CITY OF DELAND
REGULAR MEETING OF THE CITY COMMISSION
JULY 20, 2026 AT 7:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

AGENDA

CALL TO ORDER

INVOCATION - Pastor Mose Hawkins, No Limit Praise Tabernacle

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC HEARING

1. Public Hearing and Resolution to Approve State Revolving Fund Facility Plan and Business Plan for Water Plant PFAS Treatment and Removal Project

   Staff recommends that the City Commission hold a public hearing on this matter and approve the accompanying resolution authorizing the adoption and execution of the Facility Plan and Business Plan for the implementation of the Water Plant PFAS Treatment and Removal Project.

PRESENTATIONS

1. Introduction of New Police Officers: Destiny Ortiz-Felix and Maurice Therrien
2. Introduction of New Firefighter: Mary Pickett
3. Proclamation for Parks and Recreation Month
4. Report from the Elected Officials Roundtable Stormwater Mitigation and Flooding Subcommittee

CONSENT AGENDA

1. Consideration re: Amendment No.1 to Ground Lease Agreement for the Sport Aviation Village, Shalom Confessor De Aguiar Do Amaral.

   Staff recommends that the City Commission approve Amendment No. 1 to the Ground Lease Agreement with Shalom Confessor De Aguiar Do Amaral.

2. Consideration re: Utility Service and Fair Share Agreements for Woodruff Ridge Subdivision

   Staff recommends that the City Commission approve the attached Utility Service and Fair Share Agreements for the Woodruff Ridge subdivision.

3. Consideration re: Utility Service and Fair Share Agreements for Third Level Storage

   Staff recommends that the City Commission approve the attached Utility Service and Fair Share Agreements for the Third Lake Storage commercial project.

4. Consideration, JL2 Architecture Design Services, Fire Station 84

   Staff recommends that the City Commission approve JL2 professional design services for Fire Station 84, in the amount of $149,805.00.

5. Consideration re: Award of Bid for David E. Disney Tennis Center/Pickleball Court Expansion & Upgrade

   Staff recommends that the City Commission reject all bids and put the project on hold.

6. Approval of Resolution 2026-34: Surplus Equipment

   Staff recommends the City Commission adopt Resolution 2026-34 declaring the listed equipment as surplus and authorizing its disposal as set forth therein.

7. Consideration, Change Order No. 1 to the Westside Interceptor ARV Replacements Project, Bid #26-09

   Staff recommends that the City Commission approve Change Order No. 1 to the Westside Interceptor ARV Replacement Project in the amount of $31,196.00.

8. Consideration, Award of Bid, Reclaim Water Main Expansion Phase 6

   Staff recommends that the City award a contract to construct the Reclaim Water Expansion Phase 6 to the lowest bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) for a total of $890,253.00

9. Consideration, Award of Bid, East Regional Force Main Part B-1

   Staff recommends that the City award a contract to construct the East Regional Force Main Part B-1 to the lowest bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) in the amount of $1,098,300.00

10. Consideration, Authorization of Professional Services – Phase 6 Reclaimed Water Main Extensions Construction Phase Services

    Staff recommends the City Commission authorize Mead & Hunt to perform limited Construction Phase Services as outlined in the attached task order for the total amount of $106,059.00.

11. Consideration, Authorization of Professional Services – East Regional Force Main Part B-1 Construction Phase Services

    Staff recommends the City Commission authorize Mead & Hunt to perform limited Construction Phase Services as outlined in the attached task order for the total amount of $119,315.00.

12. Consideration re: Appointment of Voting Delegate for FLC Annual Meeting

    Staff recommends that Mayor Christopher Cloudman be appointed as the FLC voting delegate from the City of DeLand.

13. Consideration re: Letter of Support for Domestic Violence Database Transparency Initiative

    Staff recommends approval of the attached letter of support from the Mayor on behalf of the City Commission.

14. Approval of City Commission Meeting Minutes: September 19, 2022; September 22, 2022; October 3, 2022; October 17, 2022; November 7, 2022; November 15, 2022; November 21, 2022; December 5, 2022; December 19, 2022

    Staff recommends the City Commission review and approve the minutes as prepared and presented.

15. Approval of the Minutes: Monday, July 6, 2026 City Commission Regular Meeting

    Staff recommends the City Commission review and approve the minutes as prepared and presented

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

BOARD APPOINTMENT

1. Appointment of Four (4) Members to the Public Mural Art Committee

OLD BUSINESS

1. Second Reading of Ordinance 2026-18: Abandoning ± 0.09 Acres of Right-of-Way along W. Walts Avenue and S. Palmetto Avenue.

    Staff recommends that the City Commission approve Ordinance 2026-18, the vacation of portions of the W. Walts Avenue and S. Palmetto Avenue rights-of-way on Second Reading.

NEW BUSINESS

1. Approval of Resolution 2026-35: Approving the Proposed Millage Rate for Fiscal Year 2026-2027.

    Staff recommends the City Commission approve the proposed millage rate at 6.1841 mills for operating purposes. The proposed operating millage rate of 6.1841 is 2.70% above the rolled-back millage rate of 6.0217.

2. Acceptance of Easement for W. Walts Avenue and S. Palmetto Avenue.

    Staff recommends that the City Commission accept the attached easement.

CITY MANAGER REPORT

CITY ATTORNEY REPORT

CITY CLERK REPORT

CITY COMMISSION

ADJOURNMENT

The DeLand City Commission holds its regular meetings on the first and third Mondays of each month at 7:00 p.m. in the DeLand City Commission Chambers, 120 South Florida Avenue, DeLand. Notice of special meetings, workshops, changes in dates, times or locations are provided by separate Public Notices, which are

posted at City Hall and on the City's web site.

The City of DeLand may take action on any matter during this meeting, including items that are not set forth within this agenda.

Public participation is encouraged on any matter on the agenda. If you desire to be recognized by the Mayor, please fill out a Speaker's Card and present it to the City Clerk.

Minutes of the DeLand City Commission meetings are not transcribed verbatim. If any person decides to appeal a decision made by the City Commission with respect to any matter considered at a public meeting or hearing, he/she will need a record of the proceedings including all testimony and evidence upon which the appeal is to be based. To that end, such person will want to ensure that a verbatim record of the proceedings is made by a court reporter, at the person's own expense.

In accordance with the American Disabilities Act, persons needing a special accommodation in order to participate in the proceedings should notify the City Clerk's Office at least 48 hours in advance of the meeting: 626-7132.

Assisted Listening System receivers are available for the hearing impaired, and can be obtained from the City Clerk.

If you wish to obtain information regarding the City Commission's Agenda, please call the City Clerk's Office: 626-7132.

We respectfully request that all pagers and cell phones be turned OFF during City Commission meetings.

Electronic Information! City Commission agendas and short form minutes are now available on the City's web page: www.deland.org.

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Public Hearing and Resolution to Approve State Revolving Fund Facility Plan and Business Plan for Water Plant PFAS Treatment and Removal Project

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: Resolution No. 2026 - 36 , DeLand PFAS Facilities Plan

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The Utilities Department has been testing and working on how to come into compliance with the Environmental Protection Agency (EPA) on Polyfluoroalkyl and Substances, man-made forever chemicals (PFAS) removal from the cities drinking water system. Testing has shown that six of the eleven water plants have a MCL limit that is above the recommended proposed levels. Current EPA deadline for compliance is April 2029, but a possible change to extend to 2031 has been recommended but not adopted.
The City's water system currently serves an area of almost ninety-nine square miles and about 27,000 customers with potable water. The system's twenty wells currently pump an average of about 5.6 million gallons per day (MGD). Due to good groundwater quality, treatment is currently limited to aeration, addition of chlorine and a corrosion inhibitor. The recommended treatment is to add several large diameter resin vessels that the water would follow through and capture the PFAS elements in the drinking water prior to being placed into the distribution system.
The city hired McKim & Creed Engineer firm to assist with this project. They have put together a Water Facility Plan for the Implementation of PFAS Treatment Improvements and have helped with submitting for an application for a Drinking Water State Revolving Loan Fund (DWSRF) loan. The Facility Plan shows a concept site plan at each location that shows the vessels, piping, and lift station for concentrate disposal on backwash. The financial section shows the estimated cost to be just less than $60 million.
At present, the most favorable way to finance this project is through the State's revolving fund (SRF) loan program. The city has borrowed money for utility projects from this program in the past. Advantages include very low interest rates, low closing costs and the possibility of "loan forgiveness".
As part of the process for SRF application, the city must request inclusion from the Florida Department of Environmental Protection (FDEP) bureau of facility funding. The request for inclusion must be accompanied by a Facility Plan and Business Plan. These documents, attached to this request for Commission action must be reviewed and approved by a resolution of the City Commission following a public hearing on the matter.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

Infrastructure

FISCAL IMPACT:

Approval of the Resolution regarding the Facility Plan and Business Plan for the Water Plant PFAS Treatment and Removal Project will not, in and of itself have a fiscal impact. As mentioned above, cost for improvements

contemplated in this plan are estimated to be approximately $60 million. A portion of this cost can be paid from Utility Enterprise Fund reserves and the remainder by a loan from the FDEP State Revolving Fund (SRF).

RECOMMENDATION:

Staff recommends that the City Commission hold a public hearing on this matter and approve the accompanying resolution authorizing the adoption and execution of the Facility Plan and Business Plan for the implementation of the Water Plant PFAS Treatment and Removal Project.

BACKGROUND/DISCUSSION:

The SRF Loan process begins with submittal of the Facility Plan and Business Plan. The Facility Plan is a detailed technical document about the project that the City wants to fund. Upon adoption of the Facility Plan by the City Commission and the approval by the State Clearinghouse, it provides the City with five-years of environmental clearance to construct the project included in the Plan.

The Business Plan provides an overview of the City's water system and the financial capabilities to repay an SRF Loan. This preliminary planning process does not, however, bind the City into any financial agreement, nor does it bind the State into providing a loan. The next phase of the process will be putting the city on the Priority List at an FDEP public meeting. If approved, the city would need to accept and approve the actual loan documents.

There are economic reasons for choosing the SRF program over traditional loans or bonding. The SRF program interest rate is, on average, 60% less than the bond market rate. The program offers immediate interest rate reductions up to 1.20% - the Davis Bacon Act (.25%), American Iron and Steel (.75%), Innovative/Alternative projects (.10%), and having an approved Asset Management Plan (.10%). The net deduction can result in almost 0% interest.

The SRF program works on capitalized interest and the final interest to be paid is calculated at the end of the loan. Communities only repay the amount they use, not the full amount of the loan. For example, if there is a loan for $5M, but we use $3M – we only repay the $3M and the rest of the money is amended out of the loan agreement and put back into the pot of money that can be distributed to other communities. If a community needs to increase its loan, the SRF program provides funding increases when it is needed. There is no arbitrage, or early payoff penalties. Lastly, the loan goes into repayment 6-months after construction is complete. Interest is not payable until that time.

RESOLUTION NO. 2026 - 36

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, RELATING TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) STATE REVOLVING FUND (SRF), ADOPTION OF THE DRINKING WATER FACILITY PLAN AND CAPITAL FINANCING PLAN FOR THE IMPLEMENTATION OF THE PROJECT ENTITLED "WATER PLANT PFAS TREATMENT AND REMOVAL PROJECT" (2026) AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, Florida Statutes provide for SRF loans to local government agencies to finance the construction of water facility upgrades and Florida Administrative Code requires the formal authorization by the City Commission to formally adopt a Facility Plan outlining necessary water improvements to comply with State of Florida funding requirements and;

WHEREAS, formal adoption of the proposed Facility Plan is required for the City of DeLand to participate in the State Revolving Fund Loan program and;

WHEREAS, local governments must provide a Facility Plan to demonstrate technical, managerial and financial capability to participate in the State Revolving Fund Loan Program and;

WHEREAS, the City Commission of the City of DeLand, Florida agrees with the findings and summary of necessary improvements as outlined in the Facility Plan and with the declarations contained in the Capital Financing Plan.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission of the City of DeLand, hereby formally approves and adopts the City of DeLand's Facility Plan and Capital Financing Plan as written and presented to the City Commission on this date.

Section 2. The City Commission of the City of DeLand, Florida, hereby acknowledges the receipt of the Water Plant PFAS Treatment and Removal Project Facility Plan and Capital Financing Plan (2026).

Section 3. The City of DeLand, Florida, is authorized to approve the proposed Facility Plan and Capital Financing Plan related to the Water Plant Treatment Facilities.

Section 4. The City Manager is hereby designated as the authorized representative to execute the Facility Plan and Capital Financing Plan which will become the foundation of all activities related to the improvements. The City Manager is authorized to represent the City in carrying out the City's responsibilities under the Plans. The City Manager is authorized to delegate responsibility to appropriate city staff to carry out technical, financial, and administrative activities associated with the Plans.

Section 5. The legal authority for adoption of this Facility Plan and Capital Financing Plan is pursuant to the City Charter, City Code of Ordinances, and the Laws of the State of Florida.

Section 6. All Resolutions or part of Resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

Section 7. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidated or impair the validity, force, or effect or any other section or part of this Resolution.

Section 8. This Resolution shall take effect upon its approval and adoption by the City Commission.

PASSED AND DULY ADOPTED this 20th day of July 2026.

_____
Christopher M. Cloudman
Mayor- Commissioner

ATTEST:

_____
Christian D. Gowan, MPA, CMC
City Clerk-Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

CITY OF DELAND

PFAS FACILITIES PLAN

Date: July 2, 2026

Prepared for:

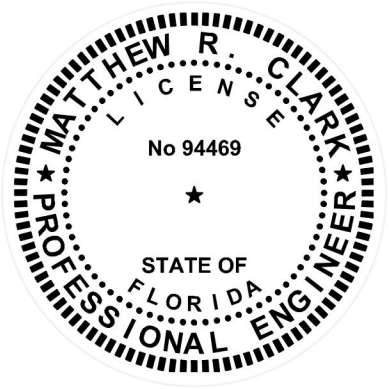
City of DeLand
Utilities Department
1102 S Amelia Ave
DeLand, FL 32720

Prepared by:

McKim & Creed, Inc.
139 Executive Circle, Suite 201
Daytona Beach, FL 32114-7102
CA License No. 29588

M&C Job No. 00998-0023

CERTIFICATION



Digitally signed by Matthew R Clark
DN: CN=Matthew R Clark, dnQualifier=A01410D00000197EF5E1F28000484AB, O=Unaffiliated, C=US
Location: Daytona Beach, Florida
Date: 2026.07.02 11:03:35-04'00'

This item has been digitally signed and sealed by Matthew Robert Clark PE on the date adjacent to the seal.

Signature must be verified on any electronic copies.

_____
Signature

Matthew Robert Clark, PE
Florida Professional Engineer No. 94469
McKim & Creed, Inc.
139 Executive Circle, Suite 201
Daytona Beach, FL 32114-7102

EXECUTIVE SUMMARY

The City of DeLand (City) owns and operates a public water system (PWS No. 3640286) that serves more than 24,000 retail and wholesale service connections throughout approximately 99 square miles of western Volusia County. Potable water is produced from nineteen (19) active groundwater wells completed in the Upper Floridan Aquifer and distributed through eleven (11) water treatment plants (WTPs).

Recent sampling has identified the presence of both long-chain and short-chain per- and polyfluoroalkyl substances (PFAS) within the City's source and finished waters. Running Annual Average (RRA) point-of-entry sampling results indicate that concentrations of perfluorooctanesulfonic acid (PFOS) exceed the U.S. Environmental Protection Agency's (EPA) National Primary Drinking Water Regulations at WTPs 1, 2, 3, 5, 6, and 8. The City is required to achieve compliance with current EPA PFAS regulations by April 26, 2029.

To proactively address current and anticipated PFAS regulations, including potential future regulation of additional short-chain PFAS compounds under future Unregulated Contaminant Monitoring Rules (UCMR), the City retained McKim & Creed to prepare this Facilities Plan and support applications for low-interest financing through the Florida State Revolving Fund (SRF) Program.

Three treatment technologies were advanced for detailed evaluation:

- PFAS-Selective Ion Exchange (IX) – Provides excellent removal of long-chain PFAS and good to excellent removal of short-chain PFAS when properly selected resins are utilized. The technology has a relatively small footprint, lower energy requirements than membrane processes, and is well suited for implementation at the City's decentralized treatment facilities. Considerations include resin replacement frequency, competing anions that may reduce resin capacity, and management of spent resin.
- Novel PFAS-Selective Adsorbents – Emerging media technologies offer promising PFAS removal performance and potentially lower waste generation; however, they currently have limited full-scale operating history, uncertain long-term performance, and limited publicly available cost and residual management data.
- Granular Activated Carbon (GAC) – Provides effective removal of long-chain PFAS but generally exhibits reduced performance for short-chain compounds and may require more frequent media replacement. Natural organic matter and other constituents may compete for adsorption sites and reduce media life.

Additional technologies, including reverse osmosis (RO), nanofiltration (NF), advanced oxidation and destruction technologies, and blending, were considered but not advanced as the recommended alternative

due to higher costs, concentrate management challenges, technology maturity concerns, or regulatory uncertainty.

Based on the alternatives evaluation, PFAS-selective ion exchange (IX) is recommended as the preferred treatment technology for the City. IX provides a favorable balance of treatment effectiveness, constructability, operational simplicity, and life-cycle cost while maintaining the flexibility to address both currently regulated PFAS compounds and potential future regulations involving short-chain PFAS.

The recommended project consists of implementing PFAS-selective IX treatment at WTPs 1, 2, 3, 5, 6, and 8, including associated site improvements, process piping, instrumentation and controls, electrical modifications, and, where feasible, provisions for future expansion. Preliminary design criteria, planning-level opinions of probable construction costs (OPCC), and estimated operation and maintenance (O&M) costs have been developed to support project implementation and SRF financing.

Given the decentralized nature of the City's water system and the April 2029 regulatory compliance deadline, timely implementation of the recommended improvements will be essential to maintaining regulatory compliance, protecting public health, and ensuring continued delivery of safe and reliable drinking water to the City's customers.

TABLE OF CONTENTS

Section 1 Introduction 1
1.1 Background 1
1.2 Purpose and Need 1
1.3 Scope of Study 5
Section 2 Existing Conditions 6
2.1 Planning Area and Period 6
2.2 Environmental Conditions 6
2.3 Socio-Economic Conditions 23
2.4 Water Supply, Treatment, and Transmission/Distribution System 24
2.5 Managerial/Operational Capacity 36
Section 3 Development of Alternatives 38
3.1 General 38
3.2 Technologies Considered but Not Advanced 38
3.3 Technologies Advanced for Further Evaluation 40
3.4 Alternative 1: PFAS-Selective Ion Exchange (IX) 45
3.5 Alternative 2: Emerging / Novel PFAS-Selective Adsorbents 48
3.6 Alternative 3: Granular Activated Carbon 51
3.7 Summary and Recommendation 54
Section 4 Selected Plan 56
4.1 Overview 56
4.2 Description of Proposed Facilities 56
4.3 Residual Management 61
4.4 Environmental Impacts of the Proposed Facilities 61
4.5 Staffing 62
4.6 Consistency with the Comprehensive Plan 63
4.7 Public Services Element 63
4.8 Conservation Element 63
4.9 Capital Improvements Element 64
4.10 Intergovernmental Coordination Element 64
4.11 Economic Development Element 64
Section 5 Implementation and Compliance 65

5.1 Public Hearing/Meeting 65
5.2 Regulatory Agency Review 65
5.3 Financial Planning 65
5.4 Implementation 66
5.5 Implementation Schedule 67
5.6 Necessary FDEP Permitting 68
5.7 Compliance 68
Appendix A City of DeLand Comprehensive Plan, Chapter 6 Conservation Element A-1
Appendix B Detailed Engineer's Opinion of Construction Costs and O&M Costs B-1
Appendix C Process Flow Diagrams and Site Plans C-1
Appendix D PFAS Sampling Laboratory Reports D-1
Appendix E Well Supplemental TOC Sampling Result E-1

LIST OF TABLES

Table 1-1 PFAS Sampling Results 4
Table 2-1 Well Data 7
Table 2-2 Endangered Species 14
Table 2-3 Migratory Birds 15
Table 2-4 Archeological and Historical Sites 17
Table 2-5 Air Quality Data 23
Table 2-6 Historical Annual Average Flows 29
Table 2-7 2025 Plant Flow by Percentage 30
Table 2-8 Limited Well Water Quality Data 31
Table 2-9 Historical Service Population and Water Production 34
Table 3-1 Comparison of PFAS Removal Technologies 44
Table 3-2 Alternative 1 PFAS IX Costs 48
Table 3-3 Alternative 2 Emerging/Novel PFAS-Selective Adsorbents Costs 50
Table 3-4 Alternative 3 GAC Costs 53
Table 3-5 Alternative Cost Comparison 54
Table 4-1 Groundwater Well Design Criteria 57
Table 4-2 Backwash Wastewater Connections 58

Table 4-3 Typical PFAS-Selective IX System Design Criteria 58
Table 4-4 Site-Specific PFAS-Selective IX System Design Criteria 58
Table 4-5 Chemical Treatment Dosage Design Criteria 59
Table 4-6 Chlorine Storage Design Criteria 59
Table 4-7 Phosphate Blend Storage Design Criteria 60
Table 4-8 High-Service Pump Design Criteria 60
Table 4-9 Finished Water Storage Design Criteria 60
Table 4-10 Improved Facilities Category and Classification 62
Table 5-1 Implementation Schedule 67

LIST OF FIGURES

Figure 1-1 Location Map 2
Figure 1-2 Service Area Map 3
Figure 2-1 Environmentally Sensitive Areas 9
Figure 2-2 Wetlands - WTP 1 10
Figure 2-3 Wetlands - WTP 2 11
Figure 2-4 Wetlands - WTP 3 12
Figure 2-5 Wetlands - WTP 5, 6, 8 13
Figure 2-6 Historical Sites - WTP 1 19
Figure 2-7 Historical Sites - WTP 2 20
Figure 2-8 Historical Sites - WTP 3 21
Figure 2-9 Historical Sites - WTP 5, 6, 8 22
Figure 2-10 City-Wide Flow Projection 35

ABBREVIATIONS AND ACRONYMS

3MADF	Three-Month Average Daily Flow
AADF	Annual Average Daily Flow
ADF	Average Daily Flow
AOP	Advanced Oxidation Process
AQI	Air Quality Index
BEBR	Bureau of Economic and Business Research
City	City of DeLand
CUP	Consumptive Use Permit
DOH	Florida Department of Health
EBCT	Empty Bed Contact Time
EPA	U.S. Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GAC	Granular Activated Carbon
gpcd	Gallons per Capita per Day
HFPO-DA (GenX)	Hexafluoropropylene Oxide Dimer Acid
H_2S	Hydrogen Sulfide
IPaC	Information for Planning and Consultation
IX	Ion Exchange
MCL	Maximum Contaminant Level
MDF	Maximum Daily Flow
MGD	Million Gallons per Day
MRL	Minimum Reporting Level
NOM	Natural Organic Matter
NF	Nanofiltration
O&M	Operation and Maintenance
OPCC	Opinion of Probable Construction Cost
PFAS	Per- and Polyfluoroalkyl Substances
PLC	Programmable Logic Controller
POE	Point of Entry
PWS	Public Water System
RO	Reverse Osmosis
RRA	Running Annual Average
RSSCT	Rapid Small-Scale Column Test
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
SDWA	Safe Drinking Water Act
SJRWMD	St. Johns River Water Management District
SRF	State Revolving Fund
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
UCMR	Unregulated Contaminant Monitoring Rule
UF	Upper Floridan Aquifer
USFWS	U.S. Fish and Wildlife Service
WTP	Water Treatment Plant

SECTION 1 INTRODUCTION

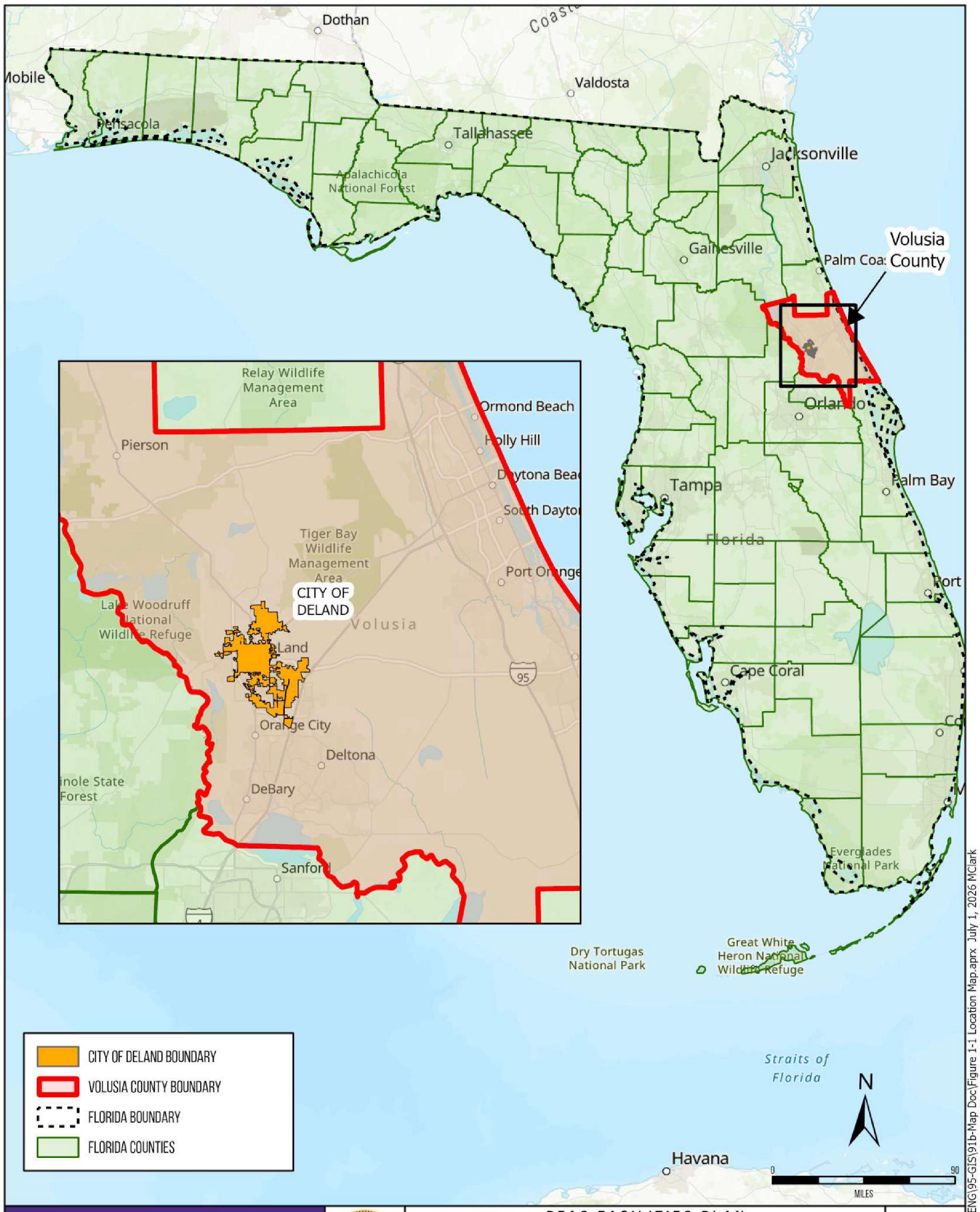
1.1 BACKGROUND

The City of DeLand (City) is located in west Volusia County (Figure 1-1) and owns and operates a Public Water System (PWS No. 3640286) that produces and distributes potable water to over 24,000 retail and wholesale service connections. Production of potable drinking water is at eleven (11) water treatment plants (WTP) using groundwater supplies pumped from a total of nineteen (19) active wells permitted under a St Johns River Water Management District (SJRWMD) Consumptive Use Permit (CUP #50116). One of the water treatment plants is currently only a storage and repump facility (WTP-10). The wells draw water from the Upper Floridan aquifer. The maximum permitted annual groundwater withdrawals from the Floridan aquifer for public supply is 2,715.60 million gallons (7.44 mgd, annual average) through 2037. The service area and location of existing WTPs are shown in Figure 1-2.

The eleven WTPs have various forms of treatment, but in general, the major WTPs include processes such as pre-chlorination, phosphate blend for corrosion control, aeration, storage, post-chlorination, and high-service pumping. Fluoridation was placed offline in 2025. WTPs # 2 and 4 have elevated storage tanks, WTPs # 1, 3, 9, 10, and 12 have ground storage tanks, and WTPs # 5, 6, 7, and 8 have wells that directly pump into the distribution system with no onsite storage. In addition to various process configurations, each site is unique in size and surroundings.

1.2 PURPOSE AND NEED

In response to evolving federal and state regulatory requirements related to Per- and Polyfluoroalkyl Substances (PFAS), the City has initiated a comprehensive evaluation of its potable water system to proactively address current exceedances and ensure long-term compliance. Through recent source water and finished water sampling, the City identified the presence of PFAS compounds within its water supply system, including concentrations of Perfluorooctanesulfonic acid (PFOS) and Perfluorohexanesulfonic acid (PFHxS) that exceed the limits established under the U.S. Environmental Protection Agency's (EPA) PFAS National Primary Drinking Water Regulations at six water treatment plants (WTPs) The Maximum Contaminant Level (MCL) regulations are measured at the Point-of-Entry (POE), on a Running Annual Average (RRA) basis. In addition to elevated PFOS concentrations in finished water, other PFAS compounds have been detected at elevated levels in the City's source waters. The RRA PFAS sampling results from the last 12-months are summarized in Table 1-1. Full laboratory results of all PFAS sampling events is included in Appendix D.



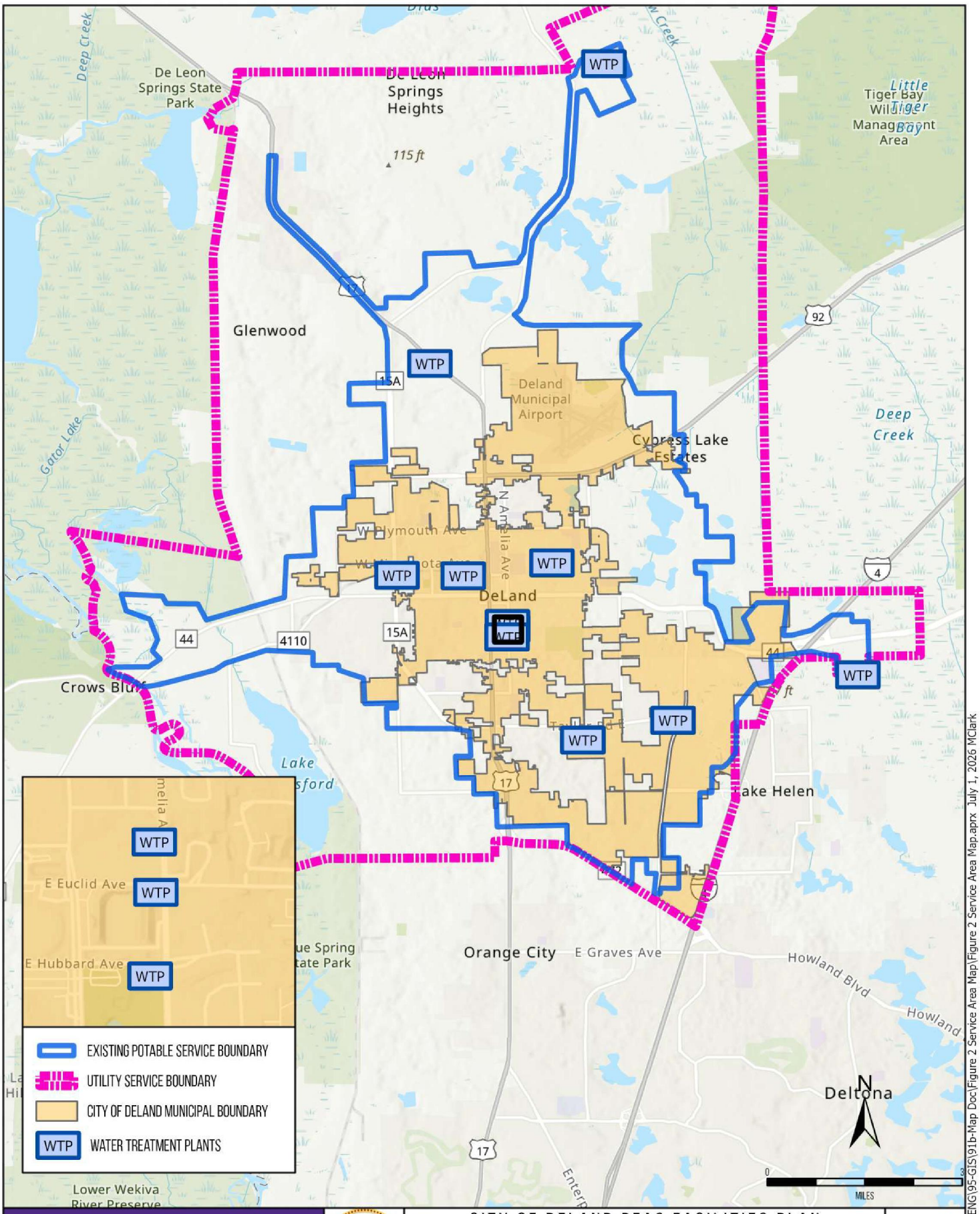
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

PFAS FACILITIES PLAN

LOCATION MAP

FIG 1-1

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 1-1 Location Map.aprx July 1, 2026 MClark



McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILITIES PLAN

SERVICE AREA MAP

FIG 1-2

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 2 Service Area Map\Figure 2 Service Area Map.aprx July 1, 2026 MClark

Table 1-1 PFAS Sampling Results

PFAS Compound	Chain Classification	Unit	MCL	WTP 1	WTP 2	WTP 3	WTP 4	WTP 5	WTP 6	WTP 7	WTP 8	WTP 9	WTP 12
Hazard Index	NA	Unitless	1	0.75	0.46	0.44	0.30	0.58	0.55	0.26	0.86	0.26	0.25
Perfluorooctanoic acid (PFOA)	Long	ppt (ng/L)	4	2.9	3.1	2.3	1.4	4.5	4.7	1.3	5.6	1.2	0.9
Perfluorooctanesulfonic acid (PFOS)	Long	ppt (ng/L)	4	7.7	6.1	4.1	2.4	8.0	7.9	2.1	10.4	2.1	1.8
Perfluorohexanesulfonic acid (PFHxS)	Long	ppt (ng/L)	10	6.2	3.3	3.2	1.7	4.5	4.2	1.3	7.0	1.3	1.1
Perfluorononanoic acid (PFNA)	Long	ppt (ng/L)	10	-	-	-	-	-	-	-	0.7	-	-
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	Short	ppt (ng/L)	NA	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Perfluoroheptanoic acid (PFHpA)	Long	ppt (ng/L)	NA	2.3	1.9	1.2	1.0	1.8	1.8	0.6	2.3	0.7	0.5
Perfluorobutanesulfonic acid (PFBS)	Short	ppt (ng/L)	NA	3.8	4.0	2.5	1.5	6.3	6.5	2.6	6.2	1.5	1.1
Perfluorohexanoic acid (PFHxA)	Short	ppt (ng/L)	NA	4.2	3.4	2.8	1.5	3.2	3.1	1.4	4.5	1.1	-
Perfluoropentanoic acid (PFPeA)	Short	ppt (ng/L)	NA	6.6	5.0	2.8	2.5	-	-	-	-	1.9	-
1H,1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2FTS)	Short	ppt (ng/L)	NA	1.5	1.6	1.2	1.3	-	-	-	-	1.3	1.3
Perfluorobutanoic acid (PFBA)	Short	ppt (ng/L)	NA	4.3	4.0	2.5	1.9	-	-	-	-	1.7	1.2
Perfluoropentanesulfonic acid (PFPeS)	Short	ppt (ng/L)	NA	1.7	0.6	-	-	-	-	-	-	-	-

"- "denotes sampling results below the Minimum Reporting Level (MRL).
All Maximum Contaminant Levels (MCL) and sampling results based on the Running Annual Average (RRA) at the Point-of-Entery (POE) into the distribution system.
Sampling collection dates range from April 2023 to December 2025.
Sampling collection dates range from October 2025 to April 2026.

Under the current regulatory framework, the City is required to achieve compliance with the EPA's PFAS standards by April 26, 2029. Given the technical complexity of PFAS treatment, the potential need for capital improvements, and the importance of maintaining uninterrupted potable water service to customers, the City is taking a proactive and strategic approach to planning and implementation. This effort includes evaluating existing treatment processes, identifying feasible treatment technologies, assessing site constraints at each affected WTP, and developing a phased compliance strategy that aligns with regulatory deadlines.

To support this initiative, the City has engaged McKim & Creed to assist with preparing a comprehensive Facilities Plan. This Plan will evaluate treatment alternatives, define preliminary design criteria, establish capital and operational cost estimates, and outline a clear path toward regulatory compliance. The Facilities Plan will also serve as a key component of the City's application for funding through the State Revolving Fund (SRF) Loan Program, positioning the City to secure low-interest financing to implement the necessary improvements in advance of the 2029 compliance deadline.

1.3 SCOPE OF STUDY

This Facilities Plan has been prepared to evaluate treatment strategies necessary for the City to achieve compliance with current and anticipated regulatory requirements governing PFAS in drinking water. With the announcement of enforceable Maximum Contaminant Levels (MCLs) under the Safe Drinking Water Act and the forthcoming monitoring requirements under UCMR 6, the City recognizes the need for a proactive and technically sound approach to long-term compliance. This report presents a comprehensive evaluation of three shortlisted treatment technologies capable of addressing both short- and long-chain PFAS detected in the City's water supply. The Plan establishes planning criteria, assesses system needs over the 2045 planning horizon (20 years), evaluates feasible treatment alternatives, and identifies a recommended approach that balances regulatory compliance, cost-effectiveness, operational reliability, and environmental stewardship. The findings of this report will support decision-making, funding applications, and the timely implementation of improvements to ensure compliance within the required regulatory timeframe.

SECTION 2 EXISTING CONDITIONS

2.1 PLANNING AREA AND PERIOD

The City of Deland is located in western Volusia County. The municipal boundary is shown in Figure 1-1. The municipal boundary encompasses approximately 19.5 square miles. The utility service area extends beyond the municipal boundary, encompassing approximately 99 square miles. The utility service boundary (potable) and water treatment plant locations are shown in Figure 1-2. The planning period for this Facility Plan is through the year 2045. Population and flow projections are estimated through 2045.

2.2 ENVIRONMENTAL CONDITIONS

2.2.1 GROUNDWATER HYDROLOGY, QUALITY, AND USES

All active wells draw water from the Upper Floridan aquifer with casing depths ranging between 80-feet and 149 feet. Table 2-1 summarizes general information. Permitted but not constructed wells are not summarized.

2.2.2 SOURCE WATER PROTECTION

The water supply for the City of DeLand's potable water system is the Volusia-Floridian Aquifer, which supplies a majority of the region's drinking water. It was designated as a sole source aquifer in 1987 (Federal Register ID 52 FR 44211). The designated aquifer is considered vulnerable because it is hydraulically isolated and relies primarily on localized recharge.

U.S. Geological Survey investigations of Volusia County hydrogeology identified the Penholoway Terrace, Talbot Terrace, and Rima Ridge uplands as important recharge areas for the Floridan aquifer system. The DeLand Ridge, which hosts the DeLand municipal wellfield, is a remnant of the Penholoway Terrace characterized by karst topography and downward drainage that promotes aquifer recharge (Rutledge, 1985). The City of DeLand averages about 54 to 55 inches of rainfall a year and 36-40 inches of evapotranspiration per year, with the remaining balance available for recharge and surface water enhancement.

Recharge areas, by their nature, can act as conduits of contamination to groundwater sources. Protecting recharge areas from contamination is an important objective in managing local groundwater supplies. Several sources of contamination include centralized sewer systems, onsite sewage treatment and disposal systems (septic tanks), underground storage tanks, and other point and non-point sources.

Table 2-1 Well Data

Well Location	Well Name	Year Drilled[4]	Aquifer	Casing Size, inches	Approx. Casing Depth, feet[4]	2025 Average Daily Flow, MGD	2025 Minimum Daily Flow, MGD	2025 Maximum Daily Flow, MGD	Capacity, gpm
WTP 1	Well 5[2]	1955	UF	16	100	-	-	-	1000
	Well 8	1961	UF	12	Unk.	0.445	0.033	0.974	800
WTP 2	Well 3	1925	UF	10	80	0.349	0.031	0.958	1200
	Well 4	1925	UF	10	80	0.358	0.002	0.927	1200
WTP 3	Well 7A	1985	UF	8	130	0.303	0.011	0.831	500
	Well 11	1999	UF	8	118	0.398	0.013	0.880	600
	Well 27	1978.	UF	8	130	0.316	0.001	0.680	500
	Well 28	1971	UF	8	130	0.270	0.011	0.661	500
WTP 4	Well 6	1967	UF	16	115	0.510	0.049	1.412	1200
WTP 5	Well 9	1972	UF	16	130	0.617	0.048	1.330	1200
WTP 6	Well 10	1990	UF	16	182	0.557	0.048	1.279	1200
WTP 7	Well 21	Unk.	UF	16	122	0.180	0.074	0.403	400
WTP 8	Well 12	2003	UF	16	149	0.253	0.020	1.075	850
WTP 9	Well 14	2007	UF	12	125	0.170	0.001	0.593	500
	Well 15	2007	UF	12	126	0.130	0.041	0.456	400
WTP 12	Well TW1	2009	UF	16	109	0.417	0.020	0.934	1100
	Well TW2	2009	UF	16	123	0.406	0.028	0.780	1100
	Well TW3	2009	UF	16	104	0.430	0.009	1.158	1100
	Well TW4	2009	UF	16	100	0.433	0.076	1.005	1100

Notes: 1 UF = Upper Floridan Aquifer.
2 Well was offline for the year summarized.
3 Well capacity differs between the sanitary survey & CUP 50116-33 renewal documents, but by no more than 100 gpm; the highest documented capacity shown.
4 Source: 2020 Sanitary Survey, Volusia County DOH

2.2.3 ENVIRONMENTALLY SENSITIVE AREAS OR FEATURES

The City of DeLand is a largely developed portion of Volusia County. Within the County, and mostly adjacent to the City of DeLand, there are environmentally sensitive lands, including conservation corridors, conservation lands, and natural resource management areas. The project areas are not in the vicinity of environmentally sensitive lands and are therefore anticipated not to impact them. See Figure 2-1 for an environmentally sensitive land map.

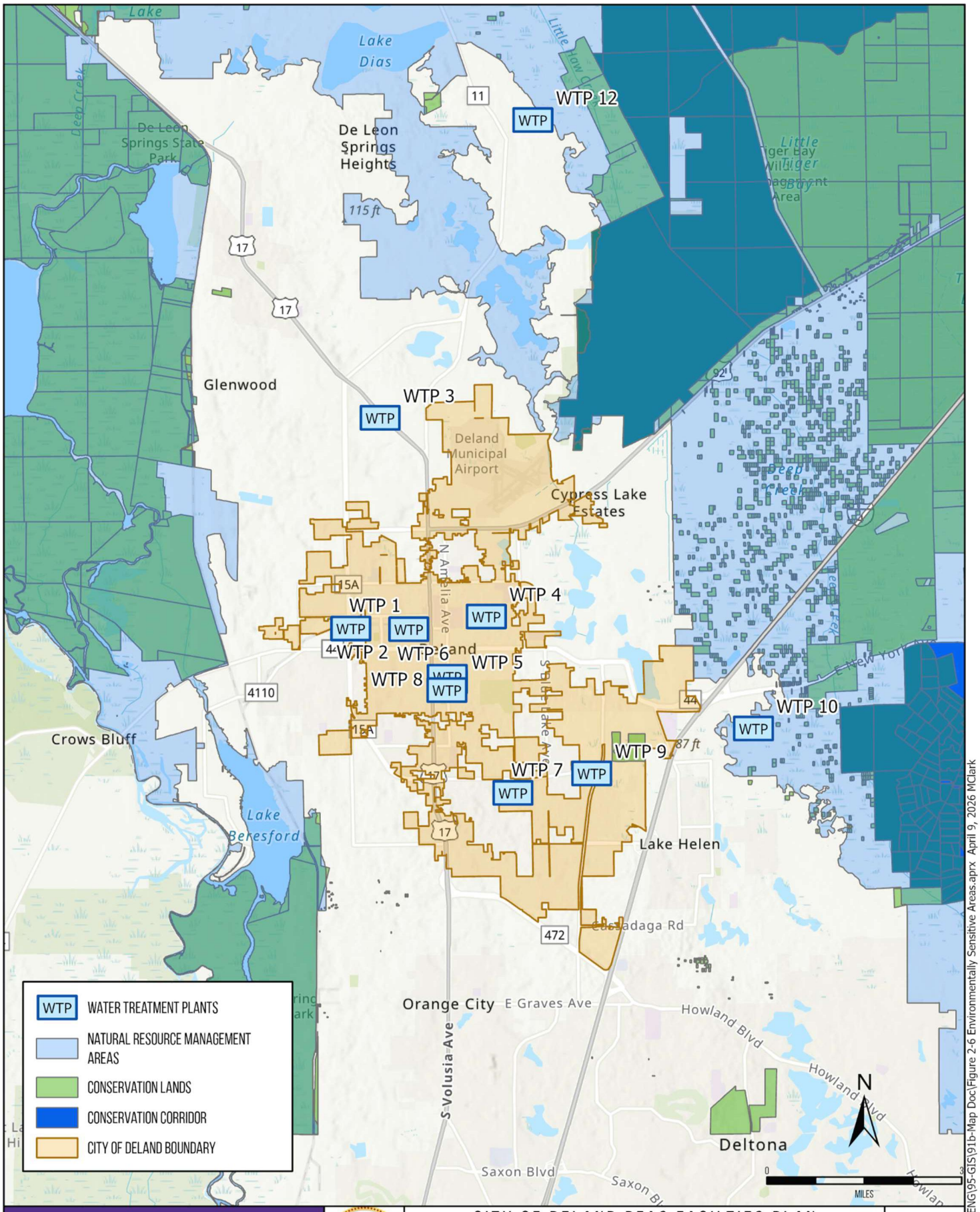
The City of DeLand contains several environmentally sensitive areas that are classified into three categories. The first category, Natural Resource Management Areas, consists of land designated for the protection and sustainable management of natural resources, including water, forests, wildlife, and soils. The second category, Conservation Lands, includes areas that are permanently protected to preserve wildlife habitats and natural ecosystems. The third category, Conservation Corridors, consists of protected linear areas that connect separate natural habitats and allow wildlife, vegetation, and ecological processes to move between ecosystems.

2.2.3.1 WETLANDS

The City of DeLand mostly lies on the DeLand Ridge and therefore sits at a higher elevation than the surrounding areas. The central, west, and northern portions of the City do not contain large or extensive wetland features.

Wetland classifications shown in Figure 2-2 through Figure 2-5 are derived from the Cowardin Wetland Classification System, as maintained by the National Wetlands Inventory under the U.S. Fish and Wildlife Service. Each code conveys key information regarding the wetland's system type, dominant vegetation, hydrologic regime, and any applicable modifiers. These classifications provide guidance on potential permitting requirements and construction constraints.

The water treatment plants addressed in this study are located outside of the delineated wetland areas. Consequently, wetlands are not anticipated to impose significant limitations and will play a minimal role in shaping the recommendations of this Facilities Plan.



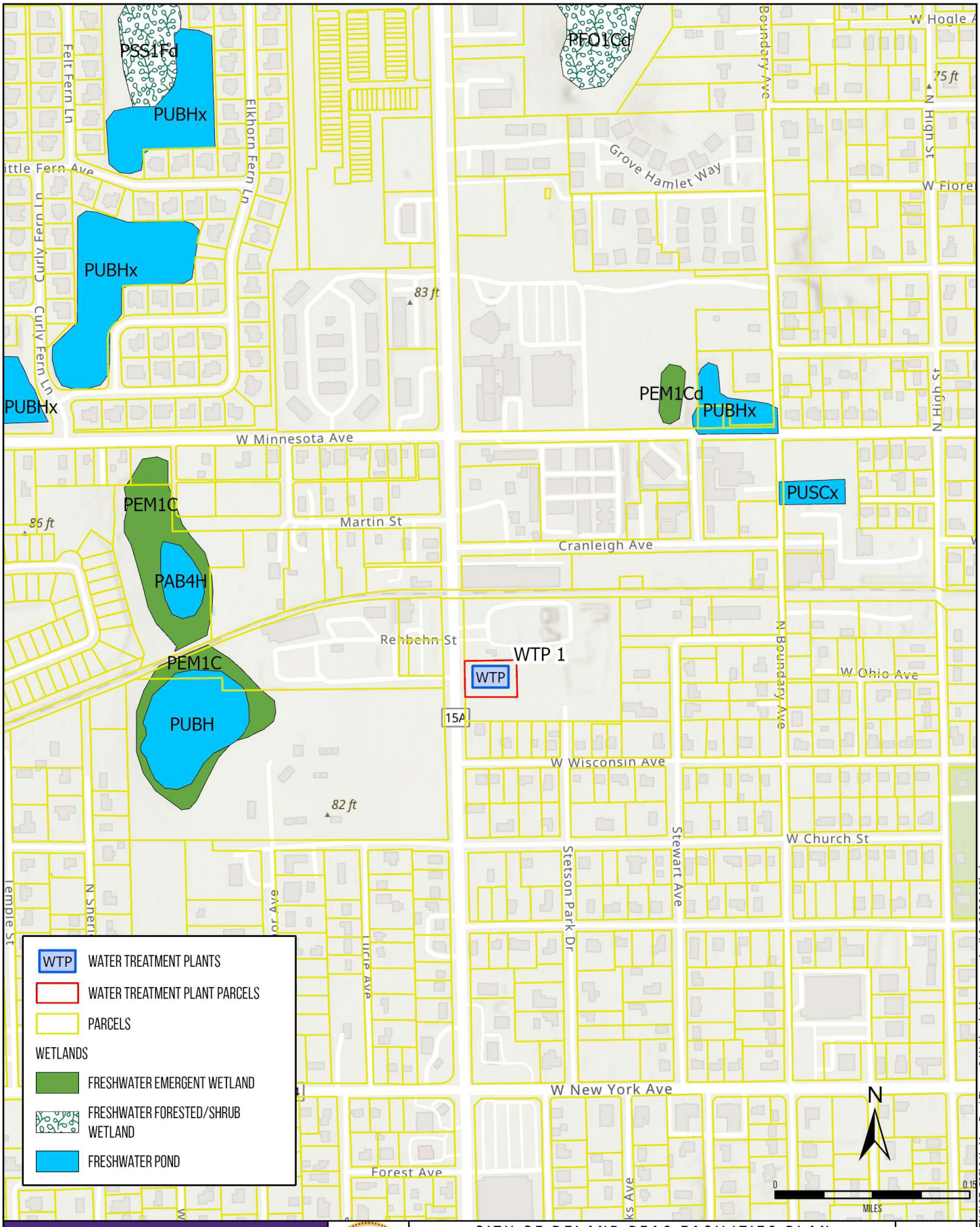
McKIM&CREED ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

ENVIRONMENTALLY SENSITIVE LANDS

FIG 2-1

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 2-6 Environmentally Sensitive Areas.aprx April 9, 2026 MClark



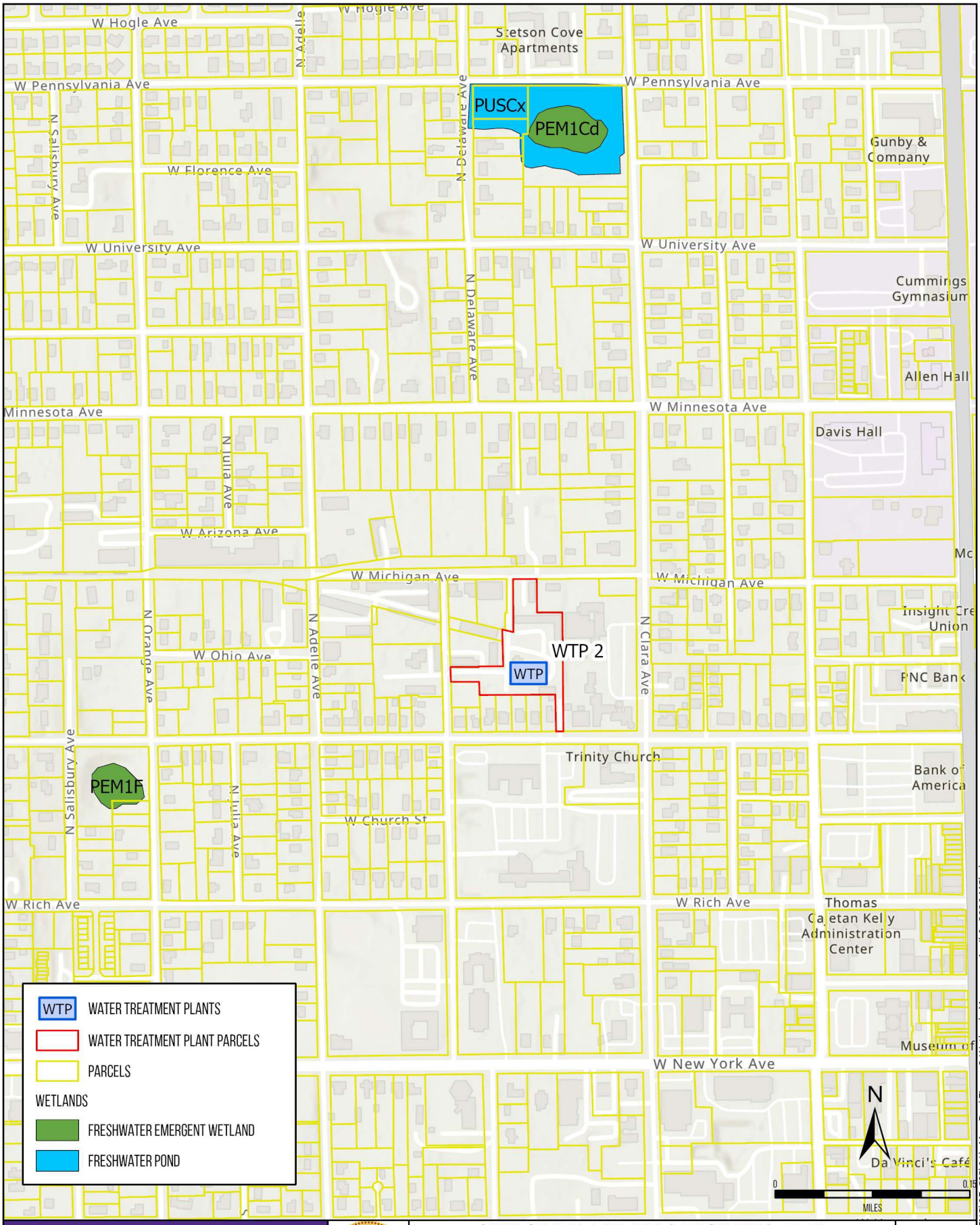
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILITIES PLAN

WETLANDS MAP - WTP 1

FIG 2-2

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 3 Wetlands Map.aprx April 9, 2026 MClark



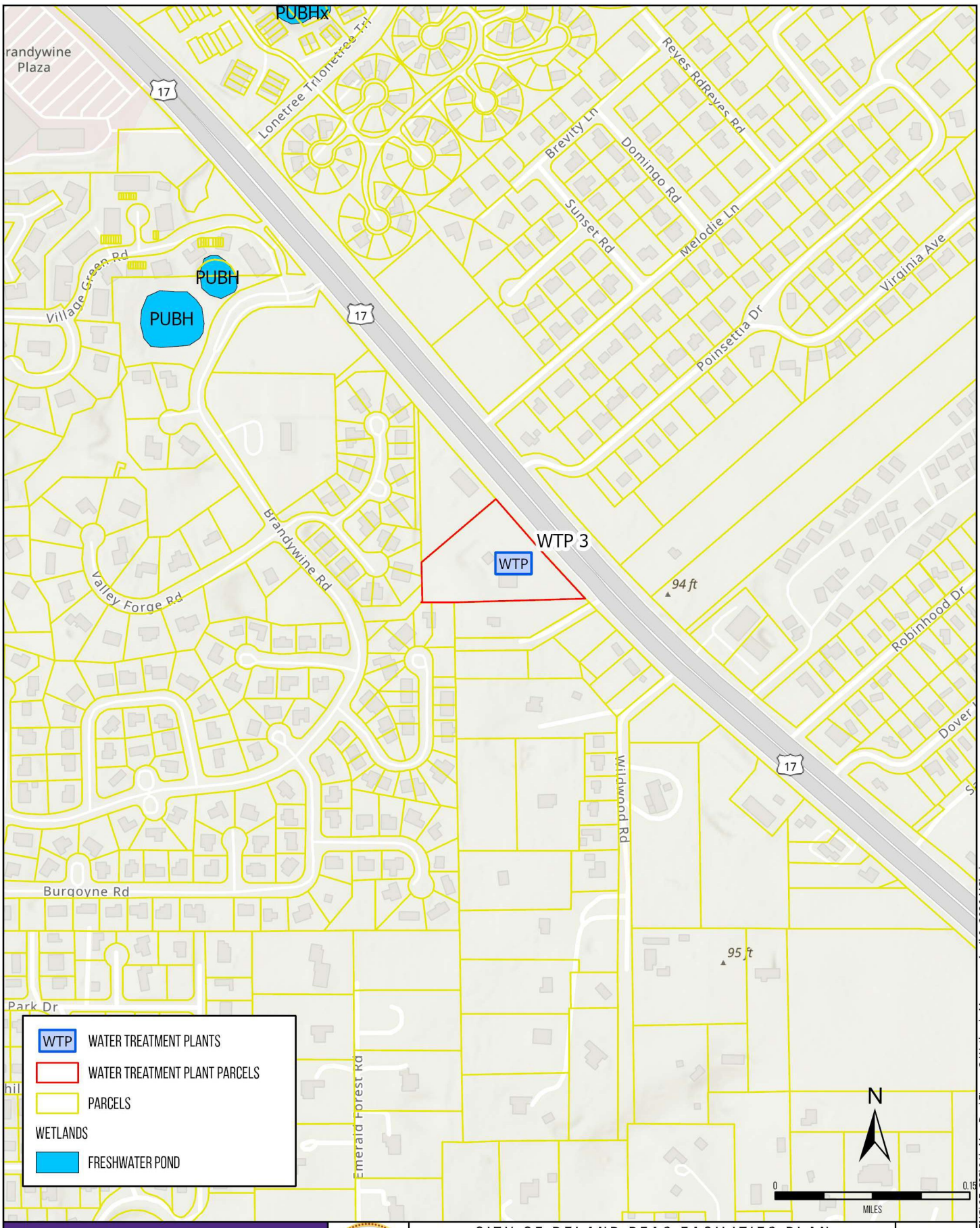
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

WETLANDS MAP - WTP 2

FIG 2-3

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 3 Wetlands Map.aprx April 9, 2026 MClark



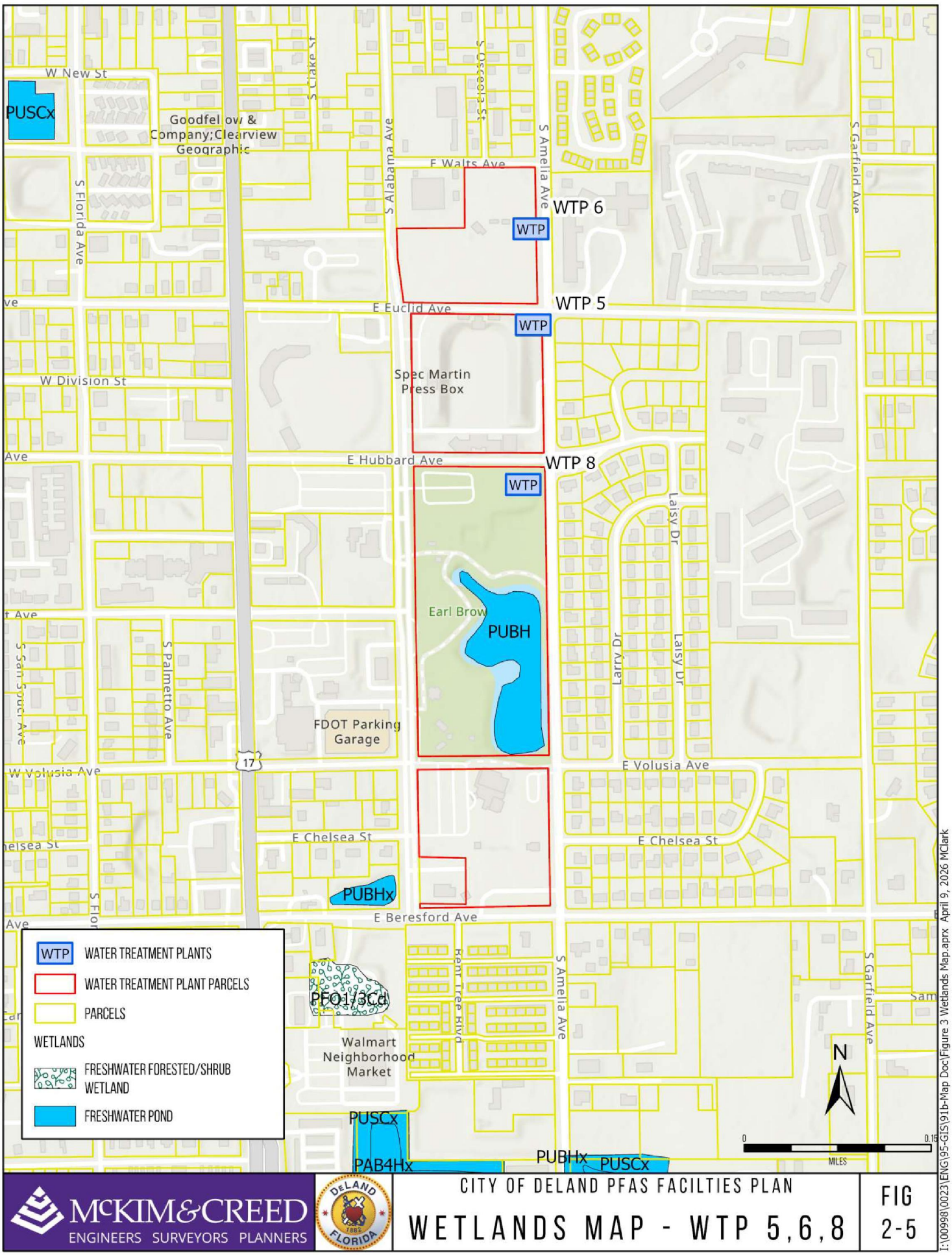
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILITIES PLAN

WETLANDS MAP - WTP 3

FIG 2-4

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 3 Wetlands Map.aprx April 9, 2026 MClark



McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

WETLANDS MAP - WTP 5,6,8

FIG 2-5

2.2.4 ENDANGERED SPECIES

According to the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) service, Table 2-2 is a list of endangered/threatened flora and fauna that may be potentially affected within the project area with their associated status.

It is noted that per the IPaC, there are no critical habitats at this location. Given the existing water treatment plant at the project site, the project is not expected to have any adverse effects on sensitive flora or fauna.

Table 2-2 Endangered Species

Common Name	Scientific Name	Status
Mammals		
Florida Panther	*Puma (=Felis) concolor coryi*	Endangered
Tricolored Bat	*Perimyotis subflavus*	Proposed Endangered
Birds		
Eastern Black Rail	*Laterallus jamaicensis jamaicensis*	Threatened
Everglades Snail Kite	*Rostrhamus sociabilis plumbeus*	Endangered
Florida Scrub-jab	*Aphelocoma coerulescens*	Threatened
Whooping Crane	*Grus americana*	Experimental population, Essential
Wood Stork	*Mycteria americana*	Threatened
Reptiles		
Eastern Indigo Snake	*Drymarchon couperi*	Threatened
Southern Hognose Snake	*Heterodon simus*	Proposed Threatened
Insects		
Monarch Butterfly	*Danaus plexippus*	

2.2.5 BALD AND GOLDEN EAGLES

There may be bald eagles in the project area. However, the project area is not identified as a Bird of Conservation Concern (BCC) area. Bald Eagles have a breeding season from September 1 to July 31. Scheduling construction and other activities will consider the Probability of Presence Summary on the IPaC portal. It is understood that if a bald or golden eagle takes up residence in the project area, any work that might disturb the protected bird will be halted until it is deemed appropriate to resume, in accordance with USFWS guidelines, federal regulations, and the Bald and Golden Eagle Protection Act of 1940. Nesting shall remain undisturbed.

2.2.6 MIGRATORY BIRDS

The birds listed in Table 2-3 are birds of particular concern either because they appear on the USFWS BCC list or because they warrant special attention in the project area. It is understood that this is not a list of every bird that may be found in the project area, nor a guarantee that every bird on the list may be found there. A variety of breeding seasons are identified for each species, and scheduling of construction and other activities will consider the Probability of Presence Summary located on the IPaC portal.

It is understood that if a listed bird is found in the project area, any work that might disturb the protected bird will be halted until it is deemed appropriate to resume per USFWS guidelines, federal regulations, and the Migratory Birds Treaty Act of 1918

Table 2-3 Migratory Birds

Common Name	Scientific Name	Breeding Season
American Kestrel	*Falco sparverius paulus*	Apr 1 – Aug 31
American Oystercatcher	*Haematopus palliatus*	Apr 15 – Aug 31
Bachman's Sparrow	*Peucaea aestivalis*	May 1 – Sep 30
Bald Eagle	*Haliaeetus leucocephalus*	Sep 1 – Jul 31
Black Skimmer	*Rynchops niger*	May 20 – Sep 15
Chimney Swift	*Chaetura pelagica*	Mar 15 – Aug 25
Great Blue Heron	*Ardea herodias occidentalis*	Jan 1 – Dec 31
King Rail	*Rallus elegans*	May 1 – Sep 5
Least Tern	*Sternula antillarum antillarum*	Apr 25 – Sep 5
Lesser Yellowlegs	*Tringa flavipes*	Breeds elsewhere
Magnificent Frigatebird	*Fregata magnificens*	Oct 1 – Apr 30
Painted Bunting	*Passerina ciris*	Apr 25 – Aug 15
Pectoral Sandpiper	*Calidris melanotos*	Breeds elsewhere
Prairie Warbler	*Setophaga discolor*	May 1 – Jul 31
Red-headed Woodpecker	*Melanerpes erythrocephalus*	May 10 – Sep 10
Reddish Egret	*Egretta rufescens*	Mar 1 – Sep 15
Ruddy Turnstone	*Arenaria interpres morinella*	Breeds elsewhere
Saltmarsh Sparrow	*Ammospiza caudacuta*	May 15 – Sep 5
Short-billed Dowitcher	*Limnodromus griseus*	Breeds elsewhere
Swallow-tailed Kite	*Elanoides forficatus*	Mar 10 – Jun 30
Willet	*Tringa semipalmata*	Apr 20 – Aug 5
Worthington's Marsh Wren	*Cistothorus palustris griseus*	Apr 10 – Aug 3

2.2.7 ARCHEOLOGICAL AND HISTORICAL SITES

Archaeological and historical sites within the City have been categorized into three distinct types, reflecting the area's rich cultural and historical fabric. The first category, Historical Sites, encompasses locations with well-documented historical significance, including prominent landmarks, architecturally significant buildings, and monuments or statues that commemorate the City's heritage. Areas where these sites are densely clustered are recognized as Historical Districts, preserving the character and story of entire neighborhoods. The final category, Historical Cemeteries, includes burial grounds that are protected due to their age, the prominence of those interred, distinctive design features, or cultural and social importance. All these archaeological and historical sites are protected under local, state, or federal regulations, and any disturbance requires careful planning and adherence to prescribed protocols.

A Florida Master Site data search was performed within a one-mile radius of the WTPs parcels subject to this Plan. Figure 2-6 through Figure 2-9 highlight the subject WTPs and any archeological and historical sites within their vicinity. There are many historic structures in the central area of the City. To further narrow down nearby historical sites, Table 2-4 summarizes were within 500 feet of each subject WTP.

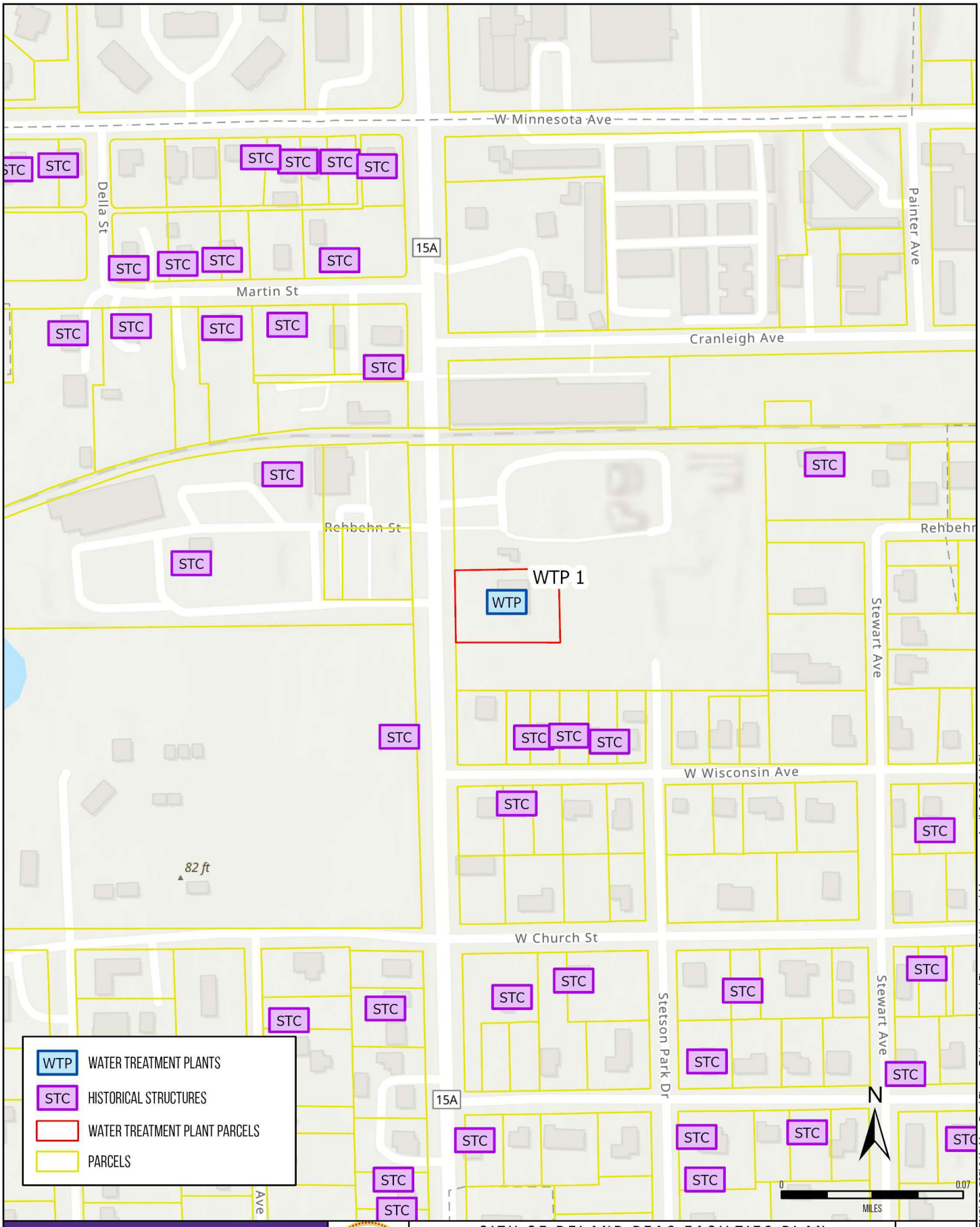
- WTP 1 – The historical structures that are within 500 ft of the WTP parcel are not anticipated to be impacted by the proposed construction activities.
- WTP 2 – The historical structures that are within 500 ft of the WTP parcel are not anticipated to be impacted by the proposed construction activities. Florida Master Site map data indicate that there might be several structures on the parcel, but reviewing their recorded addresses, it appears they might not be geolocated on the appropriate parcels. Additionally, the WTP parcel falls within the West DeLand Residential Historical District.
- WTP 3 – There are no recorded historical structures that are within 500 ft of the WTP parcel. The WTP parcel is adjacent to the US Hwy 17 Historical District.
- WTP 5, 6, & 8 - The historical structures that are within 500 ft of the WTP parcel are not anticipated to be impacted by the proposed construction activities. Additionally, the WTP parcel falls near the Methodist Hill and US Hwy 17 Historical Districts.

Construction activities of the subject WTPs are not expected to disturb or damage any historical or archaeological sites.

Table 2-4 Archeological and Historical Sites

Site Type	Site Name / Adress	Use / Type
Historical Structure	962 Wisconsin Avenue	Private residence
Historical Structure	963 West Wisconsin Avenue	Private residence
Historical Structure	959 West Wisconsin Avenue	Private residence
Historical Structure	955 West Wisconsin Avenue	Private residence
Historical Structure	Florida Power Warehouse	Warehouse
Historical Structure	Future Farmers Building	Education related
Historical Structure	Lighthouse Electric	Commercial
Historical Structure	C M Miller House	Private residence
Historical Structure	416 North Clara Avenue	Private residence
Historical Structure	404 North Clara Avenue	Private residence
Historical Structure	415 W Church Street	Private residence
Historical Structure	236 N Delaware Avenue	Private residence
Historical Structure	240 N Delaware Avenue	Private residence
Historical Structure	242 N Delaware Avenue	Private residence
Historical Structure	244 N Delaware Avenue	Private residence
Historical Structure	301 N Delaware Avenue	Apartment
Historical Structure	360 W Michigan Avenue	Commercial
Historical Structure	354 W Michigan Avenue	Commercial
Historical Structure	325 N Delaware Avenue	Commercial
Historical Structure	Mcormick Lumber Company	Commercial
Historical Structure	419 W Wisconsin Avenue	Private residence
Historical Structure	421 W Wisconsin Avenue	Private residence
Historical Structure	429 W Wisconsin Avenue	Private residence
Historical Structure	431 W Wisconsin Avenue	Private residence
Historical Structure	435 W Wisconsin Avenue	Private residence
Historical Structure	428 W Wisconsin Avenue	Private residence
Historical Structure	426 W Wisconsin Avenue	Private residence
Historical Structure	420 W Wisconsin Avenue	Private residence
Historical Structure	347 W Wisconsin Avenue	Private residence
Historical Structure	345 W Wisconsin Avenue	Private residence
Historical Structure	341 W Wisconsin Avenue	Private residence
Historical Structure	339 W Wisconsin Avenue	Private residence
Historical Structure	335 W Wisconsin Avenue	Private residence
Historical Structure	333 W Wisconsin Avenue	Private residence
Historical Structure	327 W Wisconsin Avenue	Private residence
Historical Structure	Volusia Cty School Brd Offices	Education related
Historical Structure	St Barnabas Episcopal Church	Temple (religious)
Historical Structure	322 W Michigan Avenue	Private residence
Historical Structure	328 W Michigan Avenue	Private residence
Historical Structure	342 N Clara Avenue	Private residence
Historical Structure	345 N Clara Avenue	Private residence
Historical Structure	339 N Clara Avenue	Private residence
Historical Structure	333 N Clara Avenue	Private residence
Historical Structure	327 N Clara Avenue	Private residence
Historical Structure	319-321 N Clara Avenue	Private residence
Historical Structure	309 N Clara Avenue	Private residence
Historical Structure	241 N Clara Avenue	Private residence
Historical Structure	Trinity Meth Episcopal Church	Temple (religious)

Site Type	Site Name / Adress	Use / Type
Historical Structure	330 S Alabama Avenue	Private residence
Historical Structure	344 S Alabama Avenue	Private residence
Historical Structure	436 S Alabama Avenue	Private residence
Historical Structure	438 S Alabama Avenue	Private residence
Historical Structure	117 E Euclid Avenue	Private residence
Historical Structure	341 S Clake Street	Private residence
Historical Structure	323 S Hayden Avenue	Private residence
Historical Structure	320 S Hayden Avenue	Private residence
Historical Structure	319 S Osceola Street	Private residence
Historical Structure	321 S Osceola Street	Private residence
Historical Structure	318 S Osceola Street	Private residence
Historical Structure	316 S Amelia Avenue	Private residence
Historical Structure	314 S Amelia Avenue	Private residence
Historical Structure	403 S Amelia Avenue	Private residence
Historical Structure	130 E Chelsea Street	Private residence
Historical Structure	115 E Chelsea Street	Private residence
Historical Structure	Sholtz, Dave Building	Governmental Offices
Historical Structure	244 E Beresford Avenue	Private residence
Historical Structure	Deland Armory Storage Shed	Warehouse
Historical Structure	Deland Armory	Armory
Historical Structure	Storage Building	Warehouse
Historical Structure	647 S Woodland Blvd, Bldg 2	Apartment
Historical Structure	332 S Alabama Ave	Private residence
Historical Structure	400 S Alabama Ave	Private residence
Historical Structure	406 S Alabama Ave	Private residence
Historical Structure	420 S Alabama Ave	Private residence
Historical Structure	424 S Alabama Ave	Private residence
Historical Structure	428 S Alabama Ave	Private residence
Historical Structure	318 1/2 S Osceola St	Private residence
Historical Structure	329 S Osceola St	Private residence
Historical Structure	328 S Amelia Ave	Private residence
Historical Structure	332 S Amelia Ave	Private residence
Historical Structure	336 S Amelia Ave	Private residence
Historical Structure	321 S Osceola Street	Private residence
Archeological Site	Lindquist Residence Aboriginal Site	Artifact scatter-low density (< 2 per sq meter)
Historical District	West Deland Residential District	Architecture
Historical District	Us Hwy 17	Transportation
Historical District	Methodist Hill Historic District	Architecture



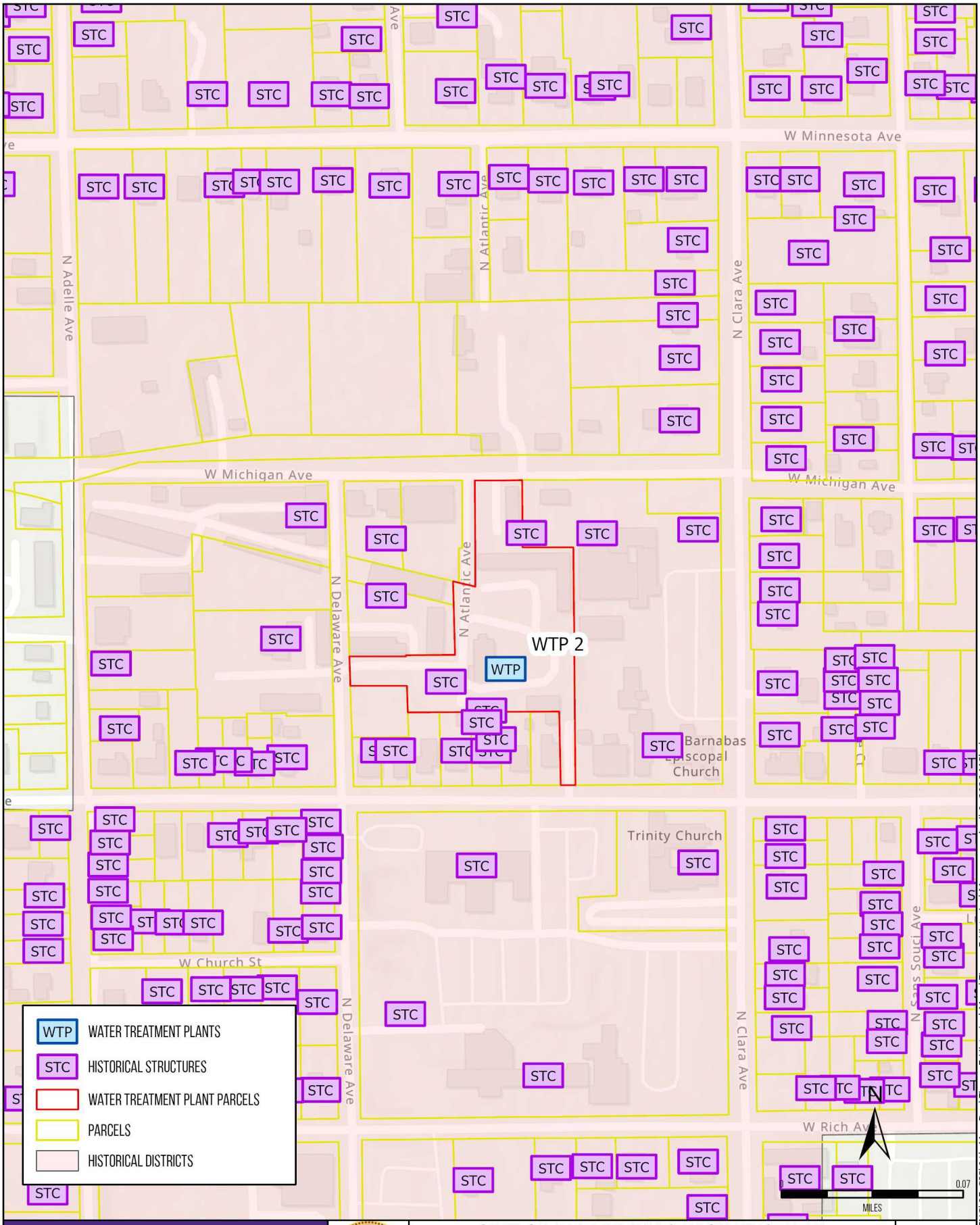
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

HISTORICAL MAP - WTP 1

FIG 2-7

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 5 Historical Maps\Figure 5 Historical Maps.aprx April 9, 2026 MClark



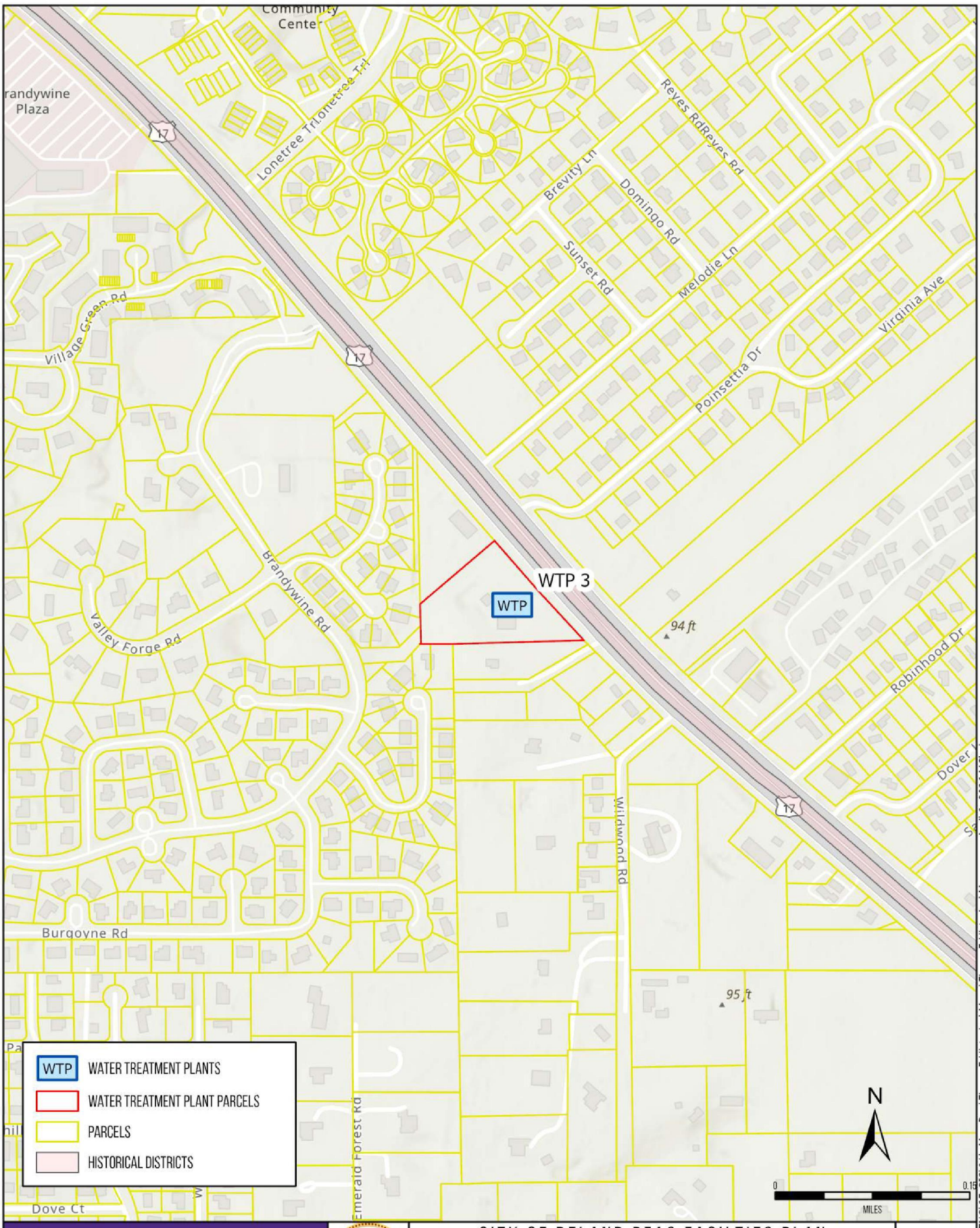
McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

HISTORICAL MAP - WTP 2

FIG 2-8

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 5 Historical Maps\Figure 5 Historical Maps.aprx April 9, 2026 MClark

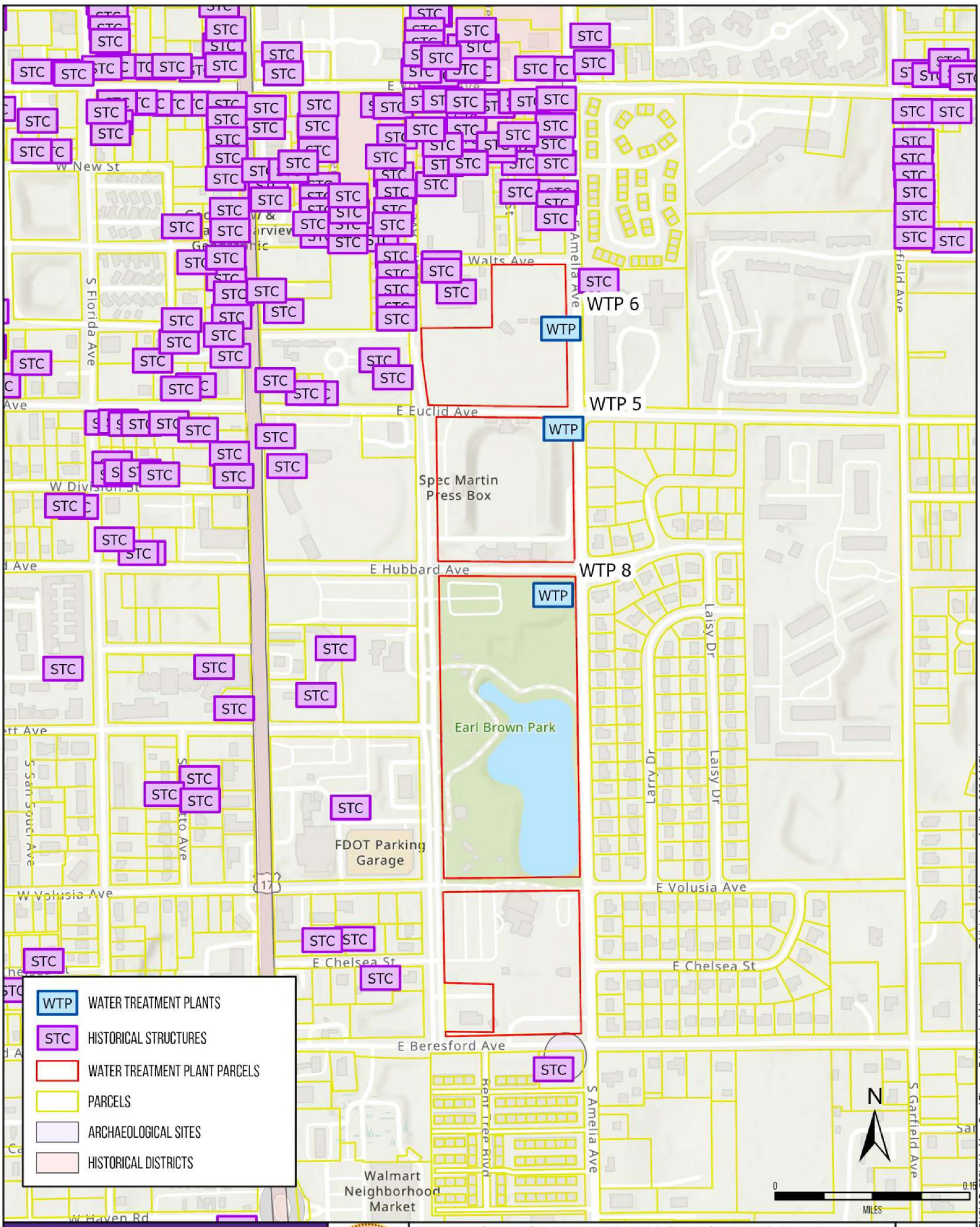


McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

HISTORICAL MAP - WTP 3

FIG 2-9



McKIM&CREED
ENGINEERS SURVEYORS PLANNERS

CITY OF DELAND PFAS FACILTIES PLAN

HISTORICAL MAP - WTP 5,6,8

FIG 2-10

I:\00998\0023\ENG\95-GIS\91b-Map Doc\Figure 5 Historical Maps\Figure 5 Historical Maps.aprx April 9, 2026 MClark

2.2.8 AIR QUALITY

According to the EPA, the Deltona-Daytona Beach-Ormond Beach region in Florida, including DeLand, typically has an Air Quality Index (AQI) that is Good to Moderate. Table 2-5 outlines the last 5 years of recorded AQI data.

The proposed projects are not anticipated to impact local air quality and will not require air permitting.

Table 2-5 Air Quality Data

Year	Days with AQI	Good Days	Days Moderate	Days Unhealthy for Sensitive Groups	Days Unhealthy	Days very Unhealthy	Days Hazardous
2021	365	224	141	-	-	-	-
2022	365	242	123	-	-	-	-
2023	365	261	103	1	-	-	-
2024	360	292	68	-	-	-	-
2025	365	297	68	-	-	-	-

2.3 SOCIO-ECONOMIC CONDITIONS

2.3.1 POPULATION

According to the V2025 US Census Bureau population estimates, the City of DeLand has a population of 46,346. The US Census Bureau reported that the median household income for residents within the City limits was $71,863 (2024 dollars) from 2020-2024. The population is predominantly White, with 64.7% identifying as White alone, including 59.4% who are White alone and not Hispanic or Latino. Black or African American residents make up 11.7% of the population, while Asian residents account for 1.8%, American Indian and Alaska Native residents 0.3%, and Native Hawaiian and other Pacific Islander residents 0.1%. Individuals identifying as two or more races represent 11.3% of the population. Additionally, 25.2% of residents identify as Hispanic or Latino, who may be of any race.

2.3.2 LAND USE AND DEVELOPMENT

As an established but growing community in Volusia County, DeLand continues to experience a mix of residential expansion, commercial infill, and redevelopment within its urban core and designated growth areas. The City's Comprehensive Plan guides development through future land-use designations that promote

balanced growth, protect environmentally sensitive areas, and ensure efficient use of existing infrastructure. Anticipated increases in population density and shifts toward mixed-use development will place additional demands on the water, wastewater, and stormwater systems. The City of DeLand maintains control over zoning and future land use within its municipal boundaries. Small portions of the City's utility service area extend into unincorporated Volusia County, which maintains land use ordinances over those areas.

2.4 WATER SUPPLY, TREATMENT, AND TRANSMISSION/DISTRIBUTION SYSTEM

2.4.1 DESCRIPTION OF THE EXISTING WATER SYSTEM

The City of DeLand's potable water system is supplied by groundwater withdrawn from the Upper Floridan Aquifer, a regionally significant source of high-quality drinking water throughout Central Florida. Water supply is provided by nineteen (19) active production wells permitted under the Consumptive Use Permit (CUP No. 50116-32) issued by the St. Johns River Water Management District, which establishes regulatory limits on groundwater withdrawals in accordance with Chapter 40C of the Florida Administrative Code to ensure sustainable use of the aquifer. Additional wells are permitted and pending development, contingent on property acquisition. Groundwater extracted from these wells is treated at ten (10) water treatment plants (WTPs), located throughout the City, and one (1) storage and repump plant at the County fairgrounds for local pressure stabilization and fire protection. These facilities vary in size, configuration, and level of treatment, reflecting DeLand's decentralized system development, yet collectively form an interconnected system that provides flexibility, redundancy, and the ability to meet varying demands across the service area.

Each WTP is designed to reliably produce potable water in compliance with applicable state and federal regulations, including standards established by the Florida Department of Environmental Protection (FDEP) and the U.S. Environmental Protection Agency (EPA) under the Safe Drinking Water Act. While treatment processes differ based on site-specific conditions and source water characteristics, typical processes include pre-chlorination for initial disinfection and oxidation, aeration for removal of dissolved gases and oxidation of iron and manganese, fluoridation, and the addition of phosphate blend for corrosion control in accordance with the Lead and Copper Rule. Additional treatment steps include post-chlorination to maintain disinfectant residuals, finished water storage, and high-service pumping to deliver water to the distribution system. Additional details for each facility of this Plan are in the following sections. Collectively, these facilities, as well as those not of focus in this plan, form an interconnected system that provides flexibility, redundancy, and the ability to meet varying system demands across the City's service area.

2.4.1.1 WATER PLANT 1

Water Treatment Plant 1 (WTP 1) is located at 339 N Spring Garden Ave, about 1.25 miles west of the downtown area, on a 0.7-acre site owned by the City. Adjacent parcels include commercial, light industrial, and residential lots.

WTP1 is supplied by one onsite well #8 and one offsite well #5. At each wellhead, a phosphate blend is applied to support corrosion control within the distribution system. Flows from the two wells are combined prior to primary disinfection using chlorine gas. Chlorine gas analyzers monitor for any leaks.

Following chlorination, the water is routed through a forced-draft cascading-tray aerator atop the ground storage tanks for the removal of dissolved gases such as H_2S. Treated water falls from the aerators into the 750,000-gallon ground storage tank, providing operational storage and system buffering.

From storage, three high-service pumps deliver water to the distribution system. Prior to distribution, a secondary chlorine dose is applied to maintain a disinfectant residual in the distribution system. Fluorosilicic acid addition ceased in 2025. The finished water is metered and can be sampled at a point-of-entry location to verify compliance with applicable drinking water standards before entering the distribution system.

WTP 1 also includes a bypass configuration that allows flow to circumvent the pre-storage chlorination, aeration, and ground storage tank processes, rejoining the system downstream of the high-service pumps. This provides operational flexibility during maintenance or varying demand conditions.

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system levels, pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.2 WATER PLANT 2

Water Treatment Plant 2 (WTP 2) is located at 325 W Michigan Ave, about a 0.5-mile west of the downtown area, on a 2.8-acre site owned by the City. The site is shared with other City departments, which have offices and maintenance shops, as well as the formal Utility Department operational center. Adjacent parcels include commercial, light industrial, institutional, and residential lots.

WTP-2 is supplied by two onsite wells #3 and #4. As with other facilities, corrosion control is initiated at each wellhead through polyphosphate addition. The combined raw water flow is then disinfected using chlorine gas prior to entering the aeration system. Chlorine gas analyzers monitor for any leaks.

Aeration at WTP 2 is accomplished by a forced-draft cascading-tray aerator atop a 20,000-gallon clear well. From the aeration process, water is pumped via three transfer pumps. Fluorosilicic acid addition ceased in 2025.

Finished water is then conveyed to a 500,000-gallon elevated storage tank, which provides both storage capacity and system pressure stabilization. Following storage, a secondary chlorine dose is applied to maintain distribution system residuals, and three high-service pumps convey water into the distribution system. As with other plants, finished water is metered and accessible for compliance sampling at a point-of-entry tap.

A bypass line is also provided, allowing the system to operate without pre-storage chlorination and aeration when necessary, with flow rejoining downstream of the transfer pumps

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system levels, pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.3 WATER PLANT 3

Water Treatment Plant 3 (WTP 3) is located at 2700 N Woodland Blvd, about 3.6 miles north of the downtown area, on a 3.7-acre site owned by the City. Adjacent parcels include commercial and residential.

WTP-3 is supplied by two onsite wells #7A and #11 and two offsite wells #27 and #28. Polyphosphate blend is applied only at the combined well #27 and #28 header, so all four wells are run at the same time to ensure consistent dosing. Raw water is routed through a forced-draft cascading-tray aerator atop the ground storage tanks. Treated water falls from the aerators into the 750,000-gallon ground storage tank, providing operational storage and system buffering. Primary disinfection uses chlorine gas, but unlike at other sites, chlorine is applied directly to the ground storage tank via an injection point on the side of the tank, with tank mixers ensuring consistent disinfection. Chlorine gas analyzers monitor for any leaks.

From storage, three high-service pumps deliver water to the distribution system. Prior to distribution, a secondary chlorine dose is applied to maintain a disinfectant residual in the distribution system. Fluorosilicic acid addition ceased in 2025. As with other plants, finished water is metered and accessible for compliance sampling at a point-of-entry tap.

Similar to WTP 1, this facility includes a bypass arrangement that allows water to circumvent aeration and storage processes, providing flexibility in system operations

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system levels, pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.4 WATER PLANT 5

Water Treatment Plant 5 (WTP 5) is located at 290 E Euclid Ave, about a 0.5-mile south of the downtown area, on a 10-acre site owned by the City. The site is mostly occupied by Earl Brown Park, sports fields, and other leisure areas. Adjacent parcels include commercial, institutional, and residential lots.

WTP-5 is a smaller facility supplied by a single groundwater source, well #9. The treatment process is simpler compared to the larger plants. Raw water is first treated with a polyphosphate blend for corrosion control. Chlorine gas is then applied to achieve primary disinfection. Fluorosilicic acid addition ceased in 2025. The treated water is metered and can be sampled at a point-of-entry location prior to entering the distribution system. No onsite storage or pressure stabilization (e.g., hydropneumatic tanks) is onsite. WTP-5, 6, and 8 are all located in series about 500 to 700 feet apart (refer Figure 1-2 inset).

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.5 WATER PLANT 6

Water Treatment Plant 6 (WTP 6) is located at 450 S Amelia Ave, about a 0.5-mile south of the downtown area, on a 6.35-acre site owned by the City. The site is mostly occupied by Earl Brown Park, sports fields, and other leisure areas. Adjacent parcels include commercial, institutional, and residential lots.

WTP-6 is a smaller facility supplied by a single groundwater source, well #10. The treatment process is simpler compared to the larger plants. Raw water is first treated with a polyphosphate blend for corrosion control. Chlorine gas is then applied to achieve primary disinfection. Fluorosilicic acid addition ceased in 2025. The treated water is metered and can be sampled at a point-of-entry location prior to entering the distribution system. No onsite storage or pressure stabilization (e.g., hydropneumatic tanks) is onsite. WTP-5, 6, and 8 are all located in series about 500 to 700 feet apart (refer to Figure 1-2 inset).

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.6 WATER PLANT 8

Water Treatment Plant 8 (WTP 8) is located at 220 E Hubbard Ave, about a 0.5 mile south of the downtown area, on a 15.4-acre site owned by the City. The site is mostly occupied by Earl Brown Park, sports fields, and other leisure areas. Adjacent parcels include commercial, institutional, and residential lots.

WTP-8 is a smaller facility supplied by a single groundwater source, well #12. The treatment process is simpler compared to the larger plants. Raw water is first treated with a polyphosphate blend for corrosion control. Chlorine gas is then applied to achieve primary disinfection. Fluorosilicic acid addition ceased in 2025. The treated water is metered and can be sampled at a point-of-entry location prior to entering the distribution system. No onsite storage or pressure stabilization (e.g., hydropneumatic tanks) is onsite. WTP-5, 6, and 8 are all located in series about 500 to 700 feet apart (refer to Figure 1-2 inset).

Plant operations are controlled by a single Programmable Logic Controller (PLC) that provides automated monitoring and control of system pressures, and chlorine residuals. A Supervisory Control and Data Acquisition (SCADA) system allows operators to remotely monitor plant conditions and operational performance. The SCADA system consists of a single Remote Terminal Unit (RTU) connected via a radio communication network for data acquisition and remote monitoring capabilities.

2.4.1.7 WATER PLANTS 4, 7, 9, 10, AND 12

WTP-4, WTP-7, WTP-9, WTP-10, and WTP-12 have not had Running Annual Average (RRA) Point-of-Entry (POE) PFAS sampling results above the proposed MCLs over the past 12 months, indicating the facilities will not require treatment at this time; therefore, they are not subject to PFAS treatment in this Facilities Plan. Note, WTP-10 is a storage and repump facility and does not have its own raw water supply.

2.4.1.8 WATER TRANSMISSION AND DISTRIBUTION SYSTEM

The City delivers finished water through a single Public Water System (PWS) that serves a utility service area of nearly 99 square miles. The PWS comprises more than 450 miles of pipe, ranging from small-diameter mains two inches or smaller to large twenty-inch transmission mains. Materials vary from legacy cast iron, galvanized

steel, and asbestos cement to modern materials such as ductile iron, polyvinyl chloride, and high-density polyethylene pipe. Active pipe installation dates extend back more than 50 years. The City actively replaces sections of its water transmission and distribution system, including downtown portions, and expands the system into residential areas previously served by private wells (approximately 15,000 to 20,000 feet per year).

2.4.2 PRESENT AND HISTORICAL WATER USAGE

Historical water use data have been compiled from records provided by the City. The City prepares an annual report for staff that outlines flows for various parameters, including total raw groundwater pumped per EN50s and potable water produced, both in million-gallons per day (MGD) and annual average daily flow (AADF). These records are tabulated for the last 20 years in Table 2-6.

Table 2-6 Historical Annual Average Flows

Year	Raw groundwater Pumped per EN50 (MGD AADF)	Potable Water Produced (MGD AADF)
2006	7.15	7.12
2007	6.79	6.85
2008	5.73	5.82
2009	5.54	5.37
2010	5.41	5.41
2011	5.56	5.56
2012	5.03	4.96
2013	5.01	4.90
2014	4.77	4.66
2015	4.74	4.86
2016	5.14	5.19
2017	5.01	5.01
2018	4.84	4.84
2019	5.12	5.12
2020	5.01	4.96
2021	5.17	5.18
2022	5.58	5.34
2023	5.22	5.38
2024	5.41	5.53
2025	5.90	5.85

Flow has varied over the reference period due to several factors, including water conservation initiatives, offset by service population growth and climate variability, the latter of which is known to influence irrigation use in Central Florida, especially in systems with limited access to reclaimed water.

A review of 2025 individual plant flow records indicates that the majority of the City's potable water demand is met by WTP 1, WTP-2, WTP-3, and WTP-12, which account for approximately 66% of the produced water (Table 2-7).

Table 2-7 2025 Plant Flow by Percentage

Plant	Percentage of 2025 Annual Flow
WTP-1	8%
WTP-2	10%
WTP-3	20%
WTP-4	3%
WTP-5	10%
WTP-6	9%
WTP-7	3%
WTP-8	4%
WTP-9	5%
WTP-12	28%

Overall, historical and present data indicate that water usage in the City of DeLand has remained relatively stable over the 25-year evaluation period, with identifiable periods of peak demand, decline, and gradual recovery. 2025 average daily demand is approximately 5.86 MGD, and the system appears to be entering a phase of moderate growth. Future water demand will continue to be influenced by population trends, land use patterns, climatic variability, and ongoing water resource management efforts.

2.4.3 GROUNDWATER QUALITY

Groundwater quality parameters are regularly tested to maintain compliance with operational and consumptive use permitting. Available data sources included St Johns River Water Management District (SJRWMD) limited parameter water quality data (2024, 2025) for field pH, specific conductance, chloride, sulfate, and total dissolved solids. Other parameters, such as alkalinity, magnesium, iron, potassium, sodium, and strontium, were not a CUP sampling requirement at the time of the reports provided. The City also performed total organic carbon sampling (2026), which is not a CUP requirement. Table 2-8 outlines the currently available limited well water quality data.

Table 2-8 Limited Well Water Quality Data

Parameter	WTP 1		WTP 2		WTP 3				WTP 4	WTP 5	WTP 6	WTP 7	WTP 8	WTP 9		WTP 12			
	Well 5	Well 8	Well 3	Well 4	Well 7A	Well 11	Well 27	Well 28	Well 6	Well 9	Well 10	Well 21	Well 12	Well 14	Well 15	Well TW1	Well TW2	Well TW3	Well TW4
Field pH	OOS	7.8	7.7	7.7	7.6	7.5	7.6	7.6	7.6	7.4	7.5	7.8	7.7	OOS	NR	7.6	8.0	7.9	8.0
Specific Conductivity, µmho/cm or µS/cm	OOS	371	411	427	395	386	221	400	389	448	401	376	426	OOS	NR	355	296	306	297
Chloride (Cl^-), mg/L	OOS	195	206	233	202	188	233	187	196	223	199	140	222	OOS	NR	182	149	152	145
Sulfate (SO_4^{2-}), mg/L	OOS	15	23	19	15	22	12	16	13	25	18	18	19	OOS	NR	15	10	13	19
Total Dissolved Solids (TDS), mg/L	OOS	18	12	13	2	12	199	6	-U	18	15	9	14	OOS	NR	25	11	24	28
TOC, mg/L	OOS	1.0 U	1.0 U	1.0 U	1.5 I	1.4 I	1.7 I	1.2 I	2.7	1.0 U	1.0 U	1.0 U	1.0 U	OOS	1.9 I	1.0 U	1.0 U	1.0 U	1.0 U

OOS The well was out of service and not sampled in the provided reporting data
NR The sample results were not recorded in the provided reporting data
I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U Indicates that the compound was analyzed for but not detected.

2.4.4 WATER CONSERVATION

The City of DeLand's water conservation policies are designed to protect water quality, conserve potable water supplies, promote alternative water sources, and ensure long-term sustainability of groundwater and surface water resources. The City coordinates with the St. Johns River Water Management District (SJRWMD), Volusia County, and other agencies to implement conservation measures and integrate water supply planning with growth management decisions. The City seeks to promote potable water conservation through the following key elements:

- Reducing potable water consumption
- Expanding reclaimed water use
- Promoting water-efficient development and landscaping practices
- Protecting groundwater recharge and water quality
- Enhancing stormwater reuse and aquifer recharge
- Coordinating regional water supply planning and emergency conservation measures

The City conserves potable water by prohibiting the use of potable-water irrigation meters in new construction, requiring connection to reclaimed water where available, promoting water-saving plumbing fixtures and appliances, maintaining a leak-detection program, and implementing a block-rate water-billing structure. For example, the latest effective residential rates include block rates for up to 5,000, 10,000, 15,000, and over 15,000 gallons per month, with associated rates of $2.86, $4.74, and $8.90 per thousand gallons, respectively. Similar block rates exist for multifamily, commercial, irrigation, and reclaimed, with rates that are similar or more aggressive.

Another primary component of the City's conservation strategy is the expansion and use of reclaimed water for irrigation. The reclaimed water system offsets potable demand by supplying non-potable water for landscape irrigation and other approved uses. Consistent with City land development regulations, new development within designated service areas must connect to reclaimed water when available. This policy reduces per capita potable water demand and supports compliance with SJRWMD water conservation objectives.

The City also enforces irrigation restrictions in accordance with SJRWMD guidelines. These restrictions limit landscape irrigation to specific days and times and establish maximum application rates. The use of rain shutoff devices or soil moisture sensors is required to prevent unnecessary irrigation during rainfall events. These measures are critical for managing peak day demand (PDD) and maximum day demand (MDD), which, in Central Florida systems, are largely driven by irrigation use.

Public education and outreach further support the City's conservation efforts. The City provides guidance on efficient water-use practices, including irrigation scheduling, drought-tolerant landscaping (Florida-Friendly

Landscaping™ principles), and identifying over-irrigation. These efforts contribute to long-term reductions in gallons per capita per day (gpcd) and help moderate demand growth despite population growth.

Operationally, the Utilities Department maintains an active program of system monitoring and maintenance to reduce water losses and improve efficiency. This includes leak detection and repair, meter testing and replacement, backflow prevention, and ongoing system evaluations. These practices reduce water loss and support compliance with FDEP water loss control requirements.

At the planning level, the City incorporates water resource protection into its Comprehensive Plan. Chapter 6 includes several objectives and associated policies that promote aquifer recharge, protect groundwater quality, and encourage stormwater infiltration. Specific to potable water conservation, Policy c1.2.7 outlines performance standards to be incorporated into land development codes. These measures are particularly important given the City's reliance on the Floridan Aquifer as its primary source of potable water.

Collectively, these conservation measures have contributed to relatively stable annual average daily flow (AADF) over the historical period of record, generally ranging between approximately 4.66 and 7.12 MGD from 2000 through 2025. While total system demand has shown a modest upward trend in recent years, reaching approximately 5.86 MGD in 2025, per capita demand has remained stable or declined, indicating improved water use efficiency. Continued implementation of these conservation strategies is expected to moderate future increases in demand and support the City's ability to meet projected water needs within available and permitted supply limits.

2.4.5 PERFORMANCE OF EXISTING WATER SYSTEM

The City's drinking water must meet the requirements of the FDEP and the USEPA, which set national standards for drinking water under the Safe Drinking Water Act (SDWA). The primary rules and regulations that apply are Chapters 62-550 and 62-560 of the Florida Administrative Code (F.A.C.), and MCLs defined by the USEPA.

The State of Florida has adopted the USEPA's National Primary and Secondary Drinking Water Standards and has created additional rules to meet state requirements. Water quality parameters, according to these regulations, are expected to be met not only at the point of entry (POE) into the City's distribution system but also throughout the distribution system and at customers' taps.

City staff have collected raw water samples and, through independent lab tests, found that the water supply and point of entry (POE) contain levels of Per- and Polyfluoroalkyl Substances (PFAS) above the drinking water regulations. The existing WTPs were not designed to reduce or remove PFAS. It is anticipated that the City's drinking water will not comply with drinking water standards once the PFAS MCLs are enforced.

2.4.6 WATER DEMAND PROJECTIONS

Potable water demand projections for the City's service area were developed to estimate future system needs over a 20-year planning horizon through 2045. The City's existing demand projections were reviewed and updated where needed to maintain consistency with the City's long-term planning.

Population projections reviewed in this analysis were obtained from the University of Florida Bureau of Economic and Business Research (BEBR), the U.S. Census Bureau, and prior projections prepared by other consultants for the City.

Based on current service area mapping and customer account records, the City presently serves approximately 12% of the total population within Volusia County. This percentage was applied to the BEBR population projections to estimate the population the City is expected to serve over the planning horizon. Adjustments were also made where applicable to account for known or anticipated service area expansions, including the City's active expansion of its potable water system into areas historically served by private wells.

Baseline potable water demand conditions were established using historical production data obtained from the City for the period 2000 to 2025. Historical production records were reviewed to calculate average daily flow (ADF), rolling three-month average flows (3MADF), and a per capita daily usage rate (gpcd). The Max Daily Flow (MDF) for 2023, 2024, and 2025 were 6.80 MGD, 7.24 MGD, and 7.78 MGD, respectively, providing an average MDF peaking factor of 1.33 over the AADF of those years. These metrics provide a representative characterization of system usage and demand patterns.

Table 2-9 summarizes the historical service population and potable water production over the past 10 years, from 2016 through 2025.

Table 2-9 Historical Service Population and Water Production

Year	Utility Service Population	Annual Average Daily Flow (MGD)	Usage (gallons/ capita day)
2016	63,740	5.19	81
2017	64,948	5.01	77
2018	65,563	4.84	74
2019	66,484	5.12	77
2020	67,404	4.96	74
2021	68,325	5.18	76
2022	69,245	5.34	77
2023	70,166	5.38	77
2024	71,086	5.53	78
2025	72,007	5.85	81

Historically, the MDF over the past 3 years has occurred from April through May, reflecting seasonal demand typically associated with irrigation and warmer weather.

To maintain consistency with previous planning efforts, the methodology and assumptions presented in the Consumptive Use Permit (CUP) and West Volusia Water Suppliers reporting (Mead & Hunt, 2022) were reviewed and incorporated where appropriate. These prior analyses established baseline per-capita demand values and peaking factors that remain representative of system conditions and were therefore used as a reference in developing the updated projections.

Future potable water demand was estimated by applying an average gallons-per-capita-day (gpcd) from 2021 to 2025 (79 gpcd) to the projected service population through 2045, which was determined by projecting out the number of service connections that the City has. This rate reflects historical system usage patterns, conservation trends, and planning assumptions documented in the previous CUP analysis.

Projected demands were developed at annual increments through the year 2045. Figure 2-10 summarizes the projected service population and associated average and max daily flow demands.

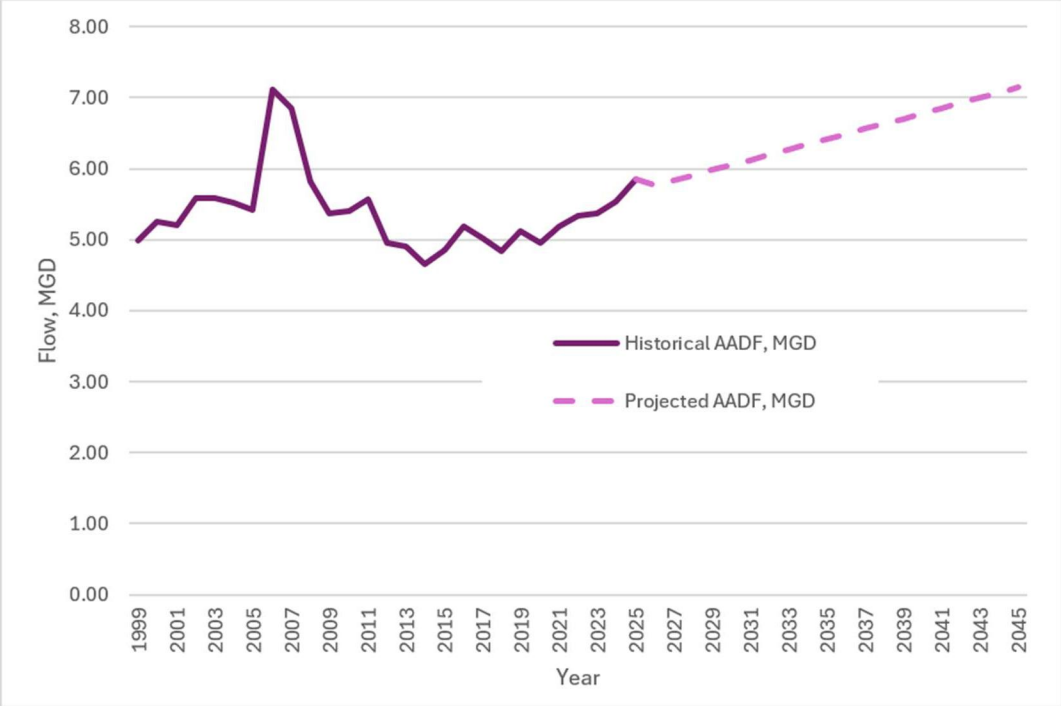


Figure 2-10 City-Wide Flow Projection

Based on the projected population growth and assumed per-capita demand rates, the City's average daily potable water demand is anticipated to increase from approximately 5.85 MGD in 2025 to approximately 7.14 MGD by 2045. Corresponding maximum daily and seasonal average demands will increase proportionally over the planning horizon.

Through discussions with City staff, much of the system and demand growth will occur within the Downtown Community Redevelopment Agency and in areas where pipelines are extended to connect customers historically served by private wells. Additionally, the City intends to expand capacity through additional facilities at WTP-12 and a possible new water treatment plant located near the County Fairgrounds, east of Interstate 4 and State Road 44 (Mead and Hunt, 2019). The City is updating its Utility Master Plan, which may provide more granular distribution of projected flows, but at the time of this Plan, it is not available for use. Additionally, the existing water treatment plants subject to this Plan are space-constrained and have limited capacity for expansion, except for WTP-3, which has available space. Therefore, the Plan will focus on the footprint and costs associated with sizing PFAS treatment technologies to match the capacity of the current water supply wells, with provisions for expansion if feasible.

The projections may be refined in the future as updated population forecasts become available, new development occurs within the service area, or system usage patterns change due to conservation measures or regulatory requirements.

2.4.7 PLANT WASTE

The City's water treatment plants (WTPs) do not generate process-related waste streams under normal operating conditions, as existing treatment processes do not produce backwash residuals, concentrate streams, or other process wastes requiring handling or disposal. Wastewater generated at these facilities is limited to sanitary flows associated with staff amenities. These flows are discharged to the municipal sanitary sewer collection system and conveyed to the City's wastewater treatment plant for treatment and final disposition.

As a result, current residuals management requirements at the WTP sites are minimal, and there is no dedicated infrastructure to handle or dispose of process waste.

2.5 MANAGERIAL/OPERATIONAL CAPACITY

The City maintains continuous operation of its water treatment and distribution systems, supported by staffing and monitoring on a 24-hour, seven-day-per-week basis. The latest City budget included one Water Plant Supervisor, one Assistant Chief Water Plant Superintendent, five Plant Operators, and one Utility Plant Technician. Licensed operators perform routine on-site inspections, system checks, and operational adjustments to ensure consistent performance and regulatory compliance. These activities include monitoring treatment processes, verifying system pressures and flows, and responding to any observed operational anomalies.

During non-staffed hours, system performance is continuously monitored through a supervisory control and data acquisition (SCADA) system. The SCADA system provides real-time data acquisition, alarm management, and remote-control capabilities, allowing operators to monitor key process parameters and system status. Automated alarms are configured to notify on-call personnel of any deviations from established operating conditions, enabling timely response and corrective action. As needed, operators are dispatched to the facility to address system issues and ensure uninterrupted operation.

Overall, the City's operational structure provides a high level of oversight, responsiveness, and reliability, supporting effective system management across all hours of operation. During storms, staff follow emergency procedures, such as pre-staging, lockdown, and post-storm response. Plants and wells have emergency power generation and are monitored by SCADA systems to mitigate the impacts of storm events and provide staff with insight for post-storm response. Additionally, the system's distributed nature adds redundancy in operations during storms and other abnormal events.

2.5.1 OPERATION AND MAINTENANCE PROGRAM

The City of DeLand operates and maintains its potable water system through a centralized Utilities Department organized into specialized divisions, including divisions responsible for water production, distribution, and maintenance. Operational responsibility for the City's wells and water treatment plants resides primarily with the Water Plant Superintendent, while the Water Distribution Superintendent manages the transmission and distribution system, including pipelines, valves, hydrants, and service connections.

Routine activities include inspection and servicing of wells, pumps, treatment equipment, and chemical feed systems, as well as valve exercising, hydrant maintenance, and meter repair and replacement. In addition, the City conducts backflow prevention testing and maintains service connections to protect the integrity of the potable water system. Corrective maintenance activities, such as water main repairs and emergency response to leaks or system failures, are performed as needed to minimize service disruptions and water loss.

Dedicated Utility Plant Technicians provide technical support for mechanical, electrical, and instrumentation systems across the water facilities. This includes maintenance of pumps, motors, treatment process equipment, SCADA systems, and backup power generators.

Routine sampling, laboratory analysis, and reporting are conducted to verify compliance with applicable drinking water standards established by FDEP and EPA. Analyses are performed either in the City's National Environmental Laboratory Accreditation Program (NELAP) Certified lab or through vendor NELAP Certified laboratories. These activities ensure that treated water consistently meets all primary and secondary drinking water regulations and that appropriate disinfectant residuals are maintained throughout the distribution system.

SECTION 3 DEVELOPMENT OF ALTERNATIVES

3.1 GENERAL

A desktop evaluation of currently available and emerging treatment technologies for PFAS was conducted to identify viable alternatives for implementation at the City's WTPs. The objective of this screening-level analysis was to assess each technology based on demonstrated PFAS removal performance, regulatory acceptance, operational complexity, residuals management requirements, and applicability to the facility's source water quality and treatment goals. Table 3-1 shows a comparison between different criteria for PFAS removal technologies.

3.2 TECHNOLOGIES CONSIDERED BUT NOT ADVANCED

The system under consideration would consist of five treatment facilities (at WTPs 1, 2, 3, and 5/6/8) located at geographically separate sites. Each facility currently performs minimal treatment (primarily pumping and disinfectant/phosphate dosing). As a result, any PFAS treatment solution must be implemented as a decentralized, distributed system.

This has a major impact on technology selection. Specifically:

- Each technology must be simple to operate and maintain.
- Systems should be modular and scalable.
- Demand for operator resources and staffing must be minimized.
- Capital and O&M costs could be greater than a similarly sized centralized facility.

Because of this, technologies that are complex, labor-intensive, or highly specialized are less favorable than those that are proven, passive, and easy to replicate across multiple sites. Processes that were not selected for further evaluation due to the listed criteria include:

3.2.1 ADVANCED OXIDATION PROCESSES (AOPS)

The advanced oxidation process (AOP) is a treatment process that uses strong chemical reactions with strong oxidizers such as hydrogen peroxide or ozone, along with ultraviolet (UV) light, to break down contaminants in water. This works very well for many organic contaminants. However, PFAS compounds have extremely strong chemical bonds that are very difficult to break, even with advanced oxidation.

Traditional AOP was not advanced because it is not reliably effective at destroying PFAS. The chemical reactions can sometimes transform longer-chain PFAS into shorter-chain PFAS or into unknown byproducts rather than removing them. It requires chemical feed systems, UV reactors, and continuous monitoring and control. In a system with four separate facilities, this would mean four sets of chemical systems, UV systems, and an increased operator workload at each site

Traditional AOP is too complex and insufficiently effective to remove PFAS as a standalone process to justify it as a primary treatment technology, especially in a distributed system.

3.2.2 TRADITIONAL ANION EXCHANGE

Anion exchange is a process where water passes through a tank filled with resin beads. These beads are designed to attract and retain negatively charged contaminants such as PFAS. Traditional anion exchange resins are typically used for hardness or total organic carbon treatment, not specifically for PFAS.

Traditional anion exchange is non-specific and will remove both organic contaminants and PFAS. While these resins could also provide the benefit of total organic carbon (TOC) removal, this property means TOC competes with PFAS for resin adsorption sites, making the treatment less efficient and sustainable. Traditional anion exchange uses resin beads that are less efficient than newer PFAS-specific resins and will require more frequent replacement. Traditional Anion systems require backflushing and a high salinity brine to recharge the resin beads (akin to a water softener system), creating a byproduct stream of high TDS and salinity. Since four systems are required, selecting a less efficient resin would increase long-term costs and maintenance frequency across all sites.

Traditional anion exchange was not shortlisted because a better version of the same technology (PFAS-specific IX) is available and more appropriate.

3.2.3 SUSPENDED ION EXCHANGE (SIX/MIEX) SYSTEMS

Suspended ion exchange (SIX) is similar to traditional ion exchange, but instead of fixed tanks, it uses fine resin particles that are mixed directly into the water and then removed afterward. This process is more dynamic and is often used for removing natural organic matter.

While promising, this technology is not widely used for PFAS in drinking water. It requires continuous dosing of resin, separation and recovery systems, and generally more operator control. In a distributed system, this means four systems with moving parts, increased maintenance, and operator attention

SIX is too operationally complex and not yet proven enough for PFAS to justify use at multiple small facilities.

3.2.4 REVERSE OSMOSIS (RO) AND NANO-FILTRATION (NF)

Reverse osmosis (RO) and nanofiltration (NF) are treatment processes in which water is forced through fine membranes under high pressure, removing nearly all contaminants, including PFAS. RO and NF are among the most effective technologies for PFAS removal; however, they are expensive to construct and operate. Each facility requires high-pressure pumping, pretreatment, membrane cleaning, finished-water stabilization, and a separate concentrate-disposal strategy. Concentrate management is likely to be the greatest feasibility hurdle and, under anticipated regulations, may require additional treatment to remove PFAS from the waste stream before disposal.

For the City's system, five separate RO/RF plants would be required, along with five concentrate disposal solutions. RO/NF provides excellent treatment but is too costly and complex for distributed small plants.

3.2.5 BLENDING AND CONSOLIDATION OF TREATMENT

Blending of high-PFAS and low-PFAS sources was evaluated as a potential compliance strategy. However, this approach does not provide actual removal or destruction of PFAS and is highly dependent on the availability and variability of source water. Since most PFAS-affected treatment plants' wells are contaminated with regulated PFAS above the MCL, consolidating facilities would be required, which does not align with the distributed City's water supply strategy and would require a large investment in new wells and raw water main piping. Additionally, blending may not provide a reliable or sustainable long-term solution under increasingly stringent regulatory limits.

3.3 TECHNOLOGIES ADVANCED FOR FURTHER EVALUATION

Three PFAS treatment technologies, PFAS-selective ion exchange, PFAS-selective novel/emerging adsorbents, and granular activated carbon, were advanced for further evaluation. All three technologies can reduce PFAS concentrations to meet current regulatory limits established by the U.S. Environmental Protection Agency. However, they differ significantly in cost, operational complexity, and effectiveness across PFAS compounds. In addition to the three alternatives evaluated, a "No Action" alternative was assessed as a baseline. The following sections provide a high-level analysis of the four alternatives.

3.3.1 PFAS-SELECTIVE ION EXCHANGE

PFAS-specific anion-exchange (IX) resin is widely recognized as one of the most effective technologies for removing both short- and long-chain PFAS. These systems use synthetic resins engineered to selectively adsorb PFAS and exchange them with a harmless ion, with improved affinity and capacity compared to

conventional ion-exchange media. This enhanced selectivity enables more consistent performance across varying water-quality conditions and makes PFAS-specific resins particularly effective for shorter-chain compounds that are more difficult to remove with other technologies. The empty bed contact time (EBCT) required for IX is typically lower than that for granular activated carbon (GAC) treatment, allowing for smaller vessels and a smaller footprint. As a result, PFAS-specific ion exchange has become the preferred ion-exchange approach for full-scale drinking water applications, with a strong track record of performance, operational reliability, and regulatory acceptance.

Ion exchange systems offer a compact footprint and relatively low capital cost compared to other systems, and can be implemented as modular, skid-mounted pressure-vessel units, making them well-suited for decentralized, distributed treatment applications. Operation is generally straightforward and involves routine monitoring and periodic resin replacement. In most drinking water systems, resins are used in a single-use configuration, which simplifies operations by avoiding the need for on-site regeneration or regular backwashing of the media.

Resin replacement frequency depends on influent PFAS concentrations and water quality, but typically occurs at multi-month to multi-year intervals. Operations and maintenance costs are driven primarily by resin replacement, regeneration if needed, and disposal, as spent resin must be managed in accordance with applicable regulations. Currently, disposal of resin includes landfill and incineration.

Overall, PFAS-specific ion exchange provides high removal efficiency, low energy demand, and operational simplicity, making it one of the most practical and effective treatment options for groundwater and distributed systems.

3.3.2 EMERGING / NOVEL PFAS-SELECTIVE ADSORBENTS

Emerging and novel PFAS-selective adsorbents, such as DEXORB and FLUORO-SORB, show promising results for removing PFAS from groundwater supplies. Instead of exchanging PFAS for other ions, these adsorbers rely primarily on surface chemistry to adsorb PFAS onto the media surface. Like ion exchange systems, these adsorbents are used in a pressure-vessel configuration, often skid-mounted, making them well-suited for decentralized, distributed treatment applications. Additionally, as with ion exchange resins, the empty bed contact time (EBCT) requirements are often lower than those for granular activated carbon, resulting in smaller vessels. The operation is also similar to that of other ion exchange systems.

DEXSORB is a proprietary regenerable, PFAS-selective adsorbent based on cyclodextrin polymer technology. After the media reaches its PFAS loading capacity, the adsorbed PFAS can be desorbed and concentrated through an off-site regeneration process, allowing the media to be reused rather than disposed of as spent media. The regeneration process produces a concentrated PFAS residual stream suitable for subsequent

destruction, reducing the volume of waste requiring management and potentially improving lifecycle sustainability compared to traditional adsorption technologies. Centralized regeneration facilities are currently being deployed to support large-scale municipal and industrial applications and provide a cradle-to-grave PFAS management approach.

FLUORO-SORB is a proprietary PFAS-selective adsorbent designed to remove a broad range of PFAS compounds from groundwater and drinking water applications. The media utilizes engineered surface chemistry to selectively bind both long- and short-chain PFAS while exhibiting reduced sensitivity to competing constituents, including natural organic matter, salinity, and other co-contaminants. Unlike regenerable adsorbent technologies, FLUORO-SORB is generally implemented as a single use media in which spent adsorbent is removed and managed upon exhaustion. However, its reported high adsorption capacity and resistance to competitive adsorption may reduce media replacement frequency and overall residuals generation compared to conventional adsorbents.

These adsorbents may offer advantages in adsorption capacity and treatment of shorter-chain PFAS, however, their use should be evaluated based on site-specific pilot testing, NSF certification status, vendor performance guarantees, residuals management requirements, and demonstrated full-scale potable water installations.

3.3.3 GRANULAR ACTIVATED CARBON (GAC)

Granular activated carbon is a well-established treatment technology widely used for the removal of organic contaminants and is also effective for long-chain PFAS. GAC systems function through adsorption onto porous carbon media and have a long history of use in drinking water applications, making them a proven and familiar option for utilities.

Compared to ion exchange, GAC systems typically require a larger footprint and higher capital investment due to larger vessel sizes and longer empty bed contact time (EBCT) requirements. Media changeout frequency is generally higher than that of ion exchange, especially in source waters with elevated levels of natural organic matter (NOM) and TOC, which compete for adsorption sites and reduce PFAS adsorption capacity. As a result, O&M costs can be higher than alternatives over time due to media replacement and disposal.

While GAC systems are simple to operate and widely accepted, their effectiveness for short-chain PFAS is more limited when comparted to ion exchange and specialty adsorbents. This may be an important consideration for long-term compliance as regulatory standards continue to evolve.

Overall, GAC provides a reliable, low-complexity treatment option, particularly when long-chain PFAS removal is the primary objective, operational simplicity is a priority, and source water is low in TOC and NOM.

3.3.4 NO ACTION ALTERNATIVE

While PFAS regulatory requirements may continue to evolve through changing federal priorities, legal challenges, and state-level actions, the underlying risk associated with PFAS in potable water remains. Delaying evaluation, monitoring, or treatment efforts solely due to potential regulatory shifts can expose utilities and facility owners to future compliance challenges, increased capital costs, operational disruptions, and stakeholder concerns. Even if implementation timelines or specific standards are modified, the long-term trend toward increased scrutiny of PFAS is expected to continue, driven by ongoing scientific research, public awareness, and state regulatory initiatives. As a result, proactive assessment and planning for PFAS management represent a prudent risk mitigation strategy that can preserve flexibility, reduce future costs, and better position organizations to respond to evolving regulatory and public expectations.

A “No Action” alternative would place the City at risk of non-compliance with current and potentially future PFAS regulations. Based on this, the “No Action” alternative is not feasible.

Table 3-1 Comparison of PFAS Removal Technologies

Technology	Process Maturity	PFAS Removal Potential		Relative Capital Cost	Relitive Lifecycle Cost	Relitive O&M Difficulty	Relative Footprint	Maintenance	Residuals Management	Key Takeaway
		Long Chain	Short Chain							
PFAS-Specific Ion Exchange (IX)	Established	Very High	High	Medium	Medium	Medium	Small	Resin replacement or offsite regeneration (if available)	Spent resin disposal or regeneration	Most favorable overall technology for the City's groundwater conditions, offering high PFAS removal efficiency, small footprint, and proven municipal implementation with manageable O&M requirements.
Emerging / Novel PFAS-Selective Adsorbents	Emerging	High (promising)	Medium to Medium-High	Medium	Medium to Medium-High	Medium	Small	Media replacement or off-site regeneration	Spent media disposal or regeneration	Promising next-generation alternatives that may offer advantages in media life, selectivity, or residuals management, but currently have less full-scale municipal operating history than PFAS-specific IX.
Granular Activated Carbon (GAC)	Established	High	Low–Medium	Medium-High	Medium-High	Medium	Large	Media Regeneration	Spent media disposal or regeneration	Well-established technology with the added benefit of removing taste, odor, and organic contaminants; however, shorter media life and lower effectiveness for short-chain PFAS may increase lifecycle costs.
Advanced Oxidation Process	Emerging	Low–Medium	Low	High	High	High	Medium	Energy/chemical intensive	Possible byproducts	Generally better suited as a destruction technology than a standalone removal process; currently less mature and more complex for municipal PFAS compliance applications.
Traditional Anion Exchange	Established	High	Medium–High	Medium	Medium-High	Medium	Small	Resin Replacement	Spent resin disposal or brine disposal from regeneration	Capable of effective PFAS removal but generally less selective than PFAS-specific resins, resulting in greater sensitivity to competing ions and potentially shorter media life.
Suspended Ion Exchange (SIX/MIEX)	Established	Medium	Medium	Medium	Medium-High	Medium–High	Small–Medium	Continuous resin handling	PFAS-laden resin/brine disposal	It may provide benefits as a pretreatment process in waters with elevated competing constituents, but it has limited application as a primary PFAS treatment technology.
Reverse-Osmosis (RO) and Nanofiltration (NF)	Established	High–Very High	High	High	High	High	Medium	Membrane cleaning (chemically)	Concentrated brine disposal	Provides the highest level of PFAS removal across a broad range of compounds but is often constrained by high capital and operating costs, concentrate management requirements, and operational complexity.
Blending and Consolidation of Treatment	Established	N/A	N/A	Low	Low	Low	Very Small	Minimal	None	May provide a near-term compliance strategy where sufficient low-PFAS water is available, but does not remove PFAS and may reduce system resiliency and operational flexibility.
No Action	N/A	None	None	Very Low	Very Low	Very Low	Very Low	Very Low	None	A “Do Nothing” alternative will not address PFAS regulations and will place the City in noncompliance and at public health risk.

3.4 ALTERNATIVE 1: PFAS-SELECTIVE ION EXCHANGE (IX)

3.4.1 TREATMENT MECHANISM

PFAS-selective ion-exchange (IX) systems utilize synthetic anion-exchange resins engineered to preferentially adsorb PFAS via a combination of electrostatic attraction and hydrophobic interactions, then exchange them for harmless ions. These resins are specifically tailored to improve selectivity for PFAS relative to competing anions such as sulfate and nitrate, thereby enabling more efficient use of media capacity than conventional resins or carbon-based systems. Additionally, PFAS-selective IX systems consistently achieve high removal efficiencies for both long- and short-chain compounds. IX vessels are typically designed in a two-vessel lead-lag configuration. The PFAS concentration exiting the lead vessel is monitored for breakthrough to determine when the resin should be replaced. Upon breakthrough, the spent resin in the lead breakthrough will be replaced with regenerated or virgin resin. The flow of the vessels will switch so the previous lag vessel becomes the new lead, and the vessel with the regenerated or virgin resin is placed in the lag position.

3.4.2 COMPLIANCE CONSIDERATIONS

IX systems are widely regarded as capable of achieving both current and anticipated PFAS regulatory limits, including increasingly stringent standards targeting low parts-per-trillion concentrations and expanded compound lists. The strong performance of PFAS-selective resins for short-chain compounds provides a level of regulatory resiliency that is not consistently achievable with GAC systems.

Compliance with IX systems is primarily managed through routine effluent monitoring and proactive resin changeout scheduling. Because PFAS breakthrough tends to occur relatively sharply once resin capacity is reached, vessels are typically designed in a lead-lag configuration. Consistent monitoring of the lead vessel's effluent is critical to ensure that replacement occurs before regulatory limits are exceeded.

Residuals management also represents a key compliance consideration. Spent resin containing adsorbed PFAS must be removed and disposed of in accordance with applicable regulatory requirements, or if available, regenerated. Single-use resins are currently disposed of via landfill or high-temperature incineration. Regeneration is feasible for some resins, either at a customer's site or as a service, resulting in a concentrated waste stream that is more cost-effective for destruction. Regulatory expectations are evolving toward destruction-based approaches, either with single-use or regenerable resins.

3.4.3 FOOTPRINT

PFAS-selective ion exchange is expected to have a relatively smaller footprint, approximately 40 to 60 percent less area than a comparable GAC system. At full scale at the City's facilities, a conceptual IX system would most likely consist of one (1) to four (4) pressure-vessel skids in parallel, with each skid's vessels arranged in a lead-lag configuration, along with associated piping, valves, and a small control panel. Individual vessels would likely be six (6) to twelve (12) feet in diameter, depending on site flows, the selected loading rate, and the resin volume.

3.4.4 OPERATION & MAINTENANCE CONSIDERATIONS

From an operational standpoint, IX systems are moderately complex but generally manageable for operators familiar with pressure vessel treatment processes. Once placed into service, IX systems tend to operate in a stable and predictable manner, with relatively few process adjustments required under steady-state conditions.

Routine operation primarily involves monitoring system pressures, flow rates, and effluent PFAS concentrations, and tracking the total volume of water treated to estimate the remaining resin capacity.

The most significant operational event associated with IX systems is resin changeout. Depending on influent PFAS concentrations and water quality characteristics, resin replacement may occur at intervals ranging from several months to multiple years. Changeout activities involve isolating the vessel, removing spent resin (typically via vacuum or slurry methods), refilling with new or regenerated resin, and returning the system to service. While these events are infrequent, they do require coordination with vendors and temporary adjustments to system operations.

For a distributed system with four treatment sites, operators will need to manage resin life cycles across multiple locations, potentially requiring centralized tracking and scheduling to optimize labor and minimize disruptions.

3.4.5 RESIDUALS MANAGEMENT

The primary residual generated by IX systems is spent resin containing concentrated PFAS. This material must be handled, transported, and disposed of off-site or regenerated in accordance with applicable regulations. Current industry practice typically involves either disposal in permitted landfills or destruction via high-temperature incineration, on-site regeneration, or off-site regeneration as a service.

The regulatory landscape for PFAS residuals management is evolving, with increasing scrutiny on landfill disposal due to the potential for long-term leaching. As a result, destruction technologies are expected to become more prevalent, although these options may carry higher costs and logistical considerations.

Depending on the resin manufacturer and type, regeneration is feasible. This can be accomplished either on-site or off-site as a service. Regeneration concentrates PFAS in a waste stream, making it more cost-effective to handle. On-site regeneration can occur at the facility or, in the City's case, at a centralized location, but it will require additional capital and operational expenses. Offsite regeneration as a service is likely a more feasible option for the City, in which a vendor removes and regenerates the resin, handles residual management, and provides traceable warehousing for the City's dedicated resin. Either way, the resin will need to be occasionally replaced with "virgin" resin to maintain effective PFAS removal.

PFAS-selective IX systems generally require less routine backwashing than GAC systems, typically a simple rinse after media changeout. Periodic backwashing is typically discouraged to prevent disturbance of the mass-transfer zone (the zone where PFAS is currently being removed). If hydraulic performance issues occur, such as excessive pressure drop due to accumulated solids, careful backwashing can be performed at the manufacturer's specified rates. Backwash wastewater volumes are typically small; however, facilities will need to discharge backwash water to a sanitary sewer (gravity or force main), subject to any applicable pretreatment requirements.

3.4.6 COST IMPLICATIONS

The capital cost of IX systems is generally moderate compared with other alternatives and is driven primarily by the procurement of pressure vessels, PFAS-selective resin, and associated piping, instrumentation, and controls. Because each treatment location will require independent systems, there is limited opportunity for economies of scale, and total project costs will reflect the need to replicate equipment across sites. Additional capital considerations include site work, electrical integration, and installation.

Operations and maintenance costs for IX systems are dominated by resin replacement and disposal, or regeneration. The frequency of replacement depends heavily on influent PFAS concentrations and water quality, but overall costs are generally lower than those of GAC systems over the long term. Additional O&M costs include routine monitoring, laboratory analysis, and minor energy consumption associated with pumping through the system.

Table 3-2 presents the estimated capital and annual O&M costs associated with implementing IX treatment. For baseline comparison purposes, capital costs are primarily represented by the IX system, which is expected to be the primary driver of total project cost, except for consolidated WTP-5/6/8.

O&M costs for IX systems are largely driven by media regeneration and replacement. Media regeneration has been assumed to be performed as a "regeneration as a service," in which media is removed, replenished with fresh media, and spent media is taken offsite, regenerated, and inventoried by the manufacturer. Single-use regeneration media is losing applicability as disposal options come under additional scrutiny and is therefore not considered. Additionally, on-site regeneration is capital-intensive and operationally complex and is therefore not considered either. Costs are detailed further in Appendix B.

Table 3-2 Alternative 1 PFAS IX Costs

Plant	Capital Cost[1]	20-Year O&M Costs[2]	20-Year Total Costs	$/kgal[2]
WTP-1	$5,198,674	$2,873,528	$8,072,203	$0.92
WTP-2	$4,586,971	$4,126,825	$8,713,796	$0.83
WTP-3	$6,653,276	$4,126,825	$10,780,101	$0.77
WTP-5/6/8	$42,592,844	$9,030,175	$51,623,019	$3.26
Total	**$59,031,765**	**$20,157,354**	**$79,189,119**	

1 – Capital costs are inclusive of construction contingency, design, and technical services during construction.

2 – O&M and $/kgal costs are not total facility costs, only costs related to the evaluated alternative.

3 – All values are in Net Present Value (NPV), assuming a discount rate of 5%.

If an IX system is selected, further refinement and verification of capital and O&M cost estimates should be performed, at a minimum by conducting rapid small-scale column tests (RSSCTs) to develop facility-specific design parameters and support final system design.

3.5 ALTERNATIVE 2: EMERGING / NOVEL PFAS-SELECTIVE ADSORBENTS

3.5.1 TREATMENT MECHANISM

Emerging and novel PFAS-selective adsorbents are engineered materials that preferentially bind PFAS via hydrophobic interactions, molecular recognition, electrostatic attraction, and proprietary surface chemistries. Adsorbents typically have higher removal rates than comparable granular activated carbon (GAC) systems. Unlike conventional GAC, these media are designed to improve selectivity for both long- and short-chain PFAS while minimizing competition from naturally occurring organic matter and other dissolved constituents.

Like IX systems, adsorbent systems are typically designed in a two-vessel lead-lag configuration. The PFAS concentration exiting the lead vessel is being monitored for breakthrough to determine when the media should be replaced. Upon breakthrough, the spent media in the lead breakthrough will be replaced with regenerated

or virgin media. The flow of the vessels will switch so the previous lag vessel becomes the new lead, and the vessel with the regenerated or virgin media is placed in the lag position.

3.5.2 COMPLIANCE CONSIDERATIONS

Emerging and novel PFAS-selective adsorbents have demonstrated promising removal performance for a broad range of regulated PFAS compounds and may be capable of achieving concentrations below current federal and state drinking water standards. However, compared to more established technologies such as PFAS-specific ion exchange and granular activated carbon, these media generally have fewer full-scale municipal drinking water installations and less long-term operational data available. Utilities considering these technologies should evaluate regulatory acceptance, NSF/ANSI certification status, available performance guarantees, pilot testing requirements, and demonstrated compliance histories at comparable facilities prior to implementation.

Like IX systems, vessels are typically designed in a lead-lag configuration to mitigate PFAS breakthrough once the media is loaded and can no longer remove PFAS. Consistent monitoring of the lead vessel's effluent concentration is critical to ensure that replacement occurs before regulatory limits are exceeded.

3.5.3 FOOTPRINT

Emerging and novel PFAS-selective adsorbent systems are typically implemented in pressure vessels or contactors of similar size and configuration to ion-exchange systems, resulting in a relatively compact treatment footprint compared to granular activated carbon systems. The higher adsorption capacities claimed by some manufacturers may further reduce vessel requirements and media replacement frequencies, although actual footprint requirements depend on source water quality, design flow rates, target effluent concentrations, and selected empty-bed contact times. Overall, these technologies are generally considered well-suited for sites with limited available space or distributed groundwater treatment facilities.

3.5.4 OPERATION & MAINTENANCE CONSIDERATIONS

Operational requirements for emerging and novel PFAS-selective adsorbents are generally moderate and comparable to those of other fixed-bed adsorption technologies. Routine activities include performance and pressure-loss monitoring, periodic sampling to evaluate media breakthrough, and coordination of media replacement or regeneration. Depending on the selected technology, additional logistical considerations may include off-site regeneration services, media transportation, and residual management programs. While day-to-day operation is relatively straightforward, utilities should recognize that long-term maintenance

requirements and media life projections may be less established than those associated with conventional treatment technologies.

3.5.5 RESIDUALS MANAGEMENT

Residuals management requirements vary among PFAS-selective adsorbent technologies. Some media are designed for replacement and disposal following exhaustion, like conventional adsorption technologies, while others are intended to be regenerated through a vendor-managed process that removes and concentrates the adsorbed PFAS. Regeneration-based approaches may significantly reduce the volume of waste requiring disposal; however, they introduce additional considerations regarding transportation, regeneration service availability, and the ultimate destruction of PFAS. Regardless of the selected approach, utilities must ensure that residuals management practices comply with evolving federal and state requirements governing PFAS-containing wastes.

Backwash requirements for emerging PFAS-selective adsorbents vary by manufacturer and media type but are generally expected to be relatively low, similar to PFAS-selective IX systems. As with all alternatives, the discharge of backwash water into the City's sanitary sewer system will be required.

3.5.6 COST IMPLICATIONS

The estimated capital and annual O&M costs for implementing a PFAS-selective adsorbent system are similar to those for Alternative 1. Again, capital costs are primarily represented by the PFAS-selective adsorbent system, which is expected to be the primary driver of total project cost, except for consolidated WTP-5/6/8. As with other alternatives, O&M costs for PFAS-selective adsorbent systems are largely driven by media replacement. Table 3-3 presents the estimated capital and annual O&M costs associated with implementing PFAS-selective adsorbent treatment. Costs are detailed further in Appendix B.

Table 3-3 Alternative 2 Emerging/Novel PFAS-Selective Adsorbents Costs

Plant	Capital Cost[1]	20-Year O&M Costs[2]	20-Year Total Costs	$/kgal[2]
WTP-1	$5,772,167	$6,822,747	$12,594,913	$1.44
WTP-2	$4,468,412	$10,645,642	$15,114,053	$1.43
WTP-3	$6,531,620	$18,293,436	$24,825,056	$1.77
WTP-5/6/8	$39,979,679	$21,158,609	$61,138,288	$3.86
Total	**$56,751,877**	**$56,920,434**	**$113,672,311**	

1 – Capital costs are inclusive of construction contingency, design, and technical services during construction.

2 – O&M and $/kgal costs are not total facility costs, only costs related to the evaluated alternative.

3 – All values are in Net Present Value (NPV), assuming a discount rate of 5%.

While some emerging adsorbents may offer extended media life or reduced waste generation relative to conventional technologies, limited long-term operating data can make lifecycle cost projections more uncertain. If a PFAS-selective adsorbent system is selected, further refinement and verification of capital and O&M cost estimates should be performed, at a minimum by conducting RSSCTs to develop facility-specific design parameters and support the final system design. Additionally, novel processes or products carry a risk of later becoming unsupported by the manufacturer.

3.6 ALTERNATIVE 3: GRANULAR ACTIVATED CARBON

3.6.1 TREATMENT MECHANISM

GAC removes PFAS through physical adsorption onto a highly porous carbon media. The effectiveness of this process is governed by the characteristics of the PFAS compounds, the carbon media, and the presence of competing constituents in the source water. In general, GAC exhibits strong adsorption affinity for long-chain PFAS such as PFOA and PFOS, while shorter-chain compounds are less effectively retained due to their higher solubility and reduced hydrophobicity. Additionally, the presence of natural organic matter (NOM) can significantly reduce the number of available adsorption sites, further limiting PFAS removal performance, decreasing media life, and shortening breakthrough. Vessel size and long contact times are required for effective PFAS removal rates through GAC due to the media's non-selectivity for PFAS compounds.

3.6.2 COMPLIANCE CONSIDERATIONS

GAC systems have been widely implemented for PFAS treatment and are well-established from a regulatory standpoint. Their effectiveness against long-chain PFAS has enabled utilities with in-place systems to meet earlier regulatory guidance levels. However, the continued evolution of PFAS regulations toward lower limits and inclusion of short-chain compounds presents potential challenges.

Maintaining compliance with GAC systems is highly dependent on the frequency of media replacement and careful monitoring of breakthrough. Because breakthrough tends to occur more gradually than with IX systems, there is an increased reliance on frequent sampling and conservative changeout schedules to avoid exceedances. This is particularly important in a distributed system, where variability across sites may result in differing breakthrough timelines that must be tracked individually.

From a regulatory perspective, GAC remains an accepted and defensible technology. However, its long-term viability may be affected by future regulatory emphasis on removing short-chain PFAS and increasingly stringent limits.

3.6.3 FOOTPRINT

Granular activated carbon is expected to require the largest footprint among the three alternatives, even at the relatively small flows associated with the City's facilities. For these plants, a conceptual GAC system would likely consist of numerous skids, each with vessels in a lead/lag configuration. However, the vessels would generally be larger than those required for IX because the carbon media requires greater bed volume and longer contact time to achieve effective PFAS removal. For the City's flow range, individual GAC vessels would likely be approximately twelve (12) feet in diameter.

3.6.4 OPERATION & MAINTENANCE CONSIDERATIONS

GAC systems are generally considered straightforward to operate and are familiar to most water treatment operators. Once in service, the process requires relatively minimal active control, with operations largely focused on maintaining flow rates and monitoring system performance.

However, this simplicity is offset by the frequency and logistics of media replacement. Due to the lower adsorption capacity for PFAS, particularly in the presence of competing organic matter, GAC media typically require replacement more frequently than IX resin or novel adsorbents.

Operational responsibilities include regular PFAS sampling to track breakthrough, monitoring head loss across the vessels, and coordinating media changeout activities. Regular backwashing is expected, and operators will be responsible for tracking filter performance and managing backwashing events.

For a distributed system, the increased frequency of media replacement across multiple sites can result in a higher cumulative operational burden compared to IX, requiring more frequent servicing and labor allocation.

3.6.5 RESIDUALS MANAGEMENT

The primary residual generated by GAC systems is spent carbon media containing adsorbed PFAS. This material must be removed from the vessels and transported off-site for either disposal or reactivation.

Reactivation, which involves thermal treatment to restore adsorption capacity, is commonly practiced. However, not all facilities or regulatory frameworks may permit the reactivation of PFAS-laden carbon, given concerns about PFAS destruction and potential emissions. Like IX, landfill disposal is subject to increasing regulatory scrutiny.

Compared to IX and PFAS-selective adsorbents, GAC systems generate a larger volume of residual material due to the greater quantity of media required. This results in increased requirements for handling,

transportation, and disposal. Operationally, media removal typically involves vacuum trucks or slurry removal systems, along with staging and loading areas at each site.

GAC systems typically require more frequent, higher-volume backwashing than IX or emerging adsorbent systems, resulting in greater demands on backwash management. As with all alternatives, backwash water will be discharged into the City's sanitary sewer system, and equalization and pumping facilities will be needed, increasing project complexity and lifecycle costs.

3.6.6 COST IMPLICATIONS

The capital cost of GAC systems is moderate to high relative to IX, primarily driven by larger vessel sizes, increased media volume, and the potential need for additional infrastructure, such as backwash systems and structural supports. For distributed sites, these larger systems can significantly increase total project cost, particularly where site modifications are required to accommodate the footprint.

As with other alternatives, O&M costs for GAC systems are largely driven by the frequency of media replacement. Because GAC typically has a shorter service life than IX resin under comparable conditions, long-term O&M costs can be substantial. Energy requirements are generally low, similar to IX, and are not a primary cost driver. Table 3-4 presents the estimated capital and annual O&M costs associated with implementing PFAS-selective adsorbent treatment. Costs are detailed further in Appendix B.

Table 3-4 Alternative 3 GAC Costs

Plant	Capital Cost[1]	20-Year O&M Costs[2]	20-Year Total Costs	$/kgal[2]
WTP-1	$9,150,247	$4,893,761	$14,044,009	**$1.60**
WTP-2	$9,380,649	$4,893,761	$14,274,410	**$1.35**
WTP-3	$11,310,566	$4,893,761	$16,204,327	**$1.16**
WTP-5/6/8	$45,982,441	$5,059,091	$51,041,532	**$3.23**
Total	**$75,823,904**	**$19,740,375**	**$95,564,279**	

1 – Capital costs are inclusive of construction contingency, design, and technical services during construction.

2 – O&M and $/kgal costs are not total facility costs, only costs related to the evaluated alternative.

3 – All values are in Net Present Value (NPV), assuming a discount rate of 5%.

Since GAC PFAS removal performance is heavily dependent on other raw water characteristics, such as the presence of NOM, if selected, further refinement and verification of capital and O&M cost estimates are necessary by conducting RSSCTs to develop facility-specific design parameters and support the final system design.

3.7 SUMMARY AND RECOMMENDATION

Based on an evaluation of available treatment technologies and the distributed nature of the water system, PFAS-selective ion exchange (IX), PFAS-specific emerging/novel adsorbents, and granular activated carbon (GAC) were identified as the most appropriate alternatives for further consideration. As shown in Table 3-5 the estimated costs associated with implementing these alternatives vary substantially.

Among these, PFAS-selective ion exchange represents the most balanced and practical solution. It provides high removal efficiency for both short- and long-chain PFAS while maintaining a compact footprint, relatively low energy demand, and manageable operational requirements. These characteristics make it particularly well-suited for implementation across multiple small, distributed treatment facilities.

Emerging/novel PFAS-selective adsorbents are promising but less established. Selecting this alternative would require careful piloting not only among the available adsorbents but also with PFAS-selective IX resins and GAC to build confidence in their use. These resins might prove more effective in the future and could be considered for later improvements.

Granular activated carbon offers a proven and operationally simple alternative with a long track record in drinking water treatment. It may be advantageous in applications where removing long-chain PFAS is the primary objective. However, its reduced effectiveness for short-chain PFAS and its larger footprint may limit its long-term applicability under evolving regulatory conditions and the limited property space available at each of the City's treatment facilities.

Overall, adsorption-based technologies, particularly PFAS-specific ion exchange, are generally better aligned with the needs of a multi-site, decentralized system, while GAC may be more appropriate in cases where higher treatment capacities are centralized, or when co-removal of other contaminants is needed.

Table 3-5 Alternative Cost Comparison

Alternative	Capital Costs, NPV $	20-Year O&M Costs, NPV $	20-Year Total Costs, NPV $
1 - PFAS Selective Ion Exchange	$59,031,765	$20,157,354	**$79,189,119**
2 - Emerging / Novel PFAS-Selective Adsorbents	$56,751,877	$56,920,434	**$113,672,311**
3 - Granular Activated Carbon	$75,823,904	$19,740,375	**$95,564,279**

1 – Capital costs are inclusive of construction contingency, design, and technical services during construction.

2 – O&M and $/kgal costs are not total facility costs, only costs related to the evaluated alternative.

3 – All values are in Net Present Value (NPV), assuming a discount rate of 5%.

During facility design, it is recommended that rapid small-scale column testing (RSSCT) be used to screen and shortlist available PFAS-selective ion exchange (IX) resins. The shortlisted resins should then undergo bench-scale and pilot-scale testing, alongside at least one novel PFAS adsorbent and one granular activated carbon (GAC) media, to further refine treatment design and support informed decision-making.

SECTION 4 SELECTED PLAN

4.1 OVERVIEW

The PFAS-selective ion exchange (IX) process is selected for its relatively low capital and operating costs and its ability to meet the site constraints at the City's facilities. The IX process will be constructed between the groundwater wells and prior to oxidative processes, aeration, storage, and pumping. Each site will require access considerations, a gravity or force main connection to the City's sanitary system (with appropriate air gaps), and modifications to yard piping, electrical, and instrumentation.

WTP-1, 2, and 3 already have on-site aeration, storage, and pumping, and the IX systems will be installed at each facility. WTP-5, 6, and 8 lack aeration and storage and because they have limited site space, are relatively close together, and lack storage and pumping for backwash, WTP-5, 6, and 8 will be consolidated into a single treatment facility. The City is evaluating property acquisition for this consolidated facility.

This Section and associated figures provide a basis of design for these improvements.

4.2 DESCRIPTION OF PROPOSED FACILITIES

4.2.1 OVERVIEW OF SUPPLY AND TREATMENT SYSTEM

No modifications are proposed to the City's current or future groundwater wells. The IX systems will have associated head losses, but these are expected to be manageable by the City's existing well pumps, with minor or no improvements needed. Each facility will have the IX system installed after all well flows are manifolded, with bypass provisions. Polyphosphate and chlorine injection will be relocated after the IX systems, prior to aeration and storage.

Each facility will utilize existing forced-draft aeration systems, ground storage tanks, and high-service pumps; in the case of the consolidated WTP-5, 6, and 8 facility, new systems will be installed. Proposed process flow diagrams and site plans for each facility are included in Appendix C. Design criteria for the modifications are outlined further below.

4.2.2 GROUNDWATER SUPPLY WELLS

Groundwater wells for each facility will remain as is, except for Well 9 (WTP-5), Well 10 (WTP-6), and Well 12 (WTP-8), which will be modified to manifold their discharges along S Amelia Ave to a centralized facility. The basis for this plan is the assumption that the City will acquire parcels to centralize WTP-5, 6, and 8 near the intersection of S Amelia Ave and E Euclid Ave, a move that will require approximately 1,500 feet of new raw water main. Adjustments to the wells at these consolidated facilities will be needed because their operating point shifts to a lower head. Chemical processes at each wellhead will be taken offline, and new ones will be installed at the consolidated facility. Additionally, minor electrical, control, and instrumentation work will be needed at the existing wellheads to support the consolidation. Additionally, out-of-service wells associated with the PFAS facilities will be rehabilitated, if not online at the time of the improvements. Design criteria for the groundwater supply wells are outlined in Table 4-1.

Table 4-1 Groundwater Well Design Criteria

Plant	Well	Design Criteria
WTP-1	Well 5	Offline and under evaluation by the City
	Well 8	No Modifications
WTP-2	Well 3	No Modifications
	Well 4	No Modifications
WTP-3	Well 7	No Modifications
	Well 11	No Modifications
	Well 27	No Modifications
	Well 28	No Modifications
WTP-5/6/8	Well 9	Minor modifications for lower head conditions
	Well 10	Minor modifications for lower head conditions
	Well 12	Minor modifications for lower head conditions

4.2.3 PFAS-SELECTIVE ION EXCHANGE SYSTEMS

The PFAS-selective IX systems will include one or more skids, with each skid consisting of two pressure vessels. Each skid will require a valving manifold to manage raw, backwash, and finished water. These manifolds will include manually operated valves and pressure gauge panels to monitor head loss. Raw groundwater flow for each skid will be monitored with dedicated flow meters and manually modulated. Treated water will be conveyed to downstream processes, including chemical treatment, aeration, storage, and pumping. Backwash will be manually controlled, with backwash water supplied by the high-service pumps. Backwash wastewater

will either enter an adjacent manhole or be directed to a dedicated storage and pump station to send flow to the nearest force main or manhole, as outlined in Table 4-2.

Table 4-2 Backwash Wastewater Connections

Facility	Nearest Manhole	Connection Method
WTP-1	~1,200 ft to the southeast at W Wisconsin Ave and N Boundary Ave	On-site lift station and off-site force main (~1,800 ft)
WTP-2	On-site manhole	Gravity connection
WTP-3	~500 ft to the southwest along Brandywine Rd	On-site lift station and off-site force main (~500 ft)
Consolidated WTP5, 6, 8	< 100 ft, pending site selection	Gravity connection

IX skids will be mounted on an engineered slab-on-grade, with access driveways for service and resin exchange. Typical design criteria for the PFAS-selective IX systems are outlined in Table 4-3.

Table 4-3 Typical PFAS-Selective IX System Design Criteria

Design Criteria	Value
Empty Bed Contact Time, Minimum (EBCT)	2 minutes
Hydraulic Loading Rate, Minimum	4 gpm/SF
Hydraulic Loading Rate, Maximum	20 gpm/SF
Configuration	Lead / Lag
Backwash Frequency	Only at initial rinse
Backwash Hydraulic Loading Rate,	1 to 2 gpm/SF
Media Regeneration Frequency, Average[1]	Approximately 200,000 bed volumes
Media Replacement Frequency, Average[1]	15 years

1 – Frequency is average-estimated based on vendor bench, pilot, and full-scale data.

Using the typical IX design criteria outlined above, site-specific design criteria are outlined in Table 4-4 below.

Table 4-4 Site-Specific PFAS-Selective IX System Design Criteria

Facility	Number of Skids	Vessels per Skid	Vessel Diameters, ft	Total Resin Volume, CF
WTP-1	2	2	8	1,006
WTP-2	3	2	8	1,509
WTP-3	3	2	8	1,509
Consolidated WTP5, 6, 8	4	2	10	4,084

4.2.4 CHEMICAL TREATMENT SYSTEMS

The existing facilities have corrosion control and gas-chlorine disinfection systems. Corrosion control injection will be relocated after the IX systems, and the gas-chlorine pre-injection location will generally remain the same, after the IX systems and prior to aeration and storage. Post-injection of gas-chlorine will remain unchanged. No new or additional chemical treatment systems are proposed, except for the consolidated WTP-5, 6, and 8 facility, which will have new corrosion control and disinfection processes installed. Design criteria for the consolidated WTP5, 6, and 8 chemical treatment systems are outlined in Table 4-5, Table 4-6, and Table 4-7.

Table 4-5 Chemical Treatment Dosage Design Criteria

Chemical	2025 Historic Dosage	Design Dosage
Phosphate Blend Corrosion Inhibitor (Carus SK-7641)	3.7 mg/L as Product	5.0 mg/L as Product
Gas Chlorine	4.9 mg/L Cl_2	7.5 mg/L Cl_2

Table 4-6 Chlorine Storage Design Criteria

Facility	2025 Max Month Flow (MGD)	30-Day Supply (pounds)	Online Storage
WTP-1	0.525	985	(2) 150-pound cylinders, pre (existing) (2) 150-pound cylinders, post (existing)
WTP-2	0.866	1,625	(2) 150-pound cylinders, pre (existing) (2) 150-pound cylinders, post (existing)
WTP-3	1.557	2,922	(2) 150-pound cylinders, pre (existing) (2) 150-pound cylinders, post (existing)
Consolidated WTP5, 6, 8	1.689	3,169	(2) 150-pound cylinders, pre (proposed) (2) 150-pound cylinders, post (proposed)

1 – 30-day supply based on the 2025 maximum monthly flow.

Table 4-7 Phosphate Blend Storage Design Criteria

Facility	2025 Max Month Flow (MGD)	30-Day Supply (gal)	Online Storage
WTP-1	0.525 MGD	57	55-gallon day tank (existing)
WTP-2	0.866 MGD	94	55-gallon day tank, Well 3 (existing) 55-gallon day tank, Well 4 (existing)
WTP-3	1.557 MGD	169	55-gallon day tank, Well 27/28 (existing) 55-gallon day tank, Well 7, 11 (proposed)
Consolidated WTP5, 6, 8	1.689 MGD	184	55-gallon day tank, Well 9 (proposed) 55-gallon day tank, Well 10 (proposed) 55-gallon day tank, Well 12 (proposed)

1 – 30-day supply based on the 2025 maximum monthly flow.

4.2.5 STORAGE AND PUMPING

The existing storage facilities will remain unchanged, except for a new ground storage tank at the WTP 5, 6, and 8 consolidated facility. Pumping facilities will require minor modifications. Finished water lines, post high-service pump, will be tapped to provide backwash water. Design criteria for the pumping and storage facilities are outlined in Table 4-8 and Table 4-9.

Table 4-8 High-Service Pump Design Criteria

Facility	Finished Water Pumping Capacity	Firm Capacity (gpm)
WTP-1	(3) 1,500 gpm HSPs (existing)[1]	3,000 gpm (existing)[1]
WTP-2	(3) 1,000 gpm HSPs (existing)[1]	2,000 gpm (existing)[1]
WTP-3	(3) 1,500 gpm HSPs (existing)[1]	3,000 gpm (existing)[1]
Consolidated WTP5, 6, 8	(3) 1,700 gpm HSP (proposed)[2]	3,250 gpm (proposed)[2]

1 - The capacity of existing HSPs is based on the best available records.
2 – Sized to provide the same capacity as existing well pumps, based on the best available records.

Table 4-9 Finished Water Storage Design Criteria

Facility	Storage
WTP-1	0.750 MG Ground Storage Tank
WTP-2	0.500 Elevated Storage Tank
WTP-3	0.750 MG Ground Storage Tank
Consolidated WTP5, 6, 8	1.000 MG Ground Storage Tank

4.3 RESIDUAL MANAGEMENT

Spent PFAS-selective IX resin management depends on the resin type, regulatory requirements, available vendor services, and the City's risk tolerance. Many PFAS-selective resins used for drinking-water treatment are designed for single use; once exhausted, they are removed and managed through approved disposal or destruction pathways, such as high-temperature thermal treatment or, where permitted, landfilling. Other IX products are regenerable, meaning PFAS can be stripped from the resin to restore some removal capacity. However, regeneration does not destroy PFAS; it transfers and concentrates PFAS into a smaller volume regenerant waste stream that must be further managed, treated, or destroyed.

For a decentralized system, on-site regeneration would likely add substantial complexity, including regenerant storage and handling, secondary waste management, permitting considerations, operator training, process controls, and additional capital and O&M costs. Where a qualified vendor offers off-site regeneration or media management services, that approach may be more practical for the City. Exhausted resin can be removed from the vessels on a scheduled basis or in response to performance monitoring and transported to a centralized facility. The vendor would then manage regeneration, quality control of the regenerated media, and residual handling in accordance with its approved procedures.

Off-site vendor-managed resin replacement, regeneration, or disposal should be considered the preferred near-term approach for the City, subject to confirmation of resin, vendor availability, transportation, and disposal requirements.

4.4 ENVIRONMENTAL IMPACTS OF THE PROPOSED FACILITIES

The long-term environmental impacts associated with the proposed PFAS-treatment systems are anticipated to be minimal. The proposed improvements will be constructed within the limits of the City's existing water treatment plant (WTP) sites, or in the case of the consolidated WTP 5, 6, & 8, on proposed platted parcels adjacent to the facility. As a result, no significant land disturbance or expansion into previously undeveloped areas is expected.

During construction, temporary impacts may include minor noise, dust generation, and localized site disturbance associated with equipment installation, piping modifications, and concrete work. These impacts will be mitigated through the implementation of appropriate Best Management Practices (BMPs), including erosion and sedimentation controls to prevent off-site migration of stormwater runoff, dust suppression measures, and adherence to local noise ordinances. Construction activities will be short-term in nature and limited to previously disturbed areas within each facility. Public outreach and communication with residents will also be used to ease the burden on residents.

Operational impacts are also anticipated to be minimal. The primary residual generated is spent media, which will be periodically removed and transported off-site for proper disposal, regeneration, or destruction in accordance with applicable regulations. These activities will be infrequent and conducted by qualified vendors, minimizing the potential for environmental impact.

The proposed project is not expected to adversely affect wetlands, floodplains, or other environmentally sensitive areas. Similarly, no impacts are anticipated on wild and scenic rivers, threatened or endangered species, prime agricultural lands, or undisturbed natural habitats.

The facilities will be designed and constructed in accordance with all applicable federal, state, and local regulations, including environmental permitting requirements. With the implementation of standard construction controls and adherence to regulatory requirements, the proposed improvements are expected to result in minimal short-term impacts and no significant long-term adverse environmental effects

4.5 STAFFING

Per Florida Administrative Code 62-699.310, staffing requirements for water treatment facilities are determined by plant classification, treatment processes, and system capacity. The facilities subject to this plan are currently Category IV Class C, with reduced staffing based on remote monitoring (SCADA). The proposed improved facilities will be reclassified as outlined in Table 4-10.

Table 4-10 Improved Facilities Category and Classification

Facility	Design Capacity	Category	Class
WTP-1	2.74 MGD	III	B
WTP-2	2.74 MGD	III	B
WTP-3	2.74 MGD	III	B
Consolidated WTP5, 6, 8	4.17 MGD[1]	III	B

1 – Based on the combined design flows for WTP 5, 6, & 8 per 2020 sanitary survey.

Category III Class B facilities require staffing by a Class C or higher operator for 16 hours/day, 7 days/week, with the lead/chief operator Class B or higher. Upon written request, FDEP can approve a reduction in staffing requirements for proposed new water treatment plants that are equipped with an electronic surveillance, automatic control, or electronic control system. The City's existing supervisory control and data acquisition (SCADA) system provides continuous monitoring of system performance and supports alarm-based response during non-staffed hours. Staffing for a Class B plant can be reduced to no less than staffing by a Class C or higher operator, 4 hours/day for 5 days/week, and one visit by a Class C or higher operator on each weekend day. The class of the lead/chief operator cannot be reduced. Since the plants are all connected to a single PWS,

during design and permitting, the City will engage with FDEP and FDOH early to determine the extent of permissible staffing reductions.

4.6 CONSISTENCY WITH THE COMPREHENSIVE PLAN

The Facilities Plan is consistent with the City of DeLand Comprehensive Plan because it constitutes a necessary public utility infrastructure improvement that protects public health, preserves and enhances potable water service, protects groundwater resources, maintains adopted levels of service, supports economic development, and implements the City's goals for coordinated and sustainable infrastructure investment. The project directly advances the Public Services, Conservation, Capital Improvements, Intergovernmental Coordination, and Economic Development Elements and is compatible with the broader community objectives set forth in the Comprehensive Plan.

4.7 PUBLIC SERVICES ELEMENT

The Public Services Element emphasizes maintaining public infrastructure, protecting water resources, and ensuring adequate potable water facilities. The Element specifically states that public facilities should protect the City's investment in existing infrastructure and provide adequate facility capacity. The Facility Plan is consistent with the following applicable Goals, Objectives, and Policies:

- Goal PS-1: Public facilities shall be provided in a manner which protects the City's investment in existing facilities.
- Policy PS1.1.2: Improvements for replacement, expansion, or increase in capacity of facilities shall be compatible with adopted level of service standards.

4.8 CONSERVATION ELEMENT

The Conservation Element focuses on protecting groundwater resources, aquifers, and surface water quality. The Facility Plan is consistent with the following applicable Goals, Objectives, and Policies:

- Goal C-1: The City shall Conserve , Protect , Manage, Restore, natural resources including Surficial and Floridan Aquifers , Surface water supplies, Groundwater supplies.
- Objective C1.2: The City shall continue to conserve and protect the quality of current and future water sources and coordinate water quality issues with state, regional, and local agencies.
- Policy C1.2.1: The City shall protect groundwater from point and non-point sources of pollution and manage water quality.

4.9 CAPITAL IMPROVEMENTS ELEMENT

The Capital Improvements Element requires the City to provide public facilities that maintain adopted levels of service and protect investments in infrastructure. The Facility Plan is consistent with the following applicable Goals, Objectives, and Policies:

- Goal CI-1: The City shall Provide needed public facilities, Protect investments in existing facilities, Maximize use of existing facilities; and Promote orderly growth.
- Policy CI1.2.1: Development shall bear its fair share of public facilities necessary to maintain adopted LOS standards.
- Policy CI1.2.2: Water and sewer impact fees shall be used to fund expansion and improvements of the City's water and sewer systems.
- Policy CI1.2.6: Development approval shall be conditioned upon sufficient facilities being present or provided to maintain LOS standards.

4.10 INTERGOVERNMENTAL COORDINATION ELEMENT

The Intergovernmental Coordination Element encourages coordination with state, regional, and local agencies. The Facility Plan is consistent with the following applicable Goals, Objectives, and Policies:

- Goal I-1: Foster and encourage intergovernmental coordination between the City and federal, state, and local governmental jurisdictions.

4.11 ECONOMIC DEVELOPMENT ELEMENT

The Economic Development Element promotes infrastructure investments necessary to support business growth and redevelopment. The Facility Plan is consistent with the following applicable Goals, Objectives, and Policies:

- Policy ECON2.1.4: Identify infrastructure improvements needed to support existing and new development and incorporate infrastructure priorities into the Capital Improvement Program.

SECTION 5 IMPLEMENTATION AND COMPLIANCE

5.1 PUBLIC HEARING/MEETING

A public meeting will be held at the City Commission Chambers at the DeLand City Hall on July 20, 2026, at 7:00 pm. A public notice was issued for this Facility Plan at least fourteen (14) days prior to the Meeting for review of the details of the project, its cost implications, and evaluation of project alternatives.

The Commission Meeting shall be public, with City citizens wishing to observe and/or provide comments on the record in attendance. Meeting Minutes will be taken and will be submitted, along with the adopted resolution, with the SRF Request for Inclusion.

5.2 REGULATORY AGENCY REVIEW

To qualify for a subsidized loan from the SRF, various government agencies must be satisfied with how the City's water system problem will be solved. Copies of the facilities plan adopted by the City Commission are to be sent to the following government agencies for review and comments:

- Florida Department of Environmental Protection
- Florida Department of Health
- St Johns River Water Management District
- U.S. Environmental Protection Agency

5.3 FINANCIAL PLANNING

The estimated total project cost for the recommended improvements is approximately $58,930,404, including planning, design, permitting, land acquisition, construction, engineering services during construction, legal and administrative costs, and project contingencies.

The City intends to finance the project through the Florida Department of Environmental Protection (FDEP) Drinking Water State Revolving Fund (DWSRF) Program. Upon placement on the DWSRF Priority List and approval of the loan application, the City anticipates securing a low-interest SRF loan to fund the eligible project costs. Any costs determined to be ineligible for SRF funding will be financed through utility reserves, available cash, or other local funding sources.

The City's water utility enterprise fund is operated as a self-supporting enterprise and derives its revenues primarily from user charges and service fees. Existing revenues and future rate revenues will be used to repay the SRF loan and fund the operation and maintenance of the proposed facilities.

Based on current planning-level cost estimates, the debt service for the proposed improvements is approximately $1,800,000 every six months, assuming an SRF loan amount of $59,031,765, a 2% interest rate, and a 20-year repayment term. This assumes no principal forgiveness. A detailed financial evaluation will be completed as part of the SRF loan application process and updated based on final project costs and actual loan terms.

The City periodically reviews utility rates to ensure adequate revenues are generated to fund operation and maintenance expenses, debt service obligations, capital improvements, and appropriate reserve accounts. If necessary, the City will implement rate adjustments to maintain the financial integrity of the water utility and ensure repayment of the SRF loan.

5.4 IMPLEMENTATION

Following submittal of the Request for Funding Inclusion (RFI) for design funding and subsequent placement on the State Revolving Fund (SRF) Priority List, the City will continue to compile information and prepare the documentation necessary to execute a loan agreement with the Florida Department of Environmental Protection (FDEP).

As discussed in Section 5.1, the City held a publicly advertised Commission Meeting to present this Facilities Plan and receive public review and comment. Based on this Facilities Plan and public input received, the Commission adopted a resolution supporting the proposed improvements and authorizing submission of the RFI for design funding.

If the project is placed on the SRF Priority List for design funding, the City will procure professional engineering services in accordance with Florida Statutes § 287.055, the Consultants' Competitive Negotiation Act (CCNA). Design, permitting, and any eligible land acquisition activities will then proceed.

Upon completion and approval of the design plans and specifications, the City will submit a Request for Inclusion (RFI) for construction funding. If the project is subsequently placed on the SRF Priority List for construction funding, the City will submit a construction loan application and advertise the approved plans and specifications for competitive bidding. Following bid opening and approval by the City and FDEP, construction contracts will be executed, and construction activities will commence. Upon completion of construction, performance testing and start-up activities will be conducted, and the proposed facilities will be placed into service.

The City of DeLand has sole responsibility and authority to implement the improvements recommended in this Facilities Plan.

5.5 IMPLEMENTATION SCHEDULE

The City plans to implement the proposed improvements based on the schedule in Table 5-1. Based on the current project schedule, the proposed PFAS treatment facilities are not expected to be operational before the EPA's April 26, 2029, compliance deadline. However, EPA has proposed extending the compliance date for PFOA and PFOS to April 26, 2031. While this extension has not been finalized, advancing the project now positions the City to achieve compliance under the proposed timeframe and maintain flexibility as federal PFAS regulations continue to evolve.

A Progressive Design-Build (PDB) delivery approach may provide the City with the greatest opportunity to accelerate design, procurement, and construction activities through phased implementation and early contractor involvement, thereby improving the likelihood of achieving compliance within the applicable PFAS regulatory timeframe.

Table 5-1 Implementation Schedule

Task	Completion Date
Facility Plan	June 2026
Public Hearing and Adoption of the Facility Plan	July 2026
Submit Facility Plan and RFI (Design)	July 2026
FDEP Priority List Public Meeting (Design)	August 2026
Advertise Design Request for Qualifications	October 2026
SRF Loan Application (Design)	November 2026
Design Loan Agreement	December 2026
Award Design RFQ	December 2026
Design Plan and Specs	December 2027
Obtain Permits	December 2027
Purchase of Eligible Property	December 2027
Submit RFI (Construction)	December 2027
FDEP Priority List Meeting (Construction)	February 2028
Advertise Invitation to Bid	March 2028
SRF Loan Application (Construction)	April 2028
Approve Construction Bids	May 2028
Award Construction Contract	June 2028
Begin Construction	July 2028
Complete Construction	July 2030

5.6 NECESSARY FDEP PERMITTING

The following FDEP permits will be required for full implementation and completion of the project:

- Specific Permit to Construct Public Water Supply Components
- Environmental Resource Permit

5.7 COMPLIANCE

A list of compliance requirements and associated statements of acknowledgment is below:

- The treated water from the selected alternative will be in compliance with all FDEP drinking water standards and conform to the requirements of the Safe Drinking Water Act
- The selected alternatives will meet the reliability requirements as per Chapter 62-555, Florida Administrative Code (F.A.C.)
- The residual disposal will meet the requirements of Chapter 62-701, F.A.C., and 40 Code of Federal Regulations (CFR) Part 503.
- The environmental impacts of the proposed facilities are anticipated to be minimal.
- The recommended facilities are consistent with the City of DeLand's comprehensive plan.
- Iron, steel, manufactured products, and construction materials shall comply with the Build America, Buy America Act (BABAA), which states that the above items must be produced in the United States when used in federally funded projects.
- Davis-Bacon wage requirements.

APPENDIX A CITY OF DELAND COMPREHENSIVE PLAN, CHAPTER 6 CONSERVATION ELEMENT

CHAPTER 6

CONSERVATION ELEMENT

Goals, Objectives, and Policies



INTRODUCTION

Understanding that the City of DeLand is part of a global system and that actions taken by the City contribute to the surrounding environment, the Conservation Element provides the framework for the preservation, protection, and enhancement of the City of DeLand's natural resources. The Conservation Element identifies specific resources in the City that need to be protected as well as monitored through time to ensure these protections continue over time.



GOAL c-1: *Conservation:* Conserve, protect, and appropriately manage and restore the City's natural resources in order to enhance the quality of natural systems, including the following:

a) Air
b) Landlocked Lakes and Associated Floodplains
c) Wetlands
d) Flora and Fauna
e) Surficial and Floridan Aquifers
f) Surface and Groundwater Supplies
g) Reduction of greenhouse gas emissions

Objective c1.1: *Protect Air Quality.* The City shall coordinate with Volusia County and utilize the Volusia County air quality clearing house information to ensure development meets or exceeds the minimum air quality standards established by the Florida Department of Environmental (FDEP) and shall participate in regulatory programs to prevent and/or minimize known nonpoint sources of air pollution.

Policy c1.1.1: *Cooperate with FDEP Air Quality Monitoring Activities.* The City of DeLand shall cooperate with FDEP in the monitoring of air quality and in the placement of air monitoring devices in the City of DeLand if such activity is deemed necessary by FDEP.

Policy c1.1.2: *Air Pollution and Land Use Regulations.* The City shall continue to protect against the degradation of air quality by applying land use controls which promote compatibility with existing land uses and natural systems and by enforcing nuisance abatement regulations governing emission of smoke and particulate matter. In addition, site plan review standards shall include consideration of prevailing wind directions, pollution abatement factors and the reduction of green house gas emissions in the site plan review process.



Objective c1.2: *Ensure Water Quality and Quantity.* The City shall continue to conserve and protect the quality of current and projected future water sources and surface water runoff and continue to coordinate water supply and quality issues with state, Saint Johns River Water Management District, regional, county and pertinent local governments.

Policy c1.2.1: *Surface Water Management and Land Use.* The City shall protect groundwater from point and non-point sources by assisting the State and SJRWMD in managing water quality by preventing the discharge of poor-quality stormwater into public water bodies. Land development projects shall incorporate the following performance standards in order to protect the quality of the City's water resources:

a. Surface water management systems shall be designed and constructed to meet the following standards:

- Limit the allowable stormwater peak discharge detained from a site to be developed or altered to the predevelopment or pre-alteration peak discharge for the 100-year/24-hour-duration storm.
- In addition, the City's land development regulations governing surface water management shall include the following considerations:
- Incorporate a floodplain management standard that requires that no net reduction occur in flood storage for any development within the impacted area. The intent is to allow some development to occur in floodplains but only where drainage improvements are constructed which provide compensatory storage in order to alleviate flood problems within the impacted area. However, no development shall be allowed within the flood hazard area. (floodway).

- The stormwater management ordinance shall include mandatory retention and/or detention of stormwater discharge from developed or altered sites that in the City Engineer's discretion are volumetrically sensitive. Stormwater facilities shall be designed for the 100-year/24-hour duration storm. Furthermore, the ordinance shall incorporate applicable St. Johns River Water Management District stormwater management criteria.
- Implement the use of low impact development (LID) standards for new development.

b. A vegetated and functional littoral zone shall be established as part of the surface water management system of landlocked lakes occurring on all property. Prior to construction of the surface water management system for any phase of a project, the developer shall prepare a design and management plan for the wetland/littoral zone that will be developed as part of these systems.

The plan should:

i. Include typical cross sections of the surface water management system showing the average water elevation and the -3-foot contour (i.e., below average elevation);

ii. Specify how vegetation is to be established within this zone, including the extent, method, type and timing of any planting to be provided; and

iii. Provide a description of any management procedures to be followed in order to assure the continued viability and health of the littoral zone. The littoral zone as established should consist entirely of native vegetation and should be maintained permanently as part of the water



management system. As a minimum, 10 square feet of vegetated littoral zone per linear foot of lake shoreline should be established as part of the surface water management system.

a. Class III Waters (i.e., water bodies which currently support recreation and foster maintenance of fish and aquatic wildlife). All lakes within or adjacent to the City of DeLand are Class III waters. These waters shall be protected by incorporating the following provisions into the City's land development regulations:

    i. Dredging activities shall be limited to FDEP approved dredging.

    ii. Ensure good water quality by coordinating with the FDEP and the St. Johns River Water Management District in monitoring the quality of stormwater runoff and all discharge. The City shall notify the appropriate agency with jurisdiction as potential issues or problems are identified by the City.

    iii. Limit the use of Class III waters to water-dependent activities that are not contrary to the public interest and satisfy a community need.

    iv. Limit modification of aquatic grass beds (grass beds) only to those cases involving overriding public interest.

    v. Where modification of grassbeds is permitted the City shall assure that:

        (a) A determination of overriding public interest has been demonstrated by the applicant prior to modification of grassbeds.

        (b) Project runoff, including nitrogen, phosphorous, and other nutrients, shall be



controlled to prevent an increase in water turbidity, decrease in fish or aquatic wildlife propagation, or other degradation of water quality.

(c) Projects damaging grassbeds during construction shall incorporate mitigative techniques which re-establish conditions favorable to natural regeneration of the grassbeds.

(d) Special attention shall be given to stipulations cited in (a) through (c) above during the development review process. The City shall coordinate closely with state and federal agencies during the permitting processes to insure the intent of these policies is carried out. Public interest is that which benefits either the majority of the citizens of the City or a significant minority of the citizens of the City.

Policy c1.2.2: *Areawide Documentation and Monitoring of Stormwater Issues.* The City shall coordinate with the East Central Florida Regional Planning Council, the Saint Johns River Water Management District and the Department of Environmental Protection (FDEP) in matters regarding documentation of:

- Stormwater management practices;
- Stormwater construction and maintenance costs; and
- Monitoring of selected stormwater management facilities.

Finally, the City shall coordinate with the East Central Florida Regional Planning Council (ECFRPC), FDEP the St. Johns River Water Management District and other entities as directed in a unified state program directed at



educating the general public on the known nonpoint source pollution problems and available stormwater management practices to abate nonpoint source impacts on water quality.

Policy c1.2.3: *Regulate Agricultural Activities to Preserve Water Quality.* Land development regulations shall include stipulations requiring that agricultural activities shall:

a. Not be conducted adjacent to existing waterways and surface water Management activities shall comply with all applicable policies of the FDEP, St. Johns River Water Management District, and other agencies having appropriate jurisdiction as well as state laws;
b. Maintain natural drainage patterns;
c. Promote the use of surface water supplies and reclaimed ("graywater") for irrigation purposes;
d. Prohibit the expansion of agricultural activities into wetland areas; and
e. Use best management principles and practices in order to reduce pesticide and fertilizer runoff, prevent soil erosion, and preserve water quality.

Policy c1.2.4: *Regulate Wastewater Treatment Discharge to Preserve Water Quality.* Land development regulations shall incorporate the following performance standards in order to protect water quality:

a. All new residential subdivisions as well as multiple family and nonresidential development within the City of DeLand which are served by existing or planned future expansions to the City of DeLand wastewater collection and disposal system shall be required to connect to the public wastewater system.
b. In areas where developments cannot be connected to the public sewer, private wastewater disposal systems are acceptable as interim measures providing such facilities are approved by the City Utilities

Director's office. Notwithstanding all private wastewater disposal systems shall be designed to facilitate mandatory hookups to the public wastewater system when the public system becomes available.

c. The City of DeLand shall promote water conservation through implementation of reclaimed water distribution to new subdivisions. All new residential subdivisions within the City's reclaimed water service area shall include lines for reclaimed water. The City will look for opportunities to expand reclaimed water to all areas of the City. All developments with more than 100 eru's shall provide storage and pumping facilities for peak flow attenuation and reclaimed water augmentation.

Policy c1.2.5: *Protect Floridan and Surficial Aquifer Recharge Areas*. The City's land development regulations shall include that require retention of open space for all development in order to preserve the quality and quantity of groundwater resources within the surficial and deep aquifers.

The City shall develop quantifiable methods of determining City stormwater catchment and infiltration as a method of recharge, and shall promote and maintain stormwater catchment systems in a manner which favors recharge to the maximum extent possible.

The City shall also analyze the feasibility of alternative land management practices such as transfer of development rights that may direct high-density development away from high recharge areas.

Consistent with East Central Florida Regional Planning Council and St. Johns River Water Management District policy, development activities within recharge areas shall be regulated to avoid reduction in the volume of recharge.

Such development activity shall not be permitted to increase the total volume of post development runoff or reduce the quality of ground water



below applicable state standards. Since nearly all of the City's potable water supply is drawn from the Floridan Aquifer, the City shall coordinate with Volusia County and other appropriate entities to assure that measures to safeguard wellfields are instituted.

Policy c1.2.6: *Deep Aquifer Water Conservation.* In order to protect the quality and quantity of the Floridan aquifer, the City shall:

a. Coordinate with the St. Johns River Water Management District and other applicable regulatory agencies in identifying free flowing deep aquifer wells and in requiring corrective measures, including capping, plugging, or installing regulatory devices which control the discharge of water from the deep aquifer.
b. Coordinate with Volusia County to institute a county-wide, comprehensive wellfield and aquifer recharge area protection program.
c. Analyze stormwater management improvements with consideration to the protection of groundwater recharge quality and quantity.

Policy c1.2.7: *Conservation of Potable Water Supply.* To conserve potable water supply and to achieve a reduction in the current rates of water consumption, the land development regulations shall incorporate the following performance standards:

a. Potable water irrigation meters will not be approved for new construction. Reclaimed water lines shall be installed in subdivisions within the City's reclaimed water service area.
b. Encourage adherence to installation of water saving plumbing fixtures compliant with the State Water Conservation Act (Section 553.14, F.S.) in all new construction or renovations. Also, the City of DeLand shall conserve water supply through use of a leak detection program designed to curtail wasteful loss of potable water resources.
c. Encourage application for the City's Water Star program whereby home and property owners may seek reimbursement of a percent of water and sewer impact fees through the installation of water efficient appliances and technologies.
d. To reduce demand for irrigation water (which in turn often places greater demand upon potable water sources), new development shall employ and/or preserve native vegetation and/or use drought-resistant plants for landscaping to the greatest practicable extent. New development shall utilize Florida-Friendly Landscaping principles, Florida-Friendly landscape materials, minimize the use of potable water for irrigation, avoid runoff of excess fertilizers and pesticides, and provide habitat for wildlife.
e. The City shall promote the installation and establishment of drought resistant and native plants selected to fit the naturally occurring or altered character of the proposed planting location which, once

established, eliminates the need for formal irrigation and provides habitat for existing Florida native flora and fauna.

f. The City shall promote the use of stormwater management in a manner which facilitates the use of stormwater for irrigation to existing and proposed plants and landscaping through the application or minimal grading and/or naturally occurring topography, passive catchment and/or engineered catchment and constructed conveyance.

g. To encourage water conservation, the City shall apply a block rate structure when assessing water bills whereby the fee per gallon of water consumed increases incrementally with the increase in the volume of water used.

Policy c1.2.8: *Emergency Conservation of Water Sources.* The City shall coordinate with the St. Johns River Water Management District (SJRWMD) in implementing emergency water conservation measures based on the SJRWMD plans for management of the region's water resources.

Policy c1.2.9: Dredge and fill within lakes shall be prohibited, with the exception of elevated docks and walkways. Buffers shall be established adjacent to surface waters, including wetlands, the landward extent of which shall be based on scientific evaluation of site-specific conditions, including the nature of the existing soils, vegetation, topography, hydrology, water quality, wildlife, and the resource protection status of the receiving waters. Buffer zones shall consist of intact natural communities or planted native vegetation comprised of canopy, shrub and understory layers.

Policy c1.2.10: *Groundwater Contamination Introduced Through Sinkhole Passages.* To protect groundwater quality from potential contamination introduced through sinkhole passages that provide rapid downward percolation to the shallow aquifer, and to protect property and life from potential damage or threat resulting from a sink collapse, the City of DeLand shall notify the

SJRWMD of any new sink developments or signs of potential activity occurring within or adjacent to the City's jurisdictional area, and shall take appropriate action to amend land use regulations to include performance criteria which regulates development activities on sites adjacent to sinkholes.

Policy c1.2.11: The City shall maintain standards to regulate direct stormwater discharge into surface waters and primary sinkholes in karst terrain, through the use of percolation ponds and other appropriate methods.

Policy c1.2.12: The City will inventory properties that have potential historic issues with hazardous substances to determine if they may pose potential impacts to the current water supply and evaluate the potential flooding hazards which could lead to contamination of surrounding properties and infiltration into aquifer or other water systems.

Objective c1.3: *Maintenance of Floodplain.* The City shall update the Floodplain Protection Standards contained in the Land Development Regulations for consistency with Volusia County's, SJWMD's, and the State of Florida's floodplain standards.

Policy c1.3.1: *Enforce Policies to Maintain Floodplain.* Consistent with ECFRPC floodplain policy, the City shall incorporate flood plain protection measures sufficient to protect and preserve the value and function of floodplains from encroachment by development. Land development regulations shall provide that flood control measures for new development minimize fill within the floodplain area defined within the City's Floodplain Protection Ordinance. Where no alternative to fill exists, compensatory storage for such fill should be provided through excavation of a volume of uplands equivalent to the loss of storage within the defined floodplain caused by the placement of fill.

Policy c1.3.2: Work with FEMA to assist in the review and evaluation of the limits of the 100- year floodplain within the corporate limits of the City.

Objective c1.4: *Protect and Preserve Wetlands.* The City's land development regulations shall include performance criteria designed to protect and preserve wetlands from physical and hydrologic alterations.

Policy c1.4.1: *Wetland Development Restrictions.* Wetlands (i.e., wetlands shall include hydric soils and wetland species identified by the FDEP pursuant to Rule 62-340 F.A.C.) shall be protected from physical or hydrologic alterations in order to maintain natural functions. The following uses may be allowed in wetlands: approved passive recreations, open space, restricted accessway, bird sanctuary, natural stormwater retention/detention, natural preserve, or other similar land uses approved by the City pursuant to Land Development Regulations designed to carry out the intent of the Comprehensive Plan. Where one or more of the criteria outlined below are met, other land uses, with consequent adverse impacts to wetlands, may be allowed with mitigation as specified in Policy 1.4.3 provided that the impacts are unavoidable. Impacts shall be considered unavoidable when no technically feasible and economically viable on-site alternative to the proposed activity exists that would reduce or eliminate the impacts (including changes in use, reduction in intensity, or revision of the project layout).

Unavoidable impacts may be allowed under any one of the following conditions:

a) overriding public interest, i.e., the proposed activity is essential to protection of the public health, safety or welfare, and no alternative site exists that is less environmentally sensitive; or
b) substantially degraded wetlands, i.e., the area has been degraded to the point that it no longer performs wetland functions, as determined by the City of DeLand and St. Johns River Water Management District; or
c) net long-term benefit to the overall site wetland functions, i.e., mitigation for wetland functions to be adversely affected by the

proposed activity would replace those same or similar functions in a manner that provides substantially greater long-term ecological value, as agreed by the City of DeLand and St. Johns Water River Management District.

Policy c1.4.2: The wetland preservation ordinance shall address the following issues:

a) Criteria and stipulations for protecting wetlands and managing the development review criteria;

b) Protection of wetlands and fragile transition areas (i.e., Transition Zone, also referred to as buffer areas shall be defined as the area separating wetland and upland areas and in which development activities may be regulated to protect wetlands.) The Transition Zone is an area having a direct ground water or surface water influence and provides a buffer between wetlands and development or other land alteration activities. The purpose of the Transition Zone is to ensure the continuing function of respective wetland communities. The boundary of Transition Zones adjacent to specific wetland areas shall be established by field investigation and shall be a minimum of 25 feet.

c) Compensatory mitigation where proposed upland development presents a potential hazard to wetland functions; and

d) Acknowledge the City of DeLand's right to require dedication of a conservation easement to preserve wetland functions and provide for exceptions where the subject land area no longer retains the characteristics, functions, and value of a wetland.

Policy c1.4.3: If it is determined by the City that wetland alteration is unavoidable, mitigation proposals shall be considered, which should include restoration of existing degraded or converted wetlands, or creation of new wetland habitat. Such mitigation activities shall replace like or similar habitat and function and shall not result in a net loss of wetland functions and values.



Preservation of upland habitat may be considered in certain instances if deemed appropriate, but shall not result in a net loss of wetlands functions and values. In no case shall mitigation activities degrade critical habitat.

Policy c1.4.4: As a result of development, there shall be no net loss of wetlands functions or values, nor shall wetlands functions and values be degraded.

Policy c1.4.5: Any wetland modification shall maintain~~,~~ stands of old mature forest vegetation, if currently existing.

Policy c1.4.6: Degradation of wetlands by adjacent development shall be avoided through the use of techniques such as setbacks for structures and septic tanks, limited site clearing and stormwater management.

Policy c1.4.7: Future land uses incompatible with the protection and conservation of wetlands should be directed away from wetlands in a manner which minimizes the potential for adverse impacts to wetland function and values.

Policy c1.4.8: Non-intrusive bicycle and pedestrian pathways and boardwalks are permitted, where appropriate, in wetland buffers for passive-recreation use only.

Objective c1.5: *Combat Soil Erosion*. The City's land development regulations shall include performance standards and criteria designed to reduce the incidence of soil erosion caused by land clearing, breaches in stabilized lake shorelines, and lands having exposed soil without vegetative cover. The City shall require the sodding and seeding of cleared landscapes and/or the use of other engineering controls found acceptable by the City to prevent erosion.

Policy c1.5.1: *Implementing Erosion Control.* Land development regulations shall require that appropriate measures be taken during land clearing and building operations to assure that exposed, destabilized or otherwise altered soil is expeditiously covered with an acceptable erosion control material. These



provisions shall be applicable to the act of subdividing and installation of related improvements as well as during the development review process including the period during which improvements are being undertaken. The tree protection and erosion control measures shall be applicable to all clearing and grading activities and shall include specifications for managing vegetation and re-vegetation.

Objective c1.6: *Preventing Potential Adverse Impacts of Future Mining and Excavation Activities.* The City shall implement amended land development regulations which include performance criteria designed to regulate mining activities within the City of DeLand since the City's natural systems could potentially receive irretrievable losses from the impacts of unregulated mining operations.

Policy c1.6.1: *Regulation of Mining Activities.* Land development regulations shall restrict mining activities based on the irretrievable losses that such intense activities may potentially impose on the City's ecosystem. Land Development Regulations shall require that all mining and resource extraction including but not limited to, sand and peat excavation shall be conducted according to an excavation and reclamation plan approved by the City. Soil borings and soil surveys will be required to demonstrate compliance with this measure.

Because of the high potential for surface and groundwater contamination associated with mining and extraction activities, a horizontal impervious layer (possibly including a portion of the extracted resource) shall, be left undisturbed and unpenetrated beneath all excavated areas. The amount and location of the impervious layer to remain intact, if any, will be determined by soil surveys prior to excavation. The land development regulations shall provide procedures for managing preparation and review of the excavation and reclamation plan.

Policy c1.6.2: *Reclamation Activities.* The City shall require that mining sites, including borrow pits, located within adjacent unincorporated Volusia County undergo reclamation as a condition of voluntary annexation. The procedures and specifications for achieving such reclamation shall be incorporated in the land development regulations.

Objective c1.7: Minimize impacts on ecological communities which will adversely alter their natural functions.

Policy c1.7.1: The City shall maintain criteria and standards for an environmental assessment for wetlands, tree protection, surface and stormwater management, land clearing, protection of environmentally sensitive lands and critical habitat, and protection of endangered species.

Policy c1.7.2: The City shall coordinate with applicable governmental entities to protect environmentally sensitive lands which cross governmental jurisdictional boundaries.

Policy c1.7.3: For all sites of five (5) acres or more, a professional environmental survey/assessment shall be conducted as part of the development review process. Sites less than five (5) acres may be required to provide an environmental survey/assessment on a case-by-case basis if determined to have environmentally sensitive elements. The survey shall include the following:

a. The size and distribution of native vegetative communities;
b. Wildlife populations, including state and federally listed endangered and threatened plant and animal species and species of special concern;
c. The identification of all wildlife corridors and the feasibility of maintaining such corridors;
d. Prepare an on-site protection and management plan; and



e. In the event that the post-development habitat is not ecologically viable, an off-site protection and management plan shall be prepared.

Policy c1.7.4: The City shall require implementation of conservation measures, such as clustering of dwellings and/or the preservation of contiguous open space in order to preserve environmentally sensitive lands. Environmentally sensitive lands are defined as areas suitable for the purpose of conserving or protecting natural resources or environmental quality, including areas designated for such purposes as protection of water quality, wildlife management, protection of vegetative communities or protection of wildlife habitats.

Policy c1.7.5: Where appropriate, existing expanses of natural vegetation communities shall be shown on site plans and incorporated into landscaping buffers and open spaces. Open space and/or other conservation lands or areas may not be located on or within individual residential parcels.

Objective c1.8: *Protect Wildlife Habitat.* The City shall protect habitats of wildlife species occurring in the DeLand area, especially those which are threatened, endangered, or of special concern, to maintain and enhance, where necessary, existing species population numbers and distribution.

Policy c1.8.1: Development plans shall incorporate an on-site management plan for the preservation of habitat for species listed as endangered, threatened or of special concern, where predevelopment habitat is determined to be ecologically viable based on the survey required by Policy c1.7.3. An off-site management plan for such species shall be required where post-development habitat is determined not to be ecologically viable, and where relocation and/or off-site management is determined to be acceptable an acceptable alternative by the governing regulatory agency, based upon the survey required by Policy 1.7.3.

Policy c1.8.2: Establish development review standards for projects which impact critical habitats, which shall be determined by the City and appropriate federal (USFWS) and state (FGFWFC, FDEP, ECFRPC) agencies, based upon the surveys which are required in Policy 1.7.3. These review standards shall address at a minimum:

a. The proper siting of development structures and infrastructure, including clustering of dwelling units away from critical habitats;
b. Management plans that protect endangered wildlife that utilize critical habitats;
c. Mitigation plans for critical habitat which may be lost or altered; and
d. Restriction of the use of critical habitats to those which are found to be compatible with the requirements of wildlife species which are threatened, endangered or of special concern.

Policy c1.8.3: Where feasible, the City shall protect critical habitat through the use of conservation easements or developer contributions to a fund established for the purpose of purchasing land classified as habitat for species listed as endangered, threatened or of special concern. The City may either purchase habitat independently or jointly with Volusia County and/or other local governments.

Policy c1.8.4: The City will protect from destruction, revision and/or alteration the +/-1.28 acres of recreated and restored Live Oak - Palm Hammock vegetation at Painter's Pond Park.

Objective c1.9: The City shall commit to leading the community by demonstrating sustainable stewardship by reducing City operating costs; providing a healthy work environment for City staff and visitors; protecting, conserving and enhancing the City's resources and establishing community standards of sustainable living and practices. The City shall take necessary steps to meet the goal to transition to 100% renewable energy by 2075.

Policy c1.9.1: In order to demonstrate a measurable standard in the conservation of natural resources and minimization of the City's carbon footprint and waste profile, the City shall maintain its Gold Florida Green Local Government Designation as prescribed by the Florida Green Building Coalition, Inc. and work towards obtaining Platinum status.

Policy c1.9.2: The City shall design, construct and operate City facilities to minimize environmental impacts by incorporating the use of resource and energy efficient materials, renewable resources, alternative energy sources, water conservation, waste reduction, recycling and pollution prevention practices

Policy c1.9.3: In order to achieve energy efficiency and to reduce green house gas emissions, the City shall review energy audits on all City facilities annually. The City shall subsequently implement recommended upgrades and improvements to the extent possible

Policy c1.9.4: The City shall appoint and maintain a Sustainability Green Team comprised of City staff to recommend policies, guidelines, goals and strategies to promote sustainability throughout public and private facilities and properties within the City of DeLand.

Policy c1.9.5: The City shall continue ongoing education activities to promote the use of resource and energy efficient materials, renewable resources, alternative energy sources, water conservation, waste reduction, pollution prevention and green house gas emission reduction practices. The City shall provide educational materials at public events and explore opportunities to promote and partner with organizations that focus on sustainability.

Policy c1.9.6: In order to provide guidance and technical assistance to the residents of DeLand, the City shall seek training and certification of select employees in the application process for and implementation of Florida-Friendly Landscaping ™ Program and Florida Green Building Collation, Inc. standards for green building principles and certification.

TABLE OF AMENDMENTS - CONSERVATION ELEMENT

CYCLE 09-2 EAR

Adopted by Ordinance No. 09-37

Date: November 16, 2009

Updated Goals, objectives and policies as directed for EAR based amendments

CYCLE WSP

Adopted by Ordinance No. 2009-07

Date: February 16, 2009

Addressed consistency with Water Supply Plan
Goal 1 – added water supplies
Obj. 1.2 – added SJRWMD and local governments for coordination
Policy 1.2.1 – protecting groundwater
Policy 1.2.4 – subdivisions to use conservation and reclaimed water
Policy 1.2.5 – added measuring stormwater contribution
Policy 1.2.7 – promoting conservation

CYCLE 01-1

Adopted by Ordinance No. 2001-08

Date: April 2, 2001

Deleted Support Section from Conservation Element.

CYCLE 99-D1

Adopted by Ordinance No. 99-1

Date: May 17, 1999

Policy 1.4.1 – revised to allow for limited development in wetlands.
Policy 1.4.2 – defined Transition Zones as 25 feet.
Policy 1.4.3 – new policy allows mitigation for development in wetlands.
Policy 1.4.4 – defined no net loss of wetlands.
Policy 1.4.6 – development adjacent to wetlands.
Policy 1.4.7 – directing incompatible land uses away from wetlands.

CYCLE 98-2

Adopted by Ordinance No. 98-06

Date: September 9, 1998

Replaced Dept. of Environmental Regulations and Dept. of Natural Resources with Department of Environmental Protection
Replaced Map 1
Added text concerning the creation of the Volusia Water Alliance
Revised text concerning lakes within the city
Added text concerning City's participation in FEMA Flood Insurance Program
Added text concerning an updated floodplain map
Inserted updated floodplain map
Added text regarding annexed property containing wetlands
Inserted updated wetlands map
Inserted updated topography map
Revised text concerning sinkholes
Inserted text stating the city will update the soil limitations map
Updated sinkholes map
Inserted text stating the city is in process of updating vegetation map
Inserted text concerning Cypress Swamp
Changed 1989 to 1995
Revised text concerning updated floodplain map
Revised text concerning protection of wetlands
Added text concerning the City's water quality program
Added text concerning wellhead protection
Added policy 1.2.12 concerning wellhead protection zones
Added policy 1.4.6 & 1.4.7 concerning protection/conservation of wetlands
Policy 1.10.1: deleted "By Nov. 1991 the City of DeLand shall participate" and added "work"
Fixed numeric error in Objective 1.14.
Deleted objective 1.9 - policy 13.4 as duplicative; text appeared twice
Reformatted entire element due to a switch in software

CYCLE 97-1

Adopted by Ordinance No. 98-07
March 16, 1998

Objective 1.1: revised date
Objective 1.2-1.6 and 1.12: deleted date and indicated implementation
Deleted Objective 1.9 and subsequent policies; renumbered objectives accordingly
Objective 1.10-1.11: deleted date

CYCLE 95-2

Adopted by Ordinance No. 95-27
October 2, 1995

Objective 1.14: Adding references to Painter's Pond
Policy 1.14.1: Adding references to Painter's Pond
Policy 1.14.2: Adding references to Painter's Pond

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B DETAILED ENGINEER'S OPINION OF CONSTRUCTION COSTS AND O&M COSTS

Capital Costs: Alternative 1 - PFAS-Selective Ion Exchange

Description	Qty	Unit	Unit Cost	Total
General Costs				
Mobilization & Demobilization (5%)	1	LS	$ 2,010,000	$ 2,010,000
Construction Survey and Layout (0.5%)	1	LS	$ 201,000	$ 201,000
As-Built Drawings (0.5%)	1	LS	$ 201,000	$ 201,000
Pre/Post Audio- Video Recording (0.5%)	1	LS	$ 201,000	$ 201,000
Insurance, Permits, & Performance and Payment Bond (2%)	1	LS	$ 804,000	$ 804,000
WTP-1				
PFAS-Selective IX Treatment System	1	LS	$ 1,266,000	$ 1,266,000
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 162,000	$ 162,000
Yard Piping (10%)	1	LS	$ 324,000	$ 324,000
Electrical and Instrumentation (15%)	1	LS	$ 486,000	$ 486,000
WTP-2				
PFAS-Selective IX Treatment System	1	LS	$ 1,899,000	$ 1,899,000
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Site Civil (5%)	1	LS	$ 143,000	$ 143,000
Yard Piping (10%)	1	LS	$ 286,000	$ 286,000
Electrical and Instrumentation (15%)	1	LS	$ 429,000	$ 429,000
WTP-3				
PFAS-Selective IX Treatment System	1	LS	$ 1,899,000	$ 1,899,000
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 208,000	$ 208,000
Yard Piping (10%)	1	LS	$ 415,000	$ 415,000
Electrical and Instrumentation (15%)	1	LS	$ 622,000	$ 622,000
WTP-5/6/8				
PFAS-Selective IX Treatment System	1	LS	$ 3,988,000	$ 3,988,000
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Offsite Raw Water Main	1,500	LF	$ 450	$ 675,000
Ground Storage Tank	1	LS	$ 2,410,000	$ 2,410,000
High Service Pumps	1	LS	$ 3,410,000	$ 3,410,000
Chemical Systems	1	LS	$ 470,000	$ 470,000
Operations, HSP, and Electrical Building	3,750	SF	$ 400	$ 1,500,000
Site Civil (15%)	1	LS	$ 3,767,000	$ 3,767,000
Yard Piping (15%)	1	LS	$ 3,767,000	$ 3,767,000
Electrical and Instrumentation (20%)	1	LS	$ 5,022,000	$ 5,022,000
Geneset	1	LS	$ 1,000,000	$ 1,000,000
Property	1	LS	$ 420,000	$ 420,000
Subtotal of Hard Costs				**$ 40,185,000**
Contingency (30% x Hard Costs)				$ 12,055,500
Subtotal of Construction Costs (A)				**$ 52,240,500**
Design Engineering (10% x A)				$ 5,224,050
Technical Services during Construction (3% x A)				$ 1,567,215
Subtotal of Soft Costs (B)				**$ 6,791,265**
Total Capital Costs (A+B)				$ 59,031,765

Capital Costs: Alternative 2 - Novel/Emerging PFAS-Selective Adsorbents

Description	Qty	Unit	Unit Cost	Total
General Costs				
Mobilization & Demobilization (5%)	1	LS	$ 1,932,000	$ 1,932,000
Construction Survey and Layout (0.5%)	1	LS	$ 194,000	$ 194,000
As-Built Drawings (0.5%)	1	LS	$ 194,000	$ 194,000
Pre/Post Audio- Video Recording (0.5%)	1	LS	$ 194,000	$ 194,000
Insurance, Permits, & Performance and Payment Bond (2%)	1	LS	$ 773,000	$ 773,000
WTP-1				
PFAS-Selective Adsorbent Treatment System	1	LS	$ 1,515,000	$ 1,515,000
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 180,000	$ 180,000
Yard Piping (10%)	1	LS	$ 360,000	$ 360,000
Electrical and Instrumentation (15%)	1	LS	$ 540,000	$ 540,000
WTP-2				
PFAS-Selective Adsorbent Treatment System	1	LS	$ 1,846,000	$ 1,846,000
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Site Civil (5%)	1	LS	$ 140,000	$ 140,000
Yard Piping (10%)	1	LS	$ 279,000	$ 279,000
Electrical and Instrumentation (15%)	1	LS	$ 418,000	$ 418,000
WTP-3				
PFAS-Selective Adsorbent Treatment System	1	LS	$ 1,846,000	$ 1,846,000
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 204,000	$ 204,000
Yard Piping (10%)	1	LS	$ 407,000	$ 407,000
Electrical and Instrumentation (15%)	1	LS	$ 611,000	$ 611,000
WTP-5/6/8				
PFAS-Selective Adsorbent Treatment System	1	LS	$ 2,749,000	$ 2,749,000
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Offsite Raw Water Main	1,500	LF	$ 450	$ 675,000
Ground Storage Tank	1	LS	$ 2,410,000	$ 2,410,000
High Service Pumps	1	LS	$ 3,410,000	$ 3,410,000
Chemical Systems	1	LS	$ 470,000	$ 470,000
Operations, HSP, and Electrical Building	3,750	SF	$ 400	$ 1,500,000
Site Civil (15%)	1	LS	$ 3,735,000	$ 3,735,000
Yard Piping (15%)	1	LS	$ 3,735,000	$ 3,735,000
Electrical and Instrumentation (20%)	1	LS	$ 4,696,000	$ 4,696,000
Geneset	1	LS	$ 1,000,000	$ 1,000,000
Property	1	LS	$ 420,000	$ 420,000
Subtotal of Hard Costs				**$ 38,633,000**
Contingency (30% x Hard Costs)				$ 11,589,900
Subtotal of Construction Costs (A)				**$ 50,222,900**
Design Engineering (10% x A)				$ 5,022,290
Technical Services during Construction (3% x A)				$ 1,506,687
Subtotal of Soft Costs (B)				**$ 6,528,977**
Total Capital Costs (A+B)				$ 56,751,877

Capital Costs: Alternative 3 - Granular Activated Carbon

Description	Qty	Unit	Unit Cost	Total
General Costs				
Mobilization & Demobilization (5%)	1	LS	$ 2,581,000	$ 2,581,000
Construction Survey and Layout (0.5%)	1	LS	$ 259,000	$ 259,000
As-Built Drawings (0.5%)	1	LS	$ 259,000	$ 259,000
Pre/Post Audio- Video Recording (0.5%)	1	LS	$ 259,000	$ 259,000
Insurance, Permits, & Performance and Payment Bond (2%)	1	LS	$ 1,033,000	$ 1,033,000
WTP-1				
GAC Treatment System	1	LS	$ 2,989,000	$ 2,989,000
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 285,000	$ 285,000
Yard Piping (10%)	1	LS	$ 570,000	$ 570,000
Electrical and Instrumentation (15%)	1	LS	$ 855,000	$ 855,000
WTP-2				
GAC Treatment System	1	LS	$ 3,987,500	$ 3,987,500
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Site Civil (5%)	1	LS	$ 293,000	$ 293,000
Yard Piping (10%)	1	LS	$ 585,000	$ 585,000
Electrical and Instrumentation (15%)	1	LS	$ 877,000	$ 877,000
WTP-3				
GAC Treatment System	1	LS	$ 3,929,500	$ 3,929,500
Backwash Pump Station & Offsite Force Main	1	LS	$ 1,000,000	$ 1,000,000
Site Civil (5%)	1	LS	$ 353,000	$ 353,000
Yard Piping (10%)	1	LS	$ 705,000	$ 705,000
Electrical and Instrumentation (15%)	1	LS	$ 1,057,000	$ 1,057,000
WTP-5/6/8				
GAC Treatment System	1	LS	$ 4,618,000	$ 4,618,000
Backwash Gravity Connection	1	LS	$ 100,000	$ 100,000
Offsite Raw Water Main	1,500	LF	$ 450	$ 675,000
Ground Storage Tank	1	LS	$ 2,410,000	$ 2,410,000
High Service Pumps	1	LS	$ 3,410,000	$ 3,410,000
Chemical Systems	1	LS	$ 470,000	$ 470,000
Operations, HSP, and Electrical Building	3,750	SF	$ 400	$ 1,500,000
Site Civil (15%)	1	LS	$ 4,296,000	$ 4,296,000
Yard Piping (15%)	1	LS	$ 4,296,000	$ 4,296,000
Electrical and Instrumentation (20%)	1	LS	$ 5,444,000	$ 5,444,000
Geneset	1	LS	$ 1,000,000	$ 1,000,000
Property	1	LS	$ 420,000	$ 420,000
Subtotal of Hard Costs				**$ 51,616,000**
Contingency (30% x Hard Costs)				$ 15,484,800
Subtotal of Construction Costs (A)				**$ 67,100,800**
Design Engineering (10% x A)				$ 6,710,080
Technical Services during Construction (3% x A)				$ 2,013,024
Subtotal of Soft Costs (B)				**$ 8,723,104**
Total Capital Costs (A+B)				$ 75,823,904

O&M Costs: Alternative 1 - PFAS-Selective Ion Exchange

Cost	Basis of Cost	Basis of Cost Unit	20-Year NPV	Cost per Year, Current Year $																			
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
WTP-1																							
Media "Regeneration as a Service"	$ 39,000	$/yr	$ 1,289,572	$ 39,000	$ 40,950	$ 42,998	$ 45,147	$ 47,405	$ 49,775	$ 52,264	$ 54,877	$ 57,621	$ 60,502	$ 63,527	$ 66,703	$ 70,038	$ 73,540	$ 77,217	$ 81,078	$ 85,132	$ 89,389	$ 93,858	$ 98,551
Media Replacement	$ 633,000	$/replacement	$ 1,253,297															$ 1,253,297					
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-2																							
Media "Regeneration as a Service"	$ 39,000	$/yr	$ 1,289,572	$ 39,000	$ 40,950	$ 42,998	$ 45,147	$ 47,405	$ 49,775	$ 52,264	$ 54,877	$ 57,621	$ 60,502	$ 63,527	$ 66,703	$ 70,038	$ 73,540	$ 77,217	$ 81,078	$ 85,132	$ 89,389	$ 93,858	$ 98,551
Media Replacement	$ 1,266,000	$/replacement	$ 2,506,593															$ 2,506,593					
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-3																							
Media "Regeneration as a Service"	$ 39,000	$/yr	$ 1,289,572	$ 39,000	$ 40,950	$ 42,998	$ 45,147	$ 47,405	$ 49,775	$ 52,264	$ 54,877	$ 57,621	$ 60,502	$ 63,527	$ 66,703	$ 70,038	$ 73,540	$ 77,217	$ 81,078	$ 85,132	$ 89,389	$ 93,858	$ 98,551
Media Replacement	$ 1,266,000	$/replacement	$ 2,506,593															$ 2,506,593					
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-5/6/8																							
Media "Regeneration as a Service"	$ 79,000	$/yr	$ 2,612,210	$ 79,000	$ 82,950	$ 87,098	$ 91,452	$ 96,025	$ 100,826	$ 105,868	$ 111,161	$ 116,719	$ 122,555	$ 128,683	$ 135,117	$ 141,873	$ 148,966	$ 156,415	$ 164,235	$ 172,447	$ 181,069	$ 190,123	$ 199,629
Media Replacement	$ 2,991,000	$/replacement	$ 5,921,975															$ 5,921,975					
General O&M Materials	$ 15,000	$/yr	$ 495,989	$ 15,000	$ 15,750	$ 16,538	$ 17,364	$ 18,233	$ 19,144	$ 20,101	$ 21,107	$ 22,162	$ 23,270	$ 24,433	$ 25,655	$ 26,938	$ 28,285	$ 29,699	$ 31,184	$ 32,743	$ 34,380	$ 36,099	$ 37,904
Total			$ 20,157,354	$ 241,000	$ 253,050	$ 265,703	$ 278,988	$ 292,937	$ 307,584	$ 322,963	$ 339,111	$ 356,067	$ 373,870	$ 392,564	$ 412,192	$ 432,801	$ 454,441	##########	$ 501,022	$ 526,073	$ 552,376	$ 579,995	$ 608,995
	Annual Additional O&M, NPV		$ 1,007,868																				

Assumptions

Media "regenerated as a service" and replacement based on the schedule and costs provided by vendor.

The discount rate is assumed as 5%.

Additional O&M materials is an estimate to cover PFAS sampling costs, bench tests, labor, and other miscellaneous costs

O&M Costs: Alternative 2 - Novel/Emerging PFAS-Selective Adsorbents

Cost	Basis of Cost	Basis of Cost Unit	20-Year NPV	Cost per Year, Current Year $																		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
WTP-1																							
Media Regeneration	$ 787,000	$/replacement	$ 6,492,087			$ 867,668				$ 1,054,655				$ 1,281,940			$ 1,484,006				$ 1,803,818		
Additional O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-2																							
Media Regeneration	$ 787,000	$/replacement	$ 10,314,982		$ 826,350		$ 911,051			$ 1,054,655		$ 1,162,757			$ 1,346,037		$ 1,484,006		$ 1,636,116			$ 1,894,009	
Additional O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-3																							
Media Regeneration	$ 787,000	$/replacement	$ 17,962,777	$ 787,000	$ 826,350		$ 911,051	$ 956,603		$ 1,054,655	$ 1,107,388		$ 1,220,895	$ 1,281,940	$ 1,346,037		$ 1,484,006	$ 1,558,206	$ 1,636,116		$ 1,803,818		$ 1,988,710
Additional O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-5/6/8																							
Media Regeneration	$ 1,162,000	$/replacement	$ 20,662,619	$ 1,162,000		$ 1,281,105		$ 1,412,418		$ 1,557,191	$ 1,635,051		$ 1,802,643		$ 1,987,414		$ 2,191,124	$ 2,300,681		$ 2,536,500		$ 2,796,492	
Additional O&M Materials	$ 15,000	$/yr	$ 495,989	$ 15,000	$ 15,750	$ 16,538	$ 17,364	$ 18,233	$ 19,144	$ 20,101	$ 21,107	$ 22,162	$ 23,270	$ 24,433	$ 25,655	$ 26,938	$ 28,285	$ 29,699	$ 31,184	$ 32,743	$ 34,380	$ 36,099	$ 37,904
Total			$ 56,920,434	$ 1,994,000	$ 1,699,950	$ 2,198,385	$ 1,874,195	$ 2,423,719	$ 57,433	$ 4,781,461	$ 2,805,758	$ 1,229,243	$ 3,093,348	$ 2,637,180	$ 4,756,454	$ 80,814	$ 6,727,996	$ 3,947,984	$ 3,365,785	$ 2,634,730	$ 3,710,778	$ 4,798,799	$ 2,102,423
	Annual Additional O&M, NPV		$ 2,846,022																				

Assumptions

Media (Dexsorb) regeneration costs and schedule provided by vendor.

The discount rate is assumed as 5%.

Additional O&M materials is an estimate to cover PFAS sampling costs, bench tests, labor, and other miscellaneous costs

O&M Costs: Alternative 3 - Granular Activated Carbon

Cost	Basis of Cost	Basis of Cost Unit	20-Year NPV	Cost per Year, Current Year $																			
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
WTP-1																							
Media Replacement	$ 138,000	$/replacement	$ 4,563,102	$ 138,000	$ 144,900	$ 152,145	$ 159,752	$ 167,740	$ 176,127	$ 184,933	$ 194,180	$ 203,889	$ 214,083	$ 224,787	$ 236,027	$ 247,828	$ 260,220	$ 273,231	$ 286,892	$ 301,237	$ 316,299	$ 332,113	$ 348,719
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-2																							
Media Replacement	$ 138,000	$/replacement	$ 4,563,102	$ 138,000	$ 144,900	$ 152,145	$ 159,752	$ 167,740	$ 176,127	$ 184,933	$ 194,180	$ 203,889	$ 214,083	$ 224,787	$ 236,027	$ 247,828	$ 260,220	$ 273,231	$ 286,892	$ 301,237	$ 316,299	$ 332,113	$ 348,719
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-3																							
Media Replacement	$ 138,000	$/replacement	$ 4,563,102	$ 138,000	$ 144,900	$ 152,145	$ 159,752	$ 167,740	$ 176,127	$ 184,933	$ 194,180	$ 203,889	$ 214,083	$ 224,787	$ 236,027	$ 247,828	$ 260,220	$ 273,231	$ 286,892	$ 301,237	$ 316,299	$ 332,113	$ 348,719
General O&M Materials	$ 10,000	$/yr	$ 330,660	$ 10,000	$ 10,500	$ 11,025	$ 11,576	$ 12,155	$ 12,763	$ 13,401	$ 14,071	$ 14,775	$ 15,513	$ 16,289	$ 17,103	$ 17,959	$ 18,856	$ 19,799	$ 20,789	$ 21,829	$ 22,920	$ 24,066	$ 25,270
WTP-5/6/8																							
Media Replacement	$ 138,000	$/replacement	$ 4,563,102	$ 138,000	$ 144,900	$ 152,145	$ 159,752	$ 167,740	$ 176,127	$ 184,933	$ 194,180	$ 203,889	$ 214,083	$ 224,787	$ 236,027	$ 247,828	$ 260,220	$ 273,231	$ 286,892	$ 301,237	$ 316,299	$ 332,113	$ 348,719
General O&M Materials	$ 15,000	$/yr	$ 495,989	$ 15,000	$ 15,750	$ 16,538	$ 17,364	$ 18,233	$ 19,144	$ 20,101	$ 21,107	$ 22,162	$ 23,270	$ 24,433	$ 25,655	$ 26,938	$ 28,285	$ 29,699	$ 31,184	$ 32,743	$ 34,380	$ 36,099	$ 37,904
Total			$ 19,740,375	$ 597,000	$ 626,850	$ 658,193	$ 691,102	$ 725,657	$ 761,940	$ 800,037	$ 840,039	$ 882,041	$ 926,143	$ 972,450	$ 1,021,073	$ 1,072,126	$ 1,125,733	$ 1,182,019	$ 1,241,120	$ 1,303,176	$ 1,368,335	$ 1,436,752	$ 1,508,589
	Annual Additional O&M, NPV		$ 987,019																				

Assumptions

Media replacement costs and schedule provided by vendor.

The discount rate is assumed as 5%.

Additional O&M materials is an estimate to cover PFAS sampling costs, bench tests, labor, and other miscellaneous costs

APPENDIX C PROCESS FLOW DIAGRAMS AND SITE PLANS

[redacted]

APPENDIX D PFAS SAMPLING LABORATORY REPORTS

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

June 06, 2023

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on April 28, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35795932001	**36042864 Water TP #4**	Drinking Water	04/28/23 09:55	04/28/23 14:35
35795932002	**FRB - 36042864 Water TP #4**	Drinking Water	04/28/23 09:55	04/28/23 14:35
35795932003	**36402861 Water TP #1**	Drinking Water	04/28/23 08:50	04/28/23 14:35
35795932004	**FRB - 36402861 Water TP #1**	Drinking Water	04/28/23 08:50	04/28/23 14:35
35795932005	**36402862 Water TP #2**	Drinking Water	04/28/23 09:25	04/28/23 14:35
35795932006	**FRB - 36402862 Water TP #2**	Drinking Water	04/28/23 09:25	04/28/23 14:35

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35795932001	**36042864 Water TP #4**	EPA 200.7	KPP	1	PASI-O
		EPA 533	SWR	41	PASI-O
		EPA 537.1	SWR	8	PASI-O
35795932002	**FRB - 36042864 Water TP #4**	EPA 533	SWR	41	PASI-O
35795932003	**36402861 Water TP #1**	EPA 200.7	KPP	1	PASI-O
		EPA 537.1	SWR	8	PASI-O
35795932005	**36402862 Water TP #2**	EPA 200.7	KPP	1	PASI-O
		EPA 537.1	SWR	8	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Sample: 36042864 Water TP #4 **Lab ID: 35795932001** Collected: 04/28/23 09:55 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/10/23 04:40	05/11/23 22:36	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 266 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0047	0.0016	1	05/24/23 12:30	05/26/23 01:13	763051-92-9	
4:2 FTS	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	757124-72-4	
6:2 FTS	**0.013**	ug/L	0.0047	0.0016	1	05/24/23 12:30	05/26/23 01:13	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	05/24/23 12:30	05/26/23 01:13	39108-34-4	
9Cl-PF3ONS	**0.00063 U**	ug/L	0.0019	0.00063	1	05/24/23 12:30	05/26/23 01:13	756426-58-1	
ADONA	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0047	0.0016	1	05/24/23 12:30	05/26/23 01:13	13252-13-6	
NFDHA	**0.0063 U**	ug/L	0.019	0.0063	1	05/24/23 12:30	05/26/23 01:13	1551772-58-	
Perfluorobutanesulfonic acid	**0.0011 I**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	375-73-5	
Perfluorodecanoic acid	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	335-76-2	
Perfluorohexanoic acid	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0047	0.0016	1	05/24/23 12:30	05/26/23 01:13	375-22-4	
PFEESA	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	113507-82-7	
PFHpS	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	375-92-8	
PFMBA	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0038	0.0012	1	05/24/23 12:30	05/26/23 01:13	377-73-1	
PFPeA	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0038	0.0012	1	05/24/23 12:30	05/26/23 01:13	2706-91-4	
Perfluorododecanoic acid	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	307-55-1	
Perfluoroheptanoic acid	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	375-85-9	
Perfluorohexanesulfonic acid	**0.00094 U**	ug/L	0.0028	0.00094	1	05/24/23 12:30	05/26/23 01:13	355-46-4	
Perfluorononanoic acid	**0.0012 U**	ug/L	0.0038	0.0012	1	05/24/23 12:30	05/26/23 01:13	375-95-1	
Perfluorooctanesulfonic acid	**0.0012 U**	ug/L	0.0038	0.0012	1	05/24/23 12:30	05/26/23 01:13	1763-23-1	
Perfluorooctanoic acid	**0.0012 U**	ug/L	0.0038	0.0012	1	05/24/23 12:30	05/26/23 01:13	335-67-1	
Perfluoroundecanoic acid	**0.00063 U**	ug/L	0.0019	0.00063	1	05/24/23 12:30	05/26/23 01:13	2058-94-8	
Surrogates									
13C24:2FTS (S)	197	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C26:2FTS (S)	127	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C28:2FTS (S)	108	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C2-PFDoA (S)	76	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C3HFPO-DA(S)	75	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C3-PFBS (S)	93	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C3-PFHxS (S)	94	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C4-PFBA (S)	88	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C4-PFHpA (S)	82	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C5-PFHxA (S)	81	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C5-PFPeA (S)	72	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C6-PFDA (S)	83	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C7-PFUdA (S)	79	%	50-200		1	05/24/23 12:30	05/26/23 01:13		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Sample: 36042864 Water TP #4 **Lab ID: 35795932001** Collected: 04/28/23 09:55 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 266 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
Surrogates									
13C8-PFOA (S)	84	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C8-PFOS (S)	95	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
13C9-PFNA (S)	84	%	50-200		1	05/24/23 12:30	05/26/23 01:13		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 278.91 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0015 U**	ug/L	0.0054	0.0015	1	05/07/23 02:57	05/08/23 14:52	2991-50-6	
NMeFOSAA	**0.0018 U**	ug/L	0.0054	0.0018	1	05/07/23 02:57	05/08/23 14:52	2355-31-9	
Perfluorotetradecanoic acid	**0.0024 U**	ug/L	0.0072	0.0024	1	05/07/23 02:57	05/08/23 14:52	376-06-7	
Perfluorotridecanoic acid	**0.0021 U**	ug/L	0.0063	0.0021	1	05/07/23 02:57	05/08/23 14:52	72629-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	05/07/23 02:57	05/08/23 14:52		
13C2-PFHxA (S)	76	%	70-130		1	05/07/23 02:57	05/08/23 14:52		
NEtFOSAA-d5 (S)	87	%	70-130		1	05/07/23 02:57	05/08/23 14:52		
HFPO-DAS (S)	77	%	70-130		1	05/07/23 02:57	05/08/23 14:52		

Sample: FRB - 36042864 Water TP #4 **Lab ID: 35795932002** Collected: 04/28/23 09:55 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 251.31 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0050	0.0017	1	05/23/23 19:56	05/26/23 09:12	763051-92-9	
4:2 FTS	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	757124-72-4	
6:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	05/23/23 19:56	05/26/23 09:12	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	05/23/23 19:56	05/26/23 09:12	39108-34-4	
9Cl-PF3ONS	**0.00067 U**	ug/L	0.0020	0.00067	1	05/23/23 19:56	05/26/23 09:12	756426-58-1	
ADONA	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0050	0.0017	1	05/23/23 19:56	05/26/23 09:12	13252-13-6	
NFDHA	**0.0066 U**	ug/L	0.020	0.0066	1	05/23/23 19:56	05/26/23 09:12	1551772-58-	
Perfluorobutanesulfonic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	375-73-5	
Perfluorodecanoic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	335-76-2	
Perfluorohexanoic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	307-24-4	
PFBA	**0.0017 U**	ug/L	0.0050	0.0017	1	05/23/23 19:56	05/26/23 09:12	375-22-4	
PFEESA	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	113507-82-7	
PFHpS	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	375-92-8	
PFMBA	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0040	0.0013	1	05/23/23 19:56	05/26/23 09:12	377-73-1	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Sample: FRB - 36042864 Water TP #4 **Lab ID: 35795932002** Collected: 04/28/23 09:55 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 251.31 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
PFPeA	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0040	0.0013	1	05/23/23 19:56	05/26/23 09:12	2706-91-4	
Perfluorododecanoic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	307-55-1	
Perfluoroheptanoic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	375-85-9	
Perfluorohexanesulfonic acid	**0.00099 U**	ug/L	0.0030	0.00099	1	05/23/23 19:56	05/26/23 09:12	355-46-4	
Perfluorononanoic acid	**0.0013 U**	ug/L	0.0040	0.0013	1	05/23/23 19:56	05/26/23 09:12	375-95-1	
Perfluorooctanesulfonic acid	**0.0013 U**	ug/L	0.0040	0.0013	1	05/23/23 19:56	05/26/23 09:12	1763-23-1	
Perfluorooctanoic acid	**0.0013 U**	ug/L	0.0040	0.0013	1	05/23/23 19:56	05/26/23 09:12	335-67-1	
Perfluoroundecanoic acid	**0.00067 U**	ug/L	0.0020	0.00067	1	05/23/23 19:56	05/26/23 09:12	2058-94-8	
Surrogates									
13C24:2FTS (S)	146	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C26:2FTS (S)	131	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C28:2FTS (S)	126	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C2-PFDoA (S)	92	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C3HFPO-DA(S)	63	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C3-PFBS (S)	110	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C3-PFHxS (S)	109	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C4-PFBA (S)	65	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C4-PFHpA (S)	73	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C5-PFHxA (S)	69	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C5-PFPeA (S)	64	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C6-PFDA (S)	92	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C7-PFUdA (S)	92	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C8-PFOA (S)	80	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C8-PFOS (S)	104	%	50-200		1	05/23/23 19:56	05/26/23 09:12		
13C9-PFNA (S)	86	%	50-200		1	05/23/23 19:56	05/26/23 09:12		

Sample: 36402861 Water TP #1 **Lab ID: 35795932003** Collected: 04/28/23 08:50 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/10/23 04:40	05/11/23 22:37	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 274.9 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0015 U**	ug/L	0.0055	0.0015	1	05/07/23 02:57	05/08/23 14:20	2991-50-6	
NMeFOSAA	**0.0018 U**	ug/L	0.0055	0.0018	1	05/07/23 02:57	05/08/23 14:20	2355-31-9	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Sample: 36402861 Water TP #1 **Lab ID: 35795932003** Collected: 04/28/23 08:50 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 274.9 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
Perfluorotetradecanoic acid	**0.0024 U**	ug/L	0.0073	0.0024	1	05/07/23 02:57	05/08/23 14:20	376-06-7	
Perfluorotridecanoic acid	**0.0021 U**	ug/L	0.0064	0.0021	1	05/07/23 02:57	05/08/23 14:20	72629-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	05/07/23 02:57	05/08/23 14:20		
13C2-PFHxA (S)	80	%	70-130		1	05/07/23 02:57	05/08/23 14:20		
NEtFOSAA-d5 (S)	85	%	70-130		1	05/07/23 02:57	05/08/23 14:20		
HFPO-DAS (S)	78	%	70-130		1	05/07/23 02:57	05/08/23 14:20		

Sample: 36402862 Water TP #2 **Lab ID: 35795932005** Collected: 04/28/23 09:25 Received: 04/28/23 14:35 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/10/23 04:40	05/11/23 22:43	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 271.81 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0015 U**	ug/L	0.0055	0.0015	1	05/07/23 02:57	05/08/23 14:36	2991-50-6	
NMeFOSAA	**0.0018 U**	ug/L	0.0055	0.0018	1	05/07/23 02:57	05/08/23 14:36	2355-31-9	
Perfluorotetradecanoic acid	**0.0025 U**	ug/L	0.0074	0.0025	1	05/07/23 02:57	05/08/23 14:36	376-06-7	
Perfluorotridecanoic acid	**0.0022 U**	ug/L	0.0064	0.0022	1	05/07/23 02:57	05/08/23 14:36	72629-94-8	
Surrogates									
13C2-PFDA (S)	88	%	70-130		1	05/07/23 02:57	05/08/23 14:36		
13C2-PFHxA (S)	79	%	70-130		1	05/07/23 02:57	05/08/23 14:36		
NEtFOSAA-d5 (S)	85	%	70-130		1	05/07/23 02:57	05/08/23 14:36		
HFPO-DAS (S)	76	%	70-130		1	05/07/23 02:57	05/08/23 14:36		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

QC Batch: 916126
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET Drinking Water
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35795932001, 35795932003, 35795932005

METHOD BLANK: 5037486 Matrix: Drinking Water
Associated Lab Samples: 35795932001, 35795932003, 35795932005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	7.5 U	22.5	7.5	05/11/23 22:06	N2

LABORATORY CONTROL SAMPLE: 5037487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	9	8.0 I	88	50-150	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5037488 5037489

Parameter	Units	35795588001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	7.5 U	100	100	126	129	121	125	0-200	3	30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

QC Batch: 920198
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35795932002

METHOD BLANK: 5059823
Matrix: Drinking Water
Associated Lab Samples: 35795932002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	05/26/23 03:29	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	05/26/23 03:29	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	05/26/23 03:29	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	05/26/23 03:29	
ADONA	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	05/26/23 03:29	
NFDHA	ug/L	0.0067 U	0.020	0.0067	05/26/23 03:29	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	05/26/23 03:29	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	05/26/23 03:29	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	05/26/23 03:29	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	05/26/23 03:29	
PFBA	ug/L	0.0017 U	0.0050	0.0017	05/26/23 03:29	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	05/26/23 03:29	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	05/26/23 03:29	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	05/26/23 03:29	
13C2-PFDoA (S)	%	93	50-200		05/26/23 03:29	
13C24:2FTS (S)	%	134	50-200		05/26/23 03:29	
13C26:2FTS (S)	%	118	50-200		05/26/23 03:29	
13C28:2FTS (S)	%	119	50-200		05/26/23 03:29	
13C3-PFBS (S)	%	104	50-200		05/26/23 03:29	
13C3-PFHxS (S)	%	100	50-200		05/26/23 03:29	
13C3HFPO-DA(S)	%	79	50-200		05/26/23 03:29	
13C4-PFBA (S)	%	83	50-200		05/26/23 03:29	
13C4-PFHpA (S)	%	82	50-200		05/26/23 03:29	
13C5-PFHxA (S)	%	81	50-200		05/26/23 03:29	
13C5-PFPeA (S)	%	80	50-200		05/26/23 03:29	
13C6-PFDA (S)	%	93	50-200		05/26/23 03:29	
13C7-PFUdA (S)	%	92	50-200		05/26/23 03:29	
13C8-PFOA (S)	%	85	50-200		05/26/23 03:29	
13C8-PFOS (S)	%	102	50-200		05/26/23 03:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

METHOD BLANK: 5059823 Matrix: Drinking Water
Associated Lab Samples: 35795932002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	87	50-200		05/26/23 03:29	

LABORATORY CONTROL SAMPLE: 5059824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 I	90	50-150	
4:2 FTS	ug/L	0.0019	0.0018 I	94	50-150	
6:2 FTS	ug/L	0.0019	0.0021 I	110	50-150	
8:2 FTS	ug/L	0.0019	0.0017 I	89	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0016 I	84	50-150	
ADONA	ug/L	0.0019	0.0016 I	86	50-150	
HFPO-DA	ug/L	0.002	0.0020 I	100	50-150	
NFDHA	ug/L	0.02	0.020 I	99	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0017 I	92	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0021 I	107	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0020 I	98	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0020 I	99	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0015 I	82	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0019 I	93	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0020 I	99	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0018 I	93	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0020 I	100	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0018 I	92	50-150	
PFBA	ug/L	0.002	0.0019 I	97	50-150	
PFEESA	ug/L	0.0018	0.0015 I	83	50-150	
PFHpS	ug/L	0.0019	0.0018 I	92	50-150	
PFMBA	ug/L	0.002	0.0018 I	90	50-150	
PFMPA	ug/L	0.002	0.0018 I	92	50-150	
PFPeA	ug/L	0.002	0.0019 I	96	50-150	
PFPeS	ug/L	0.0019	0.0018 I	93	50-150	
13C2-PFDoA (S)	%			96	50-200	
13C24:2FTS (S)	%			137	50-200	
13C26:2FTS (S)	%			126	50-200	
13C28:2FTS (S)	%			118	50-200	
13C3-PFBS (S)	%			108	50-200	
13C3-PFHxS (S)	%			103	50-200	
13C3HFPO-DA(S)	%			83	50-200	
13C4-PFBA (S)	%			88	50-200	
13C4-PFHpA (S)	%			91	50-200	
13C5-PFHxA (S)	%			90	50-200	
13C5-PFPeA (S)	%			86	50-200	
13C6-PFDA (S)	%			98	50-200	
13C7-PFUdA (S)	%			100	50-200	
13C8-PFOA (S)	%			92	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

LABORATORY CONTROL SAMPLE: 5059824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			104	50-200	
13C9-PFNA (S)	%			97	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

QC Batch: 920394
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35795932001

METHOD BLANK: 5060855
Matrix: Drinking Water
Associated Lab Samples: 35795932001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	05/25/23 19:29	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	05/25/23 19:29	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	05/25/23 19:29	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	05/25/23 19:29	
ADONA	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	05/25/23 19:29	
NFDHA	ug/L	0.0067 U	0.020	0.0067	05/25/23 19:29	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	05/25/23 19:29	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	05/25/23 19:29	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	05/25/23 19:29	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	05/25/23 19:29	
PFBA	ug/L	0.0017 U	0.0050	0.0017	05/25/23 19:29	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	05/25/23 19:29	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	05/25/23 19:29	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	05/25/23 19:29	
13C2-PFDoA (S)	%	89	50-200		05/25/23 19:29	
13C24:2FTS (S)	%	121	50-200		05/25/23 19:29	
13C26:2FTS (S)	%	111	50-200		05/25/23 19:29	
13C28:2FTS (S)	%	104	50-200		05/25/23 19:29	
13C3-PFBS (S)	%	104	50-200		05/25/23 19:29	
13C3-PFHxS (S)	%	102	50-200		05/25/23 19:29	
13C3HFPO-DA(S)	%	83	50-200		05/25/23 19:29	
13C4-PFBA (S)	%	89	50-200		05/25/23 19:29	
13C4-PFHpA (S)	%	88	50-200		05/25/23 19:29	
13C5-PFHxA (S)	%	88	50-200		05/25/23 19:29	
13C5-PFPeA (S)	%	88	50-200		05/25/23 19:29	
13C6-PFDA (S)	%	94	50-200		05/25/23 19:29	
13C7-PFUdA (S)	%	91	50-200		05/25/23 19:29	
13C8-PFOA (S)	%	91	50-200		05/25/23 19:29	
13C8-PFOS (S)	%	103	50-200		05/25/23 19:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

METHOD BLANK: 5060855 Matrix: Drinking Water
Associated Lab Samples: 35795932001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	90	50-200		05/25/23 19:29	

LABORATORY CONTROL SAMPLE: 5060856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 U	84	50-150	
4:2 FTS	ug/L	0.0019	0.0014 I	76	50-150	
6:2 FTS	ug/L	0.0019	0.0023 I	119	50-150	
8:2 FTS	ug/L	0.0019	0.0019 I	103	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0015 I	78	50-150	
ADONA	ug/L	0.0019	0.0014 I	76	50-150	
HFPO-DA	ug/L	0.002	0.0019 I	93	50-150	
NFDHA	ug/L	0.02	0.020 I	98	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0015 I	85	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0016 I	80	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0018 I	88	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0019 I	94	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0013 I	71	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0017 I	86	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0017 I	85	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0017 I	91	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0017 I	87	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0016 I	80	50-150	
PFBA	ug/L	0.002	0.0017 I	87	50-150	
PFEESA	ug/L	0.0018	0.0015 I	84	50-150	
PFHpS	ug/L	0.0019	0.0017 I	90	50-150	
PFMBA	ug/L	0.002	0.0017 I	84	50-150	
PFMPA	ug/L	0.002	0.0016 I	82	50-150	
PFPeA	ug/L	0.002	0.0017 I	84	50-150	
PFPeS	ug/L	0.0019	0.0015 I	79	50-150	
13C2-PFDoA (S)	%			91	50-200	
13C24:2FTS (S)	%			128	50-200	
13C26:2FTS (S)	%			116	50-200	
13C28:2FTS (S)	%			111	50-200	
13C3-PFBS (S)	%			108	50-200	
13C3-PFHxS (S)	%			107	50-200	
13C3HFPO-DA(S)	%			90	50-200	
13C4-PFBA (S)	%			94	50-200	
13C4-PFHpA (S)	%			94	50-200	
13C5-PFHxA (S)	%			92	50-200	
13C5-PFPeA (S)	%			93	50-200	
13C6-PFDA (S)	%			95	50-200	
13C7-PFUdA (S)	%			94	50-200	
13C8-PFOA (S)	%			94	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

LABORATORY CONTROL SAMPLE: 5060856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			105	50-200	
13C9-PFNA (S)	%			97	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

QC Batch: 915429
QC Batch Method: EPA 537.1
Analysis Method: EPA 537.1
Analysis Description: 537.1 PFOA Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35795932001, 35795932003, 35795932005

METHOD BLANK: 5033674 Matrix: Water
Associated Lab Samples: 35795932001, 35795932003, 35795932005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
NEtFOSAA	ug/L	0.0017 U	0.0060	0.0017	05/08/23 10:10	
NMeFOSAA	ug/L	0.0020 U	0.0060	0.0020	05/08/23 10:10	
Perfluorotetradecanoic acid	ug/L	0.0027 U	0.0080	0.0027	05/08/23 10:10	
Perfluorotridecanoic acid	ug/L	0.0024 U	0.0070	0.0024	05/08/23 10:10	
13C2-PFDA (S)	%	86	70-130		05/08/23 10:10	
13C2-PFHxA (S)	%	83	70-130		05/08/23 10:10	
HFPO-DAS (S)	%	82	70-130		05/08/23 10:10	
NEtFOSAA-d5 (S)	%	85	70-130		05/08/23 10:10	

LABORATORY CONTROL SAMPLE: 5033675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSAA	ug/L	0.005	0.0048 I	95	50-150	
NMeFOSAA	ug/L	0.006	0.0052 I	86	50-150	
Perfluorotetradecanoic acid	ug/L	0.008	0.0068 I	85	50-150	
Perfluorotridecanoic acid	ug/L	0.007	0.0056 I	80	50-150	
13C2-PFDA (S)	%			88	70-130	
13C2-PFHxA (S)	%			82	70-130	
HFPO-DAS (S)	%			80	70-130	
NEtFOSAA-d5 (S)	%			86	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5033676 5033677

Parameter	Units	35795932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
NEtFOSAA	ug/L	0.0015 U	0.0046	0.0045	0.0038 I	0.0041 I	83	90	70-130		30	
NMeFOSAA	ug/L	0.0018 U	0.0055	0.0054	0.0040 I	0.0045 I	72	82	70-130		30	
Perfluorotetradecanoic acid	ug/L	0.0024 U	0.0073	0.0072	0.0055 I	0.0057 I	75	79	70-130		30	
Perfluorotridecanoic acid	ug/L	0.0021 U	0.0064	0.0063	0.0048 I	0.0049 I	75	76	70-130		30	
13C2-PFDA (S)	%						88	88	70-130			
13C2-PFHxA (S)	%						74	74	70-130			
HFPO-DAS (S)	%						71	71	70-130			
NEtFOSAA-d5 (S)	%						86	84	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE1_Apr 2023
Pace Project No.: 35795932

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35795932001	**36042864 Water TP #4**	EPA 200.7	916126	EPA 200.7	916239
35795932003	**36402861 Water TP #1**	EPA 200.7	916126	EPA 200.7	916239
35795932005	**36402862 Water TP #2**	EPA 200.7	916126	EPA 200.7	916239
35795932001	**36042864 Water TP #4**	EPA 533	920394	EPA 533	920823
35795932002	**FRB - 36042864 Water TP #4**	EPA 533	920198	EPA 533	920369
35795932001	**36042864 Water TP #4**	EPA 537.1	915429	EPA 537.1	915465
35795932003	**36402861 Water TP #1**	EPA 537.1	915429	EPA 537.1	915465
35795932005	**36402862 Water TP #2**	EPA 537.1	915429	EPA 537.1	915465

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY UCMR5 / An

The Chain-of-Custody is a LEGAL DOCUMENT. All rel

WO# : 35795932

35795932

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	City of Deland - UCMR5	Report To:	Shawn Wahrenberger	Attention:	Accounts Payable
Address:	1101 South Amelia Avenue	Copy To:		Company Name:	
	Deland, FL 32724			Address:	
Email:	wahrenbergers@deland.org	Purchase Order #:		Pace Quote:	
Phone:	(386)626-7254 Fax	Project Name:	UCMR5_SE1_Apr 2023	Pace Project Manager:	DJ.Kapadia@pacelabs.com
Requested Due Date:		Project #:	PWS ID: FL3640286	Pace Profile #:	18402 BO#: 1079592

Regulatory Agency

State / Location

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	Ammonium Acetate	HNO3 (Nitric Acid)	Trizma	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: 200.7 Metals-Li, UCMR5	533 PFAS UCMR5	533 PFAS UCMR5-FRB	537.1 PFAS UCMR5	537.1 PFAS UCMR5-FRB	Residual Chlorine (Y/N)	
1	36042864 Water TP # 4	DW	G	4/28/23	0955				9		4	1	4		X	X		X			OQS
2	FRB - 36042864 Water TP # 4	DW			0955				4		2		2				X		X		
3	36402861 Water TP #1	DW			0850				5		2	1	2		X	X		X			
4	FRB - 36402861 Water TP #1	DW			0850				4		2		2				X		X		
5	36402862 Water TP #2	DW			0925				5		2	1	2		X	X		X			
6	FRB - 36402862 Water TP #2	DW			0925				4		2		2				X		X		
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Prior to shipping, please refrigerate the samples for 4-6	Larissa R McCoy	4/28/23	1435		4/28/23	14:35	
hours immediately after sampling.		4/28/23	15:21				
Please fill containers up to the bottom thread of the							
container cap.							

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Larissa R McCoy					
SIGNATURE of SAMPLER:	Larissa R McCoy	DATE Signed: 4/28/23				

DC#_Title: Excel Form Template
Effective Date:

WO#: 35795932
PM: DNK Due Date: 05/19/23
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☑ Othe _____
Tracking # _____
Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No ☐ N/A **Ice:** ☑ Yes ☐ No
Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

		Comments
Chain of Custody Present	☐ Yes ☐ No	
Chain of Custody Completed	☐ Yes ☐ No	
Relinquished & Sampler Signature	☐ Yes ☐ No	
Samples Arrived within Hold Time	☐ Yes ☐ No	
Sufficient Volume	☐ Yes ☐ No	
Correct Containers Used	☐ Yes ☐ No	
Containers Intact	☐ Yes ☐ No	
Sample Labels match COC	☐ Yes ☐ No	
Samples received ≤48 hr from collection	☑ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐ Ye ☐ No	
Person contacted for verification		

Temperature Verification Initials: CEJ Date: 4-28-23 Time: 15:59
IR Gun ID: T-414 CF (°C): -0.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	5.2	5.1	
EPA 537.1	4.7	4.6	

Preservation Verification pH strip: 10D312.1 pH meter: SR-2
Free Cl Strip/DPD: A2160 Cl Meter: _____
200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
360428614 water Tp #4 1/4	7.01	7.35	<2		ND	ND	
" 2/4	7.02	7.32			ND	ND	
" 3/4	7.36	7.46			ND	ND	
" 4/4	7.36	7.33			ND	ND	
FRB-360428614 water Tp#4	6.94	7.27			ND	ND	
360428611 water Tp #11 1/2	7.14	7.36	<2		ND	ND	
" 2/2	7.19	7.39			ND	ND	
FRB360428611 water Tp#11	7.46	7.37			ND	ND	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

Preservation Verification Continued

Sample/Container ID	pH 533* (pH 6.0-)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
364028621 Tp#2 1/2	6.96	7.21	<2		ND	ND	
11 2/2	7.10	7.31			ND	ND	
FRB-364028621 Tp#2	6.95	7.21			ND	ND	

*533 pH may be adjusted at the bench prior to extraction ** ND = <0.1 mg/L

COC PAGE ____ of ____

Sample Container Count

Client: _____ Profile # 18402

Site: _____ Notes _____

OQS

COC Line Item	Matrix	BP3T	BP3S	BP3N			
1		4	4	1			
2		1	1				
3		2	2	1			
4		1	1				
5		2	2	1			
6		1	1				
7							
8							
9							
10							
11							
12							

Container Codes

Plastic

Dated: 08/19/2021

Sample Container Count

BP3T	250mL Trizma
BP35	250ml Ammonium Acetate
BP3N	250ml Nitric Acid

FRB must be logged with the FRB HOLD Acode

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

July 12, 2023

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35805400001	**36402861 Water TP#1**	Drinking Water	06/09/23 09:55	06/09/23 15:15
35805400002	**FRB-36402861 Water TP#2**	Drinking Water	06/09/23 09:55	06/09/23 15:15
35805400003	**36402862 Water TP#2**	Drinking Water	06/09/23 10:10	06/09/23 15:15
35805400004	**FRB-36402862 Water TP#2**	Drinking Water	06/09/23 10:10	06/09/23 15:15

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35805400001	**36402861 Water TP#1**	EPA 533	TSW	41	PASI-O
35805400002	**FRB-36402861 Water TP#2**	EPA 533	SWR	41	PASI-O
35805400003	**36402862 Water TP#2**	EPA 533	SWR	41	PASI-O
35805400004	**FRB-36402862 Water TP#2**	EPA 533	SWR	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Sample: 36402861 Water TP#1 **Lab ID: 35805400001** Collected: 06/09/23 09:55 Received: 06/09/23 15:15 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 274.49 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0015 U**	ug/L	0.0046	0.0015	1	06/19/23 16:26	06/20/23 16:55	763051-92-9	
4:2 FTS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	757124-72-4	
6:2 FTS	**0.0015 U**	ug/L	0.0046	0.0015	1	06/19/23 16:26	06/20/23 16:55	27619-97-2	
8:2 FTS	**0.0015 U**	ug/L	0.0046	0.0015	1	06/19/23 16:26	06/20/23 16:55	39108-34-4	
9Cl-PF3ONS	**0.00061 U**	ug/L	0.0018	0.00061	1	06/19/23 16:26	06/20/23 16:55	756426-58-1	
ADONA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	919005-14-4	
HFPO-DA	**0.0015 U**	ug/L	0.0046	0.0015	1	06/19/23 16:26	06/20/23 16:55	13252-13-6	
NFDHA	**0.0061 U**	ug/L	0.018	0.0061	1	06/19/23 16:26	06/20/23 16:55	1551772-58-	
Perfluorobutanesulfonic acid	**0.0045**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	375-73-5	
Perfluorodecanoic acid	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	335-76-2	
Perfluorohexanoic acid	**0.0065**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	307-24-4	
PFBA	**0.0035 I**	ug/L	0.0046	0.0015	1	06/19/23 16:26	06/20/23 16:55	375-22-4	
PFEESA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	113507-82-7	
PFHpS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	375-92-8	
PFMBA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0036	0.0012	1	06/19/23 16:26	06/20/23 16:55	377-73-1	
PFPeA	**0.0096**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0036	0.0012	1	06/19/23 16:26	06/20/23 16:55	2706-91-4	
Perfluorododecanoic acid	**0.00091 U**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	307-55-1	
Perfluoroheptanoic acid	**0.0027 I**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	375-85-9	
Perfluorohexanesulfonic acid	**0.0086**	ug/L	0.0027	0.00091	1	06/19/23 16:26	06/20/23 16:55	355-46-4	
Perfluorononanoic acid	**0.0012 U**	ug/L	0.0036	0.0012	1	06/19/23 16:26	06/20/23 16:55	375-95-1	
Perfluorooctanesulfonic acid	**0.0086**	ug/L	0.0036	0.0012	1	06/19/23 16:26	06/20/23 16:55	1763-23-1	
Perfluorooctanoic acid	**0.0026 I**	ug/L	0.0036	0.0012	1	06/19/23 16:26	06/20/23 16:55	335-67-1	
Perfluoroundecanoic acid	**0.00061 U**	ug/L	0.0018	0.00061	1	06/19/23 16:26	06/20/23 16:55	2058-94-8	
Surrogates									
13C24:2FTS (S)	152	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C26:2FTS (S)	120	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C28:2FTS (S)	119	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C2-PFDoA (S)	90	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C3HFPO-DA(S)	92	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C3-PFBS (S)	119	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C3-PFHxS (S)	114	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C4-PFBA (S)	104	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C4-PFHpA (S)	94	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C5-PFHxA (S)	103	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C5-PFPeA (S)	100	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C6-PFDA (S)	81	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C7-PFUdA (S)	85	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C8-PFOA (S)	88	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C8-PFOS (S)	111	%	50-200		1	06/19/23 16:26	06/20/23 16:55		
13C9-PFNA (S)	79	%	50-200		1	06/19/23 16:26	06/20/23 16:55		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Sample: FRB-36402861 Water TP#2 **Lab ID: 35805400002** Collected: 06/09/23 09:55 Received: 06/09/23 15:15 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 277 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0015 U**	ug/L	0.0045	0.0015	1	07/06/23 17:32	07/08/23 15:25	763051-92-9	
4:2 FTS	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	757124-72-4	
6:2 FTS	**0.0015 U**	ug/L	0.0045	0.0015	1	07/06/23 17:32	07/08/23 15:25	27619-97-2	
8:2 FTS	**0.0015 U**	ug/L	0.0045	0.0015	1	07/06/23 17:32	07/08/23 15:25	39108-34-4	
9Cl-PF3ONS	**0.00060 U**	ug/L	0.0018	0.00060	1	07/06/23 17:32	07/08/23 15:25	756426-58-1	
ADONA	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	919005-14-4	
HFPO-DA	**0.0015 U**	ug/L	0.0045	0.0015	1	07/06/23 17:32	07/08/23 15:25	13252-13-6	
NFDHA	**0.0060 U**	ug/L	0.018	0.0060	1	07/06/23 17:32	07/08/23 15:25	1551772-58-	
Perfluorobutanesulfonic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	375-73-5	
Perfluorodecanoic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	335-76-2	
Perfluorohexanoic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	307-24-4	
PFBA	**0.0015 U**	ug/L	0.0045	0.0015	1	07/06/23 17:32	07/08/23 15:25	375-22-4	
PFEESA	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	113507-82-7	
PFHpS	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	375-92-8	
PFMBA	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0036	0.0012	1	07/06/23 17:32	07/08/23 15:25	377-73-1	
PFPeA	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0036	0.0012	1	07/06/23 17:32	07/08/23 15:25	2706-91-4	
Perfluorododecanoic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	307-55-1	
Perfluoroheptanoic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	375-85-9	
Perfluorohexanesulfonic acid	**0.00090 U**	ug/L	0.0027	0.00090	1	07/06/23 17:32	07/08/23 15:25	355-46-4	
Perfluorononanoic acid	**0.0012 U**	ug/L	0.0036	0.0012	1	07/06/23 17:32	07/08/23 15:25	375-95-1	
Perfluorooctanesulfonic acid	**0.0012 U**	ug/L	0.0036	0.0012	1	07/06/23 17:32	07/08/23 15:25	1763-23-1	
Perfluorooctanoic acid	**0.0012 U**	ug/L	0.0036	0.0012	1	07/06/23 17:32	07/08/23 15:25	335-67-1	
Perfluoroundecanoic acid	**0.00060 U**	ug/L	0.0018	0.00060	1	07/06/23 17:32	07/08/23 15:25	2058-94-8	
Surrogates									
13C24:2FTS (S)	117	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C26:2FTS (S)	118	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C28:2FTS (S)	108	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C2-PFDoA (S)	98	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C3HFPO-DA(S)	90	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C3-PFBS (S)	115	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C3-PFHxS (S)	108	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C4-PFBA (S)	98	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C4-PFHpA (S)	96	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C5-PFHxA (S)	98	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C5-PFPeA (S)	96	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C6-PFDA (S)	97	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C7-PFUdA (S)	99	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C8-PFOA (S)	99	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C8-PFOS (S)	108	%	50-200		1	07/06/23 17:32	07/08/23 15:25		
13C9-PFNA (S)	97	%	50-200		1	07/06/23 17:32	07/08/23 15:25		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Sample: 36402862 Water TP#2 **Lab ID: 35805400003** Collected: 06/09/23 10:10 Received: 06/09/23 15:15 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 263.23 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/16/23 13:01	06/18/23 11:56	763051-92-9	
4:2 FTS	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/16/23 13:01	06/18/23 11:56	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/16/23 13:01	06/18/23 11:56	39108-34-4	
9Cl-PF3ONS	**0.00064 U**	ug/L	0.0019	0.00064	1	06/16/23 13:01	06/18/23 11:56	756426-58-1	
ADONA	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0047	0.0016	1	06/16/23 13:01	06/18/23 11:56	13252-13-6	
NFDHA	**0.0063 U**	ug/L	0.019	0.0063	1	06/16/23 13:01	06/18/23 11:56	1551772-58-	
Perfluorobutanesulfonic acid	**0.0036**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	375-73-5	
Perfluorodecanoic acid	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	335-76-2	
Perfluorohexanoic acid	**0.0023 I**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	307-24-4	
PFBA	**0.0023 I**	ug/L	0.0047	0.0016	1	06/16/23 13:01	06/18/23 11:56	375-22-4	
PFEESA	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	113507-82-7	
PFHpS	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	375-92-8	
PFMBA	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0038	0.0013	1	06/16/23 13:01	06/18/23 11:56	377-73-1	
PFPeA	**0.0033**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0038	0.0013	1	06/16/23 13:01	06/18/23 11:56	2706-91-4	
Perfluorododecanoic acid	**0.00095 U**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	307-55-1	
Perfluoroheptanoic acid	**0.0012 I**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	375-85-9	
Perfluorohexanesulfonic acid	**0.0034**	ug/L	0.0028	0.00095	1	06/16/23 13:01	06/18/23 11:56	355-46-4	
Perfluorononanoic acid	**0.0013 U**	ug/L	0.0038	0.0013	1	06/16/23 13:01	06/18/23 11:56	375-95-1	
Perfluorooctanesulfonic acid	**0.0050**	ug/L	0.0038	0.0013	1	06/16/23 13:01	06/18/23 11:56	1763-23-1	
Perfluorooctanoic acid	**0.0024 I**	ug/L	0.0038	0.0013	1	06/16/23 13:01	06/18/23 11:56	335-67-1	
Perfluoroundecanoic acid	**0.00064 U**	ug/L	0.0019	0.00064	1	06/16/23 13:01	06/18/23 11:56	2058-94-8	
Surrogates									
13C24:2FTS (S)	165	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C26:2FTS (S)	122	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C28:2FTS (S)	115	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C2-PFDoA (S)	71	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C3HFPO-DA(S)	81	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C3-PFBS (S)	95	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C3-PFHxS (S)	100	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C4-PFBA (S)	95	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C4-PFHpA (S)	86	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C5-PFHxA (S)	87	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C5-PFPeA (S)	80	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C6-PFDA (S)	57	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C7-PFUdA (S)	61	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C8-PFOA (S)	78	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C8-PFOS (S)	105	%	50-200		1	06/16/23 13:01	06/18/23 11:56		
13C9-PFNA (S)	65	%	50-200		1	06/16/23 13:01	06/18/23 11:56		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Sample: FRB-36402862 Water TP#2 **Lab ID: 35805400004** Collected: 06/09/23 10:10 Received: 06/09/23 15:15 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 267.9 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0047	0.0016	1	07/06/23 17:32	07/08/23 15:41	763051-92-9	
4:2 FTS	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	07/06/23 17:32	07/08/23 15:41	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	07/06/23 17:32	07/08/23 15:41	39108-34-4	
9Cl-PF3ONS	**0.00063 U**	ug/L	0.0019	0.00063	1	07/06/23 17:32	07/08/23 15:41	756426-58-1	
ADONA	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0047	0.0016	1	07/06/23 17:32	07/08/23 15:41	13252-13-6	
NFDHA	**0.0062 U**	ug/L	0.019	0.0062	1	07/06/23 17:32	07/08/23 15:41	1551772-58-	
Perfluorobutanesulfonic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	375-73-5	
Perfluorodecanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	335-76-2	
Perfluorohexanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0047	0.0016	1	07/06/23 17:32	07/08/23 15:41	375-22-4	
PFEESA	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	113507-82-7	
PFHpS	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	375-92-8	
PFMBA	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0037	0.0012	1	07/06/23 17:32	07/08/23 15:41	377-73-1	
PFPeA	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0037	0.0012	1	07/06/23 17:32	07/08/23 15:41	2706-91-4	
Perfluorododecanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	307-55-1	
Perfluoroheptanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	375-85-9	
Perfluorohexanesulfonic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	07/06/23 17:32	07/08/23 15:41	355-46-4	
Perfluorononanoic acid	**0.0012 U**	ug/L	0.0037	0.0012	1	07/06/23 17:32	07/08/23 15:41	375-95-1	
Perfluorooctanesulfonic acid	**0.0012 U**	ug/L	0.0037	0.0012	1	07/06/23 17:32	07/08/23 15:41	1763-23-1	
Perfluorooctanoic acid	**0.0012 U**	ug/L	0.0037	0.0012	1	07/06/23 17:32	07/08/23 15:41	335-67-1	
Perfluoroundecanoic acid	**0.00063 U**	ug/L	0.0019	0.00063	1	07/06/23 17:32	07/08/23 15:41	2058-94-8	
Surrogates									
13C24:2FTS (S)	126	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C26:2FTS (S)	125	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C28:2FTS (S)	114	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C2-PFDoA (S)	103	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C3HFPO-DA(S)	94	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C3-PFBS (S)	122	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C3-PFHxS (S)	114	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C4-PFBA (S)	107	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C4-PFHpA (S)	103	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C5-PFHxA (S)	107	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C5-PFPeA (S)	104	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C6-PFDA (S)	104	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C7-PFUdA (S)	105	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C8-PFOA (S)	106	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C8-PFOS (S)	114	%	50-200		1	07/06/23 17:32	07/08/23 15:41		
13C9-PFNA (S)	103	%	50-200		1	07/06/23 17:32	07/08/23 15:41		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

QC Batch: 926623
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35805400003

METHOD BLANK: 5093134
Matrix: Drinking Water
Associated Lab Samples: 35805400003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	06/18/23 09:43	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/18/23 09:43	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/18/23 09:43	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	06/18/23 09:43	
ADONA	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	06/18/23 09:43	
NFDHA	ug/L	0.0067 U	0.020	0.0067	06/18/23 09:43	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	06/18/23 09:43	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	06/18/23 09:43	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	06/18/23 09:43	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	06/18/23 09:43	
PFBA	ug/L	0.0017 U	0.0050	0.0017	06/18/23 09:43	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	06/18/23 09:43	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	06/18/23 09:43	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	06/18/23 09:43	
13C2-PFDoA (S)	%	98	50-200		06/18/23 09:43	
13C24:2FTS (S)	%	113	50-200		06/18/23 09:43	
13C26:2FTS (S)	%	112	50-200		06/18/23 09:43	
13C28:2FTS (S)	%	107	50-200		06/18/23 09:43	
13C3-PFBS (S)	%	104	50-200		06/18/23 09:43	
13C3-PFHxS (S)	%	97	50-200		06/18/23 09:43	
13C3HFPO-DA(S)	%	101	50-200		06/18/23 09:43	
13C4-PFBA (S)	%	101	50-200		06/18/23 09:43	
13C4-PFHpA (S)	%	93	50-200		06/18/23 09:43	
13C5-PFHxA (S)	%	100	50-200		06/18/23 09:43	
13C5-PFPeA (S)	%	104	50-200		06/18/23 09:43	
13C6-PFDA (S)	%	98	50-200		06/18/23 09:43	
13C7-PFUdA (S)	%	97	50-200		06/18/23 09:43	
13C8-PFOA (S)	%	96	50-200		06/18/23 09:43	
13C8-PFOS (S)	%	103	50-200		06/18/23 09:43	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

METHOD BLANK: 5093134 Matrix: Drinking Water
Associated Lab Samples: 35805400003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	101	50-200		06/18/23 09:43	

LABORATORY CONTROL SAMPLE: 5093135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 U	81	50-150	
4:2 FTS	ug/L	0.0019	0.0019 I	98	50-150	
6:2 FTS	ug/L	0.0019	0.0017 U	78	50-150	
8:2 FTS	ug/L	0.0019	0.0018 I	94	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0014 I	76	50-150	
ADONA	ug/L	0.0019	0.0016 I	85	50-150	
HFPO-DA	ug/L	0.002	0.0017 I	87	50-150	
NFDHA	ug/L	0.02	0.015 I	77	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0014 I	79	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0017 I	86	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0016 I	81	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0016 I	80	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0017 I	95	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0016 I	82	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0017 I	84	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0017 I	88	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0017 I	87	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0016 I	81	50-150	
PFBA	ug/L	0.002	0.0017 I	84	50-150	
PFEESA	ug/L	0.0018	0.0015 I	81	50-150	
PFHpS	ug/L	0.0019	0.0017 I	89	50-150	
PFMBA	ug/L	0.002	0.0017 I	85	50-150	
PFMPA	ug/L	0.002	0.0016 I	82	50-150	
PFPeA	ug/L	0.002	0.0018 I	92	50-150	
PFPeS	ug/L	0.0019	0.0017 I	91	50-150	
13C2-PFDoA (S)	%			104	50-200	
13C24:2FTS (S)	%			118	50-200	
13C26:2FTS (S)	%			114	50-200	
13C28:2FTS (S)	%			115	50-200	
13C3-PFBS (S)	%			111	50-200	
13C3-PFHxS (S)	%			101	50-200	
13C3HFPO-DA(S)	%			101	50-200	
13C4-PFBA (S)	%			105	50-200	
13C4-PFHpA (S)	%			98	50-200	
13C5-PFHxA (S)	%			103	50-200	
13C5-PFPeA (S)	%			109	50-200	
13C6-PFDA (S)	%			103	50-200	
13C7-PFUdA (S)	%			102	50-200	
13C8-PFOA (S)	%			100	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

LABORATORY CONTROL SAMPLE: 5093135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			110	50-200	
13C9-PFNA (S)	%			107	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

QC Batch: 927223
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35805400001

METHOD BLANK: 5095944
Matrix: Drinking Water
Associated Lab Samples: 35805400001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	06/20/23 11:51	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/20/23 11:51	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/20/23 11:51	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	06/20/23 11:51	
ADONA	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	06/20/23 11:51	
NFDHA	ug/L	0.0067 U	0.020	0.0067	06/20/23 11:51	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	06/20/23 11:51	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	06/20/23 11:51	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	06/20/23 11:51	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	06/20/23 11:51	
PFBA	ug/L	0.0017 U	0.0050	0.0017	06/20/23 11:51	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	06/20/23 11:51	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	06/20/23 11:51	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	06/20/23 11:51	
13C2-PFDoA (S)	%	98	50-200		06/20/23 11:51	
13C24:2FTS (S)	%	119	50-200		06/20/23 11:51	
13C26:2FTS (S)	%	107	50-200		06/20/23 11:51	
13C28:2FTS (S)	%	108	50-200		06/20/23 11:51	
13C3-PFBS (S)	%	111	50-200		06/20/23 11:51	
13C3-PFHxS (S)	%	108	50-200		06/20/23 11:51	
13C3HFPO-DA(S)	%	98	50-200		06/20/23 11:51	
13C4-PFBA (S)	%	103	50-200		06/20/23 11:51	
13C4-PFHpA (S)	%	101	50-200		06/20/23 11:51	
13C5-PFHxA (S)	%	104	50-200		06/20/23 11:51	
13C5-PFPeA (S)	%	102	50-200		06/20/23 11:51	
13C6-PFDA (S)	%	100	50-200		06/20/23 11:51	
13C7-PFUdA (S)	%	99	50-200		06/20/23 11:51	
13C8-PFOA (S)	%	102	50-200		06/20/23 11:51	
13C8-PFOS (S)	%	106	50-200		06/20/23 11:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

METHOD BLANK: 5095944 Matrix: Drinking Water
Associated Lab Samples: 35805400001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	102	50-200		06/20/23 11:51	

LABORATORY CONTROL SAMPLE: 5095945

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0018 I	96	50-150	
4:2 FTS	ug/L	0.0019	0.0019 I	102	50-150	
6:2 FTS	ug/L	0.0019	0.0019 I	100	50-150	
8:2 FTS	ug/L	0.0019	0.0019 I	99	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	96	50-150	
ADONA	ug/L	0.0019	0.0019 I	101	50-150	
HFPO-DA	ug/L	0.002	0.0021 I	106	50-150	
NFDHA	ug/L	0.02	0.019 I	95	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0020 I	112	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0019 I	97	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0019 I	95	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0021 I	105	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0019 I	107	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0020 I	100	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0020 I	101	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0020 I	104	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0021 I	105	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0019 I	96	50-150	
PFBA	ug/L	0.002	0.0020 I	98	50-150	
PFEESA	ug/L	0.0018	0.0018 I	102	50-150	
PFHpS	ug/L	0.0019	0.0019 I	101	50-150	
PFMBA	ug/L	0.002	0.0019 I	95	50-150	
PFMPA	ug/L	0.002	0.0020 I	101	50-150	
PFPeA	ug/L	0.002	0.0020 I	99	50-150	
PFPeS	ug/L	0.0019	0.0018 I	94	50-150	
13C2-PFDoA (S)	%			95	50-200	
13C24:2FTS (S)	%			117	50-200	
13C26:2FTS (S)	%			103	50-200	
13C28:2FTS (S)	%			106	50-200	
13C3-PFBS (S)	%			106	50-200	
13C3-PFHxS (S)	%			105	50-200	
13C3HFPO-DA(S)	%			94	50-200	
13C4-PFBA (S)	%			96	50-200	
13C4-PFHpA (S)	%			95	50-200	
13C5-PFHxA (S)	%			98	50-200	
13C5-PFPeA (S)	%			97	50-200	
13C6-PFDA (S)	%			96	50-200	
13C7-PFUdA (S)	%			96	50-200	
13C8-PFOA (S)	%			97	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

LABORATORY CONTROL SAMPLE: 5095945

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			104	50-200	
13C9-PFNA (S)	%			98	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

QC Batch: 931510
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35805400002, 35805400004

METHOD BLANK: 5118220
Matrix: Drinking Water
Associated Lab Samples: 35805400002, 35805400004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	07/08/23 14:52	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	07/08/23 14:52	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	07/08/23 14:52	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	07/08/23 14:52	
ADONA	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	07/08/23 14:52	
NFDHA	ug/L	0.0067 U	0.020	0.0067	07/08/23 14:52	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	07/08/23 14:52	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	07/08/23 14:52	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	07/08/23 14:52	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	07/08/23 14:52	
PFBA	ug/L	0.0017 U	0.0050	0.0017	07/08/23 14:52	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	07/08/23 14:52	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	07/08/23 14:52	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	07/08/23 14:52	
13C2-PFDoA (S)	%	96	50-200		07/08/23 14:52	
13C24:2FTS (S)	%	116	50-200		07/08/23 14:52	
13C26:2FTS (S)	%	111	50-200		07/08/23 14:52	
13C28:2FTS (S)	%	105	50-200		07/08/23 14:52	
13C3-PFBS (S)	%	110	50-200		07/08/23 14:52	
13C3-PFHxS (S)	%	104	50-200		07/08/23 14:52	
13C3HFPO-DA(S)	%	80	50-200		07/08/23 14:52	
13C4-PFBA (S)	%	95	50-200		07/08/23 14:52	
13C4-PFHpA (S)	%	91	50-200		07/08/23 14:52	
13C5-PFHxA (S)	%	92	50-200		07/08/23 14:52	
13C5-PFPeA (S)	%	89	50-200		07/08/23 14:52	
13C6-PFDA (S)	%	95	50-200		07/08/23 14:52	
13C7-PFUdA (S)	%	97	50-200		07/08/23 14:52	
13C8-PFOA (S)	%	93	50-200		07/08/23 14:52	
13C8-PFOS (S)	%	105	50-200		07/08/23 14:52	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

METHOD BLANK: 5118220 Matrix: Drinking Water
Associated Lab Samples: 35805400002, 35805400004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	93	50-200		07/08/23 14:52	

LABORATORY CONTROL SAMPLE: 5118221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0018 I	97	50-150	
4:2 FTS	ug/L	0.0019	0.0017 I	92	50-150	
6:2 FTS	ug/L	0.0019	0.0019 I	101	50-150	
8:2 FTS	ug/L	0.0019	0.0020 I	104	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	94	50-150	
ADONA	ug/L	0.0019	0.0019 I	100	50-150	
HFPO-DA	ug/L	0.002	0.0022 I	109	50-150	
NFDHA	ug/L	0.02	0.017 I	85	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0020 I	108	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0019 I	97	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0019 I	96	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0020 I	101	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0019 I	104	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0019 I	95	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0019 I	97	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0018 I	96	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0020 I	98	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0020 I	100	50-150	
PFBA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0018 I	98	50-150	
PFHpS	ug/L	0.0019	0.0019 I	101	50-150	
PFMBA	ug/L	0.002	0.0019 I	97	50-150	
PFMPA	ug/L	0.002	0.0019 I	96	50-150	
PFPeA	ug/L	0.002	0.0020 I	101	50-150	
PFPeS	ug/L	0.0019	0.0021 I	110	50-150	
13C2-PFDoA (S)	%			101	50-200	
13C24:2FTS (S)	%			120	50-200	
13C26:2FTS (S)	%			116	50-200	
13C28:2FTS (S)	%			108	50-200	
13C3-PFBS (S)	%			113	50-200	
13C3-PFHxS (S)	%			106	50-200	
13C3HFPO-DA(S)	%			94	50-200	
13C4-PFBA (S)	%			106	50-200	
13C4-PFHpA (S)	%			99	50-200	
13C5-PFHxA (S)	%			104	50-200	
13C5-PFPeA (S)	%			101	50-200	
13C6-PFDA (S)	%			100	50-200	
13C7-PFUdA (S)	%			100	50-200	
13C8-PFOA (S)	%			103	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

LABORATORY CONTROL SAMPLE: 5118221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			108	50-200	
13C9-PFNA (S)	%			99	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5118222 5118223

Parameter	Units	35809490001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0017 U	0.018	0.017	0.017	0.017	91	96	70-130	1	30	
4:2 FTS	ug/L	0.00099 U	0.018	0.017	0.017	0.018	96	103	70-130	3	30	
6:2 FTS	ug/L	0.0017 U	0.018	0.017	0.016	0.016	85	90	70-130	1	30	
8:2 FTS	ug/L	0.0017 U	0.018	0.017	0.018	0.017	100	100	70-130	4	30	
9Cl-PF3ONS	ug/L	0.00067 U	0.018	0.017	0.017	0.017	92	97	70-130	0	30	
ADONA	ug/L	0.00099 U	0.018	0.017	0.017	0.017	92	97	70-130	0	30	
HFPO-DA	ug/L	0.0017 U	0.019	0.018	0.019	0.019	101	105	70-130	0	30	
NFDHA	ug/L	0.0066 U	0.19	0.18	0.16	0.17	84	91	70-130	3	30	
Perfluorobutanesulfonic acid	ug/L	0.0015 I	0.017	0.016	0.018	0.017	94	96	70-130	1	30	
Perfluorodecanoic acid	ug/L	0.00099 U	0.019	0.018	0.018	0.018	95	100	70-130	1	30	
Perfluorododecanoic acid	ug/L	0.00099 U	0.019	0.018	0.018	0.018	95	99	70-130	1	30	
Perfluoroheptanoic acid	ug/L	0.00099 U	0.019	0.018	0.018	0.019	94	101	70-130	2	30	
Perfluorohexanesulfonic acid	ug/L	0.00099 U	0.017	0.016	0.017	0.018	95	105	70-130	5	30	
Perfluorohexanoic acid	ug/L	0.00099 U	0.019	0.018	0.018	0.019	93	98	70-130	1	30	
Perfluorononanoic acid	ug/L	0.0013 U	0.019	0.018	0.018	0.018	94	100	70-130	2	30	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.018	0.017	0.017	0.018	92	98	70-130	2	30	
Perfluorooctanoic acid	ug/L	0.0013 U	0.019	0.018	0.019	0.018	93	96	70-130	1	30	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.019	0.018	0.018	0.018	96	98	70-130	2	30	
PFBA	ug/L	0.0017 U	0.019	0.018	0.018	0.018	92	96	70-130	0	30	
PFEESA	ug/L	0.00099 U	0.017	0.016	0.016	0.016	93	99	70-130	2	30	
PFHpS	ug/L	0.00099 U	0.018	0.017	0.017	0.017	95	100	70-130	1	30	
PFMBA	ug/L	0.00099 U	0.019	0.018	0.018	0.018	95	97	70-130	2	30	
PFMPA	ug/L	0.0013 U	0.019	0.018	0.017	0.017	90	95	70-130	1	30	
PFPeA	ug/L	0.00099 U	0.019	0.018	0.019	0.019	96	101	70-130	1	30	
PFPeS	ug/L	0.0013 U	0.018	0.017	0.017	0.017	94	95	70-130	4	30	
13C2-PFDoA (S)	%						99	94	50-200			
13C24:2FTS (S)	%						126	121	50-200			
13C26:2FTS (S)	%						122	114	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5118222 5118223

Parameter	Units	35809490001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C28:2FTS (S)	%						117	113	50-200			
13C3-PFBS (S)	%						122	116	50-200			
13C3-PFHxS (S)	%						116	112	50-200			
13C3HFPO-DA(S)	%						92	88	50-200			
13C4-PFBA (S)	%						104	102	50-200			
13C4-PFHpA (S)	%						100	93	50-200			
13C5-PFHxA (S)	%						103	98	50-200			
13C5-PFPeA (S)	%						102	97	50-200			
13C6-PFDA (S)	%						99	92	50-200			
13C7-PFUdA (S)	%						100	94	50-200			
13C8-PFOA (S)	%						101	94	50-200			
13C8-PFOS (S)	%						114	109	50-200			
13C9-PFNA (S)	%						98	90	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE1_Apr 2023_RS1
Pace Project No.: 35805400

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35805400001	**36402861 Water TP#1**	EPA 533	927223	EPA 533	927310
35805400002	**FRB-36402861 Water TP#2**	EPA 533	931510	EPA 533	931971
35805400003	**36402862 Water TP#2**	EPA 533	926623	EPA 533	926901
35805400004	**FRB-36402862 Water TP#2**	EPA 533	931510	EPA 533	931971

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

WO# : 35805400

35805400

CHAIN-OF-CUSTODY UCMR5 / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Required Client Information:	Required Project Information:	Section C Invoice Information:
Company: City of Deland - UCMR5	Report To: Shawn Wahrenberger	Attention: Accounts Payable
Address: 1101 South Amelia Avenue	Copy To:	Company Name: City of Deland - UCMR5
Deland, FL 32724		Address: 1101 South Amelia Ave., Deland, FL 32724
Email: wahrenbergers@deland.org	Purchase Order #:	Pace Quote:
Phone: (386)626-7254 Fax	Project Name: UCMR5_SE1_Apr 2023_RS1	Pace Project Manager: DJ.Kapadia@pacelabs.com
Requested Due Date:	Project #: PWS ID: FL3640286	Pace Profile #: 18402 BO#:

Regulatory Agency

State / Location

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	Preservatives: Ammonium Acetate	Preservatives: HNO3 (Nitric Acid)	Preservatives: Trizma	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: 200.7 Metals-Li, UCMR5	533 PFAS UCMR5	533 PFAS UCMR5-FRB	537.1 PFAS UCMR5	537.1 PFAS UCMR5-FRB	Residual Chlorine (Y/N)	
1	36402861 Water TP #1	DW		6/9/23	0955				4		4					X					OQS
2	FRB - 36402861 Water TP #1	DW		6/9/23	0955				2		2						X				
3	36402862 Water TP #2	DW		6/9/23	1010				2		2					X					
4	FRB - 36402862 Water TP #2	DW		6/9/23	1010				2		2						X				
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Prior to shipping, please refrigerate the samples for 4-6	Tanya C. Mc / Pace	6/9/23	1300	Pace	6/9/23	1300				
hours immediately after sampling.		6/9	1515	ESpace	6/9/23	1515	0.4	Y	n	Y
Please fill containers up to the bottom thread of the										
container cap.										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER:	DATE Signed:					

WO#: 35805400
PM: DNK Due Date: 07/18/23
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☑ Pace ☐ Othe _____

Tracking # _____

Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No ☑ N/A **Ice:** ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

		Comments
Chain of Custody Present	☑ Yes ☐ No	
Chain of Custody Completed	☑ Yes ☐ No	
Relinquished & Sampler Signature	☐ Yes ☑ No	No sampler signature
Samples Arrived within Hold Time	☑ Yes ☐ No	
Sufficient Volume	☑ Yes ☐ No	
Correct Contalners Used	☑ Yes ☐ No	
Containers Intact	☑ Yes ☐ No	
Sample Labels match COC	☑ Yes ☐ No	
Samples received ≤48 hr from collection	☑ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐ Ye ☐ No	
Person contacted for verification		

Temperature Verification Initials: EAS1 Date: 6/9/23 Time: 1530

IR Gun ID: T-409 CF (°C): -0.2

	Observed (°C)	Corrected (°C)	Comments
EPA 533	0.6	0.4	
EPA 537.1	–	–	

Preservation Verification pH strip: _____ pH meter: SR-3

Free Cl Strip/DPD: 230125 Cl Meter: _____

200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
36402861 WaterTP#1 1/4	6.8	–	–		ND	–	
" 2/4	6.9	–			ND	–	
" 3/4	7.1	–			ND	–	
" 4/4	7.1	–			ND	–	
FRB-36402861 WaterTP#1	6.5	–			ND	–	
36402862 WaterTP#2 1/2	7.2	–	–		ND	–	
" 2/2	7.2	–			ND	–	
FRB-36402862 WaterTP#2	6.6	–			ND	–	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

November 27, 2023

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35833134001	**36042864-Water Treatment Plant**	Drinking Water	10/09/23 10:20	10/09/23 13:50
35833134003	**36042861-Water Treatment Plant**	Drinking Water	10/09/23 09:40	10/09/23 13:50
35833134005	**36042862-Water Treatment Plant**	Drinking Water	10/09/23 10:00	10/09/23 13:50

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35833134001	**36042864-Water Treatment Plant**	EPA 200.7	TMA	1	PASI-O
		EPA 533	SWR	41	PASI-O
		EPA 537.1	SWR	8	PASI-O
35833134003	**36042861-Water Treatment Plant**	EPA 200.7	TMA	1	PASI-O
		EPA 537.1	SWR	8	PASI-O
35833134005	**36042862-Water Treatment Plant**	EPA 200.7	TMA	1	PASI-O
		EPA 537.1	SWR	8	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Sample: 36042864-Water Treatment Plant **Lab ID: 35833134001** Collected: 10/09/23 10:20 Received: 10/09/23 13:50 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5U**	ug/L	22.5	7.5	2.5	10/17/23 23:10	10/22/23 21:00	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 273.43 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0015U**	ug/L	0.0046	0.0015	1	10/20/23 21:14	10/22/23 11:52	763051-92-9	
4:2 FTS	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	757124-72-4	
6:2 FTS	**0.0015U**	ug/L	0.0046	0.0015	1	10/20/23 21:14	10/22/23 11:52	27619-97-2	
8:2 FTS	**0.0015U**	ug/L	0.0046	0.0015	1	10/20/23 21:14	10/22/23 11:52	39108-34-4	
9Cl-PF3ONS	**0.00061U**	ug/L	0.0018	0.00061	1	10/20/23 21:14	10/22/23 11:52	756426-58-1	
ADONA	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	919005-14-4	
HFPO-DA	**0.0015U**	ug/L	0.0046	0.0015	1	10/20/23 21:14	10/22/23 11:52	13252-13-6	
NFDHA	**0.0061U**	ug/L	0.018	0.0061	1	10/20/23 21:14	10/22/23 11:52	151772-58-6	
Perfluorobutanesulfonic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	375-73-5	
Perfluorodecanoic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	335-76-2	
Perfluorohexanoic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	307-24-4	
PFBA	**0.0015U**	ug/L	0.0046	0.0015	1	10/20/23 21:14	10/22/23 11:52	375-22-4	
PFEESA	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	113507-82-7	
PFHpS	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	375-92-8	
PFMBA	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	863090-89-5	
PFMPA	**0.0012U**	ug/L	0.0037	0.0012	1	10/20/23 21:14	10/22/23 11:52	377-73-1	
PFPeA	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	2706-90-3	
PFPeS	**0.0012U**	ug/L	0.0037	0.0012	1	10/20/23 21:14	10/22/23 11:52	2706-91-4	
Perfluorododecanoic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	307-55-1	
Perfluoroheptanoic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	375-85-9	
Perfluorohexanesulfonic acid	**0.00091U**	ug/L	0.0027	0.00091	1	10/20/23 21:14	10/22/23 11:52	355-46-4	
Perfluorononanoic acid	**0.0012U**	ug/L	0.0037	0.0012	1	10/20/23 21:14	10/22/23 11:52	375-95-1	
Perfluorooctanesulfonic acid	**0.0012U**	ug/L	0.0037	0.0012	1	10/20/23 21:14	10/22/23 11:52	1763-23-1	
Perfluorooctanoic acid	**0.0012U**	ug/L	0.0037	0.0012	1	10/20/23 21:14	10/22/23 11:52	335-67-1	
Perfluoroundecanoic acid	**0.00061U**	ug/L	0.0018	0.00061	1	10/20/23 21:14	10/22/23 11:52	2058-94-8	
Surrogates									
13C24:2FTS (S)	182	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C26:2FTS (S)	137	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C28:2FTS (S)	108	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C2-PFDoA (S)	85	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C3HFPO-DA(S)	89	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C3-PFBS (S)	117	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C3-PFHxS (S)	118	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C4-PFBA (S)	103	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C4-PFHpA (S)	105	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C5-PFHxA (S)	103	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C5-PFPeA (S)	86	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C6-PFDA (S)	88	%	50-200		1	10/20/23 21:14	10/22/23 11:52		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Sample: 36042864-Water Treatment Plant **Lab ID: 35833134001** Collected: 10/09/23 10:20 Received: 10/09/23 13:50 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 273.43 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
Surrogates									
13C7-PFUdA (S)	85	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C8-PFOA (S)	100	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C8-PFOS (S)	111	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
13C9-PFNA (S)	93	%	50-200		1	10/20/23 21:14	10/22/23 11:52		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 265.4 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0016U**	ug/L	0.0057	0.0016	1	10/10/23 16:11	10/13/23 16:36	2991-50-6	
NMeFOSAA	**0.0019U**	ug/L	0.0057	0.0019	1	10/10/23 16:11	10/13/23 16:36	2355-31-9	
Perfluorotetradecanoic acid	**0.0025U**	ug/L	0.0075	0.0025	1	10/10/23 16:11	10/13/23 16:36	376-06-7	
Perfluorotridecanoic acid	**0.0022U**	ug/L	0.0066	0.0022	1	10/10/23 16:11	10/13/23 16:36	72629-94-8	
Surrogates									
13C2-PFDA (S)	97	%	70-130		1	10/10/23 16:11	10/13/23 16:36		
13C2-PFHxA (S)	89	%	70-130		1	10/10/23 16:11	10/13/23 16:36		
NEtFOSAA-d5 (S)	96	%	70-130		1	10/10/23 16:11	10/13/23 16:36		
HFPO-DAS (S)	86	%	70-130		1	10/10/23 16:11	10/13/23 16:36		

Sample: 36042861-Water Treatment Plant **Lab ID: 35833134003** Collected: 10/09/23 09:40 Received: 10/09/23 13:50 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5U**	ug/L	22.5	7.5	2.5	10/17/23 23:10	10/22/23 21:08	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 267.43 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0016U**	ug/L	0.0056	0.0016	1	10/10/23 16:11	10/13/23 17:23	2991-50-6	
NMeFOSAA	**0.0019U**	ug/L	0.0056	0.0019	1	10/10/23 16:11	10/13/23 17:23	2355-31-9	
Perfluorotetradecanoic acid	**0.0025U**	ug/L	0.0075	0.0025	1	10/10/23 16:11	10/13/23 17:23	376-06-7	
Perfluorotridecanoic acid	**0.0022U**	ug/L	0.0065	0.0022	1	10/10/23 16:11	10/13/23 17:23	72629-94-8	
Surrogates									
13C2-PFDA (S)	103	%	70-130		1	10/10/23 16:11	10/13/23 17:23		
13C2-PFHxA (S)	102	%	70-130		1	10/10/23 16:11	10/13/23 17:23		
NEtFOSAA-d5 (S)	106	%	70-130		1	10/10/23 16:11	10/13/23 17:23		
HFPO-DAS (S)	99	%	70-130		1	10/10/23 16:11	10/13/23 17:23		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Sample: 36042862-Water Treatment Plant **Lab ID: 35833134005** Collected: 10/09/23 10:00 Received: 10/09/23 13:50 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5U**	ug/L	22.5	7.5	2.5	10/17/23 23:10	10/22/23 21:11	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 265.54 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0016U**	ug/L	0.0056	0.0016	1	10/10/23 16:11	10/13/23 17:39	2991-50-6	
NMeFOSAA	**0.0019U**	ug/L	0.0056	0.0019	1	10/10/23 16:11	10/13/23 17:39	2355-31-9	
Perfluorotetradecanoic acid	**0.0025U**	ug/L	0.0075	0.0025	1	10/10/23 16:11	10/13/23 17:39	376-06-7	
Perfluorotridecanoic acid	**0.0022U**	ug/L	0.0066	0.0022	1	10/10/23 16:11	10/13/23 17:39	72629-94-8	
Surrogates									
13C2-PFDA (S)	98	%	70-130		1	10/10/23 16:11	10/13/23 17:39		
13C2-PFHxA (S)	98	%	70-130		1	10/10/23 16:11	10/13/23 17:39		
NEtFOSAA-d5 (S)	98	%	70-130		1	10/10/23 16:11	10/13/23 17:39		
HFPO-DAS (S)	96	%	70-130		1	10/10/23 16:11	10/13/23 17:39		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

QC Batch: 958916
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET Drinking Water
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35833134001, 35833134003, 35833134005

METHOD BLANK: 5273558 Matrix: Drinking Water
Associated Lab Samples: 35833134001, 35833134003, 35833134005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	7.5U	22.5	7.5	10/22/23 20:38	N2

LABORATORY CONTROL SAMPLE: 5273559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	9	8.7J	97	50-150	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5273560 5273561

Parameter	Units	35832768001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	14.4J	100	100	197	199	182	185	0-200	1	30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

QC Batch: 959978
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35833134001

METHOD BLANK: 5279760 Matrix: Drinking Water
Associated Lab Samples: 35833134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017U	0.0050	0.0017	10/22/23 11:17	
4:2 FTS	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
6:2 FTS	ug/L	0.0017U	0.0050	0.0017	10/22/23 11:17	
8:2 FTS	ug/L	0.0017U	0.0050	0.0017	10/22/23 11:17	
9Cl-PF3ONS	ug/L	0.00067U	0.0020	0.00067	10/22/23 11:17	
ADONA	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
HFPO-DA	ug/L	0.0017U	0.0050	0.0017	10/22/23 11:17	
NFDHA	ug/L	0.0067U	0.020	0.0067	10/22/23 11:17	
Perfluorobutanesulfonic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluorodecanoic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluorododecanoic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluoroheptanoic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluorohexanesulfonic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluorohexanoic acid	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
Perfluorononanoic acid	ug/L	0.0013U	0.0040	0.0013	10/22/23 11:17	
Perfluorooctanesulfonic acid	ug/L	0.0013U	0.0040	0.0013	10/22/23 11:17	
Perfluorooctanoic acid	ug/L	0.0013U	0.0040	0.0013	10/22/23 11:17	
Perfluoroundecanoic acid	ug/L	0.00067U	0.0020	0.00067	10/22/23 11:17	
PFBA	ug/L	0.0017U	0.0050	0.0017	10/22/23 11:17	
PFEESA	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
PFHpS	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
PFMBA	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
PFMPA	ug/L	0.0013U	0.0040	0.0013	10/22/23 11:17	
PFPeA	ug/L	0.0010U	0.0030	0.0010	10/22/23 11:17	
PFPeS	ug/L	0.0013U	0.0040	0.0013	10/22/23 11:17	
13C2-PFDoA (S)	%	103	50-200		10/22/23 11:17	
13C24:2FTS (S)	%	116	50-200		10/22/23 11:17	
13C26:2FTS (S)	%	121	50-200		10/22/23 11:17	
13C28:2FTS (S)	%	111	50-200		10/22/23 11:17	
13C3-PFBS (S)	%	122	50-200		10/22/23 11:17	
13C3-PFHxS (S)	%	122	50-200		10/22/23 11:17	
13C3HFPO-DA(S)	%	100	50-200		10/22/23 11:17	
13C4-PFBA (S)	%	102	50-200		10/22/23 11:17	
13C4-PFHpA (S)	%	108	50-200		10/22/23 11:17	
13C5-PFHxA (S)	%	109	50-200		10/22/23 11:17	
13C5-PFPeA (S)	%	97	50-200		10/22/23 11:17	
13C6-PFDA (S)	%	105	50-200		10/22/23 11:17	
13C7-PFUdA (S)	%	105	50-200		10/22/23 11:17	
13C8-PFOA (S)	%	107	50-200		10/22/23 11:17	
13C8-PFOS (S)	%	117	50-200		10/22/23 11:17	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

METHOD BLANK: 5279760 Matrix: Drinking Water
Associated Lab Samples: 35833134001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	106	50-200		10/22/23 11:17	

LABORATORY CONTROL SAMPLE: 5279761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017U	79	50-150	
4:2 FTS	ug/L	0.0019	0.0014J	75	50-150	
6:2 FTS	ug/L	0.0019	0.0028J	149	50-150	
8:2 FTS	ug/L	0.0019	0.0017U	87	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0015J	76	50-150	
ADONA	ug/L	0.0019	0.0014J	74	50-150	
HFPO-DA	ug/L	0.002	0.0017U	75	50-150	
NFDHA	ug/L	0.02	0.013J	66	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0013J	74	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0016J	80	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0015J	77	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0016J	79	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0015J	85	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0016J	82	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0020J	98	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0016J	84	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0020J	101	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0015J	76	50-150	
PFBA	ug/L	0.002	0.0017U	80	50-150	
PFEESA	ug/L	0.0018	0.0014J	76	50-150	
PFHpS	ug/L	0.0019	0.0016J	83	50-150	
PFMBA	ug/L	0.002	0.0016J	79	50-150	
PFMPA	ug/L	0.002	0.0015J	75	50-150	
PFPeA	ug/L	0.002	0.0015J	77	50-150	
PFPeS	ug/L	0.0019	0.0017J	90	50-150	
13C2-PFDoA (S)	%			107	50-200	
13C24:2FTS (S)	%			113	50-200	
13C26:2FTS (S)	%			122	50-200	
13C28:2FTS (S)	%			114	50-200	
13C3-PFBS (S)	%			126	50-200	
13C3-PFHxS (S)	%			125	50-200	
13C3HFPO-DA(S)	%			108	50-200	
13C4-PFBA (S)	%			110	50-200	
13C4-PFHpA (S)	%			114	50-200	
13C5-PFHxA (S)	%			113	50-200	
13C5-PFPeA (S)	%			104	50-200	
13C6-PFDA (S)	%			112	50-200	
13C7-PFUdA (S)	%			109	50-200	
13C8-PFOA (S)	%			113	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

LABORATORY CONTROL SAMPLE: 5279761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			118	50-200	
13C9-PFNA (S)	%			110	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

QC Batch: 956813
QC Batch Method: EPA 537.1
Analysis Method: EPA 537.1
Analysis Description: 537.1 PFOA Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35833134001, 35833134003, 35833134005

METHOD BLANK: 5261437 Matrix: Water
Associated Lab Samples: 35833134001, 35833134003, 35833134005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
NEtFOSAA	ug/L	0.0017U	0.0060	0.0017	10/13/23 15:49	
NMeFOSAA	ug/L	0.0020U	0.0060	0.0020	10/13/23 15:49	
Perfluorotetradecanoic acid	ug/L	0.0027U	0.0080	0.0027	10/13/23 15:49	
Perfluorotridecanoic acid	ug/L	0.0024U	0.0070	0.0024	10/13/23 15:49	
13C2-PFDA (S)	%	101	70-130		10/13/23 15:49	
13C2-PFHxA (S)	%	96	70-130		10/13/23 15:49	
HFPO-DAS (S)	%	103	70-130		10/13/23 15:49	
NEtFOSAA-d5 (S)	%	87	70-130		10/13/23 15:49	

LABORATORY CONTROL SAMPLE: 5261438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSAA	ug/L	0.005	0.0046J	91	50-150	
NMeFOSAA	ug/L	0.006	0.0059J	99	50-150	
Perfluorotetradecanoic acid	ug/L	0.008	0.0084	105	50-150	
Perfluorotridecanoic acid	ug/L	0.007	0.0062J	89	50-150	
13C2-PFDA (S)	%			88	70-130	
13C2-PFHxA (S)	%			92	70-130	
HFPO-DAS (S)	%			93	70-130	
NEtFOSAA-d5 (S)	%			88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5261439 5261440

Parameter	Units	35833134001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
NEtFOSAA	ug/L	0.0016U	0.0048	0.0045	0.0049J	0.0040J	103	88	70-130		30	
NMeFOSAA	ug/L	0.0019U	0.0057	0.0054	0.0058	0.0055	101	101	70-130	5	30	
Perfluorotetradecanoic acid	ug/L	0.0025U	0.0076	0.0073	0.0082	0.0079	107	108	70-130	4	30	
Perfluorotridecanoic acid	ug/L	0.0022U	0.0067	0.0063	0.0064J	0.0060J	95	95	70-130		30	
13C2-PFDA (S)	%						101	101	70-130			
13C2-PFHxA (S)	%						95	93	70-130			
HFPO-DAS (S)	%						95	88	70-130			
NEtFOSAA-d5 (S)	%						100	102	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE2_Oct 2023
Pace Project No.: 35833134

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35833134001	**36042864-Water Treatment Plant**	EPA 200.7	958916	EPA 200.7	958945
35833134003	**36042861-Water Treatment Plant**	EPA 200.7	958916	EPA 200.7	958945
35833134005	**36042862-Water Treatment Plant**	EPA 200.7	958916	EPA 200.7	958945
35833134001	**36042864-Water Treatment Plant**	EPA 533	959978	EPA 533	960170
35833134001	**36042864-Water Treatment Plant**	EPA 537.1	956813	EPA 537.1	957883
35833134003	**36042861-Water Treatment Plant**	EPA 537.1	956813	EPA 537.1	957883
35833134005	**36042862-Water Treatment Plant**	EPA 537.1	956813	EPA 537.1	957883

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

UCMR 5 CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder"

WO# : 35833134

35833134

Company Name:	City of Deland - UCMR5	Contact/Report To:	Shawn Wahrenberger
Street Address:	1101 South Amelia Avenue Deland, FL 32724	Phone #:	(386)626-7254
		E-Mail:	wahrenbergers@deland.org
		Cc E-Mail:	
Customer Project #:		Invoice To:	Accounts Payable
Project Name:	UCMR5_SE2_Oct 2023	Invoice E-Mail:	wahrenbergers@deland.org
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s):

Data Deliverables:
[X] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[X] Other_SDWARS EDD Upload

Regulatory Program (DW, RCRA, etc.) as applicable:

Rush: (Pre-approval required):
[ ] 2 Day [ ] 3 day [ ] 5 day [ ] Other_____
Date Results Requested: 25 BD TAT

DW PWSID # or WW Permit # as applicable:
PWS ID: FL3640286
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Other (OT), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res. CL2	Number & Type of Containers Plastic	Number & Type of Containers Glass	200.7 Metals-Li, UCMR5	533 PFAS UCMR5	533 PFAS UCMR5-FRB	537.1 PFAS UCMR5	537.1 PFAS UCMR5-FRB	Sample Comment
Specify Container Size **										3	3	3	3	3	
Identify Container Preservative Type***										2	3	3	4	4	
Analysis Requested															
36042864-Water Treatment Plant #4-EP4	DW	G	10/9/23	1020				9		X	X		X		OQS
FRB-36042864-Water Treatment Plant #4-EP4	DW	G	10/9/23	1020				4				X		X	
36402861-Water Treatment Plant #1-EP1	DW	G	10/9/23	0940				6		X	X		X		
FRB-36402861-Water Treatment Plant #1-EP1	DW	G	10/9/23	0940				4				X		X	
36402862-Water Treatment Plant #2-EP2	DW	G	10/9/23	1000				6		X	X		X		
FRB-36402862-Water Treatment Plant #2-EP2	DW	G	10/9/23	1000				4				X		X	

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8 TerraCore, (9) Other

*** Preservative Types: (1) None, (2) HNO3, (3) Acetate, (4) Trizma, (5) NaOH, (6) Zn Acetate, (7 NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid MeOH, (11) Other

Lab Use Only
Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: 1144156

Customer Remarks / Special Conditions / Possible Hazards:
Prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Please fill containers up to the bottom thread of the container cap.

Collected By:
Printed Name: Larissa McCoy / Amanda Colmagro
Signature: Larissa McCoy / Amanda

Additional Instructions from Pace®:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp

Relinquished by/Company: (Signature)	Date/Time: 10/9/23 1350	Received by/Company: (Signature) ESpace	Date/Time: 10/9/23 1350	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v01_082123 ©

WO# : 35833134

PM: DNK **Due Date: 11/13/23**
CLIENT: TOM_UCMR

Project #
Project Manager:
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☑ Client ☐ Pace ☐ Othe

Tracking #

Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No ☑ N/A **Ice:** ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

		Comments
Chain of Custody Present	☑ Yes ☐ No	
Chain of Custody Completed	☑ Yes ☐ No	
Relinquished & Sampler Signature	☑ Yes ☐ No	
Samples Arrived within Hold Time	☑ Yes ☐ No	
Sufficient Volume	☑ Yes ☐ No	
Correct Containers Used	☑ Yes ☐ No	
Containers Intact	☑ Yes ☐ No	
Sample Labels match COC	☑ Yes ☐ No	
Samples received ≤48 hr from collection	☑ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐ Ye ☐ No	
Person contacted for verification		

Temperature Verification

Initials: EPS1 Date: 10/9/23 Time: 1400

IR Gun ID: T-408 CF (°C): -0.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	0.8	0.7	
EPA 537.1	2.8	2.9	

Preservation Verification

pH strip: HC324723 pH meter: SR-3

Free Cl Strip/DPD: 230857 Cl Meter: SR-1

200.7 Lab Preserved: Nitric Acid: Date/Time: Initials:

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
36042864 - water Treatment Plant #4 1/4	6.5	7.3	<2	~~ND~~	ND	ND	
" 2/4	6.8	7.5		EPS1 10/9/23	ND	ND	
" 3/4	6.8	7.5			ND	ND	
" 4/4	6.8	7.5			ND	ND	
FRB - 36042864 - Water Treatment Plant #4 - EPI	6.7	7.5			ND	ND	
36402361 - water Treatment Plant #1 - EPI 1/3	6.7	7.4	<2		ND	ND	
" 2/3	6.8	7.5			ND	ND	
" 3/3	7.0	-			ND	~~ND~~	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

WO# : 35833134

PM: DNK **Due Date: 11/13/23**

CLIENT: TOM_UCMR

ion Verification Continued

Sample/Container ID	pH				Free Chlorine**		Comments
	533* (pH 6.0-	537.1 (pH 6.0-8.0)	200.7 (pH <2)	200.7 Lab Preserved	533	537.1	
FRB- 36402861 - water Treatment Plant #1 - EP1	6.6	7.3			ND	ND	
36402862 - water Treatment Plant #2 - EP2 1/3	6.5	7.4	<2		ND	ND	
" 2/3	6.9	7.5			ND	ND	
" 3/3	7.0	-			ND	-	
FRB- 36402862 - water Treatment Plant #2 - EP2	6.7	7.5			ND	ND	

*533 pH may be adjusted at the bench prior to extraction ** ND = <0.1 mg/L

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

January 05, 2024

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on December 07, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35846435001	**36402861-Water Treatment Plant**	Drinking Water	12/06/23 14:50	12/07/23 13:55
35846435002	**FRB-36402861-Water Treatment P**	Drinking Water	12/06/23 14:50	12/07/23 13:55
35846435003	**36402862-Water Treatment Plant**	Drinking Water	12/06/23 15:20	12/07/23 13:55
35846435004	**FRB-36402862-Water Treatment P**	Drinking Water	12/06/23 15:20	12/07/23 13:55

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35846435003	**36402862-Water Treatment Plant**	EPA 533	TMM1	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Sample: 36402862-Water Treatment Plant **Lab ID: 35846435003** Collected: 12/06/23 15:20 Received: 12/07/23 13:55 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 268.9 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0046	0.0016	1	12/15/23 17:07	12/16/23 18:30	763051-92-9	
4:2 FTS	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0046	0.0016	1	12/15/23 17:07	12/16/23 18:30	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0046	0.0016	1	12/15/23 17:07	12/16/23 18:30	39108-34-4	
9Cl-PF3ONS	**0.00062 U**	ug/L	0.0019	0.00062	1	12/15/23 17:07	12/16/23 18:30	756426-58-1	
ADONA	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0046	0.0016	1	12/15/23 17:07	12/16/23 18:30	13252-13-6	
NFDHA	**0.0062 U**	ug/L	0.019	0.0062	1	12/15/23 17:07	12/16/23 18:30	151772-58-6	
Perfluorobutanesulfonic acid	**0.0023 I**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	375-73-5	
Perfluorodecanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	335-76-2	
Perfluorohexanoic acid	**0.0015 I**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0046	0.0016	1	12/15/23 17:07	12/16/23 18:30	375-22-4	
PFEESA	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	113507-82-7	
PFHpS	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	375-92-8	
PFMBA	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0037	0.0012	1	12/15/23 17:07	12/16/23 18:30	377-73-1	
PFPeA	**0.0018 I**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0037	0.0012	1	12/15/23 17:07	12/16/23 18:30	2706-91-4	
Perfluorododecanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	307-55-1	
Perfluoroheptanoic acid	**0.00093 U**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	375-85-9	
Perfluorohexanesulfonic acid	**0.0024 I**	ug/L	0.0028	0.00093	1	12/15/23 17:07	12/16/23 18:30	355-46-4	
Perfluorononanoic acid	**0.0012 U**	ug/L	0.0037	0.0012	1	12/15/23 17:07	12/16/23 18:30	375-95-1	
Perfluorooctanesulfonic acid	**0.0032 I**	ug/L	0.0037	0.0012	1	12/15/23 17:07	12/16/23 18:30	1763-23-1	
Perfluorooctanoic acid	**0.0025 I**	ug/L	0.0037	0.0012	1	12/15/23 17:07	12/16/23 18:30	335-67-1	
Perfluoroundecanoic acid	**0.00062 U**	ug/L	0.0019	0.00062	1	12/15/23 17:07	12/16/23 18:30	2058-94-8	
Surrogates									
13C24:2FTS (S)	121	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C26:2FTS (S)	75	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C28:2FTS (S)	64	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C2-PFDoA (S)	77	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C3HFPO-DA(S)	92	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C3-PFBS (S)	99	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C3-PFHxS (S)	98	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C4-PFBA (S)	95	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C4-PFHpA (S)	97	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C5-PFHxA (S)	96	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C5-PFPeA (S)	89	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C6-PFDA (S)	70	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C7-PFUdA (S)	69	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C8-PFOA (S)	87	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C8-PFOS (S)	97	%	50-200		1	12/15/23 17:07	12/16/23 18:30		
13C9-PFNA (S)	78	%	50-200		1	12/15/23 17:07	12/16/23 18:30		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

QC Batch: 974078
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35846435003

METHOD BLANK: 5359603
Matrix: Drinking Water
Associated Lab Samples: 35846435003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	12/16/23 11:40	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/16/23 11:40	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/16/23 11:40	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	12/16/23 11:40	
ADONA	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	12/16/23 11:40	
NFDHA	ug/L	0.0067 U	0.020	0.0067	12/16/23 11:40	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	12/16/23 11:40	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	12/16/23 11:40	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	12/16/23 11:40	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	12/16/23 11:40	
PFBA	ug/L	0.0017 U	0.0050	0.0017	12/16/23 11:40	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	12/16/23 11:40	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	12/16/23 11:40	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	12/16/23 11:40	
13C2-PFDoA (S)	%	71	50-200		12/16/23 11:40	
13C24:2FTS (S)	%	62	50-200		12/16/23 11:40	
13C26:2FTS (S)	%	58	50-200		12/16/23 11:40	
13C28:2FTS (S)	%	54	50-200		12/16/23 11:40	
13C3-PFBS (S)	%	85	50-200		12/16/23 11:40	
13C3-PFHxS (S)	%	82	50-200		12/16/23 11:40	
13C3HFPO-DA(S)	%	68	50-200		12/16/23 11:40	
13C4-PFBA (S)	%	69	50-200		12/16/23 11:40	
13C4-PFHpA (S)	%	71	50-200		12/16/23 11:40	
13C5-PFHxA (S)	%	71	50-200		12/16/23 11:40	
13C5-PFPeA (S)	%	70	50-200		12/16/23 11:40	
13C6-PFDA (S)	%	63	50-200		12/16/23 11:40	
13C7-PFUdA (S)	%	69	50-200		12/16/23 11:40	
13C8-PFOA (S)	%	67	50-200		12/16/23 11:40	
13C8-PFOS (S)	%	81	50-200		12/16/23 11:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

METHOD BLANK: 5359603 Matrix: Drinking Water
Associated Lab Samples: 35846435003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	65	50-200		12/16/23 11:40	

LABORATORY CONTROL SAMPLE: 5359604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 I	89	50-150	
4:2 FTS	ug/L	0.0019	0.0017 I	90	50-150	
6:2 FTS	ug/L	0.0019	0.0017 I	92	50-150	
8:2 FTS	ug/L	0.0019	0.0017 U	85	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0017 I	88	50-150	
ADONA	ug/L	0.0019	0.0016 I	85	50-150	
HFPO-DA	ug/L	0.002	0.0017 I	84	50-150	
NFDHA	ug/L	0.02	0.022	111	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0015 I	83	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0019 I	96	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0018 I	91	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0018 I	91	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0017 I	95	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0019 I	95	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0024 I	119	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0019 I	102	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0024 I	122	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0020 I	99	50-150	
PFBA	ug/L	0.002	0.0018 I	88	50-150	
PFEESA	ug/L	0.0018	0.0015 I	82	50-150	
PFHpS	ug/L	0.0019	0.0017 I	89	50-150	
PFMBA	ug/L	0.002	0.0018 I	89	50-150	
PFMPA	ug/L	0.002	0.0018 I	92	50-150	
PFPeA	ug/L	0.002	0.0019 I	95	50-150	
PFPeS	ug/L	0.0019	0.0015 I	80	50-150	
13C2-PFDoA (S)	%			77	50-200	
13C24:2FTS (S)	%			68	50-200	
13C26:2FTS (S)	%			61	50-200	
13C28:2FTS (S)	%			57	50-200	
13C3-PFBS (S)	%			92	50-200	
13C3-PFHxS (S)	%			86	50-200	
13C3HFPO-DA(S)	%			85	50-200	
13C4-PFBA (S)	%			81	50-200	
13C4-PFHpA (S)	%			82	50-200	
13C5-PFHxA (S)	%			84	50-200	
13C5-PFPeA (S)	%			84	50-200	
13C6-PFDA (S)	%			75	50-200	
13C7-PFUdA (S)	%			75	50-200	
13C8-PFOA (S)	%			79	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

LABORATORY CONTROL SAMPLE: 5359604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			88	50-200	
13C9-PFNA (S)	%			74	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE2_Oct 2023_RS1
Pace Project No.: 35846435

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35846435003	**36402862-Water Treatment Plant**	EPA 533	974078	EPA 533	974138

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

WO# : 35846435

35846435

Company Name:	City of Deland - UCMR5	Contact/Report To:	Shawn Wahrenberger
Street Address:	1101 South Amelia Avenue, Deland, FL 32724	Phone #:	(386)626-7254
		E-Mail:	wahrenbergers@deland.org
		Cc E-Mail:	
Customer Project #:		Invoice To:	Accounts Payable
Project Name:	UCMR5_SE2_Oct 2023_RS1	Invoice E-Mail:	wahrenbergers@deland.org
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): Florida

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other_____

Regulatory Program (DW, RCRA, etc.) as applicable:

Rush (Pre-approval required):
[ ] 2 Day [ ] 3 day [ ] 5 day [ ] Other_____
Date Results Requested: 25 BD TAT

DW PWSID # or WW Permit # as applicable: FL3640286

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Other (OT), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res. Cl2	Number & Type of Containers Plastic	Number & Type of Containers Glass	533 FRB	533 PFAS Compounds, UCMR	Sample Comment
36402861-Water Treatment Plant 1	DW	G	12/6/23	1450				3			X	OQS
FRB-36402861-Water Treatment Plant 1	DW	G	12/6/23	1450				2		X		
36402862-Water Treatment Plant 2	DW	G	12/6/23	1500				3			X	
FRB-36402862-Water Treatment Plant 2	DW	G	12/6/23	1500				2		X		

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3026156

Preservation non-conformance identified for sample.

Customer Remarks / Special Conditions / Possible Hazards:
UCMR5 is for testing finished drinking water ONLY. Please fill containers up to the bottom thread of the container cap. Prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Ship samples on Monday thru Wednesday only, overnight shipping label included.

Collected By:
Printed Name: Amanda Colindgens
Signature:

Additional Instructions from Pace®:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp. (°C)

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
	12/7/23 1355			
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 12/7/23 1355	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v01_082123 ©

WO#: 35846435

PM: DNK Due Date: 01/15/24
CLIENT: CITDELUCMR3

Project #
Project Manag
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☑ Client ☐ Pace ☐ Other _____

Tracking # _____

Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No ☐ N/A **Ice:** ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

		Comments
Chain of Custody Present	☑ Yes ☐ No	
Chain of Custody Completed	☑ Yes ☐ No	
Relinquished & Sampler Signature	☑ Yes ☐ No	
Samples Arrived within Hold Time	☑ Yes ☐ No	
Sufficient Volume	☑ Yes ☐ No	
Correct Containers Used	☑ Yes ☐ No	
Containers Intact	☑ Yes ☐ No	
Sample Labels match COC	☑ Yes ☐ No	
Samples received ≤48 hr from collection	☑ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐ Ye ☐ No	
Person contacted for verification		

Temperature Verification Initials: JRS Date: 12-7-23 Time: 1415

IR Gun ID: T-414 CF (°C): -0.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	5.3	5.2	
EPA 537.1	—	—	

Preservation Verification pH strip: HC24723 pH meter: SR2

Free Cl Strip/DPD: 230867 Cl Meter: SR1

200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
36402861 water 1/3	6.9	—			ND	—	
2/3	6.8	—			ND	—	
3/3	6.9	—			ND	—	
FRB 36402861 water	6.4	—			ND	—	
36402862 water 1/3	6.8	—			ND	—	
2/3	6.9	—			ND	—	
3/3	6.8	—			ND	—	
FRB 36402862 water	6.3	—			ND	—	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

February 13, 2024

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on January 12, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35853772001	**36042861-Water Treatment Plant**	Drinking Water	01/11/24 11:36	01/12/24 16:30
35853772002	**FRB-36042861-Water Treatment P**	Drinking Water	01/11/24 11:36	01/12/24 16:30

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35853772001	**36042861-Water Treatment Plant**	EPA 533	TSW	41	PASI-O
35853772002	**FRB-36042861-Water Treatment P**	EPA 533	SWR	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Sample: 36042861-Water Treatment Plant **Lab ID: 35853772001** Collected: 01/11/24 11:36 Received: 01/12/24 16:30 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 256.06 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0049	0.0016	1	01/17/24 09:36	01/18/24 16:35	763051-92-9	
4:2 FTS	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0049	0.0016	1	01/17/24 09:36	01/18/24 16:35	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0049	0.0016	1	01/17/24 09:36	01/18/24 16:35	39108-34-4	
9Cl-PF3ONS	**0.00065 U**	ug/L	0.0020	0.00065	1	01/17/24 09:36	01/18/24 16:35	756426-58-1	
ADONA	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0049	0.0016	1	01/17/24 09:36	01/18/24 16:35	13252-13-6	
NFDHA	**0.0065 U**	ug/L	0.020	0.0065	1	01/17/24 09:36	01/18/24 16:35	151772-58-6	
Perfluorobutanesulfonic acid	**0.0037**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	375-73-5	
Perfluorodecanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	335-76-2	
Perfluorohexanoic acid	**0.0054**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	307-24-4	
PFBA	**0.0032 I**	ug/L	0.0049	0.0016	1	01/17/24 09:36	01/18/24 16:35	375-22-4	
PFEESA	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	113507-82-7	
PFHpS	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	375-92-8	
PFMBA	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0039	0.0013	1	01/17/24 09:36	01/18/24 16:35	377-73-1	
PFPeA	**0.0078**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0039	0.0013	1	01/17/24 09:36	01/18/24 16:35	2706-91-4	
Perfluorododecanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	307-55-1	
Perfluoroheptanoic acid	**0.0024 I**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	375-85-9	
Perfluorohexanesulfonic acid	**0.0071**	ug/L	0.0029	0.00098	1	01/17/24 09:36	01/18/24 16:35	355-46-4	
Perfluorononanoic acid	**0.0013 U**	ug/L	0.0039	0.0013	1	01/17/24 09:36	01/18/24 16:35	375-95-1	
Perfluorooctanesulfonic acid	**0.0076**	ug/L	0.0039	0.0013	1	01/17/24 09:36	01/18/24 16:35	1763-23-1	
Perfluorooctanoic acid	**0.0027 I**	ug/L	0.0039	0.0013	1	01/17/24 09:36	01/18/24 16:35	335-67-1	
Perfluoroundecanoic acid	**0.00065 U**	ug/L	0.0020	0.00065	1	01/17/24 09:36	01/18/24 16:35	2058-94-8	
Surrogates									
13C24:2FTS (S)	165	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C26:2FTS (S)	121	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C28:2FTS (S)	110	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C2-PFDoA (S)	100	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C3HFPO-DA(S)	111	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C3-PFBS (S)	128	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C3-PFHxS (S)	127	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C4-PFBA (S)	117	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C4-PFHpA (S)	113	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C5-PFHxA (S)	117	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C5-PFPeA (S)	105	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C6-PFDA (S)	102	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C7-PFUdA (S)	97	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C8-PFOA (S)	109	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C8-PFOS (S)	121	%	50-200		1	01/17/24 09:36	01/18/24 16:35		
13C9-PFNA (S)	106	%	50-200		1	01/17/24 09:36	01/18/24 16:35		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Sample: FRB-36042861-Water Treatment P **Lab ID: 35853772002** Collected: 01/11/24 11:36 Received: 01/12/24 16:30 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 254.94 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0049	0.0016	1	02/06/24 09:17	02/07/24 14:22	763051-92-9	
4:2 FTS	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0049	0.0016	1	02/06/24 09:17	02/07/24 14:22	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0049	0.0016	1	02/06/24 09:17	02/07/24 14:22	39108-34-4	
9Cl-PF3ONS	**0.00066 U**	ug/L	0.0020	0.00066	1	02/06/24 09:17	02/07/24 14:22	756426-58-1	
ADONA	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0049	0.0016	1	02/06/24 09:17	02/07/24 14:22	13252-13-6	
NFDHA	**0.0065 U**	ug/L	0.020	0.0065	1	02/06/24 09:17	02/07/24 14:22	151772-58-6	
Perfluorobutanesulfonic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	375-73-5	
Perfluorodecanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	335-76-2	
Perfluorohexanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0049	0.0016	1	02/06/24 09:17	02/07/24 14:22	375-22-4	
PFEESA	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	113507-82-7	
PFHpS	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	375-92-8	
PFMBA	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0039	0.0013	1	02/06/24 09:17	02/07/24 14:22	377-73-1	
PFPeA	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0039	0.0013	1	02/06/24 09:17	02/07/24 14:22	2706-91-4	
Perfluorododecanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	307-55-1	
Perfluoroheptanoic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	375-85-9	
Perfluorohexanesulfonic acid	**0.00098 U**	ug/L	0.0029	0.00098	1	02/06/24 09:17	02/07/24 14:22	355-46-4	
Perfluorononanoic acid	**0.0013 U**	ug/L	0.0039	0.0013	1	02/06/24 09:17	02/07/24 14:22	375-95-1	
Perfluorooctanesulfonic acid	**0.0013 U**	ug/L	0.0039	0.0013	1	02/06/24 09:17	02/07/24 14:22	1763-23-1	
Perfluorooctanoic acid	**0.0013 U**	ug/L	0.0039	0.0013	1	02/06/24 09:17	02/07/24 14:22	335-67-1	
Perfluoroundecanoic acid	**0.00066 U**	ug/L	0.0020	0.00066	1	02/06/24 09:17	02/07/24 14:22	2058-94-8	
Surrogates									
13C24:2FTS (S)	114	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C26:2FTS (S)	114	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C28:2FTS (S)	95	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C2-PFDoA (S)	93	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C3HFPO-DA(S)	98	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C3-PFBS (S)	113	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C3-PFHxS (S)	109	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C4-PFBA (S)	101	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C4-PFHpA (S)	101	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C5-PFHxA (S)	101	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C5-PFPeA (S)	102	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C6-PFDA (S)	95	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C7-PFUdA (S)	97	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C8-PFOA (S)	100	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C8-PFOS (S)	106	%	50-200		1	02/06/24 09:17	02/07/24 14:22		
13C9-PFNA (S)	99	%	50-200		1	02/06/24 09:17	02/07/24 14:22		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

QC Batch: 981536
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35853772001

METHOD BLANK: 5399171 Matrix: Drinking Water
Associated Lab Samples: 35853772001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	01/18/24 12:30	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	01/18/24 12:30	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	01/18/24 12:30	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	01/18/24 12:30	
ADONA	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	01/18/24 12:30	
NFDHA	ug/L	0.0067 U	0.020	0.0067	01/18/24 12:30	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	01/18/24 12:30	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	01/18/24 12:30	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	01/18/24 12:30	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	01/18/24 12:30	
PFBA	ug/L	0.0017 U	0.0050	0.0017	01/18/24 12:30	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	01/18/24 12:30	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	01/18/24 12:30	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	01/18/24 12:30	
13C2-PFDoA (S)	%	99	50-200		01/18/24 12:30	
13C24:2FTS (S)	%	123	50-200		01/18/24 12:30	
13C26:2FTS (S)	%	106	50-200		01/18/24 12:30	
13C28:2FTS (S)	%	105	50-200		01/18/24 12:30	
13C3-PFBS (S)	%	125	50-200		01/18/24 12:30	
13C3-PFHxS (S)	%	119	50-200		01/18/24 12:30	
13C3HFPO-DA(S)	%	97	50-200		01/18/24 12:30	
13C4-PFBA (S)	%	97	50-200		01/18/24 12:30	
13C4-PFHpA (S)	%	99	50-200		01/18/24 12:30	
13C5-PFHxA (S)	%	99	50-200		01/18/24 12:30	
13C5-PFPeA (S)	%	94	50-200		01/18/24 12:30	
13C6-PFDA (S)	%	99	50-200		01/18/24 12:30	
13C7-PFUdA (S)	%	100	50-200		01/18/24 12:30	
13C8-PFOA (S)	%	101	50-200		01/18/24 12:30	
13C8-PFOS (S)	%	114	50-200		01/18/24 12:30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

METHOD BLANK: 5399171 Matrix: Drinking Water
Associated Lab Samples: 35853772001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	100	50-200		01/18/24 12:30	

LABORATORY CONTROL SAMPLE: 5399172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 U	72	50-150	
4:2 FTS	ug/L	0.0019	0.0013 I	71	50-150	
6:2 FTS	ug/L	0.0019	0.0019 I	98	50-150	
8:2 FTS	ug/L	0.0019	0.0017 U	87	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0014 I	72	50-150	
ADONA	ug/L	0.0019	0.0015 I	77	50-150	
HFPO-DA	ug/L	0.002	0.0017 I	86	50-150	
NFDHA	ug/L	0.02	0.014 I	70	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0014 I	76	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0016 I	79	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0016 I	79	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0016 I	80	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0015 I	85	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0016 I	81	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0019 I	93	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0017 I	91	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0020 I	102	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0016 I	78	50-150	
PFBA	ug/L	0.002	0.0017 U	79	50-150	
PFEESA	ug/L	0.0018	0.0014 I	77	50-150	
PFHpS	ug/L	0.0019	0.0016 I	82	50-150	
PFMBA	ug/L	0.002	0.0016 I	81	50-150	
PFMPA	ug/L	0.002	0.0016 I	82	50-150	
PFPeA	ug/L	0.002	0.0018 I	90	50-150	
PFPeS	ug/L	0.0019	0.0015 I	81	50-150	
13C2-PFDoA (S)	%			104	50-200	
13C24:2FTS (S)	%			123	50-200	
13C26:2FTS (S)	%			111	50-200	
13C28:2FTS (S)	%			106	50-200	
13C3-PFBS (S)	%			128	50-200	
13C3-PFHxS (S)	%			120	50-200	
13C3HFPO-DA(S)	%			104	50-200	
13C4-PFBA (S)	%			105	50-200	
13C4-PFHpA (S)	%			108	50-200	
13C5-PFHxA (S)	%			107	50-200	
13C5-PFPeA (S)	%			103	50-200	
13C6-PFDA (S)	%			104	50-200	
13C7-PFUdA (S)	%			102	50-200	
13C8-PFOA (S)	%			110	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

LABORATORY CONTROL SAMPLE: 5399172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			118	50-200	
13C9-PFNA (S)	%			109	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

QC Batch: 986712
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35853772002

METHOD BLANK: 5425703 Matrix: Drinking Water
Associated Lab Samples: 35853772002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	02/07/24 12:26	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	02/07/24 12:26	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	02/07/24 12:26	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	02/07/24 12:26	
ADONA	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	02/07/24 12:26	
NFDHA	ug/L	0.0067 U	0.020	0.0067	02/07/24 12:26	
Perfluorobutanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluorodecanoic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluorododecanoic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluoroheptanoic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluorohexanesulfonic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluorohexanoic acid	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
Perfluorononanoic acid	ug/L	0.0013 U	0.0040	0.0013	02/07/24 12:26	
Perfluorooctanesulfonic acid	ug/L	0.0013 U	0.0040	0.0013	02/07/24 12:26	
Perfluorooctanoic acid	ug/L	0.0013 U	0.0040	0.0013	02/07/24 12:26	
Perfluoroundecanoic acid	ug/L	0.00067 U	0.0020	0.00067	02/07/24 12:26	
PFBA	ug/L	0.0017 U	0.0050	0.0017	02/07/24 12:26	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	02/07/24 12:26	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	02/07/24 12:26	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	02/07/24 12:26	
13C2-PFDoA (S)	%	89	50-200		02/07/24 12:26	
13C24:2FTS (S)	%	105	50-200		02/07/24 12:26	
13C26:2FTS (S)	%	110	50-200		02/07/24 12:26	
13C28:2FTS (S)	%	94	50-200		02/07/24 12:26	
13C3-PFBS (S)	%	110	50-200		02/07/24 12:26	
13C3-PFHxS (S)	%	106	50-200		02/07/24 12:26	
13C3HFPO-DA(S)	%	94	50-200		02/07/24 12:26	
13C4-PFBA (S)	%	99	50-200		02/07/24 12:26	
13C4-PFHpA (S)	%	99	50-200		02/07/24 12:26	
13C5-PFHxA (S)	%	98	50-200		02/07/24 12:26	
13C5-PFPeA (S)	%	98	50-200		02/07/24 12:26	
13C6-PFDA (S)	%	94	50-200		02/07/24 12:26	
13C7-PFUdA (S)	%	93	50-200		02/07/24 12:26	
13C8-PFOA (S)	%	100	50-200		02/07/24 12:26	
13C8-PFOS (S)	%	105	50-200		02/07/24 12:26	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

METHOD BLANK: 5425703 Matrix: Drinking Water
Associated Lab Samples: 35853772002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	97	50-200		02/07/24 12:26	

LABORATORY CONTROL SAMPLE: 5425704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 U	83	50-150	
4:2 FTS	ug/L	0.0019	0.0018 I	94	50-150	
6:2 FTS	ug/L	0.0019	0.0017 U	80	50-150	
8:2 FTS	ug/L	0.0019	0.0017 U	84	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0016 I	85	50-150	
ADONA	ug/L	0.0019	0.0016 I	84	50-150	
HFPO-DA	ug/L	0.002	0.0019 I	93	50-150	
NFDHA	ug/L	0.02	0.022	108	50-150	
Perfluorobutanesulfonic acid	ug/L	0.0018	0.0016 I	86	50-150	
Perfluorodecanoic acid	ug/L	0.002	0.0016 I	82	50-150	
Perfluorododecanoic acid	ug/L	0.002	0.0016 I	80	50-150	
Perfluoroheptanoic acid	ug/L	0.002	0.0016 I	81	50-150	
Perfluorohexanesulfonic acid	ug/L	0.0018	0.0017 I	92	50-150	
Perfluorohexanoic acid	ug/L	0.002	0.0018 I	92	50-150	
Perfluorononanoic acid	ug/L	0.002	0.0022 I	111	50-150	
Perfluorooctanesulfonic acid	ug/L	0.0019	0.0020 I	104	50-150	
Perfluorooctanoic acid	ug/L	0.002	0.0022 I	110	50-150	
Perfluoroundecanoic acid	ug/L	0.002	0.0017 I	87	50-150	
PFBA	ug/L	0.002	0.0017 I	85	50-150	
PFEESA	ug/L	0.0018	0.0014 I	80	50-150	
PFHpS	ug/L	0.0019	0.0017 I	92	50-150	
PFMBA	ug/L	0.002	0.0018 I	88	50-150	
PFMPA	ug/L	0.002	0.0017 I	86	50-150	
PFPeA	ug/L	0.002	0.0017 I	86	50-150	
PFPeS	ug/L	0.0019	0.0016 I	82	50-150	
13C2-PFDoA (S)	%			95	50-200	
13C24:2FTS (S)	%			107	50-200	
13C26:2FTS (S)	%			109	50-200	
13C28:2FTS (S)	%			94	50-200	
13C3-PFBS (S)	%			112	50-200	
13C3-PFHxS (S)	%			109	50-200	
13C3HFPO-DA(S)	%			97	50-200	
13C4-PFBA (S)	%			101	50-200	
13C4-PFHpA (S)	%			100	50-200	
13C5-PFHxA (S)	%			100	50-200	
13C5-PFPeA (S)	%			100	50-200	
13C6-PFDA (S)	%			93	50-200	
13C7-PFUdA (S)	%			95	50-200	
13C8-PFOA (S)	%			100	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

LABORATORY CONTROL SAMPLE: 5425704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			106	50-200	
13C9-PFNA (S)	%			96	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE2_Oct 2023_RS2
Pace Project No.: 35853772

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35853772001	**36042861-Water Treatment Plant**	EPA 533	981536	EPA 533	981736
35853772002	**FRB-36042861-Water Treatment P**	EPA 533	986712	EPA 533	987016

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 35853772

35853772

Company Name: City of Deland - UCMR5
Street Address: 1101 South Amelia Avenue, Deland, FL 32724
Customer Project #:
Project Name: UCMR5_SE2_Oct 2023_RS2
Site Collection Info/Facility ID (as applicable):

Contact/Report To: Shawn Wahrenberger
Phone #: (386)626-7254
E-Mail: wahrenbergers@deland.org
Cc E-Mail:

Invoice To: Accounts Payable
Invoice E-Mail: wahrenbergers@deland.org
Purchase Order # (if applicable):
Quote #:

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET
County / State origin of sample(s): Florida

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable: FL3640286

Date Results Requested: 25 BD TAT

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3049361

Preservation non-conformance identified for sample.

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected ~~Composite~~ Start Date	Collected ~~Composite~~ Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	533 FRB	533 PFAS Compounds, UCMR	Sample Comment
36402862Water Treatment Plant ~~#2~~ #1 LM	DW	G	1/11/24	1136	—	—	3				X	OQS
FRB-36402862Water Treatment Plant ~~#2~~ ~~#3~~ LM #1	DW	G	1/11/24	1136	—	—	2			X		

Additional Instructions from Pace®:
UCMR5 is for testing finished drinking water ONLY. Please fill containers up to the bottom thread of the container cap. Prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Ship samples on Monday thru Wednesday only, overnight shipping label included.

Collected By: (Printed Name) Amanda Cokinogenis
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp. (°C) On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
City of Deland OR/H	1/12/24 1630	NDPa	1-12-24 1630

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Page: 1.00 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

WO# : 35853772

PM: DNK **Due Date: 02/19/24**
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☑ Client ☐ Pace ☐ Other _____

Tracking # _____

Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No ☐ N/A **Ice:** ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

		Comments
Chain of Custody Present	☑ Yes ☐ No	
Chain of Custody Completed	☑ Yes ☐ No	
Relinquished & Sampler Signature	☑ Yes ☐ No	
Samples Arrived within Hold Time	☑ Yes ☐ No	
Sufficient Volume	☑ Yes ☐ No	
Correct Containers Used	☑ Yes ☐ No	
Containers Intact	☑ Yes ☐ No	
Sample Labels match COC	☑ Yes ☐ No	
Samples received ≤48 hr from collection	☑ Yes ☐ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐ Ye ☐ No	
Person contacted for verification		

Temperature Verification **Initials:** JRS **Date:** 1-12-23 **Time:** 1643

IR Gun ID: _____ **CF (°C):** 0.0

	Observed (°C)	Corrected (°C)	Comments
EPA 533	5.3	5.3	
EPA 537.1	—	—	

Preservation Verification **pH strip:** _____ **pH meter:** _____

Free Cl Strip/DPD: _____ **Cl Meter:** SR-1

200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
36402662 1/3	617	—			0.13	—	533 tested positive for chlorine
2/3	615	—			0.16	—	533 tested positive for chlorine
3/3	617	—			ND	—	
KRB 36402662	614	—			ND	—	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Larissa McCoy
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 3/22/2024 8:41:18 AM

JOB DESCRIPTION

PFAS Investigation in Potable Wells

JOB NUMBER

670-35634-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
3/22/2024 8:41:18 AM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Isotope Dilution Summary 10
QC Sample Results 11
QC Association Summary 16
Lab Chronicle 17
Certification Summary 18
Method Summary 19
Sample Summary 20
Chain of Custody 21
Receipt Checklists 23

Definitions/Glossary

Client: City of Deland
Job ID: 670-35634-1
Project/Site: PFAS Investigation in Potable Wells

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-35634-1

Receipt
The samples were received on 2/28/2024 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7° C.

LCMS
Method 537 (modified): The recovery for labeled isotope 13C3-PFPrA is outside of QC acceptance limits. Since no target analytes are quantified using this labeled isotope, the data is reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: City of Deland
Job ID: 670-35634-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 5
Lab Sample ID: 670-35634-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	9.1		1.9	0.46	ng/L	1		537 IDA	Total/NA
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.84	I	1.9	0.46	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	8.0		1.9	0.93	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.2		1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.6		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.1		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.40	I	1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	4.4		1.9	0.93	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	10		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.1	I	1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.43	I	1.9	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 8
Lab Sample ID: 670-35634-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	9.4		1.9	0.48	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	4.9		1.9	0.96	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11		1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.25	I	1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	3.3		1.9	0.96	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	6.9		1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.6	I	1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.46	I	1.9	0.29	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35634-1

Client Sample ID: Well 5
Date Collected: 02/26/24 11:05
Date Received: 02/28/24 14:00

Lab Sample ID: 670-35634-1
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.9	0.37	ng/L		03/06/24 06:47	03/08/24 21:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorooctanesulfonic acid (PFOS)	**9.1**		1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.9	0.37	ng/L		03/06/24 06:47	03/08/24 21:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	**0.84**	**I**	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorohexanoic acid (PFHxA)	**8.0**		1.9	0.93	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.9	0.37	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorooctanoic acid (PFOA)	**3.7**		1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorohexanesulfonic acid (PFHxS)	**7.2**		1.9	0.19	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorobutanesulfonic acid (PFBS)	**4.6**		1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoroheptanoic acid (PFHpA)	**3.1**		1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorononanoic acid (PFNA)	**0.40**	**I**	1.9	0.19	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.9	0.37	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.56	U	1.9	0.56	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.9	0.37	ng/L		03/06/24 06:47	03/08/24 21:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.9	0.46	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluorobutanoic acid (PFBA)	**4.4**		1.9	0.93	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoropentanoic acid (PFPeA)	**10**		1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoropentanesulfonic acid (PFPeS)	**1.1**	**I**	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.43**	**I**	1.9	0.28	ng/L		03/06/24 06:47	03/08/24 21:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*95*		*40 - 165*	*03/06/24 06:47*	*03/08/24 21:58*	*1*
13C2 PFTeDA	*81*		*10 - 171*	*03/06/24 06:47*	*03/08/24 21:58*	*1*
d5-NEtFOSAA	*94*		*34 - 181*	*03/06/24 06:47*	*03/08/24 21:58*	*1*
d3-NMeFOSAA	*96*		*38 - 168*	*03/06/24 06:47*	*03/08/24 21:58*	*1*
13C3 HFPO-DA	*87*		*13 - 170*	*03/06/24 06:47*	*03/08/24 21:58*	*1*
M2-6:2 FTS	*110*		*40 - 200*	*03/06/24 06:47*	*03/08/24 21:58*	*1*

Client Sample ID: Well 5

Date Collected: 02/26/24 11:05
Date Received: 02/28/24 14:00

Lab Sample ID: 670-35634-1
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	92		37 - 200	03/06/24 06:47	03/08/24 21:58	1
13C3 PFBS	106		34 - 200	03/06/24 06:47	03/08/24 21:58	1
M2-4:2 FTS	134		35 - 200	03/06/24 06:47	03/08/24 21:58	1
13C8 PFOS	90		59 - 155	03/06/24 06:47	03/08/24 21:58	1
13C7 PFUnA	81		41 - 163	03/06/24 06:47	03/08/24 21:58	1
13C5 PFHxA	82		28 - 166	03/06/24 06:47	03/08/24 21:58	1
13C2-PFDoDA	83		22 - 165	03/06/24 06:47	03/08/24 21:58	1
13C8 PFOA	88		52 - 153	03/06/24 06:47	03/08/24 21:58	1
13C6 PFDA	81		53 - 151	03/06/24 06:47	03/08/24 21:58	1
13C3 PFHxS	88		48 - 169	03/06/24 06:47	03/08/24 21:58	1
13C9 PFNA	98		52 - 168	03/06/24 06:47	03/08/24 21:58	1
13C4 PFBA	97		22 - 174	03/06/24 06:47	03/08/24 21:58	1
13C3-PFPrA	15	*	21 - 157	03/06/24 06:47	03/08/24 21:58	1
13C5 PFPeA	96		33 - 196	03/06/24 06:47	03/08/24 21:58	1

Client Sample ID: Well 8

Date Collected: 02/26/24 10:55
Date Received: 02/28/24 14:00

Lab Sample ID: 670-35634-2
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.38	U	1.9	0.38	ng/L		03/06/24 06:47	03/08/24 22:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorooctanesulfonic acid (PFOS)	**9.4**		1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoroundecanoic acid (PFUnA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	U	1.9	0.38	ng/L		03/06/24 06:47	03/08/24 22:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorohexanoic acid (PFHxA)	**4.9**		1.9	0.96	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorododecanoic acid (PFDoA)	0.38	U	1.9	0.38	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorooctanoic acid (PFOA)	**2.2**		1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorodecanoic acid (PFDA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorohexanesulfonic acid (PFHxS)	**11**		1.9	0.19	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorobutanesulfonic acid (PFBS)	**3.7**		1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoroheptanoic acid (PFHpA)	**2.0**		1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorononanoic acid (PFNA)	**0.25**	**I**	1.9	0.19	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorotetradecanoic acid (PFTeDA)	0.38	U	1.9	0.38	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.57	U	1.9	0.57	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorotridecanoic acid (PFTrDA)	0.38	U	1.9	0.38	ng/L		03/06/24 06:47	03/08/24 22:10	1

Client: City of Deland
Job ID: 670-35634-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 8
Lab Sample ID: 670-35634-2
Date Collected: 02/26/24 10:55
Matrix: Water
Date Received: 02/28/24 14:00

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.29	U	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.48	U	1.9	0.48	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluorobutanoic acid (PFBA)	**3.3**		1.9	0.96	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoropentanoic acid (PFPeA)	**6.9**		1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoropentanesulfonic acid (PFPeS)	**1.6**	**I**	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.46**	**I**	1.9	0.29	ng/L		03/06/24 06:47	03/08/24 22:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*78*		*40 - 165*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C2 PFTeDA	*66*		*10 - 171*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
d5-NEtFOSAA	*78*		*34 - 181*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
d3-NMeFOSAA	*81*		*38 - 168*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C3 HFPO-DA	*73*		*13 - 170*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
M2-6:2 FTS	*95*		*40 - 200*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
M2-8:2 FTS	*71*		*37 - 200*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C3 PFBS	*95*		*34 - 200*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
M2-4:2 FTS	*102*		*35 - 200*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C8 PFOS	*78*		*59 - 155*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C7 PFUnA	*67*		*41 - 163*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C5 PFHxA	*75*		*28 - 166*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C2-PFDoDA	*67*		*22 - 165*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C8 PFOA	*80*		*52 - 153*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C6 PFDA	*70*		*53 - 151*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C3 PFHxS	*76*		*48 - 169*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C9 PFNA	*84*		*52 - 168*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C4 PFBA	*84*		*22 - 174*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C3-PFPrA	*8*	*	*21 - 157*	*03/06/24 06:47*	*03/08/24 22:10*	*1*
13C5 PFPeA	*82*		*33 - 196*	*03/06/24 06:47*	*03/08/24 22:10*	*1*

Isotope Dilution Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35634-1

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C4PFHA (40-165)	PFTDA (10-171)	d5NEFOS (34-181)	d3NMFOS (38-168)	HFPODA (13-170)	M262FTS (40-200)	M282FTS (37-200)	C3PFBS (34-200)
670-35634-1	Well 5	95	81	94	96	87	110	92	106
670-35634-2	Well 8	78	66	78	81	73	95	71	95
LCS 410-480112/2-A	Lab Control Sample	85	90	104	106	84	98	88	92
LCSD 410-480112/3-A	Lab Control Sample Dup	87	89	104	105	86	96	89	94
MB 410-480112/1-A	Method Blank	84	88	101	100	83	92	91	89

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (35-200)	C8PFOS (59-155)	13C7PUA (41-163)	13C5PHA (28-166)	PFDoDA (22-165)	C8PFOA (52-153)	C6PFDA (53-151)	C3PFHS (48-169)
670-35634-1	Well 5	134	90	81	82	83	88	81	88
670-35634-2	Well 8	102	78	67	75	67	80	70	76
LCS 410-480112/2-A	Lab Control Sample	98	92	88	84	92	89	84	83
LCSD 410-480112/3-A	Lab Control Sample Dup	97	93	87	85	88	93	85	87
MB 410-480112/1-A	Method Blank	90	88	87	79	92	88	85	84

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C9PFNA (52-168)	PFBA (22-174)	3C3PFPr/ (21-157)	PFPeA (33-196)				
670-35634-1	Well 5	98	97	15 *	96				
670-35634-2	Well 8	84	84	8 *	82				
LCS 410-480112/2-A	Lab Control Sample	94	83	67	90				
LCSD 410-480112/3-A	Lab Control Sample Dup	95	87	69	91				
MB 410-480112/1-A	Method Blank	94	85	71	87				

Surrogate Legend

C4PFHA = 13C4 PFHpA
PFTDA = 13C2 PFTeDA
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
HFPODA = 13C3 HFPO-DA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFBS = 13C3 PFBS
M242FTS = M2-4:2 FTS
C8PFOS = 13C8 PFOS
13C7PUA = 13C7 PFUnA
13C5PHA = 13C5 PFHxA
PFDoDA = 13C2-PFDoDA
C8PFOA = 13C8 PFOA
C6PFDA = 13C6 PFDA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
PFBA = 13C4 PFBA
13C3PFPrA = 13C3-PFPrA
PFPeA = 13C5 PFPeA

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-480112/1-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 480112

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.40	U	2.0	0.40	ng/L		03/06/24 06:47	03/08/24 19:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoroundecanoic acid (PFUnA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.40	U	2.0	0.40	ng/L		03/06/24 06:47	03/08/24 19:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorohexanoic acid (PFHxA)	1.0	U	2.0	1.0	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorododecanoic acid (PFDoA)	0.40	U	2.0	0.40	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorooctanoic acid (PFOA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorodecanoic acid (PFDA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	U	2.0	0.20	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorobutanesulfonic acid (PFBS)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoroheptanoic acid (PFHpA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorononanoic acid (PFNA)	0.20	U	2.0	0.20	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorotetradecanoic acid (PFTeDA)	0.40	U	2.0	0.40	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	U	2.0	0.60	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorotridecanoic acid (PFTrDA)	0.40	U	2.0	0.40	ng/L		03/06/24 06:47	03/08/24 19:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluorobutanoic acid (PFBA)	1.0	U	2.0	1.0	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoropentanoic acid (PFPeA)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoropentanesulfonic acid (PFPeS)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1
Perfluoroheptanesulfonic acid (PFHpS)	0.30	U	2.0	0.30	ng/L		03/06/24 06:47	03/08/24 19:12	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*84*		*40 - 165*	*03/06/24 06:47*	*03/08/24 19:12*	*1*
13C2 PFTeDA	*88*		*10 - 171*	*03/06/24 06:47*	*03/08/24 19:12*	*1*
d5-NEtFOSAA	*101*		*34 - 181*	*03/06/24 06:47*	*03/08/24 19:12*	*1*
d3-NMeFOSAA	*100*		*38 - 168*	*03/06/24 06:47*	*03/08/24 19:12*	*1*
13C3 HFPO-DA	*83*		*13 - 170*	*03/06/24 06:47*	*03/08/24 19:12*	*1*
M2-6:2 FTS	*92*		*40 - 200*	*03/06/24 06:47*	*03/08/24 19:12*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-480112/1-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 480112

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	91		37 - 200	03/06/24 06:47	03/08/24 19:12	1
13C3 PFBS	89		34 - 200	03/06/24 06:47	03/08/24 19:12	1
M2-4:2 FTS	90		35 - 200	03/06/24 06:47	03/08/24 19:12	1
13C8 PFOS	88		59 - 155	03/06/24 06:47	03/08/24 19:12	1
13C7 PFUnA	87		41 - 163	03/06/24 06:47	03/08/24 19:12	1
13C5 PFHxA	79		28 - 166	03/06/24 06:47	03/08/24 19:12	1
13C2-PFDoDA	92		22 - 165	03/06/24 06:47	03/08/24 19:12	1
13C8 PFOA	88		52 - 153	03/06/24 06:47	03/08/24 19:12	1
13C6 PFDA	85		53 - 151	03/06/24 06:47	03/08/24 19:12	1
13C3 PFHxS	84		48 - 169	03/06/24 06:47	03/08/24 19:12	1
13C9 PFNA	94		52 - 168	03/06/24 06:47	03/08/24 19:12	1
13C4 PFBA	85		22 - 174	03/06/24 06:47	03/08/24 19:12	1
13C3-PFPrA	71		21 - 157	03/06/24 06:47	03/08/24 19:12	1
13C5 PFPeA	87		33 - 196	03/06/24 06:47	03/08/24 19:12	1

Lab Sample ID: LCS 410-480112/2-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 480112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	18.6		ng/L		81	60 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	25.6	21.6		ng/L		84	53 - 131
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	21.7		ng/L		85	60 - 130
Perfluorooctanesulfonic acid (PFOS)	23.7	21.3		ng/L		90	62 - 130
Perfluoroundecanoic acid (PFUnA)	25.6	25.4		ng/L		99	62 - 131
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.6	23.7		ng/L		93	62 - 131
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	24.3	22.3		ng/L		92	61 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.6	24.3		ng/L		95	63 - 130
Perfluorohexanoic acid (PFHxA)	25.6	22.8		ng/L		89	59 - 130
Perfluorododecanoic acid (PFDoA)	25.6	24.2		ng/L		95	61 - 132
Perfluorooctanoic acid (PFOA)	25.6	23.6		ng/L		92	58 - 132
Perfluorodecanoic acid (PFDA)	25.6	25.6		ng/L		100	62 - 133
Perfluorohexanesulfonic acid (PFHxS)	23.3	22.2		ng/L		95	62 - 130
Perfluorobutanesulfonic acid (PFBS)	22.7	20.4		ng/L		90	64 - 132
Perfluoroheptanoic acid (PFHpA)	25.6	24.0		ng/L		94	64 - 130
Perfluorononanoic acid (PFNA)	25.6	23.1		ng/L		90	63 - 133
Perfluorotetradecanoic acid (PFTeDA)	25.6	24.4		ng/L		95	62 - 131
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	23.8		ng/L		93	62 - 133

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-480112/2-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 480112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	24.5	23.8		ng/L		97	55 - 134
Perfluorotridecanoic acid (PFTrDA)	25.6	28.4		ng/L		111	59 - 136
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	23.8	22.8		ng/L		96	60 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	23.9	21.8		ng/L		91	61 - 131
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	23.8	21.2		ng/L		89	57 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	22.8		ng/L		89	57 - 133
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	23.3		ng/L		96	61 - 130
Perfluorobutanoic acid (PFBA)	25.6	22.5		ng/L		88	58 - 130
Perfluoropentanoic acid (PFPeA)	25.6	24.2		ng/L		94	60 - 130
Perfluoropentanesulfonic acid (PFPeS)	24.0	22.9		ng/L		95	64 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	24.8		ng/L		102	59 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFHpA	*85*		*40 - 165*
13C2 PFTeDA	*90*		*10 - 171*
d5-NEtFOSAA	*104*		*34 - 181*
d3-NMeFOSAA	*106*		*38 - 168*
13C3 HFPO-DA	*84*		*13 - 170*
M2-6:2 FTS	*98*		*40 - 200*
M2-8:2 FTS	*88*		*37 - 200*
13C3 PFBS	*92*		*34 - 200*
M2-4:2 FTS	*98*		*35 - 200*
13C8 PFOS	*92*		*59 - 155*
13C7 PFUnA	*88*		*41 - 163*
13C5 PFHxA	*84*		*28 - 166*
13C2-PFDoDA	*92*		*22 - 165*
13C8 PFOA	*89*		*52 - 153*
13C6 PFDA	*84*		*53 - 151*
13C3 PFHxS	*83*		*48 - 169*
13C9 PFNA	*94*		*52 - 168*
13C4 PFBA	*83*		*22 - 174*
13C3-PFPrA	*67*		*21 - 157*
13C5 PFPeA	*90*		*33 - 196*

Lab Sample ID: LCSD 410-480112/3-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 480112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.4		ng/L		85	60 - 130	5	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-480112/3-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 480112

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			25.6	21.3		ng/L		83	53 - 131	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			25.6	22.2		ng/L		87	60 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)			23.7	21.5		ng/L		91	62 - 130	1	30
Perfluoroundecanoic acid (PFUnA)			25.6	26.0		ng/L		102	62 - 131	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.6	23.7		ng/L		93	62 - 131	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			24.3	23.0		ng/L		95	61 - 132	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.6	23.2		ng/L		91	63 - 130	5	30
Perfluorohexanoic acid (PFHxA)			25.6	24.4		ng/L		95	59 - 130	7	30
Perfluorododecanoic acid (PFDoA)			25.6	25.1		ng/L		98	61 - 132	4	30
Perfluorooctanoic acid (PFOA)			25.6	22.9		ng/L		90	58 - 132	3	30
Perfluorodecanoic acid (PFDA)			25.6	24.9		ng/L		97	62 - 133	3	30
Perfluorohexanesulfonic acid (PFHxS)			23.3	22.0		ng/L		94	62 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)			22.7	21.2		ng/L		94	64 - 132	4	30
Perfluoroheptanoic acid (PFHpA)			25.6	23.1		ng/L		90	64 - 130	4	30
Perfluorononanoic acid (PFNA)			25.6	23.7		ng/L		92	63 - 133	2	30
Perfluorotetradecanoic acid (PFTeDA)			25.6	24.4		ng/L		95	62 - 131	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			25.6	23.5		ng/L		92	62 - 133	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			24.5	22.8		ng/L		93	55 - 134	4	30
Perfluorotridecanoic acid (PFTrDA)			25.6	29.2		ng/L		114	59 - 136	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			23.8	22.7		ng/L		96	60 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			23.9	23.0		ng/L		96	61 - 131	6	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.8	20.9		ng/L		88	57 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			25.6	22.6		ng/L		88	57 - 133	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.2	23.5		ng/L		97	61 - 130	1	30
Perfluorobutanoic acid (PFBA)			25.6	24.9		ng/L		97	58 - 130	10	30
Perfluoropentanoic acid (PFPeA)			25.6	24.4		ng/L		95	60 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)			24.0	22.7		ng/L		95	64 - 132	1	30
Perfluoroheptanesulfonic acid (PFHpS)			24.4	23.4		ng/L		96	59 - 130	6	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFHpA	*87*		*40 - 165*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-480112/3-A
Matrix: Water
Analysis Batch: 481401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 480112

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFTeDA	89		10 - 171
d5-NEtFOSAA	104		34 - 181
d3-NMeFOSAA	105		38 - 168
13C3 HFPO-DA	86		13 - 170
M2-6:2 FTS	96		40 - 200
M2-8:2 FTS	89		37 - 200
13C3 PFBS	94		34 - 200
M2-4:2 FTS	97		35 - 200
13C8 PFOS	93		59 - 155
13C7 PFUnA	87		41 - 163
13C5 PFHxA	85		28 - 166
13C2-PFDoDA	88		22 - 165
13C8 PFOA	93		52 - 153
13C6 PFDA	85		53 - 151
13C3 PFHxS	87		48 - 169
13C9 PFNA	95		52 - 168
13C4 PFBA	87		22 - 174
13C3-PFPrA	69		21 - 157
13C5 PFPeA	91		33 - 196

QC Association Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35634-1

LCMS

Prep Batch: 480112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-35634-1	Well 5	Total/NA	Water	SPE	
670-35634-2	Well 8	Total/NA	Water	SPE	
MB 410-480112/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-480112/2-A	Lab Control Sample	Total/NA	Water	SPE	
LCSD 410-480112/3-A	Lab Control Sample Dup	Total/NA	Water	SPE	

Analysis Batch: 481401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-35634-1	Well 5	Total/NA	Water	537 IDA	480112
670-35634-2	Well 8	Total/NA	Water	537 IDA	480112
MB 410-480112/1-A	Method Blank	Total/NA	Water	537 IDA	480112
LCS 410-480112/2-A	Lab Control Sample	Total/NA	Water	537 IDA	480112
LCSD 410-480112/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	480112

Lab Chronicle

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35634-1

Client Sample ID: Well 5

Lab Sample ID: 670-35634-1

Date Collected: 02/26/24 11:05

Matrix: Water

Date Received: 02/28/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			480112	DX7G	ELLE	03/06/24 06:47
Total/NA	Analysis	537 IDA		1	481401	VK3G	ELLE	03/08/24 21:58

Client Sample ID: Well 8

Lab Sample ID: 670-35634-2

Date Collected: 02/26/24 10:55

Matrix: Water

Date Received: 02/28/24 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			480112	DX7G	ELLE	03/06/24 06:47
Total/NA	Analysis	537 IDA		1	481401	VK3G	ELLE	03/08/24 22:10

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: City of Deland
Job ID: 670-35634-1
Project/Site: PFAS Investigation in Potable Wells

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87997	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	SPE	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 IDA	SPE	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
537 IDA	SPE	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 IDA	SPE	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: City of Deland
Job ID: 670-35634-1
Project/Site: PFAS Investigation in Potable Wells

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
SPE	PFAS by SPE	Lab SOP	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35634-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
670-35634-1	Well 5	Water	02/26/24 11:05	02/28/24 14:00
670-35634-2	Well 8	Water	02/26/24 10:55	02/28/24 14:00

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler: Amanda Cokinogenis	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-16128-6788.2
Client Contact: Ms. Larissa McCoy	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City of Deland	PWSID:			Job #:
Address: 1101 S. Amelia Ave.	Due Date Requested:			
City: Deland	TAT Requested (days):			
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No			
Phone: 386-626-7256(Tel)	PO #: Purchase Order Requested			
Email: mccoyl@deland.org	WO #:			
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, EPA Methods 537.1 & 533 Lists (29	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
Well 5	2/26/24	1105	G	Water			X	2	
Well 8	2/26/24	1055	G	Water			X	2	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					



Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		2/28/24 1302			2-28-24 15:02	
2		2-28-24 2:00			2/28 1400	
3						

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.7/2.7

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-24679.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-35634-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 3/19/2024			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/PFAS_W_Prep PFAS, EPA Methods 537.1 & 533 Lists (29	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Well 5 (670-35634-1)	2/26/24	11:05 Eastern		Water			X	2	
Well 8 (670-35634-2)	2/26/24	10:55 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		2/28/24 1615				
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 2/29/24 0938	Company ECLST

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: R: 2.1 C: 1.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-35634-1

Login Number: 35634
List Number: 1
Creator: Beck, Brent

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-35634-1

Login Number: 35634
List Number: 2
Creator: Santiago, Nathaniel

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 02/29/24 12:24 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Larissa McCoy
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 3/20/2024 10:02:42 PM

JOB DESCRIPTION

PFAS Investigation in Potable Wells

JOB NUMBER

670-35919-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
3/20/2024 10:02:42 PM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 8
Isotope Dilution Summary 20
QC Sample Results 22
QC Association Summary 25
Lab Chronicle 26
Certification Summary 28
Method Summary 29
Sample Summary 30
Chain of Custody 31
Receipt Checklists 33

Definitions/Glossary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Qualifiers

LCMS

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value; value may not be accurate.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-35919-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/6/2024 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C.

PFAS
Method PFC_IDA: The recovery for d5-NEtFOSAA is above the QC acceptance limit in the closing continuing calibration verification standard. Since the recovery for the labeled isotope is within the QC acceptance limit in TW Well 2 (670-35919-2), the data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 21 — Lab Sample ID: 670-35919-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.1		1.9	0.48	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	1.7	I	1.9	0.97	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	I	1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	I	1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.54	I	1.9	0.29	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	1.9		1.9	0.97	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		1.9	0.29	ng/L	1		537 IDA	Total/NA

Client Sample ID: TW Well 2 — Lab Sample ID: 670-35919-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.31	I	1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.36	I	1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.30	I	1.9	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: TW Well 3 — Lab Sample ID: 670-35919-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.3	I	1.8	0.46	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	0.68	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.94	I	1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.93	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	0.50	I	1.8	0.27	ng/L	1		537 IDA	Total/NA

Client Sample ID: TW Well 4 — Lab Sample ID: 670-35919-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.7	I J	2.0	0.50	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	1.2	I	2.0	0.30	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4	I	2.0	0.20	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.98	I	2.0	0.30	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.38	I	2.0	0.30	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	0.54	I	2.0	0.30	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 7A — Lab Sample ID: 670-35919-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	4.5		1.9	0.47	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	2.6		1.9	0.93	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	2.6		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.0	I	1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	1.5	I	1.9	0.93	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	2.8		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.41	I	1.9	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 11 — Lab Sample ID: 670-35919-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	8.0		1.9	0.46	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		1.9	0.93	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Client Sample ID: Well 11 (Continued)
Lab Sample ID: 670-35919-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	4.4		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.5		1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.3		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.23	I	1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	2.3		1.9	0.93	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	4.9		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.61	I	1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.33	I	1.9	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 27
Lab Sample ID: 670-35919-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	4.0		1.8	0.46	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	2.6		1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	I	1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	1.4	I	1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.39	I	1.8	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 28
Lab Sample ID: 670-35919-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	3.5		1.9	0.47	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		1.9	0.94	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	2.5		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		1.9	0.19	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.85	I	1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	1.4	I	1.9	0.94	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		1.9	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.41	I	1.9	0.28	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35919-1

Client Sample ID: Well 21
Date Collected: 03/01/24 11:35
Date Received: 03/06/24 09:40

Lab Sample ID: 670-35919-1
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.39	U	1.9	0.39	ng/L		03/13/24 06:34	03/15/24 18:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorooctanesulfonic acid (PFOS)	**2.1**		1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoroundecanoic acid (PFUnA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.39	U	1.9	0.39	ng/L		03/13/24 06:34	03/15/24 18:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorohexanoic acid (PFHxA)	**1.7**	**I**	1.9	0.97	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorododecanoic acid (PFDoA)	0.39	U	1.9	0.39	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorooctanoic acid (PFOA)	**1.3**	**I**	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorodecanoic acid (PFDA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**I**	1.9	0.19	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorobutanesulfonic acid (PFBS)	**2.9**		1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoroheptanoic acid (PFHpA)	**0.54**	**I**	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorononanoic acid (PFNA)	0.19	U	1.9	0.19	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorotetradecanoic acid (PFTeDA)	0.39	U	1.9	0.39	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.58	U	1.9	0.58	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorotridecanoic acid (PFTrDA)	0.39	U	1.9	0.39	ng/L		03/13/24 06:34	03/15/24 18:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.48	U	1.9	0.48	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluorobutanoic acid (PFBA)	**1.9**		1.9	0.97	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoropentanoic acid (PFPeA)	**2.4**		1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoropentanesulfonic acid (PFPeS)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1
Perfluoroheptanesulfonic acid (PFHpS)	0.29	U	1.9	0.29	ng/L		03/13/24 06:34	03/15/24 18:25	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*89*		*40 - 165*	*03/13/24 06:34*	*03/15/24 18:25*	*1*
13C2 PFTeDA	*66*		*10 - 171*	*03/13/24 06:34*	*03/15/24 18:25*	*1*
d5-NEtFOSAA	*69*		*34 - 181*	*03/13/24 06:34*	*03/15/24 18:25*	*1*
d3-NMeFOSAA	*66*		*38 - 168*	*03/13/24 06:34*	*03/15/24 18:25*	*1*
13C3 HFPO-DA	*81*		*13 - 170*	*03/13/24 06:34*	*03/15/24 18:25*	*1*
M2-6:2 FTS	*96*		*40 - 200*	*03/13/24 06:34*	*03/15/24 18:25*	*1*

Client Sample ID: Well 21
Lab Sample ID: 670-35919-1

Date Collected: 03/01/24 11:35
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	79		37 - 200	03/13/24 06:34	03/15/24 18:25	1
13C3 PFBS	91		34 - 200	03/13/24 06:34	03/15/24 18:25	1
M2-4:2 FTS	105		35 - 200	03/13/24 06:34	03/15/24 18:25	1
13C8 PFOS	80		59 - 155	03/13/24 06:34	03/15/24 18:25	1
13C7 PFUnA	69		41 - 163	03/13/24 06:34	03/15/24 18:25	1
13C5 PFHxA	89		28 - 166	03/13/24 06:34	03/15/24 18:25	1
13C2-PFDoDA	66		22 - 165	03/13/24 06:34	03/15/24 18:25	1
13C8 PFOA	81		52 - 153	03/13/24 06:34	03/15/24 18:25	1
13C6 PFDA	70		53 - 151	03/13/24 06:34	03/15/24 18:25	1
13C3 PFHxS	85		48 - 169	03/13/24 06:34	03/15/24 18:25	1
13C9 PFNA	87		52 - 168	03/13/24 06:34	03/15/24 18:25	1
13C4 PFBA	77		22 - 174	03/13/24 06:34	03/15/24 18:25	1
13C5 PFPeA	81		33 - 196	03/13/24 06:34	03/15/24 18:25	1

Client Sample ID: TW Well 2
Lab Sample ID: 670-35919-2

Date Collected: 03/01/24 09:45
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/16/24 21:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorooctanesulfonic acid (PFOS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/16/24 21:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorohexanoic acid (PFHxA)	0.95	U	1.9	0.95	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorododecanoic acid (PFDoA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorooctanoic acid (PFOA)	**0.31**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorohexanesulfonic acid (PFHxS)	**0.36**	**I**	1.9	0.19	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorobutanesulfonic acid (PFBS)	**0.30**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoroheptanoic acid (PFHpA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorononanoic acid (PFNA)	0.19	U	1.9	0.19	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorotetradecanoic acid (PFTeDA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.57	U	1.9	0.57	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorotridecanoic acid (PFTrDA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/16/24 21:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1

Client Sample ID: TW Well 2

Lab Sample ID: 670-35919-2

Date Collected: 03/01/24 09:45

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluorobutanoic acid (PFBA)	0.95	U	1.9	0.95	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoropentanoic acid (PFPeA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoropentanesulfonic acid (PFPeS)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1
Perfluoroheptanesulfonic acid (PFHpS)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/16/24 21:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*118*		*40 - 165*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C2 PFTeDA	*83*		*10 - 171*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
d5-NEtFOSAA	*155*		*34 - 181*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
d3-NMeFOSAA	*132*		*38 - 168*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C3 HFPO-DA	*100*		*13 - 170*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
M2-6:2 FTS	*156*		*40 - 200*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
M2-8:2 FTS	*171*		*37 - 200*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C3 PFBS	*131*		*34 - 200*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
M2-4:2 FTS	*187*		*35 - 200*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C8 PFOS	*112*		*59 - 155*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C7 PFUnA	*101*		*41 - 163*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C5 PFHxA	*114*		*28 - 166*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C2-PFDoDA	*103*		*22 - 165*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C8 PFOA	*111*		*52 - 153*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C6 PFDA	*105*		*53 - 151*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C3 PFHxS	*116*		*48 - 169*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C9 PFNA	*130*		*52 - 168*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C4 PFBA	*108*		*22 - 174*	*03/13/24 06:34*	*03/16/24 21:13*	*1*
13C5 PFPeA	*113*		*33 - 196*	*03/13/24 06:34*	*03/16/24 21:13*	*1*

Client Sample ID: TW Well 3

Lab Sample ID: 670-35919-3

Date Collected: 03/01/24 10:05

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 18:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorooctanesulfonic acid (PFOS)	**1.3**	**I**	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoroundecanoic acid (PFUnA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 18:50	1

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: TW Well 3
Lab Sample ID: 670-35919-3
Date Collected: 03/01/24 10:05
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorohexanoic acid (PFHxA)	0.91	U	1.8	0.91	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorooctanoic acid (PFOA)	**0.68**	**I**	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorodecanoic acid (PFDA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorohexanesulfonic acid (PFHxS)	**0.94**	**I**	1.8	0.18	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorobutanesulfonic acid (PFBS)	**0.93**	**I**	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoroheptanoic acid (PFHpA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorononanoic acid (PFNA)	0.18	U	1.8	0.18	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.55	U	1.8	0.55	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 18:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluorobutanoic acid (PFBA)	0.91	U	1.8	0.91	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoropentanoic acid (PFPeA)	**0.50**	**I**	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoropentanesulfonic acid (PFPeS)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1
Perfluoroheptanesulfonic acid (PFHpS)	0.27	U	1.8	0.27	ng/L		03/13/24 06:34	03/15/24 18:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*91*		*40 - 165*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C2 PFTeDA	*63*		*10 - 171*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
d5-NEtFOSAA	*74*		*34 - 181*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
d3-NMeFOSAA	*71*		*38 - 168*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C3 HFPO-DA	*81*		*13 - 170*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
M2-6:2 FTS	*99*		*40 - 200*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
M2-8:2 FTS	*94*		*37 - 200*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C3 PFBS	*101*		*34 - 200*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
M2-4:2 FTS	*128*		*35 - 200*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C8 PFOS	*84*		*59 - 155*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C7 PFUnA	*76*		*41 - 163*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C5 PFHxA	*88*		*28 - 166*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C2-PFDoDA	*68*		*22 - 165*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C8 PFOA	*83*		*52 - 153*	*03/13/24 06:34*	*03/15/24 18:50*	*1*
13C6 PFDA	*80*		*53 - 151*	*03/13/24 06:34*	*03/15/24 18:50*	*1*

Client Sample ID: TW Well 3

Lab Sample ID: 670-35919-3

Date Collected: 03/01/24 10:05

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	91		48 - 169	03/13/24 06:34	03/15/24 18:50	1
13C9 PFNA	93		52 - 168	03/13/24 06:34	03/15/24 18:50	1
13C4 PFBA	82		22 - 174	03/13/24 06:34	03/15/24 18:50	1
13C5 PFPeA	87		33 - 196	03/13/24 06:34	03/15/24 18:50	1

Client Sample ID: TW Well 4

Lab Sample ID: 670-35919-4

Date Collected: 03/01/24 09:55

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 19:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorooctanesulfonic acid (PFOS)	**1.7**	**I J**	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoroundecanoic acid (PFUnA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 19:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorohexanoic acid (PFHxA)	1.0	U	2.0	1.0	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorododecanoic acid (PFDoA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorooctanoic acid (PFOA)	**1.2**	**I**	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorodecanoic acid (PFDA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorohexanesulfonic acid (PFHxS)	**1.4**	**I**	2.0	0.20	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorobutanesulfonic acid (PFBS)	**0.98**	**I**	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoroheptanoic acid (PFHpA)	**0.38**	**I**	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorononanoic acid (PFNA)	0.20	U	2.0	0.20	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorotetradecanoic acid (PFTeDA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	U	2.0	0.60	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorotridecanoic acid (PFTrDA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 19:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluorobutanoic acid (PFBA)	1.0	U	2.0	1.0	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoropentanoic acid (PFPeA)	**0.54**	**I**	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1

Client Sample ID: TW Well 4

Lab Sample ID: 670-35919-4

Date Collected: 03/01/24 09:55

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1
Perfluoroheptanesulfonic acid (PFHpS)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 19:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*84*		*40 - 165*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C2 PFTeDA	*72*		*10 - 171*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
d5-NEtFOSAA	*75*		*34 - 181*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
d3-NMeFOSAA	*69*		*38 - 168*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C3 HFPO-DA	*75*		*13 - 170*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
M2-6:2 FTS	*104*		*40 - 200*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
M2-8:2 FTS	*102*		*37 - 200*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C3 PFBS	*95*		*34 - 200*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
M2-4:2 FTS	*117*		*35 - 200*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C8 PFOS	*86*		*59 - 155*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C7 PFUnA	*77*		*41 - 163*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C5 PFHxA	*83*		*28 - 166*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C2-PFDoDA	*72*		*22 - 165*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C8 PFOA	*81*		*52 - 153*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C6 PFDA	*79*		*53 - 151*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C3 PFHxS	*93*		*48 - 169*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C9 PFNA	*87*		*52 - 168*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C4 PFBA	*72*		*22 - 174*	*03/13/24 06:34*	*03/15/24 19:02*	*1*
13C5 PFPeA	*71*		*33 - 196*	*03/13/24 06:34*	*03/15/24 19:02*	*1*

Client Sample ID: Well 7A

Lab Sample ID: 670-35919-5

Date Collected: 03/01/24 09:20

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorooctanesulfonic acid (PFOS)	**4.5**		1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorohexanoic acid (PFHxA)	**2.6**		1.9	0.93	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorooctanoic acid (PFOA)	**2.6**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:15	1

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 7A
Lab Sample ID: 670-35919-5
Date Collected: 03/01/24 09:20
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**2.7**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoroheptanoic acid (PFHpA)	**1.0**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorononanoic acid (PFNA)	0.19	U	1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.56	U	1.9	0.56	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluorobutanoic acid (PFBA)	**1.5**	**I**	1.9	0.93	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoropentanoic acid (PFPeA)	**2.8**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoropentanesulfonic acid (PFPeS)	**0.41**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1
Perfluoroheptanesulfonic acid (PFHpS)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*89*		*40 - 165*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C2 PFTeDA	*66*		*10 - 171*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
d5-NEtFOSAA	*69*		*34 - 181*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
d3-NMeFOSAA	*67*		*38 - 168*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C3 HFPO-DA	*72*		*13 - 170*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
M2-6:2 FTS	*102*		*40 - 200*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
M2-8:2 FTS	*98*		*37 - 200*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C3 PFBS	*104*		*34 - 200*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
M2-4:2 FTS	*133*		*35 - 200*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C8 PFOS	*82*		*59 - 155*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C7 PFUnA	*75*		*41 - 163*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C5 PFHxA	*83*		*28 - 166*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C2-PFDoDA	*71*		*22 - 165*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C8 PFOA	*83*		*52 - 153*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C6 PFDA	*79*		*53 - 151*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C3 PFHxS	*89*		*48 - 169*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C9 PFNA	*90*		*52 - 168*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C4 PFBA	*81*		*22 - 174*	*03/13/24 06:34*	*03/15/24 19:15*	*1*
13C5 PFPeA	*83*		*33 - 196*	*03/13/24 06:34*	*03/15/24 19:15*	*1*

Client Sample ID: Well 11
Lab Sample ID: 670-35919-6
Date Collected: 03/01/24 09:25
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorooctanesulfonic acid (PFOS)	**8.0**		1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorohexanoic acid (PFHxA)	**3.9**		1.9	0.93	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorooctanoic acid (PFOA)	**4.4**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorohexanesulfonic acid (PFHxS)	**5.5**		1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorobutanesulfonic acid (PFBS)	**5.3**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoroheptanoic acid (PFHpA)	**2.0**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorononanoic acid (PFNA)	**0.23**	**I**	1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.56	U	1.9	0.56	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.9	0.37	ng/L		03/13/24 06:34	03/15/24 19:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.9	0.46	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluorobutanoic acid (PFBA)	**2.3**		1.9	0.93	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoropentanoic acid (PFPeA)	**4.9**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoropentanesulfonic acid (PFPeS)	**0.61**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.33**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*66*		*40 - 165*	*03/13/24 06:34*	*03/15/24 19:28*	*1*
13C2 PFTeDA	*54*		*10 - 171*	*03/13/24 06:34*	*03/15/24 19:28*	*1*
d5-NEtFOSAA	*60*		*34 - 181*	*03/13/24 06:34*	*03/15/24 19:28*	*1*
d3-NMeFOSAA	*60*		*38 - 168*	*03/13/24 06:34*	*03/15/24 19:28*	*1*
13C3 HFPO-DA	*57*		*13 - 170*	*03/13/24 06:34*	*03/15/24 19:28*	*1*
M2-6:2 FTS	*75*		*40 - 200*	*03/13/24 06:34*	*03/15/24 19:28*	*1*

Client Sample ID: Well 11

Lab Sample ID: 670-35919-6

Date Collected: 03/01/24 09:25

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	67		37 - 200	03/13/24 06:34	03/15/24 19:28	1
13C3 PFBS	79		34 - 200	03/13/24 06:34	03/15/24 19:28	1
M2-4:2 FTS	106		35 - 200	03/13/24 06:34	03/15/24 19:28	1
13C8 PFOS	64		59 - 155	03/13/24 06:34	03/15/24 19:28	1
13C7 PFUnA	63		41 - 163	03/13/24 06:34	03/15/24 19:28	1
13C5 PFHxA	64		28 - 166	03/13/24 06:34	03/15/24 19:28	1
13C2-PFDoDA	57		22 - 165	03/13/24 06:34	03/15/24 19:28	1
13C8 PFOA	61		52 - 153	03/13/24 06:34	03/15/24 19:28	1
13C6 PFDA	61		53 - 151	03/13/24 06:34	03/15/24 19:28	1
13C3 PFHxS	68		48 - 169	03/13/24 06:34	03/15/24 19:28	1
13C9 PFNA	68		52 - 168	03/13/24 06:34	03/15/24 19:28	1
13C4 PFBA	62		22 - 174	03/13/24 06:34	03/15/24 19:28	1
13C5 PFPeA	65		33 - 196	03/13/24 06:34	03/15/24 19:28	1

Client Sample ID: Well 27

Lab Sample ID: 670-35919-7

Date Collected: 03/01/24 10:30

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 19:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorooctanesulfonic acid (PFOS)	**4.0**		1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 19:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorohexanoic acid (PFHxA)	**2.6**		1.8	0.92	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorooctanoic acid (PFOA)	**2.9**		1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	**3.8**		1.8	0.18	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorobutanesulfonic acid (PFBS)	**3.7**		1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoroheptanoic acid (PFHpA)	**1.2**	**I**	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorononanoic acid (PFNA)	0.18	U	1.8	0.18	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.55	U	1.8	0.55	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.8	0.37	ng/L		03/13/24 06:34	03/15/24 19:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1

Client Sample ID: Well 27

Lab Sample ID: 670-35919-7

Date Collected: 03/01/24 10:30

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluorobutanoic acid (PFBA)	**1.4**	**I**	1.8	0.92	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoropentanoic acid (PFPeA)	**2.2**		1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoropentanesulfonic acid (PFPeS)	**0.39**	**I**	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1
Perfluoroheptanesulfonic acid (PFHpS)	0.28	U	1.8	0.28	ng/L		03/13/24 06:34	03/15/24 19:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*68*		*40 - 165*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C2 PFTeDA	*55*		*10 - 171*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
d5-NEtFOSAA	*64*		*34 - 181*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
d3-NMeFOSAA	*62*		*38 - 168*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C3 HFPO-DA	*60*		*13 - 170*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
M2-6:2 FTS	*81*		*40 - 200*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
M2-8:2 FTS	*74*		*37 - 200*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C3 PFBS	*78*		*34 - 200*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
M2-4:2 FTS	*99*		*35 - 200*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C8 PFOS	*68*		*59 - 155*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C7 PFUnA	*65*		*41 - 163*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C5 PFHxA	*65*		*28 - 166*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C2-PFDoDA	*62*		*22 - 165*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C8 PFOA	*62*		*52 - 153*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C6 PFDA	*64*		*53 - 151*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C3 PFHxS	*70*		*48 - 169*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C9 PFNA	*69*		*52 - 168*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C4 PFBA	*64*		*22 - 174*	*03/13/24 06:34*	*03/15/24 19:40*	*1*
13C5 PFPeA	*64*		*33 - 196*	*03/13/24 06:34*	*03/15/24 19:40*	*1*

Client Sample ID: Well 28

Lab Sample ID: 670-35919-8

Date Collected: 03/01/24 10:45

Matrix: Water

Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/15/24 19:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorooctanesulfonic acid (PFOS)	**3.5**		1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/15/24 19:53	1

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-35919-1

Client Sample ID: Well 28
Date Collected: 03/01/24 10:45
Date Received: 03/06/24 09:40

Lab Sample ID: 670-35919-8
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorohexanoic acid (PFHxA)	**2.1**		1.9	0.94	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorododecanoic acid (PFDoA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorooctanoic acid (PFOA)	**2.5**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorohexanesulfonic acid (PFHxS)	**3.9**		1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorobutanesulfonic acid (PFBS)	**3.7**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoroheptanoic acid (PFHpA)	**0.85**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorononanoic acid (PFNA)	0.19	U	1.9	0.19	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorotetradecanoic acid (PFTeDA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.56	U	1.9	0.56	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorotridecanoic acid (PFTrDA)	0.38	U	1.9	0.38	ng/L		03/13/24 06:34	03/15/24 19:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluorobutanoic acid (PFBA)	**1.4**	**I**	1.9	0.94	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoropentanoic acid (PFPeA)	**2.2**		1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoropentanesulfonic acid (PFPeS)	**0.41**	**I**	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1
Perfluoroheptanesulfonic acid (PFHpS)	0.28	U	1.9	0.28	ng/L		03/13/24 06:34	03/15/24 19:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*94*		*40 - 165*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C2 PFTeDA	*69*		*10 - 171*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
d5-NEtFOSAA	*78*		*34 - 181*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
d3-NMeFOSAA	*76*		*38 - 168*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C3 HFPO-DA	*81*		*13 - 170*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
M2-6:2 FTS	*109*		*40 - 200*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
M2-8:2 FTS	*106*		*37 - 200*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C3 PFBS	*100*		*34 - 200*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
M2-4:2 FTS	*138*		*35 - 200*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C8 PFOS	*85*		*59 - 155*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C7 PFUnA	*83*		*41 - 163*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C5 PFHxA	*84*		*28 - 166*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C2-PFDoDA	*74*		*22 - 165*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C8 PFOA	*83*		*52 - 153*	*03/13/24 06:34*	*03/15/24 19:53*	*1*
13C6 PFDA	*80*		*53 - 151*	*03/13/24 06:34*	*03/15/24 19:53*	*1*

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 28
Lab Sample ID: 670-35919-8
Date Collected: 03/01/24 10:45
Matrix: Water
Date Received: 03/06/24 09:40

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	90		48 - 169	03/13/24 06:34	03/15/24 19:53	1
13C9 PFNA	96		52 - 168	03/13/24 06:34	03/15/24 19:53	1
13C4 PFBA	85		22 - 174	03/13/24 06:34	03/15/24 19:53	1
13C5 PFPeA	87		33 - 196	03/13/24 06:34	03/15/24 19:53	1

Isotope Dilution Summary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C4PFHA	PFTDA	d5NEFOS	d3NMFOS	HFPODA	M262FTS	M282FTS	C3PFBS
Lab Sample ID	Client Sample ID	(40-165)	(10-171)	(34-181)	(38-168)	(13-170)	(40-200)	(37-200)	(34-200)
670-35919-1	Well 21	89	66	69	66	81	96	79	91
670-35919-2	TW Well 2	118	83	155	132	100	156	171	131
670-35919-3	TW Well 3	91	63	74	71	81	99	94	101
670-35919-4	TW Well 4	84	72	75	69	75	104	102	95
670-35919-5	Well 7A	89	66	69	67	72	102	98	104
670-35919-6	Well 11	66	54	60	60	57	75	67	79
670-35919-7	Well 27	68	55	64	62	60	81	74	78
670-35919-8	Well 28	94	69	78	76	81	109	106	100
LCS 410-482675/2-A	Lab Control Sample	87	70	72	74	77	81	70	85
MB 410-482675/1-A	Method Blank	74	64	69	64	73	70	58	75

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS	C8PFOS	13C7PUA	13C5PHA	PFDoDA	C8PFOA	C6PFDA	C3PFHS
Lab Sample ID	Client Sample ID	(35-200)	(59-155)	(41-163)	(28-166)	(22-165)	(52-153)	(53-151)	(48-169)
670-35919-1	Well 21	105	80	69	89	66	81	70	85
670-35919-2	TW Well 2	187	112	101	114	103	111	105	116
670-35919-3	TW Well 3	128	84	76	88	68	83	80	91
670-35919-4	TW Well 4	117	86	77	83	72	81	79	93
670-35919-5	Well 7A	133	82	75	83	71	83	79	89
670-35919-6	Well 11	106	64	63	64	57	61	61	68
670-35919-7	Well 27	99	68	65	65	62	62	64	70
670-35919-8	Well 28	138	85	83	84	74	83	80	90
LCS 410-482675/2-A	Lab Control Sample	83	79	76	86	68	79	79	88
MB 410-482675/1-A	Method Blank	71	71	69	76	60	71	67	74

		Percent Isotope Dilution Recovery (Acceptance Limits)		
		C9PFNA	PFBA	PFPeA
Lab Sample ID	Client Sample ID	(52-168)	(22-174)	(33-196)
670-35919-1	Well 21	87	77	81
670-35919-2	TW Well 2	130	108	113
670-35919-3	TW Well 3	93	82	87
670-35919-4	TW Well 4	87	72	71
670-35919-5	Well 7A	90	81	83
670-35919-6	Well 11	68	62	65
670-35919-7	Well 27	69	64	64
670-35919-8	Well 28	96	85	87
LCS 410-482675/2-A	Lab Control Sample	81	75	75
MB 410-482675/1-A	Method Blank	72	67	69

Surrogate Legend

C4PFHA = 13C4 PFHpA
PFTDA = 13C2 PFTeDA
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
HFPODA = 13C3 HFPO-DA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFBS = 13C3 PFBS
M242FTS = M2-4:2 FTS
C8PFOS = 13C8 PFOS
13C7PUA = 13C7 PFUnA

Isotope Dilution Summary

Client: City of Deland

Job ID: 670-35919-1

Project/Site: PFAS Investigation in Potable Wells

13C5PHA = 13C5 PFHxA

PFDoDA = 13C2-PFDoDA

C8PFOA = 13C8 PFOA

C6PFDA = 13C6 PFDA

C3PFHS = 13C3 PFHxS

C9PFNA = 13C9 PFNA

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-482675/1-A
Matrix: Water
Analysis Batch: 483827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482675

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 15:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoroundecanoic acid (PFUnA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 15:16	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorohexanoic acid (PFHxA)	1.0	U	2.0	1.0	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorododecanoic acid (PFDoA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorooctanoic acid (PFOA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorodecanoic acid (PFDA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	U	2.0	0.20	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorobutanesulfonic acid (PFBS)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoroheptanoic acid (PFHpA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorononanoic acid (PFNA)	0.20	U	2.0	0.20	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorotetradecanoic acid (PFTeDA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	U	2.0	0.60	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorotridecanoic acid (PFTrDA)	0.40	U	2.0	0.40	ng/L		03/13/24 06:34	03/15/24 15:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluorobutanoic acid (PFBA)	1.0	U	2.0	1.0	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoropentanoic acid (PFPeA)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoropentanesulfonic acid (PFPeS)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1
Perfluoroheptanesulfonic acid (PFHpS)	0.30	U	2.0	0.30	ng/L		03/13/24 06:34	03/15/24 15:16	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*74*		*40 - 165*	*03/13/24 06:34*	*03/15/24 15:16*	*1*
13C2 PFTeDA	*64*		*10 - 171*	*03/13/24 06:34*	*03/15/24 15:16*	*1*
d5-NEtFOSAA	*69*		*34 - 181*	*03/13/24 06:34*	*03/15/24 15:16*	*1*
d3-NMeFOSAA	*64*		*38 - 168*	*03/13/24 06:34*	*03/15/24 15:16*	*1*
13C3 HFPO-DA	*73*		*13 - 170*	*03/13/24 06:34*	*03/15/24 15:16*	*1*
M2-6:2 FTS	*70*		*40 - 200*	*03/13/24 06:34*	*03/15/24 15:16*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-482675/1-A
Matrix: Water
Analysis Batch: 483827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482675

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	58		37 - 200	03/13/24 06:34	03/15/24 15:16	1
13C3 PFBS	75		34 - 200	03/13/24 06:34	03/15/24 15:16	1
M2-4:2 FTS	71		35 - 200	03/13/24 06:34	03/15/24 15:16	1
13C8 PFOS	71		59 - 155	03/13/24 06:34	03/15/24 15:16	1
13C7 PFUnA	69		41 - 163	03/13/24 06:34	03/15/24 15:16	1
13C5 PFHxA	76		28 - 166	03/13/24 06:34	03/15/24 15:16	1
13C2-PFDoDA	60		22 - 165	03/13/24 06:34	03/15/24 15:16	1
13C8 PFOA	71		52 - 153	03/13/24 06:34	03/15/24 15:16	1
13C6 PFDA	67		53 - 151	03/13/24 06:34	03/15/24 15:16	1
13C3 PFHxS	74		48 - 169	03/13/24 06:34	03/15/24 15:16	1
13C9 PFNA	72		52 - 168	03/13/24 06:34	03/15/24 15:16	1
13C4 PFBA	67		22 - 174	03/13/24 06:34	03/15/24 15:16	1
13C5 PFPeA	69		33 - 196	03/13/24 06:34	03/15/24 15:16	1

Lab Sample ID: LCS 410-482675/2-A
Matrix: Water
Analysis Batch: 483827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.7		ng/L		86	60 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	25.6	26.1		ng/L		102	53 - 131
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	20.5		ng/L		80	60 - 130
Perfluorooctanesulfonic acid (PFOS)	23.7	21.7		ng/L		92	62 - 130
Perfluoroundecanoic acid (PFUnA)	25.6	24.2		ng/L		94	62 - 131
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.6	24.6		ng/L		96	62 - 131
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	24.3	22.5		ng/L		93	61 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.6	25.6		ng/L		100	63 - 130
Perfluorohexanoic acid (PFHxA)	25.6	24.8		ng/L		97	59 - 130
Perfluorododecanoic acid (PFDoA)	25.6	25.9		ng/L		101	61 - 132
Perfluorooctanoic acid (PFOA)	25.6	26.1		ng/L		102	58 - 132
Perfluorodecanoic acid (PFDA)	25.6	24.2		ng/L		94	62 - 133
Perfluorohexanesulfonic acid (PFHxS)	23.3	22.6		ng/L		97	62 - 130
Perfluorobutanesulfonic acid (PFBS)	22.7	20.4		ng/L		90	64 - 132
Perfluoroheptanoic acid (PFHpA)	25.6	25.6		ng/L		100	64 - 130
Perfluorononanoic acid (PFNA)	25.6	24.2		ng/L		95	63 - 133
Perfluorotetradecanoic acid (PFTeDA)	25.6	24.7		ng/L		97	62 - 131
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	25.0		ng/L		98	62 - 133
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	24.5	21.9		ng/L		89	55 - 134

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-482675/2-A
Matrix: Water
Analysis Batch: 483827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTrDA)	25.6	27.5		ng/L		107	59 - 136
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	23.8	20.8		ng/L		87	60 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	23.9	24.5		ng/L		102	61 - 131
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	23.8	21.0		ng/L		88	57 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	21.2		ng/L		83	57 - 133
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	22.7		ng/L		94	61 - 130
Perfluorobutanoic acid (PFBA)	25.6	24.6		ng/L		96	58 - 130
Perfluoropentanoic acid (PFPeA)	25.6	23.8		ng/L		93	60 - 130
Perfluoropentanesulfonic acid (PFPeS)	24.0	22.2		ng/L		93	64 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	22.6		ng/L		93	59 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFHpA	*87*		*40 - 165*
13C2 PFTeDA	*70*		*10 - 171*
d5-NEtFOSAA	*72*		*34 - 181*
d3-NMeFOSAA	*74*		*38 - 168*
13C3 HFPO-DA	*77*		*13 - 170*
M2-6:2 FTS	*81*		*40 - 200*
M2-8:2 FTS	*70*		*37 - 200*
13C3 PFBS	*85*		*34 - 200*
M2-4:2 FTS	*83*		*35 - 200*
13C8 PFOS	*79*		*59 - 155*
13C7 PFUnA	*76*		*41 - 163*
13C5 PFHxA	*86*		*28 - 166*
13C2-PFDoDA	*68*		*22 - 165*
13C8 PFOA	*79*		*52 - 153*
13C6 PFDA	*79*		*53 - 151*
13C3 PFHxS	*88*		*48 - 169*
13C9 PFNA	*81*		*52 - 168*
13C4 PFBA	*75*		*22 - 174*
13C5 PFPeA	*75*		*33 - 196*

LCMS

Prep Batch: 482675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-35919-1	Well 21	Total/NA	Water	SPE	
670-35919-2	TW Well 2	Total/NA	Water	SPE	
670-35919-3	TW Well 3	Total/NA	Water	SPE	
670-35919-4	TW Well 4	Total/NA	Water	SPE	
670-35919-5	Well 7A	Total/NA	Water	SPE	
670-35919-6	Well 11	Total/NA	Water	SPE	
670-35919-7	Well 27	Total/NA	Water	SPE	
670-35919-8	Well 28	Total/NA	Water	SPE	
MB 410-482675/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-482675/2-A	Lab Control Sample	Total/NA	Water	SPE	

Analysis Batch: 483827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-35919-1	Well 21	Total/NA	Water	537 IDA	482675
670-35919-3	TW Well 3	Total/NA	Water	537 IDA	482675
670-35919-4	TW Well 4	Total/NA	Water	537 IDA	482675
670-35919-5	Well 7A	Total/NA	Water	537 IDA	482675
670-35919-6	Well 11	Total/NA	Water	537 IDA	482675
670-35919-7	Well 27	Total/NA	Water	537 IDA	482675
670-35919-8	Well 28	Total/NA	Water	537 IDA	482675
MB 410-482675/1-A	Method Blank	Total/NA	Water	537 IDA	482675
LCS 410-482675/2-A	Lab Control Sample	Total/NA	Water	537 IDA	482675

Analysis Batch: 484033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-35919-2	TW Well 2	Total/NA	Water	537 IDA	482675

Lab Chronicle

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 21
Lab Sample ID: 670-35919-1
Date Collected: 03/01/24 11:35
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 18:25

Client Sample ID: TW Well 2
Lab Sample ID: 670-35919-2
Date Collected: 03/01/24 09:45
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	484033	V4RH	ELLE	03/16/24 21:13

Client Sample ID: TW Well 3
Lab Sample ID: 670-35919-3
Date Collected: 03/01/24 10:05
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 18:50

Client Sample ID: TW Well 4
Lab Sample ID: 670-35919-4
Date Collected: 03/01/24 09:55
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 19:02

Client Sample ID: Well 7A
Lab Sample ID: 670-35919-5
Date Collected: 03/01/24 09:20
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 19:15

Client Sample ID: Well 11
Lab Sample ID: 670-35919-6
Date Collected: 03/01/24 09:25
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 19:28

Lab Chronicle

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 27
Lab Sample ID: 670-35919-7
Date Collected: 03/01/24 10:30
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 19:40

Client Sample ID: Well 28
Lab Sample ID: 670-35919-8
Date Collected: 03/01/24 10:45
Matrix: Water
Date Received: 03/06/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			482675	M4QQ	ELLE	03/13/24 06:34
Total/NA	Analysis	537 IDA		1	483827	V4RH	ELLE	03/15/24 19:53

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87997	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	SPE	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 IDA	SPE	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
537 IDA	SPE	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 IDA	SPE	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
SPE	PFAS by SPE	Lab SOP	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Deland
Job ID: 670-35919-1
Project/Site: PFAS Investigation in Potable Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
670-35919-1	Well 21	Water	03/01/24 11:35	03/06/24 09:40
670-35919-2	TW Well 2	Water	03/01/24 09:45	03/06/24 09:40
670-35919-3	TW Well 3	Water	03/01/24 10:05	03/06/24 09:40
670-35919-4	TW Well 4	Water	03/01/24 09:55	03/06/24 09:40
670-35919-5	Well 7A	Water	03/01/24 09:20	03/06/24 09:40
670-35919-6	Well 11	Water	03/01/24 09:25	03/06/24 09:40
670-35919-7	Well 27	Water	03/01/24 10:30	03/06/24 09:40
670-35919-8	Well 28	Water	03/01/24 10:45	03/06/24 09:40

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

670-35919 Chain of Custody

eurofins

Client Information	Sampler: Amanda Cokinogenis	Lab PM: Nordmark, Kathryn	C No: 670-16128-6788.2
Client Contact: Ms. Larissa McCoy	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City of Deland	PWSID:		Job #:
Address: 1101 S. Amelia Ave.	Due Date Requested:		
City: Deland	TAT Requested (days):		
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No		
Phone: 386-626-7256(Tel)	PO #: Purchase Order Requested		
Email: mccoyl@deland.org	WO #:		
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, EPA Methods 537.1 & 533 Lists (29	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
Well 21	3/1/24	1135	G	Water			X	2	
TW well 2	3/1/24	0945	G	Water			X	2	
TW Well 3	3/1/24	1005	G	Water			X	2	
TW well 4	3/1/24	0955	G	Water			X	2	
Well 7A	3/1/24	0920	G	Water			X	2	
Well 11	3/1/24	0925	G	Water			X	2	
Well 27	3/1/24	1030	G	Water			X	2	
Well 28	3/1/24	1045	G	Water			X	2	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	3/6/24 0815	Deland	[signature]	3-6-24 8:15	Eurofins
2	[signature]	3-6-24 9:40	Eurofins	[signature]	3.6.24 8940	
3						

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.3 12.3

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-25060.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-35919-1
Address: 2425 New Holland Pike,	Due Date Requested: 3/26/2024			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/PFAS_W_Prep PFAS, EPA Methods 537.1 & 533 Lists (29	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Well 21 (670-35919-1)	3/1/24	11:35 Eastern		Water			X	2	
TW Well 2 (670-35919-2)	3/1/24	09:45 Eastern		Water			X	2	
TW Well 3 (670-35919-3)	3/1/24	10:05 Eastern		Water			X	2	
TW Well 4 (670-35919-4)	3/1/24	09:55 Eastern		Water			X	2	
Well 7A (670-35919-5)	3/1/24	09:20 Eastern		Water			X	2	
Well 11 (670-35919-6)	3/1/24	09:25 Eastern		Water			X	2	
Well 27 (670-35919-7)	3/1/24	10:30 Eastern		Water			X	2	
Well 28 (670-35919-8)	3/1/24	10:45 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 3/6/24 1530	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/7/24 10:10	Company ECLST

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R: 1.1 C: 0.9

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-35919-1

Login Number: 35919

List Source: Eurofins Orlando

List Number: 1

Creator: Lavardera, Angelina

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-35919-1

Login Number: 35919
List Number: 2
Creator: Santiago, Nathaniel

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 03/07/24 12:59 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Larissa McCoy
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 4/3/2024 9:09:10 AM

JOB DESCRIPTION

PFAS Investigation in Potable Wells

JOB NUMBER

670-36515-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
4/3/2024 9:09:10 AM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 8
Isotope Dilution Summary 14
QC Sample Results 15
QC Association Summary 20
Lab Chronicle 21
Certification Summary 22
Method Summary 23
Sample Summary 24
Chain of Custody 25
Receipt Checklists 27

Definitions/Glossary

Client: City of Deland
Job ID: 670-36515-1
Project/Site: PFAS Investigation in Potable Wells

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 670-36515-1 — Eurofins Orlando

Job Narrative
670-36515-1

Receipt
The samples were received on 3/15/2024 2:10 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.4º C.

LCMS
Method 537 (modified): The recovery for the labeled isotope(s) in the following samples: Well 12 (670-36515-2), Well 9 (670-36515-3) and Well 10 (670-36515-4) is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the sample, the data is reported.

Method 537 (modified): The recovery for the labeled isotope M2-6:2 FTS is outside of the QC acceptance limits in the method blank and the laboratory control spike samples associated with the following samples: TW Well 1 (670-36515-1), Well 12 (670-36515-2), Well 9 (670-36515-3) and Well 10 (670-36515-4). Since the recovery is biased high, the associated target analyte was not detected in the method blank and the recovery for associated target analyte in the laboratory control spike(s) was within the QC acceptance limits, the data is reported.

Method 537 (modified): The recovery for labeled isotope: M2-8:2 FTS is outside the QC acceptance limits in the closing continuing calibration verification standard. Since the recovery for the labeled isotope is within QC limits in the following sample: TW Well 1 (670-36515-1)the data is reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

Client Sample ID: TW Well 1 — Lab Sample ID: 670-36515-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.3	I	1.8	0.44	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	1.2	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.7	I	1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.7	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.43	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.38	I	1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	0.96	I	1.8	0.88	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	0.53	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.34	I	1.8	0.27	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 12 — Lab Sample ID: 670-36515-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	8.9		1.8	0.46	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	4.2		1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	5.3		1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorodecanoic acid (PFDA)	0.31	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.4		1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.2		1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.75	I	1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	3.2		1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	6.6		1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.75	I	1.8	0.27	ng/L	1		537 IDA	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.28	I	1.8	0.27	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 9 — Lab Sample ID: 670-36515-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	8.6		1.8	0.46	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	5.7		1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.3		1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.7		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.9		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.45	I	1.8	0.18	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	3.9		1.8	0.92	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	9.2		1.8	0.28	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.71	I	1.8	0.28	ng/L	1		537 IDA	Total/NA

Client Sample ID: Well 10 — Lab Sample ID: 670-36515-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	6.3		1.7	0.43	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		1.7	0.86	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	4.6		1.7	0.26	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		1.7	0.17	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.4		1.7	0.26	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.7	0.26	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Client Sample ID: Well 10 (Continued)
Lab Sample ID: 670-36515-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	0.23	I	1.7	0.17	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	2.4		1.7	0.86	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	5.0		1.7	0.26	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.46	I	1.7	0.26	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

Client Sample ID: TW Well 1

Date Collected: 03/11/24 13:35
Date Received: 03/15/24 14:10

Lab Sample ID: 670-36515-1

Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.35	U	1.8	0.35	ng/L		03/25/24 07:29	04/01/24 17:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorooctanesulfonic acid (PFOS)	**1.3**	**I**	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoroundecanoic acid (PFUnA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.35	U	1.8	0.35	ng/L		03/25/24 07:29	04/01/24 17:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorohexanoic acid (PFHxA)	0.88	U	1.8	0.88	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorododecanoic acid (PFDoA)	0.35	U	1.8	0.35	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorooctanoic acid (PFOA)	**1.2**	**I**	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorodecanoic acid (PFDA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorohexanesulfonic acid (PFHxS)	**1.7**	**I**	1.8	0.18	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorobutanesulfonic acid (PFBS)	**1.7**	**I**	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoroheptanoic acid (PFHpA)	**0.43**	**I**	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorononanoic acid (PFNA)	**0.38**	**I**	1.8	0.18	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorotetradecanoic acid (PFTeDA)	0.35	U	1.8	0.35	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.53	U	1.8	0.53	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorotridecanoic acid (PFTrDA)	0.35	U	1.8	0.35	ng/L		03/25/24 07:29	04/01/24 17:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluorobutanoic acid (PFBA)	**0.96**	**I**	1.8	0.88	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoropentanoic acid (PFPeA)	**0.53**	**I**	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoropentanesulfonic acid (PFPeS)	**0.34**	**I**	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1
Perfluoroheptanesulfonic acid (PFHpS)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	04/01/24 17:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*103*		*40 - 165*	*03/25/24 07:29*	*04/01/24 17:11*	*1*
13C2 PFTeDA	*76*		*10 - 171*	*03/25/24 07:29*	*04/01/24 17:11*	*1*
d5-NEtFOSAA	*107*		*34 - 181*	*03/25/24 07:29*	*04/01/24 17:11*	*1*
d3-NMeFOSAA	*115*		*38 - 168*	*03/25/24 07:29*	*04/01/24 17:11*	*1*
13C3 HFPO-DA	*93*		*13 - 170*	*03/25/24 07:29*	*04/01/24 17:11*	*1*
M2-6:2 FTS	*156*		*40 - 200*	*03/25/24 07:29*	*04/01/24 17:11*	*1*

Client Sample ID: TW Well 1
Lab Sample ID: 670-36515-1

Date Collected: 03/11/24 13:35
Matrix: Water
Date Received: 03/15/24 14:10

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	159		37 - 200	03/25/24 07:29	04/01/24 17:11	1
13C3 PFBS	149		34 - 200	03/25/24 07:29	04/01/24 17:11	1
M2-4:2 FTS	167		35 - 200	03/25/24 07:29	04/01/24 17:11	1
13C8 PFOS	113		59 - 155	03/25/24 07:29	04/01/24 17:11	1
13C7 PFUnA	90		41 - 163	03/25/24 07:29	04/01/24 17:11	1
13C5 PFHxA	101		28 - 166	03/25/24 07:29	04/01/24 17:11	1
13C2-PFDoDA	94		22 - 165	03/25/24 07:29	04/01/24 17:11	1
13C8 PFOA	106		52 - 153	03/25/24 07:29	04/01/24 17:11	1
13C6 PFDA	102		53 - 151	03/25/24 07:29	04/01/24 17:11	1
13C3 PFHxS	112		48 - 169	03/25/24 07:29	04/01/24 17:11	1
13C9 PFNA	110		52 - 168	03/25/24 07:29	04/01/24 17:11	1
13C4 PFBA	100		22 - 174	03/25/24 07:29	04/01/24 17:11	1
13C3-PFPrA	9	*	21 - 157	03/25/24 07:29	04/01/24 17:11	1
13C5 PFPeA	116		33 - 196	03/25/24 07:29	04/01/24 17:11	1

Client Sample ID: Well 12
Lab Sample ID: 670-36515-2

Date Collected: 03/12/24 13:40
Matrix: Water
Date Received: 03/15/24 14:10

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorooctanesulfonic acid (PFOS)	**8.9**		1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoroundecanoic acid (PFUnA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorohexanoic acid (PFHxA)	**4.2**		1.8	0.92	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorooctanoic acid (PFOA)	**5.3**		1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorodecanoic acid (PFDA)	**0.31**	**I**	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorohexanesulfonic acid (PFHxS)	**7.1**		1.8	0.18	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorobutanesulfonic acid (PFBS)	**5.4**		1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoroheptanoic acid (PFHpA)	**2.2**		1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorononanoic acid (PFNA)	**0.75**	**I**	1.8	0.18	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.55	U	1.8	0.55	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:18	1

Client Sample ID: Well 12

Date Collected: 03/12/24 13:40
Date Received: 03/15/24 14:10

Lab Sample ID: 670-36515-2
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.27	U	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluorobutanoic acid (PFBA)	**3.2**		1.8	0.92	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoropentanoic acid (PFPeA)	**6.6**		1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoropentanesulfonic acid (PFPeS)	**0.75**	**I**	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.28**	**I**	1.8	0.27	ng/L		03/25/24 07:29	03/31/24 13:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*68*		*40 - 165*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C2 PFTeDA	*64*		*10 - 171*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
d5-NEtFOSAA	*89*		*34 - 181*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
d3-NMeFOSAA	*90*		*38 - 168*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C3 HFPO-DA	*62*		*13 - 170*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
M2-6:2 FTS	*247*	*	*40 - 200*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
M2-8:2 FTS	*121*		*37 - 200*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C3 PFBS	*105*		*34 - 200*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
M2-4:2 FTS	*122*		*35 - 200*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C8 PFOS	*86*		*59 - 155*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C7 PFUnA	*78*		*41 - 163*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C5 PFHxA	*63*		*28 - 166*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C2-PFDoDA	*69*		*22 - 165*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C8 PFOA	*79*		*52 - 153*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C6 PFDA	*78*		*53 - 151*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C3 PFHxS	*77*		*48 - 169*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C9 PFNA	*84*		*52 - 168*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C4 PFBA	*71*		*22 - 174*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C3-PFPrA	*10*	*	*21 - 157*	*03/25/24 07:29*	*03/31/24 13:18*	*1*
13C5 PFPeA	*70*		*33 - 196*	*03/25/24 07:29*	*03/31/24 13:18*	*1*

Client Sample ID: Well 9

Date Collected: 03/12/24 13:50
Date Received: 03/15/24 14:10

Lab Sample ID: 670-36515-3
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorooctanesulfonic acid (PFOS)	**8.6**		1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1

Client Sample ID: Well 9
Date Collected: 03/12/24 13:50
Date Received: 03/15/24 14:10

Lab Sample ID: 670-36515-3
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorohexanoic acid (PFHxA)	**5.7**		1.8	0.92	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorododecanoic acid (PFDoA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorooctanoic acid (PFOA)	**5.2**		1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorodecanoic acid (PFDA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorohexanesulfonic acid (PFHxS)	**6.3**		1.8	0.18	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorobutanesulfonic acid (PFBS)	**7.7**		1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoroheptanoic acid (PFHpA)	**2.9**		1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorononanoic acid (PFNA)	**0.45**	**I**	1.8	0.18	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorotetradecanoic acid (PFTeDA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.55	U	1.8	0.55	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorotridecanoic acid (PFTrDA)	0.37	U	1.8	0.37	ng/L		03/25/24 07:29	03/31/24 13:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluorobutanoic acid (PFBA)	**3.9**		1.8	0.92	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoropentanoic acid (PFPeA)	**9.2**		1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoropentanesulfonic acid (PFPeS)	**0.71**	**I**	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1
Perfluoroheptanesulfonic acid (PFHpS)	0.28	U	1.8	0.28	ng/L		03/25/24 07:29	03/31/24 13:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*66*		*40 - 165*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C2 PFTeDA	*61*		*10 - 171*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
d5-NEtFOSAA	*82*		*34 - 181*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
d3-NMeFOSAA	*86*		*38 - 168*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C3 HFPO-DA	*66*		*13 - 170*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
M2-6:2 FTS	*230*	*	*40 - 200*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
M2-8:2 FTS	*103*		*37 - 200*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C3 PFBS	*99*		*34 - 200*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
M2-4:2 FTS	*96*		*35 - 200*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C8 PFOS	*83*		*59 - 155*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C7 PFUnA	*76*		*41 - 163*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C5 PFHxA	*67*		*28 - 166*	*03/25/24 07:29*	*03/31/24 13:33*	*1*
13C2-PFDoDA	*67*		*22 - 165*	*03/25/24 07:29*	*03/31/24 13:33*	*1*

Client Sample ID: Well 9
Lab Sample ID: 670-36515-3
Date Collected: 03/12/24 13:50
Matrix: Water
Date Received: 03/15/24 14:10

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	81		52 - 153	03/25/24 07:29	03/31/24 13:33	1
13C6 PFDA	76		53 - 151	03/25/24 07:29	03/31/24 13:33	1
13C3 PFHxS	75		48 - 169	03/25/24 07:29	03/31/24 13:33	1
13C9 PFNA	79		52 - 168	03/25/24 07:29	03/31/24 13:33	1
13C4 PFBA	75		22 - 174	03/25/24 07:29	03/31/24 13:33	1
13C3-PFPrA	16	*	21 - 157	03/25/24 07:29	03/31/24 13:33	1
13C5 PFPeA	78		33 - 196	03/25/24 07:29	03/31/24 13:33	1

Client Sample ID: Well 10
Lab Sample ID: 670-36515-4
Date Collected: 03/12/24 14:00
Matrix: Water
Date Received: 03/15/24 14:10

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.34	U	1.7	0.34	ng/L		03/25/24 07:29	03/31/24 13:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorooctanesulfonic acid (PFOS)	**6.3**		1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoroundecanoic acid (PFUnA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.34	U	1.7	0.34	ng/L		03/25/24 07:29	03/31/24 13:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorohexanoic acid (PFHxA)	**3.5**		1.7	0.86	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorododecanoic acid (PFDoA)	0.34	U	1.7	0.34	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorooctanoic acid (PFOA)	**4.6**		1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorodecanoic acid (PFDA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorohexanesulfonic acid (PFHxS)	**3.8**		1.7	0.17	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorobutanesulfonic acid (PFBS)	**6.4**		1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorononanoic acid (PFNA)	**0.23**	**I**	1.7	0.17	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorotetradecanoic acid (PFTeDA)	0.34	U	1.7	0.34	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.52	U	1.7	0.52	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorotridecanoic acid (PFTrDA)	0.34	U	1.7	0.34	ng/L		03/25/24 07:29	03/31/24 13:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1

Client: City of Deland
Job ID: 670-36515-1
Project/Site: PFAS Investigation in Potable Wells

Client Sample ID: Well 10
Lab Sample ID: 670-36515-4
Date Collected: 03/12/24 14:00
Matrix: Water
Date Received: 03/15/24 14:10

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.43	U	1.7	0.43	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluorobutanoic acid (PFBA)	**2.4**		1.7	0.86	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoropentanoic acid (PFPeA)	**5.0**		1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoropentanesulfonic acid (PFPeS)	**0.46**	**I**	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1
Perfluoroheptanesulfonic acid (PFHpS)	0.26	U	1.7	0.26	ng/L		03/25/24 07:29	03/31/24 13:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*68*		*40 - 165*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C2 PFTeDA	*60*		*10 - 171*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
d5-NEtFOSAA	*83*		*34 - 181*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
d3-NMeFOSAA	*86*		*38 - 168*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C3 HFPO-DA	*61*		*13 - 170*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
M2-6:2 FTS	*238*	*	*40 - 200*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
M2-8:2 FTS	*109*		*37 - 200*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C3 PFBS	*100*		*34 - 200*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
M2-4:2 FTS	*103*		*35 - 200*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C8 PFOS	*84*		*59 - 155*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C7 PFUnA	*75*		*41 - 163*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C5 PFHxA	*66*		*28 - 166*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C2-PFDoDA	*65*		*22 - 165*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C8 PFOA	*80*		*52 - 153*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C6 PFDA	*79*		*53 - 151*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C3 PFHxS	*78*		*48 - 169*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C9 PFNA	*80*		*52 - 168*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C4 PFBA	*72*		*22 - 174*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C3-PFPrA	*12*	*	*21 - 157*	*03/25/24 07:29*	*03/31/24 13:48*	*1*
13C5 PFPeA	*77*		*33 - 196*	*03/25/24 07:29*	*03/31/24 13:48*	*1*

Isotope Dilution Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C4PFHA (40-165)	PFTDA (10-171)	d5NEFOS (34-181)	d3NMFOS (38-168)	HFPODA (13-170)	M262FTS (40-200)	M282FTS (37-200)	C3PFBS (34-200)
670-36515-1	TW Well 1	103	76	107	115	93	156	159	149
670-36515-2	Well 12	68	64	89	90	62	247 *	121	105
670-36515-3	Well 9	66	61	82	86	66	230 *	103	99
670-36515-4	Well 10	68	60	83	86	61	238 *	109	100
LCS 410-486555/2-A	Lab Control Sample	75	79	100	108	83	203 *	120	97
LCSD 410-486555/3-A	Lab Control Sample Dup	78	84	108	114	73	231 *	122	105
MB 410-486555/1-A	Method Blank	77	80	102	103	84	258 *	113	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (35-200)	C8PFOS (59-155)	13C7PUA (41-163)	13C5PHA (28-166)	PFDoDA (22-165)	C8PFOA (52-153)	C6PFDA (53-151)	C3PFHS (48-169)
670-36515-1	TW Well 1	167	113	90	101	94	106	102	112
670-36515-2	Well 12	122	86	78	63	69	79	78	77
670-36515-3	Well 9	96	83	76	67	67	81	76	75
670-36515-4	Well 10	103	84	75	66	65	80	79	78
LCS 410-486555/2-A	Lab Control Sample	90	89	90	71	80	88	78	78
LCSD 410-486555/3-A	Lab Control Sample Dup	92	93	93	75	85	89	94	74
MB 410-486555/1-A	Method Blank	95	94	89	79	81	86	91	79

		Percent Isotope Dilution Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	C9PFNA (52-168)	PFBA (22-174)	3C3PFPrA (21-157)	PFPeA (33-196)
670-36515-1	TW Well 1	110	100	9 *	116
670-36515-2	Well 12	84	71	10 *	70
670-36515-3	Well 9	79	75	16 *	78
670-36515-4	Well 10	80	72	12 *	77
LCS 410-486555/2-A	Lab Control Sample	86	84	74	86
LCSD 410-486555/3-A	Lab Control Sample Dup	92	89	79	92
MB 410-486555/1-A	Method Blank	90	84	79	92

Surrogate Legend

C4PFHA = 13C4 PFHpA
PFTDA = 13C2 PFTeDA
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
HFPODA = 13C3 HFPO-DA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFBS = 13C3 PFBS
M242FTS = M2-4:2 FTS
C8PFOS = 13C8 PFOS
13C7PUA = 13C7 PFUnA
13C5PHA = 13C5 PFHxA
PFDoDA = 13C2-PFDoDA
C8PFOA = 13C8 PFOA
C6PFDA = 13C6 PFDA
C3PFHS = 13C3 PFHxS
C9PFNA = 13C9 PFNA
PFBA = 13C4 PFBA
13C3PFPrA = 13C3-PFPrA
PFPeA = 13C5 PFPeA

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-486555/1-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486555

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.40	U	2.0	0.40	ng/L		03/25/24 07:29	03/31/24 10:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoroundecanoic acid (PFUnA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.40	U	2.0	0.40	ng/L		03/25/24 07:29	03/31/24 10:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorohexanoic acid (PFHxA)	1.0	U	2.0	1.0	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorododecanoic acid (PFDoA)	0.40	U	2.0	0.40	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorooctanoic acid (PFOA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorodecanoic acid (PFDA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	U	2.0	0.20	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorobutanesulfonic acid (PFBS)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoroheptanoic acid (PFHpA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorononanoic acid (PFNA)	0.20	U	2.0	0.20	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorotetradecanoic acid (PFTeDA)	0.40	U	2.0	0.40	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.60	U	2.0	0.60	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorotridecanoic acid (PFTrDA)	0.40	U	2.0	0.40	ng/L		03/25/24 07:29	03/31/24 10:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluorobutanoic acid (PFBA)	1.0	U	2.0	1.0	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoropentanoic acid (PFPeA)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoropentanesulfonic acid (PFPeS)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1
Perfluoroheptanesulfonic acid (PFHpS)	0.30	U	2.0	0.30	ng/L		03/25/24 07:29	03/31/24 10:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*77*		*40 - 165*	*03/25/24 07:29*	*03/31/24 10:23*	*1*
13C2 PFTeDA	*80*		*10 - 171*	*03/25/24 07:29*	*03/31/24 10:23*	*1*
d5-NEtFOSAA	*102*		*34 - 181*	*03/25/24 07:29*	*03/31/24 10:23*	*1*
d3-NMeFOSAA	*103*		*38 - 168*	*03/25/24 07:29*	*03/31/24 10:23*	*1*
13C3 HFPO-DA	*84*		*13 - 170*	*03/25/24 07:29*	*03/31/24 10:23*	*1*
M2-6:2 FTS	*258*	*	*40 - 200*	*03/25/24 07:29*	*03/31/24 10:23*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-486555/1-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486555

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	113		37 - 200	03/25/24 07:29	03/31/24 10:23	1
13C3 PFBS	102		34 - 200	03/25/24 07:29	03/31/24 10:23	1
M2-4:2 FTS	95		35 - 200	03/25/24 07:29	03/31/24 10:23	1
13C8 PFOS	94		59 - 155	03/25/24 07:29	03/31/24 10:23	1
13C7 PFUnA	89		41 - 163	03/25/24 07:29	03/31/24 10:23	1
13C5 PFHxA	79		28 - 166	03/25/24 07:29	03/31/24 10:23	1
13C2-PFDoDA	81		22 - 165	03/25/24 07:29	03/31/24 10:23	1
13C8 PFOA	86		52 - 153	03/25/24 07:29	03/31/24 10:23	1
13C6 PFDA	91		53 - 151	03/25/24 07:29	03/31/24 10:23	1
13C3 PFHxS	79		48 - 169	03/25/24 07:29	03/31/24 10:23	1
13C9 PFNA	90		52 - 168	03/25/24 07:29	03/31/24 10:23	1
13C4 PFBA	84		22 - 174	03/25/24 07:29	03/31/24 10:23	1
13C3-PFPrA	79		21 - 157	03/25/24 07:29	03/31/24 10:23	1
13C5 PFPeA	92		33 - 196	03/25/24 07:29	03/31/24 10:23	1

Lab Sample ID: LCS 410-486555/2-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486555

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.9		ng/L		87	60 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	25.6	18.4		ng/L		72	53 - 131
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	20.8		ng/L		81	60 - 130
Perfluorooctanesulfonic acid (PFOS)	23.7	21.9		ng/L		92	62 - 130
Perfluoroundecanoic acid (PFUnA)	25.6	25.4		ng/L		99	62 - 131
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.6	23.0		ng/L		90	62 - 131
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	24.3	25.7		ng/L		106	61 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.6	23.5		ng/L		92	63 - 130
Perfluorohexanoic acid (PFHxA)	25.6	23.0		ng/L		90	59 - 130
Perfluorododecanoic acid (PFDoA)	25.6	25.5		ng/L		100	61 - 132
Perfluorooctanoic acid (PFOA)	25.6	25.5		ng/L		100	58 - 132
Perfluorodecanoic acid (PFDA)	25.6	29.2		ng/L		114	62 - 133
Perfluorohexanesulfonic acid (PFHxS)	23.3	22.3		ng/L		95	62 - 130
Perfluorobutanesulfonic acid (PFBS)	22.7	21.1		ng/L		93	64 - 132
Perfluoroheptanoic acid (PFHpA)	25.6	24.1		ng/L		94	64 - 130
Perfluorononanoic acid (PFNA)	25.6	24.6		ng/L		96	63 - 133
Perfluorotetradecanoic acid (PFTeDA)	25.6	25.1		ng/L		98	62 - 131
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	25.9		ng/L		101	62 - 133

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-486555/2-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486555

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	24.5	24.4		ng/L		99	55 - 134
Perfluorotridecanoic acid (PFTrDA)	25.6	25.3		ng/L		99	59 - 136
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	23.8	21.3		ng/L		90	60 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	23.9	23.2		ng/L		97	61 - 131
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	23.8	20.3		ng/L		85	57 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	21.0		ng/L		82	57 - 133
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	23.7		ng/L		98	61 - 130
Perfluorobutanoic acid (PFBA)	25.6	25.4		ng/L		99	58 - 130
Perfluoropentanoic acid (PFPeA)	25.6	24.5		ng/L		96	60 - 130
Perfluoropentanesulfonic acid (PFPeS)	24.0	22.5		ng/L		94	64 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	24.9		ng/L		102	59 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFHpA	*75*		*40 - 165*
13C2 PFTeDA	*79*		*10 - 171*
d5-NEtFOSAA	*100*		*34 - 181*
d3-NMeFOSAA	*108*		*38 - 168*
13C3 HFPO-DA	*83*		*13 - 170*
M2-6:2 FTS	*203*	*	*40 - 200*
M2-8:2 FTS	*120*		*37 - 200*
13C3 PFBS	*97*		*34 - 200*
M2-4:2 FTS	*90*		*35 - 200*
13C8 PFOS	*89*		*59 - 155*
13C7 PFUnA	*90*		*41 - 163*
13C5 PFHxA	*71*		*28 - 166*
13C2-PFDoDA	*80*		*22 - 165*
13C8 PFOA	*88*		*52 - 153*
13C6 PFDA	*78*		*53 - 151*
13C3 PFHxS	*78*		*48 - 169*
13C9 PFNA	*86*		*52 - 168*
13C4 PFBA	*84*		*22 - 174*
13C3-PFPrA	*74*		*21 - 157*
13C5 PFPeA	*86*		*33 - 196*

Lab Sample ID: LCSD 410-486555/3-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 486555

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.3		ng/L		85	60 - 130	3	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-486555/3-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 486555

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			25.6	21.6		ng/L		84	53 - 131	16	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			25.6	20.0		ng/L		78	60 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)			23.7	21.1		ng/L		89	62 - 130	3	30
Perfluoroundecanoic acid (PFUnA)			25.6	25.4		ng/L		99	62 - 131	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.6	21.9		ng/L		86	62 - 131	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			24.3	24.8		ng/L		102	61 - 132	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.6	22.7		ng/L		89	63 - 130	3	30
Perfluorohexanoic acid (PFHxA)			25.6	22.1		ng/L		86	59 - 130	4	30
Perfluorododecanoic acid (PFDoA)			25.6	24.7		ng/L		97	61 - 132	3	30
Perfluorooctanoic acid (PFOA)			25.6	24.4		ng/L		95	58 - 132	4	30
Perfluorodecanoic acid (PFDA)			25.6	24.3		ng/L		95	62 - 133	18	30
Perfluorohexanesulfonic acid (PFHxS)			23.3	21.9		ng/L		94	62 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)			22.7	19.9		ng/L		88	64 - 132	6	30
Perfluoroheptanoic acid (PFHpA)			25.6	23.2		ng/L		91	64 - 130	4	30
Perfluorononanoic acid (PFNA)			25.6	24.2		ng/L		95	63 - 133	1	30
Perfluorotetradecanoic acid (PFTeDA)			25.6	24.3		ng/L		95	62 - 131	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			25.6	25.9		ng/L		101	62 - 133	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			24.5	23.8		ng/L		97	55 - 134	2	30
Perfluorotridecanoic acid (PFTrDA)			25.6	24.9		ng/L		97	59 - 136	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			23.8	20.8		ng/L		87	60 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			23.9	22.7		ng/L		95	61 - 131	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.8	19.9		ng/L		83	57 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			25.6	20.1		ng/L		79	57 - 133	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.2	22.2		ng/L		92	61 - 130	7	30
Perfluorobutanoic acid (PFBA)			25.6	23.5		ng/L		92	58 - 130	8	30
Perfluoropentanoic acid (PFPeA)			25.6	23.5		ng/L		92	60 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)			24.0	22.1		ng/L		92	64 - 132	2	30
Perfluoroheptanesulfonic acid (PFHpS)			24.4	24.6		ng/L		101	59 - 130	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFHpA	*78*		*40 - 165*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-486555/3-A
Matrix: Water
Analysis Batch: 488643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 486555

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFTeDA	84		10 - 171
d5-NEtFOSAA	108		34 - 181
d3-NMeFOSAA	114		38 - 168
13C3 HFPO-DA	73		13 - 170
M2-6:2 FTS	231	*	40 - 200
M2-8:2 FTS	122		37 - 200
13C3 PFBS	105		34 - 200
M2-4:2 FTS	92		35 - 200
13C8 PFOS	93		59 - 155
13C7 PFUnA	93		41 - 163
13C5 PFHxA	75		28 - 166
13C2-PFDoDA	85		22 - 165
13C8 PFOA	89		52 - 153
13C6 PFDA	94		53 - 151
13C3 PFHxS	74		48 - 169
13C9 PFNA	92		52 - 168
13C4 PFBA	89		22 - 174
13C3-PFPrA	79		21 - 157
13C5 PFPeA	92		33 - 196

QC Association Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

LCMS

Prep Batch: 486555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-36515-1	TW Well 1	Total/NA	Water	SPE	
670-36515-2	Well 12	Total/NA	Water	SPE	
670-36515-3	Well 9	Total/NA	Water	SPE	
670-36515-4	Well 10	Total/NA	Water	SPE	
MB 410-486555/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-486555/2-A	Lab Control Sample	Total/NA	Water	SPE	
LCSD 410-486555/3-A	Lab Control Sample Dup	Total/NA	Water	SPE	

Analysis Batch: 488643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-36515-2	Well 12	Total/NA	Water	537 IDA	486555
670-36515-3	Well 9	Total/NA	Water	537 IDA	486555
670-36515-4	Well 10	Total/NA	Water	537 IDA	486555
MB 410-486555/1-A	Method Blank	Total/NA	Water	537 IDA	486555
LCS 410-486555/2-A	Lab Control Sample	Total/NA	Water	537 IDA	486555
LCSD 410-486555/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	486555

Analysis Batch: 489101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-36515-1	TW Well 1	Total/NA	Water	537 IDA	486555

Lab Chronicle

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

Client Sample ID: TW Well 1

Lab Sample ID: 670-36515-1

Date Collected: 03/11/24 13:35

Matrix: Water

Date Received: 03/15/24 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			486555	WQ8R	ELLE	03/25/24 07:29
Total/NA	Analysis	537 IDA		1	489101	DQV6	ELLE	04/01/24 17:11

Client Sample ID: Well 12

Lab Sample ID: 670-36515-2

Date Collected: 03/12/24 13:40

Matrix: Water

Date Received: 03/15/24 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			486555	WQ8R	ELLE	03/25/24 07:29
Total/NA	Analysis	537 IDA		1	488643	VK3G	ELLE	03/31/24 13:18

Client Sample ID: Well 9

Lab Sample ID: 670-36515-3

Date Collected: 03/12/24 13:50

Matrix: Water

Date Received: 03/15/24 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			486555	WQ8R	ELLE	03/25/24 07:29
Total/NA	Analysis	537 IDA		1	488643	VK3G	ELLE	03/31/24 13:33

Client Sample ID: Well 10

Lab Sample ID: 670-36515-4

Date Collected: 03/12/24 14:00

Matrix: Water

Date Received: 03/15/24 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			486555	WQ8R	ELLE	03/25/24 07:29
Total/NA	Analysis	537 IDA		1	488643	VK3G	ELLE	03/31/24 13:48

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: City of Deland
Job ID: 670-36515-1
Project/Site: PFAS Investigation in Potable Wells

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87997	06-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	SPE	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 IDA	SPE	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
537 IDA	SPE	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 IDA	SPE	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)

Method Summary

Client: City of Deland
Job ID: 670-36515-1
Project/Site: PFAS Investigation in Potable Wells

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
SPE	PFAS by SPE	Lab SOP	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Deland
Project/Site: PFAS Investigation in Potable Wells

Job ID: 670-36515-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
670-36515-1	TW Well 1	Water	03/11/24 13:35	03/15/24 14:10
670-36515-2	Well 12	Water	03/12/24 13:40	03/15/24 14:10
670-36515-3	Well 9	Water	03/12/24 13:50	03/15/24 14:10
670-36515-4	Well 10	Water	03/12/24 14:00	03/15/24 14:10

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler: Amanda Cokinogunis	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-16128-6788.2
Client Contact: Ms. Larissa McCoy	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City of Deland	PWSID:			Job #:
Address: 1101 S. Amelia Ave.	Due Date Requested:			
City: Deland	TAT Requested (days):			
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No			
Phone: 386-626-7256(Tel)	PO #: Purchase Order Requested			
Email: mccoyl@deland.org	WO #:			
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, EPA Methods 537.1 & 533 Lists (29	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	X	
TW Well 1	3/11/24	1335	G	Water			X	2	
Well 12	3/12/24	1340	G	Water			X	2	
Well 9	3/12/24	1350	G	Water			X	2	
Well 10	3/12/24	1400	G	Water			X	2	
				Water					
				Water					
				Water					
				Water					

670-36515 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3/15/24 0828		JGB	3/15/24 0830	Efids
			Amx Rivas	3/15/24 1410	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.4 / 1.4

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-25657.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-36515-1
Address: 2425 New Holland Pike, .	Due Date Requested: 4/5/2024			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: PFAS Investigation in Potable Wells	Project #: 67004404			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/PFAS_W_Prep (MOD) PFAS, EPA Methods 537.1 & 533 List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW Well 1 (670-36515-1)	3/11/24	13:35 Eastern		Water			X	2	
Well 12 (670-36515-2)	3/11/24	13:40 Eastern		Water			X	2	
Well 9 (670-36515-3)	3/11/24	13:50 Eastern		Water			X	2	
Well 10 (670-36515-4)	3/11/24	14:00 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	BB	3/15 1511				
2						
3					3/16/24 0940	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2 cor 1.0

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-36515-1

Login Number: 36515
List Number: 1
Creator: Bittle, David W

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-36515-1

Login Number: 36515
List Number: 2
Creator: Foreman, Kai

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 03/16/24 03:21 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

May 20, 2024

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on April 19, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35874302001	**00001 Water Treatment Plant #3**	Drinking Water	04/15/24 13:45	04/19/24 17:10
35874302002	**FRB-00001 Water Treatment Plan**	Drinking Water	04/15/24 13:45	04/19/24 17:10
35874302003	**Water Treatment Plant #9**	Drinking Water	04/15/24 09:40	04/19/24 17:10
35874302004	**FRB-Water Treatment Plant #9**	Drinking Water	04/15/24 09:40	04/19/24 17:10
35874302005	**Water Treatment Plant #12**	Drinking Water	04/15/24 14:30	04/19/24 17:10
35874302006	**FRB-Water Treatrment Plant #12**	Drinking Water	04/15/24 14:30	04/19/24 17:10

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35874302001	**00001 Water Treatment Plant #3**	EPA 200.7	TMA	1	PASI-O
		EPA 537.1	TMM1	8	PASI-O
35874302003	**Water Treatment Plant #9**	EPA 200.7	TMA	1	PASI-O
		EPA 533	TSW	41	PASI-O
		EPA 537.1	TMM1	8	PASI-O
35874302005	**Water Treatment Plant #12**	EPA 200.7	TMA	1	PASI-O
		EPA 537.1	TMM1	8	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Sample: 00001 Water Treatment Plant #3 **Lab ID: 35874302001** Collected: 04/15/24 13:45 Received: 04/19/24 17:10 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/02/24 04:40	05/11/24 01:45	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 261.6 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0016 U**	ug/L	0.0057	0.0016	1	04/21/24 10:26	04/22/24 19:49	2991-50-6	
NMeFOSAA	**0.0019 U**	ug/L	0.0057	0.0019	1	04/21/24 10:26	04/22/24 19:49	2355-31-9	
PFTeDA	**0.0026 U**	ug/L	0.0076	0.0026	1	04/21/24 10:26	04/22/24 19:49	376-06-7	
PFTrDA	**0.0023 U**	ug/L	0.0067	0.0023	1	04/21/24 10:26	04/22/24 19:49	72629-94-8	
Surrogates									
13C2-PFDA (S)	97	%	70-130		1	04/21/24 10:26	04/22/24 19:49		
13C2-PFHxA (S)	95	%	70-130		1	04/21/24 10:26	04/22/24 19:49		
NEtFOSAA-d5 (S)	98	%	70-130		1	04/21/24 10:26	04/22/24 19:49		
HFPO-DAS (S)	86	%	70-130		1	04/21/24 10:26	04/22/24 19:49		

Sample: Water Treatment Plant #9 **Lab ID: 35874302003** Collected: 04/15/24 09:40 Received: 04/19/24 17:10 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/02/24 04:40	05/11/24 01:53	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 268.5 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0047	0.0016	1	04/21/24 11:13	04/25/24 19:15	763051-92-9	
4:2 FTS	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	04/21/24 11:13	04/25/24 19:15	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	04/21/24 11:13	04/25/24 19:15	39108-34-4	
9Cl-PF3ONS	**0.00062 U**	ug/L	0.0019	0.00062	1	04/21/24 11:13	04/25/24 19:15	756426-58-1	
ADONA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0047	0.0016	1	04/21/24 11:13	04/25/24 19:15	13252-13-6	
NFDHA	**0.0062 U**	ug/L	0.019	0.0062	1	04/21/24 11:13	04/25/24 19:15	151772-58-6	
PFBS	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	375-73-5	
PFDA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	335-76-2	
PFHxA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0047	0.0016	1	04/21/24 11:13	04/25/24 19:15	375-22-4	
PFEESA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	113507-82-7	
PFHpS	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	375-92-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Sample: Water Treatment Plant #9 **Lab ID: 35874302003** Collected: 04/15/24 09:40 Received: 04/19/24 17:10 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 268.5 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
PFMBA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0037	0.0012	1	04/21/24 11:13	04/25/24 19:15	377-73-1	
PFPeA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0037	0.0012	1	04/21/24 11:13	04/25/24 19:15	2706-91-4	
PFDoA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	307-55-1	
PFHpA	**0.00093 U**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	375-85-9	
PFHxS	**0.0010 I**	ug/L	0.0028	0.00093	1	04/21/24 11:13	04/25/24 19:15	355-46-4	
PFNA	**0.0012 U**	ug/L	0.0037	0.0012	1	04/21/24 11:13	04/25/24 19:15	375-95-1	
PFOS	**0.0016 I**	ug/L	0.0037	0.0012	1	04/21/24 11:13	04/25/24 19:15	1763-23-1	
PFOA	**0.0012 U**	ug/L	0.0037	0.0012	1	04/21/24 11:13	04/25/24 19:15	335-67-1	
PFUnA	**0.00062 U**	ug/L	0.0019	0.00062	1	04/21/24 11:13	04/25/24 19:15	2058-94-8	
Surrogates									
13C24:2FTS (S)	168	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C26:2FTS (S)	115	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C28:2FTS (S)	107	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C2-PFDoA (S)	82	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C3HFPO-DA(S)	96	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C3-PFBS (S)	116	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C3-PFHxS (S)	109	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C4-PFBA (S)	99	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C4-PFHpA (S)	100	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C5-PFHxA (S)	102	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C5-PFPeA (S)	105	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C6-PFDA (S)	88	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C7-PFUdA (S)	83	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C8-PFOA (S)	93	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C8-PFOS (S)	100	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
13C9-PFNA (S)	90	%	50-200		1	04/21/24 11:13	04/25/24 19:15		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 266.83 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0016 U**	ug/L	0.0056	0.0016	1	04/21/24 10:26	04/22/24 19:18	2991-50-6	
NMeFOSAA	**0.0019 U**	ug/L	0.0056	0.0019	1	04/21/24 10:26	04/22/24 19:18	2355-31-9	
PFTeDA	**0.0025 U**	ug/L	0.0075	0.0025	1	04/21/24 10:26	04/22/24 19:18	376-06-7	
PFTrDA	**0.0022 U**	ug/L	0.0066	0.0022	1	04/21/24 10:26	04/22/24 19:18	72629-94-8	
Surrogates									
13C2-PFDA (S)	102	%	70-130		1	04/21/24 10:26	04/22/24 19:18		
13C2-PFHxA (S)	100	%	70-130		1	04/21/24 10:26	04/22/24 19:18		
NEtFOSAA-d5 (S)	107	%	70-130		1	04/21/24 10:26	04/22/24 19:18		
HFPO-DAS (S)	92	%	70-130		1	04/21/24 10:26	04/22/24 19:18		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Sample: Water Treatment Plant #12 **Lab ID: 35874302005** Collected: 04/15/24 14:30 Received: 04/19/24 17:10 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	05/02/24 04:40	05/11/24 01:56	7439-93-2	N2
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 283.43 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0015 U**	ug/L	0.0053	0.0015	1	04/21/24 10:26	04/22/24 20:36	2991-50-6	
NMeFOSAA	**0.0018 U**	ug/L	0.0053	0.0018	1	04/21/24 10:26	04/22/24 20:36	2355-31-9	
PFTeDA	**0.0024 U**	ug/L	0.0071	0.0024	1	04/21/24 10:26	04/22/24 20:36	376-06-7	
PFTrDA	**0.0021 U**	ug/L	0.0062	0.0021	1	04/21/24 10:26	04/22/24 20:36	72629-94-8	
Surrogates									
13C2-PFDA (S)	94	%	70-130		1	04/21/24 10:26	04/22/24 20:36		
13C2-PFHxA (S)	92	%	70-130		1	04/21/24 10:26	04/22/24 20:36		
NEtFOSAA-d5 (S)	97	%	70-130		1	04/21/24 10:26	04/22/24 20:36		
HFPO-DAS (S)	86	%	70-130		1	04/21/24 10:26	04/22/24 20:36		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

QC Batch: 1008474
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET Drinking Water
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35874302001, 35874302003, 35874302005

METHOD BLANK: 5542530 Matrix: Drinking Water
Associated Lab Samples: 35874302001, 35874302003, 35874302005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	7.5 U	22.5	7.5	05/11/24 01:33	N2

LABORATORY CONTROL SAMPLE: 5542531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	9	9.1 I	101	50-150	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5542532 5542533

Parameter	Units	35874302001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	7.5 U	100	100	145	145	144	144	0-200	0	30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

QC Batch: 1005793
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35874302003

METHOD BLANK: 5528498
Matrix: Drinking Water
Associated Lab Samples: 35874302003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	04/24/24 13:15	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/24/24 13:15	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/24/24 13:15	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	04/24/24 13:15	
ADONA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	04/24/24 13:15	
NFDHA	ug/L	0.0067 U	0.020	0.0067	04/24/24 13:15	
PFBA	ug/L	0.0017 U	0.0050	0.0017	04/24/24 13:15	
PFBS	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFDA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	04/24/24 13:15	
PFNA	ug/L	0.0013 U	0.0040	0.0013	04/24/24 13:15	
PFOA	ug/L	0.0013 U	0.0040	0.0013	04/24/24 13:15	
PFOS	ug/L	0.0013 U	0.0040	0.0013	04/24/24 13:15	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	04/24/24 13:15	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	04/24/24 13:15	
PFUnA	ug/L	0.00067 U	0.0020	0.00067	04/24/24 13:15	
13C2-PFDoA (S)	%	90	50-200		04/24/24 13:15	
13C24:2FTS (S)	%	130	50-200		04/24/24 13:15	
13C26:2FTS (S)	%	135	50-200		04/24/24 13:15	
13C28:2FTS (S)	%	119	50-200		04/24/24 13:15	
13C3-PFBS (S)	%	109	50-200		04/24/24 13:15	
13C3-PFHxS (S)	%	105	50-200		04/24/24 13:15	
13C3HFPO-DA(S)	%	82	50-200		04/24/24 13:15	
13C4-PFBA (S)	%	92	50-200		04/24/24 13:15	
13C4-PFHpA (S)	%	89	50-200		04/24/24 13:15	
13C5-PFHxA (S)	%	91	50-200		04/24/24 13:15	
13C5-PFPeA (S)	%	88	50-200		04/24/24 13:15	
13C6-PFDA (S)	%	90	50-200		04/24/24 13:15	
13C7-PFUdA (S)	%	91	50-200		04/24/24 13:15	
13C8-PFOA (S)	%	92	50-200		04/24/24 13:15	
13C8-PFOS (S)	%	104	50-200		04/24/24 13:15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

METHOD BLANK: 5528498 Matrix: Drinking Water
Associated Lab Samples: 35874302003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	90	50-200		04/24/24 13:15	

LABORATORY CONTROL SAMPLE: 5528499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 I	89	50-150	
4:2 FTS	ug/L	0.0019	0.0020 I	107	50-150	
6:2 FTS	ug/L	0.0019	0.0020 I	107	50-150	
8:2 FTS	ug/L	0.0019	0.0018 I	97	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	92	50-150	
ADONA	ug/L	0.0019	0.0018 I	94	50-150	
HFPO-DA	ug/L	0.002	0.0019 I	96	50-150	
NFDHA	ug/L	0.02	0.023	116	50-150	
PFBA	ug/L	0.002	0.0025 I	125	50-150	
PFBS	ug/L	0.0018	0.0018 I	99	50-150	
PFDA	ug/L	0.002	0.0019 I	94	50-150	
PFDoA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0017 I	96	50-150	
PFHpA	ug/L	0.002	0.0019 I	94	50-150	
PFHpS	ug/L	0.0019	0.0020 I	107	50-150	
PFHxA	ug/L	0.002	0.0019 I	93	50-150	
PFHxS	ug/L	0.0018	0.0019 I	104	50-150	
PFMBA	ug/L	0.002	0.0019 I	96	50-150	
PFMPA	ug/L	0.002	0.0019 I	96	50-150	
PFNA	ug/L	0.002	0.0025 I	123	50-150	
PFOA	ug/L	0.002	0.0027 I	134	50-150	
PFOS	ug/L	0.0019	0.0020 I	107	50-150	
PFPeA	ug/L	0.002	0.0020 I	101	50-150	
PFPeS	ug/L	0.0019	0.0019 I	100	50-150	
PFUnA	ug/L	0.002	0.0020 I	98	50-150	
13C2-PFDoA (S)	%			93	50-200	
13C24:2FTS (S)	%			124	50-200	
13C26:2FTS (S)	%			138	50-200	
13C28:2FTS (S)	%			115	50-200	
13C3-PFBS (S)	%			111	50-200	
13C3-PFHxS (S)	%			109	50-200	
13C3HFPO-DA(S)	%			89	50-200	
13C4-PFBA (S)	%			97	50-200	
13C4-PFHpA (S)	%			93	50-200	
13C5-PFHxA (S)	%			96	50-200	
13C5-PFPeA (S)	%			94	50-200	
13C6-PFDA (S)	%			94	50-200	
13C7-PFUdA (S)	%			93	50-200	
13C8-PFOA (S)	%			96	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

LABORATORY CONTROL SAMPLE: 5528499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			103	50-200	
13C9-PFNA (S)	%			95	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

QC Batch: 1005792
QC Batch Method: EPA 537.1
Analysis Method: EPA 537.1
Analysis Description: 537.1 PFOA Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35874302001, 35874302003, 35874302005

METHOD BLANK: 5528494 Matrix: Water
Associated Lab Samples: 35874302001, 35874302003, 35874302005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
NEtFOSAA	ug/L	0.0017 U	0.0060	0.0017	04/22/24 16:24	
NMeFOSAA	ug/L	0.0020 U	0.0060	0.0020	04/22/24 16:24	
PFTeDA	ug/L	0.0027 U	0.0080	0.0027	04/22/24 16:24	
PFTrDA	ug/L	0.0024 U	0.0070	0.0024	04/22/24 16:24	
13C2-PFDA (S)	%	100	70-130		04/22/24 16:24	
13C2-PFHxA (S)	%	99	70-130		04/22/24 16:24	
HFPO-DAS (S)	%	96	70-130		04/22/24 16:24	
NEtFOSAA-d5 (S)	%	101	70-130		04/22/24 16:24	

LABORATORY CONTROL SAMPLE: 5528495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSAA	ug/L	0.005	0.0045 I	90	50-150	
NMeFOSAA	ug/L	0.006	0.0051 I	86	50-150	
PFTeDA	ug/L	0.008	0.0065 I	81	50-150	
PFTrDA	ug/L	0.007	0.0057 I	81	50-150	
13C2-PFDA (S)	%			98	70-130	
13C2-PFHxA (S)	%			95	70-130	
HFPO-DAS (S)	%			94	70-130	
NEtFOSAA-d5 (S)	%			105	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE1_Apr2024
Pace Project No.: 35874302

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35874302001	**00001 Water Treatment Plant #3**	EPA 200.7	1008474	EPA 200.7	1008620
35874302003	**Water Treatment Plant #9**	EPA 200.7	1008474	EPA 200.7	1008620
35874302005	**Water Treatment Plant #12**	EPA 200.7	1008474	EPA 200.7	1008620
35874302003	**Water Treatment Plant #9**	EPA 533	1005793	EPA 533	1005907
35874302001	**00001 Water Treatment Plant #3**	EPA 537.1	1005792	EPA 537.1	1005880
35874302003	**Water Treatment Plant #9**	EPA 537.1	1005792	EPA 537.1	1005880
35874302005	**Water Treatment Plant #12**	EPA 537.1	1005792	EPA 537.1	1005880

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 35874302

35874302

Company Name:	City of Deland - UCMR5
Street Address:	1101 South Amelia Avenue, Deland, FL 32724
Customer Project #:	
Project Name:	UCMR5_SE1_Apr2024
Site Collection Info/Facility ID (as applicable):	
Contact/Report To:	Shawn Wahrenberger
Phone #:	(386)626-7254
E-Mail:	wahrenbergers@deland.org
Cc E-Mail:	
Invoice To:	Accounts Payable
Invoice E-Mail:	wahrenbergers@deland.org
Purchase Order # (if applicable):	
Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Florida

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable: FL3640286

Date Results Requested: 25 BD TAT

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.7 MET ICP, UCMR	533 FRB	533 PFAS Compounds, UCMR	537.1 FRB	537.1 PFAS Compounds, UCMR	Sample Comment
00001Water Treatment Plant #3	DW	G			4/15/24	~~1345~~ 0940	9			X		X		X	OQS
FRB-00001Water Treatment Plant #3	DW	G			4/15/24	~~1345~~ 0940	4				X		X		
Water Treatment Plant #9	DW	G			4/15/24	0940	6			X		X		X	
FRB-Water Treatment Plant #9	DW	G			4/15/24	0940	4				X		X		
Water Treatment Plant #12	DW	G			4/15/24	1430	6			X		X		X	
FRB-Water Treatment Plant #12	DW	G			4/15/24	1430	4				X		X		

Lab Use Only
Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3079637

Preservation non-conformance identified for sample.

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Additional Instructions from Pace®:
UCMR5 is for testing finished drinking water ONLY. Please fill containers up to the bottom thread of the container cap. Prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Ship samples on Monday thru Wednesday only, overnight shipping label included.

Collected By:
(Printed Name) Amanda CoKinogenis
Signature

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.6	

Relinquished by/Company: (Signature) Samson McG	Date/Time: 4/19/24 1535	Received by/Company: (Signature) Pace	4/19	Date/Time: 1535	Tracking Number:
Relinquished by/Company: (Signature) MSF/PACE	Date/Time: 4/19/24 1636	Received by/Company: (Signature) SBH/PACE		Date/Time: 4/19/24 1710	Delivered by: [ ] In- Person [ ] Courier [ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)		Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)		Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

WO#: 35874302
PM: DNK Due Date: 05/28/24
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☑ Pace ☐ Other

Tracking #

Custody Seal: ☐ Yes ☑ No **Seal intact:** ☐ Yes ☐ No] N/A **Ice:** ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

			Comments
Chain of Custody Present	☑ Yes	☐ No	
Chain of Custody Completed	☑ Yes	☐ No	
Relinquished & Sampler Signature	☑ Yes	☐ No	
Samples Arrived within Hold Time	☑ Yes	☐ No	
Sufficient Volume	☑ Yes	☐ No	
Correct Containers Used	☑ Yes	☐ No	All collection times & dates written in sharpie on containers.
Containers Intact	☑ Yes	☐ No	
Sample Labels match COC	☐ Yes	☑ No	Sample ID water treatment plant has wrong time on the bottles 1430.
Samples received ≤48 hr from collection	☐ Yes	☑ No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☑ Ye	☐ No	
Person contacted for verification			

Temperature Verification Initials: SB4 Date: 4/19/2024 Time: 1713

IR Gun ID: T-414 CF (°C): -0.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	2.7	2.6	
EPA 537.1	2.2	2.2	

Preservation Verification pH strip: HC176067 pH meter: SR-2

Free Cl Strip/DPD: 240205 Cl Meter:

200.7 Lab Preserved: Nitric Acid: Date/Time: Initials:

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
0081 water treatment plant #3 3/4	6.0	~~7.1~~ SB4 4/19 6.9	<2		ND	ND	
" 2/4	6.4	7.1			ND	ND	
" 3/4	~~6.4~~ SB4 4/19 6.6	~~7.2~~ 7.1	SB4 4/19		ND	ND	
" 4/4	6.7	~~7.0~~ 7.2			ND	ND	
~~"~~ SB4 4/19 Eratoboy water treatment plant #3	6.7	7.0			ND	ND	
water treatment plant #9 1/3	6.3	6.6	<2		ND	ND	
" 2/3	6.5	7.1			ND	ND	
" 3/3	6.7	—			ND	ND	

*533 pH may be adjusted at the bench prior to extra ** ND = <0.1 mg/L

DC#_Title: ENV-FRM-CORQ-0016 v00_UCMR5 Sample Conditi
Effective Date: 11/15/2022

WO#: 35874302

PM: DNK Due Date: 05/28/24
CLIENT: CITDELUCMR3

Preservation Verification Con

Sample/Container ID	pH 533* (pH 6.0-	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
Frb-water treatment plant	6.7	7.1			ND	ND	DI container returned full (not used)
water treatment Plant #12 1/3	6.4	6.9	<2		ND	ND	
11 2/3	6.7	7.1			ND	ND	
11 3/3	6.6	—			ND	~~ND~~ SB4 4/19	ND
Frb-water treatment Plant FT 12	—				~~ND~~	~~ND~~	SB4 4/19

*533 pH may be adjusted at the bench prior to extraction ** ND = <0.1 mg/L

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

June 19, 2024

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



DJ Kapadia
dj.kapadia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35882941001	**00001 Water Treatment Plant #3**	Drinking Water	05/30/24 13:55	05/31/24 15:55
35882941002	**FRB-00001 Water Treatment Plan**	Drinking Water	05/30/24 13:55	05/31/24 15:55
35882941003	**Water Treatment Plant #12**	Drinking Water	05/30/24 14:15	05/31/24 15:55
35882941004	**FRB-Water Treatment Plant #12**	Drinking Water	05/30/24 14:15	05/31/24 15:55

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35882941001	**00001 Water Treatment Plant #3**	EPA 533	TSW	41	PASI-O
35882941002	**FRB-00001 Water Treatment Plan**	EPA 533	TMM1	41	PASI-O
35882941003	**Water Treatment Plant #12**	EPA 533	TSW	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Sample: 00001 Plant #3 **Water Treatment** **Lab ID: 35882941001** Collected: 05/30/24 13:55 Received: 05/31/24 15:55 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 282.34 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0015 U**	ug/L	0.0044	0.0015	1	06/04/24 03:51	06/05/24 20:32	763051-92-9	
4:2 FTS	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	757124-72-4	
6:2 FTS	**0.0015 U**	ug/L	0.0044	0.0015	1	06/04/24 03:51	06/05/24 20:32	27619-97-2	
8:2 FTS	**0.0015 U**	ug/L	0.0044	0.0015	1	06/04/24 03:51	06/05/24 20:32	39108-34-4	
9Cl-PF3ONS	**0.00059 U**	ug/L	0.0018	0.00059	1	06/04/24 03:51	06/05/24 20:32	756426-58-1	
ADONA	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	919005-14-4	
HFPO-DA	**0.0015 U**	ug/L	0.0044	0.0015	1	06/04/24 03:51	06/05/24 20:32	13252-13-6	
NFDHA	**0.0059 U**	ug/L	0.018	0.0059	1	06/04/24 03:51	06/05/24 20:32	151772-58-6	
PFBS	**0.0033**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	375-73-5	
PFDA	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	335-76-2	
PFHxA	**0.0018 I**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	307-24-4	
PFBA	**0.0015 U**	ug/L	0.0044	0.0015	1	06/04/24 03:51	06/05/24 20:32	375-22-4	
PFEESA	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	113507-82-7	
PFHpS	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	375-92-8	
PFMBA	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0035	0.0012	1	06/04/24 03:51	06/05/24 20:32	377-73-1	
PFPeA	**0.0024 I**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0035	0.0012	1	06/04/24 03:51	06/05/24 20:32	2706-91-4	
PFDoA	**0.00089 U**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	307-55-1	
PFHpA	**0.00097 I**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	375-85-9	
PFHxS	**0.0042**	ug/L	0.0027	0.00089	1	06/04/24 03:51	06/05/24 20:32	355-46-4	
PFNA	**0.0012 U**	ug/L	0.0035	0.0012	1	06/04/24 03:51	06/05/24 20:32	375-95-1	
PFOS	**0.0041**	ug/L	0.0035	0.0012	1	06/04/24 03:51	06/05/24 20:32	1763-23-1	
PFOA	**0.0032 I**	ug/L	0.0035	0.0012	1	06/04/24 03:51	06/05/24 20:32	335-67-1	
PFUnA	**0.00059 U**	ug/L	0.0018	0.00059	1	06/04/24 03:51	06/05/24 20:32	2058-94-8	
Surrogates									
13C24:2FTS (S)	141	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C26:2FTS (S)	120	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C28:2FTS (S)	108	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C2-PFDoA (S)	91	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C3HFPO-DA(S)	94	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C3-PFBS (S)	100	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C3-PFHxS (S)	109	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C4-PFBA (S)	104	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C4-PFHpA (S)	104	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C5-PFHxA (S)	98	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C5-PFPeA (S)	91	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C6-PFDA (S)	95	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C7-PFUdA (S)	90	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C8-PFOA (S)	99	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C8-PFOS (S)	105	%	50-200		1	06/04/24 03:51	06/05/24 20:32		
13C9-PFNA (S)	98	%	50-200		1	06/04/24 03:51	06/05/24 20:32		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Sample: FRB-00001 Water Treatment Plan **Lab ID: 35882941002** Collected: 05/30/24 13:55 Received: 05/31/24 15:55 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 274.89 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0015 U**	ug/L	0.0045	0.0015	1	06/12/24 16:02	06/14/24 14:30	763051-92-9	
4:2 FTS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	757124-72-4	
6:2 FTS	**0.0015 U**	ug/L	0.0045	0.0015	1	06/12/24 16:02	06/14/24 14:30	27619-97-2	
8:2 FTS	**0.0015 U**	ug/L	0.0045	0.0015	1	06/12/24 16:02	06/14/24 14:30	39108-34-4	
9Cl-PF3ONS	**0.00061 U**	ug/L	0.0018	0.00061	1	06/12/24 16:02	06/14/24 14:30	756426-58-1	
ADONA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	919005-14-4	
HFPO-DA	**0.0015 U**	ug/L	0.0045	0.0015	1	06/12/24 16:02	06/14/24 14:30	13252-13-6	
NFDHA	**0.0061 U**	ug/L	0.018	0.0061	1	06/12/24 16:02	06/14/24 14:30	151772-58-6	
PFBS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	375-73-5	
PFDA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	335-76-2	
PFHxA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	307-24-4	
PFBA	**0.0015 U**	ug/L	0.0045	0.0015	1	06/12/24 16:02	06/14/24 14:30	375-22-4	
PFEESA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	113507-82-7	
PFHpS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	375-92-8	
PFMBA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0036	0.0012	1	06/12/24 16:02	06/14/24 14:30	377-73-1	
PFPeA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0036	0.0012	1	06/12/24 16:02	06/14/24 14:30	2706-91-4	
PFDoA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	307-55-1	
PFHpA	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	375-85-9	
PFHxS	**0.00091 U**	ug/L	0.0027	0.00091	1	06/12/24 16:02	06/14/24 14:30	355-46-4	
PFNA	**0.0012 U**	ug/L	0.0036	0.0012	1	06/12/24 16:02	06/14/24 14:30	375-95-1	
PFOS	**0.0012 U**	ug/L	0.0036	0.0012	1	06/12/24 16:02	06/14/24 14:30	1763-23-1	
PFOA	**0.0012 U**	ug/L	0.0036	0.0012	1	06/12/24 16:02	06/14/24 14:30	335-67-1	
PFUnA	**0.00061 U**	ug/L	0.0018	0.00061	1	06/12/24 16:02	06/14/24 14:30	2058-94-8	
Surrogates									
13C24:2FTS (S)	114	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C26:2FTS (S)	104	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C28:2FTS (S)	106	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C2-PFDoA (S)	90	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C3HFPO-DA(S)	86	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C3-PFBS (S)	108	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C3-PFHxS (S)	103	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C4-PFBA (S)	86	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C4-PFHpA (S)	89	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C5-PFHxA (S)	89	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C5-PFPeA (S)	88	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C6-PFDA (S)	92	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C7-PFUdA (S)	92	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C8-PFOA (S)	90	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C8-PFOS (S)	101	%	50-200		1	06/12/24 16:02	06/14/24 14:30		
13C9-PFNA (S)	90	%	50-200		1	06/12/24 16:02	06/14/24 14:30		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Sample: Water Treatment Plant #12 **Lab ID: 35882941003** Collected: 05/30/24 14:15 Received: 05/31/24 15:55 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 266.53 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/04/24 03:51	06/05/24 20:48	763051-92-9	
4:2 FTS	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	757124-72-4	
6:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/04/24 03:51	06/05/24 20:48	27619-97-2	
8:2 FTS	**0.0016 U**	ug/L	0.0047	0.0016	1	06/04/24 03:51	06/05/24 20:48	39108-34-4	
9Cl-PF3ONS	**0.00063 U**	ug/L	0.0019	0.00063	1	06/04/24 03:51	06/05/24 20:48	756426-58-1	
ADONA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	919005-14-4	
HFPO-DA	**0.0016 U**	ug/L	0.0047	0.0016	1	06/04/24 03:51	06/05/24 20:48	13252-13-6	
NFDHA	**0.0063 U**	ug/L	0.019	0.0063	1	06/04/24 03:51	06/05/24 20:48	151772-58-6	
PFBS	**0.0010 I**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	375-73-5	
PFDA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	335-76-2	
PFHxA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	307-24-4	
PFBA	**0.0016 U**	ug/L	0.0047	0.0016	1	06/04/24 03:51	06/05/24 20:48	375-22-4	
PFEESA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	113507-82-7	
PFHpS	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	375-92-8	
PFMBA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	863090-89-5	
PFMPA	**0.0012 U**	ug/L	0.0038	0.0012	1	06/04/24 03:51	06/05/24 20:48	377-73-1	
PFPeA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	2706-90-3	
PFPeS	**0.0012 U**	ug/L	0.0038	0.0012	1	06/04/24 03:51	06/05/24 20:48	2706-91-4	
PFDoA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	307-55-1	
PFHpA	**0.00094 U**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	375-85-9	
PFHxS	**0.0012 I**	ug/L	0.0028	0.00094	1	06/04/24 03:51	06/05/24 20:48	355-46-4	
PFNA	**0.0012 U**	ug/L	0.0038	0.0012	1	06/04/24 03:51	06/05/24 20:48	375-95-1	
PFOS	**0.0016 I**	ug/L	0.0038	0.0012	1	06/04/24 03:51	06/05/24 20:48	1763-23-1	
PFOA	**0.0014 I**	ug/L	0.0038	0.0012	1	06/04/24 03:51	06/05/24 20:48	335-67-1	
PFUnA	**0.00063 U**	ug/L	0.0019	0.00063	1	06/04/24 03:51	06/05/24 20:48	2058-94-8	
Surrogates									
13C24:2FTS (S)	125	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C26:2FTS (S)	114	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C28:2FTS (S)	105	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C2-PFDoA (S)	78	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C3HFPO-DA(S)	95	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C3-PFBS (S)	101	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C3-PFHxS (S)	111	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C4-PFBA (S)	103	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C4-PFHpA (S)	101	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C5-PFHxA (S)	97	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C5-PFPeA (S)	97	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C6-PFDA (S)	73	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C7-PFUdA (S)	75	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C8-PFOA (S)	90	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C8-PFOS (S)	106	%	50-200		1	06/04/24 03:51	06/05/24 20:48		
13C9-PFNA (S)	79	%	50-200		1	06/04/24 03:51	06/05/24 20:48		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

QC Batch: 1016202
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35882941001, 35882941003

METHOD BLANK: 5584601
Matrix: Drinking Water
Associated Lab Samples: 35882941001, 35882941003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	06/05/24 14:25	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/05/24 14:25	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/05/24 14:25	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	06/05/24 14:25	
ADONA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	06/05/24 14:25	
NFDHA	ug/L	0.0067 U	0.020	0.0067	06/05/24 14:25	
PFBA	ug/L	0.0017 U	0.0050	0.0017	06/05/24 14:25	
PFBS	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFDA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	06/05/24 14:25	
PFNA	ug/L	0.0013 U	0.0040	0.0013	06/05/24 14:25	
PFOA	ug/L	0.0013 U	0.0040	0.0013	06/05/24 14:25	
PFOS	ug/L	0.0013 U	0.0040	0.0013	06/05/24 14:25	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	06/05/24 14:25	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	06/05/24 14:25	
PFUnA	ug/L	0.00067 U	0.0020	0.00067	06/05/24 14:25	
13C2-PFDoA (S)	%	93	50-200		06/05/24 14:25	
13C24:2FTS (S)	%	112	50-200		06/05/24 14:25	
13C26:2FTS (S)	%	110	50-200		06/05/24 14:25	
13C28:2FTS (S)	%	105	50-200		06/05/24 14:25	
13C3-PFBS (S)	%	111	50-200		06/05/24 14:25	
13C3-PFHxS (S)	%	108	50-200		06/05/24 14:25	
13C3HFPO-DA(S)	%	97	50-200		06/05/24 14:25	
13C4-PFBA (S)	%	98	50-200		06/05/24 14:25	
13C4-PFHpA (S)	%	97	50-200		06/05/24 14:25	
13C5-PFHxA (S)	%	96	50-200		06/05/24 14:25	
13C5-PFPeA (S)	%	98	50-200		06/05/24 14:25	
13C6-PFDA (S)	%	96	50-200		06/05/24 14:25	
13C7-PFUdA (S)	%	95	50-200		06/05/24 14:25	
13C8-PFOA (S)	%	97	50-200		06/05/24 14:25	
13C8-PFOS (S)	%	106	50-200		06/05/24 14:25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

METHOD BLANK: 5584601 Matrix: Drinking Water
Associated Lab Samples: 35882941001, 35882941003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	96	50-200		06/05/24 14:25	

LABORATORY CONTROL SAMPLE: 5584602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 U	81	50-150	
4:2 FTS	ug/L	0.0019	0.0019 I	101	50-150	
6:2 FTS	ug/L	0.0019	0.0023 I	123	50-150	
8:2 FTS	ug/L	0.0019	0.0017 I	88	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0016 I	83	50-150	
ADONA	ug/L	0.0019	0.0017 I	89	50-150	
HFPO-DA	ug/L	0.002	0.0019 I	95	50-150	
NFDHA	ug/L	0.02	0.017 I	83	50-150	
PFBA	ug/L	0.002	0.0020 I	100	50-150	
PFBS	ug/L	0.0018	0.0017 I	96	50-150	
PFDA	ug/L	0.002	0.0018 I	89	50-150	
PFDoA	ug/L	0.002	0.0017 I	86	50-150	
PFEESA	ug/L	0.0018	0.0016 I	89	50-150	
PFHpA	ug/L	0.002	0.0018 I	89	50-150	
PFHpS	ug/L	0.0019	0.0018 I	93	50-150	
PFHxA	ug/L	0.002	0.0017 I	87	50-150	
PFHxS	ug/L	0.0018	0.0017 I	95	50-150	
PFMBA	ug/L	0.002	0.0017 I	85	50-150	
PFMPA	ug/L	0.002	0.0016 I	80	50-150	
PFNA	ug/L	0.002	0.0022 I	111	50-150	
PFOA	ug/L	0.002	0.0024 I	119	50-150	
PFOS	ug/L	0.0019	0.0017 I	87	50-150	
PFPeA	ug/L	0.002	0.0020 I	99	50-150	
PFPeS	ug/L	0.0019	0.0016 I	84	50-150	
PFUnA	ug/L	0.002	0.0017 I	87	50-150	
13C2-PFDoA (S)	%			91	50-200	
13C24:2FTS (S)	%			121	50-200	
13C26:2FTS (S)	%			122	50-200	
13C28:2FTS (S)	%			116	50-200	
13C3-PFBS (S)	%			121	50-200	
13C3-PFHxS (S)	%			118	50-200	
13C3HFPO-DA(S)	%			85	50-200	
13C4-PFBA (S)	%			93	50-200	
13C4-PFHpA (S)	%			87	50-200	
13C5-PFHxA (S)	%			85	50-200	
13C5-PFPeA (S)	%			90	50-200	
13C6-PFDA (S)	%			83	50-200	
13C7-PFUdA (S)	%			86	50-200	
13C8-PFOA (S)	%			86	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

LABORATORY CONTROL SAMPLE: 5584602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			115	50-200	
13C9-PFNA (S)	%			80	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584603 5584604

Parameter	Units	35882619005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0016 U	0.018	0.018	0.017	0.017	92	94	70-130	2	30	
4:2 FTS	ug/L	0.00093 U	0.018	0.018	0.017	0.017	94	92	70-130	4	30	
6:2 FTS	ug/L	0.0016 U	0.018	0.018	0.017	0.017	93	94	70-130	2	30	
8:2 FTS	ug/L	0.0016 U	0.018	0.018	0.017	0.017	92	93	70-130	1	30	
9Cl-PF3ONS	ug/L	0.00063 U	0.018	0.018	0.017	0.017	92	94	70-130	1	30	
ADONA	ug/L	0.00093 U	0.018	0.018	0.018	0.018	95	98	70-130	1	30	
HFPO-DA	ug/L	0.0016 U	0.019	0.019	0.017	0.018	88	95	70-130	4	30	
NFDHA	ug/L	0.0062 U	0.19	0.19	0.15	0.16	78	84	70-130	5	30	
PFBA	ug/L	0.0016 U	0.019	0.019	0.020	0.021	103	108	70-130	1	30	
PFBS	ug/L	0.00093 U	0.017	0.017	0.017	0.017	95	95	70-130	3	30	
PFDA	ug/L	0.00093 U	0.019	0.019	0.019	0.019	96	101	70-130	2	30	
PFDoA	ug/L	0.00093 U	0.019	0.019	0.018	0.019	92	99	70-130	4	30	
PFEESA	ug/L	0.00093 U	0.017	0.017	0.017	0.017	99	99	70-130	2	30	
PFHpA	ug/L	0.00093 U	0.019	0.019	0.019	0.019	99	100	70-130	1	30	
PFHpS	ug/L	0.00093 U	0.018	0.018	0.017	0.018	91	100	70-130	6	30	
PFHxA	ug/L	0.00093 U	0.019	0.019	0.018	0.018	93	95	70-130	1	30	
PFHxS	ug/L	0.00093 U	0.017	0.017	0.018	0.017	101	102	70-130	1	30	
PFMBA	ug/L	0.00093 U	0.019	0.019	0.018	0.018	90	93	70-130	0	30	
PFMPA	ug/L	0.0012 U	0.019	0.019	0.016	0.015	81	80	70-130	4	30	
PFNA	ug/L	0.0012 U	0.019	0.019	0.023	0.023	118	122	70-130	0	30	
PFOA	ug/L	0.0012 U	0.019	0.019	0.023	0.023	118	117	70-130	3	30	
PFOS	ug/L	0.0012 U	0.018	0.018	0.018	0.017	96	97	70-130	2	30	
PFPeA	ug/L	0.00093 U	0.019	0.019	0.018	0.019	92	100	70-130	6	30	
PFPeS	ug/L	0.0012 U	0.018	0.018	0.019	0.016	102	91	70-130	14	30	
PFUnA	ug/L	0.00063 U	0.019	0.019	0.018	0.019	94	99	70-130	2	30	
13C2-PFDoA (S)	%						97	83	50-200			
13C24:2FTS (S)	%						151	144	50-200			
13C26:2FTS (S)	%						125	129	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584603 5584604

Parameter	Units	35882619005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C28:2FTS (S)	%						110	107	50-200			
13C3-PFBS (S)	%						102	98	50-200			
13C3-PFHxS (S)	%						114	106	50-200			
13C3HFPO-DA(S)	%						98	84	50-200			
13C4-PFBA (S)	%						105	101	50-200			
13C4-PFHpA (S)	%						107	97	50-200			
13C5-PFHxA (S)	%						102	84	50-200			
13C5-PFPeA (S)	%						97	88	50-200			
13C6-PFDA (S)	%						96	81	50-200			
13C7-PFUdA (S)	%						96	79	50-200			
13C8-PFOA (S)	%						99	94	50-200			
13C8-PFOS (S)	%						108	102	50-200			
13C9-PFNA (S)	%						97	87	50-200			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584605 5584606

Parameter	Units	35882763001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0017 U	0.018	0.019	0.017	0.017	93	90	70-130	2	30	
4:2 FTS	ug/L	0.0010 U	0.018	0.019	0.018	0.019	99	98	70-130	3	30	
6:2 FTS	ug/L	0.0017 U	0.018	0.019	0.017	0.018	94	94	70-130	5	30	
8:2 FTS	ug/L	0.0017 U	0.018	0.019	0.018	0.018	97	95	70-130	3	30	
9Cl-PF3ONS	ug/L	0.00068 U	0.018	0.019	0.017	0.018	94	93	70-130	3	30	
ADONA	ug/L	0.0010 U	0.018	0.019	0.018	0.018	98	97	70-130	4	30	
HFPO-DA	ug/L	0.0017 U	0.019	0.02	0.018	0.019	95	94	70-130	4	30	
NFDHA	ug/L	0.0067 U	0.19	0.2	0.15	0.16	78	81	70-130	8	30	
PFBA	ug/L	0.0032 I	0.019	0.02	0.021	0.022	96	92	70-130	1	30	
PFBS	ug/L	0.0035	0.017	0.018	0.021	0.023	105	106	70-130	5	30	
PFDA	ug/L	0.0010 U	0.019	0.02	0.019	0.020	100	97	70-130	2	30	
PFDoA	ug/L	0.0010 U	0.019	0.02	0.018	0.019	95	95	70-130	5	30	
PFEESA	ug/L	0.0010 U	0.017	0.018	0.017	0.018	100	101	70-130	7	30	
PFHpA	ug/L	0.0028 I	0.019	0.02	0.022	0.023	102	99	70-130	2	30	
PFHpS	ug/L	0.0010 U	0.018	0.019	0.018	0.018	100	93	70-130	2	30	
PFHxA	ug/L	0.0037	0.019	0.02	0.022	0.022	96	91	70-130	1	30	
PFHxS	ug/L	0.0044	0.017	0.018	0.022	0.022	104	96	70-130	2	30	
PFMBA	ug/L	0.0010 U	0.019	0.02	0.018	0.019	94	93	70-130	4	30	
PFMPA	ug/L	0.0013 U	0.019	0.02	0.015	0.016	81	80	70-130	4	30	
PFNA	ug/L	0.0013 U	0.019	0.02	0.024	0.024	121	116	70-130	1	30	
PFOA	ug/L	0.0080	0.019	0.02	0.032	0.033	125	125	70-130	4	30	
PFOS	ug/L	0.013	0.018	0.019	0.031	0.031	100	96	70-130	0	30	
PFPeA	ug/L	0.0044	0.019	0.02	0.022	0.023	95	95	70-130	5	30	
PFPeS	ug/L	0.0013 U	0.018	0.019	0.019	0.019	101	100	70-130	3	30	
PFUnA	ug/L	0.00068 U	0.019	0.02	0.018	0.020	96	98	70-130	8	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584605 5584606

Parameter	Units	35882763001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C2-PFDoA (S)	%						93	88	50-200			
13C24:2FTS (S)	%						153	151	50-200			
13C26:2FTS (S)	%						120	124	50-200			
13C28:2FTS (S)	%						109	106	50-200			
13C3-PFBS (S)	%						97	97	50-200			
13C3-PFHxS (S)	%						112	114	50-200			
13C3HFPO-DA(S)	%						96	97	50-200			
13C4-PFBA (S)	%						105	105	50-200			
13C4-PFHpA (S)	%						106	105	50-200			
13C5-PFHxA (S)	%						100	99	50-200			
13C5-PFPeA (S)	%						90	91	50-200			
13C6-PFDA (S)	%						88	87	50-200			
13C7-PFUdA (S)	%						90	83	50-200			
13C8-PFOA (S)	%						96	94	50-200			
13C8-PFOS (S)	%						107	109	50-200			
13C9-PFNA (S)	%						90	90	50-200			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584609 5584610

Parameter	Units	35882899001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0015 U	0.017	0.017	0.016	0.016	95	92	70-130	4	30	
4:2 FTS	ug/L	0.00088 U	0.017	0.017	0.017	0.017	101	100	70-130	2	30	
6:2 FTS	ug/L	0.0015 U	0.017	0.017	0.016	0.018	93	105	70-130	11	30	
8:2 FTS	ug/L	0.0015 U	0.017	0.017	0.017	0.016	97	97	70-130	1	30	
9Cl-PF3ONS	ug/L	0.00059 U	0.017	0.017	0.017	0.016	97	94	70-130	5	30	
ADONA	ug/L	0.00088 U	0.017	0.017	0.017	0.016	98	97	70-130	3	30	
HFPO-DA	ug/L	0.0015 U	0.018	0.018	0.018	0.017	100	92	70-130	10	30	
NFDHA	ug/L	0.0059 U	0.18	0.18	0.16	0.16	89	88	70-130	3	30	
PFBA	ug/L	0.0015 U	0.018	0.018	0.018	0.017	89	88	70-130	2	30	
PFBS	ug/L	0.0033	0.016	0.016	0.020	0.020	100	102	70-130	0	30	
PFDA	ug/L	0.00088 U	0.018	0.018	0.019	0.018	100	100	70-130	1	30	
PFDoA	ug/L	0.00088 U	0.018	0.018	0.018	0.017	97	95	70-130	4	30	
PFEESA	ug/L	0.00088 U	0.016	0.016	0.016	0.016	101	102	70-130	0	30	
PFHpA	ug/L	0.0016 I	0.018	0.018	0.020	0.019	103	100	70-130	4	30	
PFHpS	ug/L	0.00088 U	0.017	0.017	0.017	0.017	99	98	70-130	2	30	
PFHxA	ug/L	0.0035	0.018	0.018	0.020	0.020	93	93	70-130	1	30	
PFHxS	ug/L	0.0016 I	0.016	0.016	0.019	0.017	106	99	70-130	7	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584609 5584610

Parameter	Units	35882899001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PFMBA	ug/L	0.00088 U	0.018	0.018	0.017	0.016	92	91	70-130	3	30	
PFMPA	ug/L	0.0012 U	0.018	0.018	0.015	0.015	85	83	70-130	3	30	
PFNA	ug/L	0.0012 U	0.018	0.018	0.023	0.022	124	119	70-130	6	30	
PFOA	ug/L	0.0049	0.018	0.018	0.027	0.027	121	122	70-130	1	30	
PFOS	ug/L	0.0059	0.017	0.017	0.022	0.022	95	98	70-130	1	30	
PFPeA	ug/L	0.0035	0.018	0.018	0.021	0.021	98	96	70-130	3	30	
PFPeS	ug/L	0.0012 U	0.017	0.017	0.018	0.017	103	98	70-130	6	30	
PFUnA	ug/L	0.00059 U	0.018	0.018	0.018	0.017	99	96	70-130	5	30	
13C2-PFDoA (S)	%						89	94	50-200			
13C24:2FTS (S)	%						147	150	50-200			
13C26:2FTS (S)	%						127	130	50-200			
13C28:2FTS (S)	%						109	113	50-200			
13C3-PFBS (S)	%						100	100	50-200			
13C3-PFHxS (S)	%						106	114	50-200			
13C3HFPO-DA(S)	%						90	94	50-200			
13C4-PFBA (S)	%						101	101	50-200			
13C4-PFHpA (S)	%						102	100	50-200			
13C5-PFHxA (S)	%						97	97	50-200			
13C5-PFPeA (S)	%						94	95	50-200			
13C6-PFDA (S)	%						88	89	50-200			
13C7-PFUdA (S)	%						87	87	50-200			
13C8-PFOA (S)	%						93	95	50-200			
13C8-PFOS (S)	%						102	107	50-200			
13C9-PFNA (S)	%						87	90	50-200			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584611 5584612

Parameter	Units	35883001001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0015 U	0.017	0.017	0.016	0.016	93	96	70-130	0	30	
4:2 FTS	ug/L	0.00091 U	0.017	0.017	0.017	0.017	96	97	70-130	1	30	
6:2 FTS	ug/L	0.0015 U	0.017	0.017	0.016	0.017	92	97	70-130	2	30	
8:2 FTS	ug/L	0.0015 U	0.017	0.017	0.016	0.016	94	94	70-130	3	30	
9Cl-PF3ONS	ug/L	0.00061 U	0.017	0.017	0.016	0.016	94	95	70-130	2	30	
ADONA	ug/L	0.00091 U	0.017	0.017	0.017	0.016	97	96	70-130	4	30	
HFPO-DA	ug/L	0.0015 U	0.018	0.018	0.018	0.016	97	92	70-130	9	30	
NFDHA	ug/L	0.0061 U	0.18	0.18	0.15	0.15	83	84	70-130	2	30	
PFBA	ug/L	0.0042 I	0.018	0.018	0.020	0.021	86	93	70-130	4	30	
PFBS	ug/L	0.0061	0.016	0.016	0.022	0.021	97	93	70-130	5	30	
PFDA	ug/L	0.00091 U	0.018	0.018	0.018	0.018	99	97	70-130	5	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5584611 5584612

Parameter	Units	35883001001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PFDoA	ug/L	0.00091 U	0.018	0.018	0.017	0.017	94	95	70-130	2	30	
PFEESA	ug/L	0.00091 U	0.016	0.016	0.017	0.016	101	99	70-130	5	30	
PFHpA	ug/L	0.0034	0.018	0.018	0.022	0.021	103	99	70-130	5	30	
PFHpS	ug/L	0.00091 U	0.017	0.017	0.017	0.017	99	98	70-130	4	30	
PFHxA	ug/L	0.0059	0.018	0.018	0.023	0.023	95	93	70-130	4	30	
PFHxS	ug/L	0.0022 I	0.016	0.016	0.018	0.018	97	97	70-130	2	30	
PFMBA	ug/L	0.00091 U	0.018	0.018	0.017	0.016	91	92	70-130	2	30	
PFMPA	ug/L	0.0012 U	0.018	0.018	0.015	0.015	83	83	70-130	4	30	
PFNA	ug/L	0.0020 I	0.018	0.018	0.024	0.023	123	119	70-130	6	30	
PFOA	ug/L	0.0078	0.018	0.018	0.030	0.029	124	120	70-130	4	30	
PFOS	ug/L	0.011	0.017	0.017	0.028	0.028	95	100	70-130	1	30	
PFPeA	ug/L	0.0062	0.018	0.018	0.024	0.024	96	97	70-130	1	30	
PFPeS	ug/L	0.0012 U	0.017	0.017	0.016	0.016	91	94	70-130	1	30	
PFUnA	ug/L	0.00061 U	0.018	0.018	0.017	0.017	94	95	70-130	2	30	
13C2-PFDoA (S)	%						95	91	50-200			
13C24:2FTS (S)	%						145	140	50-200			
13C26:2FTS (S)	%						120	124	50-200			
13C28:2FTS (S)	%						111	111	50-200			
13C3-PFBS (S)	%						101	103	50-200			
13C3-PFHxS (S)	%						116	116	50-200			
13C3HFPO-DA(S)	%						93	97	50-200			
13C4-PFBA (S)	%						105	106	50-200			
13C4-PFHpA (S)	%						102	102	50-200			
13C5-PFHxA (S)	%						96	95	50-200			
13C5-PFPeA (S)	%						94	96	50-200			
13C6-PFDA (S)	%						88	69	50-200			
13C7-PFUdA (S)	%						90	81	50-200			
13C8-PFOA (S)	%						92	86	50-200			
13C8-PFOS (S)	%						109	106	50-200			
13C9-PFNA (S)	%						86	71	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

QC Batch: 1018569
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35882941002

METHOD BLANK: 5597813
Matrix: Drinking Water
Associated Lab Samples: 35882941002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	06/14/24 13:57	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/14/24 13:57	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	06/14/24 13:57	
9Cl-PF3ONS	ug/L	0.00067 U	0.0020	0.00067	06/14/24 13:57	
ADONA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	06/14/24 13:57	
NFDHA	ug/L	0.0067 U	0.020	0.0067	06/14/24 13:57	
PFBA	ug/L	0.0017 U	0.0050	0.0017	06/14/24 13:57	
PFBS	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFDA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	06/14/24 13:57	
PFNA	ug/L	0.0013 U	0.0040	0.0013	06/14/24 13:57	
PFOA	ug/L	0.0013 U	0.0040	0.0013	06/14/24 13:57	
PFOS	ug/L	0.0013 U	0.0040	0.0013	06/14/24 13:57	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	06/14/24 13:57	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	06/14/24 13:57	
PFUnA	ug/L	0.00067 U	0.0020	0.00067	06/14/24 13:57	
13C2-PFDoA (S)	%	96	50-200		06/14/24 13:57	
13C24:2FTS (S)	%	113	50-200		06/14/24 13:57	
13C26:2FTS (S)	%	101	50-200		06/14/24 13:57	
13C28:2FTS (S)	%	102	50-200		06/14/24 13:57	
13C3-PFBS (S)	%	106	50-200		06/14/24 13:57	
13C3-PFHxS (S)	%	102	50-200		06/14/24 13:57	
13C3HFPO-DA(S)	%	94	50-200		06/14/24 13:57	
13C4-PFBA (S)	%	98	50-200		06/14/24 13:57	
13C4-PFHpA (S)	%	100	50-200		06/14/24 13:57	
13C5-PFHxA (S)	%	100	50-200		06/14/24 13:57	
13C5-PFPeA (S)	%	101	50-200		06/14/24 13:57	
13C6-PFDA (S)	%	99	50-200		06/14/24 13:57	
13C7-PFUdA (S)	%	98	50-200		06/14/24 13:57	
13C8-PFOA (S)	%	99	50-200		06/14/24 13:57	
13C8-PFOS (S)	%	100	50-200		06/14/24 13:57	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

METHOD BLANK: 5597813 Matrix: Drinking Water
Associated Lab Samples: 35882941002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	100	50-200		06/14/24 13:57	

LABORATORY CONTROL SAMPLE: 5597814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0018 I	95	50-150	
4:2 FTS	ug/L	0.0019	0.0019 I	98	50-150	
6:2 FTS	ug/L	0.0019	0.0018 I	96	50-150	
8:2 FTS	ug/L	0.0019	0.0020 I	103	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	95	50-150	
ADONA	ug/L	0.0019	0.0017 I	90	50-150	
HFPO-DA	ug/L	0.002	0.0017 I	86	50-150	
NFDHA	ug/L	0.02	0.015 I	77	50-150	
PFBA	ug/L	0.002	0.0018 I	89	50-150	
PFBS	ug/L	0.0018	0.0015 I	81	50-150	
PFDA	ug/L	0.002	0.0019 I	93	50-150	
PFDoA	ug/L	0.002	0.0017 I	86	50-150	
PFEESA	ug/L	0.0018	0.0017 I	92	50-150	
PFHpA	ug/L	0.002	0.0018 I	91	50-150	
PFHpS	ug/L	0.0019	0.0021 I	108	50-150	
PFHxA	ug/L	0.002	0.0018 I	91	50-150	
PFHxS	ug/L	0.0018	0.0017 I	96	50-150	
PFMBA	ug/L	0.002	0.0019 I	93	50-150	
PFMPA	ug/L	0.002	0.0018 I	91	50-150	
PFNA	ug/L	0.002	0.0024 I	118	50-150	
PFOA	ug/L	0.002	0.0024 I	122	50-150	
PFOS	ug/L	0.0019	0.0021 I	109	50-150	
PFPeA	ug/L	0.002	0.0019 I	93	50-150	
PFPeS	ug/L	0.0019	0.0017 I	91	50-150	
PFUnA	ug/L	0.002	0.0018 I	92	50-150	
13C2-PFDoA (S)	%			92	50-200	
13C24:2FTS (S)	%			115	50-200	
13C26:2FTS (S)	%			104	50-200	
13C28:2FTS (S)	%			105	50-200	
13C3-PFBS (S)	%			107	50-200	
13C3-PFHxS (S)	%			104	50-200	
13C3HFPO-DA(S)	%			94	50-200	
13C4-PFBA (S)	%			94	50-200	
13C4-PFHpA (S)	%			98	50-200	
13C5-PFHxA (S)	%			98	50-200	
13C5-PFPeA (S)	%			97	50-200	
13C6-PFDA (S)	%			97	50-200	
13C7-PFUdA (S)	%			94	50-200	
13C8-PFOA (S)	%			97	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

LABORATORY CONTROL SAMPLE: 5597814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			98	50-200	
13C9-PFNA (S)	%			95	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE1_Apr2024_RS1
Pace Project No.: 35882941

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35882941001	**00001 Water Treatment Plant #3**	EPA 533	1016202	EPA 533	1016617
35882941002	**FRB-00001 Water Treatment Plan**	EPA 533	1018569	EPA 533	1018931
35882941003	**Water Treatment Plant #12**	EPA 533	1016202	EPA 533	1016617

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all re evant fields

WO# : 35882941

35882941

Company Name:	City of Deland - UCMR5	Contact/Report To:	Shawn Wahrenberger
Street Address:	1101 South Amelia Avenue, Deland, FL 32724	Phone #:	(386)626-7254
		E-Mail:	wahrenbergers@deland.org
		Cc E-Mail:	
Customer Project #:			
Project Name:	UCMR5_SE1_Apr2024_RS1	Invoice To:	Accounts Payable
		Invoice E-Mail:	wahrenbergers@deland.org
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Florida

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Sol d (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	533 FRB	533 PFAS Compounds, UCMR
00001Water Treatment Plant #3 2405718	DW	G			5/30/24	1355	6				X
FRB-00001Water Treatment Plant #3 2405718	DW	G				1355	2			X	
Water Treatment Plant #12 2405719	DW	G				1415	6				X
FRB-Water Treatment Plant #12 2405719	DW	G				1415	2			X	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3112246

Sample Comment

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
UCMR5 is for testing finished drinking water ONLY. Please fill containers up to the bottom thread of the container cap and do not flush/overfill the container. Prior to shipping, please refrigerate the samples for 4-6 hours immediately after sampling. Ship samples on Monday thru Wednesday only, overnight shipping label included

Collected By:
(Printed Name) Amanda CoKinogenis
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.4	

Relinquished by/Company: (Signature)	Date/Time: 5/31/24 1555	Received by/Company: (Signature) JRS/Pace	Date/Time: 5-31-24 1555	Tracking Number:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1	

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

WO#: 35882941
PM: DNK Due Date: 07/09/24
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☑Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☐Pace ☐Other: _____
Tracking # 7135 0354 2388
Custody Seal: ☐Yes ☐No Seal intact: ☐Yes ☐No Ice: ☐Yes ☐No
Packing Material: ☐Bubble Wrap ☐Bubble Bags ☑None ☐Other _____

			Comments
Chain of Custody Present	☑Yes	☐No	
Chain of Custody Completed	☑Yes	☐No	
Relinquished & Sampler Signature	☐Yes	☑No	No Sampler Signature
Samples Arrived within Hold Time	☑Yes	☐No	
Sufficient Volume	☑Yes	☐No	
Correct Containers Used	☑Yes	☐No	
Containers Intact	☑Yes	☐No	
Sample Labels match COC	☑Yes	☐No	All samples came with all info
Samples received ≤48 hr from collection?	☑Yes	☐No	written in sharpie
If no, were samples kept ≤6°C after 48 hrs of collection?	☐Yes	☐No	
Person contacted for verification _____			

Temperature Verification Initials: SB4 Date: 5/31/24 Time: ~~15~~ 1654
IR Gun ID: T-414 CF (°C): -0.1

	Observed (°C)	Corrected (°C)	Comments
EPA 533	2.4	2.3	
EPA 537.1	—	—	

Preservation Verification pH strip: HC178067 pH meter: SR-5
Free Cl Strip/DPD: 240374 Cl Meter: SR-1
200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
0000 water Treatment Plant #1 5/6	6.1	—	—		ND	—	
" 6/6	6.5	—			ND	—	
" 3/6	6.8	—			ND	—	
" 4/6	6.9	—			ND	—	
" 5/6	7.0	—			ND	—	
" 6/6	7.0	—			ND	—	
~~Fb- 0000 Water Treatment~~ SB4 5/31	—	—			—	—	
Fb- 0000 water treatment plant #1	6.9	—			ND	—	

*533 pH may be adjusted at the bench prior to extraction. ** ND = <0.1 mg/L

Labeled by: SB4 **Reviewed by:** AES **Delivered by:** SB4

Preservation Verification Continued

Sample/Container ID	pH				Free Chlorine**		Comments
	533* (pH 6.0-	537.1 (pH 6.0-8.0)	200.7 (pH <2)	200.7 Lab Preserved	533	537.1	
water Treatment Plant #1 2/6	6.6	—	—		ND	—	
" 3/6	6.7	—			ND	—	
" 3/6	6.4	—			N.D	—	
" 4/6	7.0	—			ND	—	
" 5/6	7.0	—			ND	—	
" 6/6	7.6	—			ND	—	
Elb - water treatment Plant #1	6.4	—			ND	—	

*533 pH may be adjusted at the bench prior to extraction ** ND = <0.1 mg/L

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

May 08, 2025

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rebecca Selph

Rebecca Selph
rebecca.selph@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Utah FL NELAC Reciprocity
Utah
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35948716001	36402863 Water Treatment Plant	Drinking Water	04/10/25 09:05	04/11/25 15:21
35948716002	FRB-36402863 Water Treatment P	Drinking Water	04/10/25 09:05	04/11/25 15:21
35948716003	00003 Water Treatment Plant #6	Drinking Water	04/10/25 09:25	04/11/25 15:21
35948716004	FRB-00003 Water Treatment Plan	Drinking Water	04/10/25 09:25	04/11/25 15:21
35948716005	32402867 Water Treatment Plant	Drinking Water	04/10/25 10:05	04/11/25 15:21
35948716006	FRB-32402867 Water Treatment P	Drinking Water	04/10/25 10:05	04/11/25 15:21
35948716007	36402868 Water Treatment Plant	Drinking Water	04/10/25 08:40	04/11/25 15:21
35948716008	FRB-36402868 Water Treatment P	Drinking Water	04/10/25 08:40	04/11/25 15:21

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35948716001	**36402863 Water Treatment Plant**	EPA 200.7	ASB	1	PASI-O
		EPA 533	HL	41	PASI-O
		EPA 537.1	HL	8	PASI-O
35948716002	**FRB-36402863 Water Treatment P**	EPA 533	TMM1	41	PASI-O
35948716003	**00003 Water Treatment Plant #6**	EPA 200.7	ASB	1	PASI-O
		EPA 533	HL	41	PASI-O
		EPA 537.1	HL	8	PASI-O
35948716005	**32402867 Water Treatment Plant**	EPA 200.7	ASB	1	PASI-O
		EPA 533	HL	41	PASI-O
		EPA 537.1	HL	8	PASI-O
35948716006	**FRB-32402867 Water Treatment P**	EPA 533	TMM1	41	PASI-O
35948716007	**36402868 Water Treatment Plant**	EPA 200.7	ASB	1	PASI-O
		EPA 533	HL	41	PASI-O
		EPA 537.1	HL	8	PASI-O
35948716008	**FRB-36402868 Water Treatment P**	EPA 533	TMM1	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 36402863 Water Treatment Plant **Lab ID: 35948716001** Collected: 04/10/25 09:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	04/25/25 04:17	05/03/25 11:30	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 236.5 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/12/25 18:13	04/15/25 02:28	763051-92-9	
4:2 FTS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	757124-72-4	
6:2 FTS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/12/25 18:13	04/15/25 02:28	27619-97-2	
8:2 FTS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/12/25 18:13	04/15/25 02:28	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 02:28	756426-58-1	
ADONA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	919005-14-4	
HFPO-DA	**0.0018 U**	ug/L	0.0053	0.0018	1	04/12/25 18:13	04/15/25 02:28	13252-13-6	
NFDHA	**0.0071 U**	ug/L	0.021	0.0071	1	04/12/25 18:13	04/15/25 02:28	151772-58-6	
PFBS	**0.0052**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	375-73-5	
PFDA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	335-76-2	
PFHxA	**0.0034**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	307-24-4	
PFBA	**0.0021 I**	ug/L	0.0053	0.0018	1	04/12/25 18:13	04/15/25 02:28	375-22-4	
PFEESA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	113507-82-7	
PFHpS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	375-92-8	
PFMBA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	863090-89-5	
PFMPA	**0.0014 U**	ug/L	0.0042	0.0014	1	04/12/25 18:13	04/15/25 02:28	377-73-1	
PFPeA	**0.0051**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0042	0.0014	1	04/12/25 18:13	04/15/25 02:28	2706-91-4	
PFDoA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	307-55-1	
PFHpA	**0.0015 I**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	375-85-9	
PFHxS	**0.0039**	ug/L	0.0032	0.0011	1	04/12/25 18:13	04/15/25 02:28	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0042	0.0014	1	04/12/25 18:13	04/15/25 02:28	375-95-1	
PFOS	**0.0061**	ug/L	0.0042	0.0014	1	04/12/25 18:13	04/15/25 02:28	1763-23-1	
PFOA	**0.0048**	ug/L	0.0042	0.0014	1	04/12/25 18:13	04/15/25 02:28	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 02:28	2058-94-8	
Surrogates									
13C24:2FTS (S)	126	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C26:2FTS (S)	109	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C28:2FTS (S)	98	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C2-PFDoA (S)	84	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C3HFPO-DA(S)	89	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C3-PFBS (S)	93	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C3-PFHxS (S)	97	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C4-PFBA (S)	94	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C4-PFHpA (S)	90	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C5-PFHxA (S)	89	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C5-PFPeA (S)	85	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C6-PFDA (S)	82	%	50-200		1	04/12/25 18:13	04/15/25 02:28		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 36402863 Water Treatment Plant **Lab ID: 35948716001** Collected: 04/10/25 09:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 236.5 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
Surrogates									
13C7-PFUdA (S)	85	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C8-PFOA (S)	92	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C8-PFOS (S)	94	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
13C9-PFNA (S)	85	%	50-200		1	04/12/25 18:13	04/15/25 02:28		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 231.72 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0018 U**	ug/L	0.0065	0.0018	1	04/15/25 17:01	04/17/25 08:23	2991-50-6	
NMeFOSAA	**0.0022 U**	ug/L	0.0065	0.0022	1	04/15/25 17:01	04/17/25 08:23	2355-31-9	
PFTeDA	**0.0029 U**	ug/L	0.0086	0.0029	1	04/15/25 17:01	04/17/25 08:23	376-06-7	
PFTrDA	**0.0025 U**	ug/L	0.0076	0.0025	1	04/15/25 17:01	04/17/25 08:23	72629-94-8	
Surrogates									
13C2-PFDA (S)	108	%	70-130		1	04/15/25 17:01	04/17/25 08:23		
13C2-PFHxA (S)	107	%	70-130		1	04/15/25 17:01	04/17/25 08:23		
NEtFOSAA-d5 (S)	109	%	70-130		1	04/15/25 17:01	04/17/25 08:23		
HFPO-DAS (S)	104	%	70-130		1	04/15/25 17:01	04/17/25 08:23		

Sample: FRB-36402863 Water Treatment P **Lab ID: 35948716002** Collected: 04/10/25 09:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 231.78 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0018 U**	ug/L	0.0054	0.0018	1	04/30/25 07:50	04/30/25 20:49	763051-92-9	
4:2 FTS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	757124-72-4	
6:2 FTS	**0.0018 U**	ug/L	0.0054	0.0018	1	04/30/25 07:50	04/30/25 20:49	27619-97-2	
8:2 FTS	**0.0018 U**	ug/L	0.0054	0.0018	1	04/30/25 07:50	04/30/25 20:49	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0022	0.0007	1	04/30/25 07:50	04/30/25 20:49	756426-58-1	
ADONA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	919005-14-4	
HFPO-DA	**0.0018 U**	ug/L	0.0054	0.0018	1	04/30/25 07:50	04/30/25 20:49	13252-13-6	
NFDHA	**0.0072 U**	ug/L	0.022	0.0072	1	04/30/25 07:50	04/30/25 20:49	151772-58-6	
PFBS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	375-73-5	
PFDA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	335-76-2	
PFHxA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	307-24-4	
PFBA	**0.0018 U**	ug/L	0.0054	0.0018	1	04/30/25 07:50	04/30/25 20:49	375-22-4	
PFEESA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	113507-82-7	
PFHpS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	375-92-8	
PFMBA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	863090-89-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: FRB-36402863 Water Treatment P **Lab ID: 35948716002** Collected: 04/10/25 09:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 231.78 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
PFMPA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 20:49	377-73-1	
PFPeA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 20:49	2706-91-4	
PFDoA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	307-55-1	
PFHpA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	375-85-9	
PFHxS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 20:49	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 20:49	375-95-1	
PFOS	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 20:49	1763-23-1	
PFOA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 20:49	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0022	0.0007	1	04/30/25 07:50	04/30/25 20:49	2058-94-8	
Surrogates									
13C24:2FTS (S)	96	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C26:2FTS (S)	94	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C28:2FTS (S)	98	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C2-PFDoA (S)	87	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C3HFPO-DA(S)	84	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C3-PFBS (S)	98	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C3-PFHxS (S)	95	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C4-PFBA (S)	90	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C4-PFHpA (S)	86	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C5-PFHxA (S)	93	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C5-PFPeA (S)	90	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C6-PFDA (S)	86	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C7-PFUdA (S)	87	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C8-PFOA (S)	89	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C8-PFOS (S)	95	%	50-200		1	04/30/25 07:50	04/30/25 20:49		
13C9-PFNA (S)	87	%	50-200		1	04/30/25 07:50	04/30/25 20:49		

Sample: 00003 Water Treatment Plant #6 **Lab ID: 35948716003** Collected: 04/10/25 09:25 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	04/25/25 04:17	05/03/25 11:32	7439-93-2	N2

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 00003 Plant #6 **Water Treatment** **Lab ID: 35948716003** Collected: 04/10/25 09:25 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 248.29 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0050	0.0017	1	04/12/25 18:13	04/15/25 02:45	763051-92-9	
4:2 FTS	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	757124-72-4	
6:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	04/12/25 18:13	04/15/25 02:45	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	04/12/25 18:13	04/15/25 02:45	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0020	0.0007	1	04/12/25 18:13	04/15/25 02:45	756426-58-1	
ADONA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0050	0.0017	1	04/12/25 18:13	04/15/25 02:45	13252-13-6	
NFDHA	**0.0067 U**	ug/L	0.020	0.0067	1	04/12/25 18:13	04/15/25 02:45	151772-58-6	
PFBS	**0.0026 I**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	375-73-5	
PFDA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	335-76-2	
PFHxA	**0.0014 I**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	307-24-4	
PFBA	**0.0017 U**	ug/L	0.0050	0.0017	1	04/12/25 18:13	04/15/25 02:45	375-22-4	
PFEESA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	113507-82-7	
PFHpS	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	375-92-8	
PFMBA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0040	0.0013	1	04/12/25 18:13	04/15/25 02:45	377-73-1	
PFPeA	**0.0020 I**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0040	0.0013	1	04/12/25 18:13	04/15/25 02:45	2706-91-4	
PFDoA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	307-55-1	
PFHpA	**0.0010 U**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	375-85-9	
PFHxS	**0.0013 I**	ug/L	0.0030	0.0010	1	04/12/25 18:13	04/15/25 02:45	355-46-4	
PFNA	**0.0013 U**	ug/L	0.0040	0.0013	1	04/12/25 18:13	04/15/25 02:45	375-95-1	
PFOS	**0.0018 I**	ug/L	0.0040	0.0013	1	04/12/25 18:13	04/15/25 02:45	1763-23-1	
PFOA	**0.0015 I**	ug/L	0.0040	0.0013	1	04/12/25 18:13	04/15/25 02:45	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0020	0.0007	1	04/12/25 18:13	04/15/25 02:45	2058-94-8	
Surrogates									
13C24:2FTS (S)	119	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C26:2FTS (S)	105	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C28:2FTS (S)	95	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C2-PFDoA (S)	71	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C3HFPO-DA(S)	91	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C3-PFBS (S)	97	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C3-PFHxS (S)	99	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C4-PFBA (S)	97	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C4-PFHpA (S)	91	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C5-PFHxA (S)	93	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C5-PFPeA (S)	93	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C6-PFDA (S)	67	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C7-PFUdA (S)	65	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C8-PFOA (S)	89	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C8-PFOS (S)	95	%	50-200		1	04/12/25 18:13	04/15/25 02:45		
13C9-PFNA (S)	78	%	50-200		1	04/12/25 18:13	04/15/25 02:45		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 00003 Water Treatment Plant #6 **Lab ID: 35948716003** Collected: 04/10/25 09:25 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 251.8 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0017 U**	ug/L	0.0060	0.0017	1	04/15/25 17:01	04/17/25 08:39	2991-50-6	
NMeFOSAA	**0.0020 U**	ug/L	0.0060	0.0020	1	04/15/25 17:01	04/17/25 08:39	2355-31-9	
PFTeDA	**0.0027 U**	ug/L	0.0079	0.0027	1	04/15/25 17:01	04/17/25 08:39	376-06-7	
PFTrDA	**0.0023 U**	ug/L	0.0069	0.0023	1	04/15/25 17:01	04/17/25 08:39	72629-94-8	
Surrogates									
13C2-PFDA (S)	108	%	70-130		1	04/15/25 17:01	04/17/25 08:39		
13C2-PFHxA (S)	108	%	70-130		1	04/15/25 17:01	04/17/25 08:39		
NEtFOSAA-d5 (S)	106	%	70-130		1	04/15/25 17:01	04/17/25 08:39		
HFPO-DAS (S)	103	%	70-130		1	04/15/25 17:01	04/17/25 08:39		

Sample: 32402867 Water Treatment Plant **Lab ID: 35948716005** Collected: 04/10/25 10:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	04/25/25 04:17	05/03/25 11:35	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 241.3 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0052	0.0017	1	04/12/25 18:13	04/15/25 03:01	763051-92-9	
4:2 FTS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	757124-72-4	
6:2 FTS	**0.0022 I**	ug/L	0.0052	0.0017	1	04/12/25 18:13	04/15/25 03:01	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0052	0.0017	1	04/12/25 18:13	04/15/25 03:01	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 03:01	756426-58-1	
ADONA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0052	0.0017	1	04/12/25 18:13	04/15/25 03:01	13252-13-6	
NFDHA	**0.0069 U**	ug/L	0.021	0.0069	1	04/12/25 18:13	04/15/25 03:01	151772-58-6	
PFBS	**0.0060**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	375-73-5	
PFDA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	335-76-2	
PFHxA	**0.0046**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	307-24-4	
PFBA	**0.0031 I**	ug/L	0.0052	0.0017	1	04/12/25 18:13	04/15/25 03:01	375-22-4	
PFEESA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	113507-82-7	
PFHpS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	375-92-8	
PFMBA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	863090-89-5	
PFMPA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:01	377-73-1	
PFPeA	**0.0080**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:01	2706-91-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 32402867 Water Treatment Plant **Lab ID: 35948716005** Collected: 04/10/25 10:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 241.3 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
PFDoA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	307-55-1	
PFHpA	**0.0020 I**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	375-85-9	
PFHxS	**0.0044**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:01	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:01	375-95-1	
PFOS	**0.0060**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:01	1763-23-1	
PFOA	**0.0054**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:01	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 03:01	2058-94-8	
Surrogates									
13C24:2FTS (S)	119	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C26:2FTS (S)	107	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C28:2FTS (S)	95	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C2-PFDoA (S)	61	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C3HFPO-DA(S)	89	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C3-PFBS (S)	98	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C3-PFHxS (S)	99	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C4-PFBA (S)	94	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C4-PFHpA (S)	89	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C5-PFHxA (S)	91	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C5-PFPeA (S)	89	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C6-PFDA (S)	71	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C7-PFUdA (S)	65	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C8-PFOA (S)	88	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C8-PFOS (S)	96	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
13C9-PFNA (S)	78	%	50-200		1	04/12/25 18:13	04/15/25 03:01		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 241.77 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0017 U**	ug/L	0.0062	0.0017	1	04/15/25 17:01	04/17/25 08:55	2991-50-6	
NMeFOSAA	**0.0021 U**	ug/L	0.0062	0.0021	1	04/15/25 17:01	04/17/25 08:55	2355-31-9	
PFTeDA	**0.0028 U**	ug/L	0.0083	0.0028	1	04/15/25 17:01	04/17/25 08:55	376-06-7	
PFTrDA	**0.0024 U**	ug/L	0.0072	0.0024	1	04/15/25 17:01	04/17/25 08:55	72629-94-8	
Surrogates									
13C2-PFDA (S)	106	%	70-130		1	04/15/25 17:01	04/17/25 08:55		
13C2-PFHxA (S)	108	%	70-130		1	04/15/25 17:01	04/17/25 08:55		
NEtFOSAA-d5 (S)	107	%	70-130		1	04/15/25 17:01	04/17/25 08:55		
HFPO-DAS (S)	101	%	70-130		1	04/15/25 17:01	04/17/25 08:55		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: FRB-32402867 Water Treatment P **Lab ID: 35948716006** Collected: 04/10/25 10:05 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 234.28 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/30/25 07:50	04/30/25 21:06	763051-92-9	
4:2 FTS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	757124-72-4	
6:2 FTS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/30/25 07:50	04/30/25 21:06	27619-97-2	
8:2 FTS	**0.0018 U**	ug/L	0.0053	0.0018	1	04/30/25 07:50	04/30/25 21:06	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0021	0.0007	1	04/30/25 07:50	04/30/25 21:06	756426-58-1	
ADONA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	919005-14-4	
HFPO-DA	**0.0018 U**	ug/L	0.0053	0.0018	1	04/30/25 07:50	04/30/25 21:06	13252-13-6	
NFDHA	**0.0071 U**	ug/L	0.021	0.0071	1	04/30/25 07:50	04/30/25 21:06	151772-58-6	
PFBS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	375-73-5	
PFDA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	335-76-2	
PFHxA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	307-24-4	
PFBA	**0.0018 U**	ug/L	0.0053	0.0018	1	04/30/25 07:50	04/30/25 21:06	375-22-4	
PFEESA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	113507-82-7	
PFHpS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	375-92-8	
PFMBA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	863090-89-5	
PFMPA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 21:06	377-73-1	
PFPeA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 21:06	2706-91-4	
PFDoA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	307-55-1	
PFHpA	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	375-85-9	
PFHxS	**0.0011 U**	ug/L	0.0032	0.0011	1	04/30/25 07:50	04/30/25 21:06	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 21:06	375-95-1	
PFOS	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 21:06	1763-23-1	
PFOA	**0.0014 U**	ug/L	0.0043	0.0014	1	04/30/25 07:50	04/30/25 21:06	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0021	0.0007	1	04/30/25 07:50	04/30/25 21:06	2058-94-8	
Surrogates									
13C24:2FTS (S)	82	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C26:2FTS (S)	82	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C28:2FTS (S)	81	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C2-PFDoA (S)	80	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C3HFPO-DA(S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C3-PFBS (S)	94	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C3-PFHxS (S)	91	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C4-PFBA (S)	82	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C4-PFHpA (S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C5-PFHxA (S)	83	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C5-PFPeA (S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C6-PFDA (S)	75	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C7-PFUdA (S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C8-PFOA (S)	83	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C8-PFOS (S)	92	%	50-200		1	04/30/25 07:50	04/30/25 21:06		
13C9-PFNA (S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:06		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 36402868 Water Treatment Plant **Lab ID: 35948716007** Collected: 04/10/25 08:40 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, UCMR	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Initial Volume/Weight: 50 mL Final Volume/Weight: 50 mL Pace Analytical Services - Ormond Beach								
Lithium	**7.5 U**	ug/L	22.5	7.5	2.5	04/25/25 04:17	05/03/25 11:37	7439-93-2	N2
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 242.93 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0051	0.0017	1	04/12/25 18:13	04/15/25 03:34	763051-92-9	
4:2 FTS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	757124-72-4	
6:2 FTS	**0.0017 U**	ug/L	0.0051	0.0017	1	04/12/25 18:13	04/15/25 03:34	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0051	0.0017	1	04/12/25 18:13	04/15/25 03:34	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 03:34	756426-58-1	
ADONA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0051	0.0017	1	04/12/25 18:13	04/15/25 03:34	13252-13-6	
NFDHA	**0.0069 U**	ug/L	0.021	0.0069	1	04/12/25 18:13	04/15/25 03:34	151772-58-6	
PFBS	**0.0050**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	375-73-5	
PFDA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	335-76-2	
PFHxA	**0.0046**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	307-24-4	
PFBA	**0.0033 I**	ug/L	0.0051	0.0017	1	04/12/25 18:13	04/15/25 03:34	375-22-4	
PFEESA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	113507-82-7	
PFHpS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	375-92-8	
PFMBA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	863090-89-5	
PFMPA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:34	377-73-1	
PFPeA	**0.0074**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:34	2706-91-4	
PFDoA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	307-55-1	
PFHpA	**0.0021 I**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	375-85-9	
PFHxS	**0.0067**	ug/L	0.0031	0.0010	1	04/12/25 18:13	04/15/25 03:34	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:34	375-95-1	
PFOS	**0.0086**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:34	1763-23-1	
PFOA	**0.0063**	ug/L	0.0041	0.0014	1	04/12/25 18:13	04/15/25 03:34	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0021	0.0007	1	04/12/25 18:13	04/15/25 03:34	2058-94-8	
Surrogates									
13C24:2FTS (S)	147	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C26:2FTS (S)	115	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C28:2FTS (S)	102	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C2-PFDoA (S)	74	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C3HFPO-DA(S)	90	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C3-PFBS (S)	96	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C3-PFHxS (S)	100	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C4-PFBA (S)	97	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C4-PFHpA (S)	91	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C5-PFHxA (S)	93	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C5-PFPeA (S)	90	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C6-PFDA (S)	70	%	50-200		1	04/12/25 18:13	04/15/25 03:34		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: 36402868 Water Treatment Plant **Lab ID: 35948716007** Collected: 04/10/25 08:40 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 242.93 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
Surrogates									
13C7-PFUdA (S)	68	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C8-PFOA (S)	93	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C8-PFOS (S)	97	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
13C9-PFNA (S)	84	%	50-200		1	04/12/25 18:13	04/15/25 03:34		
537.1 PFAS Compounds, UCMR	Analytical Method: EPA 537.1 Preparation Method: EPA 537.1 Initial Volume/Weight: 249.89 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
NEtFOSAA	**0.0017 U**	ug/L	0.0060	0.0017	1	04/15/25 17:01	04/17/25 08:07	2991-50-6	
NMeFOSAA	**0.0020 U**	ug/L	0.0060	0.0020	1	04/15/25 17:01	04/17/25 08:07	2355-31-9	
PFTeDA	**0.0027 U**	ug/L	0.0080	0.0027	1	04/15/25 17:01	04/17/25 08:07	376-06-7	
PFTrDA	**0.0024 U**	ug/L	0.0070	0.0024	1	04/15/25 17:01	04/17/25 08:07	72629-94-8	
Surrogates									
13C2-PFDA (S)	104	%	70-130		1	04/15/25 17:01	04/17/25 08:07		
13C2-PFHxA (S)	103	%	70-130		1	04/15/25 17:01	04/17/25 08:07		
NEtFOSAA-d5 (S)	103	%	70-130		1	04/15/25 17:01	04/17/25 08:07		
HFPO-DAS (S)	95	%	70-130		1	04/15/25 17:01	04/17/25 08:07		

Sample: FRB-36402868 Water Treatment P **Lab ID: 35948716008** Collected: 04/10/25 08:40 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 242.2 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0052	0.0017	1	04/30/25 07:50	04/30/25 21:23	763051-92-9	
4:2 FTS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	757124-72-4	
6:2 FTS	**0.0017 U**	ug/L	0.0052	0.0017	1	04/30/25 07:50	04/30/25 21:23	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0052	0.0017	1	04/30/25 07:50	04/30/25 21:23	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0021	0.0007	1	04/30/25 07:50	04/30/25 21:23	756426-58-1	
ADONA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0052	0.0017	1	04/30/25 07:50	04/30/25 21:23	13252-13-6	
NFDHA	**0.0069 U**	ug/L	0.021	0.0069	1	04/30/25 07:50	04/30/25 21:23	151772-58-6	
PFBS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	375-73-5	
PFDA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	335-76-2	
PFHxA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	307-24-4	
PFBA	**0.0017 U**	ug/L	0.0052	0.0017	1	04/30/25 07:50	04/30/25 21:23	375-22-4	
PFEESA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	113507-82-7	
PFHpS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	375-92-8	
PFMBA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	863090-89-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Sample: FRB-36402868 Water Treatment P **Lab ID: 35948716008** Collected: 04/10/25 08:40 Received: 04/11/25 15:21 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 242.2 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
PFMPA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/30/25 07:50	04/30/25 21:23	377-73-1	
PFPeA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	2706-90-3	
PFPeS	**0.0014 U**	ug/L	0.0041	0.0014	1	04/30/25 07:50	04/30/25 21:23	2706-91-4	
PFDoA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	307-55-1	
PFHpA	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	375-85-9	
PFHxS	**0.0010 U**	ug/L	0.0031	0.0010	1	04/30/25 07:50	04/30/25 21:23	355-46-4	
PFNA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/30/25 07:50	04/30/25 21:23	375-95-1	
PFOS	**0.0014 U**	ug/L	0.0041	0.0014	1	04/30/25 07:50	04/30/25 21:23	1763-23-1	
PFOA	**0.0014 U**	ug/L	0.0041	0.0014	1	04/30/25 07:50	04/30/25 21:23	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0021	0.0007	1	04/30/25 07:50	04/30/25 21:23	2058-94-8	
Surrogates									
13C24:2FTS (S)	85	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C26:2FTS (S)	85	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C28:2FTS (S)	82	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C2-PFDoA (S)	75	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C3HFPO-DA(S)	75	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C3-PFBS (S)	97	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C3-PFHxS (S)	95	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C4-PFBA (S)	83	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C4-PFHpA (S)	78	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C5-PFHxA (S)	84	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C5-PFPeA (S)	79	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C6-PFDA (S)	69	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C7-PFUdA (S)	72	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C8-PFOA (S)	81	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C8-PFOS (S)	90	%	50-200		1	04/30/25 07:50	04/30/25 21:23		
13C9-PFNA (S)	75	%	50-200		1	04/30/25 07:50	04/30/25 21:23		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

QC Batch: 1094090
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET Drinking Water
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

METHOD BLANK: 6001430 Matrix: Drinking Water
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lithium	ug/L	7.5 U	22.5	7.5	05/03/25 11:25	N2

LABORATORY CONTROL SAMPLE: 6001431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	ug/L	9	10.5 I	117	50-150	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6001432 6001433

Parameter	Units	35949615001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	7.5 U	9	9	12.1 I	11.5 I	104	97	0-200		30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

QC Batch: 1091173
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

METHOD BLANK: 5986061 Matrix: Drinking Water
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	04/14/25 22:20	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/14/25 22:20	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/14/25 22:20	
9Cl-PF3ONS	ug/L	0.0007 U	0.0020	0.0007	04/14/25 22:20	
ADONA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	04/14/25 22:20	
NFDHA	ug/L	0.0067 U	0.020	0.0067	04/14/25 22:20	
PFBA	ug/L	0.0017 U	0.0050	0.0017	04/14/25 22:20	
PFBS	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFDA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	04/14/25 22:20	
PFNA	ug/L	0.0013 U	0.0040	0.0013	04/14/25 22:20	
PFOA	ug/L	0.0013 U	0.0040	0.0013	04/14/25 22:20	
PFOS	ug/L	0.0013 U	0.0040	0.0013	04/14/25 22:20	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	04/14/25 22:20	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	04/14/25 22:20	
PFUnA	ug/L	0.0007 U	0.0020	0.0007	04/14/25 22:20	
13C2-PFDoA (S)	%	90	50-200		04/14/25 22:20	
13C24:2FTS (S)	%	109	50-200		04/14/25 22:20	
13C26:2FTS (S)	%	110	50-200		04/14/25 22:20	
13C28:2FTS (S)	%	102	50-200		04/14/25 22:20	
13C3-PFBS (S)	%	98	50-200		04/14/25 22:20	
13C3-PFHxS (S)	%	96	50-200		04/14/25 22:20	
13C3HFPO-DA(S)	%	90	50-200		04/14/25 22:20	
13C4-PFBA (S)	%	88	50-200		04/14/25 22:20	
13C4-PFHpA (S)	%	88	50-200		04/14/25 22:20	
13C5-PFHxA (S)	%	94	50-200		04/14/25 22:20	
13C5-PFPeA (S)	%	93	50-200		04/14/25 22:20	
13C6-PFDA (S)	%	91	50-200		04/14/25 22:20	
13C7-PFUdA (S)	%	93	50-200		04/14/25 22:20	
13C8-PFOA (S)	%	94	50-200		04/14/25 22:20	
13C8-PFOS (S)	%	98	50-200		04/14/25 22:20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

METHOD BLANK: 5986061 Matrix: Drinking Water
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	94	50-200		04/14/25 22:20	

LABORATORY CONTROL SAMPLE: 5986062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 I	89	50-150	
4:2 FTS	ug/L	0.0019	0.0018 I	96	50-150	
6:2 FTS	ug/L	0.0019	0.0019 I	100	50-150	
8:2 FTS	ug/L	0.0019	0.0018 I	93	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	93	50-150	
ADONA	ug/L	0.0019	0.0017 I	92	50-150	
HFPO-DA	ug/L	0.002	0.0021 I	107	50-150	
NFDHA	ug/L	0.02	0.020 I	98	50-150	
PFBA	ug/L	0.002	0.0020 I	99	50-150	
PFBS	ug/L	0.0018	0.0016 I	90	50-150	
PFDA	ug/L	0.002	0.0019 I	94	50-150	
PFDoA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0016 I	89	50-150	
PFHpA	ug/L	0.002	0.0019 I	94	50-150	
PFHpS	ug/L	0.0019	0.0019 I	99	50-150	
PFHxA	ug/L	0.002	0.0019 I	94	50-150	
PFHxS	ug/L	0.0018	0.0017 I	95	50-150	
PFMBA	ug/L	0.002	0.0018 I	92	50-150	
PFMPA	ug/L	0.002	0.0018 I	90	50-150	
PFNA	ug/L	0.002	0.0020 I	100	50-150	
PFOA	ug/L	0.002	0.0019 I	95	50-150	
PFOS	ug/L	0.0019	0.0017 I	92	50-150	
PFPeA	ug/L	0.002	0.0019 I	95	50-150	
PFPeS	ug/L	0.0019	0.0016 I	86	50-150	
PFUnA	ug/L	0.002	0.0019 I	93	50-150	
13C2-PFDoA (S)	%			94	50-200	
13C24:2FTS (S)	%			108	50-200	
13C26:2FTS (S)	%			117	50-200	
13C28:2FTS (S)	%			99	50-200	
13C3-PFBS (S)	%			106	50-200	
13C3-PFHxS (S)	%			105	50-200	
13C3HFPO-DA(S)	%			93	50-200	
13C4-PFBA (S)	%			93	50-200	
13C4-PFHpA (S)	%			94	50-200	
13C5-PFHxA (S)	%			95	50-200	
13C5-PFPeA (S)	%			96	50-200	
13C6-PFDA (S)	%			94	50-200	
13C7-PFUdA (S)	%			95	50-200	
13C8-PFOA (S)	%			100	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

LABORATORY CONTROL SAMPLE: 5986062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			102	50-200	
13C9-PFNA (S)	%			97	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986063 5986064

Parameter	Units	35947937003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0017 U			0.0017 U	0.0018 I					30	
4:2 FTS	ug/L	0.0010 U			0.0020 I	0.0019 I					30	
6:2 FTS	ug/L	0.0017 U			0.0019 I	0.0021 I					30	
8:2 FTS	ug/L	0.0017 U			0.0018 I	0.0021 I					30	
9Cl-PF3ONS	ug/L	0.0007 U			0.0017 I	0.0019 I					30	
ADONA	ug/L	0.0010 U			0.0018 I	0.0019 I					30	
HFPO-DA	ug/L	0.0017 U			0.0024 I	0.0022 I					30	
NFDHA	ug/L	0.0067 U			0.023	0.021				9	30	
PFBA	ug/L	0.0048 I			0.0061	0.0063				4	30	
PFBS	ug/L	0.0010 U			0.0020 I	0.0022 I					30	
PFDA	ug/L	0.0010 U			0.0020 I	0.0021 I					30	
PFDoA	ug/L	0.0010 U			0.0019 I	0.0020 I					30	
PFEESA	ug/L	0.0010 U			0.0016 I	0.0018 I					30	
PFHpA	ug/L	0.0010 U			0.0021 I	0.0024 I					30	
PFHpS	ug/L	0.0010 U			0.0018 I	0.0020 I					30	
PFHxA	ug/L	0.0040			0.0055	0.0057				3	30	
PFHxS	ug/L	0.0010 U			0.0018 I	0.0019 I					30	
PFMBA	ug/L	0.0010 U			0.0019 I	0.0020 I					30	
PFMPA	ug/L	0.0013 U			0.0019 I	0.0020 I					30	
PFNA	ug/L	0.0013 U			0.0021 I	0.0022 I					30	
PFOA	ug/L	0.0013 U			0.0020 I	0.0021 I					30	
PFOS	ug/L	0.0013 U			0.0018 I	0.0020 I					30	
PFPeA	ug/L	0.0089			0.010	0.010				3	30	
PFPeS	ug/L	0.0013 U			0.0018 I	0.0020 I					30	
PFUnA	ug/L	0.0007 U			0.0019 I	0.0021					30	
13C2-PFDoA (S)	%						71	70	50-200			
13C24:2FTS (S)	%						103	106	50-200			
13C26:2FTS (S)	%						107	108	50-200			
13C28:2FTS (S)	%						100	96	50-200			
13C3-PFBS (S)	%						103	102	50-200			
13C3-PFHxS (S)	%						103	101	50-200			
13C3HFPO-DA(S)	%						90	84	50-200			
13C4-PFBA (S)	%						94	86	50-200			
13C4-PFHpA (S)	%						88	81	50-200			
13C5-PFHxA (S)	%						93	87	50-200			
13C5-PFPeA (S)	%						96	88	50-200			
13C6-PFDA (S)	%						66	64	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986063 5986064

Parameter	Units	35947937003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C7-PFUdA (S)	%						64	65	50-200			
13C8-PFOA (S)	%						90	79	50-200			
13C8-PFOS (S)	%						103	99	50-200			
13C9-PFNA (S)	%						79	69	50-200			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986065 5986066

Parameter	Units	35947937005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0016 U	0.0018	0.0019	0.0017 I	0.0018 I	96	98	70-130		30	
4:2 FTS	ug/L	0.001 U	0.0018	0.0019	0.0018 I	0.0019 I	98	99	70-130		30	
6:2 FTS	ug/L	0.0016 U	0.0018	0.0019	0.0036 I	0.0029 I	189	144	70-130		30	J(M1)
8:2 FTS	ug/L	0.0016 U	0.0018	0.0019	0.0019 I	0.0018 I	103	95	70-130		30	
9Cl-PF3ONS	ug/L	0.0006 U	0.0018	0.0019	0.0016 I	0.0018 I	90	97	70-130		30	
ADONA	ug/L	0.001 U	0.0018	0.0019	0.0018 I	0.0019 I	100	100	70-130		30	
HFPO-DA	ug/L	0.0016 U	0.0019	0.002	0.0023 I	0.0024 I	114	115	70-130		30	
NFDHA	ug/L	0.0064 U	0.019	0.02	0.019	0.018 I	98	90	70-130		30	
PFBA	ug/L	0.0023 I	0.0019	0.002	0.0044 I	0.0044 I	109	108	70-130		30	
PFBS	ug/L	0.0017 I	0.0017	0.0018	0.0031	0.0032	83	86	70-130	4	30	
PFDA	ug/L	0.001 U	0.0019	0.002	0.0020 I	0.0021 I	102	101	70-130		30	
PFDoA	ug/L	0.001 U	0.0019	0.002	0.0018 I	0.0019 I	92	96	70-130		30	
PFEESA	ug/L	0.001 U	0.0017	0.0018	0.0016 I	0.0017 I	92	97	70-130		30	
PFHpA	ug/L	0.0012 I	0.0019	0.002	0.0031	0.0031	100	98	70-130	2	30	
PFHpS	ug/L	0.001 U	0.0018	0.0019	0.0019 I	0.0019 I	101	100	70-130		30	
PFHxA	ug/L	0.0028 I	0.0019	0.002	0.0046	0.0047	96	98	70-130	3	30	
PFHxS	ug/L	0.0011 I	0.0017	0.0018	0.0029	0.0029 I	105	99	70-130		30	
PFMBA	ug/L	0.001 U	0.0019	0.002	0.0019 I	0.0019 I	98	98	70-130		30	
PFMPA	ug/L	0.0013 U	0.0019	0.002	0.0018 I	0.0018 I	92	92	70-130		30	
PFNA	ug/L	0.0013 U	0.0019	0.002	0.0026 I	0.0029 I	106	111	70-130		30	
PFOA	ug/L	0.0034 I	0.0019	0.002	0.0054	0.0052	107	90	70-130	4	30	
PFOS	ug/L	0.0018 I	0.0018	0.0019	0.0034 I	0.0037 I	88	101	70-130		30	
PFPeA	ug/L	0.0024 I	0.0019	0.002	0.0041	0.0043	92	100	70-130	6	30	
PFPeS	ug/L	0.0013 U	0.0018	0.0019	0.0019 I	0.0019 I	99	94	70-130		30	
PFUnA	ug/L	0.0006 U	0.0019	0.002	0.0019	0.0019 I	99	95	70-130		30	
13C2-PFDoA (S)	%						75	82	50-200			
13C24:2FTS (S)	%						126	128	50-200			
13C26:2FTS (S)	%						110	112	50-200			
13C28:2FTS (S)	%						104	101	50-200			
13C3-PFBS (S)	%						99	98	50-200			
13C3-PFHxS (S)	%						103	102	50-200			
13C3HFPO-DA(S)	%						92	91	50-200			
13C4-PFBA (S)	%						99	97	50-200			
13C4-PFHpA (S)	%						94	92	50-200			
13C5-PFHxA (S)	%						96	92	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986065 5986066

Parameter	Units	35947937005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C5-PFPeA (S)	%						93	88	50-200			
13C6-PFDA (S)	%						72	79	50-200			
13C7-PFUdA (S)	%						69	79	50-200			
13C8-PFOA (S)	%						92	92	50-200			
13C8-PFOS (S)	%						103	99	50-200			
13C9-PFNA (S)	%						80	84	50-200			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986067 5986068

Parameter	Units	35948702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0015 U	0.0017	0.0017	0.0017 I	0.0017 I	99	99	70-130		30	
4:2 FTS	ug/L	0.0009 U	0.0017	0.0017	0.0019 I	0.0020 I	101	107	70-130		30	
6:2 FTS	ug/L	0.0015 U	0.0017	0.0017	0.0033 I	0.0019 I	149	71	70-130		30	J(M1)
8:2 FTS	ug/L	0.0015 U	0.0017	0.0017	0.0017 I	0.0018 I	101	104	70-130		30	
9Cl-PF3ONS	ug/L	0.0006 U	0.0017	0.0017	0.0016 I	0.0016 I	93	93	70-130		30	
ADONA	ug/L	0.0009 U	0.0017	0.0017	0.0017 I	0.0018 I	100	103	70-130		30	
HFPO-DA	ug/L	0.0015 U	0.0018	0.0018	0.0021 I	0.0021 I	107	103	70-130		30	
NFDHA	ug/L	0.0059 U	0.018	0.018	0.012 I	0.013 I	66	71	70-130		30	J(M1)
PFBA	ug/L	0.0033 I	0.0018	0.0018	0.0031 I	0.0052	-11	102	70-130		30	J(M1)
PFBS	ug/L	0.0013 I	0.0016	0.0016	0.0027	0.0028	87	91	70-130	3	30	
PFDA	ug/L	0.0009 U	0.0018	0.0018	0.0020 I	0.0020 I	105	102	70-130		30	
PFDoA	ug/L	0.0009 U	0.0018	0.0018	0.0018 I	0.0018 I	98	98	70-130		30	
PFEESA	ug/L	0.0009 U	0.0016	0.0016	0.0015 I	0.0016 I	96	95	70-130		30	
PFHpA	ug/L	0.0015 I	0.0018	0.0018	0.0033	0.0033	104	99	70-130	2	30	
PFHpS	ug/L	0.0009 U	0.0017	0.0017	0.0017 I	0.0018 I	99	100	70-130		30	
PFHxA	ug/L	0.0031	0.0018	0.0018	0.0049	0.0053	101	120	70-130	7	30	
PFHxS	ug/L	0.0009 U	0.0016	0.0016	0.0023 I	0.0024 I	98	107	70-130		30	
PFMBA	ug/L	0.0009 U	0.0018	0.0018	0.0020 I	0.0020 I	112	109	70-130		30	
PFMPA	ug/L	0.0012 U	0.0018	0.0018	0.0015 I	0.0016 I	85	88	70-130		30	
PFNA	ug/L	0.0012 U	0.0018	0.0018	0.0025 I	0.0025 I	106	105	70-130		30	
PFOA	ug/L	0.0052	0.0018	0.0018	0.0071	0.0074	109	123	70-130	4	30	
PFOS	ug/L	0.0017 I	0.0017	0.0017	0.0033 I	0.0031 I	94	82	70-130		30	
PFPeA	ug/L	0.0030	0.0018	0.0018	0.0049	0.0050	107	111	70-130	2	30	
PFPeS	ug/L	0.0012 U	0.0017	0.0017	0.0016 I	0.0017 I	81	85	70-130		30	
PFUnA	ug/L	0.0006 U	0.0018	0.0018	0.0019	0.0019	101	102	70-130	2	30	
13C2-PFDoA (S)	%						92	87	50-200			
13C24:2FTS (S)	%						191	181	50-200			
13C26:2FTS (S)	%						141	133	50-200			
13C28:2FTS (S)	%						113	108	50-200			
13C3-PFBS (S)	%						87	87	50-200			
13C3-PFHxS (S)	%						98	94	50-200			
13C3HFPO-DA(S)	%						79	78	50-200			
13C4-PFBA (S)	%						98	97	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5986067 5986068

Parameter	Units	35948702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C4-PFHpA (S)	%						88	85	50-200			
13C5-PFHxA (S)	%						81	83	50-200			
13C5-PFPeA (S)	%						69	71	50-200			
13C6-PFDA (S)	%						80	77	50-200			
13C7-PFUdA (S)	%						86	83	50-200			
13C8-PFOA (S)	%						86	83	50-200			
13C8-PFOS (S)	%						101	98	50-200			
13C9-PFNA (S)	%						77	74	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

QC Batch: 1095087
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35948716002, 35948716006, 35948716008

METHOD BLANK: 6006229
Matrix: Drinking Water
Associated Lab Samples: 35948716002, 35948716006, 35948716008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	04/30/25 15:18	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/30/25 15:18	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	04/30/25 15:18	
9Cl-PF3ONS	ug/L	0.0007 U	0.0020	0.0007	04/30/25 15:18	
ADONA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	04/30/25 15:18	
NFDHA	ug/L	0.0067 U	0.020	0.0067	04/30/25 15:18	
PFBA	ug/L	0.0017 U	0.0050	0.0017	04/30/25 15:18	
PFBS	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFDA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	04/30/25 15:18	
PFNA	ug/L	0.0013 U	0.0040	0.0013	04/30/25 15:18	
PFOA	ug/L	0.0013 U	0.0040	0.0013	04/30/25 15:18	
PFOS	ug/L	0.0013 U	0.0040	0.0013	04/30/25 15:18	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	04/30/25 15:18	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	04/30/25 15:18	
PFUnA	ug/L	0.0007 U	0.0020	0.0007	04/30/25 15:18	
13C2-PFDoA (S)	%	80	50-200		04/30/25 15:18	
13C24:2FTS (S)	%	87	50-200		04/30/25 15:18	
13C26:2FTS (S)	%	86	50-200		04/30/25 15:18	
13C28:2FTS (S)	%	87	50-200		04/30/25 15:18	
13C3-PFBS (S)	%	95	50-200		04/30/25 15:18	
13C3-PFHxS (S)	%	75	50-200		04/30/25 15:18	
13C3HFPO-DA(S)	%	85	50-200		04/30/25 15:18	
13C4-PFBA (S)	%	90	50-200		04/30/25 15:18	
13C4-PFHpA (S)	%	75	50-200		04/30/25 15:18	
13C5-PFHxA (S)	%	92	50-200		04/30/25 15:18	
13C5-PFPeA (S)	%	91	50-200		04/30/25 15:18	
13C6-PFDA (S)	%	81	50-200		04/30/25 15:18	
13C7-PFUdA (S)	%	82	50-200		04/30/25 15:18	
13C8-PFOA (S)	%	88	50-200		04/30/25 15:18	
13C8-PFOS (S)	%	91	50-200		04/30/25 15:18	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

METHOD BLANK: 6006229 Matrix: Drinking Water
Associated Lab Samples: 35948716002, 35948716006, 35948716008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	85	50-200		04/30/25 15:18	

LABORATORY CONTROL SAMPLE: 6006230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0017 I	88	50-150	
4:2 FTS	ug/L	0.0019	0.0018 I	96	50-150	
6:2 FTS	ug/L	0.0019	0.0027 I	142	50-150	
8:2 FTS	ug/L	0.0019	0.0017 I	88	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0017 I	88	50-150	
ADONA	ug/L	0.0019	0.0018 I	94	50-150	
HFPO-DA	ug/L	0.002	0.0020 I	101	50-150	
NFDHA	ug/L	0.02	0.021	105	50-150	
PFBA	ug/L	0.002	0.0018 I	90	50-150	
PFBS	ug/L	0.0018	0.0017 I	96	50-150	
PFDA	ug/L	0.002	0.0019 I	96	50-150	
PFDoA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0016 I	90	50-150	
PFHpA	ug/L	0.002	0.0019 I	96	50-150	
PFHpS	ug/L	0.0019	0.0018 I	94	50-150	
PFHxA	ug/L	0.002	0.0019 I	96	50-150	
PFHxS	ug/L	0.0018	0.0017 I	92	50-150	
PFMBA	ug/L	0.002	0.0019 I	93	50-150	
PFMPA	ug/L	0.002	0.0017 I	87	50-150	
PFNA	ug/L	0.002	0.0019 I	95	50-150	
PFOA	ug/L	0.002	0.0017 I	87	50-150	
PFOS	ug/L	0.0019	0.0018 I	95	50-150	
PFPeA	ug/L	0.002	0.0019 I	96	50-150	
PFPeS	ug/L	0.0019	0.0018 I	96	50-150	
PFUnA	ug/L	0.002	0.0019 I	93	50-150	
13C2-PFDoA (S)	%			91	50-200	
13C24:2FTS (S)	%			92	50-200	
13C26:2FTS (S)	%			103	50-200	
13C28:2FTS (S)	%			94	50-200	
13C3-PFBS (S)	%			101	50-200	
13C3-PFHxS (S)	%			99	50-200	
13C3HFPO-DA(S)	%			91	50-200	
13C4-PFBA (S)	%			97	50-200	
13C4-PFHpA (S)	%			93	50-200	
13C5-PFHxA (S)	%			98	50-200	
13C5-PFPeA (S)	%			96	50-200	
13C6-PFDA (S)	%			92	50-200	
13C7-PFUdA (S)	%			93	50-200	
13C8-PFOA (S)	%			97	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

LABORATORY CONTROL SAMPLE: 6006230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			99	50-200	
13C9-PFNA (S)	%			95	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

QC Batch: 1091754
QC Batch Method: EPA 537.1
Analysis Method: EPA 537.1
Analysis Description: 537.1 PFOA Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

METHOD BLANK: 5988674 Matrix: Water
Associated Lab Samples: 35948716001, 35948716003, 35948716005, 35948716007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
NEtFOSAA	ug/L	0.0017 U	0.0060	0.0017	04/17/25 06:32	
NMeFOSAA	ug/L	0.0020 U	0.0060	0.0020	04/17/25 06:32	
PFTeDA	ug/L	0.0027 U	0.0080	0.0027	04/17/25 06:32	
PFTrDA	ug/L	0.0024 U	0.0070	0.0024	04/17/25 06:32	
13C2-PFDA (S)	%	105	70-130		04/17/25 06:32	
13C2-PFHxA (S)	%	106	70-130		04/17/25 06:32	
HFPO-DAS (S)	%	105	70-130		04/17/25 06:32	
NEtFOSAA-d5 (S)	%	111	70-130		04/17/25 06:32	

LABORATORY CONTROL SAMPLE: 5988675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
NEtFOSAA	ug/L	0.005	0.0049 I	97	50-150	
NMeFOSAA	ug/L	0.006	0.0059 I	98	50-150	
PFTeDA	ug/L	0.008	0.0073 I	92	50-150	
PFTrDA	ug/L	0.007	0.0068 I	96	50-150	
13C2-PFDA (S)	%			105	70-130	
13C2-PFHxA (S)	%			109	70-130	
HFPO-DAS (S)	%			109	70-130	
NEtFOSAA-d5 (S)	%			108	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5988883 5988884

Parameter	Units	35948477001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
NEtFOSAA	ug/L	0.0016 U	0.036	0.036	0.033	0.036	92	98	70-130	9	30	
NMeFOSAA	ug/L	0.0019 U	0.043	0.044	0.042	0.046	98	105	70-130	9	30	
PFTeDA	ug/L	0.0025 U	0.057	0.058	0.057	0.060	101	103	70-130	4	30	
PFTrDA	ug/L	0.0022 U	0.05	0.051	0.051	0.052	101	103	70-130	4	30	
13C2-PFDA (S)	%						108	105	70-130			
13C2-PFHxA (S)	%						96	97	70-130			
HFPO-DAS (S)	%						88	88	70-130			
NEtFOSAA-d5 (S)	%						101	105	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE1_Apr2025_WTP 5,6,7,8
Pace Project No.: 35948716

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35948716001	36402863 Water Treatment Plant	EPA 200.7	1094090	EPA 200.7	1094221
35948716003	00003 Water Treatment Plant #6	EPA 200.7	1094090	EPA 200.7	1094221
35948716005	32402867 Water Treatment Plant	EPA 200.7	1094090	EPA 200.7	1094221
35948716007	36402868 Water Treatment Plant	EPA 200.7	1094090	EPA 200.7	1094221
35948716001	36402863 Water Treatment Plant	EPA 533	1091173	EPA 533	1091219
35948716002	FRB-36402863 Water Treatment P	EPA 533	1095087	EPA 533	1095219
35948716003	00003 Water Treatment Plant #6	EPA 533	1091173	EPA 533	1091219
35948716005	32402867 Water Treatment Plant	EPA 533	1091173	EPA 533	1091219
35948716006	FRB-32402867 Water Treatment P	EPA 533	1095087	EPA 533	1095219
35948716007	36402868 Water Treatment Plant	EPA 533	1091173	EPA 533	1091219
35948716008	FRB-36402868 Water Treatment P	EPA 533	1095087	EPA 533	1095219
35948716001	36402863 Water Treatment Plant	EPA 537.1	1091754	EPA 537.1	1092033
35948716003	00003 Water Treatment Plant #6	EPA 537.1	1091754	EPA 537.1	1092033
35948716005	32402867 Water Treatment Plant	EPA 537.1	1091754	EPA 537.1	1092033
35948716007	36402868 Water Treatment Plant	EPA 537.1	1091754	EPA 537.1	1092033

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 35948716

35948716

Company Name:	City of Deland - UCMR5	Contact/Report To:	Shawn Wahrenberger
Street Address:	1101 South Amelia Avenue Deland, FL 32724	Phone #:	(386)626-7254
		E-Mail:	wahrenbergers@deland.org
		Cc E-Mail:	
Customer Project #:			
Project Name:	UCMR5_SE1_Apr2025_WTP 5,6,7,8	Invoice To:	Accounts Payable
		Invoice E-Mail:	wahrenbergers@deland.org
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Florida

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other _____

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	~~Composite~~ Collected Start Date	~~Composite~~ Collected Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.7 MET ICP, UCMR	533 FRB	533 PFAS Compounds, UCMR	537.1 FRB	537.1 PFAS Compounds, UCMR
36402863Water Treatment Plant #5	DW	G	4/10/25	0905			9			X-1		X-4		X-4
FRB-36402863Water Treatment Plant #5	DW			0905			4				X-2		X-2	
00003Water Treatment Plant #6	DW			0925			6			X-1		X-3		X-2
FRB-00003Water Treatment Plant #6	DW			0925			4				X-2		X-2	
32402867Water Treatment Plant #7	DW			1005			6			X-1		X-3		X-2
FRB-32402867Water Treatment Plant #7	DW			1005			4				X-2		X-2	
36402868Water Treatment Plant #8	DW			0840			6			X-1		X-3		X-2
FRB-36402868Water Treatment Plant #8	DW	↓	↓	0840			4				X-2		X-2	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: DJ Kapadia
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3231675

Sample Comment

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By:
(Printed Name) Jenifer Romero
Signature: Jenifer Romero

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
				2.7	

Relinquished by/Company: (Signature)	Date/Time: 4/11/25 0951	Received by/Company: (Signature) iPace	Date/Time: 4/11/25 9:51	Tracking Number:	
Relinquished by/Company: (Signature) iPace	Date/Time: 4/11/25 15:21	Received by/Company: (Signature) CAS PACE	Date/Time: 4/11/25 1521	Delivered by: [ ] In- Person [ ] Courier	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1	

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

Sample Condition Upon Receipt (SCUR)

WO# : 35948716

PM: DNK **Due Date: 05/19/25**

CLIENT: CITDELUCMR3

Project #

Project Manager

Client:

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☑Pace ☐Other:

Tracking #

Custody Seal: ☐Yes ☑No **Seal intact:** ☐Yes ☐No **Ice:** ☑Yes ☐No

Packing Material: ☐Bubble Wrap ☐Bubble Bags ☑None ☐Other

			Comments
Chain of Custody Present	☑Yes	☐No	
Chain of Custody Completed	☑Yes	☐No	
Relinquished & Sampler Signature	☑Yes	☐No	
Samples Arrived within Hold Time	☑Yes	☐No	
Sufficient Volume	☑Yes	☐No	
Correct Containers Used	☑Yes	☐No	
Containers Intact	☑Yes	☐No	
Sample Labels match COC	☐Yes	☑No	Collection Times do not Match Chain
Samples received ≤48 hr from collection?	☑Yes	☐No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐Yes	☐No	
Person contacted for verification			

Temperature Verification

IR Gun ID: 409 **Initials:** GAS **Date:** 4/11/25 **Time:** 1540

CF (°C): 0.0

	Observed (°C)		Corrected (°C)		Comments
EPA 533	2.1	0.6	2.1	0.6	
EPA 537.1	2.7	1.0	2.7	1.0	

Preservation Verification

pH strip: HC457271 **pH meter:** SR-3

Free Cl Strip/DPD: 2502171 **Cl Meter:** SR-2

200.7 Lab Preserved: Nitric Acid: **Date/Time:** **Initials:**

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
36402863W	6.7	7.7	<2				
" 2/4	7.1	7.4			ND	ND	
" 3/4	7.2	7.4			ND	ND	
" 4/4	7.2	7.4			ND	ND	
FRB-36402863	7.0	7.5			ND	ND	
00003 Water	7.4	7.4	<2		ND	ND	
" 2/3	7.4	7.5			ND	ND	
" 3/3	7.4	—			ND	—	

*533 pH may be adjusted at the bench prior to extraction. ** ND = <0.1 mg/L

Labeled by: GAS **Reviewed by:** AES **Delivered by:** —

Preservation Verification Continued

Sample/Container ID	pH				Free Chlorine**		Comments
	533* (pH 6.0-)	537.1 (pH 6.0-8.0)	200.7 (pH <2)	200.7 Lab Preserved	533	537.1	
FRB-0000Water	6.9	7.5			ND	ND	
32 [illegible]867 water	7.3	7.5	<2		ND	ND	
"	7.3	7.5			ND	ND	
"	7.3	—			ND	ND	
FRB-3240 2867	7.2	7.5			ND	ND	
3640 2867 Wa	7.6	7.5	<2		ND	ND	
"	7.4	7.5			ND	ND	
"	7.4	—			ND	ND	
FRB-3640 2867	7.1	7.5			ND	ND	

*533 pH may be adjusted at the bench prior to extraction ** ND = <0.1 mg/L

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Shawn Wahrenberger
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 11/6/2025 8:29:12 AM

JOB DESCRIPTION

PFAS

JOB NUMBER

670-73383-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
11/6/2025 8:29:12 AM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 9
Surrogate Summary 21
Isotope Dilution Summary 22
QC Sample Results 23
QC Association Summary 32
Lab Chronicle 34
Certification Summary 36
Method Summary 38
Sample Summary 39
Chain of Custody 40
Receipt Checklists 42

Definitions/Glossary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Qualifiers

LCMS

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value; value may not be accurate.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-73383-1

Receipt
The samples were received on 10/24/2025 12:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9º C.

LCMS
Method 533: The recovery for the target analyte: 1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) in the method blank and laboratory control spike samples associated with the following samples: WTP#9 (670-73383-1), WTP#2 (670-73383-2), WTP#1 (670-73383-3), WTP#3 (670-73383-4), WTP#12 (670-73383-5) and WTP#4 (670-73383-6) is outside the QC acceptance limits. The following action was taken: The sample(s) was re-extracted within the required holding time and the recovery for the target analyte in the re-extracted method blank and laboratory control spike sample(s) is again outside the QC acceptance limits. The results reported is from the re-extraction of the sample(s).

Method 533: A field reagent blank was not submitted for the following samples: WTP#9 (670-73383-1), WTP#2 (670-73383-2), WTP#1 (670-73383-3), WTP#3 (670-73383-4), WTP#12 (670-73383-5) and WTP#4 (670-73383-6).

Method 537.1 DW: A field reagent blank was not submitted for the following samples: WTP#9 (670-73383-1), WTP#2 (670-73383-2), WTP#1 (670-73383-3), WTP#3 (670-73383-4), WTP#12 (670-73383-5) and WTP#4 (670-73383-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Client Sample ID: WTP#9 — Lab Sample ID: 670-73383-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	1.7	I	1.8	0.92	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA) - RE	1.9		1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	1.2	I	1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	1.2	I	1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	1.4	I	1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	1.8		1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	1.5	I	1.8	0.46	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	2.5		1.8	0.46	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.3	I V J	1.8	0.92	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.56	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	I	1.8	0.54	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: WTP#2 — Lab Sample ID: 670-73383-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	4.0		1.7	0.87	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA) - RE	5.0		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	3.7		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	2.3		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	3.3		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	4.2		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	3.6		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	6.3		1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS) - RE	0.60	I	1.7	0.44	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.6	I V J	1.7	0.87	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7	I	1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.0		1.9	0.57	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.9		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: WTP#1 — Lab Sample ID: 670-73383-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	4.3		1.8	0.88	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA) - RE	6.6		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	4.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	2.7		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	2.6		1.8	0.44	ng/L	1		EPA 533	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Client Sample ID: WTP#1 (Continued) — Lab Sample ID: 670-73383-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS) - RE	3.9		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	9.0		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	8.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS) - RE	1.7	I	1.8	0.44	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.5	I V J	1.8	0.88	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	4.3		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.2		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.4		1.7	0.51	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.3		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.0		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.5		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: WTP#3 — Lab Sample ID: 670-73383-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	2.5		1.8	0.88	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA) - RE	2.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	3.0		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	1.2	I	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	2.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	3.2		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	3.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	5.1		1.8	0.44	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.2	I V J	1.8	0.88	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.5		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	I	1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.5		1.9	0.57	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.4		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.6		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: WTP#12 — Lab Sample ID: 670-73383-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	1.2	I	1.8	0.91	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	0.46	I	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	0.72	I	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	1.2	I	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	1.0	I	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	1.8		1.8	0.45	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.3	I V J	1.8	0.91	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	0.81	I	1.8	0.53	ng/L	1		EPA 537.1 V2	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WTP#12 (Continued) — Lab Sample ID: 670-73383-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.95	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.95	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.7	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: WTP#4 — Lab Sample ID: 670-73383-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA) - RE	1.9		1.8	0.89	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA) - RE	2.5		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA) - RE	2.0		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA) - RE	1.6	I	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA) - RE	2.1		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS) - RE	2.5		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - RE	2.8		1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	4.0		1.8	0.44	ng/L	1		EPA 533	Total/NA
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS) - RE	1.3	I V J	1.8	0.89	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	1.7		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.84	I	1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.9		1.7	0.52	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA

This Detection Summary does not include radiochemical test results.

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Client Sample ID: WTP#9
Date Collected: 10/22/25 10:10
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-1
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.7**	**I**	1.8	0.92	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoropentanoic acid (PFPeA)	**1.9**		1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorohexanoic acid (PFHxA)	**1.2**	**I**	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoroheptanoic acid (PFHpA)	**1.2**	**I**	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorooctanoic acid (PFOA)	**1.4**	**I**	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorononanoic acid (PFNA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorodecanoic acid (PFDA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoroundecanoic acid (PFUnA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorododecanoic acid (PFDoA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorobutanesulfonic acid (PFBS)	**1.8**		1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorohexanesulfonic acid (PFHxS)	**1.5**	**I**	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoroheptanesulfonic acid (PFHpS)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluorooctanesulfonic acid (PFOS)	**2.5**		1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoropentanesulfonic acid (PFPeS)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.92	U	1.8	0.92	ng/L		11/04/25 16:20	11/05/25 18:02	1
11Cl-PF3OUdS	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.3**	**I V J**	1.8	0.92	ng/L		11/04/25 16:20	11/05/25 18:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.46	U	1.8	0.46	ng/L		11/04/25 16:20	11/05/25 18:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*81*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C4-PFBA	*89*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C3-PFBS	*86*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C5-PFPeA	*99*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C5-PFHxA	*82*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C4-PFHpA	*85*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C8-PFOA	*75*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C9-PFNA	*61*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C6-PFDA	*56*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C7-PFUnA	*61*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C2-PFDoA	*66*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*
13C8-PFOS	*88*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:02*	*1*

Client Sample ID: WTP#9

Date Collected: 10/22/25 10:10
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-1
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2 FTS	143		50 - 200	11/04/25 16:20	11/05/25 18:02	1
13C2-6:2 FTS	118		50 - 200	11/04/25 16:20	11/05/25 18:02	1
13C2-8:2 FTS	100		50 - 200	11/04/25 16:20	11/05/25 18:02	1
13C3-PFHxS	92		50 - 200	11/04/25 16:20	11/05/25 18:02	1

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**1.1**	**I**	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluoroheptanoic acid (PFHpA)	**0.56**	**I**	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorooctanoic acid (PFOA)	**1.3**	**I**	1.8	0.54	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorononanoic acid (PFNA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorodecanoic acid (PFDA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorotridecanoic acid (PFTrDA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorotetradecanoic acid (PFTeDA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorobutanesulfonic acid (PFBS)	**1.4**	**I**	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorohexanesulfonic acid (PFHxS)	**1.4**	**I**	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorooctanesulfonic acid (PFOS)	**2.2**		1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluoroundecanoic acid (PFUnA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Perfluorododecanoic acid (PFDoA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.81	U	1.8	0.81	ng/L		10/30/25 15:46	11/02/25 03:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.45	U	1.8	0.45	ng/L		10/30/25 15:46	11/02/25 03:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	108		70 - 130	10/30/25 15:46	11/02/25 03:15	1
13C2 PFHxA	92		70 - 130	10/30/25 15:46	11/02/25 03:15	1
13C3 HFPO-DA	94		70 - 130	10/30/25 15:46	11/02/25 03:15	1
d5-NEtFOSAA	100		70 - 130	10/30/25 15:46	11/02/25 03:15	1

Client Sample ID: WTP#2

Date Collected: 10/22/25 10:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-2
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.0**		1.7	0.87	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoropentanoic acid (PFPeA)	**5.0**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorohexanoic acid (PFHxA)	**3.7**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoroheptanoic acid (PFHpA)	**2.3**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorooctanoic acid (PFOA)	**3.3**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorononanoic acid (PFNA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1

Client Sample ID: WTP#2
Date Collected: 10/22/25 10:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-2
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorobutanesulfonic acid (PFBS)	**4.2**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorohexanesulfonic acid (PFHxS)	**3.6**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoroheptanesulfonic acid (PFHpS)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluorooctanesulfonic acid (PFOS)	**6.3**		1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoropentanesulfonic acid (PFPeS)	**0.60**	**I**	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.87	U	1.7	0.87	ng/L		11/04/25 16:20	11/05/25 18:14	1
11Cl-PF3OUdS	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.6**	**I V J**	1.7	0.87	ng/L		11/04/25 16:20	11/05/25 18:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.44	U	1.7	0.44	ng/L		11/04/25 16:20	11/05/25 18:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*90*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C4-PFBA	*94*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C3-PFBS	*91*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C5-PFPeA	*103*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C5-PFHxA	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C4-PFHpA	*92*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C8-PFOA	*81*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C9-PFNA	*72*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C6-PFDA	*68*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C7-PFUnA	*74*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C2-PFDoA	*75*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C8-PFOS	*90*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C2-4:2 FTS	*148*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C2-6:2 FTS	*119*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C2-8:2 FTS	*100*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*
13C3-PFHxS	*97*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:14*	*1*

Client Sample ID: WTP#2

Date Collected: 10/22/25 10:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-2
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.0**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluoroheptanoic acid (PFHpA)	**1.7**	**I**	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorooctanoic acid (PFOA)	**3.0**		1.9	0.57	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorononanoic acid (PFNA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorodecanoic acid (PFDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorotridecanoic acid (PFTrDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorotetradecanoic acid (PFTeDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorobutanesulfonic acid (PFBS)	**3.5**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorohexanesulfonic acid (PFHxS)	**3.1**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorooctanesulfonic acid (PFOS)	**5.9**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluoroundecanoic acid (PFUnA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Perfluorododecanoic acid (PFDoA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.85	U	1.9	0.85	ng/L		10/30/25 15:46	11/02/25 03:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*107*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:29*	*1*
13C2 PFHxA	*90*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:29*	*1*
13C3 HFPO-DA	*95*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:29*	*1*
d5-NEtFOSAA	*108*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:29*	*1*

Client Sample ID: WTP#1

Date Collected: 10/22/25 10:45
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-3
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.3**		1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoropentanoic acid (PFPeA)	**6.6**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorohexanoic acid (PFHxA)	**4.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoroheptanoic acid (PFHpA)	**2.7**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorooctanoic acid (PFOA)	**2.6**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorobutanesulfonic acid (PFBS)	**3.9**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorohexanesulfonic acid (PFHxS)	**9.0**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1

Client Sample ID: WTP#1
Date Collected: 10/22/25 10:45
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-3
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluorooctanesulfonic acid (PFOS)	**8.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoropentanesulfonic acid (PFPeS)	**1.7**	**I**	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.88	U	1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:38	1
11Cl-PF3OUdS	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.5**	**I V J**	1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*85*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C4-PFBA	*90*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C3-PFBS	*91*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C5-PFPeA	*99*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C5-PFHxA	*85*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C4-PFHpA	*85*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C8-PFOA	*74*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C9-PFNA	*61*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C6-PFDA	*56*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C7-PFUnA	*65*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C2-PFDoA	*67*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C8-PFOS	*89*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C2-4:2 FTS	*144*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C2-6:2 FTS	*114*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C2-8:2 FTS	*102*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*
13C3-PFHxS	*94*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:38*	*1*

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**4.3**		1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluoroheptanoic acid (PFHpA)	**2.2**		1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorooctanoic acid (PFOA)	**2.4**		1.7	0.51	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorononanoic acid (PFNA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorodecanoic acid (PFDA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorotridecanoic acid (PFTrDA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1

Client Sample ID: WTP#1

Date Collected: 10/22/25 10:45
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-3
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorobutanesulfonic acid (PFBS)	**3.3**		1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorohexanesulfonic acid (PFHxS)	**8.0**		1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorooctanesulfonic acid (PFOS)	**8.5**		1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluoroundecanoic acid (PFUnA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Perfluorododecanoic acid (PFDoA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.77	U	1.7	0.77	ng/L		10/30/25 15:46	11/02/25 03:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.43	U	1.7	0.43	ng/L		10/30/25 15:46	11/02/25 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*107*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:56*	*1*
13C2 PFHxA	*96*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:56*	*1*
13C3 HFPO-DA	*100*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:56*	*1*
d5-NEtFOSAA	*109*		*70 - 130*	*10/30/25 15:46*	*11/02/25 03:56*	*1*

Client Sample ID: WTP#3

Date Collected: 10/22/25 11:00
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-4
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.5**		1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoropentanoic acid (PFPeA)	**2.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorohexanoic acid (PFHxA)	**3.0**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoroheptanoic acid (PFHpA)	**1.2**	**I**	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorooctanoic acid (PFOA)	**2.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorobutanesulfonic acid (PFBS)	**3.2**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorohexanesulfonic acid (PFHxS)	**3.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoroheptanesulfonic acid (PFHpS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluorooctanesulfonic acid (PFOS)	**5.1**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoropentanesulfonic acid (PFPeS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1

Client Sample ID: WTP#3
Date Collected: 10/22/25 11:00
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-4
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.88	U	1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:51	1
11Cl-PF3OUdS	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.2**	**I V J**	1.8	0.88	ng/L		11/04/25 16:20	11/05/25 18:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 18:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*83*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C4-PFBA	*93*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C3-PFBS	*88*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C5-PFPeA	*107*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C5-PFHxA	*83*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C4-PFHpA	*88*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C8-PFOA	*78*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C9-PFNA	*66*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C6-PFDA	*62*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C7-PFUnA	*66*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C2-PFDoA	*67*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C8-PFOS	*89*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C2-4:2 FTS	*156*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C2-6:2 FTS	*124*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C2-8:2 FTS	*100*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*
13C3-PFHxS	*94*		*50 - 200*	*11/04/25 16:20*	*11/05/25 18:51*	*1*

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**2.5**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluoroheptanoic acid (PFHpA)	**1.1**	**I**	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorooctanoic acid (PFOA)	**2.5**		1.9	0.57	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorononanoic acid (PFNA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorodecanoic acid (PFDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorotridecanoic acid (PFTrDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorotetradecanoic acid (PFTeDA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorobutanesulfonic acid (PFBS)	**2.4**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1

Client Sample ID: WTP#3

Date Collected: 10/22/25 11:00
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-4
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**4.6**		1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluoroundecanoic acid (PFUnA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Perfluorododecanoic acid (PFDoA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.85	U	1.9	0.85	ng/L		10/30/25 15:46	11/02/25 04:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		10/30/25 15:46	11/02/25 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*110*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:09*	*1*
13C2 PFHxA	*92*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:09*	*1*
13C3 HFPO-DA	*93*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:09*	*1*
d5-NEtFOSAA	*97*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:09*	*1*

Client Sample ID: WTP#12

Date Collected: 10/22/25 11:15
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-5
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.2**	**I**	1.8	0.91	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoropentanoic acid (PFPeA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorohexanoic acid (PFHxA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoroheptanoic acid (PFHpA)	**0.46**	**I**	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorooctanoic acid (PFOA)	**0.72**	**I**	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorononanoic acid (PFNA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorodecanoic acid (PFDA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoroundecanoic acid (PFUnA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorododecanoic acid (PFDoA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorobutanesulfonic acid (PFBS)	**1.2**	**I**	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorohexanesulfonic acid (PFHxS)	**1.0**	**I**	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoroheptanesulfonic acid (PFHpS)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluorooctanesulfonic acid (PFOS)	**1.8**		1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoropentanesulfonic acid (PFPeS)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.91	U	1.8	0.91	ng/L		11/04/25 16:20	11/05/25 19:03	1
11Cl-PF3OUdS	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1

Client Sample ID: WTP#12
Date Collected: 10/22/25 11:15
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-5
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.3**	**I V J**	1.8	0.91	ng/L		11/04/25 16:20	11/05/25 19:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.45	U	1.8	0.45	ng/L		11/04/25 16:20	11/05/25 19:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C4-PFBA	*92*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C3-PFBS	*91*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C5-PFPeA	*99*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C5-PFHxA	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C4-PFHpA	*88*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C8-PFOA	*84*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C9-PFNA	*83*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C6-PFDA	*80*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C7-PFUnA	*81*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C2-PFDoA	*78*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C8-PFOS	*91*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C2-4:2 FTS	*144*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C2-6:2 FTS	*114*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C2-8:2 FTS	*101*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*
13C3-PFHxS	*93*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:03*	*1*

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluoroheptanoic acid (PFHpA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorooctanoic acid (PFOA)	**0.81**	**I**	1.8	0.53	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorotridecanoic acid (PFTrDA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorotetradecanoic acid (PFTeDA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorobutanesulfonic acid (PFBS)	**0.95**	**I**	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorohexanesulfonic acid (PFHxS)	**0.95**	**I**	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorooctanesulfonic acid (PFOS)	**1.7**	**I**	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1

Client Sample ID: WTP#12

Date Collected: 10/22/25 11:15
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-5
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.80	U	1.8	0.80	ng/L		10/30/25 15:46	11/02/25 04:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		10/30/25 15:46	11/02/25 04:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*91*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:23*	*1*
13C2 PFHxA	*81*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:23*	*1*
13C3 HFPO-DA	*85*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:23*	*1*
d5-NEtFOSAA	*84*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:23*	*1*

Client Sample ID: WTP#4

Date Collected: 10/22/25 11:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-6
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.9**		1.8	0.89	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoropentanoic acid (PFPeA)	**2.5**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorohexanoic acid (PFHxA)	**2.0**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoroheptanoic acid (PFHpA)	**1.6**	**I**	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorooctanoic acid (PFOA)	**2.1**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorobutanesulfonic acid (PFBS)	**2.5**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorohexanesulfonic acid (PFHxS)	**2.8**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoroheptanesulfonic acid (PFHpS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluorooctanesulfonic acid (PFOS)	**4.0**		1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoropentanesulfonic acid (PFPeS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	0.89	U	1.8	0.89	ng/L		11/04/25 16:20	11/05/25 19:14	1
11Cl-PF3OUdS	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	**1.3**	**I V J**	1.8	0.89	ng/L		11/04/25 16:20	11/05/25 19:14	1

Client Sample ID: WTP#4
Date Collected: 10/22/25 11:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-6
Matrix: Drinking Water

Method: EPA 533 - EPA 533 Nov 2019 - RE (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.44	U	1.8	0.44	ng/L		11/04/25 16:20	11/05/25 19:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C4-PFBA	*90*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C3-PFBS	*89*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C5-PFPeA	*97*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C5-PFHxA	*84*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C4-PFHpA	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C8-PFOA	*79*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C9-PFNA	*74*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C6-PFDA	*73*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C7-PFUnA	*75*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C2-PFDoA	*77*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C8-PFOS	*89*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C2-4:2 FTS	*141*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C2-6:2 FTS	*118*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C2-8:2 FTS	*101*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*
13C3-PFHxS	*92*		*50 - 200*	*11/04/25 16:20*	*11/05/25 19:14*	*1*

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**1.7**		1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluoroheptanoic acid (PFHpA)	**0.84**	**I**	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorooctanoic acid (PFOA)	**1.9**		1.7	0.52	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorononanoic acid (PFNA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorotridecanoic acid (PFTrDA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorotetradecanoic acid (PFTeDA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorobutanesulfonic acid (PFBS)	**2.1**		1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorohexanesulfonic acid (PFHxS)	**2.4**		1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorooctanesulfonic acid (PFOS)	**3.7**		1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.78	U	1.7	0.78	ng/L		10/30/25 15:46	11/02/25 04:36	1

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Client Sample ID: WTP#4
Date Collected: 10/22/25 11:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-6
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.7	0.44	ng/L		10/30/25 15:46	11/02/25 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*105*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:36*	*1*
13C2 PFHxA	*91*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:36*	*1*
13C3 HFPO-DA	*96*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:36*	*1*
d5-NEtFOSAA	*93*		*70 - 130*	*10/30/25 15:46*	*11/02/25 04:36*	*1*

Surrogate Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	PFDA (70-130)	PFHxA (70-130)	HFPODA (70-130)	d5NEFOS (70-130)
670-73383-1	WTP#9	108	92	94	100
670-73383-2	WTP#2	107	90	95	108
670-73383-3	WTP#1	107	96	100	109
670-73383-4	WTP#3	110	92	93	97
670-73383-5	WTP#12	91	81	85	84
670-73383-6	WTP#4	105	91	96	93
LCS 410-722312/16-A	Lab Control Sample	104	97	102	104
LCSD 410-722312/17-A	Lab Control Sample Dup	106	97	101	86
LLCS 410-722312/18-A	Lab Control Sample	99	102	103	95
MB 410-722312/15-A	Method Blank	101	92	98	103

Surrogate Legend

PFDA = 13C2 PFDA
PFHxA = 13C2 PFHxA
HFPODA = 13C3 HFPO-DA
d5NEFOS = d5-NEtFOSAA

Isotope Dilution Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Method: EPA 533 - EPA 533 Nov 2019

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
670-73383-1 - RE	WTP#9	81	89	86	99	82	85	75	61
670-73383-2 - RE	WTP#2	90	94	91	103	87	92	81	72
670-73383-3 - RE	WTP#1	85	90	91	99	85	85	74	61
670-73383-4 - RE	WTP#3	83	93	88	107	83	88	78	66
670-73383-5 - RE	WTP#12	87	92	91	99	87	88	84	83
670-73383-6 - RE	WTP#4	87	90	89	97	84	87	79	74
LCS 410-724590/12-A	Lab Control Sample	84	79	89	78	83	86	84	83
LCSD 410-724590/13-A	Lab Control Sample Dup	66	52	90	58	65	68	64	57
LLCS 410-724590/14-A	Lab Control Sample	87	87	88	88	88	92	90	88
MB 410-724590/11-A	Method Blank	70	59	83	63	69	73	67	62

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	M242FTS (50-200)	M262FTS (50-200)	M282FTS (50-200)	C3PFHS (50-200)
670-73383-1 - RE	WTP#9	56	61	66	88	143	118	100	92
670-73383-2 - RE	WTP#2	68	74	75	90	148	119	100	97
670-73383-3 - RE	WTP#1	56	65	67	89	144	114	102	94
670-73383-4 - RE	WTP#3	62	66	67	89	156	124	100	94
670-73383-5 - RE	WTP#12	80	81	78	91	144	114	101	93
670-73383-6 - RE	WTP#4	73	75	77	89	141	118	101	92
LCS 410-724590/12-A	Lab Control Sample	83	81	81	92	116	109	103	98
LCSD 410-724590/13-A	Lab Control Sample Dup	55	64	71	91	112	103	97	93
LLCS 410-724590/14-A	Lab Control Sample	84	82	82	90	112	102	95	95
MB 410-724590/11-A	Method Blank	59	67	70	87	112	99	94	89

Surrogate Legend

HFPODA = 13C3-HFPO-DA
PFBA = 13C4-PFBA
C3PFBS = 13C3-PFBS
PFPeA = 13C5-PFPeA
13C5PHA = 13C5-PFHxA
C4PFHA = 13C4-PFHpA
C8PFOA = 13C8-PFOA
C9PFNA = 13C9-PFNA
C6PFDA = 13C6-PFDA
13C7PUA = 13C7-PFUnA
PFDoA = 13C2-PFDoA
C8PFOS = 13C8-PFOS
M242FTS = 13C2-4:2 FTS
M262FTS = 13C2-6:2 FTS
M282FTS = 13C2-8:2 FTS
C3PFHS = 13C3-PFHxS

Method: EPA 533 - EPA 533 Nov 2019

Lab Sample ID: MB 410-724590/11-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 724590

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.0	U	2.0	1.0	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoropentanoic acid (PFPeA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorohexanoic acid (PFHxA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoroheptanoic acid (PFHpA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorooctanoic acid (PFOA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorononanoic acid (PFNA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorodecanoic acid (PFDA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoroundecanoic acid (PFUnA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorododecanoic acid (PFDoA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorobutanesulfonic acid (PFBS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorohexanesulfonic acid (PFHxS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoroheptanesulfonic acid (PFHpS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoropentanesulfonic acid (PFPeS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	1.0	U	2.0	1.0	ng/L		11/04/25 16:20	11/05/25 16:30	1
11Cl-PF3OUdS	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	1.65	I	2.0	1.0	ng/L		11/04/25 16:20	11/05/25 16:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.50	U	2.0	0.50	ng/L		11/04/25 16:20	11/05/25 16:30	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-HFPO-DA	*70*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C4-PFBA	*59*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C3-PFBS	*83*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C5-PFPeA	*63*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C5-PFHxA	*69*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C4-PFHpA	*73*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C8-PFOA	*67*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C9-PFNA	*62*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C6-PFDA	*59*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C7-PFUnA	*67*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C2-PFDoA	*70*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*
13C8-PFOS	*87*		*50 - 200*	*11/04/25 16:20*	*11/05/25 16:30*	*1*

Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Lab Sample ID: MB 410-724590/11-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 724590

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2 FTS	112		50 - 200	11/04/25 16:20	11/05/25 16:30	1
13C2-6:2 FTS	99		50 - 200	11/04/25 16:20	11/05/25 16:30	1
13C2-8:2 FTS	94		50 - 200	11/04/25 16:20	11/05/25 16:30	1
13C3-PFHxS	89		50 - 200	11/04/25 16:20	11/05/25 16:30	1

Lab Sample ID: LCS 410-724590/12-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 724590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	10.0	10.4		ng/L		104	70 - 130
Perfluoropentanoic acid (PFPeA)	10.0	10.3		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	10.0	10.4		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	10.0	10.2		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	10.0	10.4		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	10.0	10.0		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	10.0	9.81		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	10.0	10.0		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	10.0	10.2		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.85	9.06		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	9.13	9.26		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	9.54	9.89		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	9.26	9.35		ng/L		101	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	9.40	9.09		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	9.35	9.83		ng/L		105	70 - 130
Hexafluoropropylene oxide dimer acid (HFPO DA)	10.0	10.0		ng/L		100	70 - 130
11Cl-PF3OUdS	9.45	9.14		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	9.08		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.38	10.3		ng/L		110	70 - 130
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	9.52	11.3	V	ng/L		119	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.60	9.88		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	9.72		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	9.90		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	10.1		ng/L		101	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	8.92	9.80		ng/L		110	70 - 130

Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3-HFPO-DA	84		50 - 200
13C4-PFBA	79		50 - 200
13C3-PFBS	89		50 - 200
13C5-PFPeA	78		50 - 200
13C5-PFHxA	83		50 - 200
13C4-PFHpA	86		50 - 200
13C8-PFOA	84		50 - 200
13C9-PFNA	83		50 - 200
13C6-PFDA	83		50 - 200
13C7-PFUnA	81		50 - 200
13C2-PFDoA	81		50 - 200
13C8-PFOS	92		50 - 200
13C2-4:2 FTS	116		50 - 200
13C2-6:2 FTS	109		50 - 200
13C2-8:2 FTS	103		50 - 200
13C3-PFHxS	98		50 - 200

Lab Sample ID: LCSD 410-724590/13-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 724590

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			10.0	10.6		ng/L		106	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)			10.0	10.3		ng/L		103	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)			10.0	10.4		ng/L		104	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)			10.0	10.5		ng/L		105	70 - 130	3	30
Perfluorooctanoic acid (PFOA)			10.0	10.3		ng/L		103	70 - 130	0	30
Perfluorononanoic acid (PFNA)			10.0	10.4		ng/L		104	70 - 130	3	30
Perfluorodecanoic acid (PFDA)			10.0	10.1		ng/L		101	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)			10.0	10.1		ng/L		101	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)			10.0	10.5		ng/L		105	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)			8.85	8.92		ng/L		101	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)			9.13	9.52		ng/L		104	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)			9.54	9.78		ng/L		102	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)			9.26	9.74		ng/L		105	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)			9.40	9.23		ng/L		98	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			9.35	9.63		ng/L		103	70 - 130	2	30
Hexafluoropropylene oxide dimer acid (HFPO DA)			10.0	10.5		ng/L		105	70 - 130	4	30
11Cl-PF3OUdS			9.45	9.42		ng/L		100	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			9.45	8.88		ng/L		94	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			9.38	9.83		ng/L		105	70 - 130	5	30
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)			9.52	11.2	V	ng/L		117	70 - 130	1	30

Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Lab Sample ID: LCSD 410-724590/13-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 724590

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.60	9.98		ng/L		104	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	9.45		ng/L		95	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	10.1		ng/L		101	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	10.3		ng/L		103	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	8.92	10.1		ng/L		113	70 - 130	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3-HFPO-DA	*66*		*50 - 200*
13C4-PFBA	*52*		*50 - 200*
13C3-PFBS	*90*		*50 - 200*
13C5-PFPeA	*58*		*50 - 200*
13C5-PFHxA	*65*		*50 - 200*
13C4-PFHpA	*68*		*50 - 200*
13C8-PFOA	*64*		*50 - 200*
13C9-PFNA	*57*		*50 - 200*
13C6-PFDA	*55*		*50 - 200*
13C7-PFUnA	*64*		*50 - 200*
13C2-PFDoA	*71*		*50 - 200*
13C8-PFOS	*91*		*50 - 200*
13C2-4:2 FTS	*112*		*50 - 200*
13C2-6:2 FTS	*103*		*50 - 200*
13C2-8:2 FTS	*97*		*50 - 200*
13C3-PFHxS	*93*		*50 - 200*

Lab Sample ID: LLCS 410-724590/14-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 724590

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	2.00	2.52		ng/L		126	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.31		ng/L		116	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.37		ng/L		119	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.24		ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.39		ng/L		119	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.34		ng/L		117	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.34		ng/L		117	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.34		ng/L		117	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.37		ng/L		119	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	2.04		ng/L		115	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.08		ng/L		114	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	2.23		ng/L		117	50 - 150

Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Lab Sample ID: LLCS 410-724590/14-A
Matrix: Drinking Water
Analysis Batch: 725212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 724590

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	1.85	2.27		ng/L		122	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	2.07		ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.87	2.13		ng/L		114	50 - 150
Hexafluoropropylene oxide dimer acid (HFPO DA)	2.00	2.35		ng/L		118	50 - 150
11Cl-PF3OUdS	1.89	2.10		ng/L		111	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.04		ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	2.28		ng/L		121	50 - 150
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	1.90	3.64	V J	ng/L		191	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	2.28		ng/L		118	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.28		ng/L		114	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.24		ng/L		112	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.20		ng/L		110	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.78	2.20		ng/L		123	50 - 150

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3-HFPO-DA	*87*		*50 - 200*
13C4-PFBA	*87*		*50 - 200*
13C3-PFBS	*88*		*50 - 200*
13C5-PFPeA	*88*		*50 - 200*
13C5-PFHxA	*88*		*50 - 200*
13C4-PFHpA	*92*		*50 - 200*
13C8-PFOA	*90*		*50 - 200*
13C9-PFNA	*88*		*50 - 200*
13C6-PFDA	*84*		*50 - 200*
13C7-PFUnA	*82*		*50 - 200*
13C2-PFDoA	*82*		*50 - 200*
13C8-PFOS	*90*		*50 - 200*
13C2-4:2 FTS	*112*		*50 - 200*
13C2-6:2 FTS	*102*		*50 - 200*
13C2-8:2 FTS	*95*		*50 - 200*
13C3-PFHxS	*95*		*50 - 200*

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Lab Sample ID: MB 410-722312/15-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 722312

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluoroheptanoic acid (PFHpA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorooctanoic acid (PFOA)	0.60	U	2.0	0.60	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorononanoic acid (PFNA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorodecanoic acid (PFDA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorotridecanoic acid (PFTrDA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorotetradecanoic acid (PFTeDA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorobutanesulfonic acid (PFBS)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluoroundecanoic acid (PFUnA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Perfluorododecanoic acid (PFDoA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.90	U	2.0	0.90	ng/L		10/30/25 15:46	11/01/25 19:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		10/30/25 15:46	11/01/25 19:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*101*		*70 - 130*	*10/30/25 15:46*	*11/01/25 19:15*	*1*
13C2 PFHxA	*92*		*70 - 130*	*10/30/25 15:46*	*11/01/25 19:15*	*1*
13C3 HFPO-DA	*98*		*70 - 130*	*10/30/25 15:46*	*11/01/25 19:15*	*1*
d5-NEtFOSAA	*103*		*70 - 130*	*10/30/25 15:46*	*11/01/25 19:15*	*1*

Lab Sample ID: LCS 410-722312/16-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 722312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	60.0	57.7		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.0	59.8		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	60.0	57.4		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	60.0	60.1		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	60.0	59.5		ng/L		99	70 - 130
Perfluorotridecanoic acid (PFTrDA)	60.0	52.6		ng/L		88	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	60.0	50.8		ng/L		85	70 - 130
Perfluorobutanesulfonic acid (PFBS)	53.1	47.3		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	54.8	54.9		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	55.6	55.1		ng/L		99	70 - 130

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LCS 410-722312/16-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 722312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	60.0	59.3		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	60.0	54.8		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.0	54.0		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	60.0	54.3		ng/L		91	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	60.0	60.6		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	56.1	58.6		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	56.7	52.8		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	56.7	55.2		ng/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFDA	*104*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C3 HFPO-DA	*102*		*70 - 130*
d5-NEtFOSAA	*104*		*70 - 130*

Lab Sample ID: LCSD 410-722312/17-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 722312

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	60.0	59.0		ng/L		98	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	60.0	58.5		ng/L		98	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	60.0	57.7		ng/L		96	70 - 130	0	30
Perfluorononanoic acid (PFNA)	60.0	59.7		ng/L		99	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	60.0	56.1		ng/L		94	70 - 130	6	30
Perfluorotridecanoic acid (PFTrDA)	60.0	53.7		ng/L		89	70 - 130	2	30
Perfluorotetradecanoic acid (PFTeDA)	60.0	51.3		ng/L		86	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	53.1	53.7		ng/L		101	70 - 130	13	30
Perfluorohexanesulfonic acid (PFHxS)	54.8	56.3		ng/L		103	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	55.6	55.3		ng/L		100	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	60.0	49.2		ng/L		82	70 - 130	19	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	60.0	50.8		ng/L		85	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)	60.0	52.3		ng/L		87	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	60.0	54.6		ng/L		91	70 - 130	0	30

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LCSD 410-722312/17-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 722312

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	60.0	60.6		ng/L		101	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	56.1	57.5		ng/L		103	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	56.7	50.0		ng/L		88	70 - 130	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	56.7	55.1		ng/L		97	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C2 PFDA	*106*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C3 HFPO-DA	*101*		*70 - 130*
d5-NEtFOSAA	*86*		*70 - 130*

Lab Sample ID: LLCS 410-722312/18-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 722312

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	1.92	1.93	I	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.92	1.82	I	ng/L		95	50 - 150
Perfluorooctanoic acid (PFOA)	1.92	1.87	I	ng/L		97	50 - 150
Perfluorononanoic acid (PFNA)	1.92	1.84	I	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	1.92	1.88	I	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	1.92	1.74	I	ng/L		90	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	1.92	1.62	I	ng/L		85	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.70	1.54	I	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.75	1.63	I	ng/L		93	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.78	1.63	I	ng/L		91	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.92	1.56	I	ng/L		81	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.92	1.64	I	ng/L		85	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.92	1.70	I	ng/L		88	50 - 150
Perfluorododecanoic acid (PFDoA)	1.92	1.58	I	ng/L		82	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.92	1.86	I	ng/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.80	1.63	I	ng/L		91	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.81	1.49	I	ng/L		82	50 - 150

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LLCS 410-722312/18-A
Matrix: Drinking Water
Analysis Batch: 723137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 722312

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.81	1.69	I	ng/L		93	50 - 150		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFDA	*99*		*70 - 130*
13C2 PFHxA	*102*		*70 - 130*
13C3 HFPO-DA	*103*		*70 - 130*
d5-NEtFOSAA	*95*		*70 - 130*

LCMS

Prep Batch: 722312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1	WTP#9	Total/NA	Drinking Water	537.1 DW Prep	
670-73383-2	WTP#2	Total/NA	Drinking Water	537.1 DW Prep	
670-73383-3	WTP#1	Total/NA	Drinking Water	537.1 DW Prep	
670-73383-4	WTP#3	Total/NA	Drinking Water	537.1 DW Prep	
670-73383-5	WTP#12	Total/NA	Drinking Water	537.1 DW Prep	
670-73383-6	WTP#4	Total/NA	Drinking Water	537.1 DW Prep	
MB 410-722312/15-A	Method Blank	Total/NA	Drinking Water	537.1 DW Prep	
LCS 410-722312/16-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW Prep	
LCSD 410-722312/17-A	Lab Control Sample Dup	Total/NA	Drinking Water	537.1 DW Prep	
LLCS 410-722312/18-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW Prep	

Prep Batch: 722689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1	WTP#9	Total/NA	Drinking Water	EPA 533	
670-73383-2	WTP#2	Total/NA	Drinking Water	EPA 533	
670-73383-3	WTP#1	Total/NA	Drinking Water	EPA 533	
670-73383-4	WTP#3	Total/NA	Drinking Water	EPA 533	
670-73383-5	WTP#12	Total/NA	Drinking Water	EPA 533	
670-73383-6	WTP#4	Total/NA	Drinking Water	EPA 533	
MB 410-722689/16-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-722689/17-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	
LCSD 410-722689/18-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	
LLCS 410-722689/19-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	

Analysis Batch: 723137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1	WTP#9	Total/NA	Drinking Water	EPA 537.1 V2	722312
670-73383-2	WTP#2	Total/NA	Drinking Water	EPA 537.1 V2	722312
670-73383-3	WTP#1	Total/NA	Drinking Water	EPA 537.1 V2	722312
670-73383-4	WTP#3	Total/NA	Drinking Water	EPA 537.1 V2	722312
670-73383-5	WTP#12	Total/NA	Drinking Water	EPA 537.1 V2	722312
670-73383-6	WTP#4	Total/NA	Drinking Water	EPA 537.1 V2	722312
MB 410-722312/15-A	Method Blank	Total/NA	Drinking Water	EPA 537.1 V2	722312
LCS 410-722312/16-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	722312
LCSD 410-722312/17-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 537.1 V2	722312
LLCS 410-722312/18-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	722312

Analysis Batch: 723775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1	WTP#9	Total/NA	Drinking Water	EPA 533	722689
670-73383-2	WTP#2	Total/NA	Drinking Water	EPA 533	722689
670-73383-3	WTP#1	Total/NA	Drinking Water	EPA 533	722689
670-73383-4	WTP#3	Total/NA	Drinking Water	EPA 533	722689
670-73383-5	WTP#12	Total/NA	Drinking Water	EPA 533	722689
670-73383-6	WTP#4	Total/NA	Drinking Water	EPA 533	722689
MB 410-722689/16-A	Method Blank	Total/NA	Drinking Water	EPA 533	722689
LCS 410-722689/17-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	722689
LCSD 410-722689/18-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	722689
LLCS 410-722689/19-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	722689

QC Association Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

LCMS

Prep Batch: 724590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1 - RE	WTP#9	Total/NA	Drinking Water	EPA 533	
670-73383-2 - RE	WTP#2	Total/NA	Drinking Water	EPA 533	
670-73383-3 - RE	WTP#1	Total/NA	Drinking Water	EPA 533	
670-73383-4 - RE	WTP#3	Total/NA	Drinking Water	EPA 533	
670-73383-5 - RE	WTP#12	Total/NA	Drinking Water	EPA 533	
670-73383-6 - RE	WTP#4	Total/NA	Drinking Water	EPA 533	
MB 410-724590/11-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-724590/12-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	
LCSD 410-724590/13-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	
LLCS 410-724590/14-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	

Analysis Batch: 725212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-73383-1 - RE	WTP#9	Total/NA	Drinking Water	EPA 533	724590
670-73383-2 - RE	WTP#2	Total/NA	Drinking Water	EPA 533	724590
670-73383-3 - RE	WTP#1	Total/NA	Drinking Water	EPA 533	724590
670-73383-4 - RE	WTP#3	Total/NA	Drinking Water	EPA 533	724590
670-73383-5 - RE	WTP#12	Total/NA	Drinking Water	EPA 533	724590
670-73383-6 - RE	WTP#4	Total/NA	Drinking Water	EPA 533	724590
MB 410-724590/11-A	Method Blank	Total/NA	Drinking Water	EPA 533	724590
LCS 410-724590/12-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	724590
LCSD 410-724590/13-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	724590
LLCS 410-724590/14-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	724590

Lab Chronicle

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Client Sample ID: WTP#9
Date Collected: 10/22/25 10:10
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 18:53
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 18:02
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 03:15

Client Sample ID: WTP#2
Date Collected: 10/22/25 10:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-2
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 19:04
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 18:14
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 03:29

Client Sample ID: WTP#1
Date Collected: 10/22/25 10:45
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-3
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 19:28
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 18:38
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 03:56

Client Sample ID: WTP#3
Date Collected: 10/22/25 11:00
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-4
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 19:39
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 18:51
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 04:09

Lab Chronicle

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Client Sample ID: WTP#12

Date Collected: 10/22/25 11:15
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-5

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 19:51
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 19:03
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 04:23

Client Sample ID: WTP#4

Date Collected: 10/22/25 11:30
Date Received: 10/24/25 12:00

Lab Sample ID: 670-73383-6

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			722689	VQ6H	ELLE	10/31/25 08:57
Total/NA	Analysis	EPA 533		1	723775	D4BQ	ELLE	11/03/25 20:03
Total/NA	Prep	EPA 533	RE		724590	ULU3	ELLE	11/04/25 16:20
Total/NA	Analysis	EPA 533	RE	1	725212	D4BQ	ELLE	11/05/25 19:14
Total/NA	Prep	537.1 DW Prep			722312	ULU3	ELLE	10/30/25 15:46
Total/NA	Analysis	EPA 537.1 V2		1	723137	JU9U	ELLE	11/02/25 04:36

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-26
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	07-01-26
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-26
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Ohio	State	87787	01-31-26
Oklahoma	NELAP	9804	12-31-25
Oregon	NELAP	PA200001	09-12-26
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-26
USDA	US Federal Programs	525-22-298-19481	01-23-26
Vermont	State	VT - 36037	10-28-26
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-26
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

Method Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Method	Method Description	Protocol	Laboratory
EPA 533	EPA 533 Nov 2019	EPA	ELLE
EPA 537.1 V2	EPA 537.1, Ver 2.0 Mar 2020	EPA	ELLE
537.1 DW Prep	Extraction of Perfluorinated Alkyl Acids	EPA	ELLE
EPA 533	EPA 533 Nov 2019	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-73383-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
670-73383-1	WTP#9	Drinking Water	10/22/25 10:10	10/24/25 12:00	Florida
670-73383-2	WTP#2	Drinking Water	10/22/25 10:30	10/24/25 12:00	Florida
670-73383-3	WTP#1	Drinking Water	10/22/25 10:45	10/24/25 12:00	Florida
670-73383-4	WTP#3	Drinking Water	10/22/25 11:00	10/24/25 12:00	Florida
670-73383-5	WTP#12	Drinking Water	10/22/25 11:15	10/24/25 12:00	Florida
670-73383-6	WTP#4	Drinking Water	10/22/25 11:30	10/24/25 12:00	Florida

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone 407-339-5984 Fax. 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s):	COC No: 670-32605-14133 1
Client Contact: Shawn Wahrenberger	Phone:	E-Mail: kathryn nordmark@et.eurofinsus com	State of Origin:	Page: Page 1 of 1
Company: City of Deland	PWSID:			Job #:

Address: 1101 S Amelia Ave	Due Date Requested:
City: Deland	TAT Requested (days):
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No
Phone:	PO #: Purchase Order not required
Email: wahrenbergers@deland org	WO #:
Project Name: PFAS	Project #: 67004011
Site:	SSOW#:

Analysis Requested

Preservation Codes
Y - Trizma
I NH4 Acetate

670-73383 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW - DW EPA 537 1 List of 18	533 - List of 25 analytes from EPA 533	Total N	Special Instructions/Note
			Preservation Code:				Y	I		
WTP#9	10/22/25	10:10	G	Drinking Wate			2	2	4	
WTP#2	10/22/25	10:30	G	Drinking Wate			2	2	4	
WTP#1	10/22/25	10:45	G	Drinking Wate			2	2	4	
WTP#3	10/22/25	11:00	G	Drinking Wate			2	2	4	
WTP#12	10/22/25	11:15	G	Drinking Wate			2	2	4	
WTP#4	10/22/25	11:30	G	Drinking Wate			2	2	4	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: AM	Date: 9/15/25	Time: 8:45	Method of Shipment: Fedex.

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Larissa B McCoy	10/24/25 1050	Deland		10-24-25 1050	Eurc
Relinquished by:	Date/Time: 10/24/25 1210	Company: Euro	Received by:	Date/Time: 10/24/25 1210	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 2.1-2.9

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-63291.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-73383-1
Address: 2425 New Holland Pike,	Due Date Requested: 11/4/2025			
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	533/533_PrepList of 25 analytes from EPA 533	537.1_DW/537.1_DW_PrepDW EPA 537.1 List of 18	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
WTP#9 (670-73383-1)	10/22/25	10:10 Eastern	G	Drinking Wate			X	X	4	
WTP#2 (670-73383-2)	10/22/25	10:30 Eastern	G	Drinking Wate			X	X	4	
WTP#1 (670-73383-3)	10/22/25	10:45 Eastern	G	Drinking Wate			X	X	4	
WTP#3 (670-73383-4)	10/22/25	11:00 Eastern	G	Drinking Wate			X	X	4	
WTP#12 (670-73383-5)	10/22/25	11:15 Eastern	G	Drinking Wate			X	X	4	
WTP#4 (670-73383-6)	10/22/25	11:30 Eastern	G	Drinking Wate			X	X	4	

Preservation Codes:

Other: N/A

Analysis Requested

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10-24-25 1700				
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/25/25 11:00	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R: 1.4 - 2.9 C: 1.4 - 3.0

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-73383-1

Login Number: 73383
List Number: 1
Creator: Bittle, David W

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-73383-1

Login Number: 73383
List Number: 2
Creator: Santiago, Nathaniel

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 10/25/25 03:06 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

December 29, 2025

Shawn Wahrenberger
City of Deland - UCMR5
1101 South Amelia Avenue
Deland, FL 32724

RE: Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Dear Shawn Wahrenberger:

Enclosed are the analytical results for sample(s) received by the laboratory on December 10, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rebecca Selph

Rebecca Selph
rebecca.selph@pacelabs.com
(386)672-5668
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

CERTIFICATIONS

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
California Certification# 3096
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
DoD-ANAB #:ADE-3199
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Utah FL NELAC Reciprocity
Utah
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE SUMMARY

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Lab ID	Sample ID		Matrix	Date Collected	Date Received
35001930001	**32402867 Treatment Plant**	**Water**	Drinking Water	12/09/25 08:15	12/10/25 17:45
35001930002	**FRB-32402867 Treatment P**	**Water**	Drinking Water	12/09/25 08:15	12/10/25 17:45

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

SAMPLE ANALYTE COUNT

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Lab ID	Sample ID		Method	Analysts	Analytes Reported	Laboratory
35001930001	**32402867 Plant**	**Water Treatment**	EPA 533	SWR	41	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

ANALYTICAL RESULTS

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Sample: 32402867 Water Treatment Plant **Lab ID: 35001930001** Collected: 12/09/25 08:15 Received: 12/10/25 17:45 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, UCMR	Analytical Method: EPA 533 Preparation Method: EPA 533 Initial Volume/Weight: 247.65 mL Final Volume/Weight: 1 mL Pace Analytical Services - Ormond Beach								
11Cl-PF3OUdS	**0.0017 U**	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 21:16	763051-92-9	
4:2 FTS	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	757124-72-4	
6:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 21:16	27619-97-2	
8:2 FTS	**0.0017 U**	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 21:16	39108-34-4	
9Cl-PF3ONS	**0.0007 U**	ug/L	0.0020	0.0007	1	12/12/25 10:21	12/14/25 21:16	756426-58-1	
ADONA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	919005-14-4	
HFPO-DA	**0.0017 U**	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 21:16	13252-13-6	
NFDHA	**0.0067 U**	ug/L	0.020	0.0067	1	12/12/25 10:21	12/14/25 21:16	151772-58-6	
PFBS	**0.0028 I**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	375-73-5	
PFDA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	335-76-2	
PFHxA	**0.0014 I**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	307-24-4	
PFBA	**0.0017 U**	ug/L	0.0050	0.0017	1	12/12/25 10:21	12/14/25 21:16	375-22-4	
PFEESA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	113507-82-7	
PFHpS	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	375-92-8	
PFMBA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	863090-89-5	
PFMPA	**0.0013 U**	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 21:16	377-73-1	
PFPeA	**0.0019 I**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	2706-90-3	
PFPeS	**0.0013 U**	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 21:16	2706-91-4	
PFDoA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	307-55-1	
PFHpA	**0.0010 U**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	375-85-9	
PFHxS	**0.0012 I**	ug/L	0.0030	0.0010	1	12/12/25 10:21	12/14/25 21:16	355-46-4	
PFNA	**0.0013 U**	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 21:16	375-95-1	
PFOS	**0.0020 I**	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 21:16	1763-23-1	
PFOA	**0.0015 I**	ug/L	0.0040	0.0013	1	12/12/25 10:21	12/14/25 21:16	335-67-1	
PFUnA	**0.0007 U**	ug/L	0.0020	0.0007	1	12/12/25 10:21	12/14/25 21:16	2058-94-8	
Surrogates									
13C24:2FTS (S)	86	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C26:2FTS (S)	80	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C28:2FTS (S)	81	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C2-PFDoA (S)	62	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C3HFPO-DA(S)	78	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C3-PFBS (S)	78	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C3-PFHxS (S)	82	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C4-PFBA (S)	83	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C4-PFHpA (S)	77	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C5-PFHxA (S)	79	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C5-PFPeA (S)	76	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C6-PFDA (S)	67	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C7-PFUdA (S)	64	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C8-PFOA (S)	73	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C8-PFOS (S)	80	%	50-200		1	12/12/25 10:21	12/14/25 21:16		
13C9-PFNA (S)	70	%	50-200		1	12/12/25 10:21	12/14/25 21:16		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

QC Batch: 1151880
QC Batch Method: EPA 533
Analysis Method: EPA 533
Analysis Description: 533 PFAS Compounds, UCMR
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35001930001

METHOD BLANK: 6313101
Matrix: Drinking Water
Associated Lab Samples: 35001930001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
4:2 FTS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
6:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
8:2 FTS	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
9Cl-PF3ONS	ug/L	0.0007 U	0.0020	0.0007	12/14/25 20:42	
ADONA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
HFPO-DA	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
NFDHA	ug/L	0.0067 U	0.020	0.0067	12/14/25 20:42	
PFBA	ug/L	0.0017 U	0.0050	0.0017	12/14/25 20:42	
PFBS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFDA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFDoA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFEESA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHpA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHpS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHxA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFHxS	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFMBA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFMPA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFNA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFOA	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFOS	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFPeA	ug/L	0.0010 U	0.0030	0.0010	12/14/25 20:42	
PFPeS	ug/L	0.0013 U	0.0040	0.0013	12/14/25 20:42	
PFUnA	ug/L	0.0007 U	0.0020	0.0007	12/14/25 20:42	
13C2-PFDoA (S)	%	75	50-200		12/14/25 20:42	
13C24:2FTS (S)	%	83	50-200		12/14/25 20:42	
13C26:2FTS (S)	%	77	50-200		12/14/25 20:42	
13C28:2FTS (S)	%	82	50-200		12/14/25 20:42	
13C3-PFBS (S)	%	83	50-200		12/14/25 20:42	
13C3-PFHxS (S)	%	84	50-200		12/14/25 20:42	
13C3HFPO-DA(S)	%	73	50-200		12/14/25 20:42	
13C4-PFBA (S)	%	79	50-200		12/14/25 20:42	
13C4-PFHpA (S)	%	79	50-200		12/14/25 20:42	
13C5-PFHxA (S)	%	80	50-200		12/14/25 20:42	
13C5-PFPeA (S)	%	79	50-200		12/14/25 20:42	
13C6-PFDA (S)	%	78	50-200		12/14/25 20:42	
13C7-PFUdA (S)	%	76	50-200		12/14/25 20:42	
13C8-PFOA (S)	%	79	50-200		12/14/25 20:42	
13C8-PFOS (S)	%	81	50-200		12/14/25 20:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

METHOD BLANK: 6313101 Matrix: Drinking Water
Associated Lab Samples: 35001930001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	77	50-200		12/14/25 20:42	

LABORATORY CONTROL SAMPLE: 6313102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/L	0.0019	0.0018 I	93	50-150	
4:2 FTS	ug/L	0.0019	0.0021 I	109	50-150	
6:2 FTS	ug/L	0.0019	0.0018 I	93	50-150	
8:2 FTS	ug/L	0.0019	0.0018 I	96	50-150	
9Cl-PF3ONS	ug/L	0.0019	0.0018 I	96	50-150	
ADONA	ug/L	0.0019	0.0017 I	89	50-150	
HFPO-DA	ug/L	0.002	0.0018 I	88	50-150	
NFDHA	ug/L	0.02	0.017 I	84	50-150	
PFBA	ug/L	0.002	0.0020 I	98	50-150	
PFBS	ug/L	0.0018	0.0018 I	102	50-150	
PFDA	ug/L	0.002	0.0019 I	93	50-150	
PFDoA	ug/L	0.002	0.0019 I	95	50-150	
PFEESA	ug/L	0.0018	0.0016 I	92	50-150	
PFHpA	ug/L	0.002	0.0020 I	98	50-150	
PFHpS	ug/L	0.0019	0.0020 I	107	50-150	
PFHxA	ug/L	0.002	0.0019 I	96	50-150	
PFHxS	ug/L	0.0018	0.0019 I	104	50-150	
PFMBA	ug/L	0.002	0.0018 I	92	50-150	
PFMPA	ug/L	0.002	0.0019 I	93	50-150	
PFNA	ug/L	0.002	0.0019 I	95	50-150	
PFOA	ug/L	0.002	0.0018 I	91	50-150	
PFOS	ug/L	0.0019	0.0019 I	102	50-150	
PFPeA	ug/L	0.002	0.0019 I	95	50-150	
PFPeS	ug/L	0.0019	0.0019 I	98	50-150	
PFUnA	ug/L	0.002	0.0018 I	90	50-150	
13C2-PFDoA (S)	%			77	50-200	
13C24:2FTS (S)	%			80	50-200	
13C26:2FTS (S)	%			76	50-200	
13C28:2FTS (S)	%			82	50-200	
13C3-PFBS (S)	%			83	50-200	
13C3-PFHxS (S)	%			84	50-200	
13C3HFPO-DA(S)	%			82	50-200	
13C4-PFBA (S)	%			83	50-200	
13C4-PFHpA (S)	%			81	50-200	
13C5-PFHxA (S)	%			82	50-200	
13C5-PFPeA (S)	%			82	50-200	
13C6-PFDA (S)	%			79	50-200	
13C7-PFUdA (S)	%			79	50-200	
13C8-PFOA (S)	%			80	50-200	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

LABORATORY CONTROL SAMPLE: 6313102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			82	50-200	
13C9-PFNA (S)	%			79	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6313103 6313104

Parameter	Units	35001930001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
11Cl-PF3OUdS	ug/L	0.0017 U	0.0018	0.0019	0.0016 U	0.0018 I	87	94	70-130		30	
4:2 FTS	ug/L	0.0010 U	0.0018	0.0019	0.0018 I	0.0019 I	93	93	70-130		30	
6:2 FTS	ug/L	0.0017 U	0.0018	0.0019	0.0017 I	0.0018 I	88	92	70-130		30	
8:2 FTS	ug/L	0.0017 U	0.0018	0.0019	0.0019 I	0.0017 I	102	89	70-130		30	
9Cl-PF3ONS	ug/L	0.0007 U	0.0018	0.0019	0.0017 I	0.0018 I	91	96	70-130		30	
ADONA	ug/L	0.0010 U	0.0018	0.0019	0.0016 I	0.0017 I	88	89	70-130		30	
HFPO-DA	ug/L	0.0017 U	0.0019	0.002	0.0021 I	0.0020 I	102	94	70-130		30	
NFDHA	ug/L	0.0067 U	0.019	0.02	0.017 I	0.016 I	84	79	70-130		30	
PFBA	ug/L	0.0017 U	0.0019	0.002	0.0033 I	0.0034 I	89	92	70-130		30	
PFBS	ug/L	0.0028 I	0.0017	0.0018	0.0044	0.0045	94	96	70-130	1	30	
PFDA	ug/L	0.0010 U	0.0019	0.002	0.0017 I	0.0019 I	89	93	70-130		30	
PFDoA	ug/L	0.0010 U	0.0019	0.002	0.0018 I	0.0019 I	88	93	70-130		30	
PFEESA	ug/L	0.0010 U	0.0017	0.0018	0.0016 I	0.0017 I	93	95	70-130		30	
PFHpA	ug/L	0.0010 U	0.0019	0.002	0.0024 I	0.0024 I	92	89	70-130		30	
PFHpS	ug/L	0.0010 U	0.0018	0.0019	0.0020 I	0.0019 I	99	95	70-130		30	
PFHxA	ug/L	0.0014 I	0.0019	0.002	0.0031	0.0032	88	92	70-130	3	30	
PFHxS	ug/L	0.0012 I	0.0017	0.0018	0.0029	0.0032	100	112	70-130	8	30	
PFMBA	ug/L	0.0010 U	0.0019	0.002	0.0018 I	0.0019 I	93	97	70-130		30	
PFMPA	ug/L	0.0013 U	0.0019	0.002	0.0018 I	0.0018 I	91	93	70-130		30	
PFNA	ug/L	0.0013 U	0.0019	0.002	0.0019 I	0.0019 I	94	92	70-130		30	
PFOA	ug/L	0.0015 I	0.0019	0.002	0.0033 I	0.0033 I	92	89	70-130		30	
PFOS	ug/L	0.0020 I	0.0018	0.0019	0.0037 I	0.0037 I	92	93	70-130		30	
PFPeA	ug/L	0.0019 I	0.0019	0.002	0.0038	0.0038	103	101	70-130	0	30	
PFPeS	ug/L	0.0013 U	0.0018	0.0019	0.0018 I	0.0018 I	87	86	70-130		30	
PFUnA	ug/L	0.0007 U	0.0019	0.002	0.0018 I	0.0019 I	89	94	70-130		30	
13C2-PFDoA (S)	%						65	66	50-200			
13C24:2FTS (S)	%						87	85	50-200			
13C26:2FTS (S)	%						76	75	50-200			
13C28:2FTS (S)	%						78	79	50-200			
13C3-PFBS (S)	%						77	77	50-200			
13C3-PFHxS (S)	%						81	79	50-200			
13C3HFPO-DA(S)	%						75	83	50-200			
13C4-PFBA (S)	%						82	82	50-200			
13C4-PFHpA (S)	%						75	77	50-200			
13C5-PFHxA (S)	%						76	78	50-200			
13C5-PFPeA (S)	%						75	76	50-200			
13C6-PFDA (S)	%						73	70	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6313103 6313104

Parameter	Units	35001930001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
13C7-PFUdA (S)	%						69	67	50-200			
13C8-PFOA (S)	%						75	77	50-200			
13C8-PFOS (S)	%						76	77	50-200			
13C9-PFNA (S)	%						74	75	50-200			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALIFIERS

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UCMR5_SE2_Oct2025_WTP 5,6,7,8_
Pace Project No.: 35001930

Lab ID	Sample ID		QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35001930001	**32402867 Treatment Plant**	**Water**	EPA 533	1151880	EPA 533	1152146

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace® Location Requested (City/State):
Pace Analytical Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

WO# : 35001930

35001930

Company Name:	City of Deland - UCMR5
Street Address:	1101 South Amelia Avenue Deland, FL 32724
Customer Project #:	
Project Name:	UCMR5_SE2_Oct2025_WTP 5,6,7,8_RS1
Site Collection Info/Facility ID (as applicable):	
Contact/Report To:	Shawn Wahrenberger
Phone #:	(386)626-7254
E-Mail:	wahrenbergers@deland.org
Cc E-Mail:	
Invoice To:	Accounts Payable
Invoice E-Mail:	wahrenbergers@deland.org
Purchase Order # (if applicable):	
Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s): Florida

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	533 FRB	533 PFAS Compounds, UCMR
32402867Water Treatment Plant #7	DW	G	12/09/25	0815	12/09/25	0815					X
FRB-32402867Water Treatment Plant #7	DW	G	12/09/25	0915	12/09/25	0915				X	

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Rebecca Selph
AcctNum / Client ID:
Table #:
Profile / Template: 18402
Prelog / Bottle Ord. ID: EZ 3326616

Sample Comment

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By:
(Printed Name)
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
			1-1		

Relinquished by/Company: (Signature)	A Vargas 12/10/25	Date/Time: 12/10/25 12:23	Received by/Company: (Signature)	Date/Time: 12/10/25 12:23	Tracking Number:
Relinquished by/Company: (Signature)		Date/Time: 12/10/25 17:45	Received by/Company: (Signature) V.M PACE	Date/Time: 12/10 1745	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)		Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)		Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

DC#_Title: Excel Form Template
Effective Date:

WO#: 35001930

PM: RJS **Due Date: 01/19/26**
CLIENT: CITDELUCMR3

Project #
Project Manager:
Client:

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☑Pace ☐Other: _____
Tracking # _____
Custody Seal: ☐Yes ☐No **Seal intact:** ☐Yes ☐No **Ice:** ☑Yes ☐No
Packing Material: ☐Bubble Wrap ☐Bubble Bags ☑None ☐Other _____

			Comments
Chain of Custody Present	☑Yes	☐No	
Chain of Custody Completed	☑Yes	☐No	
Relinquished & Sampler Signature	☑Yes	☐No	
Samples Arrived within Hold Time	☑Yes	☐No	
Sufficient Volume	☑Yes	☐No	
Correct Containers Used	☑Yes	☐No	
Containers Intact	☑Yes	☐No	
Sample Labels match COC	☑Yes	☐No	
Samples received ≤48 hr from collection?	☑Yes	☐No	
If no, were samples kept ≤6°C after 48 hrs of collection?	☐Yes	☐No	
Person contacted for verification _____			

Temperature Verification **Initials:** _____ **Date:** 12/10/25 **Time:** 1751
IR Gun ID: T-425 **CF (°C):** +0.2

	Observed (°C)	Corrected (°C)	Comments
EPA 533	0.9	1.1	
EPA 537.1			

Preservation Verification **pH strip:** HC457271 **pH meter:** SR-2
Free Cl Strip/DPD: 257110 **Cl Meter:** SR-1
200.7 Lab Preserved: Nitric Acid: _____ Date/Time: _____ Initials: _____

Sample/Container ID	pH 533* (pH 6.0-8.0)	pH 537.1 (pH 6.0-8.0)	pH 200.7 (pH <2)	pH 200.7 Lab Preserved	Free Chlorine** 533	Free Chlorine** 537.1	Comments
1/4 32402867 Water Trout	6.5				ND		
2/4	6.3				ND		
3/4	6.3				ND		
4/4	6.4				ND		
509-32402867 Water Trout	6.5				ND		

*533 pH may be adjusted at the bench prior to extraction. ** ND = <0.1 mg/L

Labeled by: BP **Reviewed by:** [signature] **Delivered by:** _____

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Shawn Wahrenberger
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 2/5/2026 8:39:40 AM

JOB DESCRIPTION

PFAS

JOB NUMBER

670-79405-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Drinking Water and Wastewater Southeast, LLC Project Manager.

Authorization



Generated
2/5/2026 8:39:40 AM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 8
Surrogate Summary 17
QC Sample Results 18
QC Association Summary 22
Lab Chronicle 23
Certification Summary 25
Method Summary 26
Sample Summary 27
Chain of Custody 28
Receipt Checklists 31

Definitions/Glossary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Qualifiers

LCMS

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-79405-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 1/28/2026 1:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C.

PFAS
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Client Sample ID: 2601479 WP#1 POE — Lab Sample ID: 670-79405-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.4		1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		1.8	0.53	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.6		1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.5		1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601480 WP#2 POE — Lab Sample ID: 670-79405-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.4		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.0		1.7	0.52	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.1		1.7	0.44	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601481 WP#3 POE — Lab Sample ID: 670-79405-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.0	I	1.7	0.52	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601482 WP#4 POE — Lab Sample ID: 670-79405-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.85	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.44	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	0.99	I	1.8	0.53	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.95	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.4	I	1.8	0.44	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601483 WP#5 POE — Lab Sample ID: 670-79405-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.2		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.5		1.8	0.55	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.6		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.2		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601484 WP#6 POE — Lab Sample ID: 670-79405-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.1		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	I	1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.7		1.9	0.56	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.4		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.2		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Client Sample ID: 2601484 WP#6 POE (Continued) — Lab Sample ID: 670-79405-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	7.7		1.9	0.47	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601485 WP#7 POE — Lab Sample ID: 670-79405-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.4	I	1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.61	I	1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	I	1.8	0.55	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.5		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	I	1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.0		1.8	0.46	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601486 WP#8 POE — Lab Sample ID: 670-79405-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	4.5		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.3		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	5.4		1.7	0.51	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	0.77	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.3		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.7		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	9.7		1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601487 WP#9 POE — Lab Sample ID: 670-79405-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.87	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.44	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.0	I	1.7	0.52	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.6	I	1.7	0.43	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2601488 WP#12 POE — Lab Sample ID: 670-79405-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.0	I	1.8	0.54	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	I	1.8	0.45	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: Field Blank — Lab Sample ID: 670-79405-11

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Client Sample ID: 2601479 WP#1 POE

Date Collected: 01/27/26 10:15
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-1
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.4**		1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorooctanoic acid (PFOA)	**3.1**		1.8	0.53	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorotridecanoic acid (PFTrDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorotetradecanoic acid (PFTeDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorobutanesulfonic acid (PFBS)	**3.6**		1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorohexanesulfonic acid (PFHxS)	**3.5**		1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorooctanesulfonic acid (PFOS)	**6.5**		1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.79	U	1.8	0.79	ng/L		02/03/26 08:29	02/04/26 15:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*85*		*70 - 130*	*02/03/26 08:29*	*02/04/26 15:53*	*1*
13C2 PFHxA	*82*		*70 - 130*	*02/03/26 08:29*	*02/04/26 15:53*	*1*
13C3 HFPO-DA	*95*		*70 - 130*	*02/03/26 08:29*	*02/04/26 15:53*	*1*
d5-NEtFOSAA	*94*		*70 - 130*	*02/03/26 08:29*	*02/04/26 15:53*	*1*

Client Sample ID: 2601480 WP#2 POE

Date Collected: 01/27/26 10:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-2
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.4**		1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluoroheptanoic acid (PFHpA)	**1.8**		1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorooctanoic acid (PFOA)	**3.0**		1.7	0.52	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorononanoic acid (PFNA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorotridecanoic acid (PFTrDA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorotetradecanoic acid (PFTeDA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorobutanesulfonic acid (PFBS)	**3.7**		1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorohexanesulfonic acid (PFHxS)	**3.2**		1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorooctanesulfonic acid (PFOS)	**6.1**		1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1

Client Sample ID: 2601480 WP#2 POE

Date Collected: 01/27/26 10:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-2
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.79	U	1.7	0.79	ng/L		02/03/26 08:29	02/04/26 16:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.7	0.44	ng/L		02/03/26 08:29	02/04/26 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*89*		*70 - 130*	*02/03/26 08:29*	*02/04/26 16:07*	*1*
13C2 PFHxA	*77*		*70 - 130*	*02/03/26 08:29*	*02/04/26 16:07*	*1*
13C3 HFPO-DA	*88*		*70 - 130*	*02/03/26 08:29*	*02/04/26 16:07*	*1*
d5-NEtFOSAA	*91*		*70 - 130*	*02/03/26 08:29*	*02/04/26 16:07*	*1*

Client Sample ID: 2601481 WP#3 POE

Date Collected: 01/27/26 10:30
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-3
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluoroheptanoic acid (PFHpA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorooctanoic acid (PFOA)	**1.0**	**I**	1.7	0.52	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorononanoic acid (PFNA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorodecanoic acid (PFDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorotridecanoic acid (PFTrDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorotetradecanoic acid (PFTeDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorobutanesulfonic acid (PFBS)	**1.1**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorooctanesulfonic acid (PFOS)	**1.5**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluoroundecanoic acid (PFUnA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Perfluorododecanoic acid (PFDoA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.78	U	1.7	0.78	ng/L		02/03/26 08:29	02/04/26 19:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 19:16	1

Client Sample ID: 2601481 WP#3 POE

Lab Sample ID: 670-79405-3

Date Collected: 01/27/26 10:30

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	87		70 - 130	02/03/26 08:29	02/04/26 19:16	1
13C2 PFHxA	85		70 - 130	02/03/26 08:29	02/04/26 19:16	1
13C3 HFPO-DA	87		70 - 130	02/03/26 08:29	02/04/26 19:16	1
d5-NEtFOSAA	94		70 - 130	02/03/26 08:29	02/04/26 19:16	1

Client Sample ID: 2601482 WP#4 POE

Lab Sample ID: 670-79405-4

Date Collected: 01/27/26 09:45

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**0.85**	**I**	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluoroheptanoic acid (PFHpA)	**0.44**	**I**	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorooctanoic acid (PFOA)	**0.99**	**I**	1.8	0.53	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorononanoic acid (PFNA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorodecanoic acid (PFDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorotridecanoic acid (PFTrDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorotetradecanoic acid (PFTeDA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorobutanesulfonic acid (PFBS)	**0.95**	**I**	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**I**	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorooctanesulfonic acid (PFOS)	**1.4**	**I**	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluoroundecanoic acid (PFUnA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Perfluorododecanoic acid (PFDoA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.79	U	1.8	0.79	ng/L		02/03/26 08:29	02/04/26 19:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.44	U	1.8	0.44	ng/L		02/03/26 08:29	02/04/26 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	94		70 - 130	02/03/26 08:29	02/04/26 19:29	1
13C2 PFHxA	85		70 - 130	02/03/26 08:29	02/04/26 19:29	1
13C3 HFPO-DA	90		70 - 130	02/03/26 08:29	02/04/26 19:29	1
d5-NEtFOSAA	90		70 - 130	02/03/26 08:29	02/04/26 19:29	1

Client Sample ID: 2601483 WP#5 POE

Lab Sample ID: 670-79405-5

Date Collected: 01/27/26 08:45

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.2**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluoroheptanoic acid (PFHpA)	**1.8**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1

Client Sample ID: 2601483 WP#5 POE

Date Collected: 01/27/26 08:45
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-5
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**4.5**		1.8	0.55	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorononanoic acid (PFNA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorodecanoic acid (PFDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorotridecanoic acid (PFTrDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorotetradecanoic acid (PFTeDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorobutanesulfonic acid (PFBS)	**5.6**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorohexanesulfonic acid (PFHxS)	**3.9**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorooctanesulfonic acid (PFOS)	**7.2**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluoroundecanoic acid (PFUnA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Perfluorododecanoic acid (PFDoA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.82	U	1.8	0.82	ng/L		02/03/26 08:29	02/04/26 19:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*87*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:43*	*1*
13C2 PFHxA	*85*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:43*	*1*
13C3 HFPO-DA	*90*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:43*	*1*
d5-NEtFOSAA	*87*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:43*	*1*

Client Sample ID: 2601484 WP#6 POE

Date Collected: 01/27/26 09:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-6
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.1**		1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**I**	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorooctanoic acid (PFOA)	**4.7**		1.9	0.56	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorononanoic acid (PFNA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorodecanoic acid (PFDA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorotridecanoic acid (PFTrDA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorotetradecanoic acid (PFTeDA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorobutanesulfonic acid (PFBS)	**6.4**		1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorohexanesulfonic acid (PFHxS)	**4.2**		1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorooctanesulfonic acid (PFOS)	**7.7**		1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1

Client Sample ID: 2601484 WP#6 POE

Date Collected: 01/27/26 09:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-6
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluoroundecanoic acid (PFUnA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Perfluorododecanoic acid (PFDoA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.84	U	1.9	0.84	ng/L		02/03/26 08:29	02/04/26 19:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.47	U	1.9	0.47	ng/L		02/03/26 08:29	02/04/26 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*88*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:56*	*1*
13C2 PFHxA	*83*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:56*	*1*
13C3 HFPO-DA	*91*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:56*	*1*
d5-NEtFOSAA	*89*		*70 - 130*	*02/03/26 08:29*	*02/04/26 19:56*	*1*

Client Sample ID: 2601485 WP#7 POE

Date Collected: 01/27/26 09:30
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-7
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**1.4**	**I**	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluoroheptanoic acid (PFHpA)	**0.61**	**I**	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorooctanoic acid (PFOA)	**1.3**	**I**	1.8	0.55	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorononanoic acid (PFNA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorodecanoic acid (PFDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorotridecanoic acid (PFTrDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorotetradecanoic acid (PFTeDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorobutanesulfonic acid (PFBS)	**2.5**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**I**	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorooctanesulfonic acid (PFOS)	**2.0**		1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluoroundecanoic acid (PFUnA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Perfluorododecanoic acid (PFDoA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.83	U	1.8	0.83	ng/L		02/03/26 08:29	02/04/26 20:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 20:10	1

Client Sample ID: 2601485 WP#7 POE

Lab Sample ID: 670-79405-7

Date Collected: 01/27/26 09:30

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	87		70 - 130	02/03/26 08:29	02/04/26 20:10	1
13C2 PFHxA	81		70 - 130	02/03/26 08:29	02/04/26 20:10	1
13C3 HFPO-DA	87		70 - 130	02/03/26 08:29	02/04/26 20:10	1
d5-NEtFOSAA	81		70 - 130	02/03/26 08:29	02/04/26 20:10	1

Client Sample ID: 2601486 WP#8 POE

Lab Sample ID: 670-79405-8

Date Collected: 01/27/26 08:30

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**4.5**		1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluoroheptanoic acid (PFHpA)	**2.3**		1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorooctanoic acid (PFOA)	**5.4**		1.7	0.51	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorononanoic acid (PFNA)	**0.77**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorodecanoic acid (PFDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorotridecanoic acid (PFTrDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorotetradecanoic acid (PFTeDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorobutanesulfonic acid (PFBS)	**5.3**		1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorohexanesulfonic acid (PFHxS)	**6.7**		1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorooctanesulfonic acid (PFOS)	**9.7**		1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluoroundecanoic acid (PFUnA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Perfluorododecanoic acid (PFDoA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.77	U	1.7	0.77	ng/L		02/03/26 08:29	02/04/26 20:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	86		70 - 130	02/03/26 08:29	02/04/26 20:23	1
13C2 PFHxA	85		70 - 130	02/03/26 08:29	02/04/26 20:23	1
13C3 HFPO-DA	88		70 - 130	02/03/26 08:29	02/04/26 20:23	1
d5-NEtFOSAA	89		70 - 130	02/03/26 08:29	02/04/26 20:23	1

Client Sample ID: 2601487 WP#9 POE

Lab Sample ID: 670-79405-9

Date Collected: 01/27/26 09:15

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**0.87**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluoroheptanoic acid (PFHpA)	**0.44**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1

Client Sample ID: 2601487 WP#9 POE

Date Collected: 01/27/26 09:15
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-9
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**1.0**	**I**	1.7	0.52	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorononanoic acid (PFNA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorodecanoic acid (PFDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorotridecanoic acid (PFTrDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorotetradecanoic acid (PFTeDA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorobutanesulfonic acid (PFBS)	**1.4**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorooctanesulfonic acid (PFOS)	**1.6**	**I**	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluoroundecanoic acid (PFUnA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Perfluorododecanoic acid (PFDoA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.78	U	1.7	0.78	ng/L		02/03/26 08:29	02/04/26 20:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.43	U	1.7	0.43	ng/L		02/03/26 08:29	02/04/26 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*87*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:37*	*1*
13C2 PFHxA	*84*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:37*	*1*
13C3 HFPO-DA	*84*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:37*	*1*
d5-NEtFOSAA	*82*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:37*	*1*

Client Sample ID: 2601488 WP#12 POE

Date Collected: 01/27/26 10:45
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-10
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluoroheptanoic acid (PFHpA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorooctanoic acid (PFOA)	**1.0**	**I**	1.8	0.54	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorononanoic acid (PFNA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorodecanoic acid (PFDA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorotridecanoic acid (PFTrDA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorotetradecanoic acid (PFTeDA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorobutanesulfonic acid (PFBS)	**1.1**	**I**	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**I**	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorooctanesulfonic acid (PFOS)	**1.5**	**I**	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1

Client Sample ID: 2601488 WP#12 POE

Lab Sample ID: 670-79405-10

Date Collected: 01/27/26 10:45

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluoroundecanoic acid (PFUnA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Perfluorododecanoic acid (PFDoA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.82	U	1.8	0.82	ng/L		02/03/26 08:29	02/04/26 20:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.45	U	1.8	0.45	ng/L		02/03/26 08:29	02/04/26 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*88*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:50*	*1*
13C2 PFHxA	*86*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:50*	*1*
13C3 HFPO-DA	*90*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:50*	*1*
d5-NEtFOSAA	*89*		*70 - 130*	*02/03/26 08:29*	*02/04/26 20:50*	*1*

Client Sample ID: Field Blank

Lab Sample ID: 670-79405-11

Date Collected: 01/27/26 00:00

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluoroheptanoic acid (PFHpA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorooctanoic acid (PFOA)	0.55	U	1.8	0.55	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorononanoic acid (PFNA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorodecanoic acid (PFDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorotridecanoic acid (PFTrDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorotetradecanoic acid (PFTeDA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorobutanesulfonic acid (PFBS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorohexanesulfonic acid (PFHxS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorooctanesulfonic acid (PFOS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluoroundecanoic acid (PFUnA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Perfluorododecanoic acid (PFDoA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.83	U	1.8	0.83	ng/L		02/03/26 08:29	02/04/26 21:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.46	U	1.8	0.46	ng/L		02/03/26 08:29	02/04/26 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*80*		*70 - 130*	*02/03/26 08:29*	*02/04/26 21:04*	*1*
13C2 PFHxA	*82*		*70 - 130*	*02/03/26 08:29*	*02/04/26 21:04*	*1*

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Client Sample ID: Field Blank
Date Collected: 01/27/26 00:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-11
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		70 - 130	02/03/26 08:29	02/04/26 21:04	1
d5-NEtFOSAA	81		70 - 130	02/03/26 08:29	02/04/26 21:04	1

Surrogate Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		PFDA	PFHxA	HFPODA	d5NEFOS
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
670-79405-1	2601479 WP#1 POE	85	82	95	94
670-79405-2	2601480 WP#2 POE	89	77	88	91
670-79405-3	2601481 WP#3 POE	87	85	87	94
670-79405-4	2601482 WP#4 POE	94	85	90	90
670-79405-5	2601483 WP#5 POE	87	85	90	87
670-79405-6	2601484 WP#6 POE	88	83	91	89
670-79405-7	2601485 WP#7 POE	87	81	87	81
670-79405-8	2601486 WP#8 POE	86	85	88	89
670-79405-9	2601487 WP#9 POE	87	84	84	82
670-79405-10	2601488 WP#12 POE	88	86	90	89
670-79405-11	Field Blank	80	82	91	81
LCS 410-763817/13-A	Lab Control Sample	85	86	93	86
LCSD 410-763817/14-A	Lab Control Sample Dup	85	83	92	89
LLCS 410-763817/15-A	Lab Control Sample	86	86	91	84
MB 410-763817/12-A	Method Blank	87	86	91	88

Surrogate Legend

PFDA = 13C2 PFDA
PFHxA = 13C2 PFHxA
HFPODA = 13C3 HFPO-DA
d5NEFOS = d5-NEtFOSAA

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020

Lab Sample ID: MB 410-763817/12-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 763817

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluoroheptanoic acid (PFHpA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorooctanoic acid (PFOA)	0.60	U	2.0	0.60	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorononanoic acid (PFNA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorodecanoic acid (PFDA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorotridecanoic acid (PFTrDA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorotetradecanoic acid (PFTeDA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorobutanesulfonic acid (PFBS)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorohexanesulfonic acid (PFHxS)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluoroundecanoic acid (PFUnA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Perfluorododecanoic acid (PFDoA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.90	U	2.0	0.90	ng/L		02/03/26 08:29	02/04/26 12:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.50	U	2.0	0.50	ng/L		02/03/26 08:29	02/04/26 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*87*		*70 - 130*	*02/03/26 08:29*	*02/04/26 12:04*	*1*
13C2 PFHxA	*86*		*70 - 130*	*02/03/26 08:29*	*02/04/26 12:04*	*1*
13C3 HFPO-DA	*91*		*70 - 130*	*02/03/26 08:29*	*02/04/26 12:04*	*1*
d5-NEtFOSAA	*88*		*70 - 130*	*02/03/26 08:29*	*02/04/26 12:04*	*1*

Lab Sample ID: LCS 410-763817/13-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 763817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	60.0	58.4		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.0	59.2		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	60.0	60.7		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	60.0	60.7		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.0	60.1		ng/L		100	70 - 130
Perfluorotridecanoic acid (PFTrDA)	60.0	54.5		ng/L		91	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	60.0	52.5		ng/L		87	70 - 130
Perfluorobutanesulfonic acid (PFBS)	53.1	48.5		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	54.8	52.9		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	55.6	53.9		ng/L		97	70 - 130

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LCS 410-763817/13-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 763817

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			60.0	53.7		ng/L		89	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			60.0	54.6		ng/L		91	70 - 130		
Perfluoroundecanoic acid (PFUnA)			60.0	62.2		ng/L		104	70 - 130		
Perfluorododecanoic acid (PFDoA)			60.0	53.7		ng/L		90	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			60.0	61.8		ng/L		103	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			56.1	50.9		ng/L		91	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			56.7	45.1		ng/L		80	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			56.7	54.9		ng/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFDA	*85*		*70 - 130*
13C2 PFHxA	*86*		*70 - 130*
13C3 HFPO-DA	*93*		*70 - 130*
d5-NEtFOSAA	*86*		*70 - 130*

Lab Sample ID: LCSD 410-763817/14-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 763817

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)			60.0	57.1		ng/L		95	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)			60.0	60.4		ng/L		101	70 - 130	2	30
Perfluorooctanoic acid (PFOA)			60.0	59.9		ng/L		100	70 - 130	1	30
Perfluorononanoic acid (PFNA)			60.0	60.9		ng/L		101	70 - 130	0	30
Perfluorodecanoic acid (PFDA)			60.0	61.0		ng/L		102	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)			60.0	54.1		ng/L		90	70 - 130	1	30
Perfluorotetradecanoic acid (PFTeDA)			60.0	54.0		ng/L		90	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)			53.1	46.1		ng/L		87	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)			54.8	54.1		ng/L		99	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)			55.6	55.5		ng/L		100	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			60.0	56.8		ng/L		95	70 - 130	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			60.0	57.8		ng/L		96	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)			60.0	61.1		ng/L		102	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)			60.0	56.3		ng/L		94	70 - 130	5	30

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LCSD 410-763817/14-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 763817

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			60.0	62.5		ng/L		104	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			56.1	51.2		ng/L		91	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			56.7	48.4		ng/L		85	70 - 130	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			56.7	54.7		ng/L		96	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C2 PFDA	*85*		*70 - 130*
13C2 PFHxA	*83*		*70 - 130*
13C3 HFPO-DA	*92*		*70 - 130*
d5-NEtFOSAA	*89*		*70 - 130*

Lab Sample ID: LLCS 410-763817/15-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 763817

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)			1.92	1.94	I	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)			1.92	1.98	I	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)			1.92	2.00		ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)			1.92	2.07		ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)			1.92	2.04		ng/L		106	50 - 150
Perfluorotridecanoic acid (PFTrDA)			1.92	1.66	I	ng/L		87	50 - 150
Perfluorotetradecanoic acid (PFTeDA)			1.92	1.76	I	ng/L		92	50 - 150
Perfluorobutanesulfonic acid (PFBS)			1.70	1.54	I	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)			1.75	1.81	I	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)			1.78	1.78	I	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			1.92	1.76	I	ng/L		92	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			1.92	1.63	I	ng/L		85	50 - 150
Perfluoroundecanoic acid (PFUnA)			1.92	2.09		ng/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)			1.92	1.75	I	ng/L		91	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			1.92	2.04		ng/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)			1.80	1.58	I	ng/L		88	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.81	1.48	I	ng/L		82	50 - 150

Method: EPA 537.1 V2 - EPA 537.1, Ver 2.0 Mar 2020 (Continued)

Lab Sample ID: LLCS 410-763817/15-A
Matrix: Drinking Water
Analysis Batch: 764529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 763817

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.81	1.78	I	ng/L		98	50 - 150		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFDA	*86*		*70 - 130*
13C2 PFHxA	*86*		*70 - 130*
13C3 HFPO-DA	*91*		*70 - 130*
d5-NEtFOSAA	*84*		*70 - 130*

QC Association Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

LCMS

Prep Batch: 763817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-79405-1	2601479 WP#1 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-2	2601480 WP#2 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-3	2601481 WP#3 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-4	2601482 WP#4 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-5	2601483 WP#5 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-6	2601484 WP#6 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-7	2601485 WP#7 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-8	2601486 WP#8 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-9	2601487 WP#9 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-10	2601488 WP#12 POE	Total/NA	Drinking Water	537.1 DW Prep	
670-79405-11	Field Blank	Total/NA	Drinking Water	537.1 DW Prep	
MB 410-763817/12-A	Method Blank	Total/NA	Drinking Water	537.1 DW Prep	
LCS 410-763817/13-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW Prep	
LCSD 410-763817/14-A	Lab Control Sample Dup	Total/NA	Drinking Water	537.1 DW Prep	
LLCS 410-763817/15-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW Prep	

Analysis Batch: 764529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-79405-1	2601479 WP#1 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-2	2601480 WP#2 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-3	2601481 WP#3 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-4	2601482 WP#4 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-5	2601483 WP#5 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-6	2601484 WP#6 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-7	2601485 WP#7 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-8	2601486 WP#8 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-9	2601487 WP#9 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-10	2601488 WP#12 POE	Total/NA	Drinking Water	EPA 537.1 V2	763817
670-79405-11	Field Blank	Total/NA	Drinking Water	EPA 537.1 V2	763817
MB 410-763817/12-A	Method Blank	Total/NA	Drinking Water	EPA 537.1 V2	763817
LCS 410-763817/13-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	763817
LCSD 410-763817/14-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 537.1 V2	763817
LLCS 410-763817/15-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	763817

Lab Chronicle

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Client Sample ID: 2601479 WP#1 POE
Date Collected: 01/27/26 10:15
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 15:53

Client Sample ID: 2601480 WP#2 POE
Date Collected: 01/27/26 10:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-2
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 16:07

Client Sample ID: 2601481 WP#3 POE
Date Collected: 01/27/26 10:30
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-3
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 19:16

Client Sample ID: 2601482 WP#4 POE
Date Collected: 01/27/26 09:45
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-4
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 19:29

Client Sample ID: 2601483 WP#5 POE
Date Collected: 01/27/26 08:45
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-5
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 19:43

Client Sample ID: 2601484 WP#6 POE
Date Collected: 01/27/26 09:00
Date Received: 01/28/26 13:45

Lab Sample ID: 670-79405-6
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 19:56

Lab Chronicle

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Client Sample ID: 2601485 WP#7 POE

Lab Sample ID: 670-79405-7

Date Collected: 01/27/26 09:30

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 20:10

Client Sample ID: 2601486 WP#8 POE

Lab Sample ID: 670-79405-8

Date Collected: 01/27/26 08:30

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 20:23

Client Sample ID: 2601487 WP#9 POE

Lab Sample ID: 670-79405-9

Date Collected: 01/27/26 09:15

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 20:37

Client Sample ID: 2601488 WP#12 POE

Lab Sample ID: 670-79405-10

Date Collected: 01/27/26 10:45

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 20:50

Client Sample ID: Field Blank

Lab Sample ID: 670-79405-11

Date Collected: 01/27/26 00:00

Matrix: Drinking Water

Date Received: 01/28/26 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW Prep			763817	VQ6H	ELLE	02/03/26 08:29
Total/NA	Analysis	EPA 537.1 V2		1	764529	WR4P	ELLE	02/04/26 21:04

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-11-26
Arkansas DEQ	State	88-00660	08-09-26
California	State	2792	01-31-26 *
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
Delaware (DW)	State	N/A	01-31-27
Florida	NELAP	E87997	06-30-26
Illinois	NELAP	200027	01-31-27
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-26
Kentucky (DW)	State	KY90088	12-31-26
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-26
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-26
Massachusetts	State	M-PA009	06-30-26
Minnesota	NELAP	042-999-487	12-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-27
New Hampshire	NELAP	2730	01-10-27
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	01-01-27
North Dakota	State	R-205	01-31-24 *
Ohio	State	87787	01-31-27
Oklahoma	NELAP	9804	12-31-26
Oregon	NELAP	PA200001	09-11-26
Pennsylvania	NELAP	36-00037	01-31-27
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-31-26
Texas	NELAP	T104704194-23-46	08-31-26
USDA	US Federal Programs	525-22-298-19481	03-13-26
Vermont	State	VT - 36037	10-28-26
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	01-31-27
West Virginia DEP	State	055	07-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Method	Method Description	Protocol	Laboratory
EPA 537.1 V2	EPA 537.1, Ver 2.0 Mar 2020	EPA	ELLE
537.1 DW Prep	Extraction of Perfluorinated Alkyl Acids	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Deland
Project/Site: PFAS

Job ID: 670-79405-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
670-79405-1	2601479 WP#1 POE	Drinking Water	01/27/26 10:15	01/28/26 13:45	Florida
670-79405-2	2601480 WP#2 POE	Drinking Water	01/27/26 10:00	01/28/26 13:45	Florida
670-79405-3	2601481 WP#3 POE	Drinking Water	01/27/26 10:30	01/28/26 13:45	Florida
670-79405-4	2601482 WP#4 POE	Drinking Water	01/27/26 09:45	01/28/26 13:45	Florida
670-79405-5	2601483 WP#5 POE	Drinking Water	01/27/26 08:45	01/28/26 13:45	Florida
670-79405-6	2601484 WP#6 POE	Drinking Water	01/27/26 09:00	01/28/26 13:45	Florida
670-79405-7	2601485 WP#7 POE	Drinking Water	01/27/26 09:30	01/28/26 13:45	Florida
670-79405-8	2601486 WP#8 POE	Drinking Water	01/27/26 08:30	01/28/26 13:45	Florida
670-79405-9	2601487 WP#9 POE	Drinking Water	01/27/26 09:15	01/28/26 13:45	Florida
670-79405-10	2601488 WP#12 POE	Drinking Water	01/27/26 10:45	01/28/26 13:45	Florida
670-79405-11	Field Blank	Drinking Water	01/27/26 00:00	01/28/26 13:45	Florida

Eurofins Environmental Testing Southeast, LLC
481 Newburyport Ave
Altamonte Springs FL 32701
Phone 407-339-5984

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: SVP / RR	Lab PM: Kathryn Nordmark	Carrier Tracking No(s):	COC No: 670-36357-15675 1
Client Contact: Shawn Wahrenberger	Phone: 386-626-7256	E-Mail: Kathryn Nordmark@et.eurofinsus com		Page: Page 1 of 1
Company: City of Deland				Job #:
Address: 1101 S Amelia Ave	Due Date Requested			
City: Deland	TAT Requested (days)			
State Zip: FL 32724				
Phone:	PO #: 26-002294			
Email: wahrenbergers@deland org	WO #:			
Project Name: PFAS	Project #: 67004011			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL	M - Hexane
B NaOH	N - None
C Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T TSP Dodecahydrate
I - Ice	U Acetone
J - DI Water	V - MCAA
K - EDTA	W pH 4-5
L - EDA	Z - other (specify)

Other: Y - Zn 2m

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW - DW EPA 537 1 List of 18	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	Y	X	
2601479 WP# 1 POE	1/27/26	1015	G	Drinking Wate			X	2	
2601480 WP#2 POE	1/27/26	1000	G	Drinking Wate			X	2	
2601481 WP#3 POE	1/27/26	1030	G	Drinking Wate			X	2	
2601482 WP#4 POE	1/27/26	0945	G	Drinking Wate			X	2	
2601483 WP#5 POE	1/27/26	0845	G	Drinking Wate			X	2	
2601484 WP#6 POE	1/27/26	0900	G	Drinking Wate			X	2	
2601485 WP#7 POE	1/27/26	0930	G	Drinking Wate			X	2	
2601486 WP#8 POE	1/27/26	0830	G	Drinking Wate			X	2	
2601487 WP#9 POE	1/27/26	0915	G	Drinking Wate			X	2	
2601488 WP#12 POE	1/27/26	1045	G	Drinking Wate			X	2	

670-79405 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

1.00
1

Deliverable Requested I II III, IV Other (specify)

Empty Kit Relinquished by: AM	Date: 1/9/26	13 12	Method of Shipment: Fedcex

Relinquished by: Stephanie Vargas	Date/Time: 01/28/26	Company: 1005	Received by:	Date/Time: 1-28-26	Company: PSJ
Relinquished by:	Date/Time: 1-28-26	Company: 13.45	Received by: CB	Date/Time: 1/28/26 1345	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.2/2.2

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-70473.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 1 of 2
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-79405-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 2/6/2026			Preservation Codes: -
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537.1_DW/537.1_DW_PrepDW EPA 537.1 List of 18	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2601479 WP#1 POE (670-79405-1)	1/27/26	10:15 Eastern	G	Drinking Wate			X	2	
2601480 WP#2 POE (670-79405-2)	1/27/26	10:00 Eastern	G	Drinking Wate			X	2	
2601481 WP#3 POE (670-79405-3)	1/27/26	10:30 Eastern	G	Drinking Wate			X	2	
2601482 WP#4 POE (670-79405-4)	1/27/26	09:45 Eastern	G	Drinking Wate			X	2	
2601483 WP#5 POE (670-79405-5)	1/27/26	08:45 Eastern	G	Drinking Wate			X	2	
2601484 WP#6 POE (670-79405-6)	1/27/26	09:00 Eastern	G	Drinking Wate			X	2	
2601485 WP#7 POE (670-79405-7)	1/27/26	09:30 Eastern	G	Drinking Wate			X	2	
2601486 WP#8 POE (670-79405-8)	1/27/26	08:30 Eastern	G	Drinking Wate			X	2	
2601487 WP#9 POE (670-79405-9)	1/27/26	09:15 Eastern	G	Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	1.28.26 1700				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 02/02/26 0920	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R-1.2, 1.3, 0.5, 2.6

Ver: 10/10/2024

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone: 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-70473.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn.nordmark@et.eurofinsus.com	State of Origin: Florida	Page: Page 2 of 2
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Florida		Job #: 670-79405-1
Address: 2425 New Holland Pike,	Due Date Requested: 2/6/2026			Preservation Codes: -
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537.1_DW/537.1_DW_PrepDW EPA 537.1 List of 18	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2601488 WP#12 POE (670-79405-10)	1/27/26	10:45 Eastern	G	Drinking Wate			X	2	
Field Blank (670-79405-11)	1/27/26	Eastern	G	Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		1.28.26 1700				
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 02/02/26 0920	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R: 1.2, 1.3, 0.5, 2.6

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-79405-1

Login Number: 79405
List Number: 1
Creator: Borel, Celeste

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-79405-1

Login Number: 79405
List Number: 2
Creator: Bui, Anthony

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 02/02/26 12:29 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	Not present.
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Shawn Wahrenberger
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 5/11/2026 8:34:01 AM

JOB DESCRIPTION

PFAS Sampling

JOB NUMBER

670-86758-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Drinking Water and Wastewater Southeast, LLC Project Manager.

Authorization



Generated
5/11/2026 8:34:01 AM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 8
Surrogate Summary 15
QC Sample Results 16
QC Association Summary 20
Lab Chronicle 22
Certification Summary 25
Method Summary 27
Sample Summary 28
Chain of Custody 29
Receipt Checklists 36

Definitions/Glossary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Qualifiers

LCMS

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-86758-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 5/1/2026 12:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.2°C and 3.4°C.

PFAS
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Client Sample ID: 2604693 WP#1 FB — Lab Sample ID: 670-86758-1

No Detections.

Client Sample ID: 2604694 WP#2 FB — Lab Sample ID: 670-86758-2

No Detections.

Client Sample ID: 2604695 WP#3 FB — Lab Sample ID: 670-86758-3

No Detections.

Client Sample ID: 2604697 WP#5 FB — Lab Sample ID: 670-86758-5

No Detections.

Client Sample ID: 2604698 WP#6 FB — Lab Sample ID: 670-86758-6

No Detections.

Client Sample ID: 2604700 WP#8 FB — Lab Sample ID: 670-86758-8

No Detections.

Client Sample ID: 2604702 WP#12 FB — Lab Sample ID: 670-86758-10

No Detections.

Client Sample ID: 2604683 WP #1 POE — Lab Sample ID: 670-86767-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	4.4		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.4		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.0		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604684 WP #2 POE — Lab Sample ID: 670-86767-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.4		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.0		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604685 WP #3 POE — Lab Sample ID: 670-86767-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	4.2		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.0		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.7		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604686 WP #4 POE — Lab Sample ID: 670-86767-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.65	I	2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.63	I	2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.65	I	2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	0.73	I	2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Detection Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Client Sample ID: 2604687 WP #5 POE — Lab Sample ID: 670-86767-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	5.1		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.9		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.7		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.5		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604688 WP #6 POE — Lab Sample ID: 670-86767-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	4.1		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.6		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.1		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.7		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604689 WP #7 POE — Lab Sample ID: 670-86767-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	1.4	I	2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.2	I	2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604690 WP #8 POE — Lab Sample ID: 670-86767-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	7.2		2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.1		2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	5.8		2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	0.66	I	2.0	0.40	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604691 WP #9 POE — Lab Sample ID: 670-86767-9

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	1.2	I	2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	I	2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.9	I	2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	0.94	I	2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: 2604692 WP #12 POE — Lab Sample ID: 670-86767-10

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	1.4	I	2.0	0.32	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	I	2.0	0.37	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	0.43	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	1.1	I	2.0	0.38	ng/L	1		EPA 537.1 V2	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2604693 WP#1 FB

Lab Sample ID: 670-86758-1

Date Collected: 04/29/26 10:15

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 15:34	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 15:34	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 15:34	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 15:34	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 15:34	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*111*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:34*	*1*
13C2 PFDA	*106*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:34*	*1*
d5-NEtFOSAA	*99*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:34*	*1*
13C3-GenX	*107*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:34*	*1*

Client Sample ID: 2604694 WP#2 FB

Lab Sample ID: 670-86758-2

Date Collected: 04/29/26 10:05

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 15:43	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 15:43	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 15:43	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 15:43	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 15:43	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*117*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:43*	*1*
13C2 PFDA	*117*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:43*	*1*
d5-NEtFOSAA	*114*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:43*	*1*
13C3-GenX	*116*		*70 - 130*	*05/05/26 02:40*	*05/05/26 15:43*	*1*

Client Sample ID: 2604695 WP#3 FB

Lab Sample ID: 670-86758-3

Date Collected: 04/29/26 10:30

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 16:03	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 16:03	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 16:03	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 16:03	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 16:03	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:03*	*1*
13C2 PFDA	*107*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:03*	*1*
d5-NEtFOSAA	*105*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:03*	*1*

Client Sample ID: 2604695 WP#3 FB

Date Collected: 04/29/26 10:30
Date Received: 05/01/26 12:45

Lab Sample ID: 670-86758-3
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-GenX	*106*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:03*	*1*

Client Sample ID: 2604697 WP#5 FB

Date Collected: 04/29/26 08:45
Date Received: 05/01/26 12:45

Lab Sample ID: 670-86758-5
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 16:23	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 16:23	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 16:23	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 16:23	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 16:23	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:23*	*1*
13C2 PFDA	*109*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:23*	*1*
d5-NEtFOSAA	*101*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:23*	*1*
13C3-GenX	*105*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:23*	*1*

Client Sample ID: 2604698 WP#6 FB

Date Collected: 04/29/26 08:55
Date Received: 05/01/26 12:45

Lab Sample ID: 670-86758-6
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 16:33	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 16:33	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 16:33	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 16:33	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 16:33	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*116*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:33*	*1*
13C2 PFDA	*103*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:33*	*1*
d5-NEtFOSAA	*108*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:33*	*1*
13C3-GenX	*110*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:33*	*1*

Client Sample ID: 2604700 WP#8 FB

Date Collected: 04/29/26 08:25
Date Received: 05/01/26 12:45

Lab Sample ID: 670-86758-8
Matrix: Drinking Water

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 16:52	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 16:52	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 16:52	1

Client Sample ID: 2604700 WP#8 FB

Lab Sample ID: 670-86758-8

Date Collected: 04/29/26 08:25

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 16:52	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 16:52	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*120*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:52*	*1*
13C2 PFDA	*106*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:52*	*1*
d5-NEtFOSAA	*108*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:52*	*1*
13C3-GenX	*112*		*70 - 130*	*05/05/26 02:40*	*05/05/26 16:52*	*1*

Client Sample ID: 2604702 WP#12 FB

Lab Sample ID: 670-86758-10

Date Collected: 04/29/26 10:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 17:11	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 17:11	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 17:11	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 17:11	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 17:11	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*124*		*70 - 130*	*05/05/26 02:40*	*05/05/26 17:11*	*1*
13C2 PFDA	*111*		*70 - 130*	*05/05/26 02:40*	*05/05/26 17:11*	*1*
d5-NEtFOSAA	*116*		*70 - 130*	*05/05/26 02:40*	*05/05/26 17:11*	*1*
13C3-GenX	*123*		*70 - 130*	*05/05/26 02:40*	*05/05/26 17:11*	*1*

Client Sample ID: 2604683 WP #1 POE

Lab Sample ID: 670-86767-1

Date Collected: 04/29/26 10:15

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 14:26	1
Perfluorohexanesulfonic acid (PFHxS)	**4.4**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 14:26	1
Perfluorobutanesulfonic acid (PFBS)	**4.4**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 14:26	1
Perfluorooctanesulfonic acid (PFOS)	**7.0**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 14:26	1
Perfluorooctanoic acid (PFOA)	**3.4**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 14:26	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*123*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:26*	*1*
13C2 PFDA	*116*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:26*	*1*
d5-NEtFOSAA	*118*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:26*	*1*
13C3-GenX	*115*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:26*	*1*

Client Sample ID: 2604684 WP #2 POE

Lab Sample ID: 670-86767-2

Date Collected: 04/29/26 10:05

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 14:36	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 14:36	1
Perfluorobutanesulfonic acid (PFBS)	**4.4**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 14:36	1
Perfluorooctanesulfonic acid (PFOS)	**6.0**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 14:36	1
Perfluorooctanoic acid (PFOA)	**3.2**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 14:36	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*119*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:36*	*1*
13C2 PFDA	*110*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:36*	*1*
d5-NEtFOSAA	*107*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:36*	*1*
13C3-GenX	*108*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:36*	*1*

Client Sample ID: 2604685 WP #3 POE

Lab Sample ID: 670-86767-3

Date Collected: 04/29/26 10:30

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 14:45	1
Perfluorohexanesulfonic acid (PFHxS)	**4.2**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 14:45	1
Perfluorobutanesulfonic acid (PFBS)	**3.1**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 14:45	1
Perfluorooctanesulfonic acid (PFOS)	**5.0**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 14:45	1
Perfluorooctanoic acid (PFOA)	**2.7**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 14:45	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*117*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:45*	*1*
13C2 PFDA	*110*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:45*	*1*
d5-NEtFOSAA	*110*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:45*	*1*
13C3-GenX	*105*		*70 - 130*	*05/05/26 13:30*	*05/06/26 14:45*	*1*

Client Sample ID: 2604686 WP #4 POE

Lab Sample ID: 670-86767-4

Date Collected: 04/29/26 09:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 15:06	1
Perfluorohexanesulfonic acid (PFHxS)	**0.65**	**I**	2.0	0.32	ng/L		05/05/26 13:30	05/06/26 15:06	1
Perfluorobutanesulfonic acid (PFBS)	**0.63**	**I**	2.0	0.37	ng/L		05/05/26 13:30	05/06/26 15:06	1
Perfluorooctanesulfonic acid (PFOS)	**0.65**	**I**	2.0	0.43	ng/L		05/05/26 13:30	05/06/26 15:06	1

Client Sample ID: 2604686 WP #4 POE

Lab Sample ID: 670-86767-4

Date Collected: 04/29/26 09:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**0.73**	**I**	2.0	0.38	ng/L		05/05/26 13:30	05/06/26 15:06	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:06*	*1*
13C2 PFDA	*115*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:06*	*1*
d5-NEtFOSAA	*110*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:06*	*1*
13C3-GenX	*101*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:06*	*1*

Client Sample ID: 2604687 WP #5 POE

Lab Sample ID: 670-86767-5

Date Collected: 04/29/26 08:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 15:17	1
Perfluorohexanesulfonic acid (PFHxS)	**5.1**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 15:17	1
Perfluorobutanesulfonic acid (PFBS)	**6.9**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 15:17	1
Perfluorooctanesulfonic acid (PFOS)	**8.7**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 15:17	1
Perfluorooctanoic acid (PFOA)	**4.5**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 15:17	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*97*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:17*	*1*
13C2 PFDA	*105*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:17*	*1*
d5-NEtFOSAA	*101*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:17*	*1*
13C3-GenX	*92*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:17*	*1*

Client Sample ID: 2604688 WP #6 POE

Lab Sample ID: 670-86767-6

Date Collected: 04/29/26 08:55

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 15:26	1
Perfluorohexanesulfonic acid (PFHxS)	**4.1**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 15:26	1
Perfluorobutanesulfonic acid (PFBS)	**6.6**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 15:26	1
Perfluorooctanesulfonic acid (PFOS)	**8.1**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 15:26	1
Perfluorooctanoic acid (PFOA)	**4.7**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 15:26	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*117*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:26*	*1*
13C2 PFDA	*115*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:26*	*1*
d5-NEtFOSAA	*114*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:26*	*1*

Client Sample ID: 2604688 WP #6 POE

Lab Sample ID: 670-86767-6

Date Collected: 04/29/26 08:55
Matrix: Drinking Water
Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3-GenX	*109*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:26*	*1*

Client Sample ID: 2604689 WP #7 POE

Lab Sample ID: 670-86767-7

Date Collected: 04/29/26 09:05
Matrix: Drinking Water
Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/08/26 01:30	05/08/26 14:27	1
Perfluorohexanesulfonic acid (PFHxS)	**1.4**	**I**	2.0	0.32	ng/L		05/08/26 01:30	05/08/26 14:27	1
Perfluorobutanesulfonic acid (PFBS)	**2.7**		2.0	0.37	ng/L		05/08/26 01:30	05/08/26 14:27	1
Perfluorooctanesulfonic acid (PFOS)	**2.1**		2.0	0.43	ng/L		05/08/26 01:30	05/08/26 14:27	1
Perfluorooctanoic acid (PFOA)	**1.2**	**I**	2.0	0.38	ng/L		05/08/26 01:30	05/08/26 14:27	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/08/26 01:30	05/08/26 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*92*		*70 - 130*	*05/08/26 01:30*	*05/08/26 14:27*	*1*
13C2 PFDA	*98*		*70 - 130*	*05/08/26 01:30*	*05/08/26 14:27*	*1*
d5-NEtFOSAA	*106*		*70 - 130*	*05/08/26 01:30*	*05/08/26 14:27*	*1*
13C3-GenX	*99*		*70 - 130*	*05/08/26 01:30*	*05/08/26 14:27*	*1*

Client Sample ID: 2604690 WP #8 POE

Lab Sample ID: 670-86767-8

Date Collected: 04/29/26 08:25
Matrix: Drinking Water
Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 15:45	1
Perfluorohexanesulfonic acid (PFHxS)	**7.2**		2.0	0.32	ng/L		05/05/26 13:30	05/06/26 15:45	1
Perfluorobutanesulfonic acid (PFBS)	**7.1**		2.0	0.37	ng/L		05/05/26 13:30	05/06/26 15:45	1
Perfluorooctanesulfonic acid (PFOS)	**11**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 15:45	1
Perfluorooctanoic acid (PFOA)	**5.8**		2.0	0.38	ng/L		05/05/26 13:30	05/06/26 15:45	1
Perfluorononanoic acid (PFNA)	**0.66**	**I**	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*118*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:45*	*1*
13C2 PFDA	*114*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:45*	*1*
d5-NEtFOSAA	*112*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:45*	*1*
13C3-GenX	*109*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:45*	*1*

Client Sample ID: 2604691 WP #9 POE

Lab Sample ID: 670-86767-9

Date Collected: 04/29/26 09:25

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 15:55	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**I**	2.0	0.32	ng/L		05/05/26 13:30	05/06/26 15:55	1
Perfluorobutanesulfonic acid (PFBS)	**1.4**	**I**	2.0	0.37	ng/L		05/05/26 13:30	05/06/26 15:55	1
Perfluorooctanesulfonic acid (PFOS)	**1.9**	**I**	2.0	0.43	ng/L		05/05/26 13:30	05/06/26 15:55	1
Perfluorooctanoic acid (PFOA)	**0.94**	**I**	2.0	0.38	ng/L		05/05/26 13:30	05/06/26 15:55	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*91*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:55*	*1*
13C2 PFDA	*98*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:55*	*1*
d5-NEtFOSAA	*107*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:55*	*1*
13C3-GenX	*84*		*70 - 130*	*05/05/26 13:30*	*05/06/26 15:55*	*1*

Client Sample ID: 2604692 WP #12 POE

Lab Sample ID: 670-86767-10

Date Collected: 04/29/26 10:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 16:04	1
Perfluorohexanesulfonic acid (PFHxS)	**1.4**	**I**	2.0	0.32	ng/L		05/05/26 13:30	05/06/26 16:04	1
Perfluorobutanesulfonic acid (PFBS)	**1.1**	**I**	2.0	0.37	ng/L		05/05/26 13:30	05/06/26 16:04	1
Perfluorooctanesulfonic acid (PFOS)	**2.0**		2.0	0.43	ng/L		05/05/26 13:30	05/06/26 16:04	1
Perfluorooctanoic acid (PFOA)	**1.1**	**I**	2.0	0.38	ng/L		05/05/26 13:30	05/06/26 16:04	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*117*		*70 - 130*	*05/05/26 13:30*	*05/06/26 16:04*	*1*
13C2 PFDA	*111*		*70 - 130*	*05/05/26 13:30*	*05/06/26 16:04*	*1*
d5-NEtFOSAA	*112*		*70 - 130*	*05/05/26 13:30*	*05/06/26 16:04*	*1*
13C3-GenX	*109*		*70 - 130*	*05/05/26 13:30*	*05/06/26 16:04*	*1*

Surrogate Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		PFHxA	PFDA	d5NEFOS	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
670-86758-1	2604693 WP#1 FB	111	106	99	107
670-86758-2	2604694 WP#2 FB	117	117	114	116
670-86758-3	2604695 WP#3 FB	114	107	105	106
670-86758-5	2604697 WP#5 FB	115	109	101	105
670-86758-6	2604698 WP#6 FB	116	103	108	110
670-86758-8	2604700 WP#8 FB	120	106	108	112
670-86758-10	2604702 WP#12 FB	124	111	116	123
670-86767-1	2604683 WP #1 POE	123	116	118	115
670-86767-2	2604684 WP #2 POE	119	110	107	108
670-86767-3	2604685 WP #3 POE	117	110	110	105
670-86767-4	2604686 WP #4 POE	110	115	110	101
670-86767-5	2604687 WP #5 POE	97	105	101	92
670-86767-6	2604688 WP #6 POE	117	115	114	109
670-86767-7	2604689 WP #7 POE	92	98	106	99
670-86767-8	2604690 WP #8 POE	118	114	112	109
670-86767-9	2604691 WP #9 POE	91	98	107	84
670-86767-10	2604692 WP #12 POE	117	111	112	109
LCS 380-224939/21-A	Lab Control Sample	106	111	96	96
LCS 380-224959/21-A	Lab Control Sample	116	112	106	109
LCS 380-225728/21-A	Lab Control Sample	104	103	95	99
MBL 380-224939/19-A	Method Blank	121	121	107	117
MBL 380-224959/19-A	Method Blank	121	123	114	112
MBL 380-225728/19-A	Method Blank	127	118	112	114
MRL 380-224939/20-A	Lab Control Sample	104	103	99	93
MRL 380-224959/20-A	Lab Control Sample	120	114	113	111
MRL 380-225728/20-A	Lab Control Sample	100	98	107	93

Surrogate Legend

PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
d5NEFOS = d5-NEtFOSAA
GenX = 13C3-GenX

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Lab Sample ID: MBL 380-224939/19-A
Matrix: Drinking Water
Analysis Batch: 225008

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224939

Analyte	MBL Result	MBL Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 02:40	05/05/26 13:30	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 02:40	05/05/26 13:30	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 02:40	05/05/26 13:30	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 02:40	05/05/26 13:30	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 02:40	05/05/26 13:30	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 02:40	05/05/26 13:30	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*121*		*70 - 130*	*05/05/26 02:40*	*05/05/26 13:30*	*1*
13C2 PFDA	*121*		*70 - 130*	*05/05/26 02:40*	*05/05/26 13:30*	*1*
d5-NEtFOSAA	*107*		*70 - 130*	*05/05/26 02:40*	*05/05/26 13:30*	*1*
13C3-GenX	*117*		*70 - 130*	*05/05/26 02:40*	*05/05/26 13:30*	*1*

Lab Sample ID: LCS 380-224939/21-A
Matrix: Drinking Water
Analysis Batch: 225008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	22.3		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	26.3		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	25.6		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	25.6		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	25.4		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.3		ng/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*106*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
d5-NEtFOSAA	*96*		*70 - 130*
13C3-GenX	*96*		*70 - 130*

Lab Sample ID: MRL 380-224939/20-A
Matrix: Drinking Water
Analysis Batch: 225008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224939

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.67	I	ng/L		83	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.20		ng/L		110	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.29		ng/L		114	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.18		ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.13		ng/L		107	50 - 150

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-224939/20-A
Matrix: Drinking Water
Analysis Batch: 225008

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224939

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorononanoic acid (PFNA)			2.00	2.20		ng/L		110	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C2 PFHxA	*104*		*70 - 130*
13C2 PFDA	*103*		*70 - 130*
d5-NEtFOSAA	*99*		*70 - 130*
13C3-GenX	*93*		*70 - 130*

Lab Sample ID: MBL 380-224959/19-A
Matrix: Drinking Water
Analysis Batch: 225208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224959

Analyte	MBL Result	MBL Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/05/26 13:30	05/06/26 12:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/05/26 13:30	05/06/26 12:19	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/05/26 13:30	05/06/26 12:19	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/05/26 13:30	05/06/26 12:19	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/05/26 13:30	05/06/26 12:19	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/05/26 13:30	05/06/26 12:19	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*121*		*70 - 130*	*05/05/26 13:30*	*05/06/26 12:19*	*1*
13C2 PFDA	*123*		*70 - 130*	*05/05/26 13:30*	*05/06/26 12:19*	*1*
d5-NEtFOSAA	*114*		*70 - 130*	*05/05/26 13:30*	*05/06/26 12:19*	*1*
13C3-GenX	*112*		*70 - 130*	*05/05/26 13:30*	*05/06/26 12:19*	*1*

Lab Sample ID: LCS 380-224959/21-A
Matrix: Drinking Water
Analysis Batch: 225208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224959

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	25.5		ng/L		102	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			25.1	26.9		ng/L		107	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			25.1	27.6		ng/L		110	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			25.1	26.7		ng/L		107	70 - 130		
Perfluorooctanoic acid (PFOA)			25.1	26.0		ng/L		104	70 - 130		
Perfluorononanoic acid (PFNA)			25.1	26.8		ng/L		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*116*		*70 - 130*
13C2 PFDA	*112*		*70 - 130*
d5-NEtFOSAA	*106*		*70 - 130*
13C3-GenX	*109*		*70 - 130*

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-224959/20-A
Matrix: Drinking Water
Analysis Batch: 225208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224959

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.22		ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.36		ng/L		118	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.28		ng/L		114	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.16		ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.28		ng/L		114	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.21		ng/L		110	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C2 PFHxA	*120*		*70 - 130*
13C2 PFDA	*114*		*70 - 130*
d5-NEtFOSAA	*113*		*70 - 130*
13C3-GenX	*111*		*70 - 130*

Lab Sample ID: MBL 380-225728/19-A
Matrix: Drinking Water
Analysis Batch: 225838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225728

Analyte	MBL Result	MBL Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.0	U	2.0	1.0	ng/L		05/08/26 01:30	05/08/26 12:32	1
Perfluorohexanesulfonic acid (PFHxS)	0.32	U	2.0	0.32	ng/L		05/08/26 01:30	05/08/26 12:32	1
Perfluorobutanesulfonic acid (PFBS)	0.37	U	2.0	0.37	ng/L		05/08/26 01:30	05/08/26 12:32	1
Perfluorooctanesulfonic acid (PFOS)	0.43	U	2.0	0.43	ng/L		05/08/26 01:30	05/08/26 12:32	1
Perfluorooctanoic acid (PFOA)	0.38	U	2.0	0.38	ng/L		05/08/26 01:30	05/08/26 12:32	1
Perfluorononanoic acid (PFNA)	0.40	U	2.0	0.40	ng/L		05/08/26 01:30	05/08/26 12:32	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*127*		*70 - 130*	*05/08/26 01:30*	*05/08/26 12:32*	*1*
13C2 PFDA	*118*		*70 - 130*	*05/08/26 01:30*	*05/08/26 12:32*	*1*
d5-NEtFOSAA	*112*		*70 - 130*	*05/08/26 01:30*	*05/08/26 12:32*	*1*
13C3-GenX	*114*		*70 - 130*	*05/08/26 01:30*	*05/08/26 12:32*	*1*

Lab Sample ID: LCS 380-225728/21-A
Matrix: Drinking Water
Analysis Batch: 225838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	46.4		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	51.1		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	50.3		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.1	50.4		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	50.4		ng/L		101	70 - 130

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: LCS 380-225728/21-A
Matrix: Drinking Water
Analysis Batch: 225838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanoic acid (PFNA)	50.1	52.0		ng/L		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*104*		*70 - 130*
13C2 PFDA	*103*		*70 - 130*
d5-NEtFOSAA	*95*		*70 - 130*
13C3-GenX	*99*		*70 - 130*

Lab Sample ID: MRL 380-225728/20-A
Matrix: Drinking Water
Analysis Batch: 225838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225728

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.93	I	ng/L		96	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.08		ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.20		ng/L		110	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.24		ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.89	I	ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.12		ng/L		106	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C2 PFHxA	*100*		*70 - 130*
13C2 PFDA	*98*		*70 - 130*
d5-NEtFOSAA	*107*		*70 - 130*
13C3-GenX	*93*		*70 - 130*

LCMS

Prep Batch: 224939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86758-1	2604693 WP#1 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-2	2604694 WP#2 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-3	2604695 WP#3 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-5	2604697 WP#5 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-6	2604698 WP#6 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-8	2604700 WP#8 FB	Total/NA	Drinking Water	537.1 DW	
670-86758-10	2604702 WP#12 FB	Total/NA	Drinking Water	537.1 DW	
MBL 380-224939/19-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-224939/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-224939/20-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 224959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86767-1	2604683 WP #1 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-2	2604684 WP #2 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-3	2604685 WP #3 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-4	2604686 WP #4 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-5	2604687 WP #5 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-6	2604688 WP #6 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-8	2604690 WP #8 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-9	2604691 WP #9 POE	Total/NA	Drinking Water	537.1 DW	
670-86767-10	2604692 WP #12 POE	Total/NA	Drinking Water	537.1 DW	
MBL 380-224959/19-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-224959/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-224959/20-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 225008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86758-1	2604693 WP#1 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-2	2604694 WP#2 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-3	2604695 WP#3 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-5	2604697 WP#5 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-6	2604698 WP#6 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-8	2604700 WP#8 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
670-86758-10	2604702 WP#12 FB	Total/NA	Drinking Water	EPA 537.1 V2	224939
MBL 380-224939/19-A	Method Blank	Total/NA	Drinking Water	EPA 537.1 V2	224939
LCS 380-224939/21-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	224939
MRL 380-224939/20-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	224939

Analysis Batch: 225208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86767-1	2604683 WP #1 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-2	2604684 WP #2 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-3	2604685 WP #3 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-4	2604686 WP #4 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-5	2604687 WP #5 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-6	2604688 WP #6 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-8	2604690 WP #8 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-9	2604691 WP #9 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
670-86767-10	2604692 WP #12 POE	Total/NA	Drinking Water	EPA 537.1 V2	224959
MBL 380-224959/19-A	Method Blank	Total/NA	Drinking Water	EPA 537.1 V2	224959

LCMS (Continued)

Analysis Batch: 225208 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 380-224959/21-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	224959
MRL 380-224959/20-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	224959

Prep Batch: 225728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86767-7	2604689 WP #7 POE	Total/NA	Drinking Water	537.1 DW	
MBL 380-225728/19-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-225728/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-225728/20-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 225838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-86767-7	2604689 WP #7 POE	Total/NA	Drinking Water	EPA 537.1 V2	225728
MBL 380-225728/19-A	Method Blank	Total/NA	Drinking Water	EPA 537.1 V2	225728
LCS 380-225728/21-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	225728
MRL 380-225728/20-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1 V2	225728

Lab Chronicle

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Client Sample ID: 2604693 WP#1 FB

Lab Sample ID: 670-86758-1

Date Collected: 04/29/26 10:15

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 15:34

Client Sample ID: 2604694 WP#2 FB

Lab Sample ID: 670-86758-2

Date Collected: 04/29/26 10:05

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 15:43

Client Sample ID: 2604695 WP#3 FB

Lab Sample ID: 670-86758-3

Date Collected: 04/29/26 10:30

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 16:03

Client Sample ID: 2604697 WP#5 FB

Lab Sample ID: 670-86758-5

Date Collected: 04/29/26 08:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 16:23

Client Sample ID: 2604698 WP#6 FB

Lab Sample ID: 670-86758-6

Date Collected: 04/29/26 08:55

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 16:33

Client Sample ID: 2604700 WP#8 FB

Lab Sample ID: 670-86758-8

Date Collected: 04/29/26 08:25

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 16:52

Lab Chronicle

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Client Sample ID: 2604702 WP#12 FB

Lab Sample ID: 670-86758-10

Date Collected: 04/29/26 10:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224939	G9MN	EA POM	05/05/26 02:40
Total/NA	Analysis	EPA 537.1 V2		1	225008	M7ML	EA POM	05/05/26 17:11

Client Sample ID: 2604683 WP #1 POE

Lab Sample ID: 670-86767-1

Date Collected: 04/29/26 10:15

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 14:26

Client Sample ID: 2604684 WP #2 POE

Lab Sample ID: 670-86767-2

Date Collected: 04/29/26 10:05

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 14:36

Client Sample ID: 2604685 WP #3 POE

Lab Sample ID: 670-86767-3

Date Collected: 04/29/26 10:30

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 14:45

Client Sample ID: 2604686 WP #4 POE

Lab Sample ID: 670-86767-4

Date Collected: 04/29/26 09:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 15:06

Client Sample ID: 2604687 WP #5 POE

Lab Sample ID: 670-86767-5

Date Collected: 04/29/26 08:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 15:17

Lab Chronicle

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Client Sample ID: 2604688 WP #6 POE

Lab Sample ID: 670-86767-6

Date Collected: 04/29/26 08:55

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 15:26

Client Sample ID: 2604689 WP #7 POE

Lab Sample ID: 670-86767-7

Date Collected: 04/29/26 09:05

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			225728	G9MN	EA POM	05/08/26 01:30
Total/NA	Analysis	EPA 537.1 V2		1	225838	Y5FM	EA POM	05/08/26 14:27

Client Sample ID: 2604690 WP #8 POE

Lab Sample ID: 670-86767-8

Date Collected: 04/29/26 08:25

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 15:45

Client Sample ID: 2604691 WP #9 POE

Lab Sample ID: 670-86767-9

Date Collected: 04/29/26 09:25

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 15:55

Client Sample ID: 2604692 WP #12 POE

Lab Sample ID: 670-86767-10

Date Collected: 04/29/26 10:45

Matrix: Drinking Water

Date Received: 05/01/26 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			224959	L9UA	EA POM	05/05/26 13:30
Total/NA	Analysis	EPA 537.1 V2		1	225208	M7ML	EA POM	05/06/26 16:04

Laboratory References:

EA POM = Eurofins Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Accreditation/Certification Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Laboratory: Eurofins Pomona

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5890.01 & 5890.02	06-30-27
Alabama	State	41060	06-18-26
Arizona	State	AZ0833	02-27-27
Arkansas (DW)	State	CA00006	01-31-27
California	State	2813	06-18-27
Colorado	State	CA00006	01-31-27
Connecticut	State	PH-0107	03-31-26 *
Delaware (DW)	State	CA00006	01-31-27
Florida	NELAP	E871024	06-30-26
Georgia (DW)	State	947	01-31-26 *
Guam	State	26-03R	03-31-27
Hawaii	State	CA00006	01-31-26 *
Hawaii (Micro)	State	CA00006	01-31-27
Idaho (DW)	State	CA00006	01-31-27
Idaho (Micro)	State	CA00006	03-31-27
Illinois	NELAP	200033	03-31-27
Indiana	State	C-CA-01	06-18-27
Kansas	NELAP	E-10268	04-30-27
Kentucky (DW)	State	KY90107	12-31-26
Louisiana (DW)	State	LA008	12-31-26
Maine	State	CA00006A	03-08-28
Maryland	State	224	03-31-27
Massachusetts	State	M-CA006	06-30-26
MI - RadChem Recognition	State	9906	06-18-27
Michigan	State	9906	06-18-27
Mississippi	State	CA00006	01-31-27
Montana (DW)	State	CERT0035	01-01-27
Nebraska	State	NE-OS-21-13	01-31-27
Nevada	State	CA00006	07-31-26
New Hampshire	NELAP	2959	03-29-27
New Jersey	NELAP	CA008	06-30-26
New Mexico	State	CA00006	01-31-27
New York	NELAP	11320	04-01-27
North Carolina (DW)	State	06701	07-31-26
North Dakota	State	R-009	01-31-26 *
Northern Mariana Islands (DW)	State	CA00006	01-31-27
Ohio	State	87786	01-31-27
Oregon	NELAP	4034	01-29-27
Pennsylvania	NELAP	68-00565	10-31-26
Puerto Rico	State	CA00006	03-31-27
Rhode Island	State	LAO00381	12-30-26
South Dakota (DW)	State	CA11320	06-18-27
Tennessee	State	TN02839	06-18-26
Texas	NELAP	T104704230	09-30-26
Utah	NELAP	CA00006	01-31-27
Vermont	State	VT-0114	01-22-27
Virginia	NELAP	460260	06-14-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Laboratory: Eurofins Pomona (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C838	03-13-27
Wyoming	State	8-TMS-L	06-18-27

Method Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Method	Method Description	Protocol	Laboratory
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA POM = Eurofins Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Sample Summary

Client: City of Deland
Project/Site: PFAS Sampling

Job ID: 670-86758-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
670-86758-1	2604693 WP#1 FB	Drinking Water	04/29/26 10:15	05/01/26 12:45	Florida
670-86758-2	2604694 WP#2 FB	Drinking Water	04/29/26 10:05	05/01/26 12:45	Florida
670-86758-3	2604695 WP#3 FB	Drinking Water	04/29/26 10:30	05/01/26 12:45	Florida
670-86758-5	2604697 WP#5 FB	Drinking Water	04/29/26 08:45	05/01/26 12:45	Florida
670-86758-6	2604698 WP#6 FB	Drinking Water	04/29/26 08:55	05/01/26 12:45	Florida
670-86758-8	2604700 WP#8 FB	Drinking Water	04/29/26 08:25	05/01/26 12:45	Florida
670-86758-10	2604702 WP#12 FB	Drinking Water	04/29/26 10:45	05/01/26 12:45	Florida
670-86767-1	2604683 WP #1 POE	Drinking Water	04/29/26 10:15	05/01/26 12:45	Florida
670-86767-2	2604684 WP #2 POE	Drinking Water	04/29/26 10:05	05/01/26 12:45	Florida
670-86767-3	2604685 WP #3 POE	Drinking Water	04/29/26 10:30	05/01/26 12:45	Florida
670-86767-4	2604686 WP #4 POE	Drinking Water	04/29/26 09:45	05/01/26 12:45	Florida
670-86767-5	2604687 WP #5 POE	Drinking Water	04/29/26 08:45	05/01/26 12:45	Florida
670-86767-6	2604688 WP #6 POE	Drinking Water	04/29/26 08:55	05/01/26 12:45	Florida
670-86767-7	2604689 WP #7 POE	Drinking Water	04/29/26 09:05	05/01/26 12:45	Florida
670-86767-8	2604690 WP #8 POE	Drinking Water	04/29/26 08:25	05/01/26 12:45	Florida
670-86767-9	2604691 WP #9 POE	Drinking Water	04/29/26 09:25	05/01/26 12:45	Florida
670-86767-10	2604692 WP #12 POE	Drinking Water	04/29/26 10:45	05/01/26 12:45	Florida

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone 407-339-5984 Fax. 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler	Lab PM	Carrier Tracking No(s):	COC No:
Client Contact. Shawn Wahrenberger	Phone:	Nordmark Kathryn E-Mail kathryn nordmark@et.eurofinsus com	State of Origin	670-40032-17271 2 Page: Page 2 of 2
Company: City of Deland	PWSID			Job #:

Address	Due Date Requested	Analysis Requested	Preservation Codes
1101 S Amelia Ave			Y - Trizma
City: Deland	TAT Requested (days)		
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No		
Phone:	PO #: 26-002294		
Email: wahrenbergers@deland org	WO #:		
Project Name: PFAS Sampling	Project #: 67004011		
Site:	SSOW#:		

670-86758 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW_PFEC - 40 CFR 141 PFAS	Total Number of contai	Special Instructions/Note
			Preservation Code:				Y		
260046 93 WP#1 FB	04/29/26	1015	G	Drinking Wate			X	3	
260046 94 WP#2 FB		1005	G	Drinking Wate			X	3	
260046 95 WP#3 FB		1030	G	Drinking Wate			X	3	
260046 96 WP#4 FB		0945	G	Drinking Wate			X	3	
260046 97 WP#5 FB		0845	G	Drinking Wate			X	3	
260046 98 WP#6 FB		0855	G	Drinking Wate			X	3	
260046 99 WP#7 FB		0905	G	Drinking Wate			X	3	
260047 00 WP#8 FB		0825	G	Drinking Wate			X	3	
260047 01 WP#9 FB		0925	G	Drinking Wate			X	3	
260047 02 WP#12 FB		1045	G	Drinking Wate			X	3	
				Drinking Wate					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: Jennifer Bell Date: 4-28-26 Time: 13:36 Method of Shipment: UPS

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Janice R McCoy	5/1/26 0915	Deland	William Nelson	05-01-26 9:15	ORL
William Nelson	5-1-26 12:45	ORL	JD	5/1/26 1245	E-ORL
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks. 3.2/3.2 | 3.4/3.4

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone 407-339-5984 Fax. 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler:	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s).	COC No: 670-40032-17271 1
Client Contact: Shawn Wahrenberger	Phone.	E-Mail: kathryn nordmark@et.eurofinsus com	State of Origin	Page. Page 1 of 2
Company: City of Deland	PWSID			Job #:
Address: 1101 S Amelia Ave	Due Date Requested			Preservation Codes: Y Trizma
City: Deland	TAT Requested (days)			
State, Zip: FL, 32724	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 26-002294			
Email: wahrenbergers@deland org	WO #:			
Project Name: PFAS Sampling	Project #: 67004011			
Site.	SSOW#:			Other:

670-86767 Chain of Custody

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS MSD (Yes or No)	537 1_DW_PFEC - 40 CFR 141 PFAS	Total Number of containe	Special Instructions/Note:
			Preservation Code:				Y		
2604683 WP#1 POE	04/29/26	1015	G	Drinking Wate			X	3	
2604684 WP#2 POE	04/29/26	1005	G	Drinking Wate			X	3	
2604685 WP#3 POE	04/29/26	1030	G	Drinking Wate			X	3	
2604686 WP#4 POE	04/29/26	0945	G	Drinking Wate			X	3	
2604687 WP#5 POE	04/29/26	0845	G	Drinking Wate			X	3	
2604688 WP#6 POE	04/29/26	0855	G	Drinking Wate			X	3	
2604689 WP#7 POE	04/29/26	0905	G	Drinking Wate			X	3	
2604690 WP#8 POE	04/29/26	0825	G	Drinking Wate			X	3	
2604691 WP#9 POE	04/29/26	0925	G	Drinking Wate			X	3	
2604692 WP#12 POE	04/29/26	1045	G	Drinking Wate			X	3	
				Drinking Wate					

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: Jennifer Bat	Date 4-28-26	Time 13:36	Method of Shipment: CPU		
Relinquished by: Janice R McCoy	Date/Time: 5/1/26 0915	Company: Deland	Received by: William Nelson	Date/Time: 05-01-26 9:15	Company: ORL
Relinquished by: William Nelson	Date/Time: 5-1-26 12:45	Company: ORL	Received by: JP	Date/Time: 5/1/26 1245	Company: E-ORL
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. ~~3.2/3.4~~ SP 3.2/3.2 | 3.4/3.4

Ver 03/20/2026 5/11/2026

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone. 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM.: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-78389 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn nordmark@et.eurofinsus com	State of Origin: Florida	Page: Page 1 of 2
Company: Eurofins Drinking Water and Wastewater W		Accreditations Required (See note): NELAP - Florida		Job #: 670-86758-1
Address: 941 Corporate Center Drive, ,	Due Date Requested: 5/8/2026			Preservation Codes: -
City: Pomona	TAT Requested (days): N/A			
State, Zip: CA, 91768-2642				
Phone: 626-386-1100(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW_PREC/537 1_DW_Prep40 CFR 141 PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2604693 WP#1 FB (670-86758-1)	4/29/26	10 15 Eastern	G	Drinking Wate			X	3	
2604694 WP#2 FB (670-86758-2)	4/29/26	10:05 Eastern	G	Drinking Wate			X	3	
2604695 WP#3 FB (670-86758-3)	4/29/26	10:30 Eastern	G	Drinking Wate			X	3	
2604696 WP#4 FB (670-86758-4)	4/29/26	09:45 Eastern	G	Drinking Wate			X	3	
2604697 WP#5 FB (670-86758-5)	4/29/26	08.45 Eastern	G	Drinking Wate			X	3	
2604698 WP#6 FB (670-86758-6)	4/29/26	08.55 Eastern	G	Drinking Wate			X	3	
2604699 WP#7 FB (670-86758-7)	4/29/26	09:05 Eastern	G	Drinking Wate			X	3	
2604700 WP#8 FB (670-86758-8)	4/29/26	08:25 Eastern	G	Drinking Wate			X	3	
2604701 WP#9 FB (670-86758-9)	4/29/26	09:25 Eastern	G	Drinking Wate			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time.	Method of Shipment: Bo Cat		
Relinquished by: [signature]	Date/Time: 5 1 26 1700	Company	Received by: [signature]	Date/Time: 5/2/26 0950	Company [signature]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.		Cooler Temperature(s) °C and Other Remarks. 6302 1.3 100 = 1.3 °C VOTE		

Ver 03/20/2026

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-78389.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn.nordmark@et.eurofinsus com	State of Origin: Florida	Page: Page 2 of 2
Company: Eurofins Drinking Water and Wastewater W		Accreditations Required (See note): NELAP - Florida		Job #: 670-86758-1
Address: 941 Corporate Center Drive, ,	Due Date Requested: 5/8/2026			
City: Pomona	TAT Requested (days): N/A			
State, Zip: CA, 91768-2642				
Phone: 626-386-1100(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW_PREC/537 1_DW_Prep40 CFR 141 PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2604702 WP#12 FB (670-86758-10)	4/29/26	10:45 Eastern	G	Drinking Wate			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		5/26 1700			5/27/26 0930	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 6.3 - 1.7 TR = 1.3 IR

Ver 03/20/2026

ORIGIN ID.SFBA (407) 339-5984
SAMANTHA COCHRAN

481 NEWBURYPORT AVE

ALTAMONTE SPRINGS FL 32701
UNITED STATES US

SHIP DATE. 01MAY26
ACTWGT 20.00 LB
CAD 255694836/INET4535

BILL SENDER

TO **CUSTODY**
EUROFINS POMONA
941 CORPORATE CENTER DRIVE

POMONA CA 91768
(626) 386-1100 REF·
INV·
PO: DEPT.

58KJ4/42C3/484B

FedEx Express

E

J261026012001uv

1 of 2

TRK# 0201 **8713 1268 2297**

MASTER

X0 ONTA

SATURDAY 12:00P
PRIORITY OVERNIGHT

91768
CA-US ONT

63CA 4.3 / 4.3 ice net

5/2/26
954

After printing this label
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1 Fold the printed page along the horizontal line
2 Place label in shipping pouch and affix it to your shipment

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone. 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM.: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-78389 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn nordmark@et.eurofinsus com	State of Origin.: Florida	Page: Page 1 of 2
Company: Eurofins Drinking Water and Wastewater W		Accreditations Required (See note): NELAP - Florida		Job #: 670-86767-1
Address: 941 Corporate Center Drive, ,	Due Date Requested: 5/8/2026			Preservation Codes. -
City: Pomona	TAT Requested (days): N/A			
State, Zip: CA, 91768-2642				
Phone: 626-386-1100(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW_PREC/537 1_DW_Prep40 CFR 141 PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2604683 WP #1 POE (670-86767-1)	4/29/26	10:15 Eastern	G	Drinking Wate			X	3	
2604684 WP #2 POE (670-86767-2)	4/29/26	10 05 Eastern	G	Drinking Wate			X	3	
2604685 WP #3 POE (670-86767-3)	4/29/26	10:30 Eastern	G	Drinking Wate			X	3	
2604686 WP #4 POE (670-86767-4)	4/29/26	09:45 Eastern	G	Drinking Wate			X	3	
2604687 WP #5 POE (670-86767-5)	4/29/26	08.45 Eastern	G	Drinking Wate			X	3	
2604688 WP #6 POE (670-86767-6)	4/29/26	08.55 Eastern	G	Drinking Wate			X	3	
2604689 WP #7 POE (670-86767-7)	4/29/26	09:05 Eastern	G	Drinking Wate			X	3	
2604690 WP #8 POE (670-86767-8)	4/29/26	08:25 Eastern	G	Drinking Wate			X	3	
2604691 WP #9 POE (670-86767-9)	4/29/26	09:25 Eastern	G	Drinking Wate			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time.	Method of Shipment: Re 1 AF		
Relinquished by: [signature] 5 1.26	Date/Time: 1700	Company	Received by: [signature]	Date/Time: 5/2/26 09:39	Company: [signature]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 63 OA 1.3 TDO = 1.3 [illegible]

Ver: 03/20/2026

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone. 407-339-5984 Fax: 407-260-6110

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Nordmark, Kathryn	Carrier Tracking No(s): N/A	COC No: 670-78389.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: kathryn nordmark@et.eurofinsus com	State of Origin: Florida	Page: Page 2 of 2
Company: Eurofins Drinking Water and Wastewater W		Accreditations Required (See note): NELAP - Florida		Job #: 670-86767-1
Address: 941 Corporate Center Drive, ,	Due Date Requested: 5/8/2026			Preservation Codes: -
City: Pomona	TAT Requested (days): N/A			
State, Zip: CA, 91768-2642				
Phone: 626-386-1100(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Drinking Water	Project #: 67004011			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537 1_DW_PREC/537 1_DW_Prep40 CFR 141 PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
2604692 WP #12 POE (670-86767-10)	4/29/26	10.45 Eastern	G	Drinking Wate			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater Southeast, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Drinking Water and Wastewater Southeast, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater Southeast, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date.	Time.	Method of Shipment: [illegible]		
Relinquished by: [signature]	Date/Time: 5/26 1700	Company	Received by: [signature]	Date/Time: 5/2/26 0959	Company: [signature]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: [illegible] 1.3 to 0 = 1.3 [illegible]		

Ver 03/20/2026

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-86758-1

Login Number: 86758

List Source: Eurofins Orlando

List Number: 1

Creator: De Dios, Jon Vince

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-86758-1

Login Number: 86758
List Number: 2
Creator: Edrosa, Rey

List Source: Eurofins Pomona
List Creation: 05/02/26 12:56 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Samples do not require splitting or compositing.	True	
Were samples preserved to correct pH upon receipt, if applicable?	True	
Sample Preservative Verified	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-86758-1

Login Number: 86767

List Number: 1

Creator: De Dios, Jon Vince

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-86758-1

Login Number: 86767
List Number: 2
Creator: Edrosa, Rey

List Source: Eurofins Pomona
List Creation: 05/02/26 12:52 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Samples do not require splitting or compositing.	True	
Were samples preserved to correct pH upon receipt, if applicable?	True	
Sample Preservative Verified	True	
Container provided by EEA	True	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

APPENDIX E WELL SUPPLEMENTAL TOC SAMPLING RESULT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Shawn Wahrenberger
City of Deland
1101 S. Amelia Ave.
Deland, Florida 32724

Generated 5/27/2026 2:58:18 PM

JOB DESCRIPTION

TOC in Wells

JOB NUMBER

670-88387-1

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Drinking Water and Wastewater Southeast, LLC Project Manager.

Authorization



Generated
5/27/2026 2:58:18 PM

Authorized for release by
Kathryn Nordmark, Senior Project Manager
kathryn.nordmark@et.eurofinsus.com
(407)773-2123

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 8
QC Sample Results 12
QC Association Summary 13
Lab Chronicle 14
Certification Summary 17
Method Summary 18
Sample Summary 19
Chain of Custody 20
Receipt Checklists 22

Definitions/Glossary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
670-88387-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 5/21/2026 2:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: Well 8 — Lab Sample ID: 670-88387-1

No Detections.

Client Sample ID: Well 3 — Lab Sample ID: 670-88387-2

No Detections.

Client Sample ID: Well 4 — Lab Sample ID: 670-88387-3

No Detections.

Client Sample ID: Well 7A — Lab Sample ID: 670-88387-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.5	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	1.5	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	1.4	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	1.5	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: Well 11 — Lab Sample ID: 670-88387-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.4	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	1.5	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	1.4	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	1.2	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: Well 27 — Lab Sample ID: 670-88387-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.7	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	1.8	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	1.7	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	1.6	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: Well 28 — Lab Sample ID: 670-88387-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.2	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	1.2	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	1.2	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	1.1	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: Well 6 — Lab Sample ID: 670-88387-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	2.7		2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	2.8		2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	2.7		2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	2.7		2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: Well 9 — Lab Sample ID: 670-88387-9

No Detections.

Client Sample ID: Well 10 — Lab Sample ID: 670-88387-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Orlando

Detection Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: Well 21 — Lab Sample ID: 670-88387-11

No Detections.

Client Sample ID: Well 12 — Lab Sample ID: 670-88387-12

No Detections.

Client Sample ID: Well 15 — Lab Sample ID: 670-88387-13

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	1.9	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 1	1.9	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 2	1.9	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA
TOC Result 3	1.8	I	2.0	1.0	mg/L	1		5310 C-2014	Total/NA

Client Sample ID: TW 1 — Lab Sample ID: 670-88387-14

No Detections.

Client Sample ID: TW 2 — Lab Sample ID: 670-88387-15

No Detections.

Client Sample ID: TW 3 — Lab Sample ID: 670-88387-16

No Detections.

Client Sample ID: TW 4 — Lab Sample ID: 670-88387-17

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: Well 8

Lab Sample ID: 670-88387-1

Date Collected: 05/19/26 13:53

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 21:43	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 21:43	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 21:43	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 21:43	1

Client Sample ID: Well 3

Lab Sample ID: 670-88387-2

Date Collected: 05/19/26 10:39

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:40	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:40	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:40	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:40	1

Client Sample ID: Well 4

Lab Sample ID: 670-88387-3

Date Collected: 05/18/26 10:30

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:58	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:58	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:58	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/26/26 22:58	1

Client Sample ID: Well 7A

Lab Sample ID: 670-88387-4

Date Collected: 05/18/26 14:37

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	**1.5**	**I**	2.0	1.0	mg/L			05/26/26 23:17	1
TOC Result 1 (SM 5310 C-2014)	**1.5**	**I**	2.0	1.0	mg/L			05/26/26 23:17	1
TOC Result 2 (SM 5310 C-2014)	**1.4**	**I**	2.0	1.0	mg/L			05/26/26 23:17	1
TOC Result 3 (SM 5310 C-2014)	**1.5**	**I**	2.0	1.0	mg/L			05/26/26 23:17	1

Client Sample ID: Well 11

Lab Sample ID: 670-88387-5

Date Collected: 05/18/26 14:48

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	**1.4**	**I**	2.0	1.0	mg/L			05/26/26 23:36	1
TOC Result 1 (SM 5310 C-2014)	**1.5**	**I**	2.0	1.0	mg/L			05/26/26 23:36	1
TOC Result 2 (SM 5310 C-2014)	**1.4**	**I**	2.0	1.0	mg/L			05/26/26 23:36	1
TOC Result 3 (SM 5310 C-2014)	**1.2**	**I**	2.0	1.0	mg/L			05/26/26 23:36	1

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: Well 27

Lab Sample ID: 670-88387-6

Date Collected: 05/18/26 14:21

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.7	I	2.0	1.0	mg/L			05/26/26 23:55	1
TOC Result 1 (SM 5310 C-2014)	1.8	I	2.0	1.0	mg/L			05/26/26 23:55	1
TOC Result 2 (SM 5310 C-2014)	1.7	I	2.0	1.0	mg/L			05/26/26 23:55	1
TOC Result 3 (SM 5310 C-2014)	1.6	I	2.0	1.0	mg/L			05/26/26 23:55	1

Client Sample ID: Well 28

Lab Sample ID: 670-88387-7

Date Collected: 05/18/26 14:12

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.2	I	2.0	1.0	mg/L			05/27/26 00:14	1
TOC Result 1 (SM 5310 C-2014)	1.2	I	2.0	1.0	mg/L			05/27/26 00:14	1
TOC Result 2 (SM 5310 C-2014)	1.2	I	2.0	1.0	mg/L			05/27/26 00:14	1
TOC Result 3 (SM 5310 C-2014)	1.1	I	2.0	1.0	mg/L			05/27/26 00:14	1

Client Sample ID: Well 6

Lab Sample ID: 670-88387-8

Date Collected: 05/19/26 10:06

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	2.7		2.0	1.0	mg/L			05/27/26 00:33	1
TOC Result 1 (SM 5310 C-2014)	2.8		2.0	1.0	mg/L			05/27/26 00:33	1
TOC Result 2 (SM 5310 C-2014)	2.7		2.0	1.0	mg/L			05/27/26 00:33	1
TOC Result 3 (SM 5310 C-2014)	2.7		2.0	1.0	mg/L			05/27/26 00:33	1

Client Sample ID: Well 9

Lab Sample ID: 670-88387-9

Date Collected: 05/19/26 09:37

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 00:52	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 00:52	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 00:52	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 00:52	1

Client Sample ID: Well 10

Lab Sample ID: 670-88387-10

Date Collected: 05/19/26 09:46

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 01:11	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 01:11	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 01:11	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 01:11	1

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: Well 21

Lab Sample ID: 670-88387-11

Date Collected: 05/19/26 09:03

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 02:08	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 02:08	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 02:08	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 02:08	1

Client Sample ID: Well 12

Lab Sample ID: 670-88387-12

Date Collected: 05/19/26 08:16

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:05	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:05	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:05	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:05	1

Client Sample ID: Well 15

Lab Sample ID: 670-88387-13

Date Collected: 05/18/26 13:23

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	**1.9**	**I**	2.0	1.0	mg/L			05/27/26 03:23	1
TOC Result 1 (SM 5310 C-2014)	**1.9**	**I**	2.0	1.0	mg/L			05/27/26 03:23	1
TOC Result 2 (SM 5310 C-2014)	**1.9**	**I**	2.0	1.0	mg/L			05/27/26 03:23	1
TOC Result 3 (SM 5310 C-2014)	**1.8**	**I**	2.0	1.0	mg/L			05/27/26 03:23	1

Client Sample ID: TW 1

Lab Sample ID: 670-88387-14

Date Collected: 05/18/26 15:16

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:42	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:42	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:42	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 03:42	1

Client Sample ID: TW 2

Lab Sample ID: 670-88387-15

Date Collected: 05/18/26 15:50

Matrix: Water

Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:01	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:01	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:01	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:01	1

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: TW 3

Lab Sample ID: 670-88387-16

Date Collected: 05/18/26 16:00
Matrix: Water
Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:20	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:20	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:20	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:20	1

Client Sample ID: TW 4

Lab Sample ID: 670-88387-17

Date Collected: 05/18/26 16:16
Matrix: Water
Date Received: 05/21/26 14:50

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:39	1
TOC Result 1 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:39	1
TOC Result 2 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:39	1
TOC Result 3 (SM 5310 C-2014)	1.0	U	2.0	1.0	mg/L			05/27/26 04:39	1

Method: 5310 C-2014 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 670-224787/5
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	2.0	1.0	mg/L			05/26/26 21:24	1
TOC Result 1	1.0	U	2.0	1.0	mg/L			05/26/26 21:24	1
TOC Result 2	1.0	U	2.0	1.0	mg/L			05/26/26 21:24	1
TOC Result 3	1.0	U	2.0	1.0	mg/L			05/26/26 21:24	1

Lab Sample ID: LCS 670-224787/4
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.98	9.71		mg/L		97	80 - 120

Lab Sample ID: MRL 670-224787/3
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	2.00	2.03		mg/L		102	50 - 150

Lab Sample ID: 670-88387-1 MS
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Well 8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.0	U	10.0	10.5		mg/L		105	85 - 115

Lab Sample ID: 670-88387-1 MSD
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Well 8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	1.0	U	9.98	10.6		mg/L		106	85 - 115	1	20

Lab Sample ID: 670-88387-11 MS
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Well 21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.0	U	10.0	10.3		mg/L		103	85 - 115

Lab Sample ID: 670-88387-11 MSD
Matrix: Water
Analysis Batch: 224787

Client Sample ID: Well 21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	1.0	U	9.98	10.3		mg/L		103	85 - 115	0	20

QC Association Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

General Chemistry

Analysis Batch: 224787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-88387-1	Well 8	Total/NA	Water	5310 C-2014	
670-88387-2	Well 3	Total/NA	Water	5310 C-2014	
670-88387-3	Well 4	Total/NA	Water	5310 C-2014	
670-88387-4	Well 7A	Total/NA	Water	5310 C-2014	
670-88387-5	Well 11	Total/NA	Water	5310 C-2014	
670-88387-6	Well 27	Total/NA	Water	5310 C-2014	
670-88387-7	Well 28	Total/NA	Water	5310 C-2014	
670-88387-8	Well 6	Total/NA	Water	5310 C-2014	
670-88387-9	Well 9	Total/NA	Water	5310 C-2014	
670-88387-10	Well 10	Total/NA	Water	5310 C-2014	
670-88387-11	Well 21	Total/NA	Water	5310 C-2014	
670-88387-12	Well 12	Total/NA	Water	5310 C-2014	
670-88387-13	Well 15	Total/NA	Water	5310 C-2014	
670-88387-14	TW 1	Total/NA	Water	5310 C-2014	
670-88387-15	TW 2	Total/NA	Water	5310 C-2014	
670-88387-16	TW 3	Total/NA	Water	5310 C-2014	
670-88387-17	TW 4	Total/NA	Water	5310 C-2014	
MB 670-224787/5	Method Blank	Total/NA	Water	5310 C-2014	
LCS 670-224787/4	Lab Control Sample	Total/NA	Water	5310 C-2014	
MRL 670-224787/3	Lab Control Sample	Total/NA	Water	5310 C-2014	
670-88387-1 MS	Well 8	Total/NA	Water	5310 C-2014	
670-88387-1 MSD	Well 8	Total/NA	Water	5310 C-2014	
670-88387-11 MS	Well 21	Total/NA	Water	5310 C-2014	
670-88387-11 MSD	Well 21	Total/NA	Water	5310 C-2014	

Lab Chronicle

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: Well 8
Lab Sample ID: 670-88387-1
Date Collected: 05/19/26 13:53
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 21:43

Client Sample ID: Well 3
Lab Sample ID: 670-88387-2
Date Collected: 05/19/26 10:39
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 22:40

Client Sample ID: Well 4
Lab Sample ID: 670-88387-3
Date Collected: 05/18/26 10:30
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 22:58

Client Sample ID: Well 7A
Lab Sample ID: 670-88387-4
Date Collected: 05/18/26 14:37
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 23:17

Client Sample ID: Well 11
Lab Sample ID: 670-88387-5
Date Collected: 05/18/26 14:48
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 23:36

Client Sample ID: Well 27
Lab Sample ID: 670-88387-6
Date Collected: 05/18/26 14:21
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/26/26 23:55

Client Sample ID: Well 28
Lab Sample ID: 670-88387-7
Date Collected: 05/18/26 14:12
Matrix: Water
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 00:14

Client Sample ID: Well 6 — **Lab Sample ID: 670-88387-8**
Date Collected: 05/19/26 10:06 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 00:33

Client Sample ID: Well 9 — **Lab Sample ID: 670-88387-9**
Date Collected: 05/19/26 09:37 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 00:52

Client Sample ID: Well 10 — **Lab Sample ID: 670-88387-10**
Date Collected: 05/19/26 09:46 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 01:11

Client Sample ID: Well 21 — **Lab Sample ID: 670-88387-11**
Date Collected: 05/19/26 09:03 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 02:08

Client Sample ID: Well 12 — **Lab Sample ID: 670-88387-12**
Date Collected: 05/19/26 08:16 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 03:05

Client Sample ID: Well 15 — **Lab Sample ID: 670-88387-13**
Date Collected: 05/18/26 13:23 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 03:23

Client Sample ID: TW 1 — **Lab Sample ID: 670-88387-14**
Date Collected: 05/18/26 15:16 — **Matrix: Water**
Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 03:42

Lab Chronicle

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Client Sample ID: TW 2

Lab Sample ID: 670-88387-15

Date Collected: 05/18/26 15:50

Matrix: Water

Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 04:01

Client Sample ID: TW 3

Lab Sample ID: 670-88387-16

Date Collected: 05/18/26 16:00

Matrix: Water

Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 04:20

Client Sample ID: TW 4

Lab Sample ID: 670-88387-17

Date Collected: 05/18/26 16:16

Matrix: Water

Date Received: 05/21/26 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	5310 C-2014		1	224787	PCW	EET ORL	05/27/26 04:39

Laboratory References:

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

Accreditation/Certification Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Laboratory: Eurofins Orlando

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E83018	06-30-26

Method Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Method	Method Description	Protocol	Laboratory
5310 C-2014	Total Organic Carbon/Persulfate - Ultrav	SM	EET ORL

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

Sample Summary

Client: City of Deland
Project/Site: TOC in Wells

Job ID: 670-88387-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
670-88387-1	Well 8	Water	05/19/26 13:53	05/21/26 14:50	Florida
670-88387-2	Well 3	Water	05/19/26 10:39	05/21/26 14:50	Florida
670-88387-3	Well 4	Water	05/18/26 10:30	05/21/26 14:50	Florida
670-88387-4	Well 7A	Water	05/18/26 14:37	05/21/26 14:50	Florida
670-88387-5	Well 11	Water	05/18/26 14:48	05/21/26 14:50	Florida
670-88387-6	Well 27	Water	05/18/26 14:21	05/21/26 14:50	Florida
670-88387-7	Well 28	Water	05/18/26 14:12	05/21/26 14:50	Florida
670-88387-8	Well 6	Water	05/19/26 10:06	05/21/26 14:50	Florida
670-88387-9	Well 9	Water	05/19/26 09:37	05/21/26 14:50	Florida
670-88387-10	Well 10	Water	05/19/26 09:46	05/21/26 14:50	Florida
670-88387-11	Well 21	Water	05/19/26 09:03	05/21/26 14:50	Florida
670-88387-12	Well 12	Water	05/19/26 08:16	05/21/26 14:50	Florida
670-88387-13	Well 15	Water	05/18/26 13:23	05/21/26 14:50	Florida
670-88387-14	TW 1	Water	05/18/26 15:16	05/21/26 14:50	Florida
670-88387-15	TW 2	Water	05/18/26 15:50	05/21/26 14:50	Florida
670-88387-16	TW 3	Water	05/18/26 16:00	05/21/26 14:50	Florida
670-88387-17	TW 4	Water	05/18/26 16:16	05/21/26 14:50	Florida

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs, FL 32701
Phone 407-339-5984 Fax. 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler	Lab PM	Carrier Tracking No(s):	COC No
		Nordmark Kathryn		670-40496-17513 1
Client Contact: Shawn Wahrenberger	Phone	E-Mail: kathryn nordmark@et eurofinsus com	State of Origin	Page: Page 1 of 2
Company: City of Deland	PWSID			Job #:

Address: 1101 S Amelia Ave	Due Date Requested	Analysis Requested	Preservation Codes: S H2SO4
City: Deland	TAT Requested (days)		
State Zip: FL 32724	Compliance Project: Δ Yes Δ No		
Phone:	PO #: 26-002294		
Email: wahrenbergers@deland org	WO #:		
Project Name: TOC in Wells	Project #: 67005462		Other:
Site	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C Total Organic Carbon	Total Number of containers	Special Instructions/Note:
			Preservation Code				S		
Well 8	5/19/26	1353	G	Water			X		
Well 3	5/19	1039		Water					
Well 4	5/18	1030		Water					
Well 7A	5/18	1437		Water					
Well 11		1448		Water					
Well 27		1421		Water					
Well 28		1412		Water					
Well 6	5/19	1006		Water					
Well 9		0937		Water					
Well 10		0946		Water					
Well 21		0903		Water					

670-88387 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date: 05-13-26	Time: 1203	Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Samuel McCoy	5/21/26 1005	Deland	William Nelson	5-21-26 10:05	OPL
William Nelson	5-21-26 14:50	OPL		5/21/26 1450	Eurofins

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.2/2.2

Eurofins Orlando
481 Newburyport Avenue
Altamonte Springs FL 32701
Phone 407-339-5984 Fax. 407-260-6110

Chain of Custody Record

eurofins

Client Information	Sampler	Lab PM: Nordmark Kathryn	Carrier Tracking No(s):	COC No: 670-40496-17513 2
Client Contact: Shawn Wahrenberger	Phone	E-Mail: kathryn nordmark@et eurofinsus com	State of Origin	Page: Page 2 of 2
Company: City of Deland	PWSID			Job #:

Address: 1101 S Amelia Ave	Due Date Requested	Analysis Requested	Preservation Codes: S H2SO4
City: Deland	TAT Requested (days)		
State, Zip: FL 32724	Compliance Project: Δ Yes Δ No		
Phone:	PO #: 26-002294		
Email: wahrenbergers@deland org	WO #:		
Project Name: TOC in Wells	Project #: 67005462		
Site	SSOW#:		Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5310C - Total Organic Carbon	Total Number of containers	Special Instructions/Note
			Preservation Code				S		
Well 12	5/19/26	~~0816~~ 0903	G	Water			X		
Well 15	5/18/26	1303		Water					
TW 1		1516		Water					
TW 2		1530		Water					
TW 3		1600		Water					
TW 4		1616		Water					
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date: 05-13-26	Time: 1203	Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Samuel R McCoy	5/21/26 1005	Deland	William Nelson	5-21-26 10:05	ORL
William Nelson	5-21-26 14:50	ORL		5/21/26 1450	Eurofins
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.2/2.2 003

Ver: 03/20/2026

Login Sample Receipt Checklist

Client: City of Deland

Job Number: 670-88387-1

Login Number: 88387
List Number: 1
Creator: Vuyyuru, Sam

List Source: Eurofins Orlando

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Amendment No.1 to Ground Lease Agreement for the Sport Aviation Village, Shalom Confessor De Aguiar Do Amaral.

DEPARTMENT: Airport

PREPARED BY: John Eiff, Airport Manager

ATTACHMENTS: First Amendment to Ground Lease

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

Shalom Confessor De Aguiar Do Amaral is a current tenant in good standing at the DeLand Airport and desires to amend the terms of the May 6, 2024 ground lease agreement for Lot #1 in the Sport Aviation Village at 1565 Sport Aviation Way by amending the deadline to construct a hangar building to June 1, 2027. Unforeseen delays within the construction industry has made this request necessary. Shalom recently provided Staff with an updated business plan that indicates he has already secured an engineering company to start the permitting process and given us an illustration of the new hangar. Staff fully supports this amendment and has known Shalom for 7 years and looks forward to Shalom bringing the Montaer Aircraft Dealership to the DeLand Airport.

The attached Ground Lease Agreement amendment No.1, if approved, will insure that the current lease of 20 years with two successive renewals of 15 years will be realized. Terms and conditions of the current lease are similar to the those currently required of other airport tenants.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The rent proposed under the revised lease is an annual rent of $5,403.48 per year or $450.29 per month, subject to payment of applicable taxes and annual cost of living adjustments.

RECOMMENDATION:

Staff recommends that the City Commission approve Amendment No. 1 to the Ground Lease Agreement with Shalom Confessor De Aguiar Do Amaral.

BACKGROUND/DISCUSSION:

N/A

FIRST AMENDMENT TO GROUND LEASE AGREEMENT

The City of DeLand, a Florida municipal corporation (hereinafter referred to as "Lessor"), and Shalom Confessor De Aguiar Do Amaral, with his principal place of business at 101 Berg Ct, Daytona Beach, Florida 32124 (hereinafter referred to as "Lessee"), in consideration of the mutual terms and conditions of this First Amendment to Ground Lease Agreement (hereinafter referred to as the "Agreement"), hereby agree as follows:

Whereas, Lessor and Lessee entered into that certain ground lease agreement dated May 6, 2024 (the "Ground Lease"); and

Whereas, Lessor and Lessee desire to amend the terms of the Ground Lease by amending the deadline to construct a hangar building to June 1, 2027.

Now, Therefore, in consideration of the mutual promises and covenants set forth herein and other consideration, Lessor and Lessee amend the Ground Lease as follows:

1. Section 45 of the Ground Lease is hereby amended to read as follows:

Section 45. Special terms and conditions. In the event that Lessee, for any reason whatsoever, shall fail to construct a hangar building of a size that reasonably maximizes the use of the leased premises, together with the associated site infrastructure, by June 1, 2027, then Lessor shall be entitled to cancel this lease without any liability to reimburse Lessee for rent theretofore paid for the leased premises, it being Lessor's intent to ensure that the leased premises is developed and put to economic use.

2. This First Amendment to Ground Lease Agreement shall be effective as of the date executed by Lessor.

3. All other terms and conditions of the Ground Lease shall remain in full force and effect.

*** Signatures on following page ***

EXECUTED by the Lessee this _____ day of June, 2026.

EXECUTED by the Lessor this _____ day of June, 2026.

CITY OF DELAND,
LESSOR

Christopher M. Cloudman
Mayor-Commissioner

SHALOM CONFESSOR DE AGUIAR DO AMARAL,
LESSEE

Shalom Confessor De Aguiar Do Amaral

Address: City of DeLand
120 South Florida Avenue
DeLand, Florida 32720

Address: Shalom Confessor De Aguiar Do Amaral
101 Berg Ct.
Daytona Beach, Florida 32124

ATTEST:

Christian D. Gowan
City Clerk-Auditor

WITNESSES AS TO LESSEE:

(Witness' Signature)

JOHN EIFF
(Print Name)

WITNESSES AS TO LESSEE:

(Witness' Signature)

Mindy Considine
(Print Name)

This Instrument Prepared By:
City of DeLand
120 South Florida Avenue
DeLand, Florida 32720

SEC. 35, T. 16 S., R. 30 E., CITY OF DELAND, VOLUSIA COUNTY, FLORIDA.

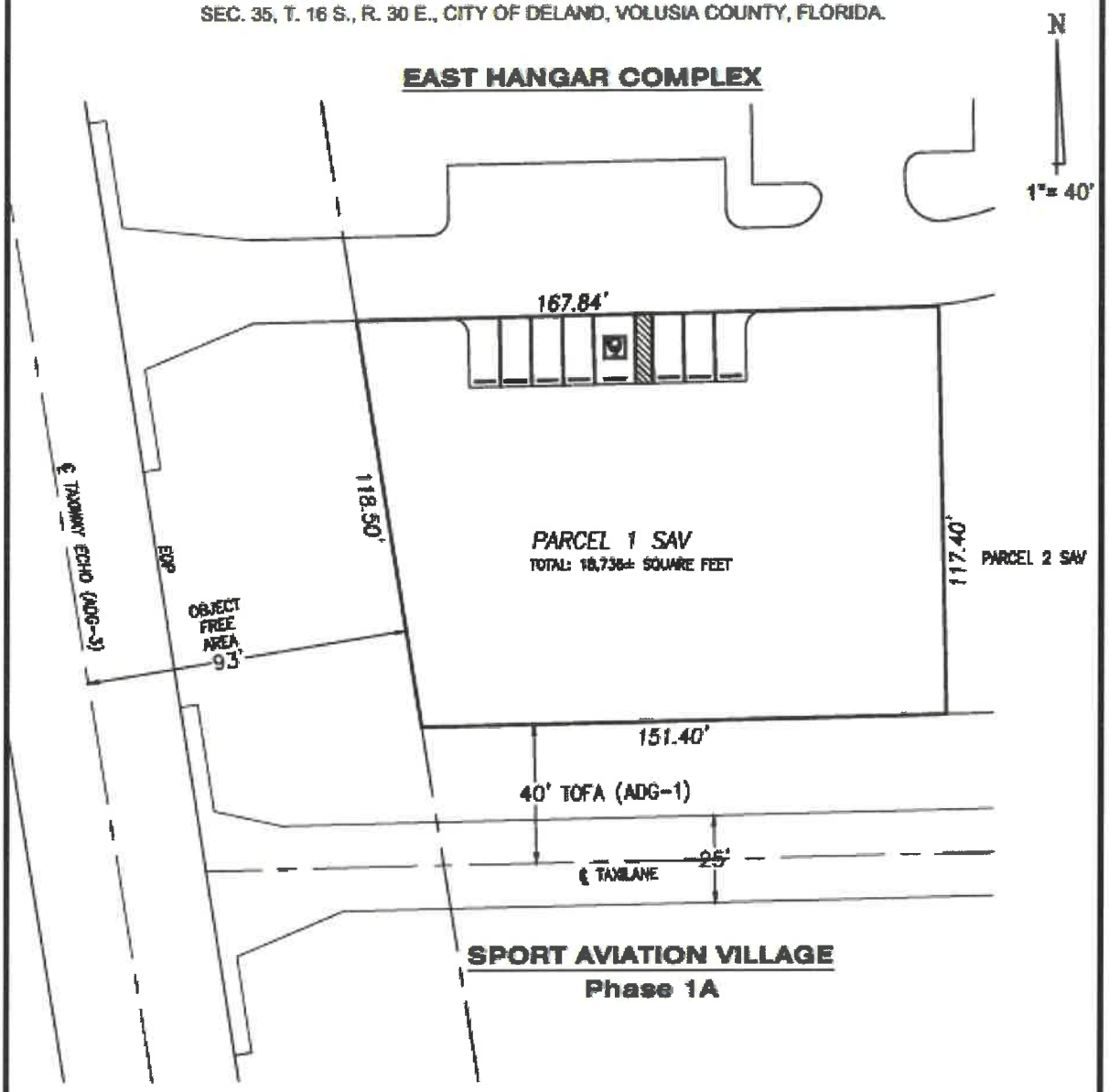


EXHIBIT "A"

City of DeLand, Florida
ENGINEERING DEPARTMENT
1102 S. Garfield Avenue
DeLand, Florida 32724
TEL: 386/626-7196 FAX: 386/736-5366

Sketch of Lease for
AIRPORT LEASE - PARCEL 1 SAV
1565 SPORT AVIATION WAY
DeLAND, FLORIDA, 32724

DATE:	2/10/21	PROJECT NO. EN 18-25
SCALE:	1" = 40'	Sheet 1 of 1
DRAWN BY:	SC	

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Utility Service and Fair Share Agreements for Woodruff Ridge Subdivision

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: Woodruff Ridge FSA partially signed, Woodruff Ridge USA partially signed (002), Woodruff Ridge Subdivision Exhibit A

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The Woodruff Ridge subdivision project is located at the north west corner of the intersection of west SR 44 and Grand Avenue in the county. The proposed subdivision will equate to one hundred and sixty-nine (169) residential units. The attached Utility Service Agreement contains the usual terms and conditions required by the City for utility service. No reimbursement for oversizing of offsite utilities is provided, but in Section 18 an agreement and payment were reached for extension of the reclaim system toward this development. As is consistent with City policy, the developer has executed this agreement for the use and planned improvements to allow increased density in proportion to the capacity of such utilities used by the developer.

The project is also in the West Side Interceptor Force Main service area. Thus, as is consistent with City policy, the developer has executed a West Side Interceptor Force Main Concurrency and Fair Share Agreement which is intended to compensate the City for use of the West Side Interceptor Force Main in proportion to the capacity of that pipeline used by the developer.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Infrastructure

FISCAL IMPACT:

At buildout, the City will receive water and sewer impact fees and ongoing utility revenue from the one hundred and sixty-nine (169) equivalent residential units constructed. A one-time fee of $75,000 was contributed to the design of a reclaim main to the site and an additional $75,000 if city constructs in a set time line. In addition, the city will receive payment for the West Side Interceptor Fair Share contribution in the amount of $151,931 ($899 per unit x 169 units).

RECOMMENDATION:

Staff recommends that the City Commission approve the attached Utility Service and Fair Share Agreements for the Woodruff Ridge subdivision.

BACKGROUND/DISCUSSION:

N/A

WESTSIDE INTERCEPTOR FORCE MAIN
CONCURRENCY AND FAIR SHARE AGREEMENT
FOR
WOODRUFF RIDGE SUBDIVISION

This Westside Interceptor Force Main Concurrency and Fair Share Agreement (the "Agreement") is made and entered into this ____ day of _____, 2026, by and between the City of DeLand, Florida, a Chartered Florida Municipality located in Volusia County, Florida, ("City") and TLC Volusia Holdings, LLC, with its principal office located at 605 Commonwealth Ave, Orlando, Fl 32803 ("Developer").

Tax Parcel ID. Numbers:

794001000040

That part of Lots 4, 5, 7, 8, 9, 15, 16, 17 and 18 of Bracket's Subdivision of the Thomas Fitch Grant as recorded in Deed Book G, Page 316 Public Records of Volusia County, Florida;

794001000100

That part of Lot 10, Brackett's Subdivision of the Northerly portion of the Thomas Fitch Grant, in Section 40 Township 17 South, Range 29 East, according to the map in Deed Book "G", Page 316, Public Records of Volusia County, Florida;

794001000030

That part of Lot 3, Brackett's Subdivision of the Northerly portion of the Thomas Fitch Grant, in Section 40 Township 17 South, Range 29 East, according to the map in Deed Book "G", Page 316, Public Records of Volusia County, Florida.

RECITALS

WHEREAS, attached to this Concurrency and Fair Share Agreement ("Agreement"), are exhibits describing in greater detail the parties hereto, real property, Westside Force Main and Master Pump Station Impact Fee Surcharge Study and the sanitary sewer utility improvements which are referenced throughout this Agreement. The parties agree that all attached exhibits have been reviewed by the parties and their respective professional consultants, and all information set forth or otherwise referenced therein is deemed incorporated herein by reference; and

WHEREAS, unless otherwise stated, the Developer is the owner of the real property described in the attached Exhibit "A." Developer desires to permit, develop and, if appropriate, plat the real property for an approximately 56.86-acre residential (Woodruff Ridge Subdivision); and, in addition to other requirements, is seeking to comply with the City's concurrency requirements for wastewater utilities; and

WHEREAS, the City would not have sufficient wastewater transmission lines in the vicinity of the Project without the installation of the Westside Interceptor Force Main such that the Project could not be built without the Westside Interceptor Force Main; and

WHEREAS, the Westside Interceptor Force Main, as more particularly described in the attached Exhibits, is required in order for the Project to meet minimum concurrency requirements for wastewater to support the proposed Project; and

WHEREAS, it would not be feasible for the Developer to install the entire Westside Interceptor Force Main at its sole expense; and

WHEREAS, the Westside Interceptor Force Main will provide sanitary sewer transmission capacity to other developments in the vicinity of the Project such that it is more practical and fair that the City install the Westside Interceptor Force Main and collect from the Developer only its fair share cost of the said Westside Interceptor Force Main; and

WHEREAS, the City is desirous of including the Concurrency Improvements described below in the City's Comprehensive Plan Capital Improvement Element in the next annual amendment; and

WHEREAS, the City and the Developer desire to enter into this Agreement in order to utilize the provisions of Section 163.3180(11) Florida Statutes (2005) to implement the "fair share" process.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the City and Developer, hereby agree as follows:

1. **Incorporation of Recitals**. The presumptions and facts stated above in the recitals are incorporated by reference herein and deemed by the parties to be true, correct and constitute a material part of this Agreement.

2. **Construction.** The City agrees to construct, or to have constructed, the Westside Interceptor Force Main in accordance with the plans and specifications for the said project, which plans may be amended from time to time in the normal course of construction. Construction of the Westside Interceptor Force Main will commence and be complete to meet concurrency requirements, unless delay is caused for reasons outside of City's control, in which case construction will commence or recommence as soon as is reasonably practical. For purposes of this Agreement, "reasons outside of City's control" shall mean: delays or stoppage caused by acts of God, war, inability to obtain labor or materials or reasonable substitutes therefore, inability to receive governmental permits and approvals newly enacted governmental regulations or controls, the application of existing regulations or controls in a manner which City could not have foreseen or other similar matters or causes.

3. **Payment of Fair Share Assessment Amount**. In connection with the City's construction of the Westside Interceptor Force Main and as a requirement for receiving preliminary plat approval for the Project(s), Developer shall pay to the City a fair share assessment, ("Fair

Share Payment"). The Fair Share Payment shall be an amount determined by multiplying the number of lots/units in the subdivision or equivalent residential units for a non-residential project times $899.00 which is the per residential dwelling unit determined by the Westside Force Main and Master Pump Impact Fee Surcharge Study attached hereto as Exhibit "B". For this project, the number of equivalent residential units is mutually agreed to be 169. The Developer shall be required to make payment for the total amount of its Fair Share Payment at the time of approval of the preliminary plat or site plan for the Project, and must be received by the City prior to issuance of any development permits by the City. The requirement to make the Fair Share Payment shall be deemed to be a condition of approval of the preliminary plat or site plan for the project, regardless of whether any resolution or other action of the City evidencing approval of the preliminary plat or site plan specifically references such condition. In the event that the actual number of lots approved by way of approval of the final plat exceeds those approved in preliminary plat, then Developer shall pay, as a condition of approval of the final plat, the additional fee for those lots, or be entitled to a refund, as the case may be.

4. **Vested Rights in Wastewater Concurrency**. The City agrees that by paying the City the Fair Share Payment, and by receiving a Development Order for the Project, Developer will be deemed to have satisfied the City's wastewater concurrency requirements for the Project and that the Project shall be fully vested with wastewater concurrency for purposes of development and related Project construction, subject only to the requirement to pay sewer impact fees which become due and payable in accordance with the City's wastewater impact fee ordinance, as the same may be amended from time to time.

5. **No Entitlement to Impact Fee Credits**. Nothing herein is intended to entitle the Developer to any credit toward, or to otherwise reduce its obligation to pay sewer impact fees pursuant to the City's sewer impact fee ordinance, as the same may be amended from time to time.

6. **Miscellaneous.**

A. Attorney's Fees. In the event of litigation to enforce the terms of this Agreement, the prevailing party shall be entitled to collect from the other party reasonable attorney's fees and costs of suit.

B. Venue and Choice of Law. In the event of litigation regarding the terms of this Agreement or documents executed as a result of this Agreement, venue of the action shall be in Volusia County and Florida law shall apply. Trial shall be non-jury for any issues subject to trial.

C. Waiver. The waiver by a party of any terms or conditions of this Agreement or any breach hereof shall not constitute a waiver of any other term or condition or any subsequent breach of this Agreement.

D. Successors. This Agreement shall be binding on the parties hereto, their heirs, administrators, executors, successors in interest and assigns.

E. Construction of Contract. The parties hereto agree that they have all participated in the drafting of this Agreement. Therefore, the presumption that any ambiguity or vagueness in the construction of this Agreement shall be construed against the drafter shall not apply. The terms and provisions of the Agreement shall be applied equally to each party and the interpretation of the Agreement shall be guided by the express intent of the parties as determined by the overall effect of the provisions herein.

G. Amendments. Amendment to this Agreement shall not be effective unless in writing and signed by all record title property owners of the land for which the amendment is to be applied (but excluding the record title property owners for land that is unaffected by the amendment), and the City. Before amending this Agreement, the City shall conduct at least one public hearing. At the City's option, one of these public hearings may be held by the City Planning Board.

i. Notice of intent to consider an amendment to this Agreement shall be published by the City at the Developer's expense in a newspaper of general circulation and readership in Volusia County, Florida.

ii. If applicable, notice of intent to consider an amendment shall comply with the requirements of Section 166.041(3)(c), Florida Statutes (2005), as amended from time to time.

iii. Notices of intent to consider an amendment shall specify the location of the Property subject to the proposed amendment, the nature of the proposed amendment and such other information as the City Staff shall reasonably deem pertinent and appropriate.

iv. All notices shall specify a place where a copy of the proposed amendment can be obtained.

H. Conflicts. Developer agrees to be bound by all City codes and ordinances that are not in conflict with the provisions of this Agreement.

I. Recording. This Agreement shall be recorded by the City in the Public Records of Volusia County, Florida.

J. Binding Nature and Covenants Running With the Land. The provisions of this Agreement shall be binding upon the parties hereto, and upon all successors in interest in the subject real property. And further, the provisions of this Agreement shall constitute covenants running with the land applicable to all of the subject real property comprising the Project.

K. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered.

IN WITNESS WHEREOF, the parties affix their signatures and seals on the dates set forth below:

WITNESSES:

_____
Printed Name: _____

_____
Printed Name: _____

_____
Printed Name: _____

_____
Printed Name: _____

CITY OF DELAND, a Florida Municipal Corporation

Printed Name: _____
Christopher M. Cloudman, Mayor

Attest: _____
Christian Gowan, City Clerk

Date: _____

(*Corporate Seal*)

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____day of _____, 2025, by Christopher M. Cloudman and Christen Gowan, as Mayor and City Clerk, respectively, of the City of DeLand, a Florida municipality, on behalf of the City. They are personally known to me or have produced as _____ identification.

_____
Notary Public, State of Florida at Large Commission Number

WITNESSES:

TLC Volusia Holdings, LLC

By: _____

Name/Title: *Andrew Orosz/ Authorized Member*

_____

Printed Name: Andres Arvelo

_____

Printed Name: Jason Lonas

_____

Printed Name: Anthony Iorio

_____

Printed Name: IAN TRAN

STATE OF Florida
COUNTY OF Orange

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 23 day of June, 2026 by Andrew Orosz, the Authorized Member of TLC Volusia Holdings, LLC who is ☑ personally known to me or ☐ who has produced, _____ as identification.

NOTARY PUBLIC:

_____

Notary Public, State of Florida at Large

Seal, Term Expiration and Commission Number

Notary Public State of Florida
Sylvialdenis Soto
My Commission HH 734500
Expires 11/22/2029

WOODRUFF RIDGE SUBDIVISION

EXHIBIT A



UTILITY SERVICE AGREEMENT
FOR
WOODRUFF RIDGE

THIS AGREEMENT is entered into this ____ day of _____, 2026, between the City of DeLand (City) and, TLC Volusia Holdings, LLC (Developer) regarding utility service for the Woodruff Ridge project. In consideration of the mutual covenants and conditions in this Agreement, and subject to any necessary approval by any other governmental agency having jurisdiction, the parties agree as follows:

Section 1. City to furnish service. Upon the terms and conditions in this Agreement, and in accordance with the City's rules and regulations, the City shall provide and shall have the exclusive right to furnish potable water, domestic sewer and reuse irrigation services to the real property located on the north west corner of West New York Avenue and Grand Avenue at 2433 West New York Avenue DeLand, FL and described as:

TAX PARCEL NUMBERS

794001000040

That part of Lots 4, 5, 7, 8, 9, 15, 16, 17 and 18 of BRACKETT'S SUBDIVISION OF THE THOMAS FITCH GRANT as recorded in Deed Book G, Page 316 Public Records of Volusia County, Florida;

794001000100

That part of Lot 10, Brackett's Subdivision of the Northerly portion of the Thomas Fitch Grant, in Section 40 Township 17 South, Range 29 East, according to the map in Deed Book "G", Page 316, Public Records of Volusia County, Florida;

794001000030

That part of Lot 3, Brackett's Subdivision of the Northerly portion of the Thomas Fitch Grant, in Section 40 Township 17 South, Range 29 East, according to the map in Deed Book "G", Page 316, Public Records of Volusia County, Florida.

Section 2. Service conditioned on construction and acceptance of systems. No water, wastewater or reuse service shall be provided to any part of the property, and no connections to such systems shall be allowed, until the Developer has installed system facilities and improvements in accordance with approved plans and specifications and the City has accepted the conveyance of the systems in writing. The Developer shall apply in writing to the City Engineer for acceptance of the systems. Upon acceptance of the systems, all construction guarantees in favor of the City shall be released.

Section 3. Installation of improvements. The Developer shall install, at its own initial cost and expense (including engineering costs), all lines, pipes, manholes, lift stations, generators, RTU, machinery and other facilities which may be required on and off Developer's property to provide the buildings and occupants with water, wastewater and reuse service and to connect the property to existing City facilities and systems. Upon completion, all off-site and onsite utility improvements shall be conveyed and dedicated to the City. The improvements to be constructed by the Developer off the Developer's property (off-site improvements) shall include:

- One water main wet tap connection with a 12" X 12" X 8" Stainless Steel tapping sleeve, one 8" Gate Valve, and approximately 10 LF +/- of 8" PVC Pipe.

- One water main wet tap connection with an 8" X 8" X 8" Stainless Steel tapping sleeve, one 8" Gate Valve, and approximately 10 LF +/- of 8" PVC Pipe.
- One force main wet tap connection with an 8" X 8" X 6" Stainless Steel tapping sleeve, one 6" Gate Valve, and approximately 10 LF +/- of 10" PVC Pipe.
- All connections to City facilities shall be made at Developer's expense. All water and reclaim meters 2" and smaller will be installed by the city at the Developer's expense.
- Any other installations required in accordance with the plans and specifications for the subject development or which are otherwise required in accordance with sound utility engineering practices.

Section 4. Approval of design and plans. The design and construction of all facilities to be transferred to and owned and operated by the City shall be subject to prior approval by the City Engineer. The Developer's engineer shall incorporate all applicable standards and specifications of the City into the Developer's engineering design, plans and specifications. The City shall provide assistance to the Developer's engineers as to design and construction requirements and must approve all construction plans and specifications in writing prior to any construction being commenced. The Developer shall obtain all necessary state, county and local permits required for construction, acceptance and operation of the improvements.

Section 5. Access to construction; approval of work and materials. The City may inspect the construction to ensure compliance with the approved plans and specifications and shall retain the power of final approval of work and materials.

Section 6. Testing during and after construction. The Developer's engineer shall properly supervise construction and shall certify to the City Engineer that the systems are installed in accordance with the approved design plans and specifications. The Developer shall conduct at its own expense whatever tests are deemed by the City Engineer to be necessary and reasonable to ensure that the systems are being constructed in accordance with the approved engineering plans and specifications.

Section 7. Conveyance of easements and improvements. The Developer shall at its expense grant to the City adequate transferable easements for water, sewer and reclaim lines, for access to lift stations and water stations and related appurtenances as may be deemed necessary by the City.

Section 8. Evidence of conveyance of facilities. By this Agreement Developer hereby transfers to the City the title to the water, wastewater and reclaim systems, facilities and improvements to be installed pursuant to this Agreement, effective without further action upon the completion and acceptance by the City of the installation of those systems. As further evidence of this transfer of title, the Developer shall provide to the City a copy of the recorded plat, if any; a bill of sale for the facilities; written easements; deeds to the land on which lift stations, water stations or similar facilities are located; and other evidences of conveyance required by the City.

Section 9. Additional documents to be provided before acceptance of facilities. In addition to the documents of title listed in the previous paragraph, the Developer shall provide to the City the following documents prior to acceptance of the facilities: As-built drawings of utility improvements, (one hard copy signed and sealed, one PDF and one AUTOCAD delivered on a USB drive) furnished one week prior to final inspection; an accounting of the actual costs (schedule of values) for on-site and off-site construction; letters of acceptance from the appropriate regulatory agency for the systems; certification by the design engineer that the system was constructed as designed; and right-of-way use permits and other permits and licenses obtained from applicable government agencies.

Section 10. Uninterrupted supply not guaranteed. The City does not guarantee an uninterrupted supply of water or reclaim at any particular pressure, nor does it assume any duty or obligation to furnish water for extinguishing fires. The City reserves the right to shut off the water in its mains temporarily for necessary purposes. The City shall not be responsible for any damage caused by low pressure, interruption of service or variations in water quality or content.

Section 11. Connections subject to rates and fees. All connections to the water, wastewater and reuse systems shall be subject to the continuing operating rules and regulations of the City including, without limitation, the periodic payment of water, wastewater and reclaim charges and fees as provided in the City's rate schedule, and payment of all deposits, meter charges and other fees, rates and charges, including development fees. The rates charged by the City for water, sewer, and reclaim service shall be in accordance with its rate schedule, which shall be subject to change from time to time.

Section 12. Reimbursement for oversizing of off-site improvements. This Section Not Used

Section 13. Surcharge for non-domestic waste. The terms wastewater or sanitary sewage used in this Agreement are meant to include only human waste, including liquids and solid matter carried from plumbing fixtures normally carried off by drains and sewers, and, except where specifically excluded, bath and toilet wastes, laundry wastes, kitchen wastes and other similar wastes. This service Agreement, and any charges contained in this Agreement, is based on normal domestic sewage, defined herein as containing not more than two hundred (200) parts per million biochemical oxygen demand or two hundred (200) parts per million suspended solids. Whenever water which contains more than these amounts is to be admitted to the sewers, the City and all other pollution control agencies must specifically agree to the connection and an additional charge shall be imposed in accordance with City regulations.

Section 14. Developer to obtain permits. The Developer shall obtain all governmental approvals, licenses and permits necessary for the design, routing, construction, connection and use of the water, wastewater and reclaim systems to be installed under this Agreement. The City will render assistance to the Developer in obtaining these approvals, licenses and permits.

Section 15. Service of other properties. The City reserves the right to service other properties through the facilities conveyed by the Developer, and nothing in this Agreement shall be deemed to prohibit or prevent the City from extending its water, wastewater or reclaim facilities to any other area.

Section 16. Default by Developer. The Developer's failure to carry out any provision in this Agreement shall relieve the City from its obligation to provide water, wastewater or reclaim service to the subject property.

Section 17. Covenant to support annexation. As a condition of supplying potable water, sanitary sewer or reuse service to the proposed Woodruff Ridge, Developer agrees to sign a covenant to support annexation to the City of DeLand. This covenant shall be recorded and shall be binding upon all successors and assigns.

Section 18. Contribution for Off-Site Reclaim Water System Extension. The Developer is building a residential subdivision on the subject property and desires to irrigate the grass and landscaping within the subdivision residential lots. Given the growing demands on Florida's water supply, and in particular in the West Volusia County area, it is necessary to connect the Developer's subdivision to the City's reclaimed water system. Currently, the closet point of

connection to the City's existing reclaim water distribution system is located more than one (1) mile from the subject property. Although the City plans to extend its reclaim water system to the general area of the subject property, there is no immediate plan to do so and would be done in an incremental fashion as properties develop, so that developers would pay the cost of the extension. In order to facilitate the immediate extension of the City's reclaim water system and allow the Developer to proceed with development of the subject property, the Developer hereby agrees to contribute financially to the extension of the City's reclaim water system as follows:

A. Upfront Contribution: An initial payment to the City in the amount of Seventy-Five Thousand Dollars ($75,000.00) shall be paid by the Developer at the Effective Date (defined below) of this Agreement.

B. Reuse Extension Contribution: Within thirty (30) days after construction commences on the extension of the City's reclaim system to the property, the Developer shall make an additional Seventy-Five Thousand Dollars ($75,000.00). This second payment shall only be due upon the City's award of a construction contract for the specific phase of the reclaim system extension that directly provides reclaimed water service to the subject project. No payment shall be required for any preliminary, upstream, or segmented phase that does not extend the City's reclaim main to the boundary of the subject property.

C. Reclaim Water System Extension Contribution Surety: The Developer shall provide letter of credit in a form acceptable to the city attorney, or cash to be held in escrow by the city, as surety to ensure the payment described in subsection 18B. of this Agreement.

D. Construction Timing: The City shall commence construction of the portion of the reclaim water system extension which reaches the subject property within five (5) years of the effective date of this Agreement. Upon commencement of construction, the City shall notify Developer, or any successor or assignee designated in writing by the Developer, that construction has commenced and that the payment described in subsection 18.B. of this Agreement is due within thirty (30) days of the date of said notice. If the Developer does not make payment when due, then the City may call the letter of credit or, if applicable, release from escrow and take ownership and possession of the cash security being held by the City, either without further notice to or action by the Developer or its designated assignee. If the City does not commence construction within said five (5) year period, the City shall either release the letter of credit or return the cash security being held by the City, as applicable, and all obligations of the Developer pursuant to this Agreement related to the reclaim water system extension shall be deemed satisfied. At any point in the future, even if the City does not extend the reclaimed water system to the subject property in accordance with this Section 18.D. of this Agreement and the payment described in subsection 18.B. of this Agreement does not become due, the development on the subject property shall nevertheless be required to connect its irrigation system to the City's reclaimed water system when the same becomes available to the subject property, as defined by Florida law.

Section 19. Entire Agreement; amendment. It is expressly agreed and understood that this is the entire Agreement between the Developer and the City, and that there are no other written or verbal agreements applicable to the subject of this Agreement between the Developer and the City. This Agreement may be amended and modified from time to time by written agreement of the parties.

Section 20. Miscellaneous.

A. Successors. This Agreement shall be binding on the parties hereto, their heirs, administrators, executors, successors in interest and assigns.

B. Binding Nature and Covenants Running with the Land. The provisions of this Agreement shall be binding upon the parties hereto, and upon all successors in interest in the subject property. And further, the provisions of this Agreement shall constitute covenants running with the land applicable to all of the subject property comprising the Project.

C. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by email copy of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered.

D. Governing Law; Venue. This Agreement shall be construed and interpreted according to the laws of the State of Florida, and all duly adopted ordinances, regulations, and policies of the City now in effect and those hereinafter adopted. The location for settlement of any and all claims, controversies, or disputes, arising out of or relating to any part of this Agreement, or any breach hereof, shall be Volusia County, Florida.

E. Severability. If any word, phrase, sentence, paragraph or other portion of this Agreement is finally determined by a court of competent jurisdiction to be void or unenforceable then such word, phrase, sentence, paragraph or other portion shall be severed from this Agreement and the balance shall remain in full force and effect to the greatest extent permitted by law.

F. Effective Date. The effective date of this Agreement shall be the date that it is last executed by a party as set forth below (Effective Date).

TLC VOLUSIA HOLDINGS, LLC

Name: Andrew Orosz
Title: Authorized Member

ATTEST:

Witness Andres Arvelo

Witness Jason Lonas

CITY OF DELAND

Christopher M. Cloudman
Mayor

ATTEST:

Christian Gowan
City Clerk - Auditor

Witness

Witness

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 2026 by Christopher M. Cloudman, Mayor-Commissioner of the City of DeLand, Florida who is ☐ personally known to me or ☐ who has produced, _____as identification

Notary Public - State of Florida

Name: _____
My Commission expires: _____

STATE OF FLORIDA
COUNTY OF ORANGE

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 23 day of June, 2026 by Andrew Orosz, the Authorized Member of TLC Volusia Holdings, LLC who is ☒ personally known to me or ☐ who has produced, _____as identification.

Notary Public - State of Florida

Notary Public State of Florida
Sylvialdenis Soto
My Commission HH 734500
Expires 11/22/2029

Name: Sylvialdenis Soto
My Commission expires: 11/22/2029

DEVELOPMENT TEAM:

DEVELOPER

HANOVER LAND COMPANY
605 COMMONWEALTH AVENUE
ORLANDO, FLORIDA 32803
ATTN: ANDRES ARVELO PE
PHONE: (407) 625 4747

ENGINEER

KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE,
SUITE 400
ORLANDO, FLORIDA 32804
ATTN: SEAN FORTIER PE
PHONE: (407) 898-7858
FAX: (407) 898-1488

GEOTECHNICAL ENGINEER

GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS, INC.
919 LAKE BALDWIN LANE,
ORLANDO, FL 32814
ATTN: CRAIG BALLOCK PE
PHONE: (407) 898-1818

SURVEYOR

ON POINT SURVEYING, INC.
P.O. BOX 770931
WINTER GARDEN, FL 34777
ATTN: DAN GENTRY
PHONE (321) 239-4868

LANDSCAPE ARCHITECT

BONNET DESIGN GROUP, LLC
400 SOUTH ORANGE AVE.,
SUITE 201
MAITLAND, FL 32751
ATTN: BRETT LARUE
PHONE: (407) 622-1588 (EXT. 7)

UTILITIES:

WATER / SEWER / REUSE

CITY OF DELAND
1101 SOUTH AMELIA AVENUE,
DELAND, FLORIDA 32724
ATTN: JIM AILES
PHONE: (386) 626-7250

ELECTRIC TRANSMISSION DUKE ENERGY

4306 E. CR 62, BLDF F
WILDWOOD, FL 34785
ATTN: CHRIS PADILLA
PHONE (352) 661-4532

ELECTRIC DISTRIBUTION DUKE ENERGY

WOODRUFF RIDGE SUBDIVISION

EXHIBIT A



WOODRUFF RIDGE SUBDIVISION

EXHIBIT A



CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Utility Service and Fair Share Agreements for Third Level Storage

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: Third Lake Storage DeLand FSA 2026 partially signed, Third Lake Storage DeLand USA 2026 partially signed, Third Lake Storage Exhibit A

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The Third Lake Storage commercial project is located at the north east corner of the intersection of Spring Garden Avenue and Gayle Drive in the county. The proposed commercial project will equate to two (2) residential units. The attached Utility Service Agreement contains the usual terms and conditions required by the City for utility service. No reimbursement for oversizing of offsite utilities is provided. As is consistent with City policy, the developer has executed this agreement for the use and planned improvements to allow increased density in proportion to the capacity of such utilities used by the developer.

The project is also in the West Side Interceptor Force Main service area. Thus, as is consistent with City policy, the developer has executed a West Side Interceptor Force Main Concurrency and Fair Share Agreement which is intended to compensate the City for use of the West Side Interceptor Force Main in proportion to the capacity of that pipeline used by the developer.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Infrastructure

FISCAL IMPACT:

At buildout, the City will receive water and sewer impact fees and ongoing utility revenue from the two (2) equivalent residential units constructed. In addition, the city will receive payment for the West Side Interceptor Fair Share contribution in the amount of $1,798 ($899 per unit x 2 units).

RECOMMENDATION:

Staff recommends that the City Commission approve the attached Utility Service and Fair Share Agreements for the Third Lake Storage commercial project.

BACKGROUND/DISCUSSION:

N/A

WESTSIDE INTERCEPTOR FORCE MAIN
CONCURRENCY AND FAIR SHARE AGREEMENT
FOR
THIRD LAKE STORAGE

This Westside Interceptor Force Main Concurrency and Fair Share Agreement (the "Agreement") is made and entered into this 15 day of July, 2026, by and between the City of DeLand, Florida, a Chartered Florida Municipality located in Volusia County, Florida, ("City") and **TLV RE SS III DELAND OWNER, LLC**, with its principal office located at 600 E. 8th Avenue, Suite a132, Tampa, Fl, 33605 ("Developer").

Tax Parcel ID. Numbers:

702010000010
20-17-30 LOTS 1 THRU 24 E OF ST RD & N 1/2 VAC VERMONT AVE ADJ & VAC BOUNDARY ST ADJ BON AIR SUB MB 10 PG 103 PER OR 2431 PG 0707 PER OR 5416 PG 4272 PER OR 6024 PGS 0441-0442 PER OR 8822 PG 3763

RECITALS

WHEREAS, attached to this Concurrency and Fair Share Agreement ("Agreement"), are exhibits describing in greater detail the parties hereto, real property, Westside Force Main and Master Pump Station Impact Fee Surcharge Study and the sanitary sewer utility improvements which are referenced throughout this Agreement. The parties agree that all attached exhibits have been reviewed by the parties and their respective professional consultants, and all information set forth or otherwise referenced therein is deemed incorporated herein by reference; and

WHEREAS, unless otherwise stated, the Developer is the owner of the real property described in the attached Exhibit "A." Developer desires to permit, develop and, if appropriate, plat the real property for an approximately 4.36-acre commercial project (Third Lake Development); and, in addition to other requirements, is seeking to comply with the City's concurrency requirements for wastewater utilities; and

WHEREAS, the City would not have sufficient wastewater transmission lines in the vicinity of the Project without the installation of the Westside Interceptor Force Main such that the Project could not be built without the Westside Interceptor Force Main; and

WHEREAS, the Westside Interceptor Force Main, as more particularly described in the attached Exhibits, is required in order for the Project to meet minimum concurrency requirements for wastewater to support the proposed Project; and

WHEREAS, it would not be feasible for the Developer to install the entire Westside Interceptor Force Main at its sole expense; and

WHEREAS, the Westside Interceptor Force Main will provide sanitary sewer transmission capacity to other developments in the vicinity of the Project such that it is more practical and fair that the City install the Westside Interceptor Force Main and collect from the Developer only its fair share cost of the said Westside Interceptor Force Main; and

WHEREAS, the City is desirous of including the Concurrency Improvements described below in the City's Comprehensive Plan Capital Improvement Element in the next annual amendment; and

WHEREAS, the City and the Developer desire to enter into this Agreement in order to utilize the provisions of Section 163.3180(11) Florida Statutes (2005) to implement the "fair share" process.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the City and Developer, hereby agree as follows:

1. **Incorporation of Recitals**. The presumptions and facts stated above in the recitals are incorporated by reference herein and deemed by the parties to be true, correct and constitute a material part of this Agreement.

2. **Construction.** The City agrees to construct, or to have constructed, the Westside Interceptor Force Main in accordance with the plans and specifications for the said project, which plans may be amended from time to time in the normal course of construction. Construction of the Westside Interceptor Force Main will commence and be complete to meet concurrency requirements, unless delay is caused for reasons outside of City's control, in which case construction will commence or recommence as soon as is reasonably practical. For purposes of this Agreement, "reasons outside of City's control" shall mean: delays or stoppage caused by acts of God, war, inability to obtain labor or materials or reasonable substitutes therefore, inability to receive governmental permits and approvals newly enacted governmental regulations or controls, the application of existing regulations or controls in a manner which City could not have foreseen or other similar matters or causes.

3. **Payment of Fair Share Assessment Amount**. In connection with the City's construction of the Westside Interceptor Force Main and as a requirement for receiving preliminary plat approval for the Project(s), Developer shall pay to the City a fair share assessment, ("Fair Share Payment"). The Fair Share Payment shall be an amount determined by multiplying the number of lots/units in the subdivision or equivalent residential units for a non-residential project time $899.00 which is the per residential dwelling unit determined by the Westside Force Main and Master Pump Impact Fee Surcharge Study attached hereto as Exhibit "B". For this project, the number of equivalent residential units is mutually agreed to be 2. The Developer shall be required to make payment for the total amount of its Fair Share Payment at the time of approval of the preliminary plat or site plan for the Project, and must be received by the City prior to issuance of any development permits by the City.

The requirement to make the Fair Share Payment shall be deemed to be a condition of approval of the preliminary plat or site plan for the project, regardless of whether any resolution or other action of the City evidencing approval of the preliminary plat or site plan specifically references such condition. In the event that the actual number of lots approved by way of approval of the final plat exceeds those approved in preliminary plat, then Developer shall pay, as a condition of approval of the final plat, the additional fee for those lots, or be entitled to a refund, as the case may be.

4. **Vested Rights in Wastewater Concurrency**. The City agrees that by paying the City the Fair Share Payment, and by receiving a Development Order for the Project, Developer will be deemed to have satisfied the City's wastewater concurrency requirements for the Project and that the Project shall be fully vested with wastewater concurrency for purposes of development and related Project construction, subject only to the requirement to pay sewer impact fees which become due and payable in accordance with the City's wastewater impact fee ordinance, as the same may be amended from time to time.

5. **No Entitlement to Impact Fee Credits**. Nothing herein is intended to entitle the Developer to any credit toward, or to otherwise reduce its obligation to pay sewer impact fees pursuant to the City's sewer impact fee ordinance, as the same may be amended from time to time.

6. **Miscellaneous.**

A. Attorney's Fees. In the event of litigation to enforce the terms of this Agreement, the prevailing party shall be entitled to collect from the other party reasonable attorney's fees and costs of suit.

B. Venue and Choice of Law. In the event of litigation regarding the terms of this Agreement or documents executed as a result of this Agreement, venue of the action shall be in Volusia County and Florida law shall apply. Trial shall be non-jury for any issues subject to trial.

C. Waiver. The waiver by a party of any terms or conditions of this Agreement or any breach hereof shall not constitute a waiver of any other term or condition or any subsequent breach of this Agreement.

D. Successors. This Agreement shall be binding on the parties hereto, their heirs, administrators, executors, successors in interest and assigns.

E. Construction of Contract. The parties hereto agree that they have all participated in the drafting of this Agreement. Therefore, the presumption that any ambiguity or vagueness in the construction of this Agreement shall be construed against the drafter shall not apply. The terms and provisions of the Agreement shall be applied equally to each party and the interpretation of the Agreement shall be guided by the express intent of the parties as determined by the overall effect of the provisions herein.

G. Amendments. Amendment to this Agreement shall not be effective unless in writing and signed by all record title property owners of the land for which the amendment is to be applied (but excluding the record title property owners for land that is unaffected by the amendment), and the City. Before amending this Agreement, the City shall conduct at least one public hearing. At the City's option, one of these public hearings may be held by the City Planning Board.

i. Notice of intent to consider an amendment to this Agreement shall be published by the City at the Developer's expense in a newspaper of general circulation and readership in Volusia County, Florida.

ii. If applicable, notice of intent to consider an amendment shall comply with the requirements of Section 166.041(3)(c), Florida Statutes (2005), as amended from time to time.

iii. Notices of intent to consider an amendment shall specify the location of the Property subject to the proposed amendment, the nature of the proposed amendment and such other information as the City Staff shall reasonably deem pertinent and appropriate.

iv. All notices shall specify a place where a copy of the proposed amendment can be obtained.

H. Conflicts. Developer agrees to be bound by all City codes and ordinances that are not in conflict with the provisions of this Agreement.

I. Recording. This Agreement shall be recorded by the City in the Public Records of Volusia County, Florida.

J. Binding Nature and Covenants Running With the Land. The provisions of this Agreement shall be binding upon the parties hereto, and upon all successors in interest in the subject real property. And further, the provisions of this Agreement shall constitute covenants running with the land applicable to all of the subject real property comprising the Project.

K. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by facsimile of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered.

IN WITNESS WHEREOF, the parties affix their signatures and seals on the dates set forth below:

WITNESSES:

CITY OF DELAND, a Florida Municipal Corporation

Printed Name: _____

Printed Name: _____
Christopher M. Cloudman, Mayor

Printed Name: _____

Attest: _____
Christian Gowan - City Clerk -Auditor

Printed Name: _____

Date: _____

Printed Name: _____

(*Corporate Seal*)

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____day of _____, 2026, by Christopher M. Cloudman and Christian Gowan, as Mayor and City Clerk-Auditor, respectively, of the City of DeLand, a Florida municipality, on behalf of the City. They are personally known to me or have produced as _____ identification.

NOTARY PUBLIC:

_____
Notary Public, State of Florida at Large Commission Number

WITNESSES:

Printed Name: Grant Loudenback

Printed Name: Jeffrey Voth

Printed Name: Andrew Russum

Printed Name: Angelica Torres

TLV RE SS III DELAND OWNER, LLC

By: _____
Name/Title: Luke Thomas, Authorized Representative

Attest: _____
Name/Title: Jennifer Carvalho / Secretary

Date: 07/15/2026

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me this 15th day of July, 2026, by Luke Thomas and Jennifer Carvalho, in their respective official capacities as Authorized Representative and Secretary, respectively, on behalf of TLV RE SS III Deland Owner, a Florida LLC. They are [X] personally known to me, or [ ] have produced _____ as identification.

NOTARY PUBLIC:

Notary Public, State of Florida at Large
Seal, Term Expiration and Commission Number

PEGGY CHONG
Commission # HH 299127
Expires August 10, 2026

UTILITY SERVICE AGREEMENT
FOR
Third Lake Storage DeLand

THIS AGREEMENT is entered into this 15 day of July, 2026, between the City of DeLand (City) and **TLV RE SS III DELAND OWNER, LLC** (Developer) regarding utility service for the, Third Lake Storage DeLand project. In consideration of the mutual covenants and conditions in this Agreement, and subject to any necessary approval by any other governmental agency having jurisdiction, the parties agree as follows:

Section 1. City to furnish service. Upon the terms and conditions in this Agreement, and in accordance with the City's rules and regulations, the City shall provide and shall have the exclusive right to furnish potable water, domestic sewer and reuse irrigation services to the real property located on the east side of the intersection of Gayle Dr and S State Road 15A, DeLand, FL and described as:

TAX PARCEL NUMBERS

702010000010
20-17-30 LOTS 1 THRU 24 E OF ST RD & N 1/2 VAC VERMONT AVE ADJ & VAC BOUNDARY ST ADJ BON AIR SUB MB 10 PG 103 PER OR 2431 PG 0707 PER OR 5416 PG 4272 PER OR 6024 PGS 0441-0442 PER OR 8822 PG 3763

Section 2. Service conditioned on construction and acceptance of systems. No water, wastewater or reuse service shall be provided to any part of the property, and no connections to such systems shall be allowed, until the Developer has installed system facilities and improvements in accordance with approved plans and specifications and the City has accepted the conveyance of the systems in writing. The Developer shall apply in writing to the City Engineer for acceptance of the systems. Upon acceptance of the systems, all construction guarantees in favor of the City shall be released.

Section 3. Installation of improvements. The Developer shall install, at its own initial cost and expense (including engineering costs), all lines, pipes, manholes, lift stations, generators, RTU, machinery and other facilities which may be required on and off Developer's property to provide the buildings and occupants with water, wastewater or reuse service and to connect the property to existing City facilities and systems. Upon completion, all off-site utility improvements shall be conveyed and dedicated to the City. The improvements to be constructed by the Developer off the Developer's property (off-site improvements) shall include:

- One potable 12" X 12" X 8" wet tap on existing water main with a 12" stainless steel tapping sleeve, and one 8" gate valve.
- One potable 12" X 12" X 2" wet tap on existing water main with a 12" stainless steel tapping sleeve, and one 2" gate valve.
- One sewer 16" X 16" X 4" wet tap on existing force main with a 16" stainless steel tapping sleeve, one 4" gate valve, and approximately 110 LF +/- of 4" HDPE.
- All onsite piping, valves, hydrants, fire department connections, double detector check valves, all potable mains and services beyond meter, all sewer gravity lines, force main line, and Lift Station and irrigation or reclaimed water piping shall be installed by the developer and will remain privately owned, operated and maintained in perpetuity by the property owner.
- All connections to City facilities shall be made at Developer's expense. All water and reuse meters 2" and below will be installed by the city at the Developer's expense.

- Any other installations required in accordance with the plans and specifications for the subject development or which are otherwise required in accordance with sound utility engineering practices.

Section 4. Approval of design and plans. The design and construction of all facilities to be transferred to and owned and operated by the City shall be subject to prior approval by the City Engineer. The Developer's engineer shall incorporate all applicable standards and specifications of the City into the Developer's engineering design, plans and specifications. The City shall provide assistance to the Developer's engineers as to design and construction requirements and must approve all construction plans and specifications in writing prior to any construction being commenced. The Developer shall obtain all necessary state, county and local permits required for construction, acceptance and operation of the improvements.

Section 5. Access to construction; approval of work and materials. The City may inspect the construction to ensure compliance with the approved plans and specifications and shall retain the power of final approval of work and materials.

Section 6. Testing during and after construction. The Developer's engineer shall properly supervise construction and shall certify to the City Engineer that the systems are installed in accordance with the approved design plans and specifications. The Developer shall conduct at its own expense whatever tests are deemed by the City Engineer to be necessary and reasonable to ensure that the systems are being constructed in accordance with the approved engineering plans and specifications.

Section 7. Conveyance of easements and improvements. The Developer shall at its expense grant to the City adequate transferable easements for water, sewer and reuse lines, for access to lift stations and water stations and related appurtenances as may be deemed necessary by the City. The City shall have absolutely no responsibility whatsoever for the maintenance of any utility lines within the project.

Section 8. Evidence of conveyance of facilities. By this Agreement Developer hereby transfers to the City the title to the water, wastewater and reuse systems, facilities and improvements to be installed pursuant to this Agreement, effective without further action upon the completion and acceptance by the City of the installation of those systems. As further evidence of this transfer of title, the Developer shall provide to the City a copy of the recorded plat, if any; a bill of sale for the facilities; written easements; deeds to the land on which lift stations, water stations or similar facilities are located; and other evidences of conveyance required by the city.

Section 9. Additional documents to be provided before acceptance of facilities. In addition to the documents of title listed in the previous paragraph, the Developer shall provide to the City the following documents prior to acceptance of the facilities: As-built drawings of utility improvements, (one hard copy signed and sealed, one PDF and one AUTOCAD delivered on a USB drive) furnished one week prior to final inspection; an accounting of the actual costs (schedule of values) for on-site and off-site construction; letters of acceptance from the appropriate regulatory agency for the systems; certification by the design engineer that the system was constructed as designed; and right-of-way use permits and other permits and licenses obtained from applicable government agencies.

Section 10. Uninterrupted supply not guaranteed. The city does not guarantee an uninterrupted supply of water or reuse at any particular pressure, nor does it assume any duty or obligation to furnish water for extinguishing fires. The City reserves the right to shut off the water in its mains

temporarily for necessary purposes. The City shall not be responsible for any damage caused by low pressure, interruption of service or variations in water quality or content.

Section 11. Connections subject to rates and fees. All connections to the water, wastewater and reuse systems shall be subject to the continuing operating rules and regulations of the City including, without limitation, the periodic payment of water, wastewater and reuse charges and fees as provided in the City's rate schedule, and payment of all deposits, meter charges and other fees, rates and charges, including development fees. The rates charged by the City for water, sewer, or reuse service shall be in accordance with its rate schedule, which shall be subject to change from time to time.

Section 12. Reimbursement for oversizing of off-site improvements. This Section Not Used

Section 13. Surcharge for non-domestic waste. The terms wastewater or sanitary sewage used in this agreement are meant to include only human waste, including liquids and solid matter carried from plumbing fixtures normally carried off by drains and sewers, and, except where specifically excluded, bath and toilet wastes, laundry wastes, kitchen wastes and other similar wastes. This service agreement, and any charges contained in this agreement, is based on normal domestic sewage, defined herein as containing not more than two hundred (200) parts per million biochemical oxygen demand or two hundred (200) parts per million suspended solids. Whenever water which contains more than these amounts is to be admitted to the sewers the City and all other pollution control agencies must specifically agree to the connection and an additional charge shall be imposed in accordance with City regulations.

Section 14. Developer to obtain permits. The Developer shall obtain all governmental approvals, licenses and permits necessary for the design, routing, construction, connection and use of the water, wastewater and reuse systems to be installed under this agreement. The City shall render assistance to the Developer in obtaining these approvals, licenses and permits.

Section 15. Service of other properties. The City reserves the right to service other properties through the facilities conveyed by the Developer, and nothing in this Agreement shall be deemed to prohibit or prevent the City from extending its water, wastewater or reuse facilities to any other area.

Section 16. Default by Developer. The Developer's failure to carry out any provision in this agreement shall relieve the City from its obligation to provide water, wastewater or reuse service to the property.

Section 17. Covenant to support annexation. As a condition of supplying potable water, sanitary sewer or reuse service to the proposed Third Lake Storage DeLand, Developer agrees to sign a covenant to support annexation to the City of DeLand. This covenant shall be recorded and shall be binding upon all successors and assigns.

Section 18. Entire Agreement; amendment. It is expressly agreed and understood that this is the entire Agreement between the Developer and the City, and that there are no other written or verbal agreements applicable to the subject of this Agreement between the Developer and the City. This Agreement may be amended and modified from time to time by written agreement of the parties.

Section 19. Miscellaneous.

A. Successors. This Agreement shall be binding on the parties hereto, their heirs, administrators, executors, successors in interest and assigns.

B. Binding Nature and Covenants Running with the Land. The provisions of this Agreement shall be binding upon the parties hereto, and upon all successors in interest in the subject real property. And further, the provisions of this Agreement shall constitute covenants running with the land applicable to all of the subject real property comprising the Project.

C. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The delivery by email copy of an executed copy of this Agreement shall be deemed valid as if an original signature was delivered.

D. Governing Law; Venue. This Agreement shall be construed and interpreted according to the laws of the State of Florida, and all duly adopted ordinances, regulations, and policies of the City now in effect and those hereinafter adopted. The location for settlement of any and all claims, controversies, or disputes, arising out of or relating to any part of this Agreement, or any breach hereof, shall be Volusia County, Florida.

E. Severability. If any word, phrase, sentence, paragraph or other portion of this Agreement is finally determined by a court of competent jurisdiction to be void or unenforceable then such word, phrase, sentence, paragraph or other portion shall be severed from this Agreement and the balance shall remain in full force and effect to the greatest extent permitted by law.

F. Effective Date. The effective date of this agreement shall be the date that it is last executed by a party as set forth below.

TLV RE SS III DELAND OWNER, LLC

Name: Luke Thomas
Title: Authorized Representative

ATTEST:

Name: Jennifer Carvalho
Secretary

Witness

Witness

CITY OF DELAND

Christopher M. Cloudman
Mayor

ATTEST:

Christian Gowen
City Clerk - Auditor

Witness

Witness

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 2026 by Christopher M. Cloudman, Mayor-Commissioner of the City of DeLand, Florida who is ☐ personally known to me or ☐ who has produced, _____ as identification.

Notary Public - State of Florida

Name: _____
My Commission expires: _____

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 15th day of July, 2026 by Luke Thomas, the Authorized Representative of **TLV RE SS III DELAND OWNER, LLC** who is ~~☐~~ personally known to me or ☐ who has produced, _____ as identification.

Notary Public - State of Florida

Name: Peggy Chong
My Commission expires: August 10, 2026

PEGGY CHONG
Commission # HH 299127
Expires August 10, 2026

Contact Information

OWNER:
U STOR DELAND, LLC
3060 N ALT 19
PALM HARBOR, FL 34683

DEVELOPER:
THIRD LAKE DEVELOPMENT
CONTACT: JONATHAN AYLOR, DEVELOPMENT DIRECTOR
600 E. 8TH AVENUE, SUITE A132
TAMPA, FL 33605
OFFICE: 727-349-9152
CELL: 727-922-3963
JAYLOR@THIRDLAKEDEVELOPMENT.COM

ARCHITECT:
STUDIO NORTH ARCHITECTURE
CONTACT: KEVIN POLIT, AIA, LEED AP BD+C
3315 N. OAK TRAFFICWAY
KANSAS CITY, MO 64116
847-627-0898
studionortharchitecture.com

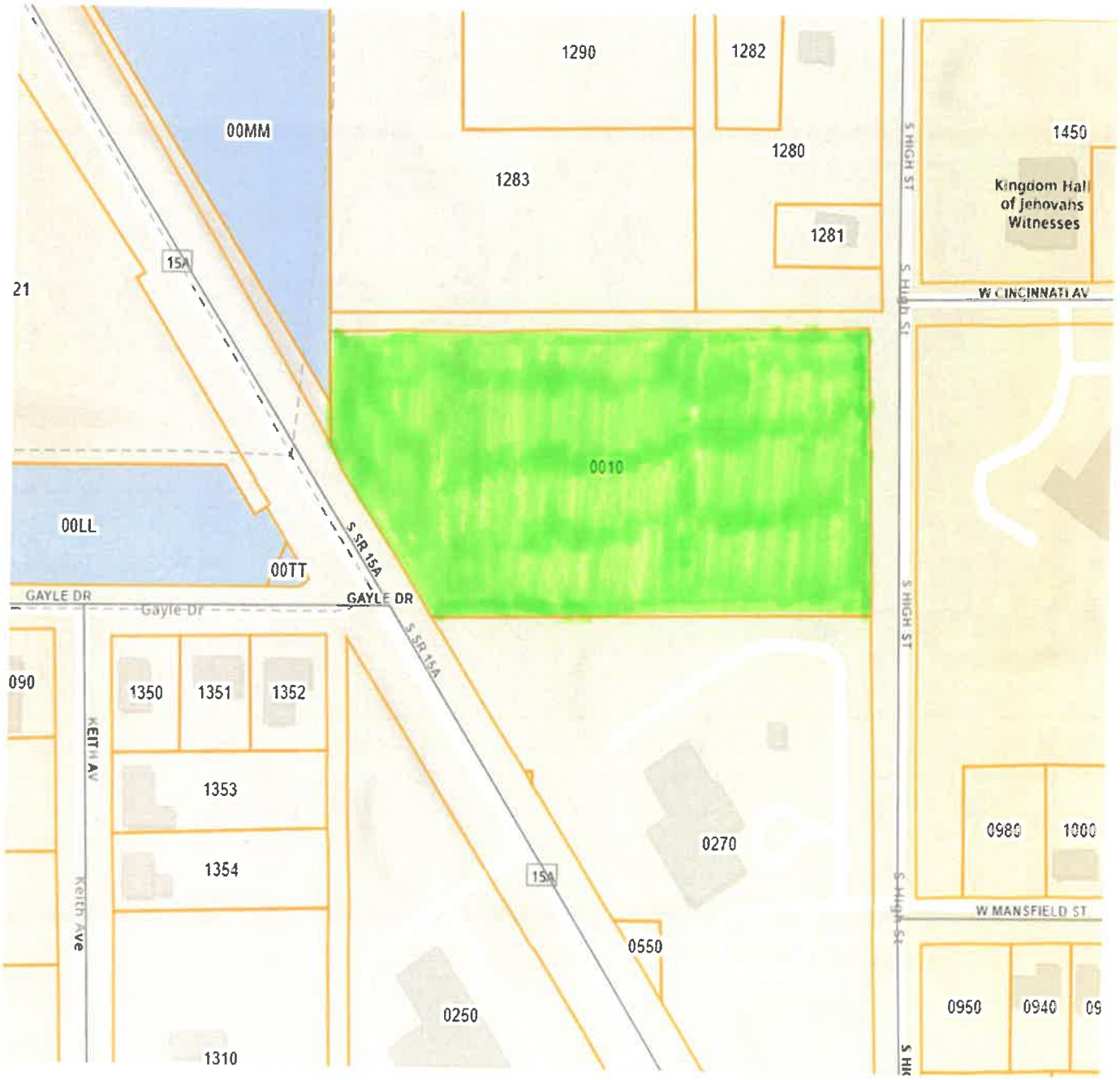
SURVEYOR:
TERMINUS SURVEYING, LLC
2752 JASON STREET
TAMPA, FLORIDA 33619
813-681-4481
CERTIFICATE OF AUTHORIZATION NO. LB 8207

GEOTECH:
ECS FLORIDA, LLC
CONTACT: GIOVANNI MAFIOL, GEOTECHNICAL STAFF PROJECT MANAGER
386-944-9588
gmafiol@ecslimited.com

ENGINEER/LANDSCAPE ARCHITECT:
PARKER MYNCHENBERG & ASSOCIATES, INC.
STEVEN R. BUSWELL P.E. #53985
STEVEN R. BUSWELL R.L.A. #6667011
CERTIFICATE OF AUTHORIZATION NUMBER: 00003910

THIRD LAKE STORAGE

EXHIBIT A



CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, JL2 Architecture Design Services, Fire Station 84

DEPARTMENT: Engineering

PREPARED BY: Ray Bahrami, City Engineer

ATTACHMENTS: JL2 Professional Design Services

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The proposed Fire Station 84 will be located at the intersection of East New York Avenue and Miller Road on property currently being acquired by the City for $147,000. This location was identified through the Fire Department's predictive analytics and response modeling software as a critical area with existing emergency service coverage gaps. The selected site represents the optimal location to improve response times and enhance emergency service delivery to residents and visitors within this growing section of the City. In addition to improving emergency response capabilities, Fire Station 84 will provide operational relief to Fire Station 81, currently the busiest fire station in Volusia County. By redistributing call volume and emergency incidents, the new station will increase system capacity within the downtown service area, improve unit availability, and help reduce firefighter workload and fatigue. The construction of Fire Station 84 represents a strategic investment in public safety infrastructure that will enhance community protection, support firefighter wellness, and ensure the City is positioned to meet current and future emergency service demands.

We have received confirmation that our House Representative, Webster Barnaby, is willing to sponsor a Florida Legislative Appropriation, or House Appropriations Local Funding Initiative request for Fire Station 84. These funding requests typically assume part of the cost for construction, and not full cost. In order to apply for this grant in September of this year, we will need to submit a preliminary design.

The subject task assignment will provide Architectural, Mechanical, Electrical, Plumbing, Fire Protection, Structural, Geotechnical, Civil and Surveying services for the schematic design (30%) phase of this project. The remainder of the design phase, permitting, and bid phase assistance will be covered under a separate proposal in the future.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The proposed cost for these services is $149,805. The FY 25/26 budget included $150,000 for new fire station design work. There is $133,500 remaining in that budget. A budget amendment will be needed to fund the additional $16,305, which can be funded from capital reserves.

RECOMMENDATION:

Staff recommends that the City Commission approve JL2 professional design services for Fire Station 84, in the amount of $149,805.00.

BACKGROUND/DISCUSSION:

N/A

Proposal for Professional Design Services

~~May 15, 2026~~, *Revised 6.25.2026*

Mr. Ray Bahrami, PE
Deputy Public Services Director
City of DeLand
1102 S Garfield Ave
DeLand, FL 32724

Re: Proposal for Professional Design Services
City of DeLand—Fire Station 84-Schematic Documents

Commission No. 2026-P014

Dear Mr. Bahrami:

jl2 Architecture appreciates the opportunity to submit our proposal for Professional Architectural & Engineering Services on the above referenced project for your consideration. The scope of work and compensation for the project is described as:

I. Description of Project Scope Items included:

A. The City of DeLand is constructing a new 8-10,000sf Fire Station 84, located on Miller Court in DeLand, FL. Below is a detailed breakdown of the proposed design scope of work:

1. Geotechnical Report.
2. Programming & Conceptual Planning.
3. Civil, Landscape, Environmental Systems Narratives.
4. Civil Site Plan.
5. Surveying.
6. Architectural 30% Construction Documents.
7. Structural / MEPF & Security Systems Narratives.
8. Cost Estimating.

II. Design Disciplines included:

A. Design services for the project include the following disciplines:

1. Architectural / jl2 Architecture
2. Civil, Landscape, Environmental & Surveying / Zev Cohen & Associates
3. MEPF, Security / TLC Engineering
4. Structural Engineering / BBM Structural
5. Geotechnical Engineering / Bechtol Engineering
6. Cost Estimating / KMI International

III. We understand that the final schedule is yet to be determined and will be finalized by the City. We have listed below a draft schedule for the jl2 team's scope of work. Description of Design Phases and Draft Milestone Schedule included (billing will occur monthly & be based on the percentage of work performed at that time):

A. Phases and Deliverables for this proposal include:

1. Site Investigations / Planning—**8 weeks**
   **includes a document page turn for County review of documents.*
2. 100% Schematic Documents—**6 weeks**
   **includes a document page turn for County review of documents.*

IV. Design Services Exclusions & Clarifications:

A. Items not listed in the Scope of Work and Design Services above & listed below are not included in this proposal:

1. Totals include all printing and other expenses required to complete scope of work listed above.
2. All documents other than one's required for jurisdictional permitting will be submitted to the City electronically.

V. Compensation for Architectural / Engineering Services:

For the scope listed above, we propose a fixed lump sum fee of $149,805.00 (One Hundred Forty Nine Thousand Eight Hundred and Five Dollars). **See Exhibit A for jl2 hourly breakdowns.*

1. 100% Planning Documents—**30%**
2. 100% Schematic Documents—**70%**

We hope this proposal meets with your approval and we are available to discuss with you or your staff any aspect of the information contained herein. jl2 Architecture is prepared to initiate start-up immediately at the direction of the City of DeLand and we are committed to servicing you with our fullest capabilities. We look forward to hearing from you soon.

Sincerely,

Johnnie Lohrum Jr., RA
President

DeLand Fire Station 84--*Fire Station* --jl2 Fee/Hourly Breakdown									
ARCHITECTURAL--EXHIBIT A									
6.25.2026									
	250	190	170	130	110	170	160	95	
	Principal	Proj	Proj.	Designer	BIM	Spec	Const.	Admin.	
		Manager	Architect		Tech.	Writer	Admin.		
Planning Phase-10%									
Document collection & review		8						4	
Administrative									
Review site conditions		8							
Code Analysis		8	8						
Interviews with staff		8	8						
Staffing analysis		8	8						
Equipment analysis		8	8						
Programming		8	8	8					
Review city standards, requirements		4							
Team coordination		4	4						
Survey coordination									
Master planning		8	8						
Prepare adjacency diagrams		8	8						
Prepare due dilgence draft report		8	8						
Subtotal hours	0	88	68	8	0	0	0	4	**Total**
Subtotal fees	0	16720	11560	1040	0	0	0	380	**29700**
Schematic Phase-30%									
Incorpoarte owner planning comments		4	4					4	
Administrative									
Consultant coordination		16	16						
Schematic drawing preparation		30	30	4	20			4	
Site planning finalization		8	8	4					
Team meetings weekly		20	20	20					
Coordinate surveying documents		4	4	4					
Outline specification preparation		8	8	2		8			
3D renderings		10	20	30					
Print and Issue redline review sets		8	8						
Coordinate with estimator		8	12	4					
Meetings with staff		12	12						
Coordinate geotechical report		4	4						
Coordination with grant writer		4	4						
Review and finalize schematic documents		12	12						
Subtotal hours	0	148	162	68	20	8	0	8	**Total**
Subtotal fees	0	28120	27540	8840	2200	1360	0	760	**68820**
TOTAL HOURS	0	236	230	76	20	8	0	12	
TOTAL FEES	0	44840	39100	9880	2200	1360	0	1140	
ARCHITECTURAL TOTAL FEES									98520
Printing									
Printing costs									1500
Geotechnical (Allowance)									

Geotechnical report, underdrain & recovery analysis									10,000
MEPF/Security									
									7,500
Structural									
									5,500
Surveying (Allowance)									
									8,000
Civil / Env. / Landscape / Irrigation									
									12,000
Cost Estimator									
									6,785
TOTAL PROJECT FEES									149,805

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Award of Bid for David E. Disney Tennis Center/Pickleball Court Expansion & Upgrade

DEPARTMENT: Engineering

PREPARED BY: Ray Bahrami, City Engineer

ATTACHMENTS: Bid Tabulation

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

This project consists of the transformation and expansion of existing athletic facilities at the David E. Disney Tennis & Pickleball Center by converting existing pickleball courts into two new tennis courts while simultaneously expanding and converting existing tennis courts into sixteen new pickleball courts with furnishings and amenities. This project was bid in accordance with the City's purchasing procedures, including advertisement in the local newspaper and on the internet-based Demand Star system. On June 25, 2026, seven bids were received as summarized on the attached bid tabulation. Paul Culver Construction, Inc. of Daytona Beach, Florida was the lowest responsible bidder in the amount of $5,080,721.10. In addition, there are other costs associated with the project to include lighting, construction administration, and information technology which increase the total project costs to $5,597,819.10. Given the cost of the project exceeds what was budgeted by $1,886,875.10, the associated annual debt service and operating expense for the facility, and the potential loss of general fund revenue, staff is recommending that the bids be rejected at this time.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Sustainability

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The cost to award bid is $5,080,721.10. In addition to that, there were items not included in the bid to save money, which includes lighting ($265,000), construction administration ($222,098), and information technology ($30,000), which brings the total project costs to $5,597,819.10. The remaining project budget has $3,710,944 in funds remaining, leaving a deficit of $1,886,875.10.

RECOMMENDATION:

Staff recommends that the City Commission reject all bids and put the project on hold.

BACKGROUND/DISCUSSION:

Additional work includes the renovation of an existing office building into a pro shop with bathrooms as well as construction of a new concession building with bathrooms, a custom shade pavilion, a pre-engineered metal building, and all associated utility connections. Site improvements feature the installation of a drainage swale

& flume, extensive landscaping & irrigation, synthetic turf, site and sports court lighting, new sidewalks, and a custom gateway feature to enhance beautification and optimize pedestrian flow between the courts and parking areas.

120 S. Florida Ave.
DeLand, FL 32720
Phone: 386-626-7000
Fax: 386-626-7140

BID TABULATION SHEET

Bid Title: Dave E Disney Tennis Center/Pickleball Expansion & Upgrade
Bid No: B-26-10
OPENING DATE & TIME: June 25, 2026 @ 3:00 P.M.
POSTING DATE: June 30, 2026 **POSTED BY: Corey McMillen**

Vendor	City, State	Bid Amount
Paul Culver Construction, Inc.	**Daytona Beach, FL**	**$5,080,721.10**
A.G. Pifer Construction Co., Inc.	Daytona Beach, FL	$5,498,568.40
McKee Construction Co.	Sanford, FL	$5,805,786.03
S.A. Casey Construction	Orlando, FL	$5,951,765.59
Saboungi Construction, Inc.	Ormond Beach, FL	$5,955,340.65
Legacy Sports Surfacing LLC	Melbourne, FL	$6,037,946.62
All State Civil Construction, Inc.	Daytona Beach, FL	$6,662,541.43

Tabulation represents the lowest-responsive bidder and the recommended awardee of the City of DeLand. *Bid tabulations are posted to DemandStar at www.demandstar.com & VendorLink at www.vendorlink.com.*

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Approval of Resolution 2026-34: Surplus Equipment

DEPARTMENT: Information Technology

PREPARED BY: Erin Carello

ATTACHMENTS: Surplus Property Resolution 2026-34, AIO-Surplus7-6-26, AndrewsTimeclocks-Surplus7-6-26, Laptop-Surplus7-6-26, MIFI-Surplus7-6-26, Non Profit Corporations5-2026, Phone-Surplus7-6-26, Server-Surplus7-6-26, Towers-Surplus7-6-26

APPROVED BY: Michael Pleus, City Manager, July 15, 2026

SUMMARY/HIGHLIGHT:

The proposed Resolution declares certain equipment as surplus and authorizes the City Manager to dispose of the same. Staff has indicated that the property is either obsolete and the continued use of it is uneconomical or inefficient; that it serves no useful function; and /or that it is irreparable.

Staff reached out to the Boys & Girls Club, and The House Next Door. The following stated they would like various pieces of equipment.

The House Next Door is located at 803 North Woodland Blvd. DeLand, FL 32720, a registered non-profit organization, is seeking donations of computer equipment.
The organization has requested six (6) All-in-One (AIO) desktop computers and one (1) laptop computer. Staff recommends approving the donation of the following equipment currently deemed surplus:

All-in-One Computers (6)

Dell	Optiplex 7780 AIO	J77GQJ3
Dell	Optiplex 7400 AIO	J4RPGT3
Dell	Optiplex 7780 AIO	477GQJ3
Dell	Optiplex 7780 AIO	B67GQJ3
Dell	Optiplex 5400 AIO	GQWBGT3
Dell	Optiplex 7410 AIO	B6N62Z3

Laptop (1)

HP	pavilion 15-eg3097nr	5CD42910C9

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The proceeds from the sale of surplus equipment are included as revenue in the budget.

RECOMMENDATION:

It is recommended that the City Commission adopt the resolution declaring the equipment surplus and authorizing its disposal.

BACKGROUND/DISCUSSION:

N/A

RESOLUTION 2026 – 34

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, DECLARING CERTAIN PROPERTY SURPLUS; AUTHORIZING DISPOSAL OF THE PROPERTY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the disposal of tangible surplus property is authorized by Chapter 274 of the Florida Statutes and the City's home rule powers; and

WHEREAS, the City Commission hereby declares all of the tangible personal property listed in this Resolution as surplus; and

WHEREAS, the City Commission hereby finds that the property listed in this Resolution is no longer needed by the City and the continued use of it would be both and inefficient, and that it serves no useful function for the City; and

WHEREAS, the property listed in this Resolution has little to no commercial value and the cost to the City to attempt to sell the property would far exceed any small value it may have; and

WHEREAS, City staff has contacted private nonprofit agencies as defined in Section 273.01(3) of the Florida Statutes and certain of the property listed in this Resolution is intended to be donated to the private nonprofit agency or agencies as set forth in this Resolution; and

WHEREAS, the City Commission hereby finds that process set forth in this Resolution is the most economical and beneficial manner in which to dispose of the personal property.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF DELAND, FLORIDA:

Section 1. The following described property is hereby declared surplus:

Dept.	Description	Make	Model	Serial #	Surplus Method
110	Tower	Dell	Optiplex7080	C9CTM83	A1 Assets
110	Tower	Dell	Precision3630	H9R7G73	A1 Assets
110	Tower	Dell	Precision3630	H9R5G73	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	J77GQJ3	The House Next Door
110	Tower	Dell	Optiplex7400 AIO	J4RPGT3	The House Next Door
110	Tower	Dell	Optiplex7780 AIO	477GQJ3	The House Next Door
110	Tower	Dell	Optiplex5400 AIO	GQWBGT3	The House Next Door
110	Tower	Dell	Optiplex7410 AIO	B6N62Z3	The House Next Door
110	Tower	Dell	Optiplex7480 AIO	HRX7673	A1 Assets
110	Tower	Dell	Optiplex7400 AIO	DXDQGT3	A1 Assets
110	Tower	Dell	Optiplex7400 AIO	FVBQGT3	A1 Assets
110	Tower	Dell	Optiplex7400 AIO	6XDQGT3	A1 Assets
110	Tower	Dell	Optiplex7480 AIO	HS2B673	A1 Assets
110	Tower	Dell	Optiplex7480 AIO	HSZXH63	A1 Assets

110	Tower	Dell	Optiplex7480 AIO	HS0ZH63	A1 Assets
110	Tower	Dell	Optiplex7480 AIO	977GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	C77GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	577GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	277GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	177GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	F77GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	B77GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	G67GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	877GQJ3	A1 Assets

Dept.	Description	Make	Model	Serial #	Method
110	Tower	Dell	Optiplex7480 AIO	HSYZH63	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	H77GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	D77GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	BR7CRN3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	F67GQJ3	A1 Assets
110	Tower	Dell	Optiplex7480 AIO	HRMVH63	A1 Assets
110	Tower	Dell	Optiplex7480 AIO	HT01J63	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	667GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	867GQJ3	A1 Assets
110	Tower	Dell	Optiplex7780 AIO	C67GQJ3	A1 Assets
110	Tower	Dell	Optiplex5400 AIO	FQWBGT3	A1 Assets
110	Tower	Dell	Optiplex3050 AIO	4J2QMR2	A1 Assets
110	Tower	Dell	Optiplex7410 AIO	HLH26X3	A1 Assets
110	Tower	Dell	Optiplex7440 AIO	61GGXG2	A1 Assets
110	Tower	Dell	WYSE 5470 AIO	HL1HTH3	A1 Assets
110	Laptop	Dell	Latitude 5501	31LW3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	8DRV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	HSKV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5591	3GB9RV2	A1 Assets
110	Laptop	Dell	Latitude 5501	2YHV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	60JV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	F5JV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	31JV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	G8RV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5580	1J07QH2	The House Next Door
110	Laptop	HP	Pavilion 15-eg3097nr	5CD42910C9	A1 Assets
110	Laptop	Dell	Latitude 5501	29RV3Z2	A1 Assets
110	Laptop	Dell	Latitude 5501	61BB693	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	153803220033	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200114	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200551	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200292	A1 Assets

110	Time Clock	Andrews Technology	NT-8000B-FP	120715200214	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200361	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200578	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200485	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200208	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	186115210347	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200459	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200505	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	120715200053	A1 Assets
110	Time Clock	Andrews Technology	NT-8000B-FP	153803220271	A1 Assets
110	Server	Dell	PowerEdge R730	49F0CM2	A1 Assets

Dept.	**Description**	**Make**	**Model**	**Serial #**	**Method**
110	Server	Dell	PowerEdge R730	49DYBM2	A1 Assets
110	Server	Dell	PowerEdge R720	G6HKYV1	A1 Assets
110	MIFI Unit	AT&T Netgear	MR6110	16094001161624	A1 Assets
110	MIFI Unit	AT&T Netgear	MR6110	16094001156251	A1 Assets
110	MIFI Unit	AT&T Netgear	MR6110	16094001146427	A1 Assets
110	MIFI Unit	AT&T Netgear	MR6110	16094001168595	A1 Assets
110	MIFI Unit	AT&T Netgear	MR6110	16094001039200	A1 Assets
110	MIFI Unit	AT&T Franklin A50	RG2102	358718371708509	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052211541	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052209503	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052201153	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052208901	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052193509	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052211640	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052209735	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052201872	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052203704	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052199613	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052211632	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052201955	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018053091462	A1 Assets
110	MIFI Unit	Verizon	Inseego-INSGM3100	990018052201815	A1 Assets
110	MIFI Unit	Verizon	Inseego-8800L	990016871437388	A1 Assets
110	MIFI Unit	Verizon	Inseego-8800L	990016871285746	A1 Assets
110	MIFI Unit	Verizon	Inseego-8800L	990016879229746	A1 Assets
110	MIFI Unit	Verizon	Inseego-8800L	990016878925369	A1 Assets
110	MIFI Unit	Verizon	MR6110	16094001161624	A1 Assets
110	Verizon Cell	Kyocera	Dura XV Extreme	015588007565507	A1 Assets
110	Verizon Cell	Kyocera	Dura XV Extreme	015588007572727	A1 Assets
110	Desktop Phone	NEC	DT900	A18987B9800152	A1 Assets
110	Desktop Phone	NEC	DT900	A18987B9800096	A1 Assets
110	Desktop Phone	NEC	DT900	A18987B9800067	A1 Assets

Section 2. The City Manager is hereby authorized to dispose of the surplus property listed in Section 1 above in the manner designated in Section 1 for each item listed remove the surplus property from the City's fixed assets.

Section 3. The City Manager is directed to donate those items identified in Section 1 to the private nonprofit agency or agencies listed next to those items and the City Manager is further authorized to transfer the remaining items to companies listed next to those items for sale or disposal.

Section 4. This Resolution shall become effective immediately upon its adoption.

PASSED AND ADOPTED this 20th day of July, 2026.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Christian D. Gowan
City Clerk-Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Manufacturer	Model	Serial	Notes
Dell	Optiplex 7780 AIO	J77GQJ3	Pending Surplus to The House Next Door
Dell	Optiplex 7400 AIO	J4RPGT3	Pending Surplus to The House Next Door
Dell	Optiplex 7780 AIO	477GQJ3	Pending Surplus to The House Next Door
Dell	Optiplex 7780 AIO	B67GQJ3	Pending Surplus to The House Next Door
Dell	Optiplex 5400 AIO	GQWBGT3	Pending Surplus to The House Next Door
Dell	Optiplex 7410 AIO	B6N62Z3	Pending Surplus to The House Next Door
Dell	Optiplex 7480 AIO	HRX7673	
Dell	Optiplex 7400 AIO	DXDQGT3	
Dell	Optiplex 7400 AIO	FVBQGT3	
Dell	Optiplex 7400 AIO	6XDQGT3	
Dell	OptiPlex 7480 AIO	HS2B673	
Dell	OptiPlex 7480 AIO	HSZXH63	
Dell	OptiPlex 7480 AIO	HS0ZH63	
Dell	Optiplex 7780 AIO	977GQJ3	
Dell	Optiplex 7780 AIO	C77GQJ3	
Dell	Optiplex 7780 AIO	577GQJ3	
Dell	Optiplex 7780 AIO	277GQJ3	
Dell	Optiplex 7780 AIO	177GQJ3	
Dell	Optiplex 7780 AIO	F77GQJ3	
Dell	Optiplex 7780 AIO	B77GQJ3	
Dell	Optiplex 7780 AIO	G67GQJ3	
Dell	Optiplex 7780 AIO	877GQJ3	
Dell	OptiPlex 7480 AIO	HSYZH63	
Dell	Optiplex 7780 AIO	H77GQJ3	
Dell	Optiplex 7780 AIO	D77GQJ3	
Dell	Optiplex 7780 AIO	BR7CRN3	
Dell	Optiplex 7780 AIO	F67GQJ3	
Dell	OptiPlex 7480 AIO	HRMVH63	
Dell	OptiPlex 7480 AIO	HT01J63	
Dell	Optiplex 7780 AIO	667GQJ3	
Dell	Optiplex 7780 AIO	867GQJ3	
Dell	Optiplex 7780 AIO	C67GQJ3	
Dell	Optiplex 5400 AIO	FQWBGT3	
Dell	Optiplex 3050 AIO	4J2QMR2	
Dell	Optiplex AIO 7410	HLH26X3	
Dell	OptiPlex 7440 AIO	61GGXG2	
Dell	WYSE 5470 AIO	HL1HTH3	

Manufacturer	Model	Serial	Notes
Andrews Technology	NT-8000B-FP	153803220033	Timeclocks
Andrews Technology	NT-8000B-FP	120715200114	Timeclocks
Andrews Technology	NT-8000B-FP	120715200551	Timeclocks
Andrews Technology	NT-8000B-FP	120715200292	Timeclocks
Andrews Technology	NT-8000B-FP	120715200214	Timeclocks
Andrews Technology	NT-8000B-FP	120715200361	Timeclocks
Andrews Technology	NT-8000B-FP	120715200578	Timeclocks
Andrews Technology	NT-8000B-FP	120715200485	Timeclocks
Andrews Technology	NT-8000B-FP	120715200208	Timeclocks
Andrews Technology	NT-8000B-FP	186115210347	Timeclocks
Andrews Technology	NT-8000B-FP	120715200459	Timeclocks
Andrews Technology	NT-8000B-FP	120715200505	Timeclocks
Andrews Technology	NT-8000B-FP	120715200053	Timeclocks
Andrews Technology	NT-8000B-FP	153803220271	Timeclocks

Manufacturer	Model	Serial	Notes
Dell	Latitude 5501	31LW3Z2	
Dell	Latitude 5501	8DRV3Z2	
Dell	Latitude 5501	HSKV3Z2	
Dell	Latitude 5591	3GB9RV2	
Dell	Latitude 5501	2YHV3Z2	
Dell	Latitude 5501	60JV3Z2	
Dell	Latitude 5501	F5JV3Z2	
Dell	Latitude 5501	31JV3Z2	
Dell	Latitude 5501	G8RV3Z2	
Dell	Latitude 5580	1J07QH2	Pending Surplus to The House Next Door
HP	pavilion 15-eg3097nr	5CD42910C9	
Dell	Latitude 5501	29RV3Z2	
Dell	Latitude 5501	61BB693	

Manufacturer	Model	Serial	Notes
AT&T Netgear	MR6110	16094001161624	MIFI Unit
AT&T Netgear	MR6110	16094001156251	MIFI Unit
AT&T Netgear	MR6110	16094001146427	MIFI Unit
AT&T Netgear	MR6110	16094001168595	MIFI Unit
AT&T Netgear	MR6110	16094001039200	MIFI Unit
AT&T Franklin A50	RG2102	358718371708509	MIFI Unit
Verizon	Inseego-INSGM3100	990018052211541	MIFI Unit
Verizon	Inseego-INSGM3100	990018052209503	MIFI Unit
Verizon	Inseego-INSGM3100	990018052201153	MIFI Unit
Verizon	Inseego-INSGM3100	990018052208901	MIFI Unit
Verizon	Inseego-INSGM3100	990018052193509	MIFI Unit
Verizon	Inseego-INSGM3100	990018052211640	MIFI Unit
Verizon	Inseego-INSGM3100	990018052209735	MIFI Unit
Verizon	Inseego-INSGM3100	990018052201872	MIFI Unit
Verizon	Inseego-INSGM3100	990018052203704	MIFI Unit
Verizon	Inseego-INSGM3100	990018052199613	MIFI Unit
Verizon	Inseego-INSGM3100	990018052211632	MIFI Unit
Verizon	Inseego-INSGM3100	990018052201955	MIFI Unit
Verizon	Inseego-INSGM3100	990018053091462	MIFI Unit
Verizon	Inseego-INSGM3100	990018052201815	MIFI Unit
Verizon	Inseego-8800L	990016871437388	MIFI Unit
Verizon	Inseego-8800L	990016871285746	MIFI Unit
Verizon	Inseego-8800L	990016879229746	MIFI Unit
Verizon	Inseego-8800L	990016878925369	MIFI Unit

Surplus Equipment

Non-Profit Corporations

Boys & Girls Club
462 Green Street
DeLand FL 32720
Althea Chavers
achavers@bgcvfc.org
386-734-0555 5-15-26 lmom @9:07AM
386-734-0555 5-20-26 lmom @1:40PM Xtsn 209
5-20-26 rcvd call back from Althea, advised equipment we currently have listed for surplus, she declined at this time.

Florida Dept of Children and Families
Julia Marshall
Julia.marshall@myflfamilies.com
386-562-0154 5-15-26 lmom @9:08AM
386-562-0154 5-20-26 lmom @1:42PM

The House Next Door
Administrative Office
803 North Woodland Blvd
Deland, FL 32720
386-734-7571 5-15-26 clld TT Joyce, xfrd to COO lmom @9:10AM
5-20-26 emailed Chris Booker a list of surplus@1:32PM
5-29-26 emailed, adv unable to open attachment for interested equipment, rqtsd another version.
6-3-26 rcvd email adv would like 6 AIO, and one laptop

A1 Assets 888-474-3784
Brittany@a1assets.com

Manufacturer	Model	Serial	Notes
Kyocera	Dura XV Extreme	015588007565507	Verizon Cell
Kyocera	Dura XV Extreme	015588007572727	Verizon Cell
NEC	DT900	A18987B9800152	Desktop Phone
NEC	DT900	A18987B9800096	Desktop Phone
NEC	DT900	A18987B9800067	Desktop Phone

Manufacturer	Model	Serial	Notes
Dell	PowerEdge R730	49F0CM2	Server
Dell	PowerEdge R730	49FTBM2	Server
Dell	PowerEdge R730	49DYBM2	Server
Dell	PowerEdge R720	G6HKYV1	Server

Manufacturer	Model	Serial	Notes
Dell	Optiplex 7080	C9CTM83	tower
Dell	Precision 3630	H9R7G73	tower
Dell	Precision 3630	H9R5G73	tower

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, Change Order No. 1 to the Westside Interceptor ARV Replacements Project, Bid #26-09

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: City of DeLand - ARV Add on - Proposal, Fully Executed Westside Interceptor ARV Replacement

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

In May of 2026, The City awarded the Westside Interceptor Air Release Valve (ARV) Replacements project to Hazen Construction. This project was originally bid with four ARV replacements scheduled. The fourth and final ARV was determined to need additional tasks for its successful replacement.

Based on the above determination, a proposal was provided to the city for the needed additional tasks. Utility staff chose to get pricing on two additional ARV's in the process, since bid pricing was so favorable for the replacement of the twenty-one-year-old units. Now with this change order #1, adjustments to a previous scheduled ARV replacement and two additional ARV replacements can occur.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Infrastructure

FISCAL IMPACT:

Approval of Change Order No. 1 will result in an additional obligation of $31,196.00 and bring the total project cost amount to $77,957.00. There are funds remaining available in the project account to cover this expense.

RECOMMENDATION:

Staff recommends that the City Commission approve Change Order No. 1 to the Westside Interceptor ARV Replacement Project in the amount of $31,196.00.

BACKGROUND/DISCUSSION:

N/A

HAZEN CONSTRUCTION, LLC

July 6, 2026 VIA EMAIL: Larkinsd@delandfl.gov

City of Deland
1102 Amelia Ave
Deland, FL 32724
Attn. Doug Larkins

RE: City of Deland Add on ARV's

Dear Doug,

Hazen Construction is pleased to submit this proposal for the additional ARV replacements. Our lump sum price of **$31,196** includes the following scope of work:

- Remove and replace ARV at Spring Garden Ave and Beresford Ave
- Remove and replace ARV at Spring Garden Ave and New Hampshire
- Remove and replace up to 2 - 6" sidewalk panels – 50 SF
- Core into manhole benches to get saddles around ARV #4
- City to supply 2" D-025 ARV's
- City to close FM isolation Valves to control sewer flow during saddle replacements
- Void if not accepted in writing within 30 days of submission

We are willing to meet with the city to discuss this proposal in more detail at your earliest convenience to confirm / clarify the overall scope and understanding. If you would like us to complete this work, please let me know and we will schedule accordingly. If you have any questions or require additional information, please give me a call.

Sincerely,
Hazen Construction

Marcia Palmer
Project Manager

1599 Tionia Road
New Smyrna Beach, Florida 32168
Phone: 386 322-8700
Fax: 386 756-0000

CHANGE ORDER NO. 1

Date: July 6, 2026

Project: West Side Interceptor ARV Replacements

Contractor: Hazen Construction
1599 Tionia Rd
New Smyrna Beach, FL 32168

Description: Adjustment to previous approved manhole to install ARV 15A and W New Hampshire Ave No. 4, Additional replacement ARV installation at Spring Garden Ave and Beresford Ave No. 5, and additional replacement ARV installation at Spring Garden Ave and New Hampshire Ave No.6.

ADJUSTED SCHEDULE OF CONTRACT COSTS

Original Contract Amount.....$46,761.00

Change Order No. 1.....$31,196.00

Adjusted Contract Cost.....$77,957.00

Contract time for Final Completion shall be extended by **30** days.

CERTIFICATION:

I hereby certify that, in my considered professional opinion, the prices quoted are fair and reasonable and in proper ratio to the cost of the original work contracted for under competitive bidding.

James Ailes
Utilities Director

Date 7/6/2026

Hazen Construction

Chad S Hazen
Owner

Date 7/6/26

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, Award of Bid, Reclaim Water Main Expansion Phase 6

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: DE Phase 6 RWM - ROA

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

In May 2024, the City Commission authorized design of the Reclaim Water Expansion Phase 6 for construction. Mead & Hunt finalized design of the project in April 2025. The city was advised in the fall of 2025 that this project did not receive any grant funding. Based on being advised of the reduced funding, staff instructed the Engineer to remove the retrofitting of Forest Trace. This downsizing of the project put the construction within the matching funds the city had reserved for construction. The specification booklet and plans we completed in March 2026 and the city put the project out to bid.

The project starts at Plymouth Avenue and Hazen Road and goes south to the Minnesota Avenue with a 12" main extension. The project will then head east on Minnesota to Big Pine Key Boulevard with an 8" main extension to activate the dry reclaim lines in Phase two of Mallory Woods subdivision. At the intersection of Hazen Road and Minnesota Avenue, a road crossing to the SE corner and SW corner will occur for future connections.

This project was advertised for bids in the local newspaper and via the internet-based Demand Star System. Bids were received from ten contractors as indicated on the attached Bid Tabulation. A letter of recommendation is attached from Mead & Hunt certifying Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) bid and reference approval.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Facilities & Infrastructure

FISCAL IMPACT:

Bids received ranged from a high bid of $1,967,407.58 to lowest bid of $847,860.00. The Reclaim Water Expansion Phase 6 construction line item approved in the fiscal 25/26 budget has an amount of $2,351,575.00 available. Therefore, funds are available to cover the low bid amount of $847,860.00 plus 5% contingency for a total award of $890,253.00 for award.

RECOMMENDATION:

Staff recommends that the City award a contract to construct the Reclaim Water Expansion Phase 6 to the lowest bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC).

BACKGROUND/DISCUSSION:

The low bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) has satisfactorily completed projects of similar scope in other jurisdictions. Mead & Hunt contacted the references provided and similar jobs and received favorable responses. This will be the first time that the city has done work with them and cannot provide any past knowledge of how they will conduct business.

The retrofitting of Forest Trace was submitted with the Reclaim Phase 7 project grant hoping that the combination of additional potential customers would be more attractive for a grant in this coming fiscal year.

July 6, 2026

Mr. James Ailes
Utilities Director
City of DeLand
1101 S. Amelia Ave.
DeLand, Fl. 32724

Subject: Reclaimed Water Main Extensions – Phase 6
B-26-13

Dear Mr. Ailes:

On June 18, 2026, the City received ten (10) bids for the referenced project. WCDEL, LLC, doing business as Treasure Coast Infrastructure of Stuart, Florida, submitted the lowest bid at $847,860.00, with a total of $890,253.00 including a 5% contingency (see attached bid tabulation).

Treasure Coast Infrastructure has provided all required documentation as part of their submission. We have reviewed the supplied references, all of whom confirmed that Treasure Coast Infrastructure is qualified to successfully complete this project. Comparative analysis of similar projects completed by the contractor indicates relevance in both scope and scale. Furthermore, their General Contractor's license is in good standing without any active complaints.

Based on our research, verification of references, and assessment of experience with comparable projects, we recommend awarding the project in its entirety to Treasure Coast Infrastructure for the total amount of $890,253.00.

Do not hesitate to contact the office if you have questions. Thank you.

Sincerely,

MEAD & HUNT, Inc.

Cassandra Cissell

Cassandra "Casey" Cissell, PE
Project Manager

Attachment B-26-13 Bid Tabulation

CITY OF DELAND
RWM EXTENSIONS PHASE 6
BID NO. 26-13
BID TABULATION

ITEM NO.	DESCRIPTION	QTY	UNIT	TREASURE COAST INFRASTRUCTURE Stuart, FL		GENERAL UNDERGROUND LLC Lake Helen, FL		ACCURATE DRILLING SYSTEMS, INC. LaBelle, FL		CACIQUE UTILITIES, LLC Lake Worth, FL		ITG COMMUNICATIONS, LLC Fort Lauderdale, FL		C&B CIVIL CONSTRUCTION, INC. High Springs, FL		BADGER DRILLING LLC Jacksonville, FL	
				UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	**Mobilization / Demobilization**	1	LS	$45,000.00	$45,000.00	$44,000.00	$44,000.00	$63,030.00	$63,030.00	$60,000.00	$60,000.00	$70,569.24	$70,569.24	$59,850.00	$59,850.00	$61,620.44	$61,620.44
2	**Pre-Construction Video**	1	LS	$5,000.00	$5,000.00	$10,000.00	$10,000.00	$1,030.00	$1,030.00	$10,000.00	$10,000.00	$551.25	$551.25	$5,000.00	$5,000.00	$2,000.00	$2,000.00
3	**Field Locate & Expose Exisiting Utilities**	1	LS	$22,000.00	$22,000.00	$10,000.00	$10,000.00	$3,633.00	$3,633.00	$20,000.00	$20,000.00	$37,066.00	$37,066.00	$50,000.00	$50,000.00	$5,000.00	$5,000.00
4	**Furnish & Install PVC Reclaimed Water Main by Open Cut**																
	a) 6-inch	30	LF	$70.00	$2,100.00	$50.00	$1,500.00	$252.00	$7,560.00	$100.00	$3,000.00	$331.53	$9,945.90	$80.00	$2,400.00	$75.00	$2,250.00
	b) 8-inch	40	LF	$85.00	$3,400.00	$70.00	$2,800.00	$199.00	$7,960.00	$150.00	$6,000.00	$331.39	$13,255.60	$96.00	$3,840.00	$95.00	$3,800.00
	c) 12-inch	110	LF	$110.00	$12,100.00	$105.00	$11,550.00	$254.00	$27,940.00	$250.00	$27,500.00	$403.20	$44,352.00	$120.00	$13,200.00	$135.00	$14,850.00
5	**Furnish & Install HDPE (DR11) Reclaimed Water Main by HDD**																
	a) 8"	530	LF	$80.00	$42,400.00	$70.00	$37,100.00	$83.80	$44,414.00	$100.00	$53,000.00	$124.40	$65,932.00	$90.00	$47,700.00	$80.00	$42,400.00
	b) 12"	5700	LF	$66.00	$376,200.00	$95.50	$544,350.00	$119.20	$679,440.00	$125.00	$712,500.00	$116.94	$666,558.00	$125.00	$712,500.00	$105.00	$598,500.00
6	**Gate Valves & Valve Boxes**																
	a) 4-inch	1	EA	$2,500.00	$2,500.00	$2,250.00	$2,250.00	$2,560.00	$2,560.00	$600.00	$600.00	$4,348.45	$4,348.45	$1,200.00	$1,200.00	$2,736.80	$2,736.80
	b) 6-inch	5	EA	$3,000.00	$15,000.00	$2,400.00	$12,000.00	$2,860.00	$14,300.00	$2,500.00	$12,500.00	$4,515.89	$22,579.45	$1,750.00	$8,750.00	$3,286.33	$16,431.65
	c) 8-inch	3	EA	$3,500.00	$10,500.00	$3,000.00	$9,000.00	$1,930.00	$5,790.00	$2,500.00	$7,500.00	$5,237.58	$15,712.74	$2,000.00	$6,000.00	$1,604.47	$4,813.41
	d) 12-inch	11	EA	$4,500.00	$49,500.00	$6,000.00	$66,000.00	$5,780.00	$63,580.00	$5,000.00	$55,000.00	$6,872.08	$75,592.88	$2,200.00	$24,200.00	$8,393.02	$92,323.22
7	**Blow-Off Assembly (2-inch)**	8	EA	$2,200.00	$17,600.00	$4,000.00	$32,000.00	$1,960.00	$15,680.00	$600.00	$4,800.00	$4,151.58	$33,212.64	$1,500.00	$12,000.00	$1,641.03	$13,128.24
8	**Air Release Valve Assembly (2-inch)**	2	EA	$5,000.00	$10,000.00	$6,500.00	$13,000.00	$5,290.00	$10,580.00	$2,500.00	$5,000.00	$6,224.55	$12,449.10	$11,000.00	$22,000.00	$7,805.34	$15,610.68
9	**Tie-Ins**																
	a) Connect to Exist. 12-inch RWM	1	EA	$5,500.00	$5,500.00	$6,500.00	$6,500.00	$6,230.00	$6,230.00	$17,000.00	$17,000.00	$5,349.17	$5,349.17	$20,000.00	$20,000.00	$16,500.00	$16,500.00
	b) Connect to Exist. 8-inch RWM	1	EA	$3,500.00	$3,500.00	$6,000.00	$6,000.00	$3,120.00	$3,120.00	$15,000.00	$15,000.00	$3,769.74	$3,769.74	$17,000.00	$17,000.00	$12,800.00	$12,800.00
10	**Reclaimed Water Services**																
	a) 2-inch	2	EA	$3,500.00	$7,000.00	$3,500.00	$7,000.00	$2,230.00	$4,460.00	$2,500.00	$5,000.00	$4,288.28	$8,576.56	$7,500.00	$15,000.00	$4,092.82	$8,185.64
11	**Swab Pipelines by "Pigging"**	6410	LF	$5.00	$32,050.00	$1.25	$8,012.50	$2.80	$17,948.00	$2.00	$12,820.00	$3.67	$23,524.70	$5.00	$32,050.00	$10.50	$67,305.00
12	**Pressure test Existing RWM Main**	1	LS	$10,000.00	$10,000.00	$10,000.00	$10,000.00	$7,660.00	$7,660.00	$20,000.00	$20,000.00	$8,905.45	$8,905.45	$18,790.00	$18,790.00	$15,000.00	$15,000.00
13	**Leak Repair for Exisitng Line (Allowance)**	1	LS	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00
14	**Concrete Driveways / Sidewalks (Remove & Replace)**																
	a) 4" thick - 3,000 psi	60	SY	$90.00	$5,400.00	$100.00	$6,000.00	$400.00	$24,000.00	$85.00	$5,100.00	$99.75	$5,985.00	$75.00	$4,500.00	$450.00	$27,000.00
15	**Maintenance of Traffic**	1	LS	$25,000.00	$25,000.00	$10,000.00	$10,000.00	$15,940.00	$15,940.00	$60,000.00	$60,000.00	$26,666.00	$26,666.00	$30,000.00	$30,000.00	$125,000.00	$125,000.00
16	**Erosion & Turbidity Control / NPDES Permist Requirements**	1	LS	$18,000.00	$18,000.00	$10,000.00	$10,000.00	$3,200.00	$3,200.00	$10,000.00	$10,000.00	$7,875.00	$7,875.00	$15,000.00	$15,000.00		
17	**Indemnification**	1	LS	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00
18	**Layout / As-builts**	1	LS	$35,000.00	$35,000.00	$23,500.00	$23,500.00	$37,450.00	$37,450.00	$50,000.00	$50,000.00	$12,600.00	$12,600.00	$20,000.00	$20,000.00	$37,000.00	$37,000.00
19	**Electronic Marker Balls**																
	a) Programmable	75	EA	$90.00	$6,750.00	$60.00	$4,500.00	$122.00	$9,150.00	$50.00	$3,750.00	$49.50	$3,712.50	$50.00	$3,750.00	$75.00	$5,625.00
	b) Non-Progammable	9	EA	$40.00	$360.00	$30.00	$270.00	$85.00	$765.00	$50.00	$450.00	$20.90	$188.10	$30.00	$270.00	$50.00	$450.00
20	**Ductile Iron Fittings - Add or Delete**	1	TN	$20,000.00	$20,000.00	$5,000.00	$5,000.00	$32,930.00	$32,930.00	$15,000.00	$15,000.00	$12,000.00	$12,000.00	$1,000.00	$1,000.00	$81,699.20	$81,699.20
21	**Landscape & Irrigation Restoration**	1	LS	$25,000.00	$25,000.00	$5,000.00	$5,000.00	$9,130.00	$9,130.00	$5,000.00	$5,000.00	$8,400.00	$8,400.00	$10,000.00	$10,000.00	$22,000.00	$22,000.00
22	**Permits & Allowances**	1	LS	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00
				Subtotal	$847,860.00		$938,332.50		$1,160,480.00		$1,237,520.00		$1,240,677.47		$1,197,000.00		$1,335,029.28
				5% Contigency	$42,393.00		$46,916.63		$58,024.00		$61,876.00		$62,033.87		$59,850.00		$66,751.46
				TOTAL	**$890,253.00**		**$985,249.13**		**$1,218,504.00**		**$1,299,396.00**		**$1,302,711.34**		**$1,256,850.00**		**$1,401,780.74**

CITY OF DELAND
RWM EXTENSIONS PHASE 6
BID NO. 26-13
BID TABULATION

				TB LANDMARK CONSTRUCTION, INC. Jacksonville, FL		THADCON, LLC Daytona Beach, FL		MASCI GENERAL CONTRACTOR INC. Port Orange, FL	
ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	**Mobilization / Demobilization**	1	LS	$75,340.00	$75,340.00	$43,000.00	$43,000.00	$170,000.00	$170,000.00
2	**Pre-Construction Video**	1	LS	$3,850.00	$3,850.00	$3,750.00	$3,750.00	$1,950.00	$1,950.00
3	**Field Locate & Expose Exisiting Utilities**	1	LS	$25,000.00	$25,000.00	$27,000.00	$27,000.00	$20,000.00	$20,000.00
4	**Furnish & Install PVC Reclaimed Water Main by Open Cut**								
	a) 6-inch	30	LF	$950.00	$28,500.00	$110.00	$3,300.00	$199.50	$5,985.00
	b) 8-inch	40	LF	$990.00	$39,600.00	$120.00	$4,800.00	$297.85	$11,914.00
	c) 12-inch	110	LF	$445.00	$48,950.00	$150.00	$16,500.00	$435.65	$47,921.50
5	**Furnish & Install HDPE (DR11) Reclaimed Water Main by HDD**								
	a) 8"	530	LF	$90.00	$47,700.00	$160.00	$84,800.00	$159.35	$84,455.50
	b) 12"	5700	LF	$120.00	$684,000.00	$175.00	$997,500.00	$199.95	$1,139,715.00
6	**Gate Valves & Valve Boxes**								
	a) 4-inch	1	EA	$2,800.00	$2,800.00	$3,100.00	$3,100.00	$3,055.00	$3,055.00
	b) 6-inch	5	EA	$3,275.00	$16,375.00	$4,250.00	$21,250.00	$4,500.00	$22,500.00
	c) 8-inch	3	EA	$4,460.00	$13,380.00	$5,600.00	$16,800.00	$5,300.00	$15,900.00
	d) 12-inch	11	EA	$6,555.00	$72,105.00	$7,400.00	$81,400.00	$8,485.00	$93,335.00
7	**Blow-Off Assembly (2-inch)**	8	EA	$3,500.00	$28,000.00	$4,890.00	$39,120.00	$4,900.00	$39,200.00
8	**Air Release Valve Assembly (2-inch)**	2	EA	$11,800.00	$23,600.00	$5,990.00	$11,980.00	$5,100.00	$10,200.00
9	**Tie-Ins**								
	a) Connect to Exist. 12-inch RWM	1	EA	$12,500.00	$12,500.00	$7,900.00	$7,900.00	$9,951.00	$9,951.00
	b) Connect to Exist. 8-inch RWM	1	EA	$12,500.00	$12,500.00	$7,700.00	$7,700.00	$7,200.00	$7,200.00
10	**Reclaimed Water Services**								
	a) 2-inch	2	EA	$2,350.00	$4,700.00	$6,500.00	$13,000.00	$3,200.00	$6,400.00
11	**Swab Pipelines by "Pigging"**	6410	LF	$2.45	$15,704.50	$3.00	$19,230.00	$1.95	$12,499.50
12	**Pressure test Existing RWM Main**	1	LS	$15,250.00	$15,250.00	$25,000.00	$25,000.00	$5,000.00	$5,000.00
13	**Leak Repair for Exisitng Line (Allowance)**	1	LS	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00
14	**Concrete Driveways / Sidewalks (Remove & Replace)**								
	a) 4" thick - 3,000 psi	60	SY	$124.00	$7,440.00	$110.00	$6,600.00	$259.25	$15,555.00
15	**Maintenance of Traffic**	1	LS	$28,000.00	$28,000.00	$50,000.00	$50,000.00	$20,000.00	$20,000.00
16	**Erosion & Turbidity Control / NPDES Permist Requirements**	1	LS	$13,400.00	$13,400.00			$15,000.00	$15,000.00
17	**Indemnification**	1	LS	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00
18	**Layout / As-builts**	1	LS	$21,450.00	$21,450.00	$50,000.00	$50,000.00	$35,000.00	$35,000.00
19	**Electronic Marker Balls**								
	a) Programmable	75	EA	$125.00	$9,375.00	$190.00	$14,250.00	$75.00	$5,625.00
	b) Non-Progammable	9	EA	$100.00	$900.00	$180.00	$1,620.00	$40.00	$360.00
20	**Ductile Iron Fittings - Add or Delete**	1	TN	$12,000.00	$12,000.00	$15,500.00	$15,500.00	$19,000.00	$19,000.00
21	**Landscape & Irrigation Restoration**	1	LS	$41,000.00	$41,000.00	$27,400.00	$27,400.00	$15,000.00	$15,000.00
22	**Permits & Allowances**	1	LS	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00
					$1,344,419.50		$1,633,500.00		$1,873,721.50
					$67,220.98		$81,675.00		$93,686.08
					$1,411,640.48		**$1,715,175.00**		**$1,967,407.58**

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, Award of Bid, East Regional Force Main Part B-1

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: DE E. Regional FM - ROA

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

In May 2025, the City Commission authorized design of the East Regional Force Main Sewer Part B-1 construction project. Mead & Hunt finalized design of the East Regional Force Main Sewer in May 2026 and the city put the project out to bid. Project starts at Blue Lake Avenue and heads east on Voorhies Avenue with a 12" main line to connect to dry line on east New York Avenue. Project resumes with connection to the dry line just south of the Kepler Road and New York Avenue roundabout. The 12" line continues south to Beresford and will connect into the Beresford Avenue 8" sewer force main. This project is design to reduce the pressure and provide capacity to the force main coming from the DeLand Transfer Station.

This project was advertised for bids in the local newspaper and via the internet-based Demand Star System. Bids were received from five contractors as indicated on the attached Bid Tabulation. A letter of recommendation is attached from Mead & Hunt certifying Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) bid and reference approval.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Facilities & Infrastructure

FISCAL IMPACT:

Bids received ranged from a high bid of $1,949,823.00 to lowest bid of $1,098,300.00. The East Regional Force Main Part B-1 construction line item approved in the fiscal 25/26 budget has an amount of $3,180,000.00 available to cover the construction of this project. So, funds are available in the Utilities Fund to cover the low bid amount of $1,098,300.00 for award.

RECOMMENDATION:

Staff recommends that the City award a contract to construct the East Regional Force Main Part B-1 project to the lowest bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.)

BACKGROUND/DISCUSSION:

The low bidder, Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) has satisfactorily completed projects of similar scope in other jurisdictions. The Mead & Hunt contacted the references provided and similar

jobs and received favorable responses. This will be the first time that the city has done work with them and cannot provide any past knowledge of how they will conduct business.

July 6, 2026

Mr. James Ailes
Utilities Director
City of DeLand
1101 S. Amelia Ave.
DeLand, Fl. 32724

Subject: East Regional Force Main (Part B1)

Dear Mr. Ailes:

On June 18, 2026, the City received six (6) bids for the referenced project. WCDEL, LLC, doing business as Treasure Coast Infrastructure of Stuart, Florida, submitted the lowest bid at $1,098,300.00 (see attached bid tabulation).

Treasure Coast Infrastructure has provided all required documentation as part of their submission. We have reviewed the supplied references, all of whom confirmed that Treasure Coast Infrastructure is qualified to successfully complete this project. Comparative analysis of similar projects completed by the contractor indicates relevance in both scope and scale. Furthermore, their General Contractor's license is in good standing without any active complaints.

Based on our research, verification of references, and assessment of experience with comparable projects, we recommend awarding the project in its entirety to Treasure Coast Infrastructure for the total amount of $1,098,300.00.

Do not hesitate to contact the office if you have questions. Thank you.

Sincerely,

MEAD & HUNT, Inc.

Matt Guzinski, PE
Project Manager

Attachment Bid Tabulation

CITY OF DELAND
EAST REGIONAL FORCE MAIN (PART B)
BASE BID
BID TABULATION

ITEM #	DESCRIPTION	QTY.	UNIT	WCDEL LLC, D/B/A TREASURE COAST INFRASTRUCTURE Stuart, FL		GENERAL UNDERGROUND LLC Lake Helen, FL		ITG COMMUNICATIONS LLC Fort Lauderdale, FL		ACCURATE DRILLING SYSTEMS, INC. LaBelle, FL		AP CONSTRUCTION CONTRACTOR LLC Casselberry, FL		T B LANDMARK CONSTRUCTION, INC. Jacksonville, FL	
				UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE
1	**Mobilization / Demobilization**	1	LS	$ 50,000.00	$ 50,000.00	$ 60,000.00	$ 60,000.00	$ 109,494.78	$ 109,494.78	$ 83,120.00	$ 83,120.00	$ 122,845.00	$ 122,845.00	$ 104,000.00	$ 104,000.00
2	**Clearing and Grubbing**	1	LS	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 14,189.45	$ 14,189.45	$ 11,090.00	$ 11,090.00	$ 19,827.00	$ 19,827.00	$ 14,000.00	$ 14,000.00
3	**Pre-Construction Video**	1	LS	$ 4,500.00	$ 4,500.00	$ 10,000.00	$ 10,000.00	$ 810.00	$ 810.00	$ 780.00	$ 780.00	$ 3,450.00	$ 3,450.00	$ 5,000.00	$ 5,000.00
4	**Field Locate and Expose Existing Utilities**	1	LS	$ 15,000.00	$ 15,000.00	$ 10,000.00	$ 10,000.00	$ 10,911.51	$ 10,911.51	$ 7,360.00	$ 7,360.00	$ 2,300.00	$ 2,300.00	$ 52,082.00	$ 52,082.00
5	**Furnish and Install C-900 PVC Force Main**														
	a) 4"	110	LF	$ 40.00	$ 4,400.00	$ 50.00	$ 5,500.00	$ 141.25	$ 15,537.50	$ 82.00	$ 9,020.00	$ 81.00	$ 8,910.00	$ 290.00	$ 31,900.00
	b) 8"	25	LF	$ 80.00	$ 2,000.00	$ 70.00	$ 1,750.00	$ 196.73	$ 4,918.25	$ 158.00	$ 3,950.00	$ 200.00	$ 5,000.00	$ 560.00	$ 14,000.00
	c) 12"	450	LF	$ 85.00	$ 38,250.00	$ 100.00	$ 45,000.00	$ 221.90	$ 99,855.00	$ 164.50	$ 74,025.00	$ 121.00	$ 54,450.00	$ 310.00	$ 139,500.00
6	**Furnish and Install HDPE (DR 11) Force Main by HDD**														
	c) 12"	7,400	LF	$ 78.00	$ 577,200.00	$ 99.00	$ 732,600.00	$ 88.82	$ 657,268.00	$ 110.20	$ 815,480.00	$ 128.00	$ 947,200.00	$ 124.00	$ 917,600.00
7	**Gate Valves and Valve Boxes**														
	a) 4"	3	EA	$ 2,500.00	$ 7,500.00	$ 2,250.00	$ 6,750.00	$ 3,845.74	$ 11,537.22	$ 1,725.00	$ 5,175.00	$ 5,279.00	$ 15,837.00	$ 2,515.00	$ 7,545.00
	b) 8"	3	EA	$ 3,500.00	$ 10,500.00	$ 3,000.00	$ 9,000.00	$ 4,759.62	$ 14,278.86	$ 2,430.00	$ 7,290.00	$ 6,376.00	$ 19,128.00	$ 5,920.00	$ 17,760.00
	c) 12"	9	EA	$ 4,200.00	$ 37,800.00	$ 6,000.00	$ 54,000.00	$ 6,438.77	$ 57,948.93	$ 5,080.00	$ 45,720.00	$ 7,358.00	$ 66,222.00	$ 6,079.00	$ 54,711.00
8	**Air-Release Valve Assembly (2-inch)**	12	EA	$ 5,000.00	$ 60,000.00	$ 6,500.00	$ 78,000.00	$ 7,366.61	$ 88,399.32	$ 4,780.00	$ 57,360.00	$ 8,733.00	$ 104,796.00	$ 8,800.00	$ 105,600.00
9	**Tie-Ins**														
	a) 4"	1	EA	$ 2,500.00	$ 2,500.00	$ 5,000.00	$ 5,000.00	$ 6,140.49	$ 6,140.49	$ 17,250.00	$ 17,250.00	$ 5,143.00	$ 5,143.00	$ 10,000.00	$ 10,000.00
	b) 8"	1	EA	$ 3,500.00	$ 3,500.00	$ 6,000.00	$ 6,000.00	$ 6,697.25	$ 6,697.25	$ 24,200.00	$ 24,200.00	$ 7,478.00	$ 7,478.00	$ 22,000.00	$ 22,000.00
	c) 12"	3	EA	$ 5,500.00	$ 16,500.00	$ 6,500.00	$ 19,500.00	$ 6,854.60	$ 20,563.80	$ 10,385.00	$ 31,155.00	$ 5,857.00	$ 17,571.00	$ 21,965.00	$ 65,895.00
10	**Concrete Driveways / Sidewalks (Remove and Replace)**														
	a) 4" thick	100	SY	$ 75.00	$ 7,500.00	$ 40.00	$ 4,000.00	$ 87.48	$ 8,748.00	$ 166.00	$ 16,600.00	$ 160.00	$ 16,000.00	$ 115.00	$ 11,500.00
	b) 6" thick	150	SY	$ 95.00	$ 14,250.00	$ 70.00	$ 10,500.00	$ 92.34	$ 13,851.00	$ 263.00	$ 39,450.00	$ 171.00	$ 25,650.00	$ 128.00	$ 19,200.00
11	**Open Cut and Asphalt Repair**	150	SY	$ 80.00	$ 12,000.00	$ 100.00	$ 15,000.00	$ 34.02	$ 5,103.00	$ 207.50	$ 31,125.00	$ 97.00	$ 14,550.00	$ 220.00	$ 33,000.00
12	**Concrete Curb (Remove and Replace)**	100	LF	$ 75.00	$ 7,500.00	$ 30.00	$ 3,000.00	$ 34.56	$ 3,456.00	$ 111.20	$ 11,120.00	$ 86.00	$ 8,600.00	$ 88.50	$ 8,850.00
13	**Maintenance of Traffic**	1	LS	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 47,485.60	$ 47,485.60	$ 19,050.00	$ 19,050.00	$ 33,221.00	$ 33,221.00	$ 70,645.00	$ 70,645.00
14	**Erosion and Turbidity Control**	1	LS	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 4,320.00	$ 4,320.00	$ 3,780.00	$ 3,780.00	$ 7,764.00	$ 7,764.00	$ 15,615.00	$ 15,615.00
15	**Layout / As-builts**	1	LS	$ 48,000.00	$ 48,000.00	$ 10,000.00	$ 10,000.00	$ 19,440.00	$ 19,440.00	$ 34,560.00	$ 34,560.00	$ 17,250.00	$ 17,250.00	$ 49,950.00	$ 49,950.00
16	**Electronic Marker Balls**														
	a) Programmable	60	EA	$ 90.00	$ 5,400.00	$ 60.00	$ 3,600.00	$ 44.00	$ 2,640.00	$ 121.00	$ 7,260.00	$ 142.00	$ 8,520.00	$ 150.00	$ 9,000.00
	b) Non-Programmable	25	EA	$ 40.00	$ 1,000.00	$ 30.00	$ 750.00	$ 20.90	$ 522.50	$ 88.00	$ 2,200.00	$ 169.00	$ 4,225.00	$ 140.00	$ 3,500.00
17	**Ductile Iron Fittings - Add or Delete**	1.5	TN	$ 22,000.00	$ 33,000.00	$ 17,500.00	$ 26,250.00	$ 21,996.70	$ 32,995.05	$ 460.00	$ 690.00	$ 20,972.00	$ 31,458.00	$ 22,500.00	$ 33,750.00
18	**Landscape and Irrigation Restoration**	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00	$ 39,588.67	$ 39,588.67	$ 24,400.00	$ 24,400.00	$ 12,679.00	$ 12,679.00	$ 33,220.00	$ 33,220.00
19	**Permits and Allowances**	1	LS	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00	$ 100,000.00
	TOTAL BASE BID				$ 1,098,300.00		$ 1,251,200.00		$ 1,396,700.18		$ 1,483,210.00		$ 1,680,074.00		$ 1,949,823.00

Notes:
General Underground LLC had a mathematical error in their total bid price; corrected total is shown.

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, Authorization of Professional Services – Phase 6 Reclaimed Water Main Extensions Construction Phase Services

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: DE Phase 6 RWM - Bidding CA and EOR Proposal_revised

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

In May 2024, the City Commission authorized design of the Reclaim Water Expansion Phase 6 for construction. Mead & Hunt finalized design of the project in April 2025. The project was bid out during June 2026 and is scheduled to be awarded. The previous design task did not cover bidding or anything during the construction phase.

The City has a current contract with Mead & Hunt for Engineering and Surveying services. Staff tasked them with design of the Reclaim Water Expansion Phase 6 project and has asked for additional assistance during the Construction Phase. The attached proposal outlines the limited scope for construction phase services.

In a separate agenda item, staff is seeking Award of Bid to Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) for construction of the Reclaim Water Expansion Phase 6 project. To keep the project moving forward, staff would like to authorize Mead & Hunt to handle specific items pertaining to Bidding, Requests for Information (RFI)'s, submittals, meetings, and line clearances. All of this will lead up to the Engineer providing final as-builts and close out documents.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Facilities & Infrastructure

FISCAL IMPACT:

This task for Construction Phase Services will amount to $106,059.00. Funds are available in the Utility Enterprise Account to cover this additional cost in the Reclaim Water Expansion Phase 6-line item previously approved.

RECOMMENDATION:

Staff recommends the City Commission authorize Mead & Hunt to perform limited Construction Phase Services as outlined in the attached task order for the total amount of $106,059.00.

BACKGROUND/DISCUSSION:

Staff has reviewed and negotiated the proposed professional services fee for the Reclaim Water Expansion Phase 6. Inspections will be done by the Utility Department to reduce the cost of the professional services. Staff believes that the fees proposed are consistent with those paid in the past for similar projects to this and other utility consultants.

July 6, 2026

Mr. Jim Ailes
Utilities Director
City of DeLand
1101 S. Amelia Ave.
DeLand, Fl. 32724

Email: ailesj@deland.org

Subject: Phase 6 Reclaimed Water Main Extensions – Bidding, Construction Contract Administration, and Engineer of Record Services

Dear Jim,

In accordance with your request, we are pleased to offer the enclosed scope of services and engineering fee estimate for bidding assistance and Construction Contract Administration (CA) and Engineer of Record (EOR) services for the above-mentioned project. The project consists of construction of approximately 6,000 linear feet of reclaimed water main along Hazen Rd. and Minnesota Ave. The project also includes leak testing, repairs, and connection to the existing dry reclaimed lines in the eastern portion of the Mallory Square subdivision.

Thank you for this opportunity to be of service. If you have any questions or require additional information, please contact me.

Sincerely,
MEAD & HUNT, Inc.

Noah Adamoski
Construction Services Supervisor

Cassandra "Casey" Cissell, PE
Project Manager

Enclosure: Scope of Services

cc: Doug Larkins – City of DeLand
Scott Zender – City of DeLand

CITY OF DELAND
SCOPE OF SERVICES
FOR
PHASE 6 RECLAIMED WATER MAIN EXTENSIONS
BIDDING, CONSTRUCTION CONTRACT ADMINISTRATION, AND EOR SERVICES

The Task Order is in conformance with the Agreement for Consulting Services dated November 20, 2023, between the City of DeLand (OWNER) and Mead & Hunt, Inc. (MEAD & HUNT) and is referred to herein as the Contract.

PROJECT UNDERSTANDING

The project involves construction of approximately 6,000 linear feet of reclaimed water main along Hazen Rd. and Minnesota Ave. and leak testing, repairs, and connection to the existing dry reclaimed lines in the eastern portion of the Mallory Square subdivision. The project is a reclaimed water retrofit initiative that is a part of the City's Blue Spring MFL compliance strategy. This will extend reclaimed water to existing City water customers to replace groundwater utilization for irrigation with reclaimed water.

SCOPE OF SERVICES

After receipt of authorization to proceed, MEAD & HUNT will provide the following services:

PHASE 1 – PROJECT MANAGEMENT

Project Coordination

MEAD & HUNT'S Project Manager (PM) will monitor and manage the project budget, schedule, and scope throughout the estimated nine (9) month project duration. The PM will manage the development of project work and subconsultant efforts.

PHASE 2 – BIDDING ASSISTANCE

The OWNER will be responsible for the overall solicitation for construction bids process, including any legal review of the bidding and contract documents (Division 0) and verifying compliance with OWNER purchasing and contract policies (Division 0 and 1). The OWNER will also be responsible for request for bid advertisements, distribution of bidding documents, prebid meeting, and bid opening. MEAD & HUNT will provide the following:

Bidding and Contract Documents

MEAD & HUNT will utilize OWNER supplied templates, bid number and dates (advertisement, prebid, bidder question deadline and bid opening) to prepare draft bidding and contract documents as Divisions 0 and 1 of the Project Manual and submit such to the OWNER's finance/purchasing/clerk for review. Upon receipt of the OWNER's review comments, MEAD & HUNT will prepare final bidding and contract

documents and assemble the entire Project Manual and submit the Project Manual and Construction Drawings (denoted as bid set) in electronic format to the OWNER's finance/purchasing/clerk staff. The OWNER will be responsible for distributing bidding documents to interested parties.

Pre-Bid Meeting

MEAD & HUNT will attend an in-person pre-bid meeting and present the project scope/intent; construction contract duration; design and permitting highlights and any special/supplemental conditions specific to the project.

Addenda

MEAD & HUNT will respond to potential bidders' questions during the bid period. MEAD & HUNT will prepare suggested responses and provide the OWNER with a draft addendum for review. This scope of services assumes one (1) addendum will be completed. The OWNER shall be responsible for distribution of addenda.

Bid Opening

MEAD & HUNT will attend the bid opening at the OWNER's facility. The OWNER will be responsible for receiving, opening, and recording the bids.

Bid Review and Recommendation of Award

Upon receipt of copies of the received bid documents from the OWNER, MEAD & HUNT will review bids for completeness and conformance with technical requirements. MEAD & HUNT will evaluate the low bidder(s) submitted qualifications information and contact provided references to inquire about bidders' experience. MEAD & HUNT will prepare a tabulation of received bid prices, including unit prices, if applicable, and verify extended values and totals. MEAD & HUNT will also review submitted pricing for imbalances and other disparities. Based on that review, MEAD & HUNT will submit to the OWNER the bid tabulation and a recommendation of award.

Deliverables – Bidding Assistance

- Bid Set Plans and Specifications
- Addenda to bid documents
- Bid Tabulation
- Recommendation of award

PHASE 3 – CONSTRUCTION CONTRACT ADMINISTRATION (CA) and ENGINEER OF RECORD (EOR) SERVICES

MEAD & HUNT will provide the following CA and EOR services to the OWNER:

Construction Contract Execution
MEAD & HUNT will coordinate the execution of the construction contract between the OWNER and the contractor, including reviewing insurance certificates for proper limits and coordinating the recording of the public construction bond(s) by the contractor.

Issued for Construction Documents
MEAD & HUNT will prepare conformed drawings and technical specifications “Issued for Construction” by incorporating bidder questions and addendums and provide those to the OWNER (in electronic format) for inclusion in the Contract documents.

Deliverables – Issued for Construction Documents

- Issued for Construction Drawings
- Issued for Construction Specifications

Pre-Construction Meeting
MEAD & HUNT will coordinate and preside over one (1) in-person pre-construction meeting with the OWNER, contractor, and other project stakeholders. MEAD & HUNT will prepare agenda and distribute to all invitees prior to meeting. MEAD & HUNT will prepare meeting summary and distribute meeting summary to all attendees.

Deliverables – Pre-Construction Meeting

- Meeting Agenda and Summary

Notice to Proceed
MEAD & HUNT will issue the notice to proceed (NTP) to the contractor on behalf of the OWNER.

Deliverables – Notice to Proceed

- Notice to Proceed Letter

Progress Meetings
MEAD & HUNT will coordinate and preside over six (6) in-person construction progress meetings. MEAD & HUNT will prepare agendas, meeting summaries, and distribute to all attendees.

Deliverables – Progress Meetings

- Monthly progress meeting agendas and summaries

Construction Submittals

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to up to fifteen (15) Contractor construction submittals and resubmittals for conformance with construction and contract requirements. The EOR will rely upon the construction services supervisor and staff to assist in submittal review and processing.

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to Contractor assembled submittals for operations and maintenance manuals, guarantees, and certificates of inspection (for general contents as required by the Contract documents). These are included in the construction submittals count noted above.

MEAD & HUNT will maintain a log of submittals with submittal number, submittal name, date received, reviewer, action taken, and date returned.

Deliverables – Construction Submittals

- Construction submittal review packages
- Submittal log

Requests for Information (RFI's)

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to up to ten (10) contractor RFI's related to clarification of the contract documents, design intent, or field conditions. MEAD & HUNT will prepare and maintain an RFI log, noting the date received, subject, resolution and date response was returned to the contractor. The EOR will rely upon the construction services supervisor and staff to assist in RFI review and processing.

Deliverables – RFIs

- RFI response packages
- RFI response log

Field/Change Orders

MEAD & HUNT will prepare, issue, and coordinate up to three (3) field orders, Requests for Proposals (RFP's), and change orders in coordination with the OWNER. MEAD & HUNT will maintain a log of field changes and pending changes. MEAD & HUNT will provide assistance during negotiations of contractor cost proposals and will review claims and provide recommendations to the OWNER.

Deliverables – Field/Change Orders

- Field and change order packages and supporting documentation
- Field and change order log

Pay Applications

MEAD & HUNT will review up to six (6) monthly payment applications from the contractor and provide a written recommendation for payment to the OWNER based on construction progress. MEAD & HUNT will review pay application supporting documentation, including updated construction schedules, record drawings, stored materials, release of liens, and as approved change/field orders. OWNER will be responsible for verifying quantities of installed materials.

Deliverables – Pay Applications

- Pay application recommendations

Site Visits

MEAD & HUNT will conduct up to six (6) site visits during construction to monitor construction. These visits may be combined with attendance of construction progress meetings, substantial/final completion reviews or other site visit needs. The proposed scope does not include regularly scheduled resident project representative (RPR) services. The scope does provide for construction monitoring by MEAD & HUNT's construction services supervisor and field personnel to adequately monitor installation of proposed facilities and address issues as they arise in the field. The construction services supervisor and/or assigned representative will attend the pre-construction meeting, progress meetings and field site visits on an as-needed basis.

PHASE 4 – PROJECT CLOSEOUT

Substantial and Final Completion

MEAD & HUNT will determine substantial completion and attend substantial and final walkthroughs. RPR will document the list of outstanding items at both substantial and final walkthroughs and verify completion of outstanding items before final closeout.

Deliverables – Substantial and Final Completion

- Substantial completion – list of outstanding items (electronic PDF format)
- Final completion – list of outstanding items (electronic PDF format)

As-Built Review

MEAD & HUNT will review contractor final as-builts for compliance with the contract documents.

Deliverables – As-Built Review

- Acceptable Contractor as-builts (Electronic PDF and AutoCAD Format)

Permitting Closeout

MEAD & HUNT will prepare and provide certifications of completion to the following permitting agencies for permit closeout:

- Volusia County

PHASE 5 – REIMBURSABLES

Items under this phase include out-of-pocket direct job expenses such as subconsultants, reproductions, postage, etc. Items included in this phase will be billed at actual cost plus 15%.

PHASE 6 – CONTINGENCY

If additional services are identified as needed or required during the duration of the project, MEAD & HUNT will request written approval from the OWNER to utilize contingency funds for any additional work items. Contingency funds will be billed at time and expense. Additional work will be billed per the agreed upon contract hourly rates. MEAD & HUNT will not bill against the contingency funding without prior authorization from the OWNER.

RESPONSIBILITIES OF OWNER

This scope of services and compensation are based on the Owner performing or providing the following:

- A designated representative with complete authority to transmit instructions and information, receive information, interpret policy, and define decisions.
- Access to the project site.
- Protection of MEAD & HUNT-supplied digital information or data, if any, from contamination, misuse, or changes.

EXCLUSIONS

This scope of services excludes all items not specifically described herein.

SCHEDULE

Mead & Hunt estimates the work included in this task order will be completed in accordance with the following schedule:

Phase/Task	Duration to Complete (calendar days)	Commencing Upon
Phase 1 – Project Management	*270 days*	*Receipt of notice to proceed*
Phase 2 – Bidding Assistance	*90 days*	*OWNER approval of 100% deliverable*
Phase 3 – Construction Contract Administration (CA) and Engineer of Record (EOR) Services	*150 days*	*OWNER award to Contractor*

Phase 4 – Project Closeout	*30 days*	*Substantial completion by contractor*

COMPENSATION

The not-to-exceed cost for this Scope of Services, including Contingency Funds, is $106,059. The Contingency Funds authorized for use on this project may only be expended upon written approval from the OWNER. Any out-of-scope work performed requiring the release of Contingency Funds will be considered at-risk and may not be compensated until, or if, written approval is granted by the OWNER.

The above fee is based on the following breakdown:

Phase/Task	Fee/Cost	Basis
Phase 1 – Project Management	*$9,732*	*Lump Sum*
Phase 2 – Bidding Assistance	*$7,964*	*Lump Sum*
Phase 3 – Construction Contract Administration (CA) and Engineer of Record (EOR) Services	*$69,925*	*Lump Sum*
Phase 4 – Project Closeout	*$12,438*	*Lump Sum*
Subtotal	***$100,059***	
Phase 5 – Reimbursables	*$1,000*	*Actual cost plus 15%*
Phase 6 – Contingency	*$5,000*	*Time & Expense*
TOTAL	***$106,059***	

Authorization

The Scope of Services and Compensation stated in this proposal are valid for a period of thirty (30) days from date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by Mead & Hunt.

Signatures of authorized representatives of City of DeLand and Mead & Hunt shall convert this proposal to an Agreement between the two parties, and receipt of one signed copy shall be considered authorization to proceed with the work described in the Scope of Services.

MEAD AND HUNT, INC.

Approved by: MEAD AND HUNT, INC.

By:	Cassandra Cissell	By:	
	Author/Submitter		*Authorized Signer Review*
Name:	Cassandra “Casey” Cissell	Name:	Brad T. Blais
Title:	Business Unit Leader	Title:	Vice President/Market Leader
Date:	July 6, 2026	Date:	July 6, 2026

Accepted by: CITY OF DELAND

By: _____

The above person is authorized to sign for the Owner and bind the Owner to the terms hereof.

Name: _____

Title: _____

Date: _____

PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

IF THE CONTRACTOR (MEAD & HUNT INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY HALL, CITY OF DELAND, 120 SOUTH FLORIDA AVENUE, DELAND, FL 32720, City Clerk, Christian Gowan (386) 626-7130, GowanC@deland.org.

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration, Authorization of Professional Services – East Regional Force Main Part B-1 Construction Phase Services

DEPARTMENT: Utilities

PREPARED BY: Jim Ailes, Deputy Public Serv. Director/Utilities Director

ATTACHMENTS: DE East Regional Force Main Part B1 Scope REV 7.8.2026

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

In May 2025, the City Commission authorized design of the East Regional Force Main Sewer Part B-1 construction project. Mead & Hunt finalized the design of the East Regional Force Main Sewer in May 2026. The project was bid out during June 2026 and is scheduled to be awarded. The previous design task did not cover any work during the construction phase.

The City has a current contract with Mead & Hunt for Engineering and Surveying services. Staff tasked them with the design of the East Regional Force Main Part B-1 project and has asked for additional assistance during the construction phase. The attached proposal outlines the limited scope for construction phase services.

In a separate agenda item, staff is seeking an Award of Bid to Treasure Coast Infrastructure of Stuart, Florida (WCDEL, LLC.) for construction of the East Regional Force Main Part B-1 project. To keep the project moving forward, staff would like to authorize Mead & Hunt to handle specific items pertaining to Requests for Information (RFI), submittals, meetings, and line clearances. All of this will lead up to the engineer providing final as-built and closing-out documents.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

Facilities & Infrastructure

FISCAL IMPACT:

This task for Construction Phase Services will amount to $119,315.00. Funds are available in the Utility Enterprise Account to cover this additional cost in the East Regional force Main Part B-1 line item previously approved.

RECOMMENDATION:

Staff recommends the City Commission authorize Mead & Hunt to perform limited Construction Phase Services as outlined in the attached task order for the total amount of $119,315.00.

BACKGROUND/DISCUSSION:

Staff has reviewed and negotiated the proposed professional services fee for the East Regional force Main Part B-1. Inspections will be done by the Utility Department to reduce the cost of the professional services. Staff believes that the fees proposed are consistent with those paid in the past for similar projects to this and other utility consultants.

July 8, 2026

James V. Ailes
Deputy Public Services/ Utilities Director
City of DeLand
1101 S. Amelia Avenue
DeLand, FL 32724

Email: Ailesj@deland.org
Hard Copy Mailed Only on Request

Subject: East Regional Force Main, Part B1
Contract Administration and Engineer of Record (EOR) Services

Dear Jim,

In accordance with your request, we are pleased to offer the enclosed scope of services and fee estimate for contract administration, Engineer of Record Services and project closeout services for the East Regional Force Main, Part B1 project. The project itself is a major force main extension that will ultimately serve the east quadrants of the City. It includes:

1. Drilling of approximately 7,400 LF of 12" DR-11 HDPE and open-cut placement of 450 LF of 12" C-900 PVC sewage force main from S. Blue Lake Avenue, along E. Voorhis Avenue, down S. Kepler Road, and ending at E. Beresford Avenue.
2. Connection to an existing 8" sewage force main.

If you have any questions or require additional information, please contact me.

Sincerely,
MEAD & HUNT, INC.

Brad T. Blais, PE
Vice President/Client Manager

Noah Adamoski
Construction Services Supervisor

BTB/NA

Enclosure: Scope of Services and Fee Estimate

OWNER NAME
SCOPE OF SERVICES
FOR
EAST REGIONAL FORCE MAIN, PART B1
CONTRACT ADMINISTRATION AND ENGINEER OF RECORD (EOR) SERVICES

The Task Order is in conformance with the Agreement for Consulting Services dated November 20, 2023, between the City of DeLand (OWNER) and Mead & Hunt, Inc. (MEAD & HUNT) and is referred to herein as the Contract.

PROJECT UNDERSTANDING

The project involves Drilling of approximately 7,400 LF of 12" DR-11 HDPE and open-cut placement of 450 LF of 12" C-900 PVC sewage force main from S. Blue Lake Avenue, along E. Voorhis Avenue, down S. Kepler Road, and ending at E. Beresford Avenue, with connection to an existing 8" sewage force main.

SCOPE OF SERVICES

After receipt of authorization to proceed, MEAD & HUNT will provide the following services:

PHASE 1 – PROJECT MANAGEMENT

Project Coordination

MEAD & HUNT's Project Manager (PM) will monitor and manage the project budget, schedule, and scope throughout the estimated nine-month total project duration. The PM will manage the development of project work and subconsultant efforts. If the project extends beyond nine (9) months, additional labor and fees may be required.

PHASE 2 – CONSTRUCTION CONTRACT ADMINISTRATION (CA) SERVICES

MEAD & HUNT will provide the following CA services to the OWNER:

Construction Contract Execution

MEAD & HUNT will coordinate the execution of the construction contract between the OWNER and the contractor, including reviewing insurance certificates for proper limits and coordinating the recording of the public construction bond(s) by the contractor.

Issued for Construction Documents

MEAD & HUNT will prepare conformed drawings and technical specification "Issued for Construction" by incorporating bidder questions and addendums and provide those to the OWNER (in electronic format) for inclusion in the Contract documents.

Deliverables – Issued for Construction Documents

- Issued for Construction Drawings
- Issued for Construction Specifications

Pre-Construction Meeting

MEAD & HUNT will coordinate and preside over one (1) in-person pre-construction meeting with the OWNER, contractor, and other project stakeholders. MEAD & HUNT will prepare agenda and distribute to all invitees prior to meeting. MEAD & HUNT will prepare meeting summary and distribute meeting summary to all attendees.

Deliverables – Pre-Construction Meeting

- Meeting Agenda and Summary

Notice to Proceed

MEAD & HUNT will issue the Notice to Proceed (NTP) to the contractor on behalf of the OWNER.

Deliverables – Notice to Proceed

- Notice to Proceed Letter

Progress Meetings

MEAD & HUNT will coordinate and preside over nine (9) in-person construction progress meetings. MEAD & HUNT will prepare agendas, meeting summaries, and distribute to all attendees.

Deliverables – Progress Meetings

- Monthly progress meeting agendas and summaries

Construction Submittals

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to up to twelve (12) Contractor construction submittals and resubmittals for conformance with construction and contract requirements.

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to Contractor assembled submittals for operations and maintenance manuals, guarantees, and certificates of inspection (for general contents as required by the Contract documents). These are included in the construction submittals count noted above.

MEAD & HUNT will maintain a log of submittals with submittal number, submittal name, date received, reviewer,

action taken, and date returned.

Deliverables – Construction Submittals

- Construction submittal review packages
- Submittal log

Requests for Information (RFI's)

MEAD & HUNT will receive, review, coordinate review by EOR, and respond to up to ten (10) contractor Request for Information (RFI's) related to clarification of the contract documents, design intent, or field conditions. MEAD & HUNT will prepare and maintain a RFI log, noting the date received, subject, resolution and date response was returned to the contractor.

Deliverables – RFIs

- RFI response packages
- RFI response log

Field/Change Orders

MEAD & HUNT will prepare, issue, and coordinate up to six (6) field orders, Requests for Proposals (RFP's), and change orders in coordination with the OWNER. MEAD & HUNT will maintain a log of field changes and pending changes. MEAD & HUNT will provide assistance during negotiations of contractor cost proposals and will review claims and provide recommendations to the OWNER.

Deliverables – Field/Change Orders

- Field and change order packages and supporting documentation
- Field and change order log

Pay Applications

MEAD & HUNT will review up to nine (9) monthly payment applications from the contractor and provide a written recommendation for payment to the OWNER based on construction progress. MEAD & HUNT will review pay application supporting documentation, including updated construction schedules, record drawings, stored materials, release of liens, and as approved change/field orders.

Deliverables – Pay Applications

- Pay application recommendations

Site Visits

MEAD & HUNT will conduct up to thirty-six (36) site visits during construction to monitor construction and compliance with the construction contract documents.

PHASE 3 – PROJECT CLOSEOUT

Substantial and Final Completion

MEAD & HUNT will determine substantial completion and attend substantial and final walkthroughs. RPR will document the list of outstanding items at both substantial and final walkthroughs and verify completion of outstanding items before final closeout.

Deliverables – Substantial and Final Completion

- Substantial completion – list of outstanding items (electronic PDF format)
- Final completion – list of outstanding items (electronic PDF format)

As-Builts

MEAD & HUNT will review contractor final as-builts for compliance with the contract documents. MEAD & HUNT will prepare final record drawings utilizing contractor as-builts and inspector sketches, photographs, and other documentation. Record drawings to be provided electronically to the OWNER.

Deliverables – As-Built Review and Record Drawings

- Acceptable Contractor as-builts (Electronic PDF and AutoCAD Format)
- Record Drawings (Electronic PDF and AutoCAD Format)

Permitting Closeout

MEAD & HUNT will prepare and provide certifications of completion to the following permitting agencies for permit closeout:

- Volusia County
- FDOT

PHASE 4 – REIMBURSABLES

Items under this phase include out-of-pocket direct job expenses such as subconsultants, reproductions, postage, etc. It is assumed permit application fees will be paid by the OWNER. Items included in this phase will be billed at actual cost plus 15%.

RESPONSIBILITIES OF OWNER

This scope of services and compensation are based on the Owner performing or providing the following:

- A designated representative with complete authority to transmit instructions and information, receive information, interpret policy, and define decisions.
- Access to the project site.

- Available data, drawings, and information related to the project.
- Protection of Mead & Hunt-supplied digital information or data, if any, from contamination, misuse, or changes.

ASSUMPTIONS AND LIMITATIONS

MEAD & HUNT prepared this Scope of Work based on discussions at the project scoping meeting and with the following assumptions and limitations. If any of the below assumptions prove to be incorrect, MEAD & HUNT will consult with the OWNER and as necessary or appropriate, modify this Scope of Work via a Scope Change.

SCHEDULE

Mead & Hunt estimates the work included in this task order will be completed in accordance with the following schedule:

Phase/Task	Duration to Complete (calendar days)	Commencing Upon
Phase 1 – Project Management	*270 days*	*Receipt of Notice to Proceed*
Phase 2 – Contract Administration	*270 days*	*Receipt of Notice to Proceed*
Phase 3 – Project Closeout	*30 days*	*Receipt of Notice to Proceed*

The above timeframes *do not* include permitting agency review time.

COMPENSATION

The not-to-exceed cost for this Scope of Services is ***$119,315.00.***

The above fee is based on the following breakdown:

Phase/Task	Fee/Cost	Basis
Phase 1 – Project Management	*$13,883.00*	*Lump Sum*
Phase 2 – Construction Contract Administration (CA) Services	*$91,391.00*	*Lump Sum*
Phase 3 – Project Closeout	*$12,891.00*	*Lump Sum*
Subtotal	***$118,165.00***	
Phase 4 – Reimbursables	*$1,150.00*	*Actual cost plus 15% administrative markup*
TOTAL	***$119,315.00***	

Authorization
The Scope of Services and Compensation stated in this proposal are valid for a period of thirty (30) days from date of submission. If authorization to proceed is not received during this period, this proposal may be withdrawn or modified by Mead & Hunt.

Signatures of authorized representatives of CITY OF DELAND and Mead & Hunt shall convert this proposal to an Agreement between the two parties, and receipt of one signed copy shall be considered authorization to proceed with the work described in the Scope of Services.

MEAD AND HUNT, INC.		Approved by: MEAD AND HUNT, INC.	
By:	*Author/Submitter*	By:	*Authorized Signer Review*
Name:	Noah Adamoski	Name:	Brad T. Blais, PE
Title:	Construction Services Supervisor	Title:	Vice President/Client Manager
Date:	July 8, 2026	Date:	July 8, 2026

Accepted by: CITY OF DELAND

By: _____

The above person is authorized to sign for the Owner and bind the Owner to the terms hereof.

Name: _____

Title: _____

Date: _____

PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF MEAD & HUNT INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

IF THE CONTRACTOR (MEAD & HUNT, INC.) HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S (MEAD & HUNT, INC.'s) DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT (PROPOSAL), CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY HALL, CITY OF DELAND, 120 SOUTH FLORIDA AVENUE, DELAND, FL 32720, City Clerk, Christian Gowan MMC (386) 626-7130, GowanC@deland.org.

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Appointment of Voting Delegate for FLC Annual Meeting

DEPARTMENT: City Manager

PREPARED BY: Michael Pleus, City Manager

ATTACHMENTS: 2026 Voting Delegate Memo

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

Each year, the Florida League of Cities asks all member cities to appoint a voting delegate for the Annual Business Meeting. Attached is a memo and form for the appointment of a delegate from the City of DeLand. The Mayor is typically appointed as the voting delegate.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

SUSTAINABILITY:

FISCAL IMPACT:

None

RECOMMENDATION:

Staff recommends that Mayor Christopher Cloudman be appointed as the FLC voting delegate from the City of DeLand.

BACKGROUND/DISCUSSION:

FLC
FLORIDA LEAGUE OF CITIES

To: Key Official

From: Eryn Alcorn, Florida League of Cities

Date: June 18, 2026

Subject: 2026 Annual Conference Voting Delegate Information

The Florida League of Cities Annual Conference will be held at the Diplomat Beach Resort in Hollywood, Florida, from August 13-15, 2026. This conference will provide valuable educational opportunities to help Florida's municipal officials serve their citizenry more effectively.

We ask that each member municipality sending delegates to the Annual Conference **designate one elected official to serve as its Voting Delegate** and cast the municipality's votes at the Annual Business Meeting which will be held on **Saturday, August 15, 2026**. The Voting Delegate designated by each municipality will vote on all official business matters brought before the League membership and requiring a vote during the Business Meeting. Matters such as the election of League leadership, adoption of resolutions and any other official business matters affecting the League may be voted on during the Business Meeting.

In accordance with the League's by-laws, the number of votes allocated to each municipality is determined based upon population. The League will use the latest Florida Estimates of Population as published by the University of Florida, Bureau of Economic and Business Research.

Annual Conference registration materials were sent to each municipality via the League's e-newsletter and are available online at *flcities.com*.

If you have any questions about voting delegates, please email *ealcorn@flcities.com*.
Voting delegate forms must be received by the League no later than July 31, 2026.

Attachments: Form Designating Voting Delegate

2026 Annual Conference
Florida League of Cities, Inc.
August 13-15, 2026
Hollywood, Florida

It is important that each member municipality sending delegates to the Annual Conference of the Florida League of Cities designate one of its elected officials to cast the municipality's votes at the Annual Business Meeting. League By-Laws require each municipality to select one person to serve as the municipality's Voting Delegate.

Municipalities do not need to adopt a resolution to designate a voting delegate. Instead, please fill out this form and return it to the League office so that your voting delegate may be properly identified. **Voting delegate forms must be received by the League no later than July 31, 2026.**

Designation of Voting Delegate

Name of Voting Delegate: __Christopher M. Cloudman_____

Title: ___Mayor - Commissioner_____

Delegate Email: cloudmanc@delandfl.gov_____

Municipality of: __DeLand_____

AUTHORIZED BY:

_____
Name

_____
Title

Return this form to:
Eryn Alcorn
Florida League of Cities, Inc.
Post Office Box 1757
Tallahassee, FL 32302-1757
Email: *ealcorn@flcities.com*

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Consideration re: Letter of Support for Domestic Violence Database Transparency Initiative

DEPARTMENT: City Manager

PREPARED BY: Michael Pleus, City Manager

ATTACHMENTS: Domestic Violence Transparency Initiative Letter of Support

APPROVED BY: Michael Pleus, City Manager, July 15, 2026

SUMMARY/HIGHLIGHT:

County Council Member, Matt Reinhart is requesting support to create the Volusia County Domestic Violence Database Transparency Initiative. The proposed initiative would increase public awareness and transparency regarding domestic violence offenses in our community.

Domestic violence remains one of the most serious public safety challenges facing Volusia County, which consistently ranks among the highest counties in Florida. In fact, Volusia County recently ranked number four for domestic violence incidents for the state. While criminal case information is publicly available, locating domestic violence-related offenses often requires individuals to search through extensive court records and criminal histories.

His proposal would create a dedicated public database containing basic information on domestic violence offenses, making already-public information easier for residents to access while fully protecting victim privacy. Victim names and identifying information would not be included.

He has received approval from the County Council to have this proposed initiative included in Florida's 2027 legislative request package. He also has support from Sheriff Mike Chitwood and the Volusia County Domestic Abuse Council. The goal if for this to be a state-wide database.

This proposal is not intended to impose additional punishment beyond the legal process. Its purpose is to provide greater transparency and empower residents with access to information that is already public but often difficult to locate.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Public Safety

SUSTAINABILITY:

FISCAL IMPACT:

There is no fiscal impact to the City of DeLand.

RECOMMENDATION:

Staff recommends approval of the attached letter of support from the Mayor on behalf of the City Commission.

BACKGROUND/DISCUSSION:

July 20, 2026

The Honorable Matt Reinhart
Vice Chair, Volusia County Council – District 2
123 W. Indiana Avenue
DeLand, FL 32720

Dear Councilman Reinhart:

Thank you for sharing your proposed Volusia County Domestic Violence Database Transparency Initiative.

The City of DeLand appreciates your leadership in bringing greater awareness to the issue of domestic violence. We support efforts that improve public access to information while protecting the privacy and dignity of victims. Making existing public records more accessible can help promote transparency, accountability, and informed decision-making throughout our community.

Please accept this letter as the City of DeLand's support for continued development of this initiative. We appreciate your commitment to enhancing public safety and wish you success as you move this proposal forward.

Sincerely,

Chris Cloudman
Mayor-Commissioner

CC: Honorable City Commissioners

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Approval of City Commission Meeting Minutes: September 19, 2022; September 22, 2022; October 3, 2022; October 17, 2022; November 7, 2022; November 15, 2022; November 21, 2022; December 5, 2022; December 19, 2022

DEPARTMENT: City Clerk

PREPARED BY:

ATTACHMENTS: MIN.CC.2022.09.19, MIN.CC.2022.09.26, MIN.CC.2022.10.03, MIN.CC.2022.10.17, MIN.CC.2022.11.07, MIN.CC.2022.11.15, MIN.CC.2022.11.21, MIN.CC.2022.12.05, MIN.CC.2022.12.19

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

N/A

FISCAL IMPACT:

N/A

RECOMMENDATION:

Staff recommends the City Commission review and approve the minutes as prepared and presented.

BACKGROUND/DISCUSSION:

N/A

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, SEPTEMBER 19, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or with regard to an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak with regard to any item on which the City Commission is to take action.

INVOCATION

Associate Pastor Jenny Vander Haeghen, The Nazarene Church DeLand, gave the Invocation.

PLEDGE OF ALLEGIANCE

Harrison Bitler, Boy Scout with Troop 340, led the Pledge of Allegiance to the Flag.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Michael Grebosz, Assistant City Manager; Dan Stauffer, Finance Director; Rick Werbiskis, Community Development Director; Jim Ailes, Deputy Public Service/Utilities Director; Ray Underwood, Public Works Director; Nick Conte, Economic Development Manager; Mark Hayward, Human Resources Director; Kieu Moses, Risk/Safety/Events Manager; Chris Graham, Community Information Manager

PUBLIC HEARING

1. Resolution Approving Fiscal Year 2022-2023 Final Millage Rate

Mayor Apgar opened the Public Hearing.

Michael Pleus, City Manager, addressed the City Commission and thanked them for allowing him the opportunity to present the recommended budget for fiscal year 2022-2023. He stated it means a lot to staff members that the City Commissioners take time to review and understand the budget requests. He also thanked Dan Staffer, Finance Director; Heidi VanEtten, Assistant Finance Director; and Nick Segel, Budget Manager for their hard work. The budget process begins with the strategic plan discussion in February, at which time the Commission sets forth priorities for the year. This year the priorities encompass a robust list and a lot of things have been included in this budget.

Looking at this year's budget, there has been a 39.56% increase, largely due to capital projects in the program which includes a $35 million Wastewater Treatment Plant expansion. The amount of a capital project is placed in the budget during the year it is budgeted, which brings the appearance that the budget is overly inflated. This is also part of the reason the City of DeLand has separated Special Grants & Revenue Fund and Capital fund.

Mr. Pleus reviewed what is included in the general fund budget. A Major Capital Investment will include the next phase of the Paiva Greenway. The City received an ECHO grant and is in the process of bidding this project. The trail will go from the current terminus point at Stetson's campus, all the way up to 92 and connect with the State trail. The next phase will be toward Sunrail, which will connect the entire trail system with the County's Spring to Spring Trail.

Lake Moore is one hundred twenty-six acres the City is looking to purchase through the Volusia Forever program. Volusia County has been informed the City agreed to match funds and an offer has been submitted. Southeast Regional Park, is the result thirteen acres deeded over to the City of DeLand when Victoria Park was developed. This year staff will explore what that thirteen acres will be used for and at this time practice fields are being considered.

Entry features in the City of DeLand are being designed and will be underway with approval of the budget.

The largest commitment the City of DeLand has ever made to road resurfacing is included in this budget.

As the City of DeLand grows, additional personnel are necessary and have been included in the budget.

Updating of the Land Development Regulations and the Comprehensive Plan will be completed. These updates will take a significant amount of time and what was not listed in this presentation is the major update to the City's strategic plan which will begin sometime in January.

The next phase of Advanced Life Support is being addressed in the recommended budget.

Mr. Pleus discussed new positions included in the budget, as well as, personnel salary increases, career track promotions and position upgrades. He also mentioned the increase in health insurance.

Mr. Pleus was proud to state the City Commission challenged staff to bring forth a reduced millage rate during the budget workshops. Staff achieved this goal and the recommended millage is 6.5841 mills, 7.02% over the rolled back rate and well below the rate of inflation which is at 8.03%.

Mr. Pleus presented tax scenarios and the impact to taxpayers, which is improved significantly both on residential and commercial with this reduction in millage.

The government debt will increase with this budget in order to accomplish capital goals, approximately $9.9 million. The City of DeLand is still successful in terms of debt ratio.

Mr. Pleus discussed the Homeless Shelter Fund which captures operating costs for the Homeless Shelter and Day Center. This program is offset by donations from other local governments, churches and businesses, even though there is still a year over year increase.

Water and Sewer Funds mirror what has been done in the general fund in terms of merit increases and new positions.

The capital program is rather large, which includes the wastewater treatment plant expansion.

Impact fees for water and sewer will be broken out between water and wastewater. These fees need to be used for capacity expansion.

The Airport fund mirrors other funds for merit increases and health insurance. It includes the capital fund for the airport which is paid for by lease revenue from tenants at the airport. There are no general fund contributions to the airport.

The stormwater fund mirrors other funds for personnel and four new positions will be added. The city formerly used prison crews to assist with maintenance, but those crews are no longer available causing the need for additional personnel. There are also capital projects in the stormwater fund. The Fire Station Pump Station Design is dependent upon participation by FDOT on that project to help alleviate flooding in the area.

Permits and Inspections includes merit increases and additional positions.

Dan Stauffer, Finance Director, stated per Florida Statute, the final operating millage for the City of DeLand, necessary to fund the final fiscal year 2022-2023 budget is 6.5841 mills. This rate is 7.02% above the rolled-back rate of 6.1520 mills.

Commissioner Paiva made a motion to approve the resolution. Commissioner Reid seconded the motion.

Commissioner Cloudman commended staff for a job well done.

Commissioner Paiva also thanked staff and the City Manager for a job well done. He recognized that a lot of money has been leveraged to supplement City funds and this results in the residents of DeLand experiencing a lot of value without being taxed for same.

Commissioner Davis thanked staff for a very comprehensive and easy to understand budget process. She appreciates staff being proactive in searching for grant funding.

Commissioner Reid extended his appreciation to staff and looks forward to starting the process over again.

Mayor Apgar called for a vote.

The motion was approved by the following roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

2. Resolution Approving Fiscal Year 2022-2023 Final Budget

Commissioner Paiva made a motion to approve the Resolution. Commissioner Reid seconded the motion. The motion was approved by the following roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

PRESENTATIONS

1. Recognition of Fire and Police Personnel re: Florida Department of Transportation Tower Incident

Police Chief Umberger and Fire Chief Allen were invited up to make presentation to employees who were involved in a recent incident involving the FDOT tower.

Chief Allen provided a summary and highlights of the incident which occurred at 719 S Woodland Blvd. He stated this rescue was unique because of the coordination and cooperation between the two departments, and quick actions that led to saving a life. Balancing some personal risks and some unknowns of the radio tower and the urgency of an individual who was not breathing, the determination was made to gather for immediate action. This is one of those incidents considered high risk and low frequency. Some background was provided about the patient who climbed the radio tower with the intent to take his own life.

Police Chief Umberger highlighted exceptional teamwork among the Police and Fire Departments. He said it is a rarity to see Fire and Police work together so cooperatively. DeLand Police and Fire Departments work together as a team to protect life and property in the City. This day highlighted outstanding professionalism on the part of all individuals in both departments.

Awards of Merit were presented to Police Officers Jackson Miller and Jonathan Jones.

Meritorious Service Awards were presented to Lt. Ariel Silvestri and Driver/Engineer Chris Murray

Recognition of other units who were on scene were mentioned. Unit Commendations were presented to the following firefighters: Josh Brown, Trent Sanders, Jeff von Bretzel, Adam Bruce, DeLand Fire Driver/Engineer Mike Mueller; Fire Lt. Jamie Lunsford.

Mayor Apgar, on behalf of the City Commission, thanked DeLand's first responders for a job well done.

CONSENT AGENDA

1. Resolution Approving Budget Amendment for FY 2021-2022
2. Consideration re: Recognition of "Right of First Refusal" between HEINZ and the City of DeLand
3. Consideration re: Renewal of Contract Agreement with Team Volusia Economic Development Corporation, FY 2022-2023
4. Consideration re: Renewal of Contract Agreement with DeLand Area Chamber of Commerce, FY 2022-2023
5. Consideration re: Lease Agreement with DeLand Area Chamber of Commerce

6. Consideration re: Renewal of Travelers Wrap Plus Policy for Fiduciary Liability Coverage for City's Retirement Plans
7. Consideration re: Renewal Contract for Fire Department Critical Care Cancer Insurance Policy
8. Consideration re: Third Party Access and Use Agreement for Fire Reports and EMS Charts with Zoll Data Systems, Inc. (through Volusia County Procurement)
9. Consideration re: Approval of Property/Casualty, General Liability, Auto Insurance, Worker's Compensation and Ancillary Coverage Renewal
10. Resolution Approving Sole Source Purchase Order – Biosolids Handling Services
11. Consideration re: Award of Bid for Annual Cooperative Water and Wastewater Chemicals

Item 4 was pulled from the Consent Agenda.

Commissioner Paiva made a motion to approve items 1-3 and 5-11 on the Consent Agenda. Commissioner Reid seconded the motion.

On Item 4, Commissioner Cloudman requested ongoing quarterly reports from the Chamber pertaining to how business is going and what services are being provided.

Commissioner Reid stated appreciation for everything the Chamber of Commerce does for the City of DeLand. He would like to see more focus placed on provision of a community liaison. This would be a great help to small businesses who wish to open in the City of DeLand and need assistance navigating the Planning & Zoning and permitting processes.

Mayor Apgar referred to a recent conversation with Janet Knauff, President of the Chamber, regarding Monday Morning Octane meetings. He noted for the last several weeks there have been 70+ businesses in attendance which is indicative of solid growth.

Commissioner Paiva made a motion to approve item 4 on the Consent Agenda. Commissioner Cloudman seconded the motion. The motion was unanimously approved.

Mr. Elkind, City Attorney, asked Mayor Apgar to ask for a motion to reconsider the vote where items 1-3 and 6-11 on the Consent Agenda were approved.

Commissioner Paiva made a motion to reconsider items 1-3 and 5-11 on the Consent Agenda. Commissioner Cloudman seconded the motion. The motion carried by a unanimous vote.

Commissioner Paiva made a motion to approve items 1-3, 5, 8 and 11 on the Consent Agenda. Commissioner Davis seconded the motion. The motion carried by a unanimous vote.

Commissioner Reid indicated a need to abstain from voting on items 6 and 7 on the Consent Agenda.

Commissioner Paiva made a motion to approve items 6 and 7 on the Consent Agenda. Commissioner Davis seconded the motion. The motion carried by a vote of 4 to 0, Commissioner Reid abstained from voting due to potential conflict of interest.

Commissioner Paiva made a motion to approve items 9 and 10 on the Consent Agenda. Commissioner Cloudman seconded the motion. The motion carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

Sherry Decrenza, 507 Sandale Court, stated Summer Woods was developed twenty years ago and there was a homeowner's association at that time. Subsequently, Stetson University purchased several of the homes. The City has assisted with the retention pond, which still belongs to the homeowner's association. However, Ms. DeCrenza asked if the City Commission would consider taking over maintenance of the pond since there aren't enough residents who are willing to form a homeowner's association board.

Mr. Pleus, City Manager, stated there have been internal conversations with regard to the retention pond. He suggested the City may remove the credit on the homeowner's bills for the retention pond and then take on maintenance of the area.

Mayor Apgar asked if the City is maintaining the retention pond, if the homeowners would still own the property. Mr. Elkind advised subdivisions are set up with an HOA, and in this case it would take over responsibility for operation and maintenance of the pond. In analyzing this situation, the ability for the City to create a special assessment district does exist which would allow the City to collect assessment fees to be used to maintain the area. He has concluded because in some part this retention area serves a public roadway, the City would be within its legal rights, based on prior opinions of the attorney general, to do a special assessment district. Easement for access would have to be granted to the City although Mr. Elkind does not think the City would want to take ownership of the pond. Mr. Elkind advised the HOA may need to be regenerated and four people would be necessary to serve. Ms. DeCrenza said there is such a large number of rental properties in the neighborhood, owned by Stetson University, it has been difficult to get anyone to commit to serve on a HOA. Mr. Elkind asked Ms. DeCrenza to get with him following the meeting, to further discuss.

CITY COMMISSION REPORTS

1. Report re: Elected Official Round Table

There was not a round table meeting.

2. Report re: River to Sea TPO

Commissioner Cloudman stated the River to Sea TPO meeting will be held next week.

3. Report re: River of Lakes Heritage Corridor

Commissioner Cloudman reported a meeting was held at the Enterprise Museum where Georgia Turner gave an update on Volusia County Tourism. Sharon Strouse, Executive Director of Florida Scenic Highways, presented Georgia Turner the Gary Balogh Inspiring Excellence Award.

Commissioner Paiva said following Mayor Apgar's 34 years of dedicated service to the City of DeLand, it is going to be difficult going forward. Given Mayor Apgar's lengthy service and the legacy he is leaving on the City of DeLand, he asked the City Commission to consider making a motion to name the new sports complex the Robert F. Apgar Sports Complex.

Commissioner Paiva made a motion to name the sports complex after Robert F. Apgar. Commissioner Cloudman seconded the motion. The motion carried by a unanimous vote.

Mr. Pleus reported CPH Engineering has been doing some pro-bono work for the City on signage and the process of raising money will begin so as to get this done in honor of Mayor Apgar.

Each of the City Commissioners took a moment to thank Mayor Apgar for his service and let him know how much he is appreciated and will be missed. Credit was given for so much that has been accomplished under the leadership of Mayor Apgar.

Commissioner Davis thanked the Police and Fire Departments for a beautiful 9/11 Memorial Breakfast. She and her daughter were in attendance and thoroughly enjoyed the event.

Commissioner Davis also saw a film recently, The Woman King, and she met with the assistant director who is a DeLand native. Commissioner Davis would like to introduce Asia Horne to the City Commission at a future meeting.

CITY MANAGER REPORT

Mr. Pleus reminded the City Commission there will be a workshop next Monday on the 2050 Vision Plan. He has sent two questions to each commissioner as a primer to the workshop. He also mentioned the Superstar Students program will restart October 3, 2022.

Mr. Pleus asked the City Commission's pleasure on having him look into finding a lobbyist who may assist the city with appropriations funding. There was no objection. Mr. Pleus would be looking for someone who specializes in budget appropriations.

CITY ATTORNEY REPORT

Nothing to report.

CITY CLERK REPORT

1. Board Announcements

Julie Hennessy, City Clerk-Auditor, provided a list of vacancies on various boards and committees including the Planning Board, the Citizens Advisory Task Force, DeLand Housing Authority and the Brownfield Advisory Committee.

Commissioner Cloudman asked Mr. Chris Graham to help push the need for applications.

Ms. Hennessy affirmed the City Commission is looking to appoint 5 people to the Brownfield Committee.

CITY COMMISSION

Commissioner Reid echoed Commissioner Davis' earlier comments about the 9/11 memorial breakfast. He appreciates the time staff put into the pancake breakfast and stated events such as this are a good way to build comradery with the department and with DeLand citizens.

Commissioner Reid served on the Florida League of Cities Policy Committee for Land Use and Economic Development. There are about six items of focus and he will report as the committee progresses with their work.

On September 22, 2022, there is supposed to be an unveiling of "The Hill" Mural on Voorhis Ave. The ceremony is scheduled at 5:30 p.m. Mr. Grebosz noted the artist and the business owner did not reach out to the City in time to request a road closure, which typically takes 30 days. Staff is working to see if the request may be accommodated, but there are some other events scheduled that may interfere. City Commissioners will be notified once it is determined whether or not the event will happen.

Mr. Pleus, City Manager, introduced Mr. Tywan Arrington from Team Volusia.

Commissioner Cloudman stated event season is here and the recent Spring Hill Turn Festival was nicely done. The Facilities Department won an award.

Main Street DeLand will be hosting the DeLand Craft Fair this coming weekend and they still need volunteers.

Commissioner Davis said Conquer the Skies was held this past Saturday. She thanked airport personnel for providing materials and giveaways to local youth. She stated that program will be held annually and is a great way to expose youth to different opportunities they may not get from the classroom.

Mayor Apgar mentioned the fall festival, parks had a poster unveiling after the 9/11 event at the Fire Department. Chief Umberger and Mayor Apgar also attended First Assembly to recognize their pastor for 30 years of service in the church and also as a Police Chaplain.

The League of Cities dinner will be held on Thursday.

Spring Garden Avenue ribbon cutting will be held at 5:00 p.m. on Thursday.

Mayor Apgar began his closing comments pertaining to the years he has served as Mayor for the City of DeLand. He talked about the many experiences he has had while serving the City. Having been asked about the changes he has seen during his tenure as a City Commissioner and Mayor, he stated the explosion in technology and the use of social media have been very significant changes. Mayor Apgar stated the assault on home rule by the legislature, pre-emption by legislature and more regulations at the State and Federal levels that limit a municipal government's ability to govern have been very large changes during his tenure. He also discussed additional changes he has seen with regard to voters, distrust of government, loss of civility and diversity.

ADJOURNMENT

There being no further business, the meeting was adjourned at 8:24 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A SPECIAL MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, SEPTEMBER 26, 2022, AT 7:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or with regard to an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak with regard to any item on which the City Commission is to take action.

INVOCATION: Michael Pleus, City Manager, gave the Invocation.

PLEDGE OF ALLEGIANCE: Mayor Apgar led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren J. Elkind, City Attorney; Julie Hennessy, City Clerk-Auditor; Mike Grebosz, Assistant City Manager; Chad Gamble, Public Services Director; Rick Werbiskis, Community Development Director; Mike Holmes, Planning Director; Carol Kuhn, Assistant Planning Director and members of the public and press.

Mayor Apgar stated this meeting is for the sole and explicit purpose of the First Reading of an Ordinance to change the zoning for GlassHouse Square PD, located on approximately 0.868 acres of property at 130 West New York Avenue, from C-2A to Planned Development.

NEW BUSINESS

1. First Reading of Ordinance Changing the Zoning for GlassHouse Square PD, on Approximately 0.868 Acre of Property, located at 130 West New York Avenue from C-2A to Planned Development

Rick Werbiskis briefly outlined the staff report and offered to answer questions.

Mayor Apgar opened the Public Hearing and incorporated the comments made by Mr. Werbiskis into the record.

Mayor Apgar disclosed a conversation with Alex Ford, Attorney, about the planned development agreement. He has also had discussions with staff members related to the GlassHouse development. For the record, Mayor Apgar received e-mails which have been forwarded to the City Clerk's office. There was a previous e-mail correspondence pertaining to the development which has been incorporated with all correspondence received by the Commission regarding GlassHouse.

Commissioner Cloudman disclosed attendance at a meeting of neighboring business owners to hear their concerns. On Friday, he met with Barb Shepherd to discuss the project. Today, Commissioner Cloudman met with Alex Ford to discuss the project. Several e-mails have been received as the public anticipated this item being presented to the City Commission.

Commissioner Reid disclosed similar items to those previously mentioned.

Commissioner Paiva disclosed a conversation with Attorney Mark Watts pertaining to the GlassHouse development and he has also spoken with Attorney Alex Ford.

Commissioner Davis disclosed e-mail correspondence received.

Commissioner Paiva asked about parking plans.

Rick Werbiskis, Community Development Director, presented the GlassHouse Square Project as it relates to parking. He said there were previous discussions with respect to the applicant contributing to a fund for future parking. There is not currently a parking authority or a long-range plan for the creation of parking facilities in the downtown area. He stated parking has always been a critical issue expressed by the Commission. Staff recommendation is consistent with previous discussions of the City Commission, to not move this project forward without a plan in place for parking.

Commissioner Paiva asked if the City Commission could move forward on the demolition of the property, if the first reading is continued to a time after the demolition, to either allow for a parking plan or to allow time to figure out funding for parking. Mr. Werbiskis said that would be an option and staff is open to suggestions and ideas from the City Commission. A discussion does need to take place pertaining to timing of the demolition.

In response to a question from Commissioner Davis, Mr. Werbiskis said staff has not received a definitive parking plan for the project. The applicant is proposing up to 40 temporary parking spaces based upon the PD that was submitted. However, the proposed spaces are not engineered, and they are proposing a substandard design for those spaces, smaller than what would typically be required, and no landscaping is included for the parking area.

Commissioner Cloudman asked for examples of what concerns being expressed. Mr. Werbiskis stated concerns are being raised by adjacent property owners with respect to the vibratory impacts that may impact their buildings/businesses.

Alex Ford, Attorney representing GlassHouse LLC, Landis Graham French – 145 E. Rich Avenue, Suite C, addressed the City Commission.

Since initial submittal of the draft PD agreement, negotiations have been taking place with staff. He feels everyone is in agreement. Also, adjacent property owners have been contacted and their concerns are being addressed. Mr. Ford said the Planning Board has recommended approval with suggested conditions and the Historic Preservation Board has been supportive but would like to see physical examples of the materials that will be used for construction of new building(s).

A conceptual layout / build out was displayed with the assumption of all parking being located offsite. The layout includes a courtyard, pedestrian walkway and two proposed buildings. The client believes the conceptual layout is consistent with the original purchase agreement.

Commissioner Reid asked if the plan includes a water feature in the courtyard and Mr. Ford said that is still in the plan.

Mr. Ford said several revisions have been made to the development agreement. He reviewed the revisions as follows:

1. No drive throughs on financial institutions, and restaurants.
2. Residential units only on second floor of Building 2.
3. Prohibit nursing homes as a primary use.
4. Prohibit commercial parking lot as a primary use.
5. Pre-construction survey of immediately adjacent buildings.
6. Vibration monitoring plan to be approved by the city officials.
7. Avoidance of pile driving and vibratory construction methods.
8. Developer to provide Construction Plans to neighboring property owners prior to submittal to city; and
9. Insurance requirement.

Mr. Ford stated the purchase agreement contemplated a mixed-use project providing for uses allowed under the current zoning with a few items removed as previously noted. One of the most important provisions in the agreement is for DelTran to perform their R&D function which is not a permitted use under the current zoning.

Mr. Ford displayed architectural renderings. The architecture would be in keeping with or complementary to existing downtown DeLand and Georgia Avenue brick architecture. The developer has decided to construct two-story buildings with a rooftop, in large part because of the parking.

If the developer has an option to provide on-site parking, there would be a deviation to the plan since the identified gathering space would be the area used. If GlassHouse cannot secure off-site

property for the 40 proposed parking spaces during phase 1 construction, the agreement does contemplate parking can be off or on-site. Currently, the phase 1 gathering space would be completed during phase 2 if that area is necessary for parking.

The pedestrian walkway did permit an overhang for building 2. The private parking lot to serve the needs of GlassHouse is what is to be determined for the PD Agreement. The developer needs to discern what the City Commission's requirements will be for parking.

Mr. Ford said it was contemplated the parking ratios and standards would be addressed in the PD Agreement, applicable to each parcel. This is the leeway being requested through the provision of parking spaces that do not meet current standards. He added, even the city has some parking in this area and adjacent to the former jail that would not meet current parking standards.

Residential units will be constructed to provide exterior sound attenuation and there will be no residential units on the first floor. This property is going to be treated as though it is all commercial.

The references to square feet of non-residential uses are only estimates. It was never contemplated in the purchase agreement that everything would be exact, but would be conceptual based on the parties' reasonable understanding of market demands, design flexibility and urban planning best practices. Additional engineering and a market feasibility study shall be required to ensure an economically viable redevelopment program which is in all parties' best interest.

Mr. Ford presented a parking plan for Phase 1. He said there is not a current parking plan for Phase 2 other than 10 spaces, and the 40 spaces from Phase 1 that will be located somewhere within 800' of the subject property. That is the parking plan if additional property is not located by time construction begins on Phase 1. Mr. Ford said his client does not particularly like this parking plan and they also understand the Commission is not excited about having the public space being removed. Mr. Ford provided some additional ideas for parking including paying into a fund.

Mayor Apgar stated it has been indicated that the client is willing to waive the right to purchase an option parcel. Where that is relevant is, that stays to the public, the spaces within the Trilogy lot will remain public parking. Mr. Ford said that is an option offered by the developer.

Commissioner Reid asked for clarification on drive-through facilities. He asked if that would prohibit walk-up windows and Mr. Ford said to him a drive-through is vehicular and he did not contemplate walk-up windows being an issue.

Commissioner Reid asked for further clarification on the pre-construction survey. Mr. Ford said the proposal was for pre-construction, not for a pre-demolition survey. He said it may be appropriate to have two surveys since there are two obvious phases of the project that could cause damage to nearby structures. Mr. Pleus, City Manager, stated he believes it would be in the City's best interest to have a survey before the demolition. Mr. Elkind also opined this would be his preference.

Commissioner Reid said the insurance requirement does not necessarily seem adequate. He asked if it was just for the jail location. Mr. Ford said the insurance would be for employees performing the construction activities. His insurance advisor stated the insurance included is a standard contactor requirement for liability-type insurance. Commissioner Reid asked if the construction were to cause potential damage to surrounding buildings, if they would have a claim against the contractor. Mr. Ford said he understands the contractor's policy would name his client as additionally insured and it would protect the contractor and Mr. Ford's client from liability of causing damage to adjacent structures.

Mr. Ford read the insurance requirement. He stated he has spoken with two different insurance agents and they have advised it would be inappropriate to name adjoining property owners as additionally insured.

Commissioner Reid is looking at this from the perspective of protection for the city.

Mr. Elkind advised as construction contracts are procured on a routine basis, all vendors are required to provide liability insurance with the City named as additionally insured. Liability on a construction project will typically exceed $1 million. He added with this being a zoning hearing, it would be unusual to get into discussion about liability insurance. Mr. Elkind described the insurance required by the City and how the City is protected.

Mr. Elkind said that insurance that would be issued to a contractor, is not going to include a provision in the policy about vibration monitoring. Therefore, the City cannot impose a contractual obligation that will create greater insurance coverage or greater liability than will be covered by the contractor. He said it would do no harm to put language in the PD to require procurement of an adequate insurance policy.

Commissioner Reid would like to see more scrutiny on vibration monitoring. He has seen some historical documents / preservation documents, but additional surveys throughout the process to mitigate risk to surrounding properties would seem appropriate.

Mr. Ford stated the project developer is seeking approval and he understands the situation. The added element is dealing with the Lake Helen Brick, which is a lot softer. That will need to be considered with respect to vibration monitoring.

Commissioner Reid said he would like to see this project move forward, but still would like to see additional detail about the vibration monitoring.

Commissioner Paiva asked for clarification on the total parking spaces. Mr. Ford said the spaces on phase 1 was private spaces from 8:00 am to 5:00 pm. Regarding off-site parking, the developer is looking to the City Commission for direction. Commissioner Paiva said the green space can be constructed in Phase 1 while parking is being provided, as the developer pays into a parking fund for additional parking. He does not want to take away from the green space in order to allow for parking.

Mark Watts, Attorney, Cobb Cole, 231 N. Woodland Blvd, was present on behalf of Conrad Realty. He stated Mr. Ford and his client have been receptive to suggestions made by Mr. Watts about language in the agreement for the protection of adjacent properties. The list that was provided does address several of the comments provided by interested parties. A couple of other things pointed out by Mr. Watts regarding the core issue that has been a real concern for Conrad Realty Company, is protection of their assets. This would involve GlassHouse and their activities, as well as the City's actions during the demolition process. Mr. Watts is also in agreement with using at least a couple of surveys rather than just the one pre-construction survey.

Mr. Watts advised $1 million in insurance coverage is low. He suggested $5 million would be more appropriate and reasonable given all the surrounding properties. This would provide adequate protection in the event there is damage suffered to those properties.

Mr. Watts stated that in regard to the agreement to exchange property, a right of easement will need to be granted to surrounding properties to maintain a common wall along the boundary. His clients have offered to make this request reciprocal. Given the nature of the DeLand downtown, Mr. Watts asked what the standard would be for when the public access easement along the GlassHouse Alley is closed. This is not tied to the concern of protection for the property; but being downtown and seeing the success experienced by Artisan Alley, and having that vibrancy of public access on Friday and Saturday nights is important. Perhaps there should be a standard tied to that easement.

Mr. Watts closed his comments with the fact there are FDOT standards about the protection of historic structures. He stated the consensus among his clients is the city should look at having a standard for how to approach this in the downtown area.

Commissioner Davis asked if Mr. Watts and his clients feel the materials proposed to be used by GlassHouse will be compatible. Mr. Watts said yes, there have been no significant comments about the materials proposed, they have done a nice job designing the building. There is some uncertainty about what materials will be available closer to the construction date and that is why the Historic Preservation Board has asked to see the materials prior to start of construction.

Mayor Apgar asked if Mr. Watts, based on his experience, if contractors who bid on this demolition would have experience in taking down buildings next to other buildings of a historic character. Mr. Watts said he would hope so. He believes when the city puts out an RFP for that work, it should bear in mind both protection of adjacent historic resources and the nature of the building being demolished. In this case the building being demolished is a jail, so it was robust construction.

Mayor Apgar noted regardless of who gets the job, there needs to be demonstrated experience shown in dealing with demolition of buildings in historic districts with adjoining properties.

Barb Shepherd, President of Conrad Realty Company, 112 West New York Avenue, stated the National Park Service recommends demolition by hand. She spoke about the anxiety being felt by her and other shareholders about this project and its potential for harm to buildings. Her team has been pleased with the receptivity from the GlassHouse Team to add elements to the agreement collaboratively. She thanked the city and the developer for working together on the project.

However, she is nervous about the insurance requirement and agrees $1 million will not be enough. She stated the whole Deland downtown is full of sand brick buildings, which are the City's assets that need to be protected. Mr. Shepherd said a good point was brought up by the Planning Board that there is nothing in the PD Agreement to require anything beyond what is constructed with Building 1 Phase one. She also asked the City Commission for assurance that the pedestrian walkway will be open most of the time and will be a free flow pedestrian walkway between new York and Georgia. She stated the property is a public asset the City is giving to GlassHouse Square, and she feels the City should not be giving away the tremendous opportunity for a free flow pedestrian walkway.

Sydney Johnston, 535 North Clara Avenue, presented a Historical Structure Form from the Florida Master Site File, documenting the Volusia County Jail as historic property. He stated properties are documented, but not protected. The jailhouse building is eligible to be named for its historical significance.

Mr. Johnston also pointed out the sandstone brick from The Bond Sandstone Brick Company which was operational from 1904 through 1933 in Lake Helen, Florida. DeLand, after the great 1886 fire, was constructed after the Bond Sandstone Brick Company was created to help rebuild the town. Mr. Johnston stated the sand-lime bricks are scarce. They were developed through a steam pressure technique and are very brittle. He said it is critical these bricks are not subjected to vibratory activity.

Allen Johnson, 340 West Minnesota Avenue, addressed onsite parking. He said the owner has an option to gate and lock the parking lot, which is a concern. There is an open feel to that section of the DeLand downtown and he feels a parking lot with a fence and lock would be problematic.

Commissioner Paiva expressed his agreement with Mr. Allen Johnson.

Asal Johnson, 340 West Minnesota Avenue, is concerned about the identity of the area. The jail is a historic building, and she takes students from Stetson to walk the many historic areas in downtown DeLand. She stated the replacement of that existing building will change the identity of that corridor forever. She also expressed concern about privatization of space in the downtown. The City of DeLand has made downtown a friendly place for gathering and should remain as such.

Fred Peace, 1571 Alanson Drive, expressed concern and feels this project has deviated from what was initially presented to be in the best interest of the public. The whole project would be best served as a publicly accessible area. He also expressed concern about parking being substandard, and about impervious surface and stormwater related issues as a result.

Dan Reid, 130 Clara Avenue, spoke about liability insurance and stated general liability for a contractor will not cover adjacent buildings unless equipment collides with a building. He suggested when insurance standards are determined, a separate policy should be written which states specific information regarding coverage.

Mr. Ford provided closing comments after hearing public comments and answered questions.

Commissioner Paiva noted the area was always anticipated to be used for special events. He supports the comments about the pedestrian walkway being open for the public. The idea was not to make it exclusive.

Mayor Apgar said the downtown business community has come to the City Commission on numerous occasions regarding removing the eyesore which is the old jail. Many feel that building subtracts from the ambience of downtown DeLand. The City Commission approached Volusia County several times and the County would not release the jail property. Because of Michael Pleus, City Manager, along with the City's perseverance, an agreement was finally reached with Volusia County where they stated the property was to be used for economic development. Mayor Apgar intends to honor the agreement that this land be used to add value to the downtown. The City Commission has responded to the downtown business community by moving forward to replace a downtown eyesore.

Mayor Apgar closed the public hearing.

Mayor Apgar recessed the meeting at 8:43 p.m. The meeting was reconvened at 8:52 p.m.

Mr. Elkind advised there was an acquisition and development agreement executed between the City and the CRA on one side, and GlassHouse on the other side. That contract contemplated GlassHouse would go through the process of asking the City Commission to approve rezoning of the property. The rules that must be followed when conducting a quasi-judicial rezoning hearing are the same as would be for any other PD. The City Commission should not allow the acquisition and development agreement to prevent approval of anything that would otherwise be approved in terms of rezoning, or visa versa. If the PD zoning is ultimately approved by the City Commission on second reading, subsequent to that the City Commission and the CRA, as property owner, would evaluate whether or not requirements of the acquisition and development agreement have been met as related to getting the property rezoned and if it does meet the requirements the City had vis a vis the PD and rezoning of the property. That is a separate determination from the zoning hearing which City Commission is being asked to consider this evening. Regardless of the final vote, it is not a finding one way or the other as to whether the request for rezoning complies with the acquisition.

Mayor Apgar said some discussion, for an example -- the option parcel, may present the necessity to amend the acquisition and development agreement to keep the two documents in concert with the final product.

Mr. Elkind stated a resolution has been adopted by the City Commission which states when any significant changes are made at the first reading, same is continued such that second reading should be a short hearing.

Mayor Apgar stated because the city is now four years into this project, there needs to be some clear time limits of what to accomplish and by what date. Mr. Ford was amenable to this, if any responses by the city are similarly obligated.

Mayor Apgar asked about the option parcel. Mayor Apgar expressed his hesitancy about accepting the $110,000 payment because it would place the burden for providing parking spaces on the city. The obligation of the developer would be only to find a location for thirty spaces. Mayor Apgar would prefer to see the hybrid notion be more in the way of a letter of credit, but the developer still has an obligation to find 50 parking spaces. He still wants the developer to have the obligation to provide the parking spaces, not the city being a partner in that respect. Another thought was for the city to agree to return the $110,000 to use for building the 50 parking spaces if the developer agrees to follow through. The Trilogy lot was not intended for public parking upon the City's acquisition of the land. Mayor Apgar said the green area is more positive for the area than the extra on-site parking spaces. Mayor Apgar felt the hybrid plan did make a lot of sense because then the city gets the green space and some amount of on-site parking.

Commissioner Paiva asked for a broad view of the parking area. This is an underused building; the Volusia Property Appraiser says only 12% of the building is usable and the Commission is supportive of the demolition. He feels the design continues to move the downtown forward with viability. Looking at the parking situation, Commissioner Paiva prefers the hybrid plan since the green space is desirable. If 20 parking spaces are proposed, he would be interested in allowing a fewer number of spaces, but the spaces need to be constructed to meet the parking space standards. The Fire Station is going to be torn down which will increase public parking. Having the developer pay into a parking fund would be helpful in adding parking at the fire station site. Commissioner Paiva said 20 stabilized spaces, funding for 20 spaces and the developer obligated to build 30 off-site spaces seems reasonable. He also would like language to allow for public use of the spaces.

Commissioner Davis expressed concern regarding the GlassHouse Alley and Artisan Alley. She asked if there would be restrictions on the public or if the pedestrian walkway would be opened to the public. Mr. Ford said his client would like to have the ability to close the area off and secure it at times after hours, as general protections. The intent is to mimic the success being experienced next door.

Commissioner Paiva would want the alleyway to be accessible to pedestrians not vehicles. If parking is going to be accessed from the Georgia side, having cars turn in on New York does not feel like the direction City Commissioners would like. Commissioner Paiva prefers Georgia Ave be used for parking since it would be the safer option.

Mr. Elkind has a draft of the easement, and in large part the parking will be dictated by the plan the City Commission approves and whether GlassHouse Alley has to be used for traffic circulation. This will require the expertise of Planning staff. Mr. Elkind said staff needs to have a clear understanding of how the parking plan will be configured and that the plan be should be done in a semi-professional manner so that planning staff can clearly evaluate traffic circulation and access to the parking lot by way of using the alleyway.

Mr. Ford understands Commissioner Paiva prefers standard sized parking spaces. He asked if the City Commission wishes to have landscaping and distance separation included in the plan or is the preference to maximize spaces. Commissioner Paiva said his main concern is standard parking space sizes.

Commissioner Cloudman commented the understanding with the county was for the site not to be used for parking. The initial RFP was desirous of an extension of the existing revitalization that was already taking place and when the initial plan was presented, it did complement what was being done in surrounding areas. Stopping the project at one building and mostly parking would not meet the expectation. When it comes to parking, Commissioner Cloudman believes it depends upon the building uses which have not been firmly determined. This site is unique because it is public land. He mentioned the Commission does not want to reduce the number of parking spaces.

Commissioner Cloudman said the city needs to be attentive to the concerns expressed about vibration during construction.

From the beginning, Commissioner Cloudman did not object to the project. However, he did disagree with some of the valuations and obligations placed on the city. Under stormwater in the PD, there is 100% impervious allowance even though that is not what is being turned over to the developer. The PD provides no requirements for stormwater or that all stormwater would flow through the City's stormwater facilities as they currently exist. Commissioner Cloudman said if this area is going to be improved, why not make the stormwater component better, also.

Commissioner Cloudman said in the event a restaurant opens in the GlassHouse buildings, and especially if parking is removed from the center area, trash and grease receptacle location will have to be considered.

Commissioner Reid stated a lot of money has been invested in the Georgia Avenue area to make it pedestrian friendly. He would like to continue moving vehicles out of that area to continue the pedestrian friendly feel of the area.

There was discussion about various parking and green space options.

Commissioner Paiva said he feels everyone is in consensus with 50 parking spaces. However, whether the spaces are on-site or off-site, the number of parking spaces will remain the same before any occupancy can be granted.

Mayor Apgar asked Commissioner Reid if he is looking to know where the 50 spaces will be located. Commissioner Reid thinks the applicant needs some leeway in that they must potentially negotiate purchase of land or determine where the parking spaces will be located.

Commissioner Paiva likes green space and prefers the hybrid plan. The city receives money to assist with creating parking but then the developer is still providing some parking.

Commissioner Paiva would like to see liability insurance increased. From a historical perspective, he would like to see the plaque currently on the building remain in place to recognize what was there. In phase 1, he wants to see building 1, green space and the alleyway constructed.

Mayor Apgar and Commissioner Paiva are supportive of the hybrid plan. Commissioner Reid is not opposed to the hybrid plan, but off-site parking is preferential.

Mr. Ford asked if for Phase 2, the developer could have the commitment of parking within 800 ft. This would require the developer to get approval of a specific parking plan for Phase 2 from the City Commission.

Commissioner Davis is in support of having phase 1 include a parking plan since there has been concern about phase 2 not coming to fruition. She would also like to see some of the parking area close to the site since there will be planned events.

Mr. Ford asked if a flat payment to the city for the use of funding parking would be acceptable.

Commissioner Paiva indicated that a cost per parking space needed to be established.

Mr. Pleus said the hybrid plan includes 20 +/- spaces on site and that for the other 20 spaces for phase 1, he understood the commission to say they would be supportive of the developer paying into a parking fund.

Commissioner Cloudman is supportive of the developer paying into a parking fund, but there is not currently a parking fund. Mr. Pleus stated the expectation is being set for how much parking will be built with a certain amount of money. The actual cost per space must be thought out and a parking fund can be created.

Mr. Elkind outlined several items that needed to be considered should the Council want to accept money in lieu of requiring the developer to build them on site to include location, public versus private use and construction cost.

Commissioner Paiva stated developing a parking fund for downtown would require many items to addressed and he thought this should only be done for this project.

Mr. Elkind said because a PD is being allowed in an area that would not otherwise allow for waiver of parking requirements, the City Commission can approve acceptance of a certain amount of money for parking within the agreement. This practice would be determined on a case-by-case basis without setting up a parking fund.

Mr. Elkind advised the City Commission to proceed to a first reading of the PD ordinance. Assuming it is approved on first reading, the attorneys would then draft an amendment to the Acquisition and Development Agreement that would define time frames. Subsequently, when the City Commission and the CRA Advisory Board meet, the amendments would be presented: 1) to the extent the project does not conform with the A&D Agreement, and 2) to clearly identify timeframes for the project.

Commissioner Paiva mentioned that he thinks the PD needs to include: language for the pedestrian walkway; a change in the amount of liability insurance to protect neighboring areas; a description of the phase 1 construction to include Building Number 1, green space and the alleyway; and the plaque for historic information. Mr. Pleus said it was good summary.

Mr. Elkind advised the land the developer has purchased is privately owned property. The developer, in this situation, cannot commit to building phase 2. With that, one way to solve the problem is to say on phase 2, it will be parking. If phase 2 does not take place by a date certain, the City has the right to take the property back and relieve the developer of the parking requirement in that location.

Commissioner Paiva made a motion to continue the first reading of the Ordinance (no date certain cited). Commissioner Davis seconded the motion, which carried by a unanimous vote.

ADJOURNMENT

There being no further business, the meeting recessed at 10:15 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, OCTOBER 3, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or with regard to an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak with regard to any item on which the City Commission is to take action.

INVOCATION

Mayor Apgar, on behalf of the Commission, thanked Michael Pleus, City Manager, the Department Directors and all City of DeLand employees for their dedicated efforts in preparing for Hurricane Ian. Crews were out making preparations prior to the storm and have been working since immediately after the storm, to get the city cleaned up and back to normal. He asked Mr. Pleus to give an overview on what has or is being done before, during and after the storm.

Mr. Pleus said last week Hurricane Ian, an unprecedented storm, happened which dropped at least 20 inches of rain in the City of DeLand. Investments the City has made into stormwater infrastructure over past years served the residents well even though there were a couple of localized areas of flooding near Orange Camp, Beresford and Amelia roadways. The areas of localized flooding which occurred back in 2004 did not flood again during Hurricane Ian. The amount of tree debris was far less than during previous storm events which was helpful with power restoration. Duke Energy has indicated 272 people still do not have power due to localized issues that are being addressed.

Mr. Pleus advised DRC, the city's debris contractor, cannot pick up vegetative debris in plastic bags.

Ray Underwood, Public Works Director, said DRC is the city's main debris hauler. The debris to be picked up must be in the right of way and not in plastic bags. The debris that is already in bags may be picked up by GFL, the city's solid waste contactor, based on their contract. Therefore, depending upon the number of bags, all debris may not be picked up during one stop. Moving forward, GFL will leave notes for residents that any yard waste will have to be placed in clear plastic bags. Mr. Underwood said on Wednesday, crews will begin working to remove any leaning trees or hanging debris.

Mr. Pleus commented about the debris contractor requirements. The city receives FEMA reimbursement for debris pick up and the amount of reimbursement is dependent upon the process as defined by FEMA. He noted the cost to taxpayers would be significant if the city were not eligible for FEMA reimbursement.

Vice Chair Barb Girtman, Volusia County Council, thanked the City Commission, DeLand staff, first responders and residents for being responsive and responsible during Hurricane Ian. She also thanked the City Commission for supporting her as a County Council member over the past four years and during the upcoming year as Vice Chair.

Father Comforted, St. Barnabas Episcopal Church DeLand, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Apgar led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Adam Kisthart, Deputy Police Chief; Todd Allen, Fire Chief; Michael Grebosz, Assistant City Manager; Dan Stauffer, Finance Director; Rick Werbiskis, Community Development Director; Jim Ailes, Deputy Public Service/Utilities Director; Ray Underwood, Public Works Director; Mike Holmes, Planning Director; Mark Hayward, Human Resources Director; Greg Whidden, Information Technology Director; Rick Hall, Parks and Recreation Director; Chris Graham, Community Information Manager, members of the public and press.

PRESENTATIONS

1. Super Star Students of the Month

Mayor Apgar stated the Super Star Student program was paused for approximately two years due to the pandemic. The City is delighted to restart this program. Each student will be called forward and presented with a certificate. The students were asked to remain up front for a group picture once all certificates have been presented.

Commissioner Davis read the student names along with a short description of why the student was chosen as a Super Star. Commissioner Cloudman presented the certificates:

Blue Lake Elementary: Spencer Salinetro
Citrus Grove Elementary: Chase Grebosz
DeLand High School: no submission
DeLand Middle School: Hannah Wycuf
DeLand Preparatory Academy: no submission
Freedom Elementary: Aryan Rahman
George Marks Elementary: no submission
Southwestern Middle School: Caiden Adams
St. Barnabas: Ryan Murray
St. Peter's Catholic School: Giselle Santos
Starke Elementary: Jaylen Harris
Stetson Baptist: De'Niya Padgett
TOP Academy: no submission
Woodward Avenue: Quiestanna Long

2. Certificates of Recognition to CATALYST Student Summer Intern Program

Mayor Apgar asked Commissioner Paiva to read the students' names. Commissioner Davis made the presentations. Commissioner Davis asked Ms. Benzo, CEO, to join her and Commissioner Paiva. The City of DeLand recognized:

Dakahrie Robinson
Chunijah Whie
Iamhia-Passion Bingham
Brad Lee, Jr.
Samaria Wyche
Damian Dillard
My'Kerria Jackson
Abby Reid Williams
Carlos Arnaiz

Robin King, Executive Director of Career Source, expressed her gratitude to the City Commission.

Ms. Benzo thanked the parents and the preceptors for the young people who have participated in the CATALYST Student Summer Intern Program. The City of DeLand should be very proud of their youth. She also thanked Ms. Girtman and Ms. King for making this program possible.

3. Proclamation, Fire Prevention Week

Mayor Apgar asked Commissioner Reid to read the Fire Prevention Week Proclamation. He mentioned the National Night Out event will be held on October 4, 2022. Commissioner Paiva presented the Proclamation to Todd Allen, Fire Chief.

Whereas, since 1922, the National Fire Protection Association has sponsored the public observance of Fire Prevention Week making it the longest-running public health observance in the United States of America; and

Whereas, the DeLand Fire Department, in partnership with the National Fire Protection Association, is steadfastly committed to ensuring the safety and security of all those residing in and visiting DeLand, Florida; and

Whereas, Fire Prevention Week is observed each year during the week of October 9th in commemoration of the Great Chicago Fire which began on October 8, 1871 and caused devastating damage. This horrific conflagration killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures, and burned more than 2,000 acres of land; and

Whereas, the 2022 Fire Prevention Week theme, "Fire Won't Wait, Plan Your Escape," effectively serves to remind us that we need to take personal steps to increase our safety from fire; and

Whereas, statistics indicate the vast majority of citizens are at risk of structure fire in their homes. In 2016, more than 2,700 citizens across our country lost their lives due to residential fires and Fire Departments across the United States responded to 352,000 home fires; and

Whereas, during Fire Prevention Week, children, adults, and educators learn to stay safe in case of a fire and Firefighters provide lifesaving public outreach in an effort to drastically decrease casualties caused by fire.

Now, therefore, I, Robert F. Apgar, Mayor of the City of DeLand, do hereby proclaim, October 9-15, 2022 as:

"Fire Prevention Week"

in the City of DeLand and urge all citizens to remember "Fire Won't Wait, Plan Your Escape."

Done and proclaimed this 3rd day of October 2022.

/s/ Robert F. Apgar
Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

4. Employee Years of Service Awards

Recognizing Craig Leonard, Parks & Recreation Department, for 40 years of dedicated service.

The City of DeLand is fortunate to have many dedicated employees who have served the DeLand community for many years. To honor these outstanding employees, the City Commission presents each with an award.

Mayor Apgar read the recognition celebrating Mr. Leonard's 40 years of employment with the City of DeLand.

5. Resolution No. 2022-80, Honoring the Retirement of Pam Godfrey

Commissioner Cloudman read Resolution No. 2022-80. Mayor Apgar presented the resolution to Pamela Godfrey, celebrating 38 years of service with the City of DeLand.

RESOLUTION NO. 2022-80

A RESOLUTION OF APPRECIATION AND RECOGNITION BY THE CITY COMMISSION OF THE CITY OF DELAND, FLORIDA, TO PAMELA GODFREY UPON HER RETIREMENT AFTER 38 YEARS OF SERVICE TO THE CITY OF DELAND; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Pamela Godfrey began her employment with the City of DeLand in 1984 as a part-time Office Assistant in the Parks and Recreation Department where she learned how to copy from stencil to a mimeograph machine, then to a new contraption called a computer; she served well and faithfully as the "dinosaur" of Parks and Recreation until her retirement; and

WHEREAS, Pam also performed many other duties assigned by former Director Tom Sperling such as booking assignments for the Central Florida Basketball Officials Association, and ticket taking duties during the annual American Legion Firecracker Baseball Tournament. In addition, Pam has been the Head Chef or all of the Parks and Recreation Luncheons and also for all of the hurricane staff feedings; and

WHEREAS, Pam worked tirelessly and diligently to accomplish much to enhance parks and recreation for the citizens of DeLand; she was responsible for signing patrons up for a sport, renting pavilions and buildings, and teaching the young Rick Hall the ropes of Parks and Recreation; and

WHEREAS, her performance of her duties and responsibilities, has been characterized by professionalism and dedication to work in partnership with Parks and Recreation staff and the citizens of DeLand to improve the quality of life for all; and

WHEREAS, Pam was for many years instrumental in assisting with the annual budget preparation and her expertise in this area will certainly be missed; and

WHEREAS, Pam had the responsibility to train many employees that were hired for the Parks and Recreation Department; and

WHEREAS, Pam also served on many committees throughout her time including the Benevolent and Retirement Committees

WHEREAS, NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. That the City Commission of the City of DeLand does hereby honor Pamela Godfrey for her 38 years of service to the City and for the faithful, diligent and responsible manner in which she performed her duties.

Section 2. This resolution shall be spread upon the minutes of the City Commission of the City of DeLand as part of the permanent memento of the City's thanks and appreciation to Pamela Godfrey.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 3rd day of October 2022.

/s/ Robert F. Apgar
Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

Commissioner Cloudman made a motion to approve Resolution No. 2022-80. Commissioner Paiva seconded the motion, which carried by a unanimous vote.

Mayor Apgar stated Mr. Elkind, City Attorney, has indicated the ordinance pertaining to amending the Land Development Regulations for Affordable Housing would need to be continued at the request of staff.

Mr. Elkind stated the genesis for this density bonus ordinance is the church, The Sanctuary. The property is owned by the church, and they have also asked that this item be continued until October 17, 2022.

Mayor Apgar stated this is a countywide issue and the City is trying to work with everyone involved to create greater opportunities for affordable housing.

Commissioner Cloudman stated even though this ordinance was not site specific, there were still several questions associated with the document.

Mr. Elkind advised when this item is presented at the next meeting, staff will explain exactly how enforcement will work for this federally funded program. Provisions will also be added to the ordinance for clarification.

Commissioner Paiva made a motion to continue the ordinance listed as number 1 under New Business, which pertains to amending the Land Development Regulations for Affordable Housing, to October 17, 2022. Commissioner Reid seconded the motion, which carried by a unanimous vote.

CONSENT AGENDA

1. Consideration re Change Order No. 2, Sanderson Concrete Construction
2. Consideration re Change Order No. 2, Melching Field Improvements Contract
3. Consideration re Change Order No. 1, Melching Field Stadium Improvements – Wharton Smith Contract
4. Consideration re Collective Bargaining Agreement (CBA) with the IAFF Local 4347 Fire Union for FY 2022-2023 and FY 2023-2024
5. Consideration re Cooperative Purchase Agreement for Emergency Debris Removal Services

Commissioner Paiva made a motion to approve consent agenda items 1-5. Commissioner Reid seconded the motion.

Mr. Elkind stated Commissioner Cloudman has asked if he has a conflict of interest with items 2 and 3 of the consent agenda. Mr. Elkind advised with these items being for convenience to the City and for pricing changes, and there is no potential for private gain or loss given Commissioner Cloudman's indirect employment with Stetson University.

Mayor Apgar called for a vote. The motion to approve the consent agenda carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

Raymond Long, 1884 Palmetto Road, read a letter of commendation to the DeLand Fire Department where he and his wife had children's car seats installed. Little did they know, they would be transporting their grandchildren sooner than anticipated due to Hurricane Ian.

Mr. Long also thanked the City Commission for doubling the size of a retention pond in his neighborhood. Many residents avoided flooding due to the diligent work in keeping the drain pipes clean and functional.

Mr. Long gave some kind sentiments to Mayor Apgar. He shared some of his history with Mayor Apgar who was a member of Mr. Long's gym for 18 years, always faithful and loyal. Growing up, Mayor Apgar was an outstanding athlete and scholar. In 1964, Mayor Apgar received the Tom

McCain's Countywide Football Academic Award and in 1965 was nominated for the Olsen Award as outstanding athlete for Volusia County. Naming of the Apgar Sports Complex is a rightly deserved tribute to Mayor Apgar for his service to the City of DeLand and its citizens. Mr. Long stated Mayor Apgar has always had the skill, but also has the will and is truly a Champion.

Sam Manning, 230 E Howry Avenue, spoke about a skydiving incident that happened today in DeLand. She noted there was a post about the incident on the Police Department Facebook page, prior to the next of kin being notified. She felt this was extremely insensitive and inappropriate.

Commissioner Davis thanked Ms. Manning for bringing this to the City Commission. She offered condolences to Ms. Manning, as well as, to the victim's family and friends. She advised Ms. Manning to continue communications with the Police Department.

Dr. Wendy Anderson, 505 E. Victoria Trails Blvd, thanked the City Commission and staff for all that has been done to deal with Hurricane Ian. She also spoke about climate change and the effects of overdevelopment.

OLD BUSINESS

1. Second Reading of Ordinance No. 2022-23, Changing the Zoning on Approximately 2.09 Acres of Property, Located at 425 South Woodland Boulevard

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-23

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE 425 SOUTH PLANNED DEVELOPOMENT (PD), ON PROPERTY LOCATED AT 425 SOUTH WOODLAND BOULEVARD; APPROVING AN AMENDMENT TO A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 2.09 +/- ACRES OF PROPERTY; MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve Ordinance No. 2022-23 with the changes as recommended by the Planning Board. Commissioner Davis seconded the motion.

Commissioner Cloudman noted discussion at first reading pertaining to parking. He asked if everything had been resolved. Mike Holmes, Planning Director, stated the developer did address the Planning Board comments and also removed and relocated parking spaces.

Mayor Apgar called for a vote. The motion carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

2. Second Reading of Ordinance No. 2022-24, Annexing 466 Acres of Property Located at 475 Blue Lake Avenue (The Oaks Phase III)

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-24

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, ANNEXING APPROXIMATELY 4.66 ACRES OF PROPERTY LOCATED AT 475 SOUTH BLUE LAKE AVENUE; AMENDING CITY BOUNDARIES TO INCLUDE THE ANNEXED PROPERTY; AFFIRMING COMPLIANCE WITH STATUTORY PROCEDURE; AND PROVIDING AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing.

Mike Holmes, Planning Director, stated this series of applications has been complicated and provided an overview of the five applications on the agenda. He said moving forward it will be easier having everything under one agreement.

There being no additional comments, the Public Hearing was closed.

Commissioner Paiva made a motion to approve Ordinance No. 2022-24. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

3. Second Reading of Ordinance No. 2022-25, Annexing 6.73 Acres of Property Located on the East Side of South Blue Lake Avenue, South of Saffron Trail (The Oaks Phase V)

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-25

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, ANNEXING A PARCEL OF LAND TOTALING APPROXIMATELY +/- 6.73 ACRES OF PROPERTY LOCATED ON THE EAST SIDE OF SOUTH BLUE LAKE AVENUE, SOUTH OF SAFFRON TRAIL; AMENDING CITY BOUNDARIES TO INCLUDE THE ANNEXED PROPERTIES; AFFIRMING COMPLIANCE WITH STATUTORY PROCEDURE; AND PROVIDING AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve Ordinance No. 2022-25. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

4. Second Reading of Ordinance No. 2022-26, Changing the Land Use from Volusia County Urban Low Intensity to City of DeLand Low Density Residential for 4.66 Acres of Property Located at 475 South Blue Lake Avenue (The Oaks Phase III)

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-26

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND, BY CHANGING THE LAND USE DESIGNATION OF CERTAIN PROPERTY LOCATED AT 475 SOUTH BLUE LAKE AVENUE FROM VOLUSIA COUNTY'S URBAN LOW INTNSITY TO CITY OF DELAND'S LOW DENSITY RESIDENTIAL FUTURE LAND USE DESIGNATION, PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

This application is the third of five applications on the agenda related to The Oaks Mobile Home Community.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve Ordinance No. 2022-26. Commissioner Reid seconded the motion which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

5. Second Reading of Ordinance No. 2022-27, Changing the Land Use from Volusia County Urban Low Intensity to City of DeLand Urban Low Intensity for 6.73 Acres of Property Located on the East Side of South Blue Lake Avenue South of Saffron Trail (The Oaks Phase V)

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-27

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND, BY CHANGING THE LAND USE DESIGNATION OF CERTAIN PROPERTY LOCATED ON THE EAST SIDE OF SOUTH BLUE LAKE AVENUE, SOUTH OF SAFFRON TRAIL; FROM VOLUSIA COUNTY'S URBAN LOW INTENSITY FUURE LAND USE DESIGNATION TO CITY OF DELAND'S URBAN LOW INTENSITY FUTURE LAND USE DESIGNATION; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

This application is the fourth of five applications on the agenda related to The Oaks Mobile Home Community.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve Ordinance No. 2022-27. Commissioner Davis seconded the motion which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

6. Second Reading of Ordinance No. 2022-28, Changing the Zoning from Volusia County RR (Rural Residential), City of DeLand R-M (Residential-Mobile Home) and City of DeLand The Oaks PD to The Oaks Community Expanded PD 2022 for 51.86 Acres of Property Located Generally at the Southeast Corner of Voorhis Avenue and South Blue Lake Avenue

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO. 2022-28

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING FROM VOLUSIA COUNTY'S RR, RURAL RESIDENTIAL, CITY OF DELAND'S R-M, RESIDENTIAL-MOBILE HOME AND THE OAKS PLANNED DEVELOPMENT TO CITY OF DELAND'S THE OAKS COMMUNITY EXPANDED PD 2022, PLANNED DEVELOPMENT, ON PROEPRTY LOCATED AT THE SOUTHEAST CORNER OF EAST VOORHIS AVENUE AND SOUTH BLUE LAKE AVENUE, APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 51.86 ACRES OF PROEPRTY MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPEHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

This application is the fifth of five applications on the agenda related to The Oaks Mobile Home Community.

Mayor Apgar opened the Public Hearing.

Mike Holmes, Planning Director, noted emergency access has been added to the new phases.

There being no further comments, the Public Hearing was closed.

Commissioner Cloudman mentioned affordable housing options need to include a variety of options. This product brings in more options for affordable housing.

Commissioner Paiva made a motion to approve Ordinance No. 2022-28. Commissioner Cloudman seconded the motion which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

7. Second Reading of Ordinance No. 2022-29, Changing the Zoning of Approximately 28.64 Acres of Property, located at the Southeast Corner of Martin Luther King Boulevard and Cassadaga Road, from County R-4C & R-4 to CTC DeLand PD to Develop a Multi-Family Residential Project

Mr. Elkind read the ordinance by title only.

ORDINANCE NO. 2022-29

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING FROM VOLUSIA COUNTY'S R-4C, URBAN SINGLE-FAMILY RESIDENTIAL-THOROUGHFARE CORRIDOR AND R-4, URBAN SINGLE-FAMILY RESIDENTIAL TO CITY'S PLANNED DEVELOPMENT, CTC DELAND PD, ON PROPERTY LOCATED AT THE SOUTHEAST CORNER OF DR. MARTIN LUTHER KING, JR., BOULEVARD AND CASSADAGA ROAD; APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 28.64 +/- ACRES OF PROPERTY MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing.

Mike Holmes, Planning Director, stated the Commission asked for several changes to the PD Agreement at first reading. He reviewed those items which were set forth from the staff report:

1. This project is located in a commercial and industrial area which requires better protection from noise. Note – Landscape buffer and wall proposed along the west and south boundaries should help to reduce noise in the complex. However, as noted previously, the wall should be designed to be aesthetically appealing rather than just a plain precast concrete wall.
2. Increase the surrounding buffers, especially at the intersection of Cassadaga Road and Martin L. King Blvd. Note – 40' landscape buffer is proposed along the east and north boundaries.
3. Emphasize that no burning of cleared vegetation will be permitted. Note – text added under the phasing section to prohibit open burning.
4. Clearly state that this project will be protective of the environment through methods such as Low Impact Development, drought and Florida Friendly plant materials, tree protection for historic trees and generally more plantings provided. Note – Standards added under the environmental Considerations section that address historic tree removal must follow current city provisions. Low impact development strategies and Florida Friendly landscaping will be used in the development.
5. Clearly state what amenities will be provided. Note – has not specifically stated which amenities will be provided, but lists the ones that may be provided.
6. Consider how this project will be integrated into the rest of the activity center. Note – Pedestrian connections have been added to the south and the east.

Commissioner Paiva referred to previous commentary pertaining to the placement of trees along the back yard, between the homes. Mr. Holmes said it is difficult to show individual trees on the plan, but this is something that could be asked of the developer.

Nika Hosseini, Cobb Cole Attorneys at Law, 231 N. Woodland Blvd, stated there have been multiple renderings of what this development might look like upon completion. She gave a presentation which included information about updates to the plan.

Commissioner Cloudman said part of the original first reading being brought back for another first reading had to do with the compatibility of other projects. He stated as more compact or multi-family housing is developed, it is important to make sure there is accessibility to shopping, groceries and other amenities in the surrounding area. Commissioner Cloudman asked about the compatibility of this development for the tech park. Ms. Hosseini said additional information will be presented during the next agenda item.

Commissioner Paiva asked about the wording "may" versus "shall" regarding the common areas. His concern is "may" does not provide assurance for the city. Mayor Apgar concurred there seemed to be a reluctance associated with specificity of amenities. Ms. Hosseini said there are a couple of amenities in each of the developments, but the remainder of the amenities are to be determined. She stated the development agreement may be revised to indicate there "will" be amenities. Mark Watts, Cobb Cole, concurred this concern can be addressed with a minor amendment to the document. Mr. Watts discussed the amenities that "shall" be included, pointing out proposed trail connections.

Commissioner Paiva asked for more detail on what the wall will look like. He is looking for something sturdy, long-lasting and aesthetically pleasing. Ms. Hosseini said the wall will be decorative, pre-cast with columns and will be properly maintained. That language can also be added into the development agreement.

Darren Elkind, City Attorney, asked to include an exhibit as to the aesthetics of a typical section of the wall. He stated it would be appropriate to approve the wall during second reading.

Commissioner Reid stated previous discussion included ideas for offering some type of rebate or affordability incentive for employees of the Tech Park. He asked if additional consideration had been given to incentivizing Tech Park employees to live at CTC DeLand. Ms. Hosseini stated the developer is amenable to working with businesses/employers who move into Tech Park as they develop. It would be difficult to spell this type of program out in the PD Agreement prior to business commitments for the Tech Park.

There being no further public comment, the Public Hearing was closed.

Commissioner Davis asked about the stormwater area compatibility for the community in the event of a flood. Mr. Holmes stated the City Engineer is very good with stormwater design and he believes the project will be designed so as not to impact neighbors.

Mr. Pleus has asked Ray Bahrami, City Engineer, to look at increasing the City's stormwater standards. There was a discussion pertaining to heavier rains and being prepared for future weather events that take place, prompting a closer look at amending stormwater standards.

Mayor Apgar noted the green areas have also been increased, which will help with stormwater management.

Commissioner Paiva asked if the stormwater pond would be landscaped. Ms. Hosseini said engineering has not addressed the stormwater ponds but LID standards will be implemented.

Commissioner Paiva made a motion to approve Ordinance No. 2022-29 on second reading with inclusion of amenities to include "shall" for the trails as shown on the plan, the clubhouse, swimming pool, dog park and butterfly garden. In addition, an exhibit showing a typical section of the wall is to be included. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

Mayor Apgar recessed the meeting at 8:43 p.m. The meeting reconvened at 8:48 p.m.

8. Second Reading of Ordinance No. 2022-30, Changing the Zoning from Volusia County R-4C, R-4, A-1C, A-1, I-1C & I-1 to DeLand Tech Park PD, Located in the Northwest Quadrant of SR 472 and Interstate 4, for approximately 143.2 Acres of Property

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO. 2022-30

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA CHANGING THE ZONING FROM VOLUSIA COUNTY'S, R-4, R-4C (URBAN SINGLE AMILY RESIDENTIAL); VOLUSIA COUNTY'S A-1C, A-1 (PRIME AGRICULTURE); AND VOLUSIA COUNTY'S I-1C, I-1 (LIGHT INDUSTRIAL); TO CITY'S PLANNED DEVELOPMENT, DELAND TECH PARK PD, ON PROPERTY LOCATED AT THE NORTHWEST QUADRANT OF STATE ROAD 472 AND INTERSTATE 4; APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 143.2 +/- ACRES OF PROPERTY MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing.

Mayor Apgar disclosed his former wife is related to one of the property owners, but he has no financial interest in the outcome of this agenda item.

Mike Holmes, Planning Director, stated the developer has put tree replacement, based on inches as opposed to exact dollar amount, in the PD Agreement. Staff has not received a definitive answer from Volusia County Traffic Engineering as to what they would allow for the access point.

Commissioner Cloudman questioned the need to make procedural changes since this scenario has happened in the past where there was not clear direction from the county, and therefore the city approved something and then the county made changes. Mr. Holmes said the county prefers to review what the city is going to be approving, rather than having to review proposals. Mr. Holmes said the developer did show the county what the City Commission had approved but they still required the full access. Staff hopes the developer will be successful with the county as it is possible both this PD and the previously approved PD would have to be changed.

Nika Hosseini, Cobb Cole Attorneys at Law, 231 N. Woodland Blvd, advised language has been included in the PD Agreement contemplating whole access points and road networks being subject to county review and engineering. Legal staff has been working with the county to obtain comments.

Ms. Hosseini reviewed the Southwest Activity Center (SWAC) Land Use Guidelines included in the PD Agreement. Her firm has been working with the City's Forrester in order to address comments from the City's perspective, updates have been made accordingly. Planned uses are defined in the PD Agreement, indicating specified locations for various types of businesses. Ms. Hosseini reviewed the LID standards indicating the commitment of the developer to follow same. In addition, SWAC maximum trip generation data was presented.

Mayor Apgar referred to the orientation of buildings along I-4, and asked what constitutes the requirement to incorporate architectural standards.

Mr. Elkind, City Attorney, said the idea was the narrow end of the buildings would face I-4 and would not have loading docks or other aspects of the "working end" of the buildings. His understanding was administrative offices with architectural embellishments would be positioned along the east side of the buildings that face I-4. Mr. Elkind asked Mayor Apgar to clarify what he is looking for in terms of the part of the buildings that face I-4. Ms. Hosseini concurred. Mr. Elkind will make sure language is clearly written into the agreement, and reflective of City Commission desires.

Mayor Apgar does not want retail and service land uses to be the largest traffic generator, because as such, it would take away from the ability to create higher paying employment opportunities. He asked if there could be a square footage maximum on retail sales and service uses.

Mark Watts, Attorney, stated the trip matrix does establish the maximum number of trips, which make up components that are part of the TIA being done in conjunction with the project. The uses are restricted to corresponding parcels. He said the maximum square footages included in the TIA and every other component in the review process, relate to use classifications for the property. Areas have been identified for Warehouse and Distribution Centers, Light Industrial and Manufacturing, Retail Commercial, Professional Offices, and Hotels, Restaurants and other support uses. The areas set forth for each use are not interchangeable.

Mayor Apgar asked since a concept plan is attached to the PD, if limitations should be specified in the PD Agreement. Mr. Elkind advised the concept plan forms part of the Agreement and to the extent the concept plan has specific limitations, it forms a part of the agreement unless the written language in the agreement specifically says to ignore limitations. Mr. Elkind said it would be easier for the applicant, rather than amending the concept plan, to make changes in the PD Agreement. Ms. Hosseini said language will be added into the agreement.

Mayor Apgar said the signage language seems to indicate City of DeLand as a partner. He would prefer the language to the effect that "there will be a sign along I-4 that is approved specifically by the City of DeLand that identifies the area as being part of DeLand". Mayor Apgar's concern is for the signage to be clear about the Tech Park being in the City of DeLand. He said this area is a gateway to the City of DeLand.

On the question of partnership, Mr. Watts said the intent of the language is for the City to have ultimate approval of what the signage will look like. The City will be specified as not an equity partner, but a partner in that the Commission approves the signage.

Commissioner Cloudman expressed possible concern with traffic on 472 and the number of driveways along the section from I-4 to MLK, which is already heavily traveled. Ms. Hosseini said Volusia County is looking at this, and the applicant is working on a TIA that will show the network and the impact on same network.

Commissioner Reid expressed hesitancy with how traffic is going to impact MLK Jr Beltway. He asked if anyone is aware of improvements being discussed by the State or Volusia County. Ms. Hosseini said that as part of the TIA process, Volusia County will look at impacts to roadways and then will work on a proportionate fair share agreement. Commissioner Reid is more interested in a timeframe for potential issues to be addressed.

Mr. Watts, Attorney, provided some background on the coordination taking place to address traffic concerns. There may be some changes to the access along MLK based on volumes and safety. There is a traffic signal at Cassadaga Road to make the intersection safer. Coordination of planning

also includes AdventHealth and other property owners, to better address potential future traffic issues.

There being no further comment, the Public Hearing was closed.

Darren Elkind, City Attorney, asked the applicant, in Section 6 – Architectural Standards, there is a reference to primary industrial buildings. He asked if these standards could be applied to all buildings oriented toward I-4. Ms. Hosseini said the applicant is okay with that for principal buildings, but not for accessory buildings. Mr. Watts suggested the Architectural Standards only apply to primary buildings oriented toward I-4. Mr. Elkind stated that language can be incorporated into the agreement that is satisfactory with the City Commission.

Mr. Elkind inquired if the applicant would be agreeable to removing truck courts from the I-4 side of the buildings and the applicant agreed.

Mr. Elkind said regarding the sign, the word "partnership" should be removed, and the sign would be approved by the City Commission.

Commissioner Cloudman reminded Mr. Elkind of his suggestion for the residential area facing side to include architectural standards since the residents will be looking at the buildings over a small wall. Mr. Elkind said that is something that will have to be addressed. Mr. Holmes added square footage of commercial/industrial will be added to the PD Agreement.

Commissioner Paiva asked for further clarification on accessory structures. Mr. Elkind said additional language will be included to clarify accessory buildings, which means it would have to be an accessory building to an industrial building. The idea is for no loading docks to face I-4, for aesthetic purposes.

Commissioner Paiva made a motion to approve Ordinance No. 2022-30, to include: removal of truck courts from what is allowed on the east side of the buildings and buffer; clarify in Section E, that facades of principal industrial buildings will be required to meet the architectural standards; add a maximum square footage of commercial/retail space in the body of the PD Agreement; and provide in the sign provision the City is not a partner, but is to approve the signage. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

NEW BUSINESS

1. First Reading of Ordinance Amending Land Development Regulations to Address Density Bonus for Affordable Housing

At the beginning of the meeting, following presentations, the City Commission voted to continue this agenda item to a future date (October 17, 2022)

2. Resolution Approving Final Plat, Beresford Woods Phase 1 Subdivision

Commissioner Paiva made a motion to approve the Resolution. Commissioner Reid seconded the motion, which carried by a unanimous vote.

CITY MANAGER REPORT

Mr. Pleus had nothing additional to report.

CITY ATTORNEY REPORT

Mr. Elkind had nothing additional to report.

CITY CLERK REPORT

City Clerk Hennessy stated Florida League of Cities Policy Committee meetings will be virtual this week due to the hurricane.

CITY COMMISSION

Commissioner Davis appreciated the thoughtfulness staff put into GlassHouse in the 2050 plan and she thanked everyone for continuing to work toward collecting all necessary input pertaining to this project. She appreciates the collaborative meetings that have been held.

Commissioner Davis expressed appreciation for the communications during Hurricane Ian and the importance of continuing dialogue in order to ensure the city is prepared for future weather events. She participated in the distribution team with her church, providing supplies to residents in areas impacted by Hurricane Ian.

Commissioner Reid reiterated thankfulness to the staff for continually planning, thinking ahead and reviewing plans after events such a Hurricane Ian.

Commissioner Cloudman echoed the appreciation expressed to staff and leadership during Hurricane Ian.

Commissioner Paiva also echoed the appreciation expressed. It is always nice to see the community come together to help each other.

Mayor Apgar thanked the City Commission for time spent on the first reading of GlassHouse. He stated Monday night, October 10, 2022, a CRA workshop will be held at 6:00 p.m. followed by a 7:00 p.m. Special Meeting of the City Commission. Both meetings are conceptual types of approval. There will be no official action on the agenda items.

Mayor Apgar provided additional comments pertaining to his tenure as Mayor and Commissioner in the City of DeLand. He has not served in order to leave a legacy but believes the future will determine what, if any legacy he has, which will also belong to the City Commission and staff since 2001.

ADJOURNMENT

There being no further business, the meeting was adjourned at 10:20 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, OCTOBER 17, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or regarding an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak about any item on which the City Commission is to take action.

INVOCATION

Mayor Apgar mentioned Joe Romano, the long-time owner of Mano's Restaurant, has passed away. Former County Manager Larry Arrington also passed away. Former Mayor of Orange City, Ted Irwin, recently passed away. Jill Dickinson's husband has passed away and Hector DeJesus, member of the breakfast club, active member of the community and former Chief Operating Officer with Advent Health has also passed away. Mayor Apgar asked everyone to keep these families in their thoughts and prayers.

Michael Pleus, City Manager, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Apgar led the Pledge of Allegiance to the Flag.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Michael Grebosz, Assistant City Manager; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Mike Holmes, Planning Director; carol Kuhn, Assistant Planning Director; Rick Werbiskis, Community Development Director; Jim Ailes, Deputy Public Service/Utilities

Director; Ray Underwood, Public Works Director; Ava Hanner, Community Information Specialist; Ray Bahrami, City Engineer, members of the public and press.

Mayor Apgar explained that Old Business Item 1. CONTINUATION of First Reading of Ordinance Amending Land Development Regulations to Address Density Bonus for Affordable Housing is not site specific. It is an ordinance to authorize density bonuses in the City of DeLand, which would ultimately be decided by the City Commission through the process. The applicant requested continuation of this item to November 21, 2022. Staff has recommended the City Commission continue this item indefinitely. Regarding the property on Aquarius, the applicant's attorney has asked for their item to be continued indefinitely. This will allow the developer time to work with the community to try and find resolution for issues and concerns.

Mayor Apgar was asked about petitions and members of the public who are present. He said these items are quasi-judicial in nature and must be heard under certain rules. Anything said tonight about Aquarius, which is not an item on the agenda, would not be part of the public hearing process and the applicant is not present to hear comments. With an election on November 8, 2022, at least one of the Commissioners will no longer serve due to term limit ending; therefore, it would be inappropriate for comments to be accepted on any quasi-judicial matter that is not before the City Commission.

Commissioner Cloudman made a motion to continue the Old Business Item #1 indefinitely. Commissioner Davis seconded the motion, which carried by a unanimous vote.

PRESENTATIONS

1. Proclamation, The Hue Collective Day

Commissioner Reid read the Proclamation and Commissioner Davis made the presentation.

PROCLAMATION

Whereas, The Hue Collective is a non-profit that was born out of the co-founders love for post-production. During A'sia Horne's career as an assistant editor and editor, she noticed the need for more diversity and inclusion in post-production. After teaching in the public school system in South Florida for a year, she decided to create a non-profit to inspire youth of color to tap into this industry; and

Whereas, in 2019, co-founders A'sia Horne and Keisha Gordon launched the first The Hue Collective bootcamp to teach middle and high schoolers about editing in DeLand, Florida. The program was hosted at the DeLand High School's campus and students learned to use the professional editing software Adobe Premier. Many of the students who participated in the bootcamp were members of the DeLand Boys and Girls Club; and

Whereas, due to COVID, in 2020, The Hue Collective provided online panels for students to learn about editing positions and successfully launched a six-week virtual camp in partnership with the Media Rhythm Institute in Baltimore allowing the opportunities for students in DeLand and across the nation to learn how to edit in Adobe Premiere; and

Whereas, The Hue Collective Camps teach students to organize their footage from production sets, familiarize them with the professional software called Adobe Premiere and then give them a space to get creative. The camps teach youth of color ages 13-17 and 60% of the students are girls.

Now, therefore, I, Robert F. Apgar, Mayor of the City of DeLand, do hereby proclaim, October 17, 2022, as:

"The Hue Collective Day"

in the City of DeLand and urge all citizens of DeLand to recognize the innovation and creativity in A'sia Horne and Keisha Gordon for creating and educating through The Hue Collective the youth of today.

Done and proclaimed this 17th day of October 2022.

/s/ Robert F. Apgar
Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

2. Proclamation, AVM Awareness Month – Presented outside of Commission Chambers

3. Proclamation, Red Ribbon Week

Commissioner Paiva read the Proclamation and Commissioner Cloudman made the presentation.

PROCLAMATION

Whereas, communities across America have been plagued by the numerous problems associated with illicit drug use and those that traffic in them; and

Whereas, there is hope in winning the war on drugs, and that hope lies in education and drug demand reduction, coupled with the hard work and determination of organizations such as the Young Marines of the Marine Corps League to foster healthy, drug-free lifestyle; and; and

Whereas, governments and community leaders know that citizen support is one of the most effective tools in the effort to reduce the use of illicit drugs in our communities; and

Whereas, the red ribbon has been chosen as a symbol commemorating the work of Enrique "Kiki" Camarena, a Drug Enforcement Administration agent who was murdered in the line of duty, and represents the belief that one person can make a difference; and

Whereas, the Red Ribbon Campaign was established by Congress in 1988 to encourage a drug-free lifestyle and involvement in drug prevention and reduction efforts; and

Whereas, October 23rd – 31st has been designated National Red Ribbon Week, which encourages Americans to wear a red ribbon to show their support for a drug-free environment.

Now, therefore, I, Robert F. Apgar, Mayor of the City of DeLand, do hereby proclaim, October 23 - 31, 2022 as:

"National Red Ribbon Week"

in the City of DeLand and urge all citizens of DeLand to wear a red ribbon to symbolize our commitment to establishing healthy and safe communities for our citizens, especially our children, and to participate in events throughout the week that support positive lifestyles.

Done and proclaimed this 17th day of October 2022.

/s/ Robert F. Apgar
Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

4. Fire Department Promotion Ceremony: Kayla Bruce; Justin Bass; Chief Matt Dyer

Todd Allen, Fire Chief, recognized promotions being made in the Fire Department. Each recipient of a promotion was pinned with a new badge.

Matt Dyer, Division Chief, has been with the City of DeLand since 2002. Division Chief Dyer holds a bachelor's degree in Public Safety Administration, a paramedic certification and has many state issued fire marshall certifications. Division Chief Dyer will be overseeing the emergency medical services division and emergency response. He will also oversee the accreditation process.

Lieutenant Justin Bass has served the City of DeLand since 2014. He holds a Bachelor of Arts degree from Stetson University and is pursuing a master's degree at the University of Florida. Lt. Bass holds several state issued fire marshall certifications.

Engineer Kayla Bruce, hired in 2016, has been serving an active role as engineer since last November. Engineer Bruce holds an associates degree in emergency medical services and is a certified paramedic. Engineer Bruce also holds state issued fire marshall certifications.

Mayor Apgar extended congratulations to the fire department employees.

5. Employee Years of Service Awards – Presented outside of Commission Chambers

CONSENT AGENDA

1. Consideration re Award of Bid, Miscellaneous Right of Way ADA Improvements
2. Consideration re Authorization of Professional Services Agreement Task Order No. 6 – 2024 Water Main Improvements Design
3. Consideration re Second Amendment to Property Access Agreement for Brownfield Program Groundwater Testing
4. Resolution Approving "Apgar Sports Complex"
5. Consideration re MOU between DeLand Police Department and DeLand Police Athletic League and Amendment to Funding and Operations Agreement

Mayor Apgar said staff has requested removal of consent item #4 for comment.

Commissioner Paiva made a motion to approve consent items 1 - 3 and 5. Commissioner Cloudman seconded the motion, which carried by a unanimous vote.

Mr. Pleus, City Manager, noted one of the "Whereas" clauses states Mayor Apgar is the longest serving elected official in the history of Volusia County. Mayor Apgar mentioned recently that he unsure about being the longest serving elected official. Staff would like to research this information to ensure accuracy.

Commissioner Paiva made a motion to approve consent item 4 with recommended change. Commissioner Davis seconded the motion, which carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

J C Figueredo, 1359 Jackson Woods Road, said he addressed the City Commission four years ago about flooding in his neighborhood, and nothing has been done. The flooding issue is worse than it has ever been in the past. He asked for immediate assistance, mentioning the driveway needs to be repaired for access to the house. He stated his property is in Volusia County, but he feels the problem has been caused by development projects approved by the City of DeLand.

Jorge Figueredo, Sr., 723 Ravenshill Way, spoke about flooding issues in the city. He urged the commission to consider extending a helping hand to those folks impacted by flood waters following Hurricane Ian.

Mayor Apgar reported Mr. Pleus has spoken with Mr. J C Figueredo and his dad, Jorge. Mr. Pleus said a study is being conducted to find out the cause of flooding in the subject area. The city has volunteered to participate in finding a solution, but there has to be a way to get the water pumped away from the property. Ultimately, a plan must be devised for rerouting the water. The whole area is flooded, including a city park. Staff will remain engaged in working to figure out how to address the flooding issue. J C Figueredo advised the county has stopped responding to him. Mr. Pleus offered to reach out to the county manager while the city is working to find a solution that will work.

Commissioner Davis asked what the city has done thus far to help with the flooding. Mr. Pleus responded. Commissioner Davis asked if a map could be used to identify the areas where there are people currently living with flood waters. Mr. Pleus said the flood plain maps are amended as necessary and Mr. Bahrami, City Engineer, would be the best person to address this inquiry.

Commissioner Cloudman asked if there are accessible resources rather than the city trying to find solutions inhouse He said if FEMA has been involved and designated their property as inaccessible, perhaps some FEMA funding could be used to solve the problems. Mr. Pleus has mentioned FEMA mitigation grants to Volusia County. The county will have to be the applicant and there is money available. Mr. Pleus said city staff could assist with clearing Mr. Figueredo's driveway. Mr. Figueredo said this problem did not exist until after construction of Victoria Park. He believes the engineers who worked on that program should bear responsibility to find resolution.

Mayor Apgar said much of the dialogue has indicated the problem is because of the city but a study that was conducted by Devo differs in facts. Mr. Figueredo stated he has tried to work with Devo, the expert, but communication has stopped. City staff will work with Mr. Figueredo and Volusia County to seek resolution.

OLD BUSINESS

1. CONTINUATION of First Reading of Ordinance Amending Land Development Regulations to Address Density Bonus for Affordable Housing

This item was continued indefinitely in a motion at the beginning of the meeting.

NEW BUSINESS

1. First Reading of Ordinance Annexing 4.87 Acres of Property located at the Northeast Corner of East Wisconsin Avenue and Miller Road

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, ANNEXING A PARCEL OF LAND TOTALING APPROXIMATELY +/- 4.8 ACRES OF PROPERTY LOCATED ON THE NORTH SIDE OF EAST WISCONSCIN AVENUE AND WEST OF NORTH BLUE LAKE AVENUE; AMENDING CITY BOUNDARIES TO INCLUDE THE ANNEXED PROPERTIES; AFFIRMING COMPLIANCE WITH STATUTORY PROCEDURE; AND PROVIDING AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve the ordinance on first reading. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

2. First Reading of Ordinance Changing the Land Use of 4.87 Acres of Property from Volusia County's Urban Low Intensity to City of DeLand Urban Low Intensity, for Property located at the Northeast Corner of East Wisconsin Avenue and Miller Road

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND, BY CHANGING THE LAND USE DESIGNATION OF CERTAIN PROPERTY LOCATED ON THE NORTH SIDE OF EAST WISCONSIN AVENUE, WEST OF NORTH BLUE LAKE AVENUE AND EAST OF NORTH HILL AVENUE; FROM VOLUSIA COUNTY'S URBAN LOW INTENSITY LAND USE DESIGNATION TO CITY OF DELAND'S URBAN LOW INTENSITY FUTURE LAND USE DESIGNATION; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing. There being no comment, the Public Hearing was closed.

Commissioner Paiva made a motion to approve the ordinance on first reading. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES

Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

3. First Reading of Ordinance Changing the Zoning for 4.87 Acres of Property located at the Northeast Corner of East Wisconsin Avenue and Miller Road

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING FROM VOLUSIA COUNTY'S R-3A, URBAN SINGLE-FAMILY TO CITY'S PLANNED DEVELOPMENT, THE CANOPY AT BLUE LAKE PD, ON PROPERTY LOCATED ON THE NORTH SIDE OF EAST WISCONSIN AVENUE AND WEST NORTH BLUE LAKE AVENUE; APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 4.8 +/- ACRES OF PROPERTY MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Apgar opened the Public Hearing.

The applicant, Slava Yedlin, is requesting to amend the zoning designation for the subject property from Volusia County – R-3A to City of DeLand – Planned Development (The Canopy at Blue Lake PD). The subject property is approximately 4.87 acres and is located along the north side of East Wisconsin Avenue, west of North Blue Lake Avenue.

Tyler Malmborg, Newkirk Engineering, commented at the Planning Board meeting a neighbor to the east requested a fence. The language isn't included in the PD, but he has met with the property owners to identify where the fence may be installed and run the full length of the property for security. Mr. Malmborg has a concept plan along with an amended PD he will send to Mr. Elkind.

There being no additional comments, the Public Hearing was closed.

Commissioner Cloudman thinks the lot size fits with existing neighbors. He is also interested in asking developers to follow guidelines for low impact design for stormwater and Florida Friendly landscaping. Commissioner Cloudman would like to make sure the site is engineered and constructed to handle run-off appropriately. Additionally, more use of LID would be good for filtering.

Commissioner Reid noted verbiage is typically inclusive of required Florida native vegetation. The retention pond does mention natural vegetation around the perimeter areas. He would like to see more thickness in the buffer, particularly in the northern area. Mr. Malmborg responded everything pertaining to buffering follows the city's code. If the buffer is increased to the north, no value of the trees will be gained. Commissioner Reid said he is more interested in density than the size of the buffer, asking that under-foliage be retained as much as possible. Typically, the planting requirements for buffers are maximized on the available space so if the buffer were increased, it would take away from available stormwater in the area. The stormwater system is a dry pond as is the stormwater pond adjacent to the site. The key tenants of LID will focus more on areas where there is an open basin using wet ponds are being utilized because they do not infiltrate all the additional run-off into the ground. The project is being appropriately engineered.

Commissioner Reid reiterated his desire for additional density in the buffer and Mr. Malmborg said he has no problem adding density.

Commissioner Davis is pleased with this project. She did mention the private lift station being located at the cul-de-sac. Mr. Malmborg believes gravity sewer may be used for this development, which would eliminate the need for a lift station.

Commissioner Cloudman revisited the discussion about the stormwater system and buffering, suggesting language may need to be incorporated into the agreement. Mr. Holmes stated staff will work with the applicant to rephrase the agreement to indicate low impact drainage and higher density buffer.

Commissioner Paiva made a motion to approve the ordinance on first reading, with additional language pertaining to low impact drainage and higher density buffer. Commissioner Reid seconded the motion, which carried by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner Cloudman	YES
Commissioner Reid	YES
Mayor Apgar	YES

4. Consideration re Approval of Disclaimer of Interest in Right-of-Way with Exhibit Relating to Property Located Proximate to the Intersection of East International Speedway Boulevard and North Alabama Avenue

Commissioner Paiva made a motion to approve disclaimer of interest in right-of-way with exhibit relating to property located proximate to the intersection of East International Speedway Blvd and North Alabama Ave. Commissioner Cloudman seconded the motion, which carried by a unanimous vote.

5. Resolution Approving Demolition of a Building located at 236 South Alabama Avenue

Commissioner Cloudman recalled the City Commission voting on an incentive package. Mr. Holmes said the incentive package is part of overall land use changes and zoning for the entire project. He said once permission is obtained to demolish, the project will move forward. This resolution only authorizes demolition of the building.

Mayor Apgar stated Sydney Johnston has opined the building does not have any historical significance. Mr. Holmes stated the Historic Preservation Board recommended having the historian who does demolition, look at the building to see if there was anything to be preserved. There was nothing.

Commissioner Paiva made a motion to approve the Resolution. Commissioner Davis seconded the motion, which carried by a unanimous vote.

6. Resolution Approving the Removal of One Historic Tree located in the Right-of-Way at 1521 Wyngate Drive

Mr. Jon Cheney and Ms. Dianne Cheney have requested permission to remove one 30" DBH historic tree located on the right-of-way (ROW) adjacent to their property. The tree is lifting their driveway and causing issues with insurance coverage. The tree is on the city ROW, but the Cheney family has offered to remove the tree at their expense and provide replacement by planting two Shumard Oak trees. The Land Development Regulations require that before removal of any historic trees, such removal must be approved by the City Commission. Section 33-57.05 (d) states there must be a finding that the tree is a hazard (due to health of natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree.

The City Forester has determined that the tree proposed for removal is a 30" DBH historic Live Oak in Good condition.

At their September 20, 2022, meeting, the Tree Advisory Committee recommended the application for removal be approved because the tree is causing damage to the Cheney's property. Because the Cheney family has offered to pay for the removal, they further recommended their offer of providing replacement via planting of two 45-gallon Shumard Oaks be approved.

Commissioner Paiva made a motion to approve removal of one historical tree. Commissioner Reid seconded the motion, which carried by a unanimous vote.

John Cheney, 1521 Wyngate Drive, clarified as part of their replacement plan, two Shumard Oaks will be planted.

7. Resolution Approving the Removal of One Historic Tree located at the Proposed DeLand Greenway Trail North Extension Project located at 610 North Garfield Avenue

The City of DeLand has requested permission to remove one 40" DBH historic tree within the impact area of the proposed DeLand Greenway Trail North Extension project located at 610 Garfield Avenue. The Land Development Regulations require before the removal of any historic trees, such removal must be approved by the City Commission. Section 33.57-05(d) states there must be a finding that the tree is a hazard (due to health or natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree.

The City Forester has determined the tree proposed for removal is a 40" DBH historic Live Oak in Good condition, located approximately 250' north of the intersection of East University Avenue and North Garfield Avenue.

At their August 9, 2022, meeting, the Tree Advisory Committee recommended the application be continued so the City could contact the adjacent property owner to try and obtain additional ROW to be able to save the tree. Following that meeting, Ray Bahrami, City Engineer, contacted the adjacent property owner who was unwilling to provide additional right-of-way.

At their September 20, 2022, meeting the Tree Advisory Committee was split on their decision whether to recommend approval of the removal of the 40" DBH Live Oak tree, with two members voting for the removal and two members voting against the approval.

Commissioner Cloudman stated elsewhere on the trail, there are instances where the trail splits and is constructed around a historical tree. He asked if this tree presents an opportunity to go around the tree. Ray Bahrami, City Engineer, stated there is not enough space.

Commissioner Paiva made a motion to approve removal of one historical tree. Commissioner Davis seconded the motion, which carried by a unanimous vote.

CITY COMMISSION REPORTS

1. Report re: Elected Officials Round Table

No report given.

2. Report re River-to-Sea TPO

No report given.

3. Report re River of Lakes Heritage Corridor

No report given.

CITY MANAGER REPORT

Mr. Pleus provided an update pertaining to debris removal and stormwater.

Mr. Pleus announced as a reminder, the debris hauler cannot pick up debris that has been placed in plastic bags. GFL is contracted to pick up 1 cubic yard of waste per week. Staff has confirmed GFL is picking up the one yard of yard waste during regular rounds. This means it may take several weeks for all bagged debris to be picked up.

CITY ATTORNEY REPORT

Nothing to report.

CITY CLERK REPORT

Nothing to report.

CITY COMMISSION

Commissioner Davis thanked Commissioners for allowing The Hue Collective to be a part of the meeting this evening. They will be at Southwestern with her tomorrow to teach video editing.

Commissioner Reid had nothing to report.

Commissioner Cloudman has been speaking with J C Figueredo and truly hopes the city can help rectify the problem caused by flooding. Mr. Pleus has spoken with the residents and with Ray Bahrami, City Engineer. The water remains the biggest issue.

Commissioner Paiva had nothing to report.

Mayor Apgar thanked the Police and Fire Departments for a successful National Night Out event.

Mayor Apgar thanked the City Commission for holding the special meeting for Framework.

Mayor Apgar announced this Friday the Neighborhood Center will have their Robed and Rock event.

DeLand High School homecoming parade and football game will be held on Friday, October 21, 2022.

Springhill CRA meets on October 24, 2022.

Good Samaritan Clinic fundraiser on October 27, 2022.

The Haunted Trail event will be held on October 28, 2022, at the Earl Brown Park.

Monsters on Main Street event will be held on October 31, 2022.

Mayor Apgar continued his outgoing sentiments. He said many of the same goals he had in 1983 are still the same goals of today's City Commission. Mayor Apgar outlined a wish list he has created for the City Commission into the future. Items on his wish list:

- Community Center, Recreational Related
- Continue to promote Economic Development
- Continue to bring in good high-paying jobs
- Continue to address stormwater system issues
- Continue to promote resiliency and sustainability
- Do not lose sight of the value of roundabouts
- Sister City program
- Eliminate smoking in city parks
- Revisit the number of unrelated people that can live in a house
- Continue to work with Volusia County and other jurisdictions on affordable housing
- Do not put density bonuses in writing unless the commission is serious about allowing the use of density bonuses, even though each project must be judged on its own merits
- Volunteer recognition events and finding ways to get more people involved
- Would love to see the School of Government restarted and would encourage a Citizen's Academy instead of, or in addition to, a Youth Council
- Continuing to engage the community in events, even if incentives are used
- Community partnerships
- Small business membership in a single West Volusia Chamber because many small business owners can not afford to be a member of more than one Chamber

Mayor Apgar shared his views on growth and small Cities. He said the job of City Commission is to continue to ensure growth is done responsibly. He made a point that as insiders, the City Commission knows DeLand has grown. However, people from other places who are looking at the City of DeLand still seem to perceive it as a small town.

Mayor Apgar talked about process and the importance of the process, particularly in the Planned Development process. He noted there have been some challenging decisions regarding lot size and how smaller lots play into creating a sense of community. He showed some photographs from homes he has lived in over the years and stated smaller lot sizes are not a new concept. Varied types of housing are so important now and will be into the future.

ADJOURNMENT

There being no further business, the meeting was adjourned at 9:14 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, NOVEMBER 7, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or regarding an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak about any item on which the City Commission is to take action.

INVOCATION

Mayor Apgar asked that everyone remember the family of Vince Gould in their thoughts and prayers.

Pastor Wendell Raulerson, Greater Bethlehem Baptist Church, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Apgar led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Michael Grebosz, Assistant City Manager; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Dan Stauffer, Finance Director; Mike Holmes, Planning Director; Jim Ailes, Deputy Public Service/Utilities Director; Ray Underwood, Public Works Director; Chad Gamble, Public Services Director; Rick Hall, Parks & Recreation Director; Nick Conte, Economic Development Director; Greg Whidden, Information Technology Director; Ray Bahrami, City Engineer, members of the public and press.

PRESENTATIONS

1. Super Star Students of the Month

Mayor Apgar stated each student present will be called forward and given a certificate. The students were asked to remain up front for a group picture once all certificates had been presented.

Commissioner Cloudman read the student names along with a description of why the student was chosen as a Super Star. Commissioner Davis presented the certificates:

Blue Lake Elementary: Jerome Butler
Citrus Grove Elementary: Reese Harris
DeLand High School: no submission
DeLand Middle School: Grant Giddens
DeLand Preparatory Academy: Sophia Peppers-Bates
Freedom Elementary: Hendrick Carreno
George Marks Elementary: Rishard Inman
Southwestern Middle School: Mayah Lee
St. Barnabas: no submission
St. Peter's Catholic School: Bryce Martin
Starke Elementary: no submission
Stetson Baptist: Zachary Floyd
TOP Academy: Deahn Pressley
Woodward Avenue: Glenna Buller

2. Proclamation, James H. "Jimmy" Ford Day

Commissioner Paiva read the Proclamation and Mayor Apgar made the presentation.

PROCLAMATION

Whereas, James H. Ford (Jimmy), at the age of 30 after only 11 years with (then) Florida National Bank, was promoted to Bank President, the youngest in the State of Florida; and

Whereas, after retiring from Florida National Bank in 1986, Jimmy was called back to banking by the directors of Vista Bank to assist in increasing profits and finding a viable buyer for the bank; and

Whereas, upon orchestrating the sale of Vista Bank to SouthTrust Bank, Jimmy was promoted to CEO and grew that bank to the fourth largest in a multi-state holding company; and

Whereas, Jimmy's passion for helping people and providing excellent customer service became the foundation of the Bank's retail sales strategy rollout to all 42 market banks in eight states and was deemed the Cornerstone Retail Sales Process; and

Whereas, after retiring from SouthTrust in June 2004, Jimmy was approached by the founders of Mainstreet Community Bank to discuss a Board of Directors position where he has served for 18 years; and

Whereas, Jimmy's leadership at Mainstreet Community Bank was an integral part in the recruitment of bank principals and the continued sustainability of the bank, today as it approaches its anniversary in DeLand with additional branches in Lake, Marion, and Seminole Counties; and

Whereas, in addition to the current Mainstreet Community Bank CEO, Ben Flowers, Jimmy Ford has also mentored 16 other bankers who have gone on to become CEO o f their own banks for which Jimmy is justly proud; and

Whereas, after a highly successful 64 years in banking, Jimmy and his wife of 61 years, Sharon, are looking forward to spending more time with their two sons and grandson, traveling, and visiting friends and family in DeLand and North Carolina.

Now, therefore, I, Robert F. Apgar, Mayor of the City of DeLand, do hereby proclaim, November 7, 2022, as:

"James H. "Jimmy" Ford Day"

in the City of DeLand and urge all citizens of DeLand to recognize James H. "Jimmy" Ford for his illustrious and legendary DeLand banking career and for his service to our community.

Done and proclaimed this 7th day of November 2022.

/s/ Robert F. Apgar
Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

3. Police Department Introduction of New Officers: Angel Mercado, Jermaine McQueen; Javon Kelly; Anthony Denatale, Jr.

Jason Umberger, Chief of Police, introduced the new officers. He provided a brief bio for each of the new members of the Police force, welcoming them to the City of DeLand. A pinning ceremony was held.

Jermaine McQueen was born and raised in Pennsylvania. Jermaine holds a Master's Degree in Criminal Justice from St. Joseph's University with a concentration in federal law enforcement. Jermain is excited to continue his law enforcement career with the City of DeLand.

Angel Mercado was born in New York and is of Peurto Rican descent. His passion for service started early. He is extremely excited to apply past experiences to better serve the citizens of the City of DeLand.

Javon Kelly was born and raised in DeLand, Florida. He is currently enrolled in Daytona State College where he will graduate in 2023 with his Associates Degree in Criminal Justice. Javon was in Air Force ROTC for three years where he became a flight commander. During his free time, he volunteers at the Boys and Girls Club of Spring Hill. Javon is looking forward to a long career with the City of DeLand Police Department.

Anthony Denatale, Jr., was born and raised in New York. His parents served the New York City Police Department, retiring with the rank of Sergeant. Following his parents' footsteps, he graduated from Valencia Community College with an Associates Degree in Criminal Justice. He was sworn in on January 9, 2012, as a Police Officer for the City of New York Anthony is excited to continue his law enforcement career with the City of DeLand.

The introductions were followed by a pinning ceremony.

Mayor Apgar, on behalf of the City Commission, wished these new police officers well and welcomed them to the City of DeLand.

4. Employee Years of Service Awards

Juan Millan, Police Department, being recognized for 20 Years of Service to the City of DeLand, was unable to attend the meeting.

Mayor Apgar presented a plaque to Travis Sawyer, Fire Department, in recognition of 15 Years of Service to the City of DeLand.

5. Resolution No. 2022-86, In Honor of the Retirement of Mayor F. Apgar

Commissioner Paiva read Resolution No. 2022-86, honoring Mayor F. Apgar for his retirement from the City of DeLand.

RESOLUTION NO. 2022 - 86

A RESOLUTION OF APPRECIATION AND RECOGNITION BY THE CITY COMMISSION OF THE CITY OF DELAND, FLORIDA, TO THE HONORABLE ROBERT F. APGAR UPON HIS RETIREMENT AFTER 33 YEARS AND EIGHT MONTHS OF SERVICE TO THE CITY OF DELAND; AND PROVIDING AN EFFECTIVE DATE.

Whereas, Robert F. Apgar is being honored by family and friends on the occasion of his retirement; and

Whereas, born on February 24, 1947 Bob was born in Washington, D.C. and has been a resident of DeLand since 1959; and

Whereas, Bob is a 1965 graduate of DeLand High School. He earned a Bachelor of Arts in psychology from Davidson College, Davidson, North Carolina in 1969. He earned his law degree at the University of Florida College of Law in 1971; and

Whereas, Bob as served his community as a member of the City Commission as a Commissioner for thirteen years and Mayor of the City of DeLand for twenty-one years; and

Whereas, Bob has served on numerous boards to include Florida League of Mayors, Volusia League of Cities, Florida League of Cities, and Congress of Regional Leaders; and

Whereas, Bob adheres to the highest ethical standards and has strong creditability with the citizens of DeLand and other local and state elected officials; and

Whereas, as Mayor of the City of DeLand, Bob Apgar continues to support and endorse programs and activities for both young and old in this community; he has always been at the forefront for improvements; and

Whereas, Bob has earned many high awards to include the E. Harris Drew Lifetime Achievement Award and Home Rule Hero Award from the Florida League of Cities, Elected Official of the Year Award and the Blaine O'Neal Award of Excellence from the Volusia League of Cities, and West Volusia Citizen of the Year; and

Whereas, Bob has a genuine concern for people, and is a shining example of leadership, citizen involvement, community spirit and civic responsibility; and

Whereas, Bob has truly earned the respect and affection of people from all walks of life and of all ages and will be truly missed as our Mayor.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. That the City Commission of the City of DeLand does hereby honor The Honorable Robert F. Apgar for his 33+ years of service to the City and for the faithful, diligent and responsible manner in which he performed his duties.

Section 2. As a result of the duration of public service rendered to the City of DeLand, the City Commission does hereby bestow upon Robert F. Apgar the honorary title of "Mayor Emeritus".

Section 3. This resolution shall be spread upon the minutes of the City Commission of the City of DeLand as part of the permanent memento of the City's thanks and appreciation to The Honorable Robert F. Apgar.

Section 4. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 7th day of November 2022.

/s/ Charles Paiva
Vice-Mayor

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

CONSENT AGENDA

1. Resolution re Surplus Equipment
2. Resolution Approving the Retirement and Sale of K-9 Lancelot
3. Consideration re Amendment to Existing Ground Lease, Schalk Enterprises, LLC
4. Consideration re Ground Lease, Kingspan Insulation US
5. Consideration re Approval of Ground Lease Renewal, Crete Carrier Corporation
6. Consideration re Additional Purchase of 300 Profile Unity Licenses with 3 Year Support, and Purchase of 3 Year Co-Term License for the Current 150 Profile Unity Licenses
7. Resolution Approving Sole Source Purchase of Traffic jet Xpert Avery Dennison Printing System – Sign Shop
8. Resolution Approving Sole Source Purchase for Selectron Technologies, Inc. Managed Services
9. Resolution Approving Sole Source Parts and Services for Performance Enhancement of Utilities Remote Telemetry System
10. Resolution Approving Amendment #2 to FDOT Public Transportation Grant Agreement FM 438416-1-94-01 for Hangars – Construction
11. Consideration re Approval of Construction Services – AVCON, Inc. for Airport Hangars
12. Consideration re Award for Bid for Aviation T-Hangars
13. Consideration re Approval of Joint Project Agreement between Volusia County and the City for Utility Line Extension Concerning Blue Lake Avenue Extension Construction
14. Consideration re Approval of Interlocal Maintenance Agreement between the City of DeLand and Volusia County – Greenway Trail Part A
15. Consideration re Cresswind Residential Subdivision Utility Service Agreement
16. Consideration re Cresswind Residential Subdivision Development Proportionate Share Agreement
17. Resolution Certifying Election Results of 2022 General and Special Elections; and, Setting Date for Organizational Meeting

Commissioner Paiva made a motion to approve consent items 1-11 and 14-17. Commissioner Davis seconded the motion, which carried by a unanimous vote.

Commissioner Reid expressed concern with the Award for Bid for Aviation T-Hangars. He said many of the bids that have come before the commission recently, have ended up with an increase in overall cost. Mr. Pleus said the bid price is a good price and with the exception of any change orders that may be presented, the city is protected from increase over the bid amount.

Commissioner Reid made a motion to approve consent agenda item 12. Commissioner Paiva seconded the motion, which carried by a unanimous vote.

Mayor Apgar thanked Volusia County for their hard work in securing the rights of way with the Blue Avenue extension. The City is looking forward to the joint project agreement and is anxious to get it build.

Commissioner Paiva made a motion to consent agenda item 13. Commissioner Cloudman seconded the motion, which carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

There were none.

NEW BUSINESS

1. Resolution Approving the Proposed Amendment to Volusia County Comprehensive Plan; I-4 Frontage Road Project South of Cassadaga

This Resolution, if approved, would authorize removal of the I-4 Frontage Road project south of Cassadaga from the Thoroughfare Future Needs List set forth in the Volusia County Comprehensive Plan.

Since the city has now approved the DeLand Tech park PUD with Kirk Drive providing a north-south connection between State Road 472 and Cassadaga Road, the county has requested the city to formally request an amendment to the County Thoroughfare Future Needs List to remove the section off I-4 frontage road located south of Cassadaga Road.

Commissioner Paiva made a motion to approve the resolution. Commissioner Davis seconded the motion, which carried by a unanimous vote.

2. Consideration re Approval of Agreement for Transfer of Certain Roads from Volusia County to the City of DeLand for Jurisdiction and Maintenance Pursuant to Section 335.0415 F.S.

Mayor Apgar noted items 2, 3, 4 and 5 are somewhat interrelated. He thanked the city staff for working with Volusia County and the School Board on these items. He appreciates the diligence staff has shown in working with the other jurisdictions.

Mr. Pleus recognized Ben Bartlett, Volusia County Public Works Director and Michael Ulrich, Volusia County Utilities Director, the individuals who have worked closely with City of DeLand staff on these items. Mr. Pleus said it is great to work with professionals as those at the county.

Mr. Elkind noted the road transfer agreement is part of the Utility Service Agreement which follows. The agreement in the agenda packet has been modified, but no modifications of substance, only scrivener's error corrections. He stated the city will be accepting responsibility for the local roads described herein. The City Commission's acceptance on this is contingent upon approval of the next agenda item.

The proposed agreement would transfer certain roads from Volusia County to the City of DeLand.

Russell Paiva, 825 N Boundary Ave, displayed a picture of his property and surrounding properties, and asked regarding the right-of-way, stating while the survey and the plat of 1893 seemed to be correct, when the road was paved, the physical road was offset to the East, starting at Oakdale Avenue. When this was done, there was no consideration given to the future use of underground utilities. He said every time utilities are added, the easement ends up encroaching on his property. Mr. Paiva said this issue is something the city may have to address in the future. He has been in communication with county staff trying to get the road straightened.

Mr. Elkind said rights-of-way, when they are platted, are generally wider than the area that is paved. The road is not going to be moved and Mr. Elkind said the city does not want to create an expectation that the road is going to be torn up and repaved in a different location because it is not going to happen. If there is a claim or any portion that the publicly maintained right-of-way is on private property, that is something the courts could address.

Commissioner Paiva made a motion to approve the agreement. Commissioner Reid seconded the motion, which carried by a unanimous vote.

3. Consideration re Amendment to Utility Services Agreement (Interlocal Agreement) between Volusia County and the City Realigning the Utility Service Boundary Area and the Parties' Responsibilities for Construction of Force and Water Mains along US HWY 17.

The proposed amendment to the Utility Services Agreement (Interlocal Agreement) between Volusia County and the City realigns the Utility Service Boundary area and the Parties' Responsibilities for Construction of Force and Water Mains along US Hwy 17.

Mr. Elkind stated there are several elements to this agreement. The county, with county and state funding, is running a sewer line up to the DeLeon Springs area, which from an environmental

perspective, is an important step. The city is contributing $1 million to that effort from the water and sewer fund and that line will be run to the City of DeLand's treatment plan. The City will be the utility provider for that area. There is a map in the agreement that shows the specific area where the city will be the utility provider. The school and DeLeon Springs State Park will convert from septic to the city utilities. There are four areas, two to the east along SR 44 and additionally more in the northeast, where the city is looking at installing some more potable water wells. From an economic perspective, from SR 472 north to align to area north of Cassadaga Road and west, to the South of Victoria Park, is all area where the city will become the retail utility service provider. The city will purchase, at an agreed upon wholesale rate, water and sewer treatment services and reclaimed water from Volusia County to sell at retail. West of MLK toward the TG Lee Dairy, will also become the city's utility service area. The existing utility service area agreement provides for an annexation boundary that is smaller than the water and sewer service boundary. The boundary is being expanded to include the areas described. In addition, the existing agreement is relatively old, and this was a good opportunity to address and update issues that will not impact service delivery to the customers.

Mr. Pleus noted there are no covenants to ever annex DeLeon Springs area into the City of DeLand. However, the city will be the utility service provider.

Commissioner Paiva made a motion to approve the amendment to the Interlocal Agreement. Commissioner Reid seconded the motion, which carried by a unanimous vote.

4. Consideration re Approval of Interlocal Agreement between the School Board of Volusia County, the County and the City Realigning the Utility Service Boundary Area and the Parties' Responsibilities for Construction of Force and Water Mains Along US Hwy 17

Astrid De Parry, 113 Lake Winnemissett Drive, recognized the efforts of the city staff and commission, as well as colleagues at the school board and Volusia County, to make this happen.

Mr. Elkind stated there were a lot of people involved in this item. He also thanked everyone who worked through making this agreement come to fruition. He thanked Ms. DeParry for the help and cooperation of she and her client to make something like this come together to benefit all jurisdictions.

Commissioner Paiva made a motion to approve the Interlocal Agreement. Commissioner Reid seconded the motion, which carried by a unanimous vote.

5. Consideration re Approval of Deeds Related to Beresford Avenue Extension

This item is a quit claim deed and acceptance of a warranty deed to revise the property boundaries of Lakewood Park / Beresford Avenue property dedication to the City of DeLand.

Commissioner Paiva made a motion to approve the deeds. Commissioner Cloudman seconded the motion, which carried by a unanimous vote.

CITY COMMISSION REPORTS

There were none.

CITY MANAGER REPORT

Mr. Pleus said the unfortunate news is the incoming Hurricane Nicole, projected to generate anywhere from 4-8 inches of rain. Currently, sandbags are available to residents and the city is also staging pumps around the city where recent localized flooding was experienced.

Mr. Pleus reminded all about the change in dates for garbage pick-up. Additional information is also on the website for anyone who would like more.

Mr. Pleus wished Mayor Apgar a fond farewell. He said it has been the privilege of a lifetime to work with Mayor Apgar. Mr. Pleus stated Mayor Apgar has been a friend, a mentor, an absolute gentleman, and a consummate professional. The many ideas Mayor Apgar has brought to the city has propelled the city in a forward direction. Mr. Pleus said he will miss the working relationship and conversations.

CITY ATTORNEY REPORT

Mr. Elkind thanked Mayor Apgar for the knowledge he has gained through working together with him. Being the city attorney can be difficult at times but with Mayor Apgar at the helm, the difficult job has been more of a bearable job. Mayor Apgar has made it such a pleasure to sit through the City Commission. He also complemented Mayor Apgar on the way he has mentored and assisted new commissioners.

CITY CLERK REPORT

Ms. Hennessy stated she has served with Mayor Apgar for most of his years in the City of DeLand and he has made her job easier for which she is very thankful. She said he has shared in watching her children grow and her grandchildren come along. She appreciates the guidance and tutelage Mayor Apgar has extended to her. It has been her absolute distinct pleasure to work with Mayor Apgar.

CITY COMMISSION

Commissioner Reid said it has been an honor to serve with Mayor Apgar. What he has done for the city in terms of stability, leadership and respect, not only for the residents but also for his fellow

commissioners has been incredible. As the current newest member of the commission, it has been an honor for Commissioner Reid to learn from Mayor Apgar. The bar has been set high for any elected officials in DeLand and Mayor Apgar will be missed. Commissioner Reid said he is sad to see Mayor Apgar go after all these years, but the memories will live on. Saying thank you just doesn't seem like enough. Commissioner Reid promised to keep the movement Mayor Apgar has brought forth moving forward.

Commissioner Davis thanked Chief Umberger for the emergency community meeting held on Friday evening. She thanked him for the effort he continually puts into the City of DeLand.

Commissioner Davis stated Mayor Apgar can be depended upon to be fair and respectful. She stated he has encouraged her to learn and grow. The City of DeLand is a great place to serve because of the standard Mayor Apgar has set for everyone to follow. She is grateful for the eight years she has had the pleasure of serving next to Mayor Apgar.

Commissioner Cloudman treasures the years he has had to serve beside Mayor Apgar who has been a mentor and a guiding force for the City Commission. He said to see and experience how people all over the state love and respect Mayor Apgar is incredible. Mayor Apgar has been a wonderful model and mentor to the entire commission. He has set the bar high.

Commissioner Paiva could not have asked for a better teammate when they were elected on the same day in 2001. He said the one thing that can never be doubted is Mayor Apgar's love for DeLand and his love for people. He expressed appreciation to Mayor Apgar for giving him direction prior to his deciding to run for office. Being born in DeLand, Commissioner Paiva has seen a lot of changes, but DeLand is a better place and in part, because of the guiding force Mayor Apgar has brought to the city. Commissioner Paiva said he will miss the debates. Never once has he ever doubted Mayor Apgar's love for and commitment to the City of DeLand.

Mayor Apgar stated as of late this afternoon, the Veteran's Day event on Friday was still not confirmed. If the weather is clear, the Veteran's Day parade will proceed as scheduled.

Mayor Apgar remarked that after almost 34 years, he doesn't quite know what to say. The last year has been an emotional and humbling time. He has had the opportunity to serve his hometown and a place that he loves, it has been a labor of love. As far as being Mayor, he has put his heart and soul into his service. He thanked the commission and everyone for their kind remarks and compliments. He also thanked the commission for the naming of the sports complex "Apgar Sports Complex" and for the resolution read this evening. He stated if anyone on the dais or staff would like to reach out to him, he would be happy to be responsive as a resource, a sounding board or even a historian. His plan is to not meddle in the business of the city. He will stay out of the business of the city as long as no one does anything that makes him really mad. He stated citizens and each of the staff need to allow the new Mayor to be his own man and do his own thing in the position. He asked everyone to embrace and to allow the change to occur. Mayor Apgar said when

he first became Mayor, he was working full time and he hopes people will be understanding of a new Mayor who may not be always readily available.

Mayor Apgar spoke about the culture of the City Commission and staff. They have always worked together as a team to get things accomplished. He said when one person gets criticized, he feels that person's pain because it is tough to face a room full of people where whatever a commissioner does or says could be looked upon positively or negatively. He believes the City Commission has always done a good job leaving the official disagreements in the council chamber and he hopes everyone will continue to keep this attitude and practice. The commission has never had any problem with backstabbing or criticizing one another. He said political revenge is a dangerous way to govern, especially at the local level. The City of DeLand has been so successful because of stability at the staff and the commission levels. Stability is important.

Mayor Apgar stated from top to bottom, DeLand has a great professional staff. He said for the commission to excel, the professional recommendations of staff are necessary. Mayor Apgar urged the commission to trust the recommendations of staff, but to challenge when appropriate. He encouraged the commission to respect the Charter provisions, and not micromanage the city manager or staff. He said the bottom line is, value your staff, trust them, respect and appreciate them. Mayor Apgar asked all city staff to stand and be recognized. He thanked the staff both personally and on behalf of the commission for making things happen for the city.

Mayor Apgar said this evening is bittersweet and he appreciates the citizens of DeLand entrusting the title of Mayor to him. He will miss running meetings and learning at various opportunities as an elected official. It is difficult to leave his city family and the relationships he has developed both locally and throughout the state. The city family is a bunch of good people who do a phenomenal job. Mayor Apgar is happy to be retiring but he will miss serving. He stated he leaves the commission with a strong sense of accomplishment and pride. He leaves knowing the City is in good hands, is well prepared for the future and that DeLand is and will continue to be a great place to live, work and play. He thanked Teresa for her love and support as well as the rest of his family. He also thanked staff again for all they have done to make him look good. He thanked his present and past colleagues, friends and supporters, and the sitting City Commission for all that has been done to recognize his service. Lastly, Mayor Apgar thanked the citizens of DeLand for their confidence in him to serve as Mayor. It has been a great honor.

ADJOURNMENT

There being no further business, the meeting was adjourned at 8:46 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR THE ORGANIZATIONAL MEETING OF THE CITY COMMISSION OF THE CITY OF DELAND HELD ON MONDAY, NOVEMBER 15, 2022, AT 7:00 P.M CITY HALL, COMMISSION CHAMBERS 120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Apgar at 7:00 p.m.

Mayor Apgar requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or regarding an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak about any item on which the City Commission is to take action.

PRESENTATION OF COLORS

PLEDGE OF ALLEGIANCE

Mayor Apgar led Pledge of Allegiance to the Flag.

INVOCATION

Frank Gummy, long time resident of Volusia County, has passed away. Mayor Apgar asked everyone to keep his family in their thoughts and prayers.

Pastor Mike Carroll, First Assembly of DeLand, gave the Invocation.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Chris Cloudman	Present
Commissioner Kevin Reid	Present
Mayor Robert F. Apgar	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Michael Grebosz, Assistant City Manager; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Dan Stauffer, Finance Director; Mike Holmes, Planning Director; Jim Ailes, Deputy Public Service/Utilities Director; Ray Underwood, Public Works Director; Chad Gamble, Public Services Director; Rick Hall, Parks & Recreation Director; Nick Conte, Economic

Development Director; Greg Whidden, Information Technology Director; Ray Bahrami, City Engineer, members of the public and press.

OATHS OF OFFICE

1. Julie Hennessy, City Clerk-Auditor, introduced herself and stated she is empowered by the Charter of the City of DeLand to administer the Oaths of Office to returning and newly elected Commissioners.

   - Seat 3, Commissioner Jessica Davis, was sworn into office.

   - Seat 5, Commissioner Kevin Reid, was sworn into office.

   - Seat 4, Commissioner Daniel Reed, was sworn into office.

     Commissioner Cloudman escorted Commissioner D. Reed to the Dais

   - Seat 1, Mayor-Commissioner Christopher Cloudman, was sworn into office.

Mayor Cloudman thanked everyone for attending the meeting. He thanked former Mayor Apgar for providing an amazing example over the past 21 years as Mayor. He said Mayor Apgar has set the city up for success and has set the standard for how a City Commission should work together to conduct its business.

NEW BUSINESS

1. Consideration re City Commission Appointments to R2CTPO, Elected Officials Round Table, Spring Hill CRA, Audit Committee, River-of-Lakes Heritage Corridor, Legislative Liaison, Downtown Art Liaison, and School Board Oversight Committee

River to Sea Transportation Planning Organization – Mayor Cloudman stated he would like to continue serving on this board since he is currently the incoming Chairman for that organization. He would also like to have an alternate to start attending those meetings as his successor.

Commissioner Davis thanked Mayor Cloudman for his service on the R2CTPO. Commissioner K. Reid stated he would like to continue as the alternate for that committee.

Commissioner Paiva made a motion to appoint Mayor Cloudman to the R2CTPO and Commissioner K. Reid as alternate. Commissioner Davis seconded the motion, which carried by a unanimous vote.

Elected Officials Round Table – Mayor Cloudman stated traditionally, this position is filled by the Mayors of Volusia County. He would also like to have an alternate member.

Commissioner Paiva made a motion to appoint Mayor Cloudman to the Elected Officials Round Table and to appoint himself as the alternate member. Commissioner Davis seconded the motion, which carried by a unanimous vote.

Spring Hill CRA – Mayor Cloudman stated by Charter of the CRA, he would automatically be on that board. Commissioner Paiva and Commissioner Davis serve on that board and expressed they would be happy to continue to serve on that board. Commissioner Davis continued that she has served on the CRA for eight years, and if someone else would like to serve she would support them.

Commissioner Dan Reed stated that he would like to serve.

Commissioner Reid made a motion to appoint Commissioner Paiva and Commissioner D. Reed to serve on the Spring Hill CRA. Commissioner Paiva seconded the motion, which carried by a unanimous vote.

Audit Committee – Commissioner Reid currently serves on the Audit Committee and would be happy to continue to serve on that committee.

Commissioner Paiva made a motion to appoint Commissioner K. Reid as primary and himself as alternate member on the Audit Committee. Commissioner Reid seconded the motion, which carried by a unanimous vote.

River-of-Lakes Heritage Corridor – Mayor Cloudman stated the committee promotes everything related to the highway and byway corridor in Volusia County. He has served as the liaison for 8 years and would like to pass the opportunity to someone else. Mayor Cloudman suggested Commissioner D. Reed to serve on the River-of-Lakes Heritage Corridor.

Commissioner Paiva made a motion to appoint Commissioner D. Reed as the primary member and himself as alternate member on the River-of-Lakes Heritage Corridor. Commissioner D. Reed seconded the motion, which carried by a unanimous vote.

Legislative Liaison – Mayor Cloudman said he would be happy to serve and Commissioner Paiva felt the Mayor would be the most appropriate representative of the city.

Commissioner Paiva made a motion to appoint Mayor Cloudman as primary and himself as alternate legislative liaison. Commissioner Davis seconded the motion, which carried by a unanimous vote.

Downtown Art Liaison – Mayor Cloudman stated this is an ad hoc committee that meets as needed. Commissioner Davis is interested in this position.

Commissioner Paiva made a motion to appoint Commissioner Davis as primary for the Downtown Art Liaison and Commissioner D. Reed as alternate. Commissioner D. Reed seconded the motion, which carried by a unanimous vote.

School Board Oversight Committee – Mayor Cloudman said this committee meets once a year. Commissioner Paiva made a motion to appoint Commissioner Davis as primary member and Commissioner K. Reid as alternate. Commissioner D. Reed seconded the motion, which carried by a unanimous vote.

Faith, Hope and Charity – Mr. Grebosz stated additional information about this committee will be forthcoming, there is a meeting scheduled tomorrow. Commissioner Davis expressed interest

Commissioner Paiva made a motion to appoint Commissioner Davis as primary member and himself as alternate. Commissioner Davis seconded the motion, which carried by a unanimous vote.

East Central Florida Regional Planning Council – Mayor Cloudman stated this position will be appointed by the Volusia County League of Cities. He is currently serving in that role.

2. Consideration re Appointment of Vice-Mayor

Commissioner Davis made a motion to appoint Commissioner Paiva as Vice-Mayor. Commissioner D. Reed seconded the motion, which carried by a unanimous vote.

CITY COMMISSION

Mayor Cloudman recalled Mayor Apgar's aspiration to make the City of DeLand a place in which our children and grandchildren would want to raise their families. He thanked Mayor Apgar for his dedication and for the groundwork he has laid for the City of DeLand.

Commissioner Davis also thanked everyone in attendance. She reflected on 2014 when she was first sworn into office and everything that has been accomplished during the past 8 years. She thanked everyone for supporting and re-electing her to office. She loves serving the City of DeLand.

Commissioner Dan Reed congratulated former Mayor Apgar on his long and successful career as Mayor. He stated Mayor Apgar has left a long-standing mark on the DeLand community that will never be forgotten. Commissioner Reed also thanked everyone in attendance and the residents of DeLand for the support shown through the election process and electing him as City Commissioner.

Commissioner Kevin Reid echoed those comments that have been made. He said the support received during this recent election indicates the City Commission is on the right path. He said Mayor Apgar has left a legacy and he is honored to serve on the City of DeLand City Commission.

Vice Mayor Paiva stated Mayor Apgar was an amazing teammate for the past 21 years and DeLand is absolutely a better place because of his service. He thanked Mayor Apgar for being a friend and mentor. He welcomed Dan Reed to the Commission and looks forward to the value and perspective he will bring to the Commission. He also welcomed Mayor Cloudman and stated one of his best decisions was to appoint Chris Cloudman to the City Commission and the other best decision was to hire Michael Pleus as City Manager. Commissioner Paiva stated he appreciates Mayor Cloudman always attending City Commission meetings prepared and ready to serve the community. He is looking forward to the future of DeLand.

Julie Hennessy, City Clerk-Auditor, expressed congratulations to the City Commission and she looks forward to working with everyone in the future.

Mayor Cloudman stated the City of DeLand is an amazing place to live, work and play. He spoke about all of the great things happening in the city and stated how proud he is to be a part of "the greatest city in the multiverse".

ADJOURNMENT

There being no further business, the meeting was adjourned at 7:47 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, NOVEMBER 21, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Cloudman at 7:00 p.m.

Mayor Cloudman requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or regarding an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak about any item on which the City Commission is to take action.

INVOCATION

Michael Pleus, City Manager, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Cloudman led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Daniel Reed	Present
Commissioner Kevin Reid	Present
Mayor Chris Cloudman	Present

ALSO PRESENT: Michael Pleus, City Manager; Darren Elkind, City Attorney, Julie Hennessy, City Clerk-Auditor; Michael Grebosz, Assistant City Manager; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Heidi Van Etten, Assistant Finance Director; Rick Werbiskis, Community Development Director; Mike Holmes, Planning Director; Carol Kuhn, Deputy Planning Director; Mariellen Calabro, Deputy Public Works Director; Mark Hayward, Human Resources Director;; Rick Hall, Parks & Recreation Director; Corey McMillen, Purchasing Coordinator; Ray Bahrami, City Engineer, Chris Graham, Community Information Manager, members of the public and press.

PRESENTATIONS

1. Presentation re Hometown Heroes Banner Program

Chris Graham, Community Information Manager, stated this program is to honor DeLand veterans, active service members and those who have served and are no longer living. He presented banners to everyone present.

Dakota Bachtell
John DeVito
Samuel DeVito
Steven DeVito
William J. Artis
Dwight Lyles
Bryan Salazar
Jessica Ramsey
Melvin Jones
Shawn Mortimer
Bryan Hunter
Luis Bueso
Paul Side
Thomas McDaniel
Anthony DoMoe
Roy Ray
Michael Montoya
Colton Lotel
Cameron Lotel

2. Certificate of Recognition Presented to Pastor Charles Coker and Reverend Troy Bradley

Commissioner Reed read the Certificate of Recognition and Commissioner Davis made the presentation to Pastor Coker and Reverend Bradley.

CONSENT AGENDA

1. Resolution Approving FY 2021-2022 Budget Amendment
2. Resolution Approving Morgan Stanley DVP Account Application, Agreement and Authorizing Persons
3. Consideration re Extension of Agreement for Pre-Employment Screenings with Advent Health DeLand
4. Consideration re Consent to Sublease, Clear Water Services, LLC
5. Consideration re T-hangar Rate Adjustment
6. Consideration re Gant of Easement to Duke Energy, 555 South Woodland Boulevard, Conrad Park/Melching Field
7. Consideration re Task Assignment No. 16, Greenway Trail Part A, Amendment No. 1 – Utility Relocation and Post Design Services

8. Consideration re Approval for Sale and Consumption of Alcoholic Beverages on City Property for "The Issues Bar"
9. Resolution Approving Special Exception for a 4COP Liquor License, Located at 142 West Georgia Avenue (Hyderhead Brewery)
10. Consideration re Lease Agreement with Representative Webster Barnaby for Office Space

Commissioner Paiva made a motion to approve all consent items. Commissioner Davis seconded the motion, which carried by a unanimous vote.

Commissioner Reid extended congratulations to Representative Barnaby.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

James Greene, 614 W. Ambrose Street, expressed concern about vehicles speeding on Stone Street and West Beresford.

Margo Meta, 752 Mystic Oaks Lane, spoke to the Commission about the impact of traffic from the DeLand High School. She stated many students use the area of Mystic Oaks to turn around. She requested the city look into some traffic communication devices to address the issue.

BOARD APPOINTMENT

1. Consideration re Appointments to DeLand Housing Authority

Ms. Hennessy asked the City Commission to make three appointments to the DeLand Housing Authority. Two members are up for reappointment and there is also a vacant seat.

Commissioner Paiva made a motion to reappoint Trude-Cole Hill to Seat 3, and Hilma Blair to Seat 4, for terms to expire November 1, 2026. Commissioner Reed seconded the motion, which carried by a unanimous vote.

Damian Jones, 522 Ann Street, addressed the City Commission. He has submitted an application to serve on the DeLand Housing Authority.

Ms. Hennessy asked the City Commissioners to rank applicants and sign the ranking sheets. Ms. Hennessy announced Damian Jones was the highest ranked applicant.

Commissioner Paiva made a motion to appoint Damian Jones to Seat 1, for a term to expire November 1, 2025. Commissioner Davis seconded the motion, which carried by a unanimous vote.

2. Consideration re Appointment to Tree Advisory Committee

Ms. Hennessy stated there is one applicant, Daniel Keller, who has already been attending meetings.

Commissioner Paiva made a motion to appoint Daniel Keller to the Tree Advisory Committee. Commissioner Davis seconded the motion, which carried by a unanimous vote.

3. Consideration re Appointment to the DeLand Planning Board

Ms. Hennessy stated there are six applicants for the vacant Planning Board position.

Lacey McMullan, 308 North Salisbury Avenue, gave a brief biography and stated her interest in serving on the Planning Board.

Kelly Hobbs, 930 Park Place, gave a brief biography and stated his interest in serving on the Planning Board.

Harper Hill, 801 North Clayton Street, gave a brief biography and stated his interest in serving on the Planning Board.

Jonel Meta, 752 Mystic Oaks Lane, gave a brief biography and stated his interest in serving on the Planning Board.

Beverly Scott, 614 East Wisconsin Avenue, gave a brief biography and stated her interest in serving on the Planning Board.

Paul Teeter, 829 East New York Avenue, gave a brief biography and stated his interest in serving on the Planning Board.

City Commissioners were asked to rank applicants and sign the ranking sheets. Ms. Hennessy announced Harper Hill was the highest ranked applicant.

Commissioner Paiva made a motion to appoint Harper Hill to the Planning Board. Commissioner Davis seconded the motion, which carried by a unanimous vote.

OLD BUSINESS

1. Second Reading of Ordinance No. 2022-31, Changing the Land Use for Approximately 14.57 Acres of Property, Located on North Spring Garden Avenue, South of Clear Lake Drive, from Mixed Office-Residential to High Density Residential

Mr. Elkind read Ordinance No. 2022-31 by title only.

ORDINANCE NO. 2022-31

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND, BY CHANGING THE FUTURE LAND USE DESIGNATION OF CERTAIN PROPERTIES LOCATED SOUTHEAST OF THE INTERSECTION OF CLEAR LAKE ROAD AND NORTH SPRING GARDEN AVENUE; FROM MIXED OFFICE-RESIDENTIAL FUTURE LAND USE DESINATION TO HIGH DENSITY RESIDENTIAL FUTURE LAND USE DESIGNATION; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

The application was approved on first reading at the July 18, 2022, City Commission meeting and was transmitted to the Volusia Growth Management Commission for their review and approval. The application was approved by the VGMC, and a letter has been received stating same. The land use application is being processed in conjunction with the PD rezoning application, Z22-046. At their June 15, 2022, meeting, the Planning Board recommended approval of the land use amendment.

Mayor Cloudman opened the Public Hearing.

Mike Holmes, Planning Director, stated this and the next agenda item are related.

Raul Rumbaut, 1181 Glen Falls Road, spoke about his concern with high density growth. He believes high density to create high impact.

Patricia White, 1157 East Glen Falls Road, stated her comments are on behalf of 74 residents who live in the Cascades. The residents are concerned for their safety. She stated the location of the entrance and exit for the apartments is going to impact traffic. She suggested the entrance/exit for the apartments be located on Plymouth rather than off 15A. Ms. White suggested a traffic signal may also be helpful. She displayed a photograph from a recent vehicular accident to help express the anticipated safety concerns.

Commissioner Davis lives in the same area and is interested in whether there is a plan for the additional traffic that will be generated in this area. She acknowledged there is a blind spot and she has seen accidents in the area.

Nika Hosseini, Cobb Cole, 231 N. Woodland Blvd, expressed her understanding of the concerns expressed. She made a presentation pertaining to the land use change being requested.

Ms. Hosseini stated a community meeting was held and the developer will be submitting a Traffic Impact Analysis (TIA). The development agreement contemplates that the ingress/egress locations may change. At this time, the TIA has not been completed. Once that study is completed, as the project continues through the process, traffic impact, access points and other similar

elements of the project will be further refined and reviewed by both city staff and Volusia County staff.

Commissioner Reid asked if the analysis took into account if the trips were commercial, full residential or mixed use. He asked if that would change the calculation of traffic. Mr. Holmes said for land use, the review of traffic is generalized and the focus is on the number of vehicles generated.

There being no further comments, Mayor Cloudman closed the Public Hearing.

Commissioner Paiva made a motion to approve the ordinance on first reading. Commissioner D. Reed seconded the motion, which was approved by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner D. Reed	YES
Commissioner K. Reid	YES
Mayor Cloudman	YES

2. First Reading of Ordinance Changing the Zoning from The Cascades PD to Pointe Grand Apartments PD to Develop a Multi-Family Residential Project on Approximately 14.57 Acres of Property, Located on North Spring Garden Avenue, South of Clear Lake Drive (Cont'd on 1st Reading 07/18/22)

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING DESIGNATION FROM CASCADES PD, PLANNED DEVELOPMENT TO POINTE GRAND APARTMENTS PD, PLANNED DEVELOPMENT; ON PROPERTY LOCATED SOUTHEAST OF THE INTERSECTION OF CLEAR LAKE ROAD AND NORTH SPRING GARDEN AVENUE; APPROVING A PLANNED DEVELOPMENT PLAN CONSISTING OF APPROXIMATELY 14.57 ± ACRES OF PROPERTY; MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

At the August 15, 2022, meeting, the City Commission denied the first reading of this ordinance due to an increase in density s compared to adjoining properties. Per Section 33-135.02(g) of the Land Development Regulations, a rehearing may be considered by the City Commission, 90 days after August 51, 2022, if there is a material change to the facts or issues relevant to the application.

A letter dated September 6, 2022, was addressed to the City Commission from Mark A. Watts, Attorney, Cobb Cole, requesting the City Commission reconsider their prior vote and allow for a new first reading.

The applicant has submitted a revised development agreement dated October 24, 2022. The new agreement incorporates a Special Conditions section in the agreement which outlines specific benefits for residents that work as local medical employees. For the first 2 years, 15% of the units will be specifically reserved for local medical employees. For the first 2 years, local medical employees are entitled to the following benefits:

1. A 50% discount on deposit
2. A waiver of the initial application fee
3. A waiver of the first month's rent
4. A cap of 5% on rate increases

The applicant is proposing to construct a multi-family residential project consisting of 204 apartment units. As currently designated, the two parcels for which the rezoning designations are sought will be combined to create a single property which will eventually be developed as the Pointe Grand Apartments. The applicant has applied for a concurrent land use amendment to be consistent with the higher density needed (SMLU22-074). The land use application is also scheduled for adoption at this meeting and has received approval from the Volusia Growth Management Commission.

Mayor Cloudman opened the Public Hearing.

Mr. Holmes presented the ordinance, stating it is for an apartment complex consisting of 204 units. At present, there is a second access point on 15A and an emergency access off an easement that would ultimately direct vehicles to Plymouth Avenue. Staff is working with both parties on access points. He also stated larger buffers are being planned for the north property line and the difference in this proposal as opposed to the first one is there have been some benefits defined to encourage local medical employees to live in the apartments.

Commissioner Paiva inquired about the buffers that were to be increased from 20ft to 25ft. Mr. Holmes said there was one area off the parking lot where the buffer was a little less, but there is not a building in that location. Where the buildings are located, the buffer has been increased.

Nika Hosseini, Cobb Cole, provided a presentation pertaining to the ordinance. She said the agreement includes language indicating the north buffer shall be 25ft wide and will consist of Type C materials. She said during community meetings, residents were shown the distance between the development and their homes, as there is a significant strip of property dedicated to the project as preservation, essentially creating additional buffer.

Mayor Cloudman asked for clarification on what the period of two years means, whether the benefit is only available for the first two years or units will be held open for two years. Ms. Hosseini said within the first two years, there will be an allocated percentage of units available for medical personnel. Mayor Cloudman was concerned about the incentives being used as justification for higher density, yet the option is removed after two years.

Commissioner Paiva thought the two-year period would begin once all 240 units are constructed.

Commissioner Reid stated the two-year period is a hang-up for him. If the 15% is rented out in the first month, he would like to see the program continued. He would not support ending the incentive program in its entirety after two years.

The question was raised as to the definition of medical professional as it relates to the incentive program. Ms. Hosseini said the idea was for employees of the nearby hospital, where they would have a close commute to work. However, the definition can be written into the agreement.

Commissioner Reid said in previous renditions there was discussion about a wheelchair lift in lieu of having elevators. Fire Chief Allen responded with concerns about a manual chair. The Fire Department is trained to move people but for the safety of the residents, the wheelchair lift is not a good idea.

There being no additional comments, Mayor Cloudman closed the Public Hearing.

Commissioner Paiva commented about the increased buffer and buffered distance. This ordinance was also denied initially due to accessibility, affordability and density issues. He said there has not been a lot of change with accessibility, density is the same, so he felt this came down to affordability. Commissioner Paiva thought the incentive program was a creative solution. However, he feels the incentive program could be expanded to encompass the entire area. He mentioned an internal trail that would go to Advent Health. Secondly, he would like to see the 15% increased.

Commissioner Reid recognizes the hassle to keep track of the incentive program. He understands keeping the program as manageable as possible. Whether the 15% was 20% for two years or 15% for a longer period of time, he believes some adjustment could be made.

Commissioner Davis said a lot of people are not transitioning and the apartment becomes their forever home. She said if people are staying where they are, there may be a need accessibility in the future. While supportive of offering variety, Commissioner Davis said it is important to continue to think forward.

Commissioner Reid asked if there are any apartments that are set up for impaired individuals with features such as roll-in showers or the like. Ms. Hosseini said to the degree that accessibility is required, the units will be constructed to comply with the building code. She said 5% of the

housing stock will be ADA accessible. Ms. Hosseini also said her client is willing to increase the available units to 20%.

Michael Pleus, City Manager, stated the developer in this instance was challenged with accessibility, density and affordability. He strongly recommended the Commission consider refining language in the agreement to include things such as walkability of the job within a linear mile, income level and verification of position. Another issue is the incentives are up-front, but consideration should be given to the fact the unit is not long-term affordable. Lastly, if this is for medical professionals, what happens if they change jobs and are no longer in the medical industry. The point was there are some things that need to be thought through and defined so the Commission knows what is being approved and staff is aware of what will have to be enforced.

Ms. Hosseini said the initial response was that at the time of application and lease renewals, would be the only times employment could be verified and incentives applied to medical professionals.

Darren Elkind, City Attorney, cautioned the City Commission this is a difficult thing to put into a zoning document. Affordable housing is an entirely different situation for which there is specific criteria. Mr. Elkind believes enforcement of this will be near impossible.

Commissioner Paiva asked if the buffer on the northern side has been increased and Ms. Hosseini said yes, to 25 feet.

Mayor Cloudman confirmed in addition to the dense landscape buffer, there is a 6 ft structure. Ms. Hosseini affirmed.

Commissioner Paiva made a motion to approve the ordinance with the following modifications: 1) increase the 20' buffer to 25' on the northern portion; 2) that 20% of the units are effected by having one month of free rent; 3) that the application fee be waived; 4) that 50% of security deposit will be waived; 5) that limits of 5% cap increase in rent will be placed on those taking advantage of the incentive package; and 6) that the package applies to anyone in the medical field/profession, employed one linear mile from the property; and 7) that at term of the lease (one year), if the employee continues to be in the medical field, they remain entitled to the incentive benefits and if they change professions, the incentives no longer apply. Commissioner Reid seconded the motion.

Mayor Cloudman asked Mr. Holmes when the second first reading of this ordinance would occur. Mr. Holmes said on December 19, 2022.

The motion was approved by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner D. Reed	YES
Commissioner K. Reid	YES

Mayor Cloudman YES

NEW BUSINESS

Mayor Cloudman stated that unless there were objections, he would like to reorder the agenda to address items that citizens had been waiting for in advance of strictly staff items. There were no objections.

1. (Formerly Item 3.) First Reading of Ordinance Changing the Zoning of 0.18 Acres of Property from R-1A (Single Family) to C-2A (Downtown Commercial), Located at 210 West Wisconsin

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, CHANGING THE ZONING FROM R-1A, SINGLE FAMILY TO C-2A, DOWNTOWN COMMERCIAL ON PROPERTY LOCATED AT 210 WEST WISCONSIN AVENUE; MAKING FINDINGS OF CONSISTENCY WITH THE COMPREHENSIVE LAND USE PLAN FOR THE CITY OF DELAND; DIRECTING CHANGE IN THE COMPREHENSIVE ZONING MAP; CONDITIONING FINAL DEVELOPMENT ORDERS ON A DETERMINATION OF CAPACITY; AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

This request is for approval to amend the zoning designation for property located at 210 W. Wisconsin Avenue from R-1A (Single family) to C-2A (Downtown Commercial). The property is in the core area of the city and is subject to the Downtown Commercial land use designation. The existing zoning makes it inconsistent with the land use and approval for the rezoning of this property will make it compliant with the land use.

Mayor Cloudman opened the Public Hearing.

Michael Woods, Attorney with Cobb and Cole, addressed the City Commission. He stated the land use designation is currently allows for multi-family. The land use designation is larger and broader than the zoning and this property is right on the edge of the zoning designation. The reason this request is necessary is that the zoning category does not expressly prohibit the multi-family utilization, whereas the land use expressly requires and prohibits single family.

There being no additional comments, Mayor Cloudman closed the Public Hearing.

Commissioner Paiva made a motion to approve the ordinance. Commissioner D. Reed seconded the motion, which was approved by a roll call vote.

Commissioner Paiva YES
Commissioner Davis YES

Commissioner D. Reed YES
Commissioner K. Reid YES
Mayor Cloudman YES

2. (Formerly Item 4.) Resolutions Approving the Demolition of 601 Bert Fish Drive, 609 Bert Fish Drive and 611 Bert Fish Drive

Mayor Cloudman, in light of his employment through Stetson University, passed the gavel to Vice Mayor Paiva for this item.

Mr. Pleus stated staff recommendation is for approval of the demolitions. Mr. Elkind noted the demolitions should be approved by three separate motions.

Commissioner D. Reed made a motion to approve demolition of 601 Bert Fish Drive. Commissioner K. Reid seconded the motion, which was approved by a vote of 4 -0. Mayor Cloudman abstained.

Commissioner Davis asked if staff had received any insight on the plans for the property post-demolition.

Scott Thacker, Stetson University, 421 North Woodland Blvd, stated there is no planned use for the property at this time. It will be green space for students.

Commissioner D. Reed made a motion to approve demolition of 609 Bert Fish Drive. Commissioner K. Reid seconded the motion, which was approved by a vote of 4 -0. Mayor Cloudman abstained.

Commissioner D. Reed made a motion to approve demolition of 611 Bert Fish Drive. Commissioner K. Reid seconded the motion, which was approved by a vote of 4 -0. Mayor Cloudman abstained.

3. (Formerly Item 1.) First Reading of Ordinance Amending Chapter 21, Section 21-29 of the Code of Ordinances Relating to Panhandling

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING CHAPTER 21 "OFFENSES" OF THE CODE OF ORDINANCES FOR THE CITY OF DELAND BY AMENDING SECTION 21-29 "PANHANDLING" BY ADDING A NEW SUB-SECTION 21-29(a)(13)(i) AND A NEW SUB-SUBSECTION 21-29(d)(7)a.9 FOR THE PURPOSE OF ADDING AN ADDITIONAL DANGEROUS INTERSECTION AT WHICH

PANHANDLING IS PROHIBITED; PROVIDING FOR CONFLICTS, CODIFICATION, SEVERABILITY, AND AN EFFECTIVE DATE.

The purpose of this ordinance is to add the intersection of Woodland Boulevard and Taylor Road to the city's panhandling prohibition. This ordinance amends the provisions of Section 21-29 of the City of DeLand Code of Ordinances relating to panhandling.

Mr. Elkind stated a hearing was held approximately one year ago where a lot of factual information was provided to support prohibition of panhandling within 50' of certain high-risk intersections. Panhandling is a constitutionally protected activity. The Commission was careful with this ordinance and in order to place a time, place and manner restriction on panhandling, the government agency has to show there is a significant interest in imposing the regulations. He stated the Police Department has evaluated intersections to determine which ones were high risk. The patrol division of the Police Department has now indicated they believe this additional intersection is high risk. They have collected data which supports this amendment to the ordinance.

Mayor Cloudman opened the Public Hearing. There being none, the Public Hearing was closed.

Commissioner Davis asked if there is some way to educate the public with regard to panhandling. Residents are trying to understand why they are allowed to panhandle, particularly the ones with children at a busy intersection. Mr. Elkind said the law states people have a constitutional right to panhandle. If the City is going to place restrictions on that constitutionally protected activity, it has to be done within some narrow constitutional guidelines. The prohibition at certain intersections is based upon the unsafe nature of certain high traffic, high risk intersections. The activity cannot be a citywide prohibition.

Chief Umberger and Mr. Elkind are working with the FDOT legal division about placing signage at the intersections to assist in educating the public about panhandling.

Commissioner Paiva asked about the options law enforcement officers can use to curtail illegal activities. Chief Umberger said an officer has discretion to warn the person but when the signs are posted, it will be apparent that panhandling is not allowed in certain intersections.

Commissioner D. Reed raised the question of issuing fines to those who are violating the ordinance. Chief Umberger has also thought about this but has not done any research at this time.

Commissioner Paiva made a motion to approve the ordinance. Commissioner D. Reed seconded the motion, which was approved by a roll call vote.

Commissioner Paiva	YES
Commissioner Davis	YES
Commissioner D. Reed	YES
Commissioner K. Reid	YES

Mayor Cloudman YES

4. (Formerly Item 2.) First Reading of Ordinance Creating a New Residential Land Use Category in the Future Land Use Element

Mr. Elkind read the Ordinance by title only.

ORDINANCE NO.

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, AMENDING THE COMPREHENSIVE PLAN FOR THE CITY OF DELAND BY REVISING THE FUTURE LAND USE ELEMENT BY ADOPTING A NEW RESIDENTIAL NEW LAND USE DESIGNATION – TRANSITIONAL RESIDENTIAL DEVELOPMENT (TRD) DESIGNATION; AS PART OF THE COMPREHENSIVE PLAN, PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

Mayor Cloudman opened the Public Hearing.

Carol Kuhn, representing Community Development, presented the proposed amendment to the Comprehensive Plan. In April 2022, the City Commission requested staff to explore options to address how the city develops in transition areas between developed suburban areas within the city and low-density residential areas within the unincorporated county. Four options were analyzed by staff and shared with the City Commission on August 1, 2022. At the time all four options were reviewed along with an analysis of the various options, staff presented option w (Create a new Future Land Use Category) as the preferred course of action. City Commission directed staff to move forward with option 1, creating a new Future Land Use Category. The proposed amendment would add a new residential land use category to the future land use element. Ms. Kuhn explained the components of the proposed category.

Mike Woods, Attorney, Cobb Cole, stated this is very exciting and a job well done. He stated this change allows for a better product in the City of DeLand.

There being no additional comments, the Public Hearing was closed.

Commissioner Paiva made a motion to approve the ordinance. Commissioner D. Reed seconded the motion, which was approved by a roll call vote.

Commissioner Paiva YES
Commissioner Davis YES
Commissioner D. Reed YES
Commissioner K. Reid YES
Mayor Cloudman YES

CITY COMMISSION REPORTS

1. Report re: Elected Official Round Table

There was no meeting due to Hurricane Nicole. The day after, a zoom call was done to discuss assistance to those impacted by the storm.

2. Report re: River-to-Sea TPO

The Interim Executive Director has been offered the full time Executive Director position. The contract will be presented and voted on at the next regular scheduled meeting.

Getting ready for open call on projects, so if the city staff has anything in mind that could be submitted, that would be great.

Votran has attended TPO and has since provided a PowerPoint presentation regarding their mobility on demand program.

3. Report re: River of Lakes Heritage Corridor

There were two presentations, one from Dan Friend on the status of the tugboat being relocated to Volusia County. The display location is still in question although there are some options.

The other presentation was pertaining to the proposed Black Heritage Trail that would go through the business area of the DeLand community. Grant funding has been received for this project.

CITY MANAGER REPORT

Mr. Pleus announced upcoming holiday events which include the Tree Lighting, Santa Runs and the Christmas Parade.

CITY ATTORNEY REPORT

Nothing additional to report.

CITY CLERK REPORT

Ms. Hennessy stated she received an e-amil from someone who is interested in being the City of DeLand representative on the Volusia Growth Management Committee. She said the city does not have a formal application, but she suggested an agenda item at the next meeting where the

interested person can come meet the City Commission. Mayor Cloudman suggested putting out the word about this vacancy to see if anyone else may be interested.

Ms. Hennessy said the appointee formerly was a member of the Planning Board, but that is no longer the case. Mr. Elkind said all of the City's land use amendments are reviewed by the VGMC and it was not appropriate to have a Planning Board member serve in both capacities.

CITY COMMISSION

Commissioner D. Reed had nothing to report. He thanked the Mayor and Commissioners for a great first meeting.

Commissioner K. Reid wished Commissioner D. Reed a Happy Birthday congratulated him and Mayor Cloudman on their first official meeting. He wished everyone a Happy Thanksgiving.

Commissioner Davis thanked staff and the Commission for everything and wished everyone a Happy Thanksgiving.

Commissioner Paiva congratulated Mayor Cloudman and Commissioner D. Reed. He also wished everyone a Happy Thanksgiving.

Mayor Cloudman echoed comments and stated it is a pleasure to serve the City of DeLand. He had the opportunity to spend a night with city staff during the recent storm event and he reported the city is a well-oiled machine. He thanked staff for all they do.

Mayor Cloudman stated the Fall Festival of the Arts was successful, even with the rain and cold.

ADJOURNMENT

There being no further business, the meeting was adjourned at 10:06 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, DECEMBER 5, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The meeting was called to order by Mayor Cloudman at 7:00 p.m.

Mayor Cloudman requested that anyone present who wishes to address the City Commission on an item appearing on tonight's agenda, or regarding an item not on the agenda, please fill out a Speaker's Card and give it to the City Clerk. The public has a right to speak about any item on which the City Commission is to take action.

INVOCATION

Pastor Peter Migner, The Nazarene Church DeLand, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Cloudman led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present
Commissioner Jessica Davis	Present
Commissioner Daniel Reed	Present
Commissioner Kevin Reid	Present
Mayor Chris Cloudman	Present

Mayor Cloudman announced that due to jury duty and illnesses, Assistant City Manager Mike Grebosz would be acting as City Manager and City Clerk this meeting.

ALSO PRESENT: Michael Grebosz, Assistant City Manager; Darren Elkind, City Attorney; Jason Umberger, Police Chief; Todd Allen, Fire Chief; Heidi Van Etten, Assistant Finance Director; Mike Holmes, Planning Director; Carol Kuhn, Deputy Planning Director; Mariellen Calabro, Deputy Public Works Director; Mark Hayward, Human Resources Director;; Rick Hall, Parks & Recreation Director; Corey McMillen, Purchasing Coordinator; Ray Bahrami, City Engineer, Chris Graham, Community Information Manager, members of the public and press.

PRESENTATIONS

Mayor Cloudman reordered the presentations.

1. (Formerly Item 2.) Introduction of Michael J. Degirolmo, DeLand High School Principal on Assignment

Mayor Cloudman introduced Mr. Degirolmo and asked him to address the City Commission and those present. He is a long-term resident of the City of DeLand and is proud to be serving the students and community of DeLand.

2. (Formerly Item 1.)Student Superstars of the Month
Mayor Cloudman stated this program was started several years ago at the request of Commissioner Davis. The program recognizes students from local schools and the accomplishments that have led each student to be the recipient of a Superstar of the Month Certificate. The students were asked to remain up front for a group picture once all certificates had been presented.

Commissioner D. Reed read the student names along with a description of why the student was chosen as a Super Star. Commissioner Davis presented the certificates. For the December 5, 2022, agenda, the City of DeLand Super Star Student of the Month recognizes:

Blue Lake Elementary: Khloe Galarza
Citrus Grove Elementary: Angel Cosme
DeLand High School: no submission
DeLand Middle School: Clara Price
DeLand Preparatory Academy:
Freedom Elementary: Samantha Munoz Machado
George Marks Elementary: Arlo Cohen
Southwestern Middle School: Sarah Tucker
St. Barnabas: Ethan Su
St. Peter's Catholic School: Bryce Martin
Starke Elementary: Miranda Vidalez Servin
Stetson Baptist: Zachary Floyd
TOP Academy: Maurice Smith
Woodward Avenue: Sophia Badilla

3. Resolution No. 2022-101, Honoring the Retirement of Chris Jusick

Commissioner Paiva read Resolution No. 2022-101, honoring Chris Jusick upon his retirement.

RESOLUTION NO. 2022-101

A RESOLUTION OF APPRECIATION AND RECOGNITION BY THE CITY COMMISSION OF THE CITY OF DELAND, FLORIDA, TO CHRIS JUSICK UPON HIS RETIREMENT AFTER TWENTY YEARS OF SERVICE TO THE CITY OF DELAND; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Detective Chris Jusick has dedicated his career to the safety and protection of our community, serving well and faithfully as a Detective of the DeLand Police Department; and

WHEREAS, Detective Chris Jusick, after twenty years of service to this community, will retire as a sworn police detective; and

WHEREAS, Detective Chris Jusick was hired as a Police Officer by the City of DeLand on October 7, 2002. Detective Jusick was initially assigned to the patrol Division where he quickly became a Field Training Officer. In September 2009, he transferred to the Criminal Investigations Division. Detective Jusick worked in this division for 14 years investigating major case crimes. In 2016, Detective Jusick was DeLand Police Department's Crime Stoppers Officer of the Year nominee for two homicide investigations in which the suspects were identified and prosecuted. In 2017, he was presented an award by the Statewide Prosecutors Office in front of the City Commission for his outstanding investigation while working with multiple law enforcement agencies in solving a string of violent robberies that resulted in the conviction of two subjects. He also earned several commendations from DeLand Police Department to include two Medals of Merit and received letters of appreciation from his command staff, Mayor Robert Apgar, Saint Peter Catholic Church, Volusia Sheriff's Office and the Federal Bureau of Investigation; and

WHEREAS, Detective Jusick's dedication and commitment to the City of DeLand, the City where he was raised, and to the DeLand Police Department has earned the respect, admiration, and high regard of his superiors, fellow officers, his peers with other law enforcement agencies in Volusia County, as well as that of the citizens of this community.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. That the City Commission of the City of DeLand does hereby honor Detective Chris Jusick for his twenty years of service to the City of DeLand and the DeLand Police Department for the duty, honor, courage, integrity, caring, respect, and loyalty he has devoted to the community.

Section 2. This resolution shall be spread upon the minutes of the city Commission of the City of DeLand as part of the permanent memento of the city's thanks and appreciation to detective Chris Jusick.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 5th day of December, 2022.

/s/ Christopher M. Cloudman
Mayor – Commissioner

Attest:
/s/ Julie A. Hennessy
City Clerk-Auditor

Commissioner Paiva moved approval of the resolution, seconded by Commissioner Kevin Reid, and unanimously approved.

4. Fire Department Badge Pinning Promotions: Joshua Brown, Megan Milks, Justin Pacifico, Ryan Kamine

Fire Chief Allen stated four individuals have earned the right to have their badges pinned on their uniforms. Each of the individuals was introduced to the City Commission approximately one year ago and have since completed the requirements necessary to receive their badges.

Joshua Brown's badge was pinned by his parents, David and Sharon Brown.
Megan Milks' badge was pinned by her husband, John.
Justin Pacifico's badge was pinned by his father, Vinney.
Ryan Kamine's badge was pinned by his father, Chuck.

CONSENT AGENDA

1. Resolution re Surplus of Glock Firearm for Detective Chris Jusick upon his Retirement
2. Consideration re Gateway Grant Request for 400 South Woodland Boulevard
3. Resolution Approving Amendment #3 to Florida Department of Public Transportation Grant Agreement FM 438416-1-94-01 for Hangar Construction
4. Consideration re Change Order #1 – Fire Station No. 81 Reserve Garage
5. Consideration re Award of Bid from Data Flow Communications for Network Switches
6. Consideration re Scope of Services for Professional Engineering Services for Airfield Marking and Signage Assessment

Commissioner Reid pulled Item 2 from the consent Agenda.

Commissioner Paiva made a motion to approve consent items 1 and 3-6. Commissioner Reid seconded the motion, which carried by a unanimous vote.

Commissioner Reid mentioned, with regard to consent item 2, staff is working on ways to expand the eligibility of some of the potential improvements. He would like to see the funds used.

Nick Conte, Economic Development Manager, stated an aggressive program was put into place last year. He agreed with Commissioner Reid and stated staff will be looking at the program again.

Commissioner Reid made a motion to approve consent agenda item 2. Commissioner Paiva seconded the motion, which carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

The speaker did not wish to state his name. He was interested in getting flood lights for the Southwestern Middle School football field. The only lights present at that location are streetlights. He does not know who to talk to.

Commissioner Davis said there is a field behind the school and teams do practice at that location. She asked for the speaker's name and address to begin proper communications. The school is in Volusia County, and communications will need to take place with the school board. She told Mr. James Footman, 736 West Lisbon Parkway, she would try to get the process started. She asked Mr. Footman to leave his telephone number with staff for follow-up.

Mr. Elkind has become familiar with the process of getting lights on a ballfield. He said lighting is significantly expensive to purchase, install and maintain. To the extent that other agencies or entities would like to partner with the school board for funding, it seems to be an opportunity to get things done.

Commissioner Paiva pointed out the field is in the Spring Hill CRA. He said there is reserve funding in the CRA and this may be looked at along with other CRA projects.

NEW BUSINESS

1. Resolution Approving Amendment to the City of DeLand's Personnel Rules and Regulations

Mark Hayward, Human Resources Director, presented an 18-month cycle involving a rewrite of the Personnel Rules and Regulations. This will update the policies for the City, making it more efficient and logistically and financially sound.

The City Insight and Innovation Committee has been extremely helpful with input and moving this process forward. He also thanked Carrie Lasky, HR Administrator and Julia Dundon, college intern, who have been phenomenal in assisting with getting this document to completion.

Commissioner Reid raised questions about paid maternity leave, which is not currently in the budget. Mr. Grebosz said the paid maternity/paternity leave was not in the budget but was going to be brought back to the City Commission for inclusion in the budget. Mr. Stauffer, Finance Director, addressed the budget questions.

Commissioner Davis thanked the committee members for working on the update of the city's personnel rules and regulations. She supports the direction put in place by staff and the committee.

Commissioner Reid asked how disability leave and maternity leave relate. Mr. Hayward explained that short term disability is bought by city employees through AFLAC. Mr. Hayward also explained the linkage between FMLA and maternity leave.

Commissioner Paiva asked for additional information about the use of the maternity leave program during the budget process.

Commissioner Paiva moved to approve the resolution. Commissioner Davis seconded the motion, which carried by a unanimous vote.

2. Resolution Approving City's Purchasing Policy

Dan Stauffer stated this policy consists of updates and rewrites to include details and clarification of the process.

Commissioner Paiva made a motion to approve the resolution. Commissioner Davis seconded the motion, which carried by a unanimous vote.

3. Consideration re Change of Meeting Date, Dr. Martin Luther King, Jr., Holiday

Commissioner Davis made a motion to move the meeting to 7:00 p.m. on Tuesday, January 17, 2022. Commissioner D. Reed seconded the motion which carried by a unanimous vote.

Commissioner Davis commented the MLK festivities are being planned and she encouraged everyone to join the Facebook Page, DeLand MLK. The new Executive Director is Andre Darby and he is very engaged in the community.

CITY COMMISSION REPORTS

CITY MANAGER REPORT

Mr. Grebosz said Main Street Christmas Party invitations have been sent out for Monday, December 12, 2022, from 5:00 to 7:00 p.m. in the Main Street office.

Santa neighborhood visits will follow the regular schedule as published on the city's website.

CITY ATTORNEY REPORT

Nothing additional to report.

CITY CLERK REPORT

No report.

CITY COMMISSION

Commissioner Davis said the Christmas parade was excellent.

Commissioner D. Reed enjoyed the Christmas parade. He attended his first River of Lakes meeting today and is looking forward to serving on that committee.

Commissioner K. Reid reiterated kudos to staff on coordinating with Rotary on the parade. He said the tree lighting ceremony was also excellent. He thanked everyone for their hard work to make these events successful.

Commissioner Paiva had nothing additional to report.

Mayor Cloudman noted that a large crowd attended the tree lighting and he looks forward to building on that event. The Christmas parade was also wonderful, one of the largest ever. It is great to see all of the vibrancy in town.

Later this week, the Volusia League of Cities will host a dinner in Daytona Beach.

Mayor Cloudman said the MESTRONG event is moving forward and later this year, the race will be held downtown.

Scrooge is at the Athens Theater and worth going to see.

ADJOURNMENT

There being no further business, the meeting was adjourned at 8:13 p.m.

Prepared by:
Julie A. Hennessy, MMC
City Clerk – Auditor

Approved on:
_____
Date

MINUTES FOR A REGULAR MEETING OF
THE CITY COMMISSION OF THE CITY OF DELAND
HELD ON MONDAY, DECEMBER 19, 2022, AT 7:00 P.M
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

CALL TO ORDER

The Regular Meeting of the City of DeLand City Commission was called to order by Mayor Cloudman on Monday, December 19, 2022, at 7:00 PM in the City Commission Chambers, 120 South Florida Avenue, DeLand, Florida.

INVOCATION

Pastor Mark Schrade, First Assembly DeLand, gave the Invocation.

PLEDGE OF ALLEGIANCE

Mayor Cloudman led the Pledge of Allegiance.

ROLL CALL

Commissioner Charles Paiva	Present	Commissioner Kevin Reid	Present
Commissioner Jessica Davis	Present	Mayor Chris Cloudman	Present
Commissioner Daniel Reed	Present		

PRESENTATIONS

1. Employee Years of Service Awards

   Commissioner Dan Reed presented a 15-year service award to Jonathan C. Jacob of the City Clerk's Office. Family members were invited to join for photographs.

2. Approving Resolution No. 2022-102, Honoring the Retirement of Chalen Godwin

   Commissioner Jessica Davis read Resolution No. 2022-102 honoring the retirement of Sergeant Chalen Godwin for 23 years of service to the city. Commissioner Paiva moved approval of the Resolution. Commissioner Davis seconded the motion. The motion was unanimously adopted.

   Mayor Cloudman called for Consent agenda 1 to be considered at this time.

Consent Agenda Item 1. Resolution Approving Surplus of Glock Firearm for Sergeant Chalen Godwin Upon His Retirement

Commissioner Paiva moved approval of this resolution. It was seconded by Commissioner Davis and unanimously adopted.

Chief Umberger expressed his appreciation of Sgt. Chalen and Members of the Commission offered their congratulations.

CONSENT AGENDA

2. Resolution Approving Carryforward for FY 2022-2023 Budget Amendment.
3. Resolution Approving FY 2022-2023 Budget Amendment
4. Consideration re Contract Renewal with ePermitHub
5. Consideration re Assignment and Assumption of Lease Agreement Gilbert Propane, Inc. to ThompsonGas, LLC.

Commissioner Paiva made a motion to approve consent items 2-5. Commissioner Kevin Reid seconded the motion, which carried by a unanimous vote.

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT OLD BUSINESS

Mr. Anthony O'Dell addressed the City Commission regarding black bears and the importance of preserving their habitat and their prevalence near urban areas.

Mr. Robert Johnson addressed the City Commission regarding potential violations of the separation of church and state with religious groups stationing themselves and proselytizing directly in front of government institutions such as the Courthouse and the Library.

OLD BUSINESS

1. Second Reading of Ordinance No. 2022-32, Amending Chapter 21, Section 21-29 of the Code of Ordinances Relating to Panhandling.

   Mr. Elkind read the ordinance by title only.

   Mayor Cloudman opened the public hearing.

   City Attorney Elkind presented the constitutional framework for developing this ordinance and its limitations in that panhandling cannot be prohibited city wide. City Manager Micheal Pleus answered questions about signage and a forthcoming educational campaign relating to the ordinance.

   There were no public comments.

   Mayor Cloudman closed the Public Hearing.

   Commissioner Paiva moved approval of Ordinance. Commissioner Dan Reed seconded the motion, which was approved on roll call vote.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

2. Second Reading of Ordinance No. 2022-38, Changing the Land Use for Approximately 1.47 Acres of Property, Located on the Southeast Corner of South Clake Street and Voorhis Avenue, from Medium Density Residential to Downtown Commercial

   Mr. Elkind read the ordinance by title only.

   Mayor Cloudman opened the public hearing.
   There were no public comments.
   Mayor Cloudman closed the Public Hearing.

   Commissioner Paiva moved approval of Ordinance 2022-38. Commissioner Davis seconded the motion, which was approved on roll call vote.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

3. Second Reading of Ordinance No. 2022-39, Changing the Zoning from Palm Garden Cottages PD to C-2A, Downtown Commercial, on Approximately 1.47 Acres of Property, Located on the Southeast Corner of South Clake Street and Voorhis Avenue.

   Mr. Elkind read the ordinance by title only.

   Mayor Cloudman opened the public hearing.
   There were no public comments.
   Mayor Cloudman closed the Public Hearing.

   Commissioner Paiva moved approval of Ordinance 2022-39. Commissioner Dan Reed seconded the motion, which was approved on roll call vote.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

4. Resolution Approving Class IV Site Plan, DeLand Commons.
   City Attorney Darren Elkind explained that this was a quasi-judicial hearing and that the criteria for approval or denial are based upon a determination of whether the site plan met the requirements of the code.

   Planning Director Mike Holmes reviewed the Site Plan.

Commissioner Paiva inquired as to the connections to the bike lane and Mr. Holmes indicated that the lane would remain. Commissioner Paiva would like to reserve the right-of-way for a future linkage to the proposed West Voorhis bike lane.

Commissioner Kevin Reid inquired about whether screens would be allowed.

Mr. Holmes stated that could be addressed but he would defer to the applicant.

Mr. Mark Watts, Cobb Cole, was present on behalf of the developer and introduced members of the applicant's planning team. He reviewed a history of planning process and the site plan. Mr. Watts explained streetscaping, the landscape plan, and building facades on both Woodland and Voorhis Avenues. Mr. Watts stipulated that he would be happy to add a provision prohibiting screens on the Woodland Blvd. façade. He ended by showing standards for the townhomes.

Commissioner Paiva asked how concerns regarding the bike path could be addressed from a process standpoint.

Mr. Elkind stated a condition could be added or the application could be continued.

Mr. Watts explained how automobile and bicycle parking needs were determined.

In response to questions from Commissioner Kevin Reid, Mr. Watts stated that the oak trees in the right of way would remain. Mr. Watts also stated that parking would be assigned to residents and signage would be erected for commercial uses. Limitations on balcony usage, such as for towel drying, was also discussed.

Mayor Cloudman asked about signage. Mr. Watts stated that it would follow code requirements.

Mayor Cloudman asked about architectural elements. The architect for the project explained how he was trying to complement downtown elements. Jim Wachtel, with DJ Design, explained that he reviews architecture on behalf of the City and he explained that the initial review focused on Woodland Blvd. facades. He explained the motifs, and roof lines, and the different elements that were looked at. The attempt was to be complementary.

Commissioner Dan Reed said he was hoping the look would be more "vintage". Mr. Watts explained that the location of the building on the south side of downtown blends elements of architecture from buildings located north of New York Avenue with those of buildings located closer to the muti-modal center.

Commissioner Davis asked questions about parking and about affordable housing.

Peter Mollers who lives and walks through downtown, stated he did not like the boxy look of this building, and he did not think these buildings will stand the test of time.

Mr. William Hoffman stated that this is the gateway of historic downtown and the south side of the building does not create a sense of entry to downtown. In addition, he thought the entrances to the building needed to be improved as well as the roofline. He also does not think the use of Hardy board is in keeping with the historic area.

Mr. Tushar Patel asked about the setbacks of the building, and he was concerned that the height of buildings would block light to the Artisan. He was also concerned about damages to the Artisan during construction.

Mr. Watts stated the set back was fifteen feet from the Artisan property line, which exceeds the requirement. They will address construction impacts during the process and do not want to cause any concern.

Mr. Watts cited numerous examples of architecture styles and roof types that are similar to this proposed building. He explained that they have designed and resubmitted numerous times to achieve an architectural style that is complementary to the varied architecture of downtown. Mr. Watts also stated he would be willing to provide a mechanism to accommodate a tie-in to bike trails. There is also a mid-block pedestrian crossing shown on the plan.

Mayor Cloudman referenced the parking requirement waiver being requested, and questioned the number and type of bicycle parking spaces being provided.

Commissioner Dan Reed stated he did not think there was enough parking. Mr. Watts explained that the project would have a parking management plan, and that many successful businesses have operated with parking deferrals.

Commissioner Paiva indicated that he was comfortable with the number of spaces, but he would want them to be allowed for off-premise use in addition to what is provided in the building.

Mayor Cloudman expressed the need to develop an overall parking plan for downtown commercial uses, but that parking should be provided for the residents. Commissioner Reid agreed.

Mr. Watts indicated that they wanted people to enjoy downtown, and he is willing to work with staff to develop a parking management plan that would prevent people from being towed from their site for visiting a different downtown business.

Commissioner Paiva pointed out the parking improvements that are being planned in downtown.

Commissioner Dan Reed expressed his concerns about the architecture and the balconies on Woodland Blvd.

Commissioner Reid expressed his concerns regarding the architecture and the use of Hardy board on the Woodland Blvd. facade.

Mayor Cloudman explained that he thought the buildings were flat and could be improved.

In response to Commissioners Paiva's questions about process, Mr. Elkind stated the request could be continued to ask for additional information regarding the parking deferral and to also ask for some additional changes to building elements.

Commissioner Reid asked for the following along Woodland Blvd.: a staggered roof line; greater building relief than 16 inches so that it looks like the building is comprised of multiple

buildings; incorporation of architectural elements from the Artisan whether it be some stucco or archways. The building is too uniform as proposed along Woodland Blvd.

Commissioner Paiva asked for brickwork, or partial prick work, up to the third floor.

Mr. Watts said that he understood about the architecture. He would like clarification on the parking deferral, and asked if he came back with an acceptable parking management plan, would the number of spaces provided be acceptable?

Commissioner Paiva indicated numbers are acceptable, but a good management plan needs to be provided.

Mayor Cloudman closed the Public Hearing.

Commissioner Paiva moved to continue this application. Commissioner D. Reed seconded the motion, which was approved on roll call vote.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion carried 5-0.

Mayor Cloudman recessed the meeting .
Mayor Cloudman called the meeting back to order at 9:50 pm.

5. Second Reading of Ordinance No. 2022-33, Changing the Zoning of 0.18 Acre of Property from R1A (Single-Family) to C-2A (Downtown Commercial) Located at 210 West Wisconsin.

Darren Elkind read the ordinance by title only

Mayor Cloudman opened the public hearing.
There were no public comments.
Mayor Cloudman closed the Public Hearing.

Motion to approve Ordinance No. 2022-33 on second reading was made by Commissioner Paiva and seconded by Commissioner Davis.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion carried 5-0.

6. Second Reading of Ordinance No. 2022-34, Changing the Zoning from The Cascades PD to Pointe Grand Apartments PD to Develop a Multi-Family Residential Project, on Approximately 14.57 Acres of Property, Located on North Spring Garden Avenue, South of Clear Lake Drive.

   Darren Elkind read the ordinance by title only

   Mayor Cloudman opened the public hearing.

   The applicant's representative confirmed that all three items outstanding from the first reading had been addressed: a definition of "medical professionals" was agreed upon with the City Attorney; the reserve allocation for medical professionals was increased from 15% to 20%; and the concept plan was revised to depict a 25-foot landscape buffer.

   Mayor Cloudman closed the Public Hearing.

   Motion to approve Ordinance No. 2022-34 on second reading was made by Commissioner Charles Paiva and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

7. Second Reading of Ordinance No. 2022-35, Annexing 4.87 Acres of Property Located at the North East Corner of East Wisconsin Avenue and Miller Road.

   Darren Elkind read the ordinance by title only

   Mayor Cloudman opened the public hearing.
   There were no public comments.
   Mayor Cloudman closed the Public Hearing.

   Motion to approve Ordinance No. 2022-35 on second reading was made by Commissioner Charles Paiva and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

8. Second Reading of Ordinance No. 2022-36, Changing the Land Use of 4.87 Acres of Property, from Volusia County's Urban Low Intensity to City of DeLand Urban Low Intensity, for Property Located at the North East Corner of East Wisconsin Avenue and Miller Road

   Darren Elkind read the ordinance by title only

   Mayor Cloudman opened the public hearing.
   There were no public comments.
   Mayor Cloudman closed the Public Hearing.

   Motion to approve Ordinance No. 2022-36 on second reading was made by Commissioner Charles Paiva and seconded by Commissioner Dan Reed.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

9. Second Reading of Ordinance No. 2022-37, Changing the Zoning for 4.87 Acres of Property, Located at the NE Corner of E. Wisconsin Ave. and Miller Rd., from Volusia County R-3A to City of DeLand Planned Development (The Canopy at Blue Lake PD)

   Darren Elkind read the ordinance by title only

   Mayor Cloudman opened the public hearing.
   There were no public comments.
   Mayor Cloudman closed the Public Hearing.

   Motion to approve Ordinance No. 2022-37 on second reading was made by Commissioner Charles Paiva and seconded by Commissioner Davis.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

   Motion carried 5-0.

NEW BUSINESS

1. First Reading of Ordinance Changing the Zoning of 0.533 Acre of Property Located at 216 South Florida Avenue from C-2 (General Commercial) to C-2A (Downtown Commercial)

City Attorney Elkind read the ordinance title into the record.

Mayor Cloudman opened the Public Hearing.

The applicant's representative, George Denison, confirmed that the rezoning request was intended solely to bring the property into compliance with its existing Downtown Commercial land use designation. No commission questions or public comments were offered.

Mayor Cloudman closed the Public Hearing.

Motion to approve the First Reading of the Ordinance changing the zoning at 216 South Florida Avenue from C-2 to C-2A was made by Commissioner Paiva and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion carried 5-0.

2. Resolution Approving Preliminary Plat, Trinity Gardens Subdivision

Planning Director Holmes presented the item and noted the project was consistent with prior rezoning approval. The applicant's representative, Sean Fortier, P.E. of KCG Corp., was present. Mayor Cloudman inquired about potential stormwater concerns in light of recent storm events. Mr. Fortier noted that the project employs low-impact development (LID) techniques that exceed code requirements and that the site features positive drainage to the northeast corner, allowing for pond recovery—a key distinction from closed-basin situations that caused flooding issues in other parts of the city. Mayor Cloudman also inquired about traffic phasing and the future extension of Beresford Avenue. City Attorney Elkind confirmed that the resolution incorporates specific unit count limitations tied to the completion of a second access point, consistent with guidance from the county engineer, and that a proportionate share payment in excess of one million dollars is being paid by the developer to the county.

Motion to approve the Resolution Approving Preliminary Plat, Trinity Gardens Subdivision was made by Commissioner Paiva and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion carried 5-0.

3. Resolution Approving Final Plat for the Oak Grove Residential Subdivision

The applicant's representative, Lance Jackson of Amherst Homes, confirmed the plat had completed the review process. No further discussion occurred.

Motion to approve the Resolution Approving Final Plat for the Oak Grove Residential Subdivision was made by Commissioner Paiva and seconded by Commissioner Davis.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion carried 5-0.

4. Consideration re Amendment and Restatement of Section 6 of Limited Lease Agreement Relating to Melching Field at Conrad Park Baseball Stadium

Mayor Cloudman recused himself due to his employment and turned the meeting over to Vice Mayor Paiva for this item.

Parks Department staff provided an update on construction progress and noted the deadline of February 17, 2023, at 7:00 PM, when the first pitch was scheduled. Staff expressed cautious optimism that the project would be delivered on time.

It was noted that the amendment increases the project budget cap to $8.2 million, an increase of $1.5 million, with Stetson University contributing half of the increase consistent with the existing cost-sharing arrangement. The additional cost is to be funded from the city's capital reserve. City Manager Michael Pleus confirmed Stetson's concurrence with the amendment.

Motion to approve the Amendment and Restatement of Section 6 of the Limited Lease Agreement Relating to Melching Field at Conrad Park Baseball Stadium was made by Commissioner Davis and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	ABSTAINED
Commissioner D. Reed	YES		

Motion Carried 4-0 with Mayor Cloudman Abstaining

Mayor Cloudman returned to the dais

5. Consideration re Melching Field - Design Build Contract - Wharton Smith - Change Order Number 2

Motion to approve Change Order Number 2 to the Wharton-Smith Design Build Contract for Melching Field was made by Commissioner Paiva and seconded by Commissioner Kevin Reid.

Commissioner Paiva	YES	Commissioner K. Reid	YES
Commissioner Davis	YES	Mayor Cloudman	YES
Commissioner D. Reed	YES		

Motion Carried 5-0.

6. Consideration re Change of Meeting Date, New Year's Day Holiday

Staff recommended rescheduling the January 2, 2023 regular meeting to Tuesday, January 3, 2023, due to the federal observation of New Year's Day on January 2 and the associated city closure and school holiday.

Motion to reschedule the January 2, 2023 City Commission meeting to January 3, 2023, was made by Commissioner Paiva and seconded by Commissioner Dan Reed.

The motion carried unanimously.

CITY COMMISSION REPORTS

1. Report re Elected Officials Round Table

Mayor Cloudman reported that the Elected Officials Round Table convened and included a round-robin update from each city and the county on recovery efforts from Hurricanes Ian and Nicole. Presentations were provided by FEMA and the Small Business Administration highlighting available recovery resources, particularly for residents on the east side of the county. A presentation was also given on Barracks of Hope, a housing initiative for homeless veterans.

2. Report re River-to-Sea TPO

Mayor Cloudman reported that the River-to-Sea Transportation Planning Organization (TPO) now has a permanent Executive Director, Ms. Colleen Nicholson, following execution of her employment agreement. The TPO approved updated policies for current compliance and approved priority project applications for traffic operations and safety local initiative projects. A call for projects is open through the end of February for the next priority consideration cycle. A presentation and discussion on the I-95 corridor overview was held and will return for a vote the following month.

3. Report re River of Lakes Heritage Corridor

Commissioner Dan Reed reported on his first meeting as the Commission's representative to the River of Lakes Heritage Corridor committee. He noted that Florida has 1,600 miles of designated scenic highways, 860 of which are located in Volusia County. He also highlighted an upcoming active transportation workshop being coordinated through the River to Sea Loop Alliance, focused on improving trail accessibility and bike-walk-roll connectivity in Volusia and Seminole counties.

CITY MANAGER REPORT

City Manager Michael Pleus reported that he, Mayor Cloudman, Chad Gamble, and Mike Grebosz would be meeting with Representative Webster Barnaby and Senator Tom Wright the following day to discuss legislative budget appropriations. The two priority requests are the wastewater treatment plant and a bridge project, with both legislators being sought as sponsors. City Manager Pleus also extended holiday greetings to the Commission and public, thanking the Commission for their support of staff throughout the year.

CITY ATTORNEY REPORT

No report was given.

CITY CLERK REPORT

No report was given

CITY COMMISSION

Commissioner Paiva extended holiday greetings and expressed enthusiasm for the new Commission's first year ahead.

Commissioner Dan Reed extended holiday greetings and best wishes for the new year.

Commissioner Davis thanked the Police and Fire Departments for their participation in the annual "Riding with Santa and the Grinch" event on December 9th, noting that the event reached new neighborhoods and was enthusiastically received by residents.

Commissioner Kevin Reid extended holiday greetings and wished the public a Happy New Year.

Mayor Cloudman recognized several recent community events, including the Main Street Christmas party, the Second Annual Walkthrough Christmas organized by Parks and Recreation, and the Free Will Barbecue Christmas at the Neighborhood Center, where several hundred community members were served. He noted upcoming events including the SpringHill Resource Center toy giveaway on December 20th, a meeting with FDOT Secretary Tyler on January 4th, the Volusia County Council swearing-in ceremony on January 5th, the final leg of the Tiger Tugboat journey from Astor to DeLand on January 15th, and the Martin Luther King Jr. celebrations scheduled for the weekend of January 16th, including the return of the annual breakfast and march to Earl Brown Park.

ADJOURNMENT

There being no further business, Mayor Cloudman adjourned the meeting.

_____

Julie A. Hennessy, MMC

City Clerk – Auditor

RESPECTFULLY SUBMITTED:



_____

Christian D. Gowan, MPA, CMC

City Clerk

APPROVED ON:

_____

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Approval of the Minutes: Monday, July 6, 2026 City Commission Regular Meeting

DEPARTMENT: City Clerk

PREPARED BY: Christian Gowan, City Clerk

ATTACHMENTS: MIN.CC.2026.07.06

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High Value Government

SUSTAINABILITY:

N/A

FISCAL IMPACT:

N/A

RECOMMENDATION:

Staff recommends the City Commission review and approve the minutes as prepared and presented

BACKGROUND/DISCUSSION:

N/A

CITY OF DELAND
REGULAR MEETING OF THE CITY COMMISSION
JULY 6, 2026 AT 7:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

MINUTES

CALL TO ORDER

Mayor Cloudman called the meeting to order at 7:05 p.m.

INVOCATION - Angelo Parra, Central Florida Freethought Community

Mr. Angelo Parra of the Central Florida Freethought Community offered the Invocation.

PLEDGE OF ALLEGIANCE

ROLL CALL

Mayor Christopher Cloudman, present
Vice Mayor Jessica Davis, absent
Commissioner Richard Paiva, present
Commissioner Dan Reed, present
Commissioner Kevin Reid, present

Also Present: Michael Pleus, City Manager; Darren Elkind, City Attorney; Christian Gowan, City Clerk-Auditor; Michael Grebosz, Assistant City Manager; Jason Umberger, Police Chief; Adam Kisthardt, Deputy Police Chief; Todd Allen, Fire Chief; Sarah Lux, Community Information Manager; Rick Werbiskis, Community Development Director; Carol Kuhn, Planning Director; Rachel Booth, Deputy Planning Director; Chris Carson, Senior Planner; Jeremy Wiggins, Human Resources Director; Ray Underwood, Public Works Director; Mariellen Calabro, Deputy Public Works Director; Ray Bahrami, Director of Engineering; Jim Ailes, Utilities Director; Scott Zender, Deputy Utilities Director; Dan Stauffer, Finance Director; Heidi VanEtten, Assistant Finance Director; Alberto Cirelli, IT Director; Rick Hall, Parks and Recreation Director; Brandi Weaver, Customer Service Manager; and members of the public and press.

PRESENTATIONS

1. Presentation re: Hometown Heroes

   Sarah Lux, Community Information Manager noted the attendance of Hometown Heroes. Mayor Cloudman read the names of this year's Hometown Heroes[1] and those in attendance took a photograph with the Commission.

2. Introduction of one new Police Officer: Michael Bullock

   Chief Umberger introduced Officer Michael Bullock to the community.

3. Presentation of Employee Years of Service Awards

   Commissioner Dan Reed announced the recognition of Lieutenant Adam Stacy for ten (10) years of service to the City of DeLand.

   Commissioner Kevin Reid announced the recognition of Firefighter Michael Mueller for twenty (20) years of service to the City of DeLand.

CONSENT AGENDA

UNAPPROVED

1. Approval of Minutes: May 2, 2022; May 16, 2022; June 6, 2022; June 20, 2022; July 5, 2022; July 18, 2022; August 1, 2022; August 15, 2022; September 7, 2022 City Commission Regular Meetings

2. Approval of Minutes: July 25, 2022 City Commission Special Meeting

3. Approval of the Minutes: Monday, June 15, 2026 City Commission Regular Meeting

MOTION TO APPROVE THE CONSENT AGENDA.

MOTION BY COMMISSIONER PAIVA. SECONDED BY COMMISSIONER DAN REED.

THE MOTION CARRIED UNANIMOUSLY (4-0).

PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

Randy Williams shared his thanks to the community and offered a prayer.

Jessica Turnbull asked the Commission for an update on her organization's proposed facility use proposal for the Chisholm Center.

OLD BUSINESS

1. Second Reading of Ordinance 2026-17: Changing the Zoning for ± 2.02 Acres of Property, Located at 1500 S. Adelle Avenue, from Springwood Town Homes PD (Planned Development), to R-16 (Multiple-Family Dwelling).

City Attorney Darren Elkind read Ordinance 2026-17 by title and Mayor Cloudman then opened the public hearing.

Chris Carson, Senior Planner, reviewed the request, approval criteria, and noted staff's recommendation of approval. The applicant was present and available for questions.

Mayor Cloudman closed the public hearing.

MOTION TO APPROVE OLD BUSINESS ITEM 1 (Ordinance 2026-17: Changing the Zoning for ± 2.02 Acres of Property, Located at 1500 S. Adelle Avenue, from Springwood Town Homes PD (Planned Development), to R-16 (Multiple-Family Dwelling)).

MOTION BY COMMISSIONER PAIVA. SECONDED BY COMMISSIONER KEVIN REID. DISCUSSION.

VOTE: PAIVA (AYE); DAN REED (AYE); KEVIN REID (AYE); CLOUDMAN (AYE)
MOTION CARRIED 4-0.

NEW BUSINESS

1. First Reading of Ordinance 2026-18: Abandoning ± 0.09 Acres of Right-of-Way along W. Walts Avenue and S. Palmetto Avenue.

UNAPPROVED

City Attorney Darren Elkind read Ordinance 2026-18 by title and Mayor Cloudman then opened the public hearing.

Chris Carson, Senior Planner, reviewed the request and staff's recommendation of approval. The applicant was not present. Brief discussion followed on the need for the right-of-way and increases to allowable density.

Mayor Cloudman closed the public hearing.

MOTION TO APPROVE NEW BUSINESS ITEM 1 (First Reading of Ordinance 2026-18: Abandoning ± 0.09 Acres of Right-of-Way along W. Walts Avenue and S. Palmetto Avenue.)

MOTION BY COMMISSIONER PAIVA. SECONDED BY COMMISSIONER DAN REED. DISCUSSION.

VOTE: PAIVA (AYE); DAN REED (AYE); KEVIN REID (AYE); CLOUDMAN (AYE) MOTION CARRIED 4-0.

CITY COMMISSION REPORTS

1. Report re Elected Officials Round Table.

2. Report re Volusia-Flagler TPO.
   Mayor Cloudman noted the TPO had met on June 24, 2026 to wrap up the fiscal year and adopt the prioritized project list. Mayor Cloudman further noted that the Florida Department of Transportation (FDOT) representative had changed and shared that Votran was expanding the VoRide service to the east side of the county.

3. Report re River of Lakes Heritage Corridor.
   Commissioner Dan Reed noted that the River of Lakes Heritage Corridor was scheduled to meet during the evening of July 9, 2026 and that he would be unable to attend due to the city's scheduled budget workshop.

CITY MANAGER REPORT

City Manager Michael Pleus noted that Vice Mayor Davis had planned a number of community meetings and asked if there was objection to using funds currently budgeted for "Coffee with a Commissioner" to provide some food for the planned clergy meeting on Saturday, July 11, 2026. There was brief discussion on the need to discuss these events as a body prior to scheduling but no objection to the use of the funds.

CITY ATTORNEY REPORT

No report.

CITY CLERK REPORT

City Clerk Christian Gowan noted that he had recently sent an update to the Commission on the ongoing work in the City Clerk's Office and noted plans to continue to keep the Commission apprised. He further noted planned board appointment items at future meetings and reviewed some current vacancies.

CITY COMMISSION

UNAPPROVED

Commissioner Paiva noted his attendance, as well as other city officials and staff, at the groundbreaking ceremony of the Neighborhood Center's tiny home community. Commissioner Paiva also noted his attendance at the Firecracker Festival event and noted appreciation to Sarah Lux, Community Information Manager, for her ongoing work with the DeLand DeLivers campaign.

Commissioner Kevin Reid shared his appreciation to staff and all that made the Firecracker Festival a success and acknowledged the amount of work that goes into not only the day of the event but the preparation and cleanup.

Commissioner Dan Reed noted that he was sad to have missed the Firecracker Festival for the first time.

Mayor Cloudman echoed comments praising the Firecracker Festival and noted he thought this was the best one yet.

ADJOURNMENT

Mayor Cloudman adjourned the meeting at 7:45 p.m.

RESPECTFULLY SUBMITTED:

APPROVED;

_____

Christian D. Gowan, MPA, CMC
City Clerk- Auditor

_____

UNAPPROVED

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Appointment of Four (4) Members to the Public Mural Art Committee

DEPARTMENT: City Clerk

PREPARED BY: Dale Arrington, Interim City Clerk

ATTACHMENTS: ORD. 2021-18 creating PMAC, Reso. 2021-31 Appointing initial PMAC and establishing terms, Reso 1990-52 city board rules, 2026 Public Mural Art Committee Membership, Holland resignation, Abar, Randy A., Abar, Randy A. supplement, Baugh, Bobbi, Casto, Isabella, Clark, Andrea, Ellis, Susan G., Ellis, Susan G-Resume, Finkle, Andrea, Group, Erica, Holt, Shannon L. (2), Homan, Thomas Edward, LaFortune, Jason, Luby, Paul, Martinez, Tomas A., Niven, Amy B., Sweeney, Liam T., Sweeney, Liam resume 2026, Tobias, Elias, Underriner, Martha, Underriner, Martha Resume, Wilton, John application p1, Wilton, John p2, Wilton, John p3

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

Ordinance 2021-18 created the Public Mural Art Committee to oversee the City's Mural Art Program. The Public Mural Arts Committee consists of five members appointed by the City Commission with the following two qualifications:

- "Shall have a background or other involvement in artwork as determined by the City Commission . . . ".
- "Unless people who meet this requirement have not volunteered to serve on the Public Mural Art Committee, a majority of the members of such committee shall either live, work, volunteer or own property in the Greater DeLand Area."

City Resolution 2021-31 appointed the initial members of this Committee, and established four-year terms for members following completion of the initial term. Terms commence in June.

Attached is a listing of the current membership. Three positions expired in June of 2025, and the incumbents have been serving in the new term, with an expiration of June 2029, until appointments are made. Ms. Bobbi Bough, Ms. Erica Group and Mr. John Wilton have requested reappointment and their applications are included in this package. In addition, Ms. Anslee Holland, has resigned from the Board and her seat needs to be filled until the term expires in June 2027.

Including the requests for reappointment, 17 applications have been received. All applicants appear to meet the criteria to "live, work, volunteer or own property in the Greater DeLand Area." Background and involvement in Artwork is determined by the City Commission.

Presented below is an alphabetical listing of the applicants.

1. Randy A. Abar
2. Bobbi Baugh

3. Isabella Casto
4. Andrea Clark
5. Susan Ellis
6. Andrea Finkle
7. Erica Group
8. Shannon L. Holt
9. Thomas Edward Homan
10. Jason LaFortune
11. Paul Luby
12. Tomas A. Martinez
13. Amy B. Niven
14. Elias Tobias
15. Liam T. Sweeney
16. Martha Underriner
17. John Wilton

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Preserving and Enhancing the Sense of Community.

SUSTAINABILITY:

N/A

FISCAL IMPACT:

Appointments will not have a fiscal impact.

RECOMMENDATION:

Four appointments need to be made. The City Commission is requested to select applicants for each Seat 1, 3, and 5 with terms expiring in June 2029. The three incumbents in these positions have requested reappointment (Bobbi Baugh, Erica Group and John Wilton.) Seat 4 with a term expiring in June 2027, needs to be filled due to a resignation.

BACKGROUND/DISCUSSION:

ORDINANCE NO. 2021 - 18

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, RELATING TO MURALS AS PUBLIC WORKS OF ART; CREATING A PUBLIC MURAL ART COMMITTEE; PROVIDING FOR THE ADOPTION OF A PROCEDURE RELATING TO THE APPROVAL AND PLACEMENT OF MURALS WITHIN THE CITY AS WELL AS RELATED MATTERS; REPEALING SECTION 33-94.03(B)5A(5) OF THE CODE OF ORDINANCES OF THE CITY OF DELAND; PROVIDING FOR FINDINGS AND INTENT, FOR IMPLEMENTING ADMINISTRATIVE ACTIONS, A SAVINGS PROVISION, CONFLICTS, SEVERABILITY, CODIFICATION AND AN EFFECTIVE DATE.

WHEREAS, the City Commission of the City of DeLand desires to establish a comprehensive program relating to the installation of murals as public works of art within the City in keeping with the vitality and historic ambiance of the City, for which it is highly recognized; to enhance and expand the public's experience of, and exposure to, culture through various art forms; to enhance the appearance of streetscapes, public facilities and places; to improve the artistic and cultural environment of the City for its citizens; and to enhance the economic and tourist development of the City; and

WHEREAS, the City Commission intends that the murals which are part of the City's public art program, as provided for herein, reflect the cultural and ethnic diversity of the City and declares it a policy of the City that consideration be given to the cultural and ethnic diversity of the murals which the City chooses for display in the public art program; and

WHEREAS, the adoption of the murals committee and policy as set forth herein will be beneficial to the citizens of the City of DeLand and is a sound step in the formulization and implementation of a comprehensive public arts program; and

WHEREAS, murals are artistic representations that are, typically, a one-of-a-kind, hand-painted, hand-tiled, or digitally printed image on the exterior wall of a building that does not contain any commercial message (i.e., does not advertise a business); and

WHEREAS, when carefully developed and approved, murals enhance the City's aesthetic value, sense of place and wellbeing and, if located strategically, murals can also serve to introduce and welcome visitors to the City while illustrating the City's past, present and vision for the future; and

WHEREAS, the policies and processes relating to the approval of murals as set forth in this Ordinance constitutes the implementation of public speech and does not confer any special rights of expression to any private party; and

WHEREAS, Section 33-94.03(b)5a(5) of the Code of Ordinances of the City of DeLand related to development projects provides for the use of "murals or artwork applied to exterior walls with approval of the planning board and city commission" as part of a long list of exterior design treatments that can be used to meet the requirements for issuance of a development order, and the City Commission desires to remove that provision, as it has never been used and the City does not desire to require any building owner to create artwork as a condition of any development order issued by the City; and

WHEREAS, the City Commission of the City of DeLand desires to engage in governmental speech in a manner that is beneficial to the public interest on matters such as those relating to public art and the enhancement of civic and cultural events as well as the overall ambience of the City; and

WHEREAS, Article VIII, Section 2, *Constitution of the State of Florida*, authorizes the City of DeLand to exercise any power for municipal purposes except as otherwise provided by law; and

WHEREAS, the City Commission determines that the adoption of this Ordinance is in the best interests of the health, safety and welfare of the citizens of the City of DeLand; and

WHEREAS, the prior recitals and the agenda materials relating to this Ordinance represent the findings and intent of the City Commission of the City of DeLand relative to the adoption of this Ordinance.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. Findings and Intent.

(a). The City Commission of the City of DeLand hereby adopts and incorporates into this Ordinance, as the findings and intent of the City Commission, the recitals (whereas clauses) to this Ordinance and the City staff report relating to this Ordinance.

(b). The provisions of this Ordinance are adopted pursuant to the statutory and constitutional home rule powers of the City and other controlling law.

(c). The City has complied with all requirements and procedures of Florida law in processing and advertising this Ordinance.

(d). The purpose of these policies relative to murals is, among other things, intended to create and maintain a strong community image, identity and a sense of place, through the approval of murals as high-quality public art, enhance and sustain property values and foster civic pride and community spirit.

Section 2. Creation of a Public Mural Art Committee.

(a). The City of DeLand Public Mural Art Committee is hereby created.

(b). The purpose of the Public Mural Art Committee is to oversee the matters assigned to the Committee as set forth in this Ordinance.

(c). The Public Mural Art Committee shall consist of five (5) members appointed by the City Commission, all of whom shall have a background or other involvement in artwork as determined by the City Commission and such other qualifications as established by resolution adopted from time to time by the City Commission.

(d). Unless people who meet this requirement have not volunteered to serve on the Public Mural Art Committee, a majority of the members of such committee shall either live, work, volunteer or own property in the Greater DeLand Area.

(e). No compensation will be paid for service on the Committee; provided, however, that travel expenses, if any, may be reimbursed in accordance with City policy.

(f). The Public Mural Art Committee shall meet at the call of City staff charged with administering the provisions of this Ordinance as often as necessary in order to adequately accomplish its duties.

(g). The Public Mural Art Committee shall operate in accordance with the provisions of controlling law and pursuant to bylaws that may be adopted all under the assistance and guidance of the City Attorney.

(h). The Chairperson of the Public Mural Art Committee shall be elected by the Committee and shall be responsible for the conduct of all Committee meetings. The Chairperson shall have the same voting rights as any other Committee member.

Section 3. Adoption of Mural Policy; Review Process.

(a). Murals, for purposes of this Ordinance, are defined as paintings, images, graphics, mosaics, frescos, or other artwork attached or applied directly to the exterior of an exterior wall surface that are visible to passersby and which do not direct attention to organizations, businesses, products, commodities or services, or other similar interests or activities. Murals are public art, not billboards or signs, and reflect public or governmental speech. Murals may be proposed to the City without solicitation, or the City may engage in a Request for Proposals (RFP) or otherwise seek proposals for murals as works of art from artists or property owners.

(b). Murals shall be evaluated by the Public Mural Art Committee based upon consideration of the following criteria and provisions:

(1). A mural must exhibit exceptional design, material, and application standards, while incorporating high-quality materials that will enhance the overall development and appearance of the site at which it is to be located.

(2). The materials used in developing a mural may consist of, but are not limited to, paint and other artistic mediums such as tile or mosaic, original digital images and low-relief sculpture. Paint utilized shall be intended for exterior use and of sufficient quality which will not corrode or compromise the integrity of the material to which it is applied.

(3). All materials used in the creation of a mural must be appropriate for outdoor location and climate, with special considerations for longevity or quality presentation during a planned period of display.

(4). A mural's color scheme shall be complementary and harmonious with the exterior colors of the building or structure, and consistent with the chosen theme.

(5). The design, location and scale of the mural shall be in keeping with and enhance the building on which the mural is to be located as well as the local environment.

(6). Murals shall not cover or detract from architectural features. Eaves, cornices and other architectural features shall keep their character and remain painted to match the rest of similar architectural features on the building.

(7). Murals shall not have an adverse effect on adjacent properties or facing properties.

(8). A mural's overall features shall be designed to enhance the City's unique character and quality of life.

(9). There shall be no exterior lighting directed upon the mural.

(10). Murals generally should not cover doors or windows or other architectural elements of a building such as cornices and pilasters.

(11). A mural that has been applied to another surface to be hung on a building shall be installed in a manner which does not damage the building it is attached to.

(12). Murals hung on historic masonry structures shall attach via the mortar and not by drilling into the historic brick or attached by other method which has been demonstrated not to damage the masonry.

(13). Murals may be applied to a separate material designed for exterior applications upon City approval, but only if it is demonstrated to the City that such materials are removable without damage to the walls upon removal of the mural.

(14). Each mural shall be an original work of art and all intellectual property rights issues shall be resolved.

(15). A budget, and funding source(s), for each mural shall be considered during the approval process.

(16). The time frame for completion of the mural and the plan for unveiling once completed.

(c). A mural shall be designed and installed under the supervision of a qualified artist/muralist or other qualified professional who has sufficient knowledge and experience in the design and execution of mural projects, as well as with the application of the selected medium. All mural proposals shall include the resume or statement qualifications of the artist proposed to supervise the work.

(d). The Public Mural Art Committee shall initially make all decisions regarding acquisition of murals as public works of art for display within the City, but shall seek community input and participation and, when the proposed location is within the City's Historic District, the City's Historic Preservation Board, with all such reviews occurring after a review by City staff. A review by the Historic Preservation Board shall be a recommendation only and shall be for the purpose of Historic preservation Board providing recommendations and/or input which may serve to have the mural better fit with the historic ambiance of the district. The following shall apply to all decisions of the Public Mural Art Committee:

1) Three (3) of the five (5) members shall constitute a quorum.

2) All approvals shall require a simply majority of the members present and voting on a proposed mural.

3) All decisions of the Public Mural Art Committee shall be reduced to a writing signed by the Chairperson.

4) Applications which are received for murals within the historic district shall first be scheduled for review by the City's Historic Preservation Board, as more particularly provided for below.

(e). City staff or the proposing artist may seek review of decisions of the Public Mural Art Committee by the City Commission by filing a request for review with the City Clerk within 10 days of the decision sought to be reviewed. The City Commission shall

review determinations in accordance with such processes and procedures as it deems appropriate.

(f). A mural selected for installation by the City shall remain in place without alterations for a minimum period of one year. Any future alteration is subject to approval by the City pursuant to the process set forth in this ordinance.

(g). Murals may only be approved when submitted for review with an adequate and professionally prepared maintenance plan which shall be memorialized in an agreement in a form approved by the City Attorney.

(h). Written consent from the property owner of the property on which a mural is to be developed is required by means of a public art (mural) easement in a form approved by the City Attorney.

(i). City funds may be used to implement the installation of a mural with the approval of an agreement by the City Commission approving such funding in a form approved by the City Attorney.

Section 4. Repeal of Land Development Code Regulations. Section 33-94.03(b)5a(5) of the Code of Ordinances of the City of DeLand related to the incorporation of murals or artwork in development projects is hereby repealed.

Section 5 Implementing Administrative Actions. The City Manager, or designee, is hereby authorized and directed to implement the provisions of this Ordinance by the promulgation of rules and such other actions as may be deemed necessary or appropriate to include, but not be limited to, application forms and other submittal forms for artists making applications under the provisions of this Ordinance.

Section 6. Savings. The prior actions of the City relative to murals and public art are hereby ratified and affirmed.

Section 7. Conflicts. All Ordinances or parts of Ordinances and other actions of the City Commission of the City of DeLand in conflict with this Ordinance are hereby repealed.

Section 8. Severability. If any section, sentence, phrase, word or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word or portion of this Ordinance not otherwise determined to be invalid, unlawful or unconstitutional.

Section 9. Codification; Direction To Code Codifier And City Staff; Correction Of Scrivener's Errors.

(a). The provisions of Section 1 through Section 3 of this Ordinance shall become and be made a part of the Code of Ordinances of the City of DeLand and the Sections of this Ordinance may be renumbered or re-lettered to accomplish such intention and the word "Ordinance", or similar words, may be changed to "Section," "Article", or other appropriate word; provided, however, that the text of all other sections shall not be codified.

(b). The Code codifier is granted liberal authority to codify the provisions of this Ordinance in such manner and in such places as deemed advisable.

(c). In accordance with the City's ongoing codification program; the City Clerk-Auditor in conjunction with the City Attorney, may make corrections to the provisions of this Ordinance relative to Scrivener's errors of whatever type or nature.

Section 10. Effective Date. This Ordinance shall become effective immediately upon adoption.

PASSED AND DULY ADOPTED this 19th day of April, 2021.

Robert F. Apgar
Mayor - Commissioner

ATTEST:

Julie A. Hennessy, MMC
City Clerk-Auditor

Passed on first reading: April 05, 2021.
Adopted on second reading: April 19, 2021.

APPROVED AS TO FORM AND LEGALITY:

Darren J. Elkind
City Attorney

THE DAYTONA BEACH
NEWS-JOURNAL P.O. Box 630476, Cincinnati, OH 45263-0476

PROOF OF PUBLICATION

CITY OF DELAND
City of Deland - City Clerk
120 S Florida AVE
Deland FL 32720-5422

STATE OF WISCONSIN, COUNTY OF BROWN

Before the undersigned authority personally appeared, who, on oath says that he/she is LEGAL COORDINATOR of The News-Journal, a daily and Sunday newspaper, published at Daytona Beach in Volusia and Flagler Counties, Florida; that the attached copy of advertisement, being a Main Legal CLEGL in the Circuit Court, was published in said newspaper in the issues dated or by publication on the newspaper's website, if authorized, on:

04/09/2021

Affiant further says that The News-Journal is a newspaper published at Daytona Beach, in said Volusia County, Florida, and that the said newspaper has heretofore been continuously published in said Volusia County, Florida each day and Sunday and has been entered as second-class mail matter at the post office in Daytona Beach, in said Volusia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Subscribed and sworn to before on 04/09/2021

Legal Clerk

Notary, State of WI, County of Brown

My commision expires

Publication Cost:	$283.60		
Order No:	5736974	# of Copies:	
Customer No:	466111	1	
PO #:			

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

SHELLY HORA
Notary Public
State of Wisconsin

NOTICE OF PUBLIC HEARING
CITY COMMISSION
CITY OF DELAND, FLORIDA

NOTICE IS HEREBY GIVEN that there will be a Public Hearing on the following Ordinance on Monday, April 19, 2021 at a regular meeting of the DeLand City Commission. The meeting will take place at 7:00 P.M. in the City Commission Chambers, 120 South Florida Avenue, City Hall. All interested parties are invited to attend and be heard on the matter.

Any person who wishes to appeal any decision made by the City Commission with respect to any matter considered at this meeting will need a record of the proceeding and, thus, may need to ensure that a verbatim record of the proceeding is made, including the testimony and evidence upon which an appeal may be based.

The original of the ordinance is on file in the office of the City Clerk and may be inspected Monday through Friday from 8:00 A.M. to 5:00 P.M.

ORDINANCE NO. 2021 - 18

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, RELATING TO MURALS AS PUBLIC WORKS OF ART; CREATING A PUBLIC MURAL ART COMMITTEE; PROVIDING FOR THE ADOPTION OF A POLICY RELATING TO THE APPROVAL AND PLACEMENT OF MURALS WITHIN THE CITY AS WELL AS RELATED MATTERS; REPEALING SECTION 33-94.03(B)5A(5) OF THE CODE OF ORDINANCES OF THE CITY OF DELAND; PROVIDING FOR FINDINGS AND INTENT, FOR IMPLEMENTING ADMINISTRATIVE ACTIONS, A SAVINGS PROVISION, CONFLICTS, SEVERABILITY, CODIFICATION AND AN EFFECTIVE DATE.

DB-23947061

RESOLUTION NO. 2021 - 31

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, RELATING TO MURALS AS PUBLIC WORKS OF ART AND PROVIDING FOR THE APPOINTMENT OF MEMBERS TO THE CITY'S PUBLIC MURAL ART COMMITTEE; PROVIDING FOR FINDINGS AND INTENT, FOR IMPLEMENTING ADMINISTRATIVE ACTIONS, A SAVINGS PROVISION, CONFLICTS, SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, on April 19, 2021 the City Commission of the City of DeLand enacted Ordinance Number 2021-18; and

WHEREAS, the provisions of Ordinance Number 2021-18 created a Public Mural Art Committee and provided for the adoption of a procedure relating to the approval and placement of murals within the city as well as related matters; and

WHEREAS, the initial members of the Public Mural Art Committee are in need of being appointed by the City Commission of the City of DeLand; and

WHEREAS, the recitals and legislative intent relating to Ordinance Number 2021-18 are hereby ratified and affirmed and adopted as the legislative intent for this Resolution; and

WHEREAS, the City Commission of the City of DeLand hereby finds and determines that all of the members herein appointed to the Public Mural Art Committee have a background or other involvement in artwork and that residency of the appointees to the Public Mural Art Committee has been appropriately considered and evaluated; and

WHEREAS, the City of DeLand has complied with all requirements and procedures of Florida law in processing and advertising this Resolution; and

WHEREAS, the City Commission of the City of DeLand determines that the adoption of this Resolution is in the best interests of the health, safety and welfare of the citizens of the City of DeLand; and

WHEREAS, the prior recitals and the agenda materials relating to this Resolution represent the findings and intent of the City Commission of the City of DeLand relative to the adoption of this Resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. Initial Membership, and Terms of the Public Mural Art Committee.

(a). *Members of Initial Public Mural Art Committee.* The Public Mural Art Committee shall consist of the following 5 members who shall serve terms as follows:

(1). Seat 1: Bobbi Baugh. For a 4-year term commencing on the effective date of this Resolution.

(2). Seat 2: Michael Orr. For a 2-year term commencing on the effective date of this Resolution; provided, however, that the subsequent terms for this position shall be terms of 4-years.

(3). Seat 3: Mary Swiderski. For a 4-year term commencing on the effective date of this Resolution.

(4). Seat 4: Anslee Holland. For a 2-year term commencing on the effective date of this Resolution; provided, however, that the subsequent terms for this position shall be terms of 4-years.

(5). Seat 5: John Wilton. For a 4-year term commencing on the effective date of this Resolution.

(b). Vacancies shall be filled by vote of the City Commission for the remainder of the term of the member who is being replaced.

(c). The role, function and powers of the Public Mural Art Committee are set forth in Ordinance Number 2021-18.

Section 2. Future Implementing Actions.

(a). The City Manager, or designee from City staff, is assigned the responsibility to take any and all necessary administrative actions that may be directed by the chair of the Public Mural Art Committee or as may be deemed to be desirable or necessary to implement the actions of the Public Mural Art Committee to be taken pursuant to the provisions of Ordinance Number 2021-18.

(b). The City Attorney is instructed to assist the Public Mural Art Committee and the City Manager in the implementation of this Ordinance Number 2021-18 with regard to public meetings and public records as well as the role of the Public Mural Art Committee which that body is to take under and pursuant to the provisions of Ordinance Number 2021-18.

Section 3. Savings. The prior actions of the City relative to the regulation of murals and public works of art, and any and all related matters, are hereby ratified and affirmed.

Section 4. Conflicts. All resolutions or parts of resolutions and other actions of the City Commission in conflict with this Resolution are hereby repealed.

Section 5. Severability. If any section, sentence, phrase, word or portion of this Resolution is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word or portion of this Resolution not otherwise determined to be invalid, unlawful or unconstitutional.

Section 6. Effective Date. This Resolution shall become effective immediately upon adoption.

PASSED AND DULY ADOPTED this 7th day of June, 2021.

Robert F. Apgar
Mayor - Commissioner

ATTEST:

Julie A. Hennessy, MMC
City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

Darren J. Elkind
City Attorney

RESOLUTION 90-52

A RESOLUTION OF THE CITY OF DELAND, FLORIDA CONCERNING CITY BOARDS AND COMMITTEES; REPEALING RESOLUTION NOS. 87-14 AND 88-58; SETTING FORTH THE POLICY OF THE CITY REGARDING RESIDENCY, TERMS OF OFFICE AND THE MONTH OF EXPIRATION FOR EACH BOARD, RECRUITMENT, ATTENDANCE AND ABSENTEEISM, AND THE APPOINTMENT PROCESS FOR CITY BOARDS; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

BE IT RESOLVED BY THE COMMISSION OF THE CITY OF DELAND, FLORIDA:

Section 1. Resolution No. 87-14 is hereby repealed in its entirety.

Section 2. Resolution No. 88-58 is hereby repealed in its entirety.

Section 3. The City hereby adopts the following policy with regard to City Boards:

RESIDENCY

Residency shall be defined as individuals physically domiciled within the corporate boundaries of the City of DeLand.

Where non-city residents are included on a board, these individuals must be physically domiciled within the Greater DeLand area as defined by Chapter 73-441, Special Acts of Florida, or own property within the corporate limits of the City of DeLand. Only the Code Appeals Board, Economic Development Committee and Housing Authority Board will include non-city residents. In any case, city residents shall make up a majority of the membership on all City boards.

Each member of the Code Enforcement Board, the Board of Adjustment and the Planning Board shall reside within the corporate limits of the City.

The Library Board shall consist of nine members; five appointed by the County and four appointed by the City. After initial appointments expire, only city residents shall be eligible to serve as City appointees on the Library Board.

TERMS OF OFFICE

The Commission will attempt to give all interested citizens an opportunity to serve on a city board or committee when terms expire. Therefore, an individual may serve only two consecutive full terms on the board to which he is appointed. Once a member has completed his second consecutive full term, he will not be eligible for reappointment to that board unless there are no other qualified applicants as defined in the Code of Ordinances. An individual must wait a minimum of one year before reapplying for membership on that board or any other board.

At the expiration of the term assigned to any seat, the appointee in that seat shall continue to serve until the appointment of his or her successor; however, this shall not affect the expiration date of the successor's term. The expiration date of the successor's term shall be determined by measuring the term of office for that seat from the usual expiration date of the predecessor's term for that seat.

When a position becomes vacant before the end of the term, the City Commission shall appoint a substitute member to fill the vacancy for the duration of the vacated term. Any person appointed to fill an unexpired term will be eligible for re-appointment for two consecutive full terms in addition to the remainder of the unexpired term.

The day and month of expiration for each board shall be as follows:

Code Appeals Board	October 1
Board of Adjustment	October 1
Planning Board	November 1
DeLand Housing Authority Board	November 1
Code Enforcement Board	December 1
Economic Development Committee	December 1

RECRUITMENT

The City Clerk shall:

1. Encourage applications from all interested citizens for appointment to city boards and

committees. Vacancies shall be made known to the public in a manner deemed appropriate by the City Clerk;

2. Respond to inquiries regarding applications by sending information kits to the people making those inquiries;

3. Initiate a training or orientation program for new and/or existing appointees to city boards and committees in order that they might be better acquainted with their duties and with changes in applicable laws, ordinances, rules and regulations; and

4. Conduct an annual appreciation day for the purposes of recognizing the citizens who are leaving service on a board or committee.

ATTENDANCE AND ABSENTEEISM

Any excessive absences shall be reported by the board secretary to the City Clerk who shall report such situation to the Commission. An individual who misses three consecutive, regularly scheduled meetings of a board without good cause shall be deemed to have resigned from that board and is not eligible for reappointment to that or any other board for at least one year. In that event, the City Clerk shall notify the individual that his position will be declared vacant by the Commission at the next regularly scheduled Commission meeting unless the individual demonstrates good cause for having been absent. In addition, the Commission may terminate the appointment of any board member for cause including, but not limited to, excessive absences and conflicts of interest, upon giving notice and an opportunity to be heard. The Commission shall take any and all actions it deems appropriate in its sole discretion.

APPOINTMENT PROCESS

The City Clerk's office shall submit the applications of all eligible candidates for city boards or committees to the City Commission for their review and appointment. The Commission may review applications, interview candidates and appoint members as it deems appropriate.

An individual may serve on only one board at a time. However, the Commission may, from time to time, create ad hoc committees whose membership may include representatives of codified boards in addition to other citizens appointed by the Commission. The Commission may determine residency requirements for each ad hoc committee so created.

Section 4. The City Clerk shall provide copies of this Resolution to the chairman and staff liaison for each board or committee for presentation to that board or committee.

Section 5. If any section, sentence, clause or phrase of this Resolution is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the validity of the remaining portions of this Resolution.

Section 6. This Resolution shall take effect immediately upon its adoption.

PASSED AND DULY ADOPTED this 19th day of November, 1990.

Wiley M. Nash
Mayor - Commissioner

ATTEST:

Viola H. Ballentine
City Clerk - Auditor

PUBLIC MURAL ART COMMITTEE
Membership List
June 2026

Seat	Name	Original appointment	Subsequent reappointments	Term expiration
1	Bobbi Baugh	06/2021		06/2025
2	Jaclyn Carrol	08/2023		06/2027
3	Erica Group	02/2022		06/2025
4	Anslee Holland	06/2021	08/2023	06/2027
5	John Wilton	06/2021		06/2025

Dale,

It was lovely chatting with you today. I am writing to resign from my seat on the Public Mural Art Committee. Due to increased family responsibilities, I am no longer able to give the committee the time and attention it deserves. I am grateful for the opportunity to serve and contribute to the committee's work and appreciate the experience of being involved.

Thank you for your understanding, and I wish the committee continued success.

Sincerely,

Anslee Holland

On Mon, Jun 15, 2026 at 2:09 PM Dale Arrington <arringtond@delandfl.gov> wrote:

Good afternoon Ms. Holland,

My name is Dale Arrington and I am temporarily working in the Deland City Clerks office. One of my duties is coordinating new board appointments to the Public Mural Arts Committee. Could you please give me a telephone call so that we can discuss your participation in this Committee. I can be reached at 386-626-7132.

I look forward to hearing from you.

Thank you.

City of DeLand, Florida
Mural Art Committee

The following summarizes **Request # 07056965**.

Personal Information

First name: Randy

Middle name: A.

Last name: Abar

Email address: a46hiker@aol.com

Primary phone number: (802) 655-2757

Secondary phone number:

Address: 400 E Howry Ave, DeLand, FL 32724, USA

Apartment number: 319

Employment History

Employment History
Employer:: Retirrd
Position:: Retired
Employment date:: 07/01/2020

Education

Education
Degree(s):: High School Diploma
School or college:: Heuvelton Central School

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 3 years

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: Been creating art for 40 years, creating wire figures, settings, in multimedia, paper mache, doll house furniture

Please describe your community involvement: Signed up for Habitat for Humanity, waiting for my first assignment, member of WVA, (West Volusia Artists) for 3 years

Please describe your interest/activities: Creating art , writing , sports, fishing from land,

Why do you desire to serve on this Board or Committee? I think seeing muralists and their work, being recognized as a true art form is amazing, the stories they tell will now be seen for generations, adding to the beauty of the city

Submitted On: 06/09/2026

randy abar

randyaabar56@gmail.com

Experience

Blodgett Supply | Williston, VT
01/2010 - 06/2020
Customer service to the plumbing/heating building trades, dealing with customers face to face and over the phone, supplying material and information to help them in the field

Skills

Plumbing, light carpentry, basic electrical, painting

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07056457**.

Personal Information

First name: Bobbi

Middle name:

Last name: Baugh

Email address: bobbibaughart@gmail.com

Primary phone number: (386) 453-1254

Secondary phone number:

Address: 1718 Pine Ave, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Past Co-Owner of Express Printing, DeLand 1977 - 2014
Position:: Sales Director, Graphic Design
Employment date:: 05/01/2014

Education

Education
Degree(s):: BA Stusdo Art and Speech Communication, MAT Humanities/Education
School or college:: Stetson University
Graduation date:: 06/1976

Application

Are you a City of DeLand resident? No

How long have you lived in the DeLand area?

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? Yes

When and which Board? DeLand Mural Committee

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I am an independent studio artist with a BA in studio art and a MAT in education/humanities. Prior to becoming a full-time artist I worked in the commercial printing business for 35+ years specializing in product design and graphic design. As a volunteer member of the public art committee of the Museum of Art Deland, I am familiar with the variety and purposes of public art in the DeLand community.

Please describe your community involvement: Current: Member and President of the Board of Trustees Museum of Art DeLand. Member and Board Member the DeLand Breakfast Rotary Club. Classroom volunteer at Starke Elementary School.

Past: Member and President of the Fall Festival of the Arts DeLand; Member and President of the DeLand Area Chamber of Commerce; Member and President of West Volusia Habitat for Humanity

Please describe your interest/activities: My life revolves around art and artmaking. I am active in state, national and international organizations which promote art quilting. I teach principles of art and composition to various art groups and textile art guilds. I enjoy community service projects through the DeLand Breakfast Rotary. I enjoy swimming at DeLeon Springs. I enjoy reading and writing.

Why do you desire to serve on this Board or Committee? I have served on the DeLand Mural Committee since its formation. I enjoy this committee's work. I believe that having a decision-making committee with art expertise has resulted in a strong diversity and quality of artwork in DeLand. Additionally, because business people wanting to create a mural are often confused or even frustrated by the process, I believe I employ good leadership skills to treat mural applicants respectfully and fairly. They leave understanding the process and purpose and are, mostly, and pleased with the final outcome.

Submitted On: 06/09/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07056793**.

Personal Information

First name: Isabella

Middle name:

Last name: Casto

Email address: isabella@siennadesignstudios.com

Primary phone number: (978) 602-3320

Secondary phone number:

Address: 424 W Church St, DeLand, FL 32720, USA

Apartment number:

Employment History

Employment History
Employer:: The Coatings Group Inc // Sienna Design Studios
Position:: Marketing Director // CEO
Employment date:: 07/01/2025

Education

Education
Degree(s):: Art History, Criticism and conservation
School or college:: Universidad de Granada

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 1.5 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I graduated from a European University with a major in Art History and a minor in art criticism and heritage conservation.

Please describe your community involvement: I live in the historic downtown area, frequent the boulevard weekly, am involved in the DeLand Art Museum community advisory board and support the downtown businesses any chance I get!

Please describe your interest/activities: I enjoy crafting at home, remodeling my 106 yr old house, spending time with my small family and travelling when I can’

Why do you desire to serve on this Board or Committee? I find beauty in the small and in my environment - I love to see DeLand preserve it’s quaintness and picturesque feeling. I believe that everyone has the right to see and appreciate art and beauty around them - it makes the world better.

Submitted On: 06/09/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07110105**.

Personal Information

First name: Andrea

Middle name:

Last name: Clark

Email address: andreadey@yahoo.com

Primary phone number: (386) 748-8118

Secondary phone number:

Address: 1133 Glenwood Trail, DeLand, FL 32720, USA

Apartment number:

Employment History

Employment History
Employer:: Quick Clean Laundry \ dba Tidy Cleaners
Position:: vice president
Employment date:: 04/05/2021

Education

Education
Degree(s):: Bachelors of Science
School or college:: University of Central Florida

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 50 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: My knowledge of art comes primarily from years of creating rather than through formal academic training. As a hobby artist and small business owner, I have developed an appreciation for both the creative and practical aspects of producing artwork. I believe my experience and long term DeLand residency gives me practical perspective on what makes public art meaningful, well-executed, and appropriate for the area. I value creativity, craftsmanship, and artwork that reflects the character of our community, and I would bring those principles to my role on the mural board.

Please describe your community involvement: I am involved in the DeLand community in both public and private ways. Some of that involvement is quiet and personal, including donating time, money, effort, gift baskets, and support to causes and people I believe in and to provide help when and where I can. I have donated time and 20 years of expertise in Radiology to the DeLand Historical Society when they inherited vintage x-ray equipment from Halifax for the DeLand Memorial Museum, helping with set up and written information. We sponsor Stetson FA Youth Soccer Club, DeLand Football, Love Like Lyndsey, and of course MeStrong. I just started working with the Rotary Club to help homeless mothers with children. Community involvement matters to me because DeLand is my home, and I believe in contributing where I can.

Please describe your interest/activities: My husband is a local business owner and a guitar player, so we go out to see live music and frequent local mom- and- pops down town.
I enjoy embroidery, crochet, and painting.
Most of my friends and family get hand made gifts from me.

Why do you desire to serve on this Board or Committee? DeLand is home, and I care deeply about the kind of community we continue to build. I believe murals and other artworks have the unique ability to transform ordinary spaces into places that spark conversation, preserve history and create a sense of pride. If you have walked into my business, Quick Clean Laundry, this is very apparent. I want to serve on this board to find ways to make the community stronger and more vibrant. Through out the years I have supported DeLand, and serving on this board feels

like a natural extension to that commitment. I would welcome the opportunity to help ensure our public art reflects the creativity, history and spirt that makes DeLand such a special place.

Submitted On: 06/21/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07108303**.

Personal Information

First name: Susan

Middle name: Gail

Last name: Ellis

Email address: sgellis@pacbell.net

Primary phone number: (415) 902-1172

Secondary phone number:

Address: 101 Camilla Rd, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Retired 2016
Position:: Controller for VC and PE Companies
Employment date:: 06/01/2016

Education

Education
Degree(s):: BS, Business Administration
School or college:: SUNY at Buffalo

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 5 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: My education and experience is in Financial Services. I do have a great appreciation for in many forms. I've traveled extensively in the US and abroad and spent time at many museums.
For the past 5 years, I have been a member of both the Museum of Art-DeLand and its associated Guild. I am the Membership Chair and play an active role in the Guild.

Please describe your community involvement: As stated above, I'm very active in the Museum Guild.
I am a frequent usher at The Athens & I work Concessions at The Shoestring Theatre.
I volunteer as a Mentor through Volusia County Schools.
I volunteer at the Halifax Humane Society.
I volunteer for Head Start through You Thrive Florida.

Please describe your interest/activities: I love all my volunteer positions!
I like to exercise and do 3x a week, 2 classes each day.
I love to travel.
I love to spend as much time as I can with my sweet dog, Cookie.

Why do you desire to serve on this Board or Committee? I believe I have something to contribute based on my knowledge, past experience and ability to work well in a group.

Submitted On: 06/19/2026

SUSAN G. ELLIS

28 Tralee Way
San Rafael, CA 94903

(415) 902-1172
sgellis@pacbell.net

SUMMARY

Accomplished hands-on, results-oriented Financial Controller with extensive experience in financial analysis and GAAP, regulatory and management reporting in the Private Equity, Venture Capital and Financial Services industries. Proven leadership, supervision, communications and project management skills. Proficient in the ability to synthesize complex comprehensive information into a concise and understandable form. Outgoing personality with the unique ability to maintain sense of humor in the most stressful of situations.

EXPERIENCE

PRIVATE EQUITY FINANCIAL CONSULTANT — 2001 – Present

Greenough Consulting Group – Independent Contractor — **2004 – 2013**
Interim management services firm primarily in the financial, administrative and human resource fields.

interNetwork, Inc. – Interim Director of Finance — **2002 – 2003**
Start-up software company founded in 1999 providing software-based load testing solutions for telecommunications industry. The company is financed by two venture capital funds, Target Partners and Earlybird Ventures.

- Managed finance, accounting, cash flow, legal contracts, human resources, and office policies.
- Designed and implemented cost cutting budget directly contributing to additional investor funding.

Paul Capital Partners – Interim Controller — **2002**
Private equity firm founded in 1991 with over $2 billion in committed capital. Firm invests in venture capital, leveraged buyout, mezzanine partnership interests and royalty interests through the secondary market.

- Managed fund accounting including capital calls, distributions and quarterly reporting.
- Streamlined quarterly reporting across all funds, thereby reducing production and review time.

Housatonic Partners – Interim Controller — **2001 – 2002**
Private equity firm founded in 1994 with over $250 million in committed capital. Firm invests in business services and media and communication industries companies focusing mainly on SBICs.

- Performed all aspects of fund accounting and reporting including SBIC reporting and annual audit.
- Recognized need for and implemented LP contact database, thereby improving LP communication.
- Identified and improved file retention policy increasing accuracy and space and eliminating redundancy.

SWANDER PACE CAPITAL, San Francisco, CA — **1997 – 2001**
A private equity firm founded in 1997 with over $650 million in committed capital. Firm specializes in leveraged buyout, venture capital and growth capital investments in consumer-oriented companies.

Controller

- Set up and maintained accounting ledgers, systems and practices. Prepared, maintained and adhered to annual budget and cash flow.
- Created, coordinated and prepared quarterly and annual reports to limited partners and Managing Directors; served as event coordinator for annual meetings.
- Developed and maintained banking, brokerage, audit, tax, legal, business insurance and leasing relationships and consulted and negotiated fees leading to substantial cost reductions.
- Prepared legal documents including fund and management fee agreements and promissory notes.
- Reviewed legal documents, responded to limited partners' requests and compiled information required to launch a second fund with over $220 million in committed capital.
- Ensured compliance with and adherence to fund agreements by reviewing all legal documentation, determining pro-rata investment amounts, preparing and coordinating capital calls and subsequent monitoring of portfolio company investments.
- Managed stock and cash distributions in accordance with SEC trading restrictions and partnership agreements. Allocated and maintained individual capital accounts pursuant to partnership agreements.
- Led the audit process producing Audited Financial Statements, tax returns and K-1s.
- Served as HR professional negotiating, setting up and administrating payroll services, and all employee benefits for this 20-person firm. Hired, developed and supervised administrative staff.
- Managed two cost-efficient and timely office facility build-outs including coordination with architects, designers, contractors and suppliers.

NEWTEK VENTURES, San Francisco, CA **1993 – 1997**
A venture capital firm founded in 1983 with over $50 million in committed capital specializing in high-tech and medical instrument investments.
Controller

- Prepared, reviewed and analyzed internal and external reports including financial statements, offering memorandums, tax returns, board packages, and performance data. Coordinated audit and tax engagements and provided lead schedules and confirmations.
- Ensured compliance with partnership agreements. Managed stock and cash distributions. Prepared budgets and cash flow forecasts and initiated capital calls. Identified needed amendments to partnership agreement and coordinated revisions with legal counsel.
- Reviewed term sheets and stock purchase financing agreements. Monitored portfolio companies' performance status, stock class and acquisitions dates, warrants and director stock options and tracked equity percentages.
- Established and maintained relationships with accountants, legal counsel, brokers, portfolio company management teams and investors. Responded to inquiries from investors and industry analysts.
- Directed office management and administrative tasks. Secured health insurance and benefit plans, negotiated lease agreements and equipment purchases. Hired, supervised and trained support staff and coordinated off-site meetings.

NORCAL MUTUAL INSURANCE COMPANY, San Francisco, CA **1990 – 1993**
Special Projects Accountant

- Documented finance department's accounting policies and procedures; recommended and implemented improvements to the existing system of internal control.
- Performed in-depth analysis leading to the acquisition of a related company.
- Developed and automated claims reports for board of directors, senior management and medical executives.
- Created and automated monthly investment close procedures and monthly financial statement package for the benefit of the board of directors and senior management.
- Conducted internal audits of company's pension plans which ensured compliance with IRS regulations.

FIREMAN'S FUND INSURANCE COMPANY, Novato, CA **1986 – 1990**
Senior Accountant, Financial Reporting

- Prepared, coordinated and distributed Financial Statements and Reports to Shareholders, Senior Management, Boards of Directors and various Regulatory Agencies.
- Prepared and analyzed financial statements and key financial indicators for senior management, highlighting and explaining material variances, trends and extraordinary items.
- Scheduled the monthly financial close and coordinated the workflow of all areas of the controller's department in order to meet stringent reporting deadlines.
- Supervised and reviewed the work performed by two staff accountants.
- Interfaced with the parent company to provide information required to prepare consolidated financial statements.
- Maintained and controlled the consolidating financial reporting system.
- Designed and implemented improved internal accounting controls to ensure the reliability of financial data and verification of the accuracy of consolidated results.

EDUCATION

State University of New York at Buffalo – School of Management
B.S. Cum Laude, Business Administration; Major Concentration: Financial Analysis

Polytechnic of North London, England
Liberal Arts Coursework

City of DeLand, Florida
Mural Art Committee

The following summarizes **Request # 07057730**.

Personal Information

First name: Andrea

Middle name:

Last name: Finkle

Email address: afinkle11@yahoo.com

Primary phone number: 386-801-3485

Secondary phone number: 386-8225635

Address: 729 W Pennsylvania Ave

Apartment number:

Employment History

Education

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 39 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I have participated in the Art of Reflection and Response with the Museum of Art DeLand for approximately ten years.

Please describe your community involvement: I am a teacher at DeLand High School. I was involved with the Sands Theater Center for over twenty years.

Please describe your interest/activities: Theater, reading, continuing education

Why do you desire to serve on this Board or Committee? My environment matters a great deal to me, and I believe that public art installations are vital to the community.

Submitted On:

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07066522**.

Personal Information

First name: Erica

Middle name:

Last name: Group

Email address: ericalgroup@gmail.com

Primary phone number: (386) 747-1886

Secondary phone number:

Address: 623 N Amelia Ave, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Self
Position:: Artist
Employment date:: 06/16/2026

Education

Education
Degree(s):: BFA in Interior Design
School or college:: Cazenovia College

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 37 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: Aside from my BFA, I've been so fortunate to have an abundance of practical experience in the arts; from small scale Graphic Design to large scale murals.

Please describe your community involvement: I'm the Artist in Residence for West Volusia Tourism – under this role, I've created the Wings of the West Mural trail and "What's Up in West Volusia" video series.

I'm a new member of the Museum of Art DeLand Board of trustees and also enjoy serving on the Community Advisory Board for the MOA.

Please describe your interest/activities: Illustrating, painting and designing fill my creative cup and I love raising my two young kids in DeLand - the perfect city to live in!

Why do you desire to serve on this Board or Committee? DeLand is abundant with beautiful murals and its love for the Arts is undeniable. I believe it is vital to protect the integrity and reputation DeLand has earned in the Arts community. I'm proud to live in a city that takes such care in preserving and promoting this essential thread and I would be honored to renew my position on the Public Mural Art Committee.

Submitted On: 06/16/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 06873431**.

Personal Information

First name: Shannon

Middle name: L

Last name: Holt

Email address: shannonholtart@gmail.com

Primary phone number: (386) 717-8094

Secondary phone number:

Address: 621 Marilea Ct

Apartment number:

Employment History

Employment History
Employer:: Self employed
Position:: Artist
Employment date:: 01/01/1998

Education

Education
Degree(s):: BFA in Painting, Drawing and Art Education
School or college:: Tyler School of Art, Temple University (Rome)
Degree(s):: Continuing education
School or college:: Chautauqua School of Fine Art

Application

Are you a City of DeLand resident? No

How long have you lived in the DeLand area?

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I am a master fine artist and body painter. I also paint murals and have been painting murals since 1992

Please describe your community involvement: I work in Deland doing makeups, body painting, face painting, painting murals, and reading tarot. I have been hired for many charity events, popped up at markets, and have worked with the Florida Museum of Art. I support businesses in Deland.

Please describe your interest/activities: I am an artist, my interests have to do with painting, and body painting. I enjoy spending time with my friends and my dogs. I enjoy supporting the community and being a part of community events.

Why do you desire to serve on this Board or Committee? I'm not sure this question pertains to me.

Submitted On: 03/05/2026

City of DeLand, Florida
Mural Art Committee

The following summarizes **Request # 07057924**.

Personal Information

First name: Thomas

Middle name: Edward

Last name: Homan

Email address: modernelegancellc@gmail.com

Primary phone number: (386) 337-2627

Secondary phone number:

Address: 128 W Georgia Ave, DeLand, FL 32720, USA

Apartment number:

Employment History

Employment History
Employer:: Modern Elegance
Position:: Owner/Operator
Employment date:: 12/29/2010

Education

Education
Degree(s):: None
School or college:: Autodidact

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? Born and raised. 40 years.

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I have a good working knowledge of art history and a great eye for nuanced crtique.

Please describe your community involvement: I own and operate the largest art and tattoo studio in the city. I volunteer with Deland pride to help with yourh events. I'm a member in good standing of Mainstreet Deland.

Please describe your interest/activities: I'm an avid art collector and connoisseur of every medium. Whether it be paintings, films, music, or the written word, there are no mediums of expression that I don't find fascinating.

Why do you desire to serve on this Board or Committee? I deeply love this community and want to participate in the shaping of its culture in every capacity I can manage. Deland has long been a center and refuge for the arts and I want to continue our founder's ideals of being the "Athens" of Florida.

Submitted On: 06/10/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07109642**.

Personal Information

First name: Jayson

Middle name:

Last name: LaFortune

Email address: lafortunejayson3@gmail.com

Primary phone number: (386) 473-9777

Secondary phone number:

Address: 1103 Adonis Ln, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: MainStreet DeLand Association
Position:: Event Coordinator
Employment date:: 07/07/2025
Employer:: DeLand Pilates
Position:: Pilates Instructor
Employment date:: 03/03/2025

Education

Education
Degree(s):: Bachelors of Science International Trade and Marketing
School or college:: Fashion Institute of Marketing
Degree(s):: Associates of Applied Science Fashion Merchandising
School or college:: LIM College

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 18

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: While I do not have formal training as an artist, I attended the Fashion Institute of Technology (FIT) in New York City, which is recognized as one of the top fashion schools in the world. During my time at FIT and throughout the 10 years I lived in New York City, I was surrounded by designers, artists, and creative professionals on a daily basis. That experience gave me a strong appreciation for art, design, and the creative process.

Please describe your community involvement: I'm currently the Event Coordinator for MainStreet DeLand Association and oversee many of the events that take place in Downtown DeLand, including Bike Rally, the Florida Wildflower & Garden Festival, Ice Cream Walk, the DeLand Craft Show, and Light Up DeLand. I enjoy creating events that bring people together and give residents and visitors a chance to experience DeLand in a fun and meaningful way.
I also teach at DeLand Pilates and have partnered with local nonprofits, including JSL and Volusia Pride, to host fundraising events that help raise awareness and support for their organizations.

Please describe your interest/activities: I enjoy traveling, reading, playing video games, and staying active through Pilates and tennis. Of those interests, travel has had the biggest influence on how I view public spaces and community development. Visiting different cities and small towns has exposed me to a variety of murals, public art installations, and placemaking efforts. Seeing how other communities use art to create a sense of identity and enhance the visitor experience has given me ideas that could help inspire future projects and contribute to a more art-forward vision for DeLand.

Why do you desire to serve on this Board or Committee? I grew up in DeLand and attended school here from elementary school through high school. After spending time away, I moved back a few years ago and have enjoyed being part of the positive growth happening in the community.

Through my role with MainStreet DeLand, I've seen firsthand how much excitement and energy events can bring to downtown, and I'd love the opportunity to help build on that through public art. I believe murals and art installations can create memorable experiences for both residents and visitors while giving a community a stronger sense of identity. I'd like to see DeLand become known not only for its events and historic charm, but also for its public art. Serving on this committee would give me the opportunity to contribute to that vision and help create a more colorful and engaging downtown.

Submitted On: 06/20/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07057200**.

Personal Information

First name: Paul

Middle name:

Last name: Luby

Email address: pauljluby@gmail.com

Primary phone number: (386) 490-3680

Secondary phone number:

Address: 1001 Dove Hunter Rd, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Seminole State College
Position:: Dean of Fine and Performing Arts
Employment date:: 08/08/1988

Education

Education
Degree(s):: BA - Theatre Arts, MS Theatre, MS Mental Health Counseling
School or college:: Florida State University, Stetson University

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 38 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: 43 years of teaching, designing and producing theatre in higher education, retiring as Dean of the fine and performing arts at Seminole State College

Please describe your community involvement: I volunteered both onstage and backstage at the Shoestring Theatre, presented for the West Volusia Historical Society, and am scheduled to present “Who is Bert Fish” at the Conrad Center this July 18.

Please describe your interest/activities: My interests include, but are not limited to, the arts, local history, historical preservation, local governance, community events, gardening, fishing, and golf.

Why do you desire to serve on this Board or Committee? Deland has a number of excellent murals by talented artists such as Cory Cordova, that chronicle our history in vivid pictures.

Submitted On: 06/10/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07056135**.

Personal Information

First name: tomas

Middle name: a

Last name: martinez

Email address: emailtomas@yahoo.com

Primary phone number: (386) 500-8514

Secondary phone number: (386) 450-2612

Address: 327 S Garfield Ave, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: primo transportation llc
Position:: owner
Employment date:: 06/09/2014

Education

Education
Degree(s):: ABA
School or college:: Kaplan University online

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 12.5 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: self proclaimed art connoisseur

Please describe your community involvement: as a transportation business owner i do charity work whenever the opportunity arises

Please describe your interest/activities: live, love and spread love

Why do you desire to serve on this Board or Committee? I love Deland and our community and would love to be a part of a committee who can help preserve it

Submitted On: 06/09/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07112170**.

Personal Information

First name: Amy

Middle name: B

Last name: Niven

Email address: earthy0amy@gmail.com

Primary phone number: (386) 748-5948

Secondary phone number:

Address: 929 New Bedford Dr, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Independent contractor
Position:: Virtual Assistant Graphic Design
Employment date:: 06/22/2026

Education

Education
Degree(s):: Associates degree in business
School or college:: Columbus State Community College

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? Over 20 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: My expertise is primarily in graphic design and visual communications rather than fine arts. Through many years of professional design work, I have developed a strong understanding of composition, color theory, visual impact, branding, and audience engagement. I regularly evaluate visual materials for clarity, effectiveness, and aesthetic appeal and would bring that perspective to the review of public art and mural proposals.

Please describe your community involvement: I am actively involved in supporting nonprofit and membership-based organizations through my professional work, providing website management, communications, graphic design, and administrative support. Through these roles, I help organizations engage their members, promote educational initiatives, and strengthen community connections. As a resident of DeLand, I have a strong interest in contributing to projects that enhance the city's character, foster civic pride, and create welcoming public spaces for residents and visitors.

Please describe your interest/activities: My interests include graphic design, visual communications, community beautification, local culture, and creative projects that bring people together. I enjoy exploring how art and design can communicate ideas, tell stories, and enhance public spaces. I also enjoy thrift shopping, crafting, sewing, and other creative pursuits that allow me to appreciate artistic expression from a variety of perspectives. I am particularly interested in public art that reflects the identity and diversity of the community it serves.

Why do you desire to serve on this Board or Committee? I would like to serve on the Mural Advisory Committee because I believe public art plays an important role in shaping a community's identity, creating a sense of place, and fostering civic pride. As a DeLand resident, I appreciate the positive impact murals can have on both residents and visitors, and I would welcome the opportunity to contribute to the thoughtful selection of artwork that reflects our community's character and values.

My background in graphic design and visual communications has given me experience evaluating visual concepts, considering audience engagement, and balancing creativity with practical considerations. I would be honored to use those skills to help ensure that mural projects enhance our city’s beauty, celebrate its uniqueness, and create lasting value for the community.

Submitted On: 06/22/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07056247**.

Personal Information

First name: liam

Middle name: t

Last name: sweeney

Email address: sweeneyliam71@gmail.com

Primary phone number: (386) 215-3316

Secondary phone number:

Address: 126 N Sheridan Ave, DeLand, FL 32720, USA

Apartment number:

Employment History

Employment History
Employer:: Council on Aging
Position:: Program Manager
Employment date:: 05/09/2023

Education

Education
Degree(s):: BA in IT, AA in Art,English,Math and Science
School or college:: Daytona State

Application

Are you a City of DeLand resident? Yes

How long have you lived in the DeLand area? 26 years

Do You Own Property in DeLand? Yes

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I have an assoicates degree in art. I have painted murals. I have studied art most of my life.

Please describe your community involvement: I volunteer at food pantries and mercy hour for the homeless. I used to be the director of the Bridge

Please describe your interest/activities: Art, painting, hiking and musuems

Why do you desire to serve on this Board or Committee? I want to ensure our City is beautiful and tasteful.

Submitted On: 06/09/2026

Liam Sweeney
126 N Sheridan Ave • DeLand, FL 32720
(386) 215-3316 • Sweeneyliam71@gmail.com

Objective

Results-driven professional seeking a permanent position in network security with a reputable organization that offers opportunities for growth and advancement.

Core Skills

- Operating Systems: Windows, Linux, Ubuntu Server
- Programming & Tools: C++, HTML, SQL Server, Crystal Reports
- Technical Support: Hardware/software installation, troubleshooting, system maintenance
- Networking: Network setup, security training, system upgrades
- Leadership: Team supervision, staff development, performance management
- Communication: Strong written and verbal communication skills
- Customer Service & Case Management

Professional Experience

Program Manager
Council on Aging | May 2023 – Present

- Manage case management services, caregiver support, respite care, and client services in compliance with federal, state, and local regulations
- Supervise staff to ensure quality service delivery and adherence to scope of practice
- Assign caseloads, monitor productivity, and support staff development
- Maintain high standards of customer service and regulatory compliance

Bridge Shelter Director
The Neighborhood Center – DeLand, FL | Dec 2021 – Apr 2023

- Oversaw daily operations of a 30-bed emergency shelter
- Supervised case managers and mental health professionals
- Trained and evaluated staff performance
- Coordinated services, managed partnerships, and addressed resident issues

Program Director
The Neighborhood Center – DeLand, FL | Dec 2020 – Dec 2021

- Directed program operations and supervised multidisciplinary staff
- Managed grants, contracts, and service delivery systems
- Served as site administrator for Homeless Management Information System (HMIS)
- Ensured compliance and maintained high operational standards

Shelter Director
The Neighborhood Center – DeLand, FL | Jun 2019 – Dec 2020

- Managed emergency shelter operations and staff
- Coordinated community donations and external partnerships
- Ensured effective service delivery and resident support

Housing Director
The Neighborhood Center – DeLand, FL | May 2017 – Jun 2019

- Led housing programs and supervised case management staff
- Developed programs, secured funding, and managed contracts
- Addressed complex client needs and housing stability issues

Veteran Outreach Supervisor
Salvation Army – Daytona Beach, FL | Oct 2014 – May 2017

- Conducted outreach to homeless veterans and performed assessments (VSPDAT)
- Managed HMIS data and reporting
- Supervised outreach staff and developed community partnerships
- Contributed to initiatives aimed at achieving functional zero homelessness

AmeriCorps VISTA – Veteran Outreach
Coalition for the Homeless – DeLand, FL | May 2014 – Oct 2015

- Developed and maintained organizational website
- Upgraded and maintained computer systems and network infrastructure
- Created and delivered network security training materials
- Supported outreach initiatives for homeless veterans

Videographer
Double D Productions – DeLand, FL | Aug 2013 – Present

- Film and produce sporting events
- Manage equipment setup and team coordination
- Supervise videography staff and logistics

Lab Assistant
Daytona State College – Daytona Beach, FL | Sep 2011 – Dec 2013

- Assisted in electronics, robotics, and computer labs

- Tutored students in C++ and microcontroller applications
- Completed technical projects for display

Maintenance Manager
DeLand Oaks Condominiums – DeLand, FL | Apr 2009 – Dec 2010

- Supervised property maintenance and contractors
- Managed repairs, equipment upkeep, and landscaping

Manager
Boston Coffee House – DeLand, FL | Jan 2006 – Dec 2010

- Managed hiring, training, and operations
- Oversaw inventory, ordering, and customer relations
- Supported business expansion and marketing efforts

Case Manager
Community Outreach – DeLand, FL | Sep 2002 – Dec 2006

- Assessed client needs and coordinated services
- Maintained detailed case records and follow-ups
- Ensured confidentiality and positive client outcomes

Volunteer Experience

Volunteer
Haven Recovery Center – DeLand, FL | Mar 2010 – Present

- Assisted clients with GED preparation and job readiness
- Provided resume support and housing research
- Helped clients access benefits and resources

Advocate
Outreach – Daytona Beach, FL | Jun 2003 – Mar 2005

- Conducted HIV/Hepatitis outreach and testing
- Developed case plans and provided long-term follow-up support

---

Education

Bachelor of Science – Information Science Technology
Daytona State College | May 2014

Associate of Science – Computer Engineering
Daytona State College | May 2012

Certifications

- Peer Support Specialist
- Suicide Prevention
- First Aid & CPR
- Multiple IT Certificates (with Honors):
    - Information Technology
    - Microcomputer Repair
    - Computer Specialist
    - Network System Development
    - Cable Installation

Additional Information

- Strong leadership, integrity, and work ethic
- Quick learner with adaptability across technical and management roles

---

References

Available upon request

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07056900**.

Personal Information

First name: Elias

Middle name:

Last name: Tobias

Email address: liquidgoldtattoo@gmail.com

Primary phone number: (407) 927-1110

Secondary phone number:

Address: 2510 Deleon Dr, DeLand, FL 32724, USA

Apartment number:

Employment History

Employment History
Employer:: Liquid Gold Tattoo Studio & Art Gallery
Position:: Owner/Operator
Employment date:: 10/04/2024

Education

Education
Degree(s):: n/a
School or college:: n/a

Application

Are you a City of DeLand resident? No

How long have you lived in the DeLand area?

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I have more than 30 years of experience in visual design, branding, marketing, advertising and creative project development - in a downtown environment. I am the owner of Liquid Gold Tattoo Studio & Art Gallery in Downtown DeLand, where I work daily with professional artists and the public. Additionally, my experience includes graphic design, signage, murals, vehicle wraps, advertising campaigns, social media content creation, website design, photography and art direction.

In addition to operating an art-focused business, I have spent decades evaluating visual aesthetics, composition, color theory, branding, public-facing artwork and the impact of art on community identity. Through my Studio and Gallery, I engage daily with local artists, art enthusiasts and downtown visitors, and I have a strong interest in promoting high-quality public art that enhances DeLand's character while respecting the surrounding environment and architecture.

Please describe your community involvement: I have been actively involved in the DeLand and West Volusia community for many years through business, volunteer and civic organizations. I am a member of the Greater West Volusia Chamber of Commerce and MainStreet DeLand. I previously served on the Volusia County Environmental, Natural Resources and Cultural Advisory Committee (ENRAC) and have participated in numerous community events and local initiatives.

I have also served on the Board of Directors and as an Assistant Coach for DeLand Little League. Through Liquid Gold Tattoo Studio & Art Gallery, I support local artists, collaborate with other downtown businesses, participate in community events and work to promote Downtown DeLand as a destination for arts, culture and small business.

As a business owner operating in the heart of Downtown DeLand seven days a week, I have daily interaction with residents, visitors, artists, business owners and community leaders, giving me a strong understanding of the character, history and future opportunities of our community.

Please describe your interest/activities: I spend most of my free time with my two sons, outdoors, in the gym, on the water or working on one of my classic cars. I enjoy restoring old vehicles, creative projects, local history, photography, and anything that involves design, craftsmanship and attention to detail. I am generally happiest when I am building, improving, creating or learning something new.

Why do you desire to serve on this Board or Committee?
I would like to serve on the Mural Art Committee because art has been a major part of my life for decades, and I would genuinely enjoy being involved in the process. Public art has a lasting impact on how people experience a city, and I believe DeLand is the kind of community that benefits from thoughtful, well-executed murals.

I spend a great deal of time in Downtown DeLand (nearly 100 hours a week), have a strong interest in art & design and believe I can provide a practical perspective when evaluating proposed projects. Most importantly, I care about the quality of what gets installed because these pieces become part of the city's landscape for years to come.

Submitted On: 06/09/2026

City of DeLand, Florida

Mural Art Committee

The following summarizes **Request # 07110136**.

Personal Information

First name: Martha

Middle name:

Last name: Underriner

Email address: marthaunderriner@gmail.com

Primary phone number: (936) 523-0635

Secondary phone number:

Address: 2700 N Saratoga Rd, DeLand, FL 32720, USA

Apartment number:

Employment History

Employment History
Employer:: Museum of Art - DeLand
Position:: Executive Director
Employment date:: 10/01/2025
Employer:: Museum of Art - DeLand
Position:: Curator of Education
Employment date:: 08/01/2022
Employer:: Museum of Art - DeLand
Position:: Associate Curator of Education
Employment date:: 10/21/2021
Employer:: Stetson University
Position:: Adjunct Professor
Employment date:: 08/01/2021

Education

Education
Degree(s):: Master of Fine Arts in Studio Art
School or college:: University of Florida
Degree(s):: Master of Art Education
School or college:: Texas Tech University
Degree(s):: Bachelor of Fine Arts in Studio Art
School or college:: University of North Texas

Application

Are you a City of DeLand resident? No

How long have you lived in the DeLand area?

Do You Own Property in DeLand? No

Have you ever served on a City Board? No

When and which Board?

Are you currently serving on any advisory board for any other governmental agency? No

Please list:

Please indicate the extent of your knowledge or expertise in the area of art/artwork: I have more than 20 years of professional experience in the visual arts and currently serve as Executive Director of the Museum of Art - DeLand. Throughout my career, I have worked as a professional artist, educator, arts administrator, and community advocate, collaborating with artists and arts organizations across the country.

I hold a Bachelor of Fine Arts in Studio Art, a Master of Arts in Art Education, and a Master of Fine Arts degree in Studio Art, providing both practical and academic expertise in the visual arts. My experience includes working directly with artists throughout the creative process, curating exhibitions, facilitating artist programming, and developing community engagement initiatives that connect art with diverse audiences.

As Executive Director, I oversee all aspects of the museum's operations while working closely with exhibiting artists to create meaningful experiences that enrich the cultural life of our community. My background has given me a strong understanding of artistic excellence, project development, public engagement, and the role that public art can play in fostering community connection.

Please describe your community involvement: As Executive Director of the Museum of Art - DeLand, I am deeply involved in cultivating a vibrant arts and cultural community in DeLand and

throughout Central Florida. My work focuses on building partnerships, expanding access to the arts, and creating programs that engage residents of all ages and backgrounds while strengthening connections between the museum and the broader community.

In addition to my professional role, I am an active member of the Sunset Rotary Club of DeLand, where I participate in service projects that support our local community. I also serve on the vestry at St. Barnabas Episcopal Church. Through these roles, I am committed to civic engagement, collaboration, and enhancing the quality of life in DeLand through service.

Please describe your interest/activities: My interests center on the arts and education. Prior to my role at the Museum of Art - DeLand, I spent many years serving as a K–12 art teacher and adjunct professor of art at Stetson University, encouraging creativity and lifelong learning through arts education. I also maintain an active studio practice as a professional artist, exhibiting my work nationally in galleries and museums.

Outside of my professional work, I enjoy traveling, visiting museums, and attending cultural events to experience art in other communities.

Why do you desire to serve on this Board or Committee? As a resident of the greater DeLand area, I am deeply committed to ensuring that the arts continue to flourish and remain accessible to everyone in our community. I believe that public art has the power to encourage dialogue, foster civic pride, and enhance the quality of life for both residents and visitors.

I would welcome the opportunity to serve on the Mural Committee because I believe my experience as an artist, educator, and arts administrator would allow me to contribute thoughtful, balanced leadership to the committee's work. I value collaboration and community engagement and am committed to supporting projects that strengthen the creativity and vibrancy of our community.

Submitted On: 06/21/2026

MARTHA UNDERRINER

marthaunderriner@gmail.com
936-523-0635

PROFESSIONAL EXPERIENCE

Museum of Art – DeLand, DeLand, FL, 2021-present

Executive Director, 2025-present

- Lead strategic planning, exhibitions, education programs, and community engagement initiatives.
- Developed and successfully launched *Form + Space*, a biennial juried exhibition, overseeing artist communication, juror recruitment, jury review process.
- Identify and cultivate relationships with emerging and established artists, partnering with the curatorial team to develop projects that connect art with diverse audiences.

Curator of Education, 2022-2025

- Developed arts education and community engagement programs serving diverse audiences throughout the community.
- Collaborated with artists, schools, and community partners on creative initiatives.
- Created and implemented a Community Advisory Board to strengthen community partnerships and inform museum programming.

Associate Curator of Education, 2021-2022

- Cultivated strong relationships with local schools, community organizations, and artists, leading efforts to expand community engagement and participation in museum programs.

Stetson University, DeLand, FL - Adjunct Professor in Creative Arts, 2021-2025

University of Florida, Gainesville, FL - Instructor of Record and Graduate Assistant, 2019-2021

K-12 Art Teacher, 2008–2019

COMMUNITY & PUBLIC ART EXPERIENCE

- Leadership of community-based arts initiatives through the Museum of Art – DeLand.
- Development of artist partnerships and public-facing exhibitions.
- Coordination of community art projects and collaborations with civic organizations.
- Experience reviewing artist portfolios, exhibition proposals, and juried exhibition submissions.

ADDITIONAL QUALIFICATIONS

- Professional sculptor working in steel, glass, and ceramics.
- Exhibited in nationally recognized museums, juried exhibitions, and galleries.
- Presenter and panelist at national conferences on visual arts and arts education.

EDUCATION

2022 **MFA** Master of Fine Arts in Studio Art, University of Florida, Gainesville, FL

2015 **MAE** Master of Art Education, Texas Tech University, Lubbock, TX

2008 **BFA** Bachelor of Fine Arts in Studio Art, University of North Texas, Denton, TX

Application

DELAND FLORIDA

Mural Art Committee - Application

CRITERIA:

The Committee shall have five (5) members appointed by the City Commission. A majority of the members shall either live, work, volunteer or own property in the Greater DeLand Area. All members shall have a background or other involvement in artwork as determined by the City Commission.

DUTY:

To review and approve mural designs for aesthetic quality, design integrity and appropriateness pursuant to Ordinance 2021-18, and any resolutions that may be adopted by the City Commission from time to time, in order to create and maintain a strong community image, identity and a sense of place.

Are you a City of DeLand resident? *

NO - HONJOON PENINSULA

Do You Own Property in DeLand? *

NO - HONJOON PENINSULA

Do you volunteer in DeLand area? *

YES

Do you work within the City limits? *

NO

Have you ever served on a City Board? *

YES

Are you currently serving on a City Board? *

YES

List board and time served:

MURAL ART COMMITTEE - SINCE INCEPTION

Are you currently serving on any advisory board for any other governmental agency? *

NO

Please indicate the extent of your knowledge or expertise in the area of art/artwork: *

PROFESSIONAL ARTIST 45 YEARS • COLLEGE ART PROFESSOR 27 YEARS

Please describe your community involvement: *

MUSEUM OF ART - DELAND TRUSTEE ACES DELAND FOUNDER

Please describe your interest/activities: *

VISUAL ART

Why do you desire to serve on this Board or Committee? *

LEND MY EXPERTISE FOR THE BETTERMENT OF THE CITY

Personal Information

DELAND FLORIDA

Mural Art Committee - Personal Information

First name: *

JOHN

Middle name:

Last name: *

WILTON

Email address: *

jwilton@stetson.edu

Primary phone number: *

3869562737

Secondary phone number:

3867341147

Address: *

2648 FLOWING WELL ROAD

Apartment number:

—

Employment History

Employer: *

SELF

Position: *

ARTIST

Employment date: *

06/10/2026

Education

Degree(s): *

AA, BA, MS, EdD

School or college: *

MIAMI DADE JR. COLLEGE, FSU, FIU, UCF

A resume or separate sheet with additional information may be included:

Submitted On:

06/10/2026

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Second Reading of Ordinance 2026-18: Abandoning ± 0.09 Acres of Right-of-Way along W. Walts Avenue and S. Palmetto Avenue.

DEPARTMENT: Planning

PREPARED BY: Christopher Carson, Interim Principal Planner

ATTACHMENTS: ORD 2026-18 , Exhibit A - Vacation of ROW, A26-142 Aerial, A26-142 Zoning, Business Impact Estimate - Ord 2026-18

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The City is requesting to abandon ±0.09 acres of the W. Walts Avenue and S. Palmetto Avenue rights-of-way in partnership with The Neighborhood Center of West Volusia.

The abandonment of the right-of-way will allow the Neighborhood Center of West Volusia to facilitate expansion of their services by providing10 transitional housing units (Tiny Homes). The right-of-way being abandoned is ± 120' in length and ± 15' in width and ± 165' in length and ± 18' in width, along the W. Walts Avenue and S. Palmetto Avenue rights-of-way respectively.

At the July 6, 2026 City Commission meeting, the Commission voted 4-0 to approve the abandonment on First Reading.

There is a companion RCA on this agenda related to the acceptance of easements for utility providers and existing public improvements.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

Institute Smart Growth Principles.

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The abandonment of the portions of the W. Walts Avenue and S. Palmetto Avenue rights-of-way could result in cost savings to the City through reduced maintenance costs.

RECOMMENDATION:

Staff recommends that the City Commission approve Ordinance 2026-18, the vacation of portions of the W. Walts Avenue and S. Palmetto Avenue rights-of-way on Second Reading.

BACKGROUND/DISCUSSION:

W. Walts Avenue is an improved 50' right-of-way with 21' of asphalt pavement and a 5' pedestrian sidewalk on

the north side of the right-of-way. S. Palmetto Avenue is an improved 40' right-of-way with 16' of asphalt pavement. There are no development plans or future capital improvements identified to either of these rights-of-way. Additionally, the adjacent properties are fully built out, therefore right of way acquisition does not seem feasible. The vacation of the right-of-way will not land lock the adjacent properties and will preserve all existing access and mobility.

To preserve all existing and future utility networks and improvements, the City is requiring the dedication of easements as a condition of these right-of-way abandonments.

ORDINANCE NO. 2026 - 18

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, ABANDONING A PORTION OF WEST WALTS AVENUE AND SOUTH PALMETTO AVENUE RIGHTS-OF WAY TOTALING ±0.09 ACRES LOCATED ALONG WEST WALTS AVENUE AND SOUTH PALMETTO AVENUE; AS MORE PARTICULARLY DESCRIBED HEREIN; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the applicant, is requesting approval for the abandonment of ±0.09 acres of rights-of-way located along West Walts Avenue and South Palmetto Avenue and more particularly described in the attached Exhibit "A"; and

WHEREAS, the requested abandonment of rights-of-way is consistent with the transportation element of the City's Comprehensive Plan; and

WHEREAS, the requested abandonment of this portion of rights-of-way will not restrict access to any property, will not be harmful to the public interest, and provides a positive benefit to the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The rights-of-way totaling ±0.09 acres located along West Walts Avenue and South Palmetto Avenue and more particularly described in the attached Exhibit A, is hereby abandoned, and any right, title, or interest of the public in and to the right-of-way on any recorded map or plat, is hereby renounced and disclaimed.

Section 2. The effect of this Ordinance is to abandon ± 120' in length and ± 15' in width and ± 165' in length and ± 18' in width, totaling ±0.09 acres as described above, and to renounce and disclaim any right, title, or interest of the public in and to the said right-of-way.

Section 3. The City Clerk-Auditor is hereby directed to have recorded in the public records of Volusia County, Florida, a certified copy of this Ordinance.

Section 4. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, that holding shall in no way affect the validity of the remaining portions of this Ordinance.

Section 5. All Ordinances or parts of Ordinances in conflict herewith are, to the extent of such conflict, hereby repealed.

Section 6. This Ordinance shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 20th day of July, 2026.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Christian D. Gowan, MPA, CMC
City Clerk - Auditor

Passed on first reading: July 6, 2026
Adopted on second reading: July 20, 2026

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Exhibit A

SKETCH OF DESCRIPTION

THIS IS NOT A SURVEY

LEGAL DESCRIPTION: (OR 6099 PG 973)

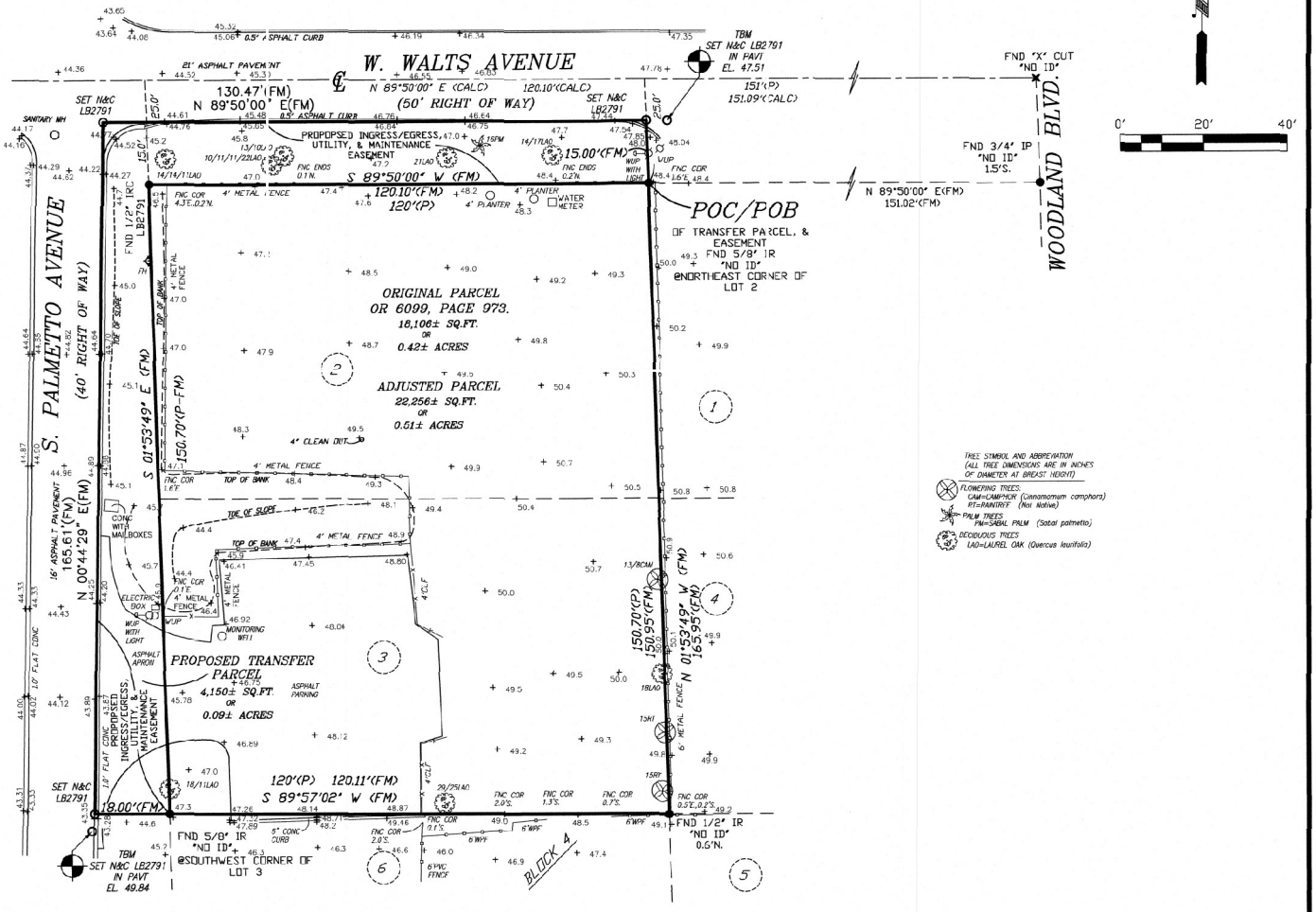
LOT 2 AND 3, BLOCK 4, S. WALTS SECOND SUBDIVISION, ACCORDING TO THE MAP OR PLAT THEROF, RECORDED IN MAP BOOK 2, PAGE 105, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

AND

LEGAL DESCRIPTION: (WRITTEN)(PROPOSED TRANSFER PARCEL)

A PORTION OF LAND LYING WITHIN THE RIGHT OF WAY OF SOUTH PALMETTO AVENUE AND WEST WALTS AVENUE, MAP OF S. WALTS SECOND SUBDIVISION OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 17 SOUTH, RANGE 30 EAST, AS RECORDED IN MAP BOOK 2, PAGE 105, AND RERECORDED IN MAP BOOK 17, PAGE 93, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FOR A POINT OF COMMENCEMENT, BEGIN AT THE NORTHEAST CORNER OF LOT 2, BLOCK 4, OF SAID S. WALTS SECOND SUBDIVISION; THENCE S 89°50'00" W, ALONG THE SOUTH RIGHT OF WAY LINE OF WEST WALTS AVENUE AND NORTH LINE OF SAID LOT 2, A DISTANCE OF 120.10 FEET TO THE EAST RIGHT OF WAY LINE OF SOUTH PALMETTO AVENUE, ALSO BEING THE WEST LINE OF SAID LOT 2 AND 3; THENCE S 01°53'49" E, ALONG SAID EAST AND WEST LINE, A DISTANCE OF 150.70 FEET TO THE SOUTHWEST CORNER OF LOT 3, BLOCK 4; THENCE S 89°57'02" W, A DISTANCE OF 18.00 FEET TO THE EAST EDGE OF PAVEMENT OF SOUTH PALMETTO AVENUE; THENCE N 00°44'29" E, ALONG SAID EAST EDGE, A DISTANCE OF 165.61 FEET; THENCE N 89°50'00"E, ALONG THE SOUTH EDGE OF PAVEMENT OF WEST WALTS AVENUE, A DISTANCE OF 130.47 FEET; THENCE S 01°53'49"E, A DISTANCE OF 15.00 FEET TO THE POINT OF BEGINNING. BEING SUBJECT TO AN INGRESS/EGRESS, UTILITY, AND MAINTENANCE EASEMENT OVER THE ENTIRETY OF THE ABOVE DESCRIBED PARCEL.



TREE SYMBOL AND ABBREVIATION
(ALL TREE DIMENSIONS ARE IN INCHES OF DIAMETER AT BREAST HEIGHT)

FLOWERING TREES:
CAM=CAMPHOR (Cinnamomum camphora)
RT=RAINTREE (Not Native)

PALM TREES:
PAM=SABAL PALM (Sabal palmetto)

DECIDUOUS TREES
LAO=LAUREL OAK (Quercus laurifolia)

FLOOD CERTIFICATION:
(Per map dated February 19, 2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map, Panel 470 of 930, Zone "X".

NOTES:

BEARINGS SHOWN BASED ON THE SOUTH RIGHT-OF-WAY LINE OF W. WALTS AVENUE AS BEING A BEARING OF S. 89°50'00" E. (ASSUMED).

THE FLOODPLAIN BOUNDARY, IF SHOWN HEREON, WAS SCALED FROM A LARGE SCALE FEMA FLOOD INSURANCE MAP AND AS SUCH HAS AN INHERENT ERROR OF 10% OF THE FEMA MAP SCALE.

UNDERGROUND UTILITIES AND FOUNDATION MAY EXIST AND HAVE NOT BEEN LOCATED, EXCEPT AS SHOWN.

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE (MINIMUM TECHNICAL STANDARDS) AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, OF THE FLORIDA ADMINISTRATIVE CODE, SECTION 472.027, FLORIDA STATUTES.

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988 DATUM.

Robert Evers
Digitally signed by Robert Evers
Date: 2026.06.11 16:20:50 -04'00'

ABBREVIATIONS

AC=Acres
A/C=Air Conditioning Unit
ASPH=Asphalt
BFP=Back Flow Preventer
BLDG=Building
BLK=Block
BM=Benchmark
(CALC)=Computed Data
CATV=Cable TV Service
CB=Concrete Block
CLF=Chain Link Fence
CM=Concrete Monument
CMP=Corrugated Metal Pipe
CONC=Concrete
COR=Corner
CUP=Concrete Utility Pole
(D)=Deed call
DRA=Drainage Retention Area
E/EC or E=Electric
ELEV or EL=Elevation
FND=Found
FOC=Fiber Optic Cable
FFE=Finish Floor Elev.
FH=Fire Hydrant
(FM)=Field Measured
FR=Frame Construction
F/WF=Field Wire Fence
F/WF=Field Wire Fence
GA=Guy Anchor
GL=Government Lot
GLO=Government Land Office
HDW=Headwall
ID=Identification
INV=Invert Elevation
IP=Iron Pipe
IR=Iron Rod
IRC=Iron Rod & Cap
LB=Licensed Business
LS=Registered Land Surveyor
MB=Map Book
MH=Manhole
MON=Monument
N&C=Nail & Cap
NO ID=No Identification
OR=Official Records Book
O/_=Overhead
(P)=Plat
PC=Point of Curvature
PCC=Point of Compound Curvature
PG=Page
PI=Point of Intersection
POB=Point of Beginning
POC=Point of Commencement
PoC=Point on the Curve
POL=Point on Line
PRC=Point of Reverse Curve
POL=Point on Line
PRC=Point of Reverse Curve
PRM=Permanent Reference Mon.
PT=Point of Tangency
PVC=Poly Vinyl Chloride
PVMT=Pavement
R=Radius or Radial Line
RCP=Reinforced Conc. Pipe
REC=Recovered
RNG=Range
RRS=Railroad Spike
R/W=Right of Way
SEC=Section
SAN=Sanitary Sewer
SD=Storm Sewer
T=Tangent
TB=Tangent Bearing
T/_ or T=Telephone Service
TWP=Township
U/_=Underground
UNP=Unrecorded Plat
UP=Utility Pole
WD/F=Wood Fence
WLP=Wood Light Pole
WM=Water Meter
W/M=Water Main
WPF=Wood Privacy Fence
WSL=Water Service Line
W/=With
WC=Witness Corner
WUP= Wood Utility Pole

NOTE:

This Plat of Survey is certified to and prepared for the sole and exclusive benefit of the entities and or individuals shown hereon, valid on the most current date shown hereon, and shall not be relied upon by any other entity or individual whomsoever.

This Survey / Sketch has been prepared without benefit of abstract or title search unless otherwise noted hereon.

There may be additional restrictions and/or other matters of record not shown on this Survey / Sketch that may be found in the Public Records of the county or contained within the Title Commitment.

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

BLACKWELL & ASSOCIATES LAND SURVEYORS, INC (LB2791)
BY: ROBERT R. EVERS License Number 5675 STATE OF FLORIDA Professional Surveyor and Mapper
ROBERT R. EVERS
FLORIDA CERT. NO. 5675

BLACKWELL & ASSOCIATES
LAND SURVEYORS, INC
WWW.BLACKWELLSURVEYING.COM
995 W. VOLUSIA AVE. * DELAND, FL. * PH: (386)-734-8050

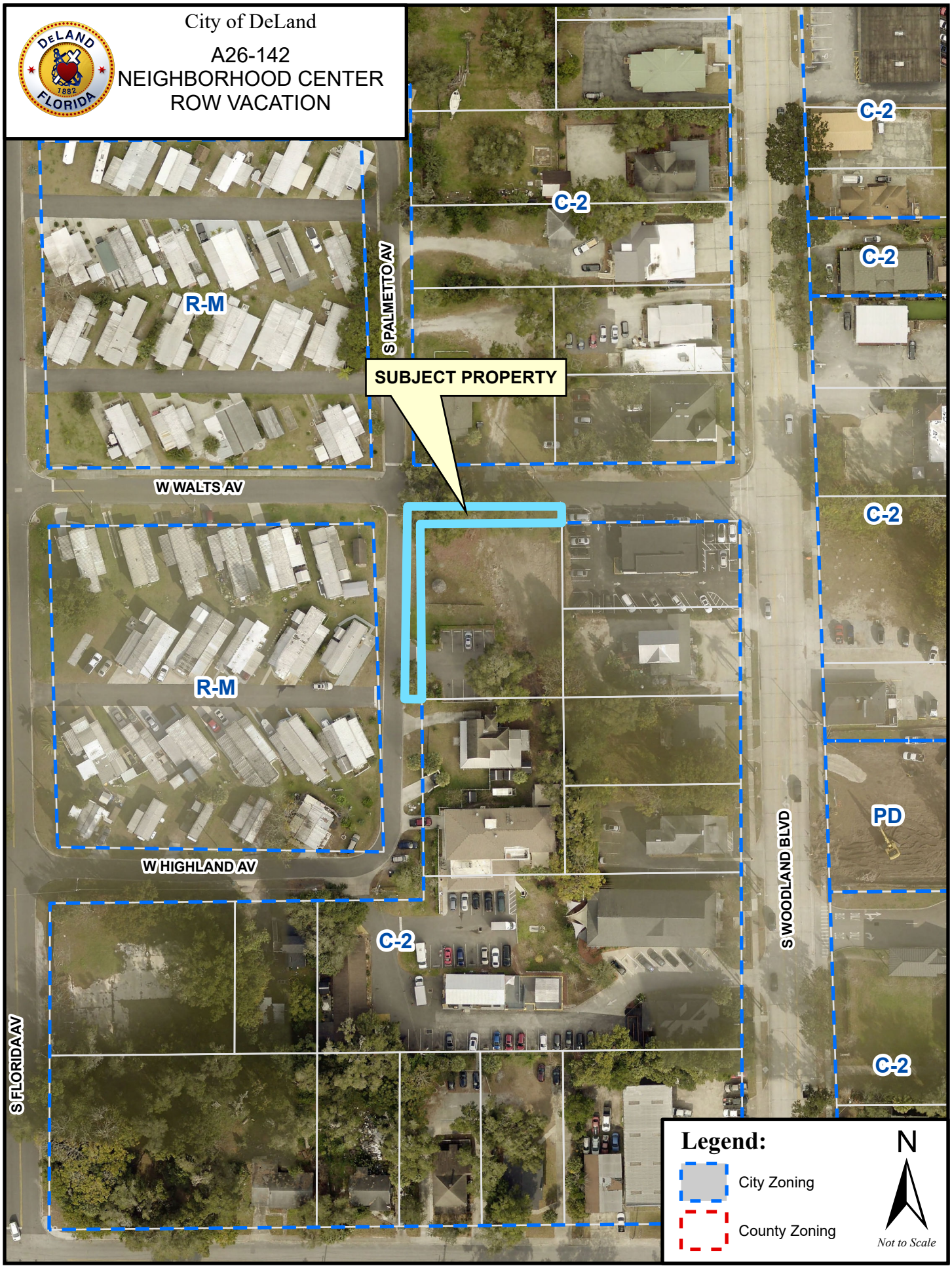
SKETCH OF DESCRIPTION FOR:

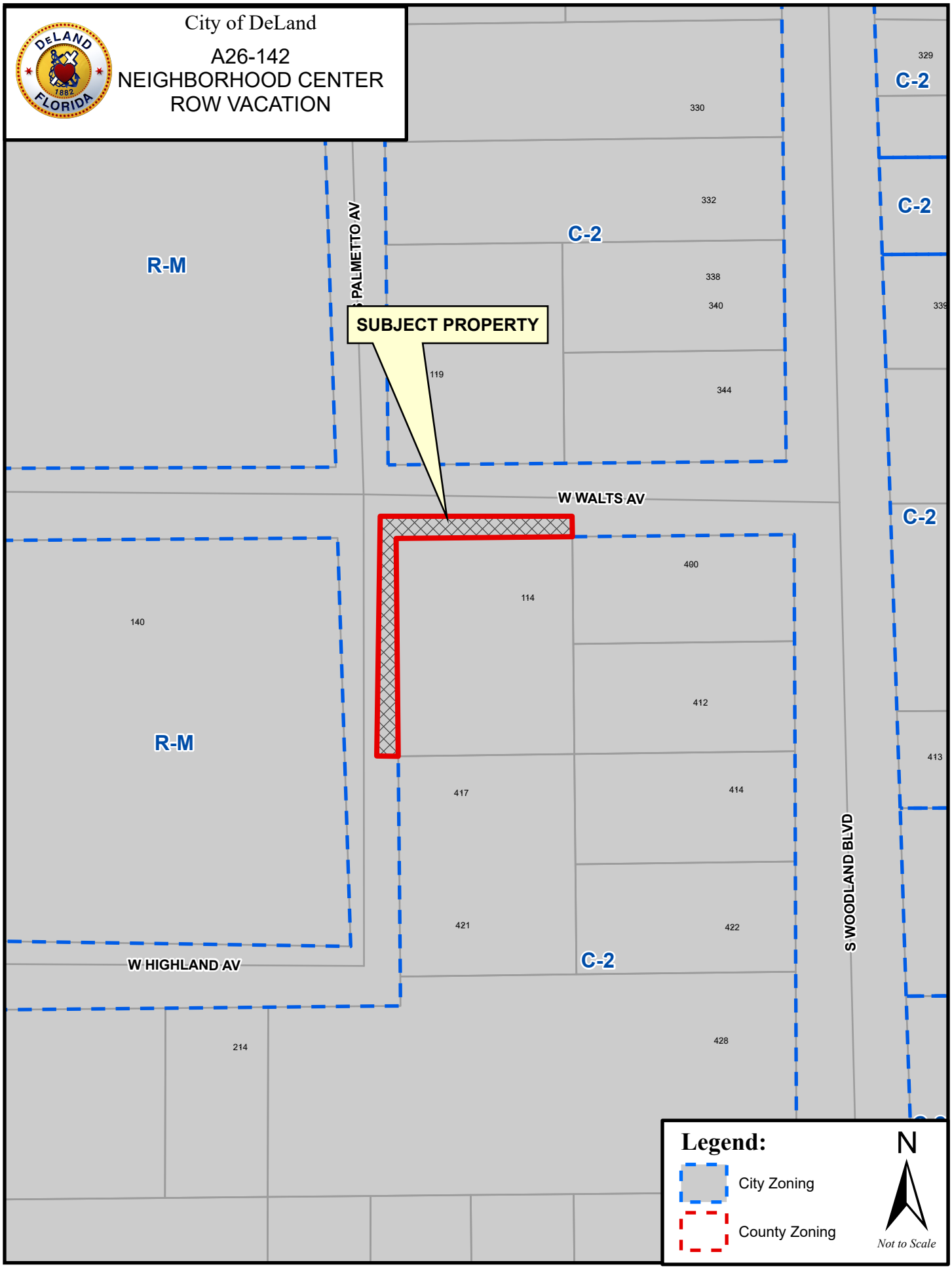
THE CITY OF DELAND.
&
NEIGHBORHOOD CENTER OF WEST VOLUSIA, INC.

SYMBOLS :

- ● = REBAR FOUND (SIZE SHOWN HEREON)
- ○ = 1/2" REBAR & CAP SET
- □ = 4"x4" CONCRETE MONUMENT & CAP SET
- ■ = CONCRETE MONUMENT FOUND (SIZE SHOWN HEREON)
- ⊕ = R.L.S. DISC/NAIL FOUND (SIZE SHOWN HEREON)
- ○ = R.L.S. DISC/NAIL SET
- ⊙ = IRON PIPE FOUND (SIZE SHOWN HEREON)
- ◆ = RAILROAD SPIKE FOUND
- ● = BOLT FOUND (SIZE SHOWN HEREON)
- • = P/K NAIL FOUND

DATE :	08/14/2024
W.O. No.	05-115-13
DRAWN BY :	DCW/RCB
FIELD BOOK :	688/40
CADD FILE / FILE No. :	05-115-13 M-


City of DeLand
A26-142
NEIGHBORHOOD CENTER
ROW VACATION
R-M
R-M
C-2
C-2
C-2
C-2
C-2
C-2
PD
SUBJECT PROPERTY
S PALMETTO AV
W WALTS AV
W HIGHLAND AV
S FLORIDA AV
S WOODLAND BLVD
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
A26-142
NEIGHBORHOOD CENTER
ROW VACATION
SUBJECT PROPERTY
R-M
C-2
S PALMETTO AV
W WALTS AV
W HIGHLAND AV
S WOODLAND BLVD
330
332
338
340
344
119
329
339
400
114
140
412
413
417
414
421
422
428
214
Legend:
City Zoning
County Zoning
N
Not to Scale

Business Impact Estimate

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the [City's/Town's/Village's] website by the time notice of the proposed ordinance is published.

Proposed ordinance's title/reference:

ORDINANCE NO. 2026 -18

AN ORDINANCE OF THE CITY COMMISSION OF DELAND, FLORIDA, ABANDONING A PORTION OF WEST WALTS AVENUE AND SOUTH PALMETTO AVENUE RIGHTS-OF WAY TOTALING ±0.09 ACRES LOCATED ALONG WEST WALTS AVENUE AND SOUTH PALMETTO AVENUE; AS MORE PARTICULARLY DESCRIBED HEREIN; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

This Business Impact Estimate is provided in accordance with section 166.041(4), Florida Statutes. If one or more boxes are checked below, this means the [City/Town/Village] is of the view that a business impact estimate is not required by state law[1] for the proposed ordinance, but the [City/Town/Village] is, nevertheless, providing this Business Impact Estimate as a courtesy and to avoid any procedural issues that could impact the enactment of the proposed ordinance. This Business Impact Estimate may be revised following its initial posting.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;
- ☐ The ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
  a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;

[1] See Section 166.041(4)(c), Florida Statutes.

b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

In accordance with the provisions of controlling law, even notwithstanding the fact that an exemption noted above may apply, the [City/Town/Village] hereby publishes the following information:

1. Summary of the proposed ordinance (must include a statement of the public purpose, such as serving the public health, safety, morals and welfare):

The proposed ordinance enhances public welfare of the community by allowing the Neighborhood Center of West Volusia to expand the Bridge, directly increasing local housing capacity and additional housing services.

2. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the [City/Town/Village], if any:

(a) An estimate of direct compliance costs that businesses may reasonably incur;

The Neighborhood Center of West Volusia is a registered 501(c)(3) non-profit organization, therefore, there is no direct economic impact to private, for-profit businesses.

(b) Any new charge or fee imposed by the proposed ordinance or for which businesses will be financially responsible; and

No new fees are being proposed that will affect business.

(c) An estimate of the [City's/Town's/Village's] regulatory costs, including estimated revenues from any new charges or fees to cover such costs.

No new fees or charges are being proposed that will affect business.

3. Good faith estimate of the number of businesses likely to be impacted by the proposed ordinance:

The estimates number of businesses that may be impacted by the proposed ordinance is zero.

4. Additional information the governing body deems useful (if any):
[*You may wish to include in this section the methodology or data used to prepare the Business Impact Estimate. For example: [City/Town/Village] staff solicited comments from businesses in the [City/Town/Village] as to the potential impact of the proposed ordinance by contacting the chamber of commerce, social media posting, direct mail or direct email, posting on [City/Town/Village] website, public workshop, etc. You may also wish to include efforts made to reduce the potential fiscal impact on businesses. You may also wish to state here that the proposed ordinance is a generally applicable ordinance that applies to all persons similarly situated (individuals as well as businesses) and, therefore, the proposed ordinance does not affect only businesses*).

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Approval of Resolution 2026-35: Approving the Proposed Millage Rate for Fiscal Year 2026-2027.

DEPARTMENT: Finance

PREPARED BY: Daniel Stauffer, Finance Director

ATTACHMENTS: Resolution No. 2026-35

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The certification of property tax values by the Volusia County Property Appraiser on July 1st provides a taxable value of $4,118,458,981, of which $170,666,818 is considered taxable new construction and annexation values. This represents an approximate 7.18% increase from the final taxable value from the prior year. The rolled-back rate is the rate that produces the same amount of revenue as received in the current fiscal year. The estimated rolled-back rate for the tax year 2026 is 6.0217 mills.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

N/A

SUSTAINABILITY:

N/A

FISCAL IMPACT:

The millage rate proposed for operating purposes is 6.1841. This is the same operating millage rate from FY 25-26. The proposed operating millage of 6.1841 is 2.70% above the rolled-back millage rate of 6.0217. The total ad valorem tax revenue is $23,225,735 for FY 26-27, with the General Fund receiving $22,099,020 and the Capital Fund receiving $1,126,715.

RECOMMENDATION:

Staff recommends that the City Commission establish the proposed millage rate at 6.1841 mills for operating purposes and instruct the Property Appraiser to advertise the rate in the "TRIM" Notice to DeLand's taxpayers and establish the dates and times for the first public hearing on Wednesday, September 9th at 7:00 p.m. and the final public hearing on Monday, September 21st at 7:00 p.m.

BACKGROUND/DISCUSSION:

The Truth in Millage Act (TRIM) requires the City to advise the Property Appraiser by August 4th of the proposed millage rate, as well as the date, time and place of the budget hearings. The Property Appraiser is then required to mail a "Notice of Proposed Property Taxes" (TRIM Notice) to each property owner. The first budget hearing will need to be scheduled for the first City Commission meeting in September (September 9th), at which time a public hearing will be held on the tentative millage and budget. The tentative millage rate cannot exceed the proposed millage rate presented in the "TRIM Notice" without notification of the increase to each taxpayer by first class mail at the City's expense. The City Commission may, however, reduce the

tentative millage rate during the public hearing held in September.

A comparison of the millage rates for the prior year and the proposed budget is as follows:

	FY 26-27	**FY 25-26**	**Change**	**% Change**
Operating	6.1841	6.1841	0.0000	0.00%
Debt Service	0.0000	0.0000	0.0000	0.00%
Total	6.1841	6.1841	0.0000	0.00%

The City does not have a debt service millage rate due to the payoff of the general obligation debt during FY 2018-2019.

RESOLUTION NO. 2026–35

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, ADOPTING A PROPOSED MILLAGE RATE FOR FISCAL YEAR 2026-2027; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of DeLand is required by Florida Statute Section 200.065(2) to adopt a Resolution setting the millage rate to be levied; and

WHEREAS, the Statute further requires that the Resolution shall state the percent, if any, by which the millage rate to be levied exceeds the rolled-back rate as computed by the Office of the Property Appraiser of Volusia County; and

WHEREAS, the City Commission of the City of DeLand does intend to adopt a proposed operating millage rate of 6.1841 mills which is 2.70% more than the estimated rolled back rate of 6.0217, and

WHEREAS, each taxpayer within the corporate limits of DeLand will be sent notice by first class mail by the Property Appraiser of the public hearing setting the tentative millage rate and proposed budget; and

WHEREAS, a tentative budget hearing on the millage rate has been scheduled for 7:00 p.m. at the City Hall Commission Chambers on September 9, 2026, and the final public hearing has been scheduled for 7:00 p.m. at the City Hall Commission Chambers on September 21, 2026; and

WHEREAS, it is necessary for the City to approve and adopt its proposed millage rate for the fiscal year 2026-2027;

NOW, THEREFORE, BE IT RESOLVED BY THE COMMISSION OF DELAND, FLORIDA:

Section 1. The City Commission of the City of DeLand hereby adopts a 6.1841 proposed operating millage rate.

Section 2. The proposed operating millage rate hereby adopted is 0.1624 more than the estimated rolled back rate.

Section 3. Any resolution or part of resolution in conflict herewith is hereby repealed.

Section 4. This Resolution shall become effective upon its adoption.

PASSED AND DULY ADOPTED this 20th day of July, 2026.

_____
Christopher M. Cloudman
Mayor – Commissioner

ATTEST:

_____
Christian D. Gowan, MPA, CMC
City Clerk – Auditor

APPROVED IN FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

CITY OF DELAND
Request for Commission Action
July 20, 2026

SUBJECT: Acceptance of Easement for W. Walts Avenue and S. Palmetto Avenue.

DEPARTMENT: Legal

PREPARED BY: Christopher Carson, Interim Principal Planner

ATTACHMENTS: Utility Easement - 114 W. Walts, Exhibit A

APPROVED BY: Michael Pleus, City Manager, July 14, 2026

SUMMARY/HIGHLIGHT:

The City is in the process of vacating portion of the W. Walts Avenue and S. Palmetto Avenue rights-of-way in partnership with The Neighborhood Center of West Volusia. There are existing utilities within portions of the right-of-way being vacated and an easement is needed in order to maintain those utilities. Staff is recommending to the City Commission that it accept the attached easement for this purpose.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

High value government

SUSTAINABILITY:

N/A

FISCAL IMPACT:

There is no direct financial impact to this item.

RECOMMENDATION:

Staff recommends that the City Commission accept the attached easement.

BACKGROUND/DISCUSSION:

There are existing utilities which exist along the W. Walts Avenue and S. Palmetto Avenue rights-of-way. To preserve all existing and future utility networks and improvements, the attached easement will allow those utilities to remain in place in perpetuity.

Prepared by and Return to:
Darren J. Elkind, Esquire
142 East New York Avenue
DeLand, Florida 32724
Phone: 386.734.3020
Tax Parcel Identification Number: 701620040020 (Altkey 2248866)

114 W. WALTS AVENUE/CITY OF DELAND UTILITY EASEMENT

THIS UTILITY EASEMENT made the __ day of July, 2026, by NEIGHBORHOOD CENTER OF WEST VOLUSIA, INC., whose address is 434 South Woodland Boulevard, DeLand, FL 32724 (hereinafter referred to as **"**Grantor**"**), to the CITY OF DELAND, a municipality of the State of Florida, whose mailing address is City Hall, 120 South Florida Avenue, DeLand, Florida 32720 (hereinafter referred to as "Grantee").

W I T N E S S E T H:

FOR AND IN CONSIDERATION OF the sum of ONE AND NO/100 DOLLAR ($1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Grantor does hereby grant and convey to the Grantee and its assigns, an easement and right-of-way for utility purposes, with full authority to enter upon, excavate, construct and maintain utility pipes, cables, lines, support poles and all associated infrastructure whatsoever that the Grantee, and any utility providers authorized by the Grantee, may deem necessary for the operation of utility facilities of whatsoever type or nature including, but not limited to, water, sewer, electric, cable, and fiber optic, over, under, upon and through the following-described lands situate in the County of Volusia, State of Florida, to-wit:

See attached Exhibit "A" which is incorporated herein by this reference thereto and is entitled "Sketch of Description" prepared by Blackwell & Associates Land Surveyors, Inc., dated June 11, 2026

TO HAVE AND TO HOLD the right to by Grantee, its assigns, and all utility providers authorized by the Grantee, to reasonably enter upon the contiguous lands of the Grantor in order to accomplish the aforesaid actions and free ingress and egress over and across the said property.

FURTHER, TO HAVE AND TO HOLD said easement and right-of-way unto said Grantee and its assigns forever.

THE GRANTEE, its assigns, and all utility providers authorized by the Grantee, shall have the right to clear, keep clear and remove from said easement and right-of-way all trees, undergrowth, and other obstructions that may interfere with location, excavation, operation or maintenance of the utilities or any facilities installed thereon, and the Grantor, and the successors and assigns of the Grantor, agree not to build, construct or create, or permit others to build, construct or create any buildings or other structures on the said easement and right-of-way that may interfere with the location, excavation, operation or maintenance of the utilities, or any facilities installed thereon, unless approved in writing by the Grantee.

TOGETHER WITH all other Common Law covenants of seisin, this conveyance also includes the covenant of further assurances.

THIS GRANT may be subject to the after acquired title doctrine and the Grantee shall benefit in every respect from that doctrine of law.

IN WITNESS WHEREOF, the Grantor has hereunto set the Grantor's hand and seal, the day and year written above.

Signed, sealed and delivered
in the presence of witnesses:

Neighborhood Center of West Volusia, Inc.,
a Florida not for profit corporation

_____
Signature of Witness #1

By:_____
Name: _____
Title: _____

_____
Printed Name of Witness #1

_____
Signature of Witness #2

_____
Printed Name of Witness #2

ACKNOWLEDGMENT

STATE OF FLORIDA

COUNTY OF VOLUSIA

SWORN TO AND SUBSCRIBED before me, by means of [ ] physical presence or [ ] online notarization, this _____ day of July, 2026, by _____, as _____ of _____, on behalf of the corporation, who is [ ] personally known to me or [ ] who has produced _____ as identification.

_____
NOTARY PUBLIC

_____
[Print, type or stamp commissioned name of notary or deputy clerk.]

SKETCH OF DESCRIPTION

THIS IS NOT A SURVEY

LEGAL DESCRIPTION: (OR 6099 PG 973)

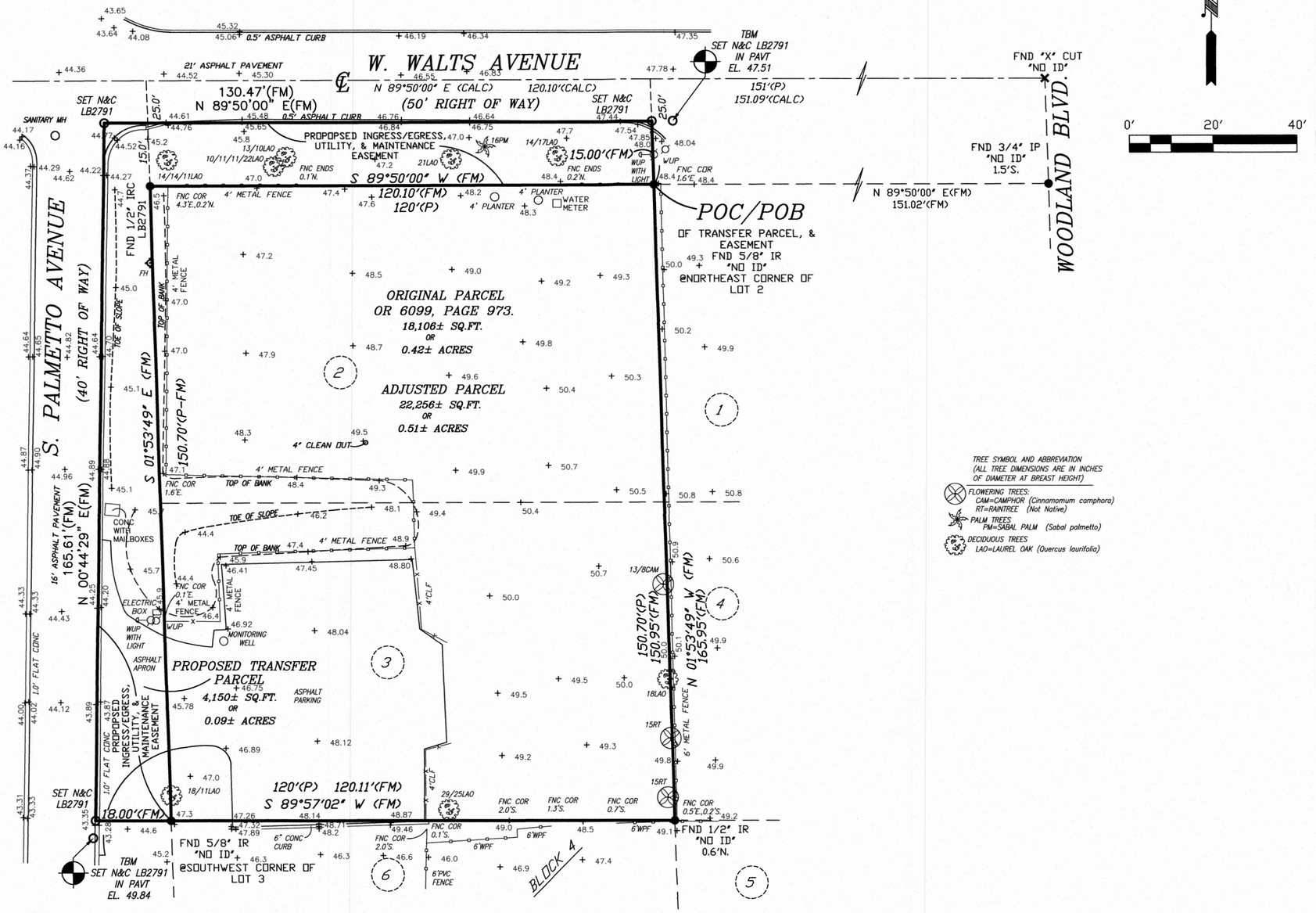
LOT 2 AND 3, BLOCK 4, S. WALTS SECOND SUBDIVISION, ACCORDING TO THE MAP OR PLAT THEROF, RECORDED IN MAP BOOK 2, PAGE 105, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

AND

LEGAL DESCRIPTION: (WRITTEN)(PROPOSED TRANSFER PARCEL)

A PORTION OF LAND LYING WITHIN THE RIGHT OF WAY OF SOUTH PALMETTO AVENUE AND WEST WALTS AVENUE, MAP OF S. WALTS SECOND SUBDIVISION OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 17 SOUTH, RANGE 30 EAST, AS RECORDED IN MAP BOOK 2, PAGE 105, AND RERECORDED IN MAP BOOK 17, PAGE 93, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FOR A POINT OF COMMENCEMENT, BEGIN AT THE NORTHEAST CORNER OF LOT 2, BLOCK 4, OF SAID S. WALTS SECOND SUBDIVISION; THENCE S 89°50'00" W, ALONG THE SOUTH RIGHT OF WAY LINE OF WEST WALTS AVENUE AND NORTH LINE OF SAID LOT 2, A DISTANCE OF 120.10 FEET TO THE EAST RIGHT OF WAY LINE OF SOUTH PALMETTO AVENUE, ALSO BEING THE WEST LINE OF SAID LOT 2 AND 3; THENCE S 01°53'49" E, ALONG SAID EAST AND WEST LINE, A DISTANCE OF 150.70 FEET TO THE SOUTHWEST CORNER OF LOT 3, BLOCK 4; THENCE S 89°57'02" W, A DISTANCE OF 18.00 FEET TO THE EAST EDGE OF PAVEMENT OF SOUTH PALMETTO AVENUE; THENCE N 00°44'29" E, ALONG SAID EAST EDGE, A DISTANCE OF 165.61 FEET; THENCE N 89°50'00"E, ALONG THE SOUTH EDGE OF PAVEMENT OF WEST WALTS AVENUE, A DISTANCE OF 130.47 FEET; THENCE S 01°53'49"E, A DISTANCE OF 15.00 FEET TO THE POINT OF BEGINNING. BEING SUBJECT TO AN INGRESS/EGRESS, UTILITY, AND MAINTENANCE EASEMENT OVER THE ENTIRETY OF THE ABOVE DESCRIBED PARCEL.



TREE SYMBOL AND ABBREVIATION
(ALL TREE DIMENSIONS ARE IN INCHES OF DIAMETER AT BREAST HEIGHT)

- FLOWERING TREES: CAM=CAMPHOR (Cinnamomum camphora) RT=RAINTREE (Not Native)
- PALM TREES PM=SABAL PALM (Sabal palmetto)
- DECIDUOUS TREES LAO=LAUREL OAK (Quercus laurifolia)

FLOOD CERTIFICATION:
(Per map dated February 19, 2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map, Panel 470 of 930, Zone "X".

NOTES:

BEARINGS SHOWN BASED ON THE SOUTH RIGHT-OF-WAY LINE OF W. WALTS AVENUE AS BEING A BEARING OF S. 89°50'00" E. (ASSUMED).

THE FLOODPLAIN BOUNDARY, IF SHOWN HEREON, WAS SCALED FROM A LARGE SCALE FEMA FLOOD INSURANCE MAP AND AS SUCH HAS AN INHERENT ERROR OF 10% OF THE FEMA MAP SCALE.

UNDERGROUND UTILITIES AND FOUNDATION MAY EXIST AND HAVE NOT BEEN LOCATED, EXCEPT AS SHOWN.

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE (MINIMUM TECHNICAL STANDARDS) AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, OF THE FLORIDA ADMINISTRATIVE CODE, SECTION 472.027, FLORIDA STATUTES.

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988 DATUM.

ABBREVIATIONS

AC=Acres
A/C=Air Conditioning Unit
ASPH=Asphalt
BFP=Back Flow Preventer
BLDG=Building
BLK=Block
BM=Benchmark
(CALC)=Computed Data
CATV=Cable TV Service
CB=Concrete Block
CLF=Chain Link Fence
CM=Concrete Monument
CMP=Corrugated Metal Pipe
CONC=Concrete
COR=Corner
CUP=Concrete Utility Pole
(D)=Deed call
DRA=Drainage Retention Area
ELEC or E=Electric
ELEV or EL=Elevation
FND=Found
FOC=Fiber Optic Cable
FFE=Finish Floor Elev.
FH=Fire Hydrant
(FM)=Field Measured
FR=Frame Construction
F/WF=Field Wire Fence
F/WF=Field Wire Fence
GA=Guy Anchor
GL=Government Lot
GLO=Government Land Office
HDW=Headwall
ID=Identification
INV=Invert Elevation
IP=Iron Pipe
IR=Iron Rod
IRC=Iron Rod & Cap
LB=Licensed Business
LS=Registered Land Surveyor
MB=Map Book
MH=Manhole
MON=Monument
N&C=Nail & Cap
NO ID=No Identification
OR=Official Records Book
O/__=Overhead
(P)=Plat
PC=Point of Curvature
PCC=Point of Compound Curvature
PG=Page
PI=Point of Intersection
POB=Point of Beginning
POC=Point of Commencement
PoC=Point on the Curve
POL=Point on Line
PRC=Point of Reverse Curve
POL=Point on Line
PRC=Point of Reverse Curve
PRM=Permanent Reference Mon.
PT=Point of Tangency
PVC=Poly Vinyl Chloride
PVMT=Pavement
R=Radius or Radial Line
RCP=Reinforced Conc. Pipe
REC=Recovered
RNG=Range
RRS=Railroad Spike
R/W=Right of Way
SEC=Section
SANI=Sanitary Sewer
SD=Storm Sewer
T=Tangent
TB=Tangent Bearing
TEL or T=Telephone Service
TWP=Township
U/__=Underground
UNP=Unrecorded Plat
UP=Utility Pole
WD/F=Wood Fence
WLP=Wood Light Pole
WM=Water Meter
W/M=Water Main
WPF=Wood Privacy Fence
WSL=Water Service Line
W/=With
WC=Witness Corner
WUP= Wood Utility Pole

NOTE:

This Plat of Survey is certified to and prepared for the sole and exclusive benefit of the entities and or individuals shown hereon, valid on the most current date shown hereon, and shall not be relied upon by any other entity or individual whomsoever.

This Survey / Sketch has been prepared without benefit of abstract or title search unless otherwise noted hereon.

There may be additional restrictions and/or other matters of record not shown on this Survey / Sketch that may be found in the Public Records of the county or contained within the Title Commitment.

Robert Evers
Digitally signed by Robert Evers
Date: 2026.06.11 16:20:50 -04'00'

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

BLACKWELL & ASSOCIATES LAND SURVEYORS, INC (LB 2791)
BY: ROBERT R. EVERS
ROBERT R. EVERS, FLORIDA CERT. NO. 5675
License Number 5675 STATE OF FLORIDA Professional Surveyor and Mapper

BLACKWELL & ASSOCIATES
LAND SURVEYORS, INC
WWW.BLACKWELLSURVEYING.COM
995 W. VOLUSIA AVE. * DELAND, FL. * PH: (386)-734-8050

SKETCH OF DESCRIPTION FOR:

THE CITY OF DELAND.
&
NEIGHBORHOOD CENTER OF WEST VOLUSIA, INC.

SYMBOLS :

- ● = REBAR FOUND (SIZE SHOWN HEREON)
- ○ = 1/2" REBAR & CAP SET
- □ = 4"x4" CONCRETE MONUMENT & CAP SET
- ■ = CONCRETE MONUMENT FOUND (SIZE SHOWN HEREON)
- ⊕ = R.L.S. DISC/NAIL FOUND (SIZE SHOWN HEREON)
- ⊙ = R.L.S. DISC/NAIL SET
- ⊙ = IRON PIPE FOUND (SIZE SHOWN HEREON)
- ◆ = RAILROAD SPIKE FOUND
- ● = BOLT FOUND (SIZE SHOWN HEREON)
- • = P/K NAIL FOUND

DATE :	08/14/2024
W.O. No.	05-115-13
DRAWN BY :	DCW/KCB
FIELD BOOK :	688/40
CADD FILE / FILE No. :	05-115-13 M-