



CITY OF FORT LAUDERDALE

Change Order No. 5
Purchase Order 6191
P12765
Prospect Lake Clean Water Center
Prospect Lake Water, L.P



This change Order provides for all costs and schedule adjustments associated with completing the work, including materials, labor, equipment, bond, insurance, overhead, profit, impacts, and any and all related items or associated costs incurred or resulting from the items listed above, and is provided in accordance with Article VIII – Changes in the Work.

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written below.

Prospect Lake Water, L.P.

Approved: Signed by:
Michael Albrecht
557401F88DBD470... Initial
MA

Michael Albrecht President

Print Name and Title

8/19/2025

Date

CITY OF FORT LAUDERDALE,
a municipal corporation of the State of
Florida.

Rickelle Williams

Rickelle Williams
City Manager

Date: 12/4/25

C:

Brandy Leighton, Division Manager
Daniel Fisher, Senior Project Manager
Financial Administrator
Project File





CITY OF FORT LAUDERDALE

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Prospect Lake Clean Water Center
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CHANGE ORDER SUMMARY SHEET

ORIGINAL CONTRACT AMOUNT (PO 6189 + 6191)	\$411,567,380
COST OF CHANGE ORDERS ON PO 6189 TO DATE	\$43,036,256
COST OF THIS CHANGE ORDER	\$0
COST OF CHANGE ORDERS ON PO 6191 TO DATE	\$3,882,544
COST OF THIS CHANGE ORDER	\$184,017
TOTAL:	\$458,670,197
ORIGINAL CONTRACT TIME	1,278 calendar days
TIME ADDED TO DATE	0 calendar days
TIME ADDED TO THIS CHANGE ORDER	0 calendar days
TOTAL:	1,278 calendar days

SCHEDULE OF CHANGE ORDERS TO DATE ON PO 6189

C.O.#	DATE	DESCRIPTION	AMOUNT OF COST OR CREDIT
1	8/23/2023	PFAS	\$371,644
2	10/23/2023	Temporary Power for Construction	\$445,504
3	12/3/2023	OCCT Construction Updates	\$1,336,774
4	10/01/2024	Feedstock Watermain	\$3,275,339
5	10/01/2024	OCCT Pipe Loop Study	\$5,790,004
6	10/01/2024	PFAS Pilot Testing	\$4,720,061
7	11/19/2024	Second Disposal Well Funding	\$20,000,000





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8	12/11/2024	Surge Analysis at Prospect Wellfield	\$144,930
9	01/21/2025	Water, Sewer, and Fiber EW Construction	\$6,952,000

SCHEDULE OF CHANGE ORDERS TO DATE ON PO 6191

C.O.#	DATE	DESCRIPTION	AMOUNT OF COST OR CREDIT
1	12/19/2023	Administration and Nano Building	\$4,167,756
2	4/9/2024	Administration Building Deduction	\$(736,631)
3	9/14/2024	PFAS Tie In Connection	\$451,419
4	12/16/2024	454 / 497 Funding Error	\$0





**CITY OF
FORT LAUDERDALE**

Change Order No. 5
Purchase Order 6191
P12765
Prospect Lake Clean Water Center
Prospect Lake Water, L.P



March 7, 2025

City of Fort Lauderdale, Florida
101 NE 3rd Avenue Suite 2100, Fort Lauderdale, FL 33301
Attn: City Manager and Public Works Director
Phone: 954-828-5000

With a copy to:

City of Fort Lauderdale, Florida
One East Broward Boulevard Suite 1320, Fort Lauderdale, FL 33301
Attn: City Attorney
Phone: 954-828-5000

VIA ELECTRONIC MAIL

RE: Prospect Lake Clean Water Center Project – City-Initiated Change

CHANGE PROPOSAL

Reference is hereby made to that certain Comprehensive Agreement, dated as of February 14, 2023 (as amended or otherwise modified from time to time, the “Comprehensive Agreement”) between, *inter alia*, Prospect Lake Water, L.P. (the “Project Company” or “we”) and the City of Fort Lauderdale, Florida (the “City” or “you”). Except as otherwise expressly provided herein, capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Comprehensive Agreement.

We acknowledge that we are in receipt of your Request for Change Proposal - Feedstock Water Temperature Analysis, dated October 22, 2024 (the “Request for Change Proposal”) and, further to our subsequent discussions with you and your consultants, we understand that at this time the City has requested the Project Company to implement the City Change described in Section 1 (Description of City Change) below. This is a Change Proposal under Section 8.04(a) of the Comprehensive Agreement, which relates to such City Change. Further, upon the City’s execution and delivery of this Change Proposal (such date, the “Effective Date”), this Change Proposal shall (a) constitute the agreement of the City and the Project Company required by Section 8.02(c) (*City-Initiated Changes*) of the Comprehensive Agreement in respect of such City Change, (b) amend the Comprehensive Agreement and become a valid and binding part of the Comprehensive Agreement, and all other terms and conditions of the Comprehensive Agreement shall remain in full force and effect, as modified by such City Change to which this Change Proposal relates, and (c) supersede all prior agreements and arrangements between the Parties, whether oral or in writing, regarding the subject matter of this Change Proposal, and that certain Change Order No. 5 for Project No. 12765, dated 3/20/2025.¹

1. Description of City Change

In the Request for Change Proposal, you instruct us to (a) prepare a proposal to conduct a groundwater temperature analysis in respect of the City Wellfield and (b) (i) provide recommendations for revising the minimum, average and maximum temperatures outlined in Annex G (*Feedstock Water Specifications*) to the Comprehensive Agreement and (ii) evaluate how changes to the Feedstock Water

¹ NTD: Change Order details to be filled in prior to execution.

temperature specifications may impact the Project's operational performance, including but not limited to chemical and energy consumption, equipment maintenance and warranties, and any potential changes to the Product Water specifications listed in Annex H-2 (*Product Water Contract Standards*) to the Comprehensive Agreement ((a) and (b), collectively, the "Feedstock Water Analysis").

Attached to this Change Proposal as Annex I is the DB Contractor's proposal (the "Feedstock Water Analysis Proposal") to arrange for the provision of the Feedstock Water Analysis by their subcontractor PLCWC EP, LLC (the "Subcontractor") in accordance with the scope, timeline and assumptions set out therein ("Feedstock Water Analysis SOW").

The City acknowledges and agrees that the City shall cooperate with the DB Contractor and its Subcontractor in the performance of the Feedstock Water Analysis SOW, including by delivering any information and providing access to the City Wellfield as may be reasonably requested by the DB Contractor.

2. Description of the Impact on the Project of the Requested City Change

(a) Extra Work Costs \$169,017

The Extra Work Costs associated with the Project Company's performance of the Feedstock Water Analysis SOW shall consist of: (a) the DB Contractor's costs, as set out in the Feedstock Water Analysis Proposal, in the amount of ~~\$195,127~~ and (b) the Project Company's administrative costs in the amount of **\$15,000** ((a) and (b), collectively, the "Feedstock Water Analysis Extra Work Costs").

The Project Company will invoice the City for the Feedstock Water Analysis Extra Work Costs in accordance with Section 10.04(a)(iv) (*Availability Payment Impacts; Monetary Compensation*) of the Comprehensive Agreement.

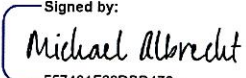
(b) Completion Deadlines

No changes to the Scheduled Commercial Operation Date or the Commercial Operation Longstop Date are proposed in connection with Project Company's performance of the Feedstock Water Analysis SOW.

[Signature Page Follows]

Very truly yours,

PROSPECT LAKE WATER, L.P.

By:  _____
Signed by: Michael Albrecht
557401F88DBD470...
Name: Michael Albrecht
Title: President
Date: 8/19/2025

Initial
MJ

8/19/2025

Accepted and agreed:

CITY OF FORT LAUDERDALE

By:  _____
Name: Rickelle Williams
Title: City Manager
Date:



February 19th, 2025

LTR No. LTR0080-A- Kiewit to Project Co.

Prospect Lake Water, L.P.
c/o Ridgewood Infrastructure
14 Philips Parkway
Montvale, NJ 07645
Attn: Legal Department

With copy to the addressees listed in Schedule 1

Via Email

Subject: Prospect Lake Clean Water Center Design Build Contract
Response to Scope CO Proposal Request – Feedstock Water Temperature Analysis

Dear Maria,

Reference is hereby made to that certain Design-Build Contract, dated as of February 14, 2023 (as amended or otherwise modified from time to time, the "DB Contract") between Prospect Lake Water, L.P. ("Project Company") and Kiewit Water Facilities Florida Co. ("Kiewit"). Except as otherwise expressly provided herein, capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the DB Contract and, if not defined therein, in the Comprehensive Agreement.

This letter ("Scope Change Order Proposal Response") is in response to Project Company's Scope Change Order Proposal Request for the Feedstock Water Temperature Analysis, sent to Kiewit on October 28th, 2024.

Section 10.03(b) (*Procedure for Scope Changes*) of the Design Build Agreement states that "*Design-Build Contractor shall promptly review the Scope Change Order Proposal Request and notify Project Company in writing of the options for implementing the proposed Scope Change (including, if possible, any option that does not involve an extension of time) and the effect, if any, each such option would have on the DB Contract Price, the Guaranteed Substantial Completion Date, the Project Progress Milestone Dates, the Payment Schedule, the Project Schedule, and the Performance Criteria*".

Kiewit hereby agrees to perform the Scope Change identified in Attachment 1 to this Scope Change Order Proposal Response in accordance with the terms and conditions set out herein, including the other attachments hereto.



Kiewit

Change to the DB Contract Price

Attachment 1 to this letter defines the detailed scope of work associated with this Scope Change including the pricing summary and supporting information. In accordance with Sections 2.09(e) and (f) (*Comprehensive Agreement; Equivalent Project Relief*) and Section 10.06 (*Price Change*) of the DB Contract, (a) DB Contractor will not be entitled to receive any increase in the DB Contract Price in respect of this Scope Change until Project Company has received such amount from the City and (b) Project Company shall pay such amount to DB Contractor promptly, and in any event no later than five (5) Business Days, after receipt of the corresponding payment from the City.

Total Cost

~~\$195,127~~ \$169,017

Change to Guaranteed Substantial Completion Date

- There is no change to the Guaranteed Substantial Completion Date associated with this Scope Change

Change to the Project Progress Milestone Dates

- There is no change to the Project Progress Milestone Dates associated with this Scope Change.

Change to the Payment Schedule

- The revised Payment Schedule will be provided once the referenced change order is fully executed.

Change to the Project Schedule

- There is no change to the Project Schedule associated with this Scope Change.

Change to the Performance Criteria

- There is no change to the Performance Criteria associated with this Scope Change.

Other Information Pursuant to Section 8.04 (*Procedures for Implementing Changes to the Work*) of the Comprehensive Agreement

This Response to Scope Change Order Proposal Request is valid for 30 days from the date of this letter.

If you have questions or comments about this information, please contact me at Matthew.Allen@Kiewit.com.



Kiewit

Sincerely,

Matthew Allen

Digitally signed by Matthew.Allen
DN: CN=Matthew.Allen,
OU=Employees, OU=Users,
OU=Kiewit, DC=KIEWITPLAZA,
DC=com
Date: 2025.02.20 19:14:31-05'00'

Matthew Allen

Project Manager

Kiewit Water Facilities Florida Co.

Accepted and Agreed:

Prospect Lake Water, L.P.

Name:

Title:

Date:

Schedule 1 – Additional Addressees

Attachments:

1. Scope of Work & Pricing Summary
2. Updated Project Progress Milestone Dates – NOT USED
3. Updated Payment Schedule – NOT USED
4. Updated Project Schedule – NOT USED
5. Updated Performance Criteria – NOT USED

Annex I

Feedstock Water Analysis Proposal

[Attached]



Schedule 1 – Additional Addressees

Prospect Lake Holdings, L.P.
c/o Ridgewood Infrastructure
14 Philips Parkway
Montvale, NJ 07645-1811
Attn: Legal Department
Phone: 201-447-9000
Email: mhaggerty@ridgewood.com

White & Case LLP
1221 Avenue of the Americas
New York, NY 10020
Attn: Dolly Mirchandani
Email: dolly.mirchandani@whitecase.com

IDE PLCWC, Inc.
c/o IDE Americas Inc.
5050 Avenida Encinas, Suite 250
Carlsbad, CA 92008
Attn: Lihy Teuerstein
Phone: 6194870760
Email: Lihyt@ide-tech.com

IDE Americas Inc.
5050 Avenida Encinas, Suite 250
Carlsbad, CA 92008
Attn: Lihy Teuerstein
Phone: 6194870760
Email: Lihyt@ide-tech.com



Attachment 1 – Scope of Work and Pricing Summary

[Attached]



Kiewit Water Facilities Florida Co.
5405 Cypress Center Drive, Suite 210
Tampa, FL 33609

SCOPE CHANGE ORDER PROPOSAL		
Prospect Lake Clean Water Center - Design-Build Contract		
Kiewit PCO NO. 20		
Wednesday, February 19, 2025		
Scope Change Order Proposal		
Feedstock Water Temperature Analysis		
IDE	\$ 178,000	\$151,890
OVERHEAD	\$ 17,127	
TOTAL	\$ 195,127	\$169,017



IDE Water Technologies Ltd.

February 10, 2025

Alex Kocher
Mechanical Project Manager
Kiewit Water Facilities Florida Co.
5405 Cypress Center Drive, Suite 210
Tampa, FL 33609

Subject: Prospect Lake Clean Water Center Feedstock Water Temperature RFP - IDE Response

On December 4, 2024, PLCWC EP, LLC (IDE/Seller) received a Request for Change Proposal – Feedstock Water Temperature Analysis (City RFP). The City RFP requests evaluation of changing the Feedstock Water temperature established in Feedstock Water Specifications (Annex G) of the Agreement.

City RFP, issued in 10/22/2024, requests that the PC conduct an analysis of groundwater temperatures at the Prospect Lake Wellfield and provide recommendations for revising the minimum, average, and maximum temperatures outlined in Annex G. Seller, Kiewit, Project Company, and the City have agreed the Feedstock Water temperature range, as established in Annex G, should be amended from 18.5° - 25° Celsius, to 23° - 28° Celsius (Revised Temperature Range) as recommended in Jacobs' Prospect Lake Feedstock Water Temperature Analysis memorandum attached to Kiewit RFP as Exhibit B.

Additionally, the City RFP requests that the PC evaluate how changes to the temperature specifications may impact the plant's operational performance, including but not limited to chemical and energy consumption, equipment maintenance and warranties, and any potential changes to the product water specifications listed in Annex H-2.

Kiewit RFP requests Seller to reply to the RFP in Two phases as described below:

1. Phase 1: Furnish a price proposal to perform an evaluation (i.e. Phase 2 Report) of any potential impacts the City RFP may have on Seller's Work.
2. Phase 2: Furnish a report detailing all impacts, and the mitigation alternatives, associated with the analysis of the Revised Temperature Range, followed by Pricing proposal for chosen alternatives involving changes to the plant (i.e. adding or replacing equipment) as requested by the city.

Kiewit RFQ states that in accordance with §5(b)(i) of the Agreement, Seller shall notify Kiewit of any potential delay caused by the scope contemplated in the City RFP. It is assumed by Seller that the five (5) days requested in the Material Contract are not relevant to this case and the agreed response dates will prevail this requirement.

The price above includes the following activities, impacted from the temperature change:

- Power consumption calculations (Annex L-1)
- Chemical consumption calculations (Annex L-2)
- Verification of Pump compatibility to new pressure drop values

T +972-9-8929-777 F +972-9-8929-715 W www.ide-tech.com

IDE Headquarters: Hamatechet St., Hasharon Industrial Park, P.O. Box 5016, Kadima 6092000, Israel





IDE Water Technologies Ltd.

- Analyzing with each subcontractor the process performance and guarantees related to their equipment. Main vendor list is detailed below.
 - IX/NF Pressurized Media Filters (PMF) – SELIP
 - Ion Exchange (IX) – SELIP
 - Ion Exchange Resin – DuPont, LANXESS, PURELITE
 - Membranes – DuPont, HYDRANAUTICS, TORAY
 - IX/NF Stripping Towers - INDUSCO
 - Micronic Filters – ENTEGRIS
 - Pumps – SULZER, POLAK
 - Salt Saturator - FORBES
 - Softeners – G Water (GALENE)
 - Static Mixers – STATIFLO
 - Dosing Skids – MILTON ROY
- Material of Construction compatibility with new water temperature range
- Mapping the engineering items (i.e. documents) specifying the water temp range
- Temperature range change impact on Product Water quality (Attachment H-2)
- Report preparation and internal approvals
- Post report verification calls and face to face meetings if needed

Seller's Phase 2 Report

The preparation of the Report will require a multi-disciplinary team to analyze all aspects of the proposed change. The pricing of the report is based on the following components:



Name	Hourly Rate	Hours	Labor Cost
Department Manager	250	25	6,250
Plant Design Manager	200	75	15,000
Specialist Engineers	200	80	16,000
Process Design Engineer 1	175	80	14,000
Process Design Engineer 2	175	140	24,500
Process Design Engineer 3	175	180	31,500
Operation Manager	175	40	7,000
Project Manager	250	50	12,500
Total		670	126,750
Total Labor Cost			126,750
Labor Overhead		8.00%	10,140
Travels		3	26,885
FEDER Permitting Fee			15,000
Outside Vendor Costs			
Price to City			178,895

151,890

As requested in Kiewit RFQ, and pursuant to Sections 8.02 and 8.04 of the CA, Seller's Phase 2 report will include the impact on the plant's operational performance, including but not limited to chemical and energy consumption (Annexes L-1/L2), equipment maintenance and warranties, and any potential changes to the product water specifications listed in Annex H-2.

Phase 2 Report will present Seller's Engineering Extra Work and Extra Work Costs Estimate (e.g. updating engineering materials such as drawings, datasheets, PE re-stamping, etc.), resulted from the proposed changes to Annex-G, and related to Seller's scope in this project, as well as schedule implications.

Phase 2 Report will be based on the analysis made to the RFP temperature range ("Revised Temperature Range"). Any future change to the Temperature Range will require additional analysis effort and may cause additional costs and schedule delays.



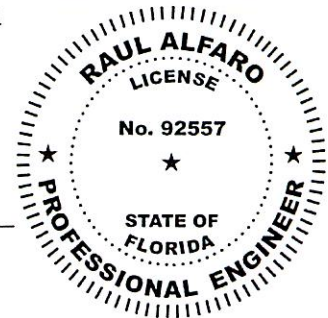
Memorandum



Prospect Lake Feedstock Water Temperature Analysis

Date: November 15, 2024
Project name: Prospect Lake WTP Owner's Representative Engineering Services
Project no: D3802600
Attention: Joseph Padron, Vice President
Company: Jacobs
Prepared by: Raul Alfaro, PE
Copies to: Joe Elarde, Jacobs
Axel Rivera, Jacobs

550 W. Cypress Creek Road
Suite 400
Fort Lauderdale, FL 33309
United States
T +1.954.522.2604
F +1.954.552.7971
Jacobs.com



Background

On October 10, 2024, Hazen and Sawyer ("Hazen") acting as Owner's Representative for the City of Fort Lauderdale ("City") requested that Prospect Lake Water, L.P. conduct an analysis of groundwater temperatures at the Prospect Lake Wellfield and provide recommendations for revising the minimum, average, and maximum temperatures outlined in Annex G of the Comprehensive Agreement between the City and Prospect Lake Water, L.P. The request was made through an official Request for Proposal ("RFP") document, (RFP #14).

On November 6th, 2024, Prospect Lake Water, L.P. requested that Jacobs analyze the available temperature data and recommend a new temperature range for Annex G. As part of this work, Jacobs analyzed the data that was collected during the *Testing and Evaluation of Prospect Wellfield* completed on May 25th, 2023, and the temperature data collected by others during the membrane piloting completed in 2024.

Temperature Data Characterization and Analysis

The Prospect Lake Wellfield is comprised of 29 Biscayne aquifer groundwater wells. All existing well pumps are constant speed 3-stage vertical turbine pumps equipped with 100-horsepower (HP) motor designed to operate at 2,100 gallons per minute (gpm) at 150 ft of head. The total well flow capacity of the wellfield is an estimated 87.6 million gallons per day (mgd). As part of the *Testing and Evaluation of Prospect Wellfield*, Jacobs conducted field and laboratory water quality analysis, which included the logging of temperature data for each individual well. The temperature parameter was analyzed using a YSI Handheld Multiparameter Water Quality Meter, with a flow-through cell to distribute water during sample collection. During the sampling, start-up temperature was logged and after 30 to 60 minutes of operation an additional temperature data point was collected for each well. The sampling was conducted from February to May of 2023 and the values associated with that sampling are included as Figure 1 below.

As shown in Figure 1, the raw water temperature varied slightly across the wellfield. The temperature ranged from 23.8 to 26.9 °C. Table 1 below shows the water quality temperature data distribution. The 90th percentile at start-up was 26.8 °C while the 10th percentile was at 25.7 °C, exceeding Annex G limits.

Memorandum

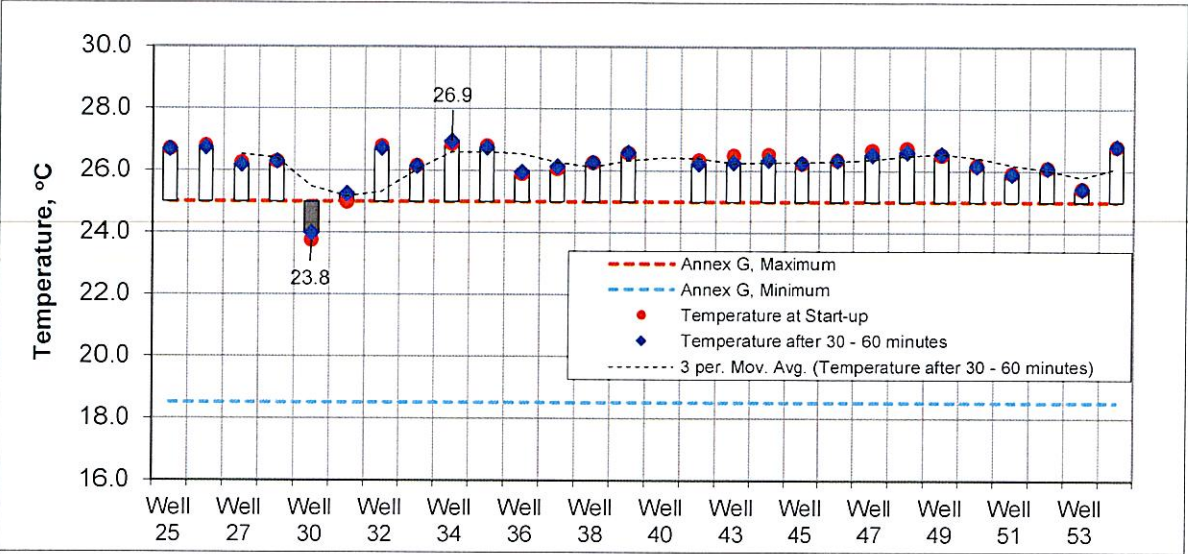


Figure 1. Individual Well Temperature Data at Start-up and After 30 – 60 Minutes of Operation

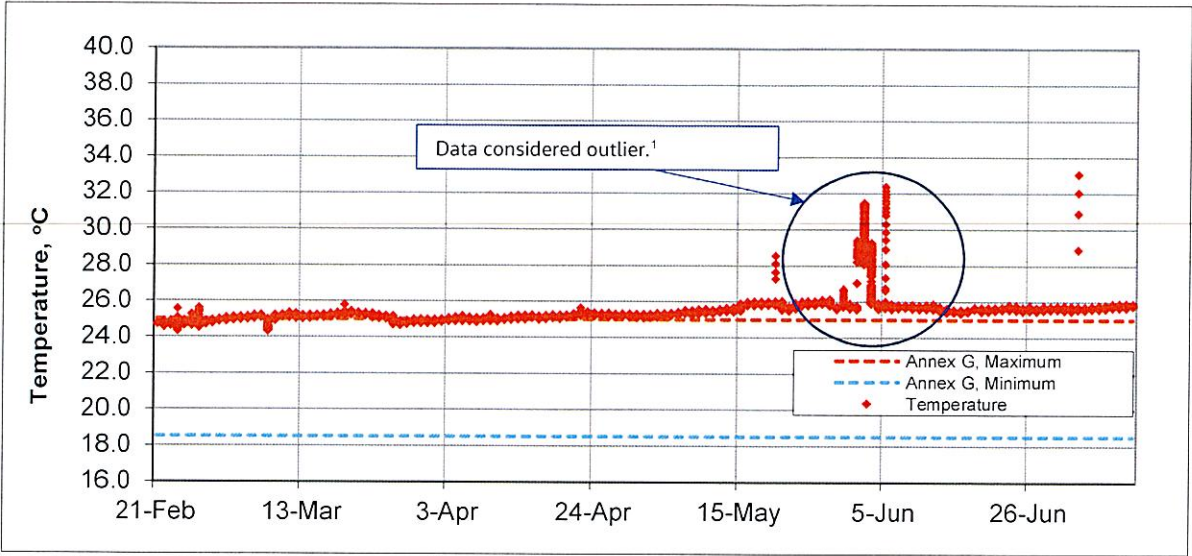
Table 1. Wellfield Water Quality Temperature Data Distribution, °C

	Max	Min	Average	90th Percentile	70th Percentile	50th Percentile	30th Percentile	10th Percentile
Temperature at Start-up	26.9	23.8	26.2	26.8	26.6	26.3	26.2	25.7
Temperature after 30 – 60 Minutes of Operation	26.9	24.0	26.2	26.7	26.5	26.3	26.1	25.7

A membrane pilot study was conducted to support the design of the new Prospect Lake Clean Water Center. The pilot was operated by IDE, which is the design engineer of the new facility, and American Water Chemicals (AWC), which is a water treatment chemical supplier that specializes in antiscalants and the optimization of membrane treatment systems. The pilot was located at Prospect Wellfield near the existing Well 50. An existing 16-inch ductile iron line was fitted with a tapping saddle to connect a temporary 2-inch schedule 40 pvc pipe that conveyed the raw water to the membrane pilot. The 2-inch line ran aboveground for approximately twenty-five (25) feet before entering the pilot trailer. The pilot received water from a combination of Well 28, Well 30, Well 31, Well 32, Well 33, Well 51, and Well 54, depending upon which well was operated for the duration of the pilot. Notably, the pilot did not receive water from Well 50 as it was electrically disconnected to allow electrical connection and supply power requirements of the membrane pilot. The pilot was fitted with a temperature data logger and was calibrated by AWC on February 21st, 2024, according to IDE. Pilot temperature data prior to instrument calibration on February 21st was not used as part of this evaluation.

Figure 2 below shows the available temperature data from the membrane pilot from February 21st through July 11th, 2024. Table 2 below shows the water quality temperature data distribution. The 90th percentile was 25.9 °C, which exceeded Anne G limits, while the 10th percentile was at 24.9 °C, just below Annex G limit for the parameter.

Memorandum



Note: ¹ Data is considered outlier. Temperature data is likely elevated due to prolonged downtime which allowed exposed section of raw water pipe feeding pilot to warm on June 2, 2024, and June 4, 2024.

Figure 2. Pilot Temperature Data from February 21st to July 11th, 2024

Table 2. Pilot Temperature Water Quality Data Distribution, °C

Max	Min	Average	90th Percentile	70th Percentile	50th Percentile	30th Percentile	10th Percentile
33.1 ¹	24.3	25.4	25.9	25.6	25.3	25.1	24.9

Note: ¹ Data is considered outlier. Temperature likely elevated due to prolonged downtime which allowed exposed section of raw water pipe feeding pilot to warm.

A water quality blending spreadsheet was developed using the average temperature data between start-up and after 30 to 60 minutes of operation from each well in Prospect Wellfield. This blending spreadsheet was used to simulate the raw water/feedstock water that would be received by the new plant.

The following two (2) scenarios were considered from the data from the Prospect Wellfield sampling from February to May of 2023:

- **Scenario 1.** This scenario considers the highest temperature results from the Prospect Wellfield sampling and assuming 35 mgd of system demands. In this scenario, the combined feedstock temperature result was 26.6 °C, which exceeds Annex G limits. Table 3 below presents the results of this scenario.
- **Scenario 2.** This scenario considers the lowest temperature results from the Prospect Wellfield sampling and assuming 35 mgd of system demands. In this scenario, the combined feedstock temperature result was 25.9 °C, which exceeds Annex G limits. Table 4 below presents the results of this scenario.

Memorandum

Table 3. Prospect Wellfield Temperature with Highest Temperature Wells in Operation (at 35 mgd)

Prospect Wellfield Well	Well Capacity	Well Active	Well Flow (mgd)	Well Flow (gpm)	Temperature, field (Celsius) ¹
Well 25	2,100	Yes	3.02	2,100	26.7
Well 26	2,100	Yes	3.02	2,100	26.8
Well 27	2,100	No			26.2
Well 28	2,100	Yes	3.02	2,100	26.3
Well 30	2,100	No			23.9
Well 31	2,100	No			25.1
Well 32	2,100	Yes	3.02	2,100	26.8
Well 33	2,100	No	0.00	0	26.1
Well 34	2,100	Yes	3.02	2,100	26.9
Well 35	2,100	Yes	3.02	2,100	26.8
Well 36	2,100	No			25.9
Well 37	2,100	No			26.1
Well 38	2,100	No			26.3
Well 39	2,100	Yes	3.02	2,100	26.6
Well 40 (TOS)	2,100	No			
Well 41	2,100	No			26.3
Well 43	2,100	Yes	3.02	2,100	26.4
Well 44	2,100	Yes	3.02	2,100	26.4
Well 45	2,100	No			26.2
Well 46	2,100	Yes	3.02	2,100	26.3
Well 47	2,100	Yes	3.02	2,100	26.6
Well 48	2,100	Yes	3.02	2,100	26.7
Well 49	2,100	Yes	3.02	2,100	26.5
Well 50	2,100	No			26.2
Well 51	2,100	No			25.9
Well 52	2,100	No			26.1
Well 53	2,100	No			25.4
Well 54	2,100	Yes	3.02	2,100	26.8
Combined			42.3	29,400	26.6
Annex G Max					25.0
Annex G Avg					22.0
Annex G Min					18.5

Note:¹ Temperature data was calculated using the average of each well at start-up and after 30 – 60 minutes of operation.

² Yellow cell indicates Annex G exceedance. Amber color cell indicates that well is operating and contributing to combined temperature calculation.

Memorandum

Table 4. Prospect Wellfield Temperature with Lowest Temperature Wells in Operation (at 35 mgd)

Prospect Wellfield Well	Well Capacity	Well Active	Well Flow (mgd)	Well Flow (gpm)	Temperature, field (Celsius) ¹
Well 25	2,100	No			26.7
Well 26	2,100	No			26.8
Well 27	2,100	Yes	3.02	2,100	26.2
Well 28	2,100	Yes	3.02	2,100	26.3
Well 30	2,100	Yes	3.02	2,100	23.9
Well 31	2,100	Yes	3.02	2,100	25.1
Well 32	2,100	No			26.8
Well 33	2,100	Yes	3.02	2,100	26.1
Well 34	2,100	No			26.9
Well 35	2,100	No			26.8
Well 36	2,100	Yes	3.02	2,100	25.9
Well 37	2,100	Yes	3.02	2,100	26.1
Well 38	2,100	Yes	3.02	2,100	26.3
Well 39	2,100	No			26.6
Well 40 (TOS)	2,100	No			
Well 41	2,100	Yes	3.02	2,100	26.3
Well 43	2,100	No			26.4
Well 44	2,100	No			26.4
Well 45	2,100	Yes	3.02	2,100	26.2
Well 46	2,100	No			26.3
Well 47	2,100	No			26.6
Well 48	2,100	No			26.7
Well 49	2,100	No			26.5
Well 50	2,100	Yes	3.02	2,100	26.2
Well 51	2,100	Yes	3.02	2,100	25.9
Well 52	2,100	Yes	3.02	2,100	26.1
Well 53	2,100	Yes	3.02	2,100	25.4
Well 54	2,100	No			26.8
Combined			42.3	29,400	25.9
Annex G Max					25.0
Annex G Avg					22.0
Annex G Min					18.5

Note:¹ Temperature data was calculated using the average of each well at start-up and after 30 – 60 minutes of operation.

² Yellow cell indicates Annex G exceedance. Amber color cell indicates that well is operating and contributing to combined temperature calculation.

Memorandum

Recommendations and Next Steps

Temperature is an important parameter in membrane treatment process, as rejection of dissolved salts can be affected by temperature fluctuations. If temperature increases and all other parameters are kept constant, permeate flux, which is the rate of permeate per unit of membrane area, and salt passage, which is the percentage of dissolved constituents in the water that pass the membrane, are both expected to increase (DuPont, 2023). Based on the preliminary water quality data available from Prospect Wellfield, the minimum individual well temperature observed was 23.8 °C while the maximum individual well temperature observed (not considered an outlier) was 26.9 °C. Water quality blending scenarios using the lowest temperature wells and the highest temperature wells, resulted in a range of 25.9 to 26.6 °C for the feedstock water. Therefore, Jacobs recommends the following:

- Prospect Lake Water, L.P. should consider amending Annex G of the Comprehensive Agreement to a new revised range of 23 – 28 °C with an average temperature value set at 26 °C. This change will allow the City to be compliant with the feedstock water requirements and maintain a margin of safety, should future groundwater temperatures at Prospect Wellfield change.
- Prospect Lake Water, L.P. should consider whether the change in the temperature specification impacts the new facility's operational performance, including chemical and energy consumption guarantees, equipment and maintenance warranties, and any changes to the product water specifications as listed in Annex H-2 of the Comprehensive Agreement, as per RFP #14.

Memorandum

References

Jacobs, (2023). Testing and Evaluation of Prospect Wellfield – City of Fort Lauderdale, Florida – Final Report.

IDE/AWC, (2024). Membrane Pilot Feedstock Water Temperature Data (Partial) from February 21, 2024 through July 11th, 2024 – City of Fort Lauderdale, Florida.

DuPont, (2021). "FilmTec Reverse Osmosis Membranes Technical Manual," version 16
<https://www.dupont.com/content/dam/dupont/amer/us/en/water=-solutions/public/documents/en/RO-NF-FilmTec-Manual-45-D01504-en.pdf>



SECTION 1 | SUMMARY INFORMATION

Date: 8/26/2026

☐ Agenda Item ☐ Commission Memo ☐ Letter (to external agency) ☒ Other Document

Document Title/Purpose: P12765 Prospect Lake Clean Water Center Change Order #6 :

Feedstock Water Temperature Analysis

Commission Meeting Date: 2/7/2023

CAM #: 23-00196

Item #: _____

CAM attached: ☒ Yes ☐ No Action Summary Attached: ☐ Yes ☒ No CIP FUNDED: ☒ Yes ☐ No

Community Investment Plan (CIP) Project defined as having a life of at least 10 years and a cost of at least \$100,000 and shall mean improvements to real property (land, buildings, or fixtures) that add value and/or extend useful life, including major repairs such as roof replacement. Term "real property" includes land, real estate, realty, or real.

SECTION 2 | REQUESTOR (CHARTER OFFICE/DEPARTMENT)

Charter Office: City Manager

Router Name: _____ Ext: _____

Department: Public Works

Router Name: Daniel Fisher Ext: 5850

Department Approval (Director/Chief): Name: Bradford Kaine Init.: BK Date: 8/21/2025

*Return Document To: Daniel Fisher Department: Public Works Ext: 5850

**REMINDER: Once review and signature at the last level of government (Federal, State, County) is complete, scan the final record copy and send to the City Clerk's Office.*Scan Date: _____ Attach Certified Resolution #: _____ Original form route to CAO: ☐ Yes ☐ No

THE FOLLOWING SECTIONS ARE FOR CHARTER OFFICE USE ONLY

SECTION 3 | CITY ATTORNEY'S OFFICE (CAO): CAO signed/routed Required ☐ Yes ☐ NoIs the attached Granicus document final? ☐ Yes ☐ No Number of Originals Attached: _____Attorney's Name: Rhonda Hasan Approved as to Form: ☒ Yes ☐ No Initials: RHA

Route to: Finance (if applicable) Date: _____ Route to: CCO Date: 11/24/25

SECTION 4 | CITY CLERK'S OFFICE (CCO)

City Clerk Office Receive and Scan Date: _____ Number of Originals: 2

Route to CMO Date: 11/24/25 Route to Mayor Date: _____

SECTION 5 | CITY MANAGER'S OFFICE (CMO)

LOG #: NOV128 Date Received: 11/24/25 Received From: CLO

To CM/ACM: ☐ R. Williams ☐ C. Cooper ☒ Y. Matthews For Ben ☐ B. Rogers

Approved Init.: [Signature] for continuous routing to Rickelle Williams, City Manager/Executive Director

Disapproved: _____ Comments: _____

Executive Assistant Route to CCO Date: 12/4/25



Public Works Department Route Form

Commission Approval NOT Required

Part 1:

Master Blanket PO Number:	6189	Master Agreement Number:	513
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Check One:

<input type="checkbox"/> Task Order	<input checked="" type="checkbox"/> Change Order	<input type="checkbox"/> Quick Quote	<input type="checkbox"/> Bid Packet	<input type="checkbox"/> General Routing
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Originator:	D. Fisher	Phone #:	X5850
Document Title/ Description Info:	Prospect Lake Clean Water Center Change Order #5 on PO 6191 Feedstock Water Temperature Analysis		
Vendor Name:	Prospect Lake Water, L.P.		
Project Number:	P12765	Contract Number:	513
CAM Number:	23-0196	Task Order Number:	
		Number of Originals:	1
		Invoice or Pay Number:	

Part 2:

Capital Investment / Community Improvement Projects: Defined as having a life of in excess of 10 years, a value of at least \$50,000, and shall mean improvements to real property (land, buildings, or fixtures) that add value and/or extend useful life, including major repairs such as roof replacement, etc. The term "Real Property" includes: land, real estate, realty, or real.

CIP Funded:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A (Advertising)
Amount Required:	\$184,017		
Index/Sub-Object Code:	10-454-7999-536-60-6599-P12765		
Strategic Support Finance Approval Signature: (For Public Works Finance Use Only)	X <i>Shannon Barrett</i>	Date:	8/8/2025

Part 3: Approval Path

	Approved	Returned	Initials	Date	Not Applicable
Daniel Fisher Senior Project Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Daniel Fisher</i>	7/29/2025	<input type="checkbox"/>
Brandy Leighton Division Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>	For <i>JB</i>	8/15/25	<input type="checkbox"/>
Bradford Kaine Director - Public Works	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>BK</i>	8/20/25	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>

Part 4: External Routing

	Signature	Date	Returned By:	Date	
Rhonda M. Hasan Senior Assistant City Attorney	<i>Rhonda Hasan</i>	11.24.25			<input type="checkbox"/> N/A
Ben Rogers Assistant City Manager	<i>Ben Rogers</i>	Dec 4			<input type="checkbox"/> N/A
					<input type="checkbox"/> N/A
					<input type="checkbox"/> N/A

Please return executed documents to Engineering Routing Liaison, extension 7818, City Hall 4th Floor.