ORANGE COUNTY GOVERNMENT FLORIDA

Interoffice Memorandum

July 8, 2020

TO: Mayor Jerry L. Demings
and Board of County Commissioners

FROM: Raymond E. Hanson, P. E., Director
Utilities Department

SUBJECT: **BCC AGENDA ITEM – Consent Agenda**
July 28, 2020 BCC Meeting
Fourth Amendment to Interlocal Agreement Between the Water Cooperative of Central Florida and Reedy Creek Improvement District Relating to the Preliminary Design and Permitting of the Alternative Water Supply Project Known as the Cypress Lake Wellfield and Related Matters
Contact Person: Teresa Remudo, P. E., Deputy Director
Utilities Department
407-254-9803

On August 30, 2011, the Board approved the Interlocal Agreement amongst the Water Cooperative of Central Florida, Orange County and Reedy Creek Improvement District relating to the preliminary design and permitting of the alternative water supply project known as the Cypress Lake Wellfield and related matters. The interlocal agreement defined all parties' financial and implementation obligations for permitting, a water transmission study and preliminary design of the Cypress Lake Wellfield project.

Since approval of the interlocal agreement, Orange County has become a member of the Water Cooperative of Central Florida and three amendments have been approved. The amendments addressed modifications to the project management tasks, modifications and additions to the scope to move the Cypress Lake Wellfield project forward.

This Fourth Amendment to the interlocal agreement provides for the addition of a new phase (Phase III-Stage 5) to initiate final design, permitting and bidding of the Cypress Lake Wellfield Raw Water Main and Water Treatment Plant including raw water supply wells, raw water main, water treatment plant and concentrate disposal wells. The total estimated cost of Phase III-Stage 5 is $7,860,000, of which 30% or $2,358,000 is Orange County's share. This Fourth Amendment increases the total estimated cost of the project to $13,830,000 of which Orange County's total share is $4,149,000.

The County Attorney's Office staff finds the agreement acceptable. Utilities Department staff recommends approval.

Action Requested: **Approval and execution of Fourth Amendment to Interlocal Agreement between the Water Cooperative of Central Florida and Reedy Creek Improvement District relating to the preliminary design and permitting of the alternative water supply project known as the Cypress Lake Wellfield and related matters.**

All Districts.

APPROVED BY ORANGE
COUNTY BOARD OF COUNTY
COMMISSIONERS

BCC Mtg. Date: July 28, 2020

FOURTH AMENDMENT TO INTERLOCAL AGREEMENT BETWEEN THE WATER COOPERATIVE OF CENTRAL FLORIDA AND REEDY CREEK IMPROVEMENT DISTRICT RELATING TO THE PRELIMINARY DESIGN AND PERMITTING OF THE ALTERNATIVE WATER SUPPLY PROJECT KNOWN AS THE CYPRESS LAKE WELLFIELD AND RELATED MATTERS

This Fourth Amendment to Interlocal Agreement Between the Water Cooperative of Central Florida and Reedy Creek Improvement District Relating to the Preliminary Design and Permitting of the Alternative Water Supply Project Known as the Cypress Lake Wellfield and Related Matters ("FOURTH AMENDMENT") is made and entered into by and between THE WATER COOPERATIVE OF CENTRAL FLORIDA ("THE COOPERATIVE"), a unit of local government, whose address is c/o its agent, Tohopekaliga Water Authority ("TWA"), 951 Martin Luther King Boulevard, Kissimmee, Florida 34741 and REEDY CREEK IMPROVEMENT DISTRICT ("RCID"), an independent special district created pursuant to Chapter 67-764, Laws of Florida, whose address is P.O. Box 10170, Lake Buena Vista, Florida 32830, referred to by name or as "PARTY" or collectively referred to as the "PARTIES."

WITNESSETH:

WHEREAS, the PARTIES entered into an agreement on August 30, 2011, captioned "Interlocal Agreement amongst The Water Cooperative of Central Florida, Orange County and Reedy Creek Improvement District Relating to the Preliminary Design and Permitting of the Alternative Water Supply Project Known as the Cypress Lake Wellfield and Related Matters" ("AGREEMENT"); and

WHEREAS, subsequent to entering into the AGREEMENT, ORANGE COUNTY became a member of THE COOPERATIVE, with all rights, privileges and responsibilities attendant therefrom; and

WHEREAS, the PARTIES entered into an amendment to the AGREEMENT ("FIRST AMENDMENT"), effective as of June 26, 2014, to: 1) transfer certain PROJECT Management and Administration tasks to TWA; 2) provide for reimbursement to TWA for performance of the PROJECT Management and Administration Responsibilities as further described in the FIRST AMENDMENT; and 3) change the name of the AGREEMENT to: the "Interlocal Agreement Between the Water Cooperative of Central Florida and Reedy Creek Improvement District Relating to the Preliminary Design and Permitting of the Alternative Water Supply Project Known as the Cypress Lake Wellfield and Related Matters;" and

WHEREAS, the PARTIES entered into a second amendment to the AGREEMENT ("SECOND AMENDMENT") effective as of September 23, 2015, to carry forward a new Phase III, including: 1) authorizing the new Phase III work; 2) redirecting certain previously approved but as yet uncommitted funds from Phase II to Phase III with no new funding obligations and an overall reduction in budget; 3) ratifying the transfer to TWA of certain PROJECT Management and Administration tasks and eliminating remuneration therefor, redirecting those management funds to other tasks as provided in the SECOND AMENDMENT; and 4) amending the Scope of Work and Total Estimated Cost to refine the descriptions to coincide more fully with services

already completed and those yet to be undertaken by amending Exhibits 1 and 3 and adding a new Exhibit 4; and

WHEREAS, the PARTIES entered into a third amendment to the AGREEMENT ("THIRD AMENDMENT") effective as of February 15, 2018, having determined that further steps in Phase III, Stages 1, 2 and 3 and a new Stage 4 should be carried forward under the AGREEMENT, including the following: 1) design and construction of the first of three concentrate disposal wells following the issuance of a permit for concentrate disposal and a Water Quality Criteria Exemption ("WQCE") by the Florida Department of Environmental Protection ("FDEP"), said initial well to be for the purpose of verifying permit conditions and to determine the need to make modifications; 2) establishment of a projected schedule for the design of the well in FY 2017 and construction in FY 2018, beginning October 1, 2017; 3) provision for the local government guarantee required as a condition of issuance of the permit; and 4) acquisition of a concentrate disposal well easement for one of the three proposed disposal wells covering the zone of discharge of the wells and of an option to purchase the water treatment plant site; and

WHEREAS, the PARTIES continue to recognize the benefits of regional cooperation and have determined that entering into this FOURTH AMENDMENT is in their mutual interest; and

WHEREAS, the PARTIES have determined that as a result of continued progress, it is appropriate to use the FOURTH AMENDMENT to change the name of the interlocal agreement from "INTERLOCAL AGREEMENT BETWEEN THE WATER COOPERATIVE OF CENTRAL FLORIDA AND REEDY CREEK IMPROVEMENT DISTRICT RELATING TO THE PRELIMINARY DESIGN AND PERMITTING OF THE ALTERNATIVE WATER SUPPLY PROJECT KNOWN AS THE CYPRESS LAKE WELLFIELD AND RELATED MATTERS" to "THE CYPRESS LAKE ALTERNATIVE WATER SUPPLY AGREEMENT;" and

WHEREAS, in addition to changing the name of the AGREEMENT, the PARTIES wish, as a new Phase III, Stage 5, to set forth and authorize: 1) the parameters, schedule and budget for the Cypress Lake Wellfield Raw Water Main and Water Treatment Plant final design, permitting, and bidding; 2) the budget and services required to prepare and submit the initial ten-year report required by Limiting Condition 22 of SFWMD Permit No. 49-02052-W; 3) the update to the hydraulic model and infrastructure cost estimate found in the document entitled "Cypress Lake Potable Water Transmission, Optimization and Interconnection Analysis and Conceptual Design Water Wheeling Plan" ("Water Wheeling Plan"); 4) the provision for a permitting allowance; and 5) the clarification that, having received a construction permit from FDEP for three Class V Group 4 concentrate disposal wells, the PARTIES will proceed with the construction of the first of three wells (which was previously approved as part of Phase III, Stage 4) concurrently with the process of securing the WQCE from FDEP; and

WHEREAS, the PARTIES also wish to set forth certain options available to RCID that will afford it the opportunity to continue its participation in the AGREEMENT and receive all benefits as a full PARTY through entry of a bulk rate wholesale agreement with TWA, without having to contribute any additional funds over and above those presently obligated by RCID as of the effective date of this AGREEMENT, so long as it exercises the option to enter into the bulk rate wholesale agreement; and

WHEREAS, THE COOPERATIVE is empowered to enter into interlocal agreements and amendments under the authority of its charter and section 163.01, Florida Statutes (2018); and

WHEREAS, RCID is empowered to enter into interlocal agreements and amendments thereto pursuant to Chapter 67-764, Laws of Florida.

NOW THEREFORE, in consideration of the foregoing premises and the mutual covenants, terms and conditions contained herein, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the PARTIES agree as follows:

SECTION 1. Recitals of the FOURTH AMENDMENT. The above recitals are true and correct and form a material part of the FOURTH AMENDMENT.

SECTION 2. Specific Amendments to the AGREEMENT. The AGREEMENT is further amended as follows:

a) The name "INTERLOCAL AGREEMENT BETWEEN THE WATER COOPERATIVE OF CENTRAL FLORIDA AND REEDY CREEK IMPROVEMENT DISTRICT RELATING TO THE PRELIMINARY DESIGN AND PERMITTING OF THE ALTERNATIVE WATER SUPPLY PROJECT KNOWN AS THE CYPRESS LAKE WELLFIELD AND RELATED MATTERS" is hereby changed to "THE CYPRESS LAKE ALTERNATIVE WATER SUPPLY AGREEMENT."

b) The Ninth WHEREAS clause of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

> WHEREAS, the PARTIES have determined that the design and permitting for the Cypress Lake Wellfield and its concentrate disposal wells involves substantial work (hereinafter collectively referred to as the "Work"), including: 1) the preliminary design, water use permitting, environmental permitting, study relating to the transmission of water between the PARTIES and other work detailed in the SECOND AMENDMENT, as amended by the THIRD AMENDMENT, all of which are described in the Summary Scope of Work, as amended by the THIRD AMENDMENT in Exhibit 1 – Revised 2016, attached thereto and incorporated therein; 2) the Scope of Services set forth in Exhibit 5 to this FOURTH AMENDMENT; and 3) an update to the hydraulic model and infrastructure cost estimate found in the Water Wheeling Plan as described below in this FOURTH AMENDMENT; and

c) Section I. of the AGREEMENT, **Recitals**, is further amended by replacing the existing text *in toto* with the following:

> The purpose and recitals of the AGREEMENT are true and correct to the best of the knowledge of the PARTIES, and are incorporated by reference herein. The PURPOSE statement of the AGREEMENT, is further amended by replacing the existing text *in toto* with the following:
>
> > THE overall PURPOSE of this AGREEMENT is to set forth the understandings of the PARTIES and the terms and conditions relating to: 1) the funding, planning, and design, comprehensive plan amendments, zoning and land use approvals, water use permitting and construction of the raw water supply wells, raw water main, water treatment plant and Class V Group 4 concentrate disposal wells (collectively, the "Cypress Lake Wellfield" or the "PROJECT," or portion thereof as the usage of the

word indicates); 2) the study of the transmission of water between the PARTIES, development of cost and rate model/formulas for water wheeling and any necessary updates thereto; 3) acquisition of property, permitting, development of data to support permitting of a water treatment reject concentrate disposal system, design and construction of the initial concentrate disposal well to verify the permit conditions and any need to modify the well design; 4) the final design for the PROJECT; and 5) the services required to prepare and submit the initial ten-year report required by Limiting Condition 22 of SFWMD Permit No. 49-02052-W. Additional agreements or amendments will be necessary to set forth the terms and conditions relating to: 1) the property acquisition, comprehensive plan amendments, zoning and land use approvals; 2) construction of and contract administration services for the raw water supply wells, raw water main, water treatment plant, the remaining Class V Group 4 concentrate disposal wells and other associated appurtenances set forth in Exhibit 5 to this FOURTH AMENDMENT; 3) operation and maintenance of the Cypress Lake Wellfield and Water Treatment Plant; and 4) additional permit compliance actions. Participation in this AGREEMENT will not bind any of the PARTIES to participation in any future agreement or amendment.

d) Subsection VI. A. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

A. The PARTIES agree that the activities authorized by this AGREEMENT shall be performed in accordance with the Work, including the Total Estimated Cost ("TEC") for Phases I, II and III, as hereinafter set forth. The negotiated scope of work ("NSW") shall be implemented consistent with and in a manner not to exceed the TEC. For the purposes of this AGREEMENT, the term "NSW" means the Work for Phases II and III, to be negotiated between the Project Administrator and the consultant(s) selected to perform the activities contemplated under this AGREEMENT.

e) Subsection VI. B. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

B. The Work shall consist of three phases: Phases I, II and III. Phase I has consisted of Work leading to the permitting of the Cypress Lake Wellfield, most of which has already been undertaken by TWA, individually (i.e., not as the agent of THE COOPERATIVE). Phase II has consisted of Part A – Preliminary Design, and Part B – Study of the Transmission of Water between the PARTIES. Phase III has consisted of, or where not yet complete, shall consist of five stages:

Stage 1 - Development of a financial model for allocating costs between the PARTIES for the PROJECT, including the charges for the transmission of water between the PARTIES;

Stage 2 – Appraisals, surveys, legal services, purchase options and other miscellaneous work related to acquisition of the water plant site, well sites and pipeline easements;

Stage 3 - Permitting and data development to support permitting of a water treatment reject concentrate disposal system, including the WQCE permitting;

Stage 4 - Design of one concentrate disposal well, construction/testing of one concentrate disposal well, and construction observation including FDEP reporting, with design work to commence in FY 2017 and construction to commence on or after August 1, 2020, with said construction to occur concurrently with the processing of the WQCE exemption;

Stage 5 – Implementation of the Cypress Lake Wellfield, Raw Water Main and Water Treatment Plant Final Design, Permitting, Bidding, and preparation and submittal of the initial ten-year report required by Limiting Condition 22 of SFWMD Permit No. 49-02052-W, both as described in Exhibit 5 of this FOURTH AMENDMENT; preparation of an update to the hydraulic model and infrastructure cost estimate found in the Water Wheeling Plan.

References to "Phase" herein shall mean Phase I, Phase II or Phase III, as the usage of the word indicates and references to "Part" shall mean Phase II, Part A or Phase II Part B, as the usage of the word indicates. References to "Stage" herein shall mean Phase III, Stage I; Phase III, Stage 2; Phase III, Stage 3; Phase III, Stage 4, or Phase III Stage 5, as the usage of the word indicates.

f) Subsection IX. B. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

The TEC for Phase II is two million five hundred ninety two thousand sixty dollars and forty cents ($2,592,060.40), as more particularly described in Exhibit 3 – Revised, attached thereto and incorporated therein by the THIRD AMENDMENT.

The TEC for Phase III, Stages 1-4 is five million nine hundred seventy thousand dollars ($5,970,000.00), as more particularly described in Exhibit 4 - Revised 2016. All consultant and legal fees and costs for land acquisition (excluding cost of real property), are included in the TEC for Phase II, Part A and Phase III and are identified in Exhibits 3 – Revised and 4 - Revised 2016.

Exhibit 3 of the AGREEMENT, which was amended by the SECOND AMENDMENT by replacing the then existing text *in toto* with the new Exhibit 3 – Revised, remains unchanged, as amended by the SECOND AMENDMENT. Exhibit 4, which was added by the SECOND AMENDMENT and replaced *in toto* by Exhibit 4 – Revised 2016 by the THIRD AMENDMENT, remains unchanged.

The TEC for Phase III, Stage 5 is seven million eight hundred sixty thousand dollars ($7,860,000.00), constituting: 1) the consultant's fee for the final design, permitting and bidding for the raw water supply wells, raw water main, water treatment plant and Class V Group 4 concentrate disposal wells, and for preparation and submittal of the initial ten-year report required by Limiting Condition 22 of SFWMD Permit No. 49-02052-W, as more particularly described in Exhibit 5 to this FOURTH AMENDMENT, incorporated by reference herein of

six million seven hundred thirty-six thousand two hundred thirty-three dollars ($6,736,233.00), together with a contingency to cover unforeseen circumstances and out of scope design changes of 10%, rounded to a total of seven million four hundred ten thousand ($7,410,000.00); 2) a permitting allowance of one hundred thousand dollars ($100,000.00); and 3) a budget of three hundred fifty thousand dollars ($350,000.00) for preparation of an update to the hydraulic model and infrastructure cost estimate found in the Water Wheeling Plan. A summary of the budget for Phase III, Stage 5, is attached hereto and incorporated herein as Exhibit 6.

g) Subsection IX. F. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

For Phase II Part A, each PARTY, or member government in the case of THE COOPERATIVE, agrees to participate financially according to its estimated Cost-Share shown on the table set forth in this Subsection. The rights and obligations of THE COOPERATIVE are set forth below next to the names of its member governments who are participating in this AGREEMENT in the proportions set out below. The amount of funding for each PARTY, or member government in the case of the COOPERATIVE, represents the amount of public supply water (annual average) expected from the PROJECT based on the estimated available yield. The share of the estimated PROJECT cost of the PARTIES, or member government in the case of THE COOPERATIVE, for Phase II Part A will be as follows:

PHASE II PART A

PARTY	**PERCENT**	**COST-SHARE AMOUNT**
TWA	40%	$758,233.20
Orange County	30%	$568,674.90
Polk County	10%	$189,558.30
St. Cloud	16.7%	$316,562.36
RCID	3.3%	$62,554.24
TOTAL	**100%**	**$1,895,583.00**

For Phase III, Stages 1-4, each PARTY, or member government in the case of THE COOPERATIVE, agrees to participate financially according to its estimated Cost-Share shown on the table set forth below in this Subsection. The rights and obligations of THE COOPERATIVE are set forth below next to the names of its member governments who are participating in this AGREEMENT in the proportions set out below. The amount of funding for each PARTY, or member government in the case of the COOPERATIVE, represents the amount of public supply water (annual average) expected from the PROJECT based on the estimated available yield. The share of the estimated PROJECT cost of the PARTIES, or member government in the case of THE COOPERATIVE, for Phase III, Stages 1-4 will be as follows:

PHASE III, STAGES 1-4

PARTY	PERCENT	COST-SHARE AMOUNT
TWA	40%	$2,388,000.00
Orange County	30%	$1,791,000.00
Polk County	10%	$597,000.00
St. Cloud	16.7%	$995,000.00
RCID	3.3%	$199,000.00
TOTAL	**100%**	**$5,970,000.00**

For Phase III, Stage 5, each PARTY, or member government in the case of THE COOPERATIVE, agrees to participate financially according to its estimated Cost-Share shown on the table set forth below in this Subsection as further detailed in Exhibit 6. The rights and obligations of THE COOPERATIVE are set forth below next to the names of its member governments who are participating in this AGREEMENT in the proportions set out below. The amount of funding for each PARTY, or member government in the case of the COOPERATIVE, represents the amount of public supply water (annual average) expected from the PROJECT based on the estimated available yield. The share of the estimated PROJECT cost of the PARTIES, or member government in the case of THE COOPERATIVE, for Phase III, Stage 5 will be as follows:

PHASE III, STAGE 5

PARTY	PERCENT	COST-SHARE AMOUNT
TWA	40%	$3,144,000.00
Orange County	30%	$2,358,000.00
Polk County	10%	$ 786,000.00
St. Cloud	16.7%	$1,310,000.00
RCID	3.3%	$ 262,000.00
TOTAL	**100%**	**$7,860,000.00**

h) Subsection IX. H. (4) is further amended by replacing the existing text *in toto* with the following:

Phase II and Phase III Invoicing - Every calendar quarter the Project Administrator shall provide an invoice to each PARTY of its Cost-Share based upon the individual cumulative shares set forth in Subsections IX. F. and G. The invoice for each PARTY shall be based on each PARTY's Cost-Share of anticipated Costs for the upcoming quarter, adjusted by the PARTY's Cost-Share of the actual Cost to estimated Cost variance from the prior quarter, and include any outstanding balance, as illustrated by the following:

PARTY's Cost-Share of anticipated Costs for the upcoming quarter
(+) PARTY's Cost-Share of actual Costs incurred during the prior quarter
(-) PARTY's Cost-Share of estimated Costs for the prior quarter
(=) Quarterly invoice amount (PARTY's Cost-Share)
(+) Any unpaid prior invoice amount by PARTY
(=) PARTY's total outstanding balance due

Within 45 days of the date of the invoice to each PARTY of its Cost-Share, each PARTY shall pay to the Project Administrator the amount identified in the invoice as that PARTY's share. In the case of THE COOPERATIVE, the invoice shall be submitted to and payment remitted by each member government, as set forth in this Section IX. All such funds received by the Project Administrator will be held in escrow by the Project Administrator for the sole purpose of payment to the consultant(s) pursuant to the terms of the contract(s). Annually, THE COOPERATIVE, as part of its budget process, must establish an anticipated schedule of work of the Consultant(s) and budget allocating each Party's Cost-Share under this Agreement for the next fiscal year of THE COOPERATIVE.

i) Subsection IX. I. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

At any time, any PARTY (or member government in the case of THE COOPERATIVE) may, at its option and upon thirty (30) days' written notice to all other PARTIES, withdraw from further participation in the AGREEMENT. In such event, the remaining PARTIES (and THE COOPERATIVE on behalf of its member governments) shall: as authorized by Water Use Permit modification, reallocate the withdrawing PARTY's percentage of estimated available water; renegotiate the corresponding financial obligations among themselves; and amend this AGREEMENT accordingly. A withdrawing PARTY (and the member government in the case of THE COOPERATIVE) shall remain liable for payment of its share of all costs and expenses contracted pursuant to this AGREEMENT as of the date of the delivery of notice of withdrawal. Upon delivery of the notice, (i) the withdrawing PARTY shall have no further rights or obligations under this AGREEMENT except for its obligation to pay its share of those costs and expenses for which it expressly remains liable under this AGREEMENT; and (ii) the term "unanimous agreement" in the AGREEMENT shall not include the representative of the withdrawing PARTY, who shall have no further rights of participation with other Project Managers. Except upon amendment of this AGREEMENT, no PARTY (or member government in the case of THE COOPERATIVE) shall be liable for any costs and expenses in excess of its individual Cost-Share set forth in Subsection IX.

j) Section XI. of the AGREEMENT is further amended by replacing the existing text *in toto* with the following:

All notices provided for in this AGREEMENT, regardless of whether the word "written" precedes the word "notice," shall be in writing and shall be sufficient and deemed to be given when sent by certified mail or registered mail, return receipt requested, on the date received by the PARTY (and member government in the case of THE COOPERATIVE) upon which notice is given. All notices shall be delivered or sent to the PARTIES at their respective address shown below or to such other address(es) as a PARTY (and member government in the case of the

COOPERATIVE) may designate by prior written notice given in accordance with this provision to the other PARTIES:

As to ST. CLOUD:	City Manager City of St. Cloud 1300 Ninth Street St. Cloud, FL 34769 Phone: 407-957-7301
With copy to:	Director of Environmental Utilities City of St. Cloud 1300 Ninth Street St. Cloud, FL 34769 Phone 407-957-7104
With a copy to:	City Attorney City of St. Cloud 1300 Ninth Street St. Cloud, FL 34769 Phone: 407-957-7301
As to the TWA:	Executive Director Tohopekaliga Water Authority 951 Martin Luther King Boulevard Kissimmee, FL 34741 Phone: 407-944-5000
With copy to:	General Counsel Tohopekaliga Water Authority 951 Martin Luther King Boulevard Kissimmee, FL 34741 Phone: 407-944-5000
As to ORANGE COUNTY:	County Administrator Orange County Government P.O. Box 1393 Orlando, FL 32802 Phone: 407-836-7366
With copy to:	Utilities Director Orange County Utilities 9150 Curry Ford Road Orlando, FL 32825 Phone 407-254-9800
	County Attorney Orange County Attorney's Office P.O. Box 1393 Orlando, FL 32802 Phone: 407-836-7320

As to POLK COUNTY:	County Manager Polk County Government Drawer AT01/P.O. Box 9005 Bartow, FL 33831 Phone: 863-534-6664
With copy to:	Utilities Director Polk County Utilities 1011 Jim Keene Boulevard Winter Haven, FL 33880 Phone: 863-298-4240
	Polk County Attorney Polk County Attorney's Office Drawer AT01/P.O. Box 9005 Bartow, FL 33831 Phone: 863-534-6482
As to REEDY CREEK IMPROVEMENT DISTRICT:	District Administrator Reedy Creek Improvement District P.O. Box 10,170 Lake Buena Vista, FL 32830
With copy to:	Director Reedy Creek Energy Services P.O. Box 10,000 Lake Buena Vista, FL 32830
As to THE COOPERATIVE:	Executive Director Tohopekaliga Water Authority 951 Martin Luther King Boulevard Kissimmee, FL 34741 Phone: 407-944-5000

k) Section XIX. of the AGREEMENT is further amended with the creation of a new Subsection H. as follows:

H. This AGREEMENT may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute the same instrument.

l) Section XIX. of the AGREEMENT is further amended with the creation of new Subsections I. and J. as follows:

I. RCID Special Conditions. The following special conditions shall be applicable to RCID's participation in the AGREEMENT:

(1) At the time of execution of the FOURTH AMENDMENT, RCID anticipates that it will withdraw its participation in this AGREEMENT within two years of the effective date of the FOURTH AMENDMENT as follows: (a) TWA and RCID will execute a mutually acceptable bulk rate wholesale agreement for TWA to deliver

to RCID a volume of water equivalent to RCID's allocation of water per this AGREEMENT; and (b) TWA will manage RCID's allocation of water under this AGREEMENT to enable TWA to fulfill the obligations, at TWA's sole cost and expense, of the contemplated bulk rate wholesale agreement. From and after the effective date of the FOURTH AMENDMENT, TWA shall cover RCID's portion of the cost of Phase III, Stage 5 contracted after the effective date of the FOURTH AMENDMENT, but in all other respects, RCID shall continue to participate in the obligations and receive all rights and benefits as a PARTY in the AGREEMENT until it withdraws from this AGREEMENT. Notwithstanding anything to the contrary contained herein, to the extent so provided in the bulk rate wholesale agreement between TWA and RCID, RCID's allocation of alternative water rights/water credits under this AGREEMENT will remain with RCID by virtue of executing the bulk rate wholesale agreement with TWA. After RCID executes the bulk rate wholesale agreement and withdraws, the PARTIES shall not amend this AGREEMENT to provide otherwise or to decrease RCID's allocation of water per this AGREEMENT or allocation of alternative water rights/water credits under this AGREEMENT so long as the bulk rate wholesale agreement between TWA and RCID remains in effect.

(2) If RCID elects to not withdraw nor enter into a bulk rate wholesale agreement with TWA within the time specified in Subsection XIX. I. (1), RCID must notify TWA and shall participate fully as a PARTY in this AGREEMENT (subject to its right to withdraw under Subsection IX. I. of this AGREEMENT as modified by Subsection XIX. J. of this AGREEMENT). No later than forty-five (45) days after the second anniversary of the effective date of the FOURTH AMENDMENT, RCID must reimburse TWA for any portion of the costs and expenses advanced by TWA on behalf of RCID, up to the date of the notice, with 3% interest, and assume responsibility for RCID's prorated share of any remaining contractual obligations associated with the FOURTH AMENDMENT. Nothing herein shall preclude RCID from notifying TWA that it elects to not enter into a bulk rate wholesale agreement any time before the completion of the two-year period, and RCID shall only be required to reimburse TWA for costs and expenses advanced with 3% interest through the date of notification. Nothing herein releases RCID from any obligation that existed before the effective date of this FOURTH AMENDMENT.

(3) If, within the time specified in Subsection XIX. I. (1), RCID does not elect to proceed as provided in Subsections XIX. I. (1) or (2), then it shall withdraw its participation in this AGREEMENT in accordance with the terms of Subsection IX. I., except as modified by Subsection XIX. J.

J. In the event the termination provisions of Subsection IX. I. are triggered by the withdrawal of RCID, RCID shall have no obligation to reimburse TWA for the costs and expenses contracted under this AGREEMENT between the effective date of the FOURTH AMENDMENT and the date it gives notice of withdrawal. Nothing herein releases RCID from any obligation that existed before the effective date of this FOURTH AMENDMENT. The remaining PARTIES shall agree on the division of the allocation that would have been allotted to RCID as provided in Subsection IX. I. and also reimburse TWA for any costs and expenses advanced on behalf of RCID pursuant to Subsection XIX. I. with 3% interest, in proportionate share to the allocation allotted to them by the division of RCID's allotted share. Except as modified by this Subsection XIX. J., all other provisions of Subsection

IX. I. remain unchanged and shall apply to any future withdrawal from the AGREEMENT by any PARTY.

SECTION 3. General Amendments and Ratifications to the AGREEMENT. Wherever the term "AGREEMENT" appears in the AGREEMENT, the FIRST AMENDMENT, the SECOND AMENDMENT, the THIRD AMENDMENT, or the FOURTH AMENDMENT said reference is amended and understood to mean the AGREEMENT as amended by the FIRST AMENDMENT the SECOND AMENDMENT, the THIRD AMENDMENT and the FOURTH AMENDMENT. Wherever the term "PROJECT" appears in the AGREEMENT or in the FIRST AMENDMENT, SECOND AMENDMENT, THIRD AMENDMENT or FOURTH AMENDMENT, said reference is amended and understood to mean the totality of the PROJECT, or a portion thereof as the usage of the word indicates. All other provisions of the AGREEMENT, as amended by the FIRST AMENDMENT, SECOND AMENDMENT, THIRD AMENDMENT and FOURTH AMENDMENT are hereby ratified and remain in full effect.

SECTION 4. Filing. Pursuant to section 163.01(11), Florida Statutes (2016), the FOURTH AMENDMENT shall be filed with the clerks of the circuit court of Orange, Osceola and Polk counties.

SECTION 5. Effective Date. This FOURTH AMENDMENT shall become effective on the last date that: 1) the PARTIES hereto and the member governments of THE COOPERATIVE have executed same; and 2) this FOURTH AMENDMENT is recorded in the public records of Orange, Osceola and Polk counties.

[Signature pages to follow.]

IN WITNESS WHEREOF, the undersigned has caused this FOURTH AMENDMENT to be duly executed.

THE WATER COOPERATIVE OF CENTRAL FLORIDA
By: its Board of Supervisors

Betsy VanderLey, Chair

Rick Wilson, Vice Chair

Hector Lizasuain, Secretary

Linette Matheny

Date: _____

IN WITNESS WHEREOF, the undersigned has caused this FOURTH AMENDMENT to be duly executed.

THE WATER COOPERATIVE OF CENTRAL FLORIDA
By: its Board of Supervisors

_____
Betsy VanderLey, Chair

_____
Rick Wilson, Vice Chair

_____
Hector Lizasuain, Secretary

_____
Linette Matheny

Date: _____

IN WITNESS WHEREOF, the undersigned has caused this FOURTH AMENDMENT to be duly executed.

THE WATER COOPERATIVE OF CENTRAL FLORIDA
By: its Board of Supervisors

_____
Betsy VanderLey, Chair

_____
Rick Wilson, Vice Chair

_____
Hector Lizasuain, Secretary

_____
Linette Matheny

Date: _____

IN WITNESS WHEREOF, the undersigned has caused this FOURTH AMENDMENT to be duly executed.

THE WATER COOPERATIVE OF CENTRAL FLORIDA
By: its Board of Supervisors

_____
Betsy VanderLey, Chair

_____
Rick Wilson, Vice Chair

_____
Hector Lizasuain, Secretary

_____
Linette Matheny

Date: 9/28/2020

IN WITNESS WHEREOF, the undersigned has caused this FOURTH AMENDMENT to be duly executed.

REEDY CREEK IMPROVEMENT DISTRICT

By: _____
John Classe, District Administrator

Attest: _____
Clerk, Board of Supervisors

Date: 10/13/20

IN WITNESS WHEREOF, the undersigned has executed this FOURTH AMENDMENT below in its capacity as a member government of THE WATER COOPERATIVE OF CENTRAL FLORIDA and, in its individual capacity, to ratify and accept on to itself the obligations of the CITY OF ST. CLOUD and the respective obligations of the individual member governments as they apply to the CITY OF ST. CLOUD, in accordance with the terms of the AGREEMENT as amended.

CITY OF ST. CLOUD, FLORIDA

By: _____
Nathan Blackwell, Mayor
Linette Matheny, Deputy Mayor

Attest: _____
Linda Jaworski, City Clerk

Date: 7/23/2020

Approved by: _____
City Attorney

IN WITNESS WHEREOF, the undersigned has executed this FOURTH AMENDMENT below in its capacity as a member government of THE WATER COOPERATIVE OF CENTRAL FLORIDA and, in its individual capacity, to ratify and accept on to itself the obligations of the TOHOPEKALIGA WATER AUTHORITY and the respective obligations of the individual member governments as they apply to the TOHOPEKALIGA WATER AUTHORITY, in accordance with the terms of the AGREEMENT, as amended.

TOHOPEKALIGA WATER AUTHORITY
By: Board of Supervisors

By: _____
Clarence Thacker, Chair

Attest: _____
William "Bill" Land, Secretary

Date: July 8, 2020

Approved by: _____
Attorney

IN WITNESS WHEREOF, the undersigned has executed this FOURTH AMENDMENT below in its capacity as a member government of WATER THE COOPERATIVE OF CENTRAL FLORIDA and, in its individual capacity, to ratify and accept on to itself the obligations of POLK COUNTY and the respective obligations of the individual member governments as they apply to POLK COUNTY, in accordance with the terms of the AGREEMENT, as amended.

POLK COUNTY, FLORIDA
By: Board of County Commissioners

By: _____
Bill Braswell, Chair

Stacy M. Butterfield, Clerk

Attest: _____
Stacy M. Butterfield, Clerk

Date: 8/4/2020

H.9 8/4/2020

Approved by: _____
Deputy County Attorney

IN WITNESS WHEREOF, the undersigned has executed this FOURTH AMENDMENT below in its capacity as a member government of THE WATER COOPERATIVE OF CENTRAL FLORIDA, and, in its individual capacity, to ratify and accept on to itself the obligations of ORANGE COUNTY and the respective obligations of the individual member governments as they apply to ORANGE COUNTY, in accordance with the terms of the AGREEMENT, as amended.

ORANGE COUNTY, FLORIDA
By: Board of County Commissioners

By: _____
for Jerry L. Demings, Orange County Mayor

Attest: Phil Diamond, C.P.A., County Comptroller
As Clerk to the Board of County Commissioners

By: _____
Deputy Clerk

Date: JUL 2 8 2020

Exhibit 5

Cypress Lake Wellfield, Raw Water Main and Water Treatment Plant
Final Design, Permitting, and Bidding
and 10-Year Report for WUP 49-02052-W

TETRA TECH

May 5, 2020

Ms. Deborah Beatty, P.E.
Toho Water Authority
951 Martin Luther King Blvd.
Kissimmee, FL 34741

Subject: **Cypress Lake Wellfield, Raw Water Main & Water Treatment Plant**
Final Design, Permitting, and Bidding Services

Tt # **200BP Toho**

Dear Ms. Beatty:

Tetra Tech is pleased to furnish this proposal for professional engineering services to assist the Water Cooperative of Central Florida with the above-referenced project. A detailed scope of services and compensation summary are attached hereto.

We look forward to providing these services to the Water Cooperative of Central Florida. If you should have any questions, please do not hesitate to contact me at 407-839-3955.

Very truly yours,

Tetra Tech

Jon D. Fox, P.E.
Vice President

Attachments

JDF/ab/Cypress Lake 10-2018/20200427_markups/Beatty_050520.doc

C: Kevin M. Friedman, P.E., Tetra Tech

EXHIBIT A

SCOPE OF SERVICES

CYPRESS LAKE WELLFIELD, RAW WATER MAIN & WATER TREATMENT PLANT (FINAL DESIGN, PERMITTING, AND BIDDING SERVICES)

I. PROJECT DESCRIPTION

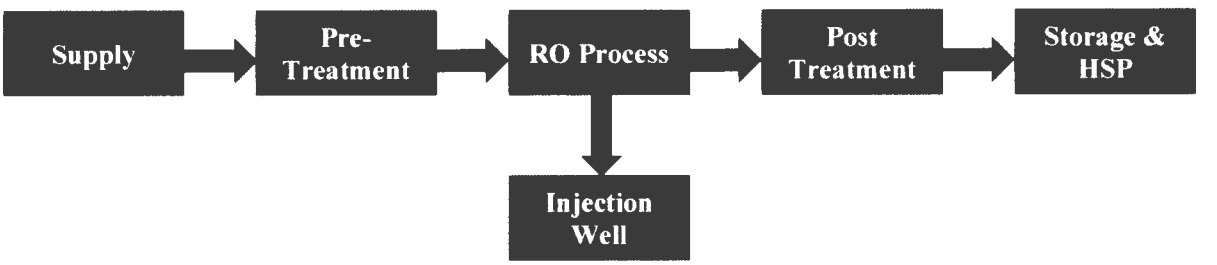
The Water Cooperative of Central Florida (Cooperative) members, currently consisting of the City of St. Cloud, Toho Water Authority (TWA), Orange County Utilities (OCU), and Polk County Utilities (PCU) together with the Reedy Creek Improvement District (RCID) [Utility Partners], has determined that the construction of a regional alternative water supply project would be of benefit to their individual water supply needs and address the specific conditions within their own current water use permits. In 2011, an interlocal agreement was executed to form a cooperative entity of Central Florida utility providers to address the funding, planning, preliminary design, design and construction, comprehensive plan amendments, zoning and land use approvals, and water use permitting for water supply projects to benefit the customers and stakeholders of the Cooperative. The Cooperative recognizes the benefits of regional cooperation and has determined that such partnership is in the best interest of the public.

Strategic planning efforts determined that a regional project yielding a minimum 30 million gallons per day (MGD) of water supply would help to collectively meet the Utility Partners needs for the near future. Two test/production wells were constructed within the Cypress Lake Wellfield and pump tested to provide the Utility Partners with water quality data within the Lower Floridan aquifer (LFA) which was used to estimate raw water quality and ultimately to provide a basis of design for the new water treatment plant (WTP). The Utility Partners completed the necessary testing to confirm that the LFA in the vicinity of Cypress Lake in central Osceola County has the ability to meet their future water supply needs, as well as address specific conditions within their water use permits. Following the completion of this testing, the Utility Partners submitted and have subsequently been issued a 30-year 37.5 MGD water use permit by the South Florida Water Management District (SFWMD) to withdraw groundwater from the LFA as an alternative water supply source. A total of 12 well sites have been identified and permitted.

As one of the next steps in the overall program, the Utility Partners have implemented the Cypress Lake Wellfield, Raw Water Main, and Water Treatment Plant Project. The initial phase of this project consisted of developing and recommending a concept plan for the new raw water supply wellfield, raw water transmission main, and water treatment facility for the withdrawal of 37.5 MGD of groundwater from the LFA and the subsequent treatment to public drinking water standards. The Concept Development Plan (Tetra Tech, MWH, Liquid Solutions Group, April 2014) recommended reverse osmosis (RO) as the treatment process for the LFA brackish groundwater supply and well injection as the most cost effective and permittable RO concentrate management option. The Concept Development Plan considered electrodialysis reversal (EDR) as an alternative concentrate management option; however, follow up water quality modelling indicated that EDR could not effectively meet finished water total dissolved solids (TDS) requirements and that the concentrations of silica appeared low enough for RO to remain an effective concentrate management option. Subsequently, a Preliminary Design Report (PDR) was prepared in 2014 to present a basis of design, preliminary layout of proposed facilities (buildings, site and yard piping), facility implementation, overview of regulatory requirements, and estimate of probable capital and O&M costs for the Cypress Lake wellfield, raw water main, and WTP.

At the time the PDR was finalized, the exact locations of various components were still in flux. Since 2014 refinement efforts have resulted it additional clarity for most aspects of the overall program. **Figure 1** presents a map showing the most current proposed location of the wells, raw water mains, and WTP.

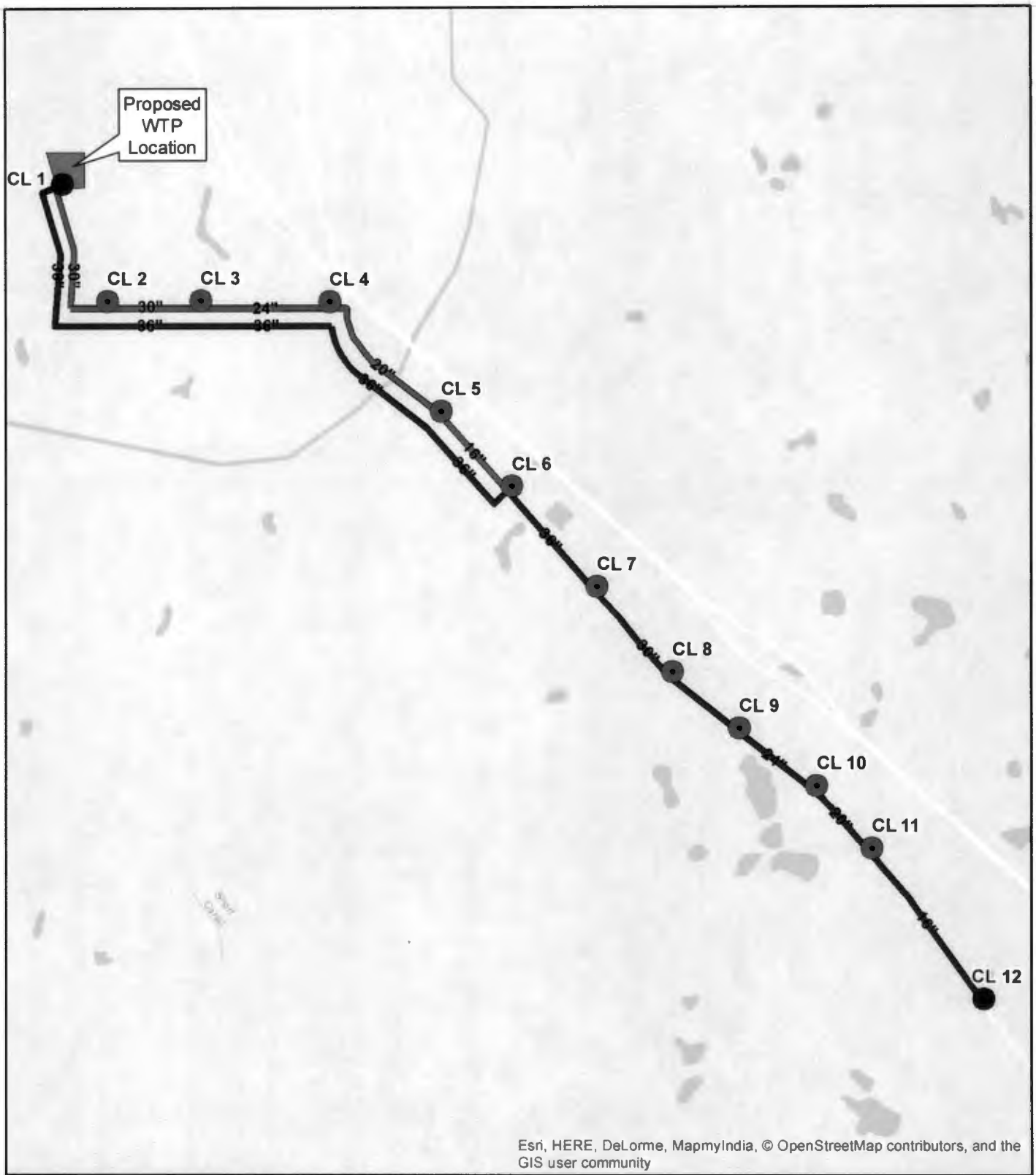
Several facilities will need to be constructed to extract the raw water from the Floridan Aquifer, convey it to the WTP, treat the raw water to meet regulatory standards and the finished water quality goals, store and pump the finished water into the transmission system and dispose of the water treatment process residuals. The overall components of these facilities are depicted in the schematic below.



The supply facilities will include 12 Floridan aquifer wells which will be cased to a depth of 1,350 feet below land surface (bls) and have open-hole sections to 1,550 feet bls. The wells will each be designed to produce 3.75 MGD so that ten wells can withdraw the permitted rate and two (2) wells will serve as standby for reliability and wellfield rotation. The wells will be equipped with vertical turbine pumps and generators and connect into a transmission main at the south end of the wellfield along Canoe Creek Road which will branch into dual parallel transmission mains at the northern end of the wellfield. Dual raw water transmission mains will enter the WTP site which provides for reliability against a single point of failure and provides for an initial phase of construction at lower capital cost.

The treatment, storage and high service pumping (HSP) facilities will be constructed on a greenfield site encompassing approximately 25 acres. The pretreatment and RO processes will be housed in a single, central treatment building. The raw water must receive pretreatment prior to the RO process. The pretreatment processes will include chemical pretreatment in the form of the addition of sulfuric acid and a commercial scale inhibitor and physical pretreatment in the form of 5-micron cartridge filters. The RO process will remove chlorides and TDS from the raw water so that their concentrations are below the regulatory limits. The RO process will consist of the RO feed pumps which boost the pressure to drive the RO process and the individual RO treatment skids. Ten (10) RO feed pumps and RO skids are proposed for these facilities. The RO process is designed to produce 30 MGD of permeate or product water and four (4) MGD of raw water will be filtered with 5-micron cartridges and blended with the permeate to provide the total design capacity of 34 MGD.

The RO permeate blended with raw water will require additional treatment following the RO process to achieve the finished water quality goals and meet the regulatory requirements. These are the post treatment processes. Hydrogen sulfide gas passes thru the RO membranes and must be removed prior to disinfection. The pH must be lowered to insure most of the hydrogen sulfide is in the gaseous form; therefore, sulfuric acid and hydrofluosilicic acids will be fed to the blended water prior to the hydrogen



Source: Water Cooperative of Central Florida

LEGEND

- Proposed Well
- Existing Well
- Phase 1 (17 MGD) Raw Water Transmission
- Phase 2 (34 MGD) Raw Water Transmission
- Proposed WTP Location

TETRA TECH

0 N 4,000

Feet

P:\ER\08466-200-08466-13017.A\GIS\Maps\Phases\AP_F1.mxd
[alex.mortalvo 10/16/2018]

CYPRESS LAKE RAW WATER TRANSMISSION SYSTEM LAYOUT

FIGURE 1

sulfide removal process. Counter current forced air degasifiers will be used to remove the hydrogen sulfide gas from the blended permeate. Following removal of the hydrogen sulfide gas, the blended permeate must be chlorinated to achieve four (4) log virus inactivation. Sodium hypochlorite and carbon dioxide will be added to the blended permeate as it enters one of three chlorine contact basins. Following disinfection, the water will receive final chemical addition in the form of calcium hydroxide, sodium hydroxide and a phosphate-based corrosion inhibitor in a blending channel ahead of the transfer pump wetwells. The final chemical addition will raise the calcium concentration to the finished water goal, increase the LSI to a positive value and prevent lead corrosion. The water following final chemical treatment will be pumped from the transfer pump wetwells to the on-site ground storage reservoirs by two sets of transfer pumps. The finished water will be stored in two 5-million gallon (MG) prestressed concrete ground storage reservoirs on-site. High service pumps, electrical equipment and generators will be housed in a building adjacent to the ground storage reservoirs. A set of six (6) high service pumps will be designed to pump the total design flow of 34 MGD. A 48-inch finished water transmission main will be used to convey the finished water offsite.

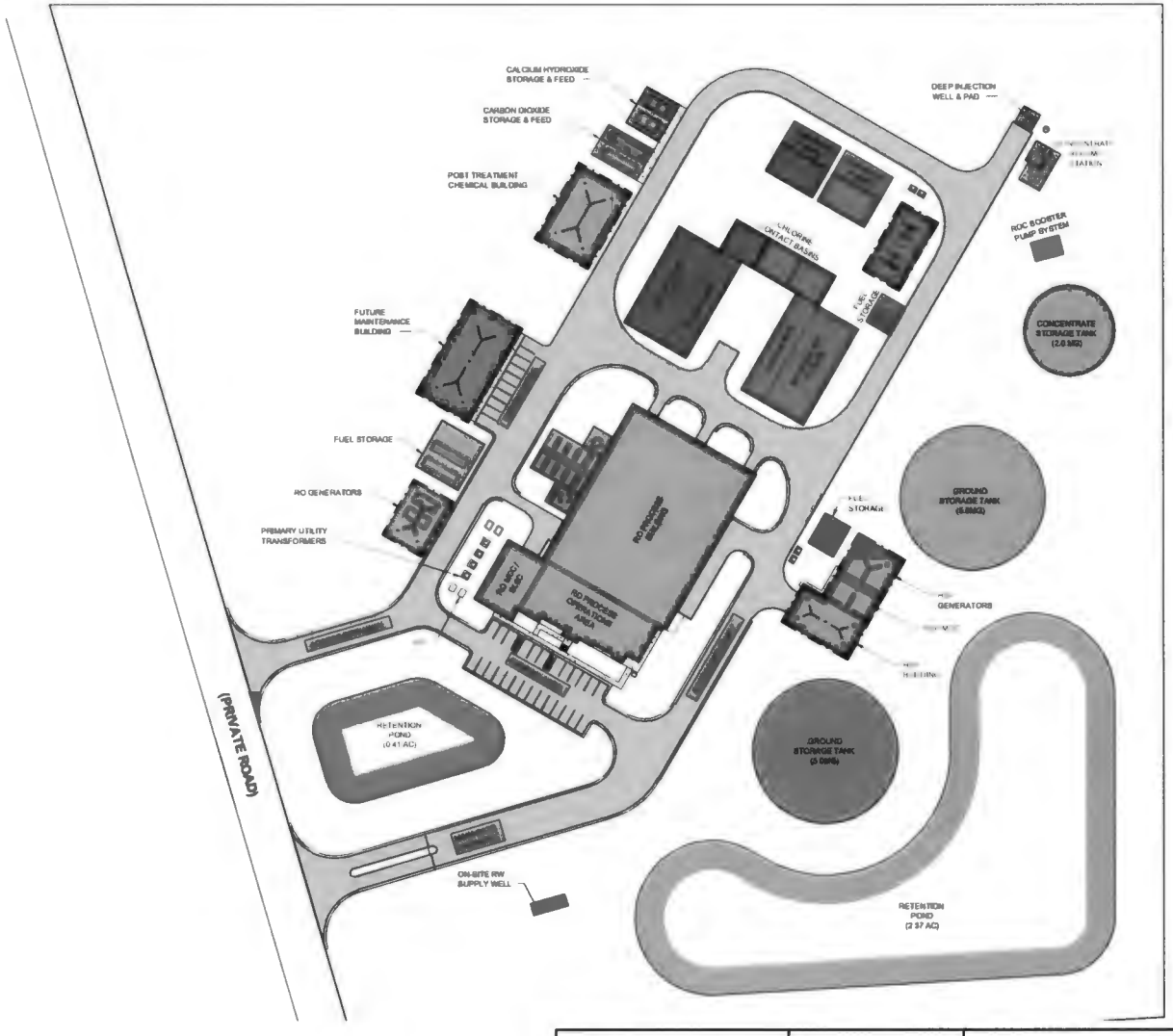
The RO process will be designed for 90% recovery of the raw water as permeate which will leave approximately 3.5 MGD of the concentrated raw water that will require disposal. Injection wells will be used to dispose of the concentrate. Preliminarily it is projected that at least three approximately 2-MGD capacity Class V injection wells will be required for disposal which includes a minimum of two in operation and one well as backup. These wells will be constructed to approximately 2,400 feet deep to access an injection formation. A set of booster pumps will be used to provide the necessary pressure for injection. A 2.0- MG gallon tank will be provided as part of the concentrate disposal system to receive flows required to flush to skids at startup or shutdown and bypass raw water around the RO process for flushing that may be in excess of the injection well capacity.

Figure 2 presents a preliminary site plan showing the WTP facilities. The layout presented may be adjusted depending upon the final parcel acquired by the Cooperative and as a result of design refinements that are typical in these types of projects.

The above description reflects the overall planned build-out concept that has been accepted by the Cooperative. Due to economic consideration and in an effort to match water supply and demand, a phased construction approach is proposed for the first phase of the program. Under this approach, six (6) raw water supply wells will be provided along with an RO treatment capacity of 15 MGD and 2 MGD of raw water blend for a total finished water production capacity of 17 MGD. Construction of approximately 20,000 linear feet of 16-, 20-, 24- and 30-inch raw water transmission main. Concentrate disposal will be provided by two (2) Class V deep injection wells. The initial piping, buildings, treatment structures, and electric service will be designed to cost-effectively accommodate the build-out expansion to 34 MGD as illustrated in **Figure 2** and described above. The finished water transmission main will be terminated at the water treatment plant property boundary.

The services provided herein will address all on-site facilities described above. The project will be delivered under three construction contracts as listed below. Tasks to be completed for this project will be completed on a phased basis for each contract and they are further described herein.

- Contract I: Raw Water Supply Wells (Well Nos. CL-1 to CL-6)
- Contract II: Raw Water Main (20,000 LF) and Water Treatment Plant (17 MGD)
- Contract III: Class V Deep Injection Well (IW- 2)



PLAN
SCALE: 1" = 120'

TETRA TECH
www.tetratech.com
201 EAST PINE STREET, SUITE 1000
ORLANDO, FLORIDA 32801
PH (407) 839-8[illegible] FAX (407) 839-1790

CYPRESS LAKE WTP
SITE PLAN

Project No.: 200-08466-13007A
Date: OCTOBER, 2018
Designed By:

FIG 2

Bar Measures 1 inch

II. SCOPE OF SERVICES

Project Management

A. Project Administration

Provide project administration services to direct, coordinate, and oversee work performed. This is an internal management activity which includes day-to-day management of the specific project work efforts, management oversight of technical tasks, coordination with other consulting teams related to the Cypress Lake project, monthly project status reports, monthly project schedule and budget updates, and quality management for this scope of services. The duration of this project is anticipated to be 24 months. Project administration will include the following:

1. Project Management Plan: Tetra Tech will prepare and maintain a Project Management Plan (PMP) to be used by the project team for managing and administering the design, permitting, bidding and construction administration phases of the project. Procedures and protocols will be established for the following project elements:

    - Project Definition
    - Team Member Roles and Responsibilities
    - Schedule with Milestones, Deliverables, Reviews and Meetings
    - Communication Protocol
    - Document Management
    - Change Management
    - Status Reporting
    - Quality Management Plan
    - Accounting (Invoicing)
    - Health and Safety Plan

    The details of the PMP will be discussed at the project kick-off meeting. The PMP will be a working document, which will be changed, modified and updated as needed during execution of the project. A draft copy of the PMP will be submitted for review. Following review, comments received will be incorporated and the final PMP will be submitted.

2. Project Schedule: Tetra Tech will develop a project schedule to identify key project milestones for project tasks. The project schedule will include a work breakdown structure that provides an organized approach to project delivery, defined milestones, progress/workshop meetings, deliverables, and deliverable reviews. The schedule will be prepared using MS Project and updated monthly.

3. Project Risk Register: Meet with the Cooperative to develop an initial project risk register and subsequently update the register on a quarterly basis. The register will identify risks that could potentially affect the project and present the estimated probabilities of occurrence, potential adverse impacts (financial, schedule, quality, flexibility, and other), contingency measures, and response plans. Once a CMAR firm is retained they will participate in expanding and updating the register.

4. Project Status Reporting: Tetra Tech will prepare a project status report on a monthly basis. Each monthly report will include a summary of the ongoing project activities as well as status updates for the schedules and budgets. Specific topics to be addressed in each monthly report consist of the following: description of work-to-date, description of 30-day look-ahead, updated project schedule, pending action items, and budget summary.

5. Quality Management: Tetra Tech will implement an ongoing quality assurance and quality control (QA/QC) program as an integral part of the delivery of the project. Quality review will be conducted throughout the project on key technical issues and on major deliverables prior to submission to the Utility Partners. Quality reviews are an internal QA/QC procedure that will be done by senior level technical peers who were not involved in development of the documents. The senior level technical peers will review draft documents for proper application of the approved assumptions, calculation methods, design methods and technologies.

Contract I: Raw Water Supply Wells

A. Final Design Services

1. Attend a kick-off meeting with representatives of the Cooperative to discuss well locations, site requirements, security needs, and equipment preferences.

2. Perform preliminary screening of the proposed well sites for siting of the new Lower Floridan Aquifer (LFA) raw water supply wells. This will include a field visit to physically observe the proposed well sites to determine if there are any visible sanitary hazards and regulatory setback constraints. The areas to be screened will include five (5) (Well CL-1 Existing) parcels of land for siting the raw water wells. Review published reports and database information from the United States Geological Survey (USGS), South Florida Water Management District (SFWMD), Florida Geological Survey (FGS), US Federal Emergency Management Agency (FEMA), the Florida Department of Environmental Protection (FDEP), the US Environmental Protection Agency (EPA), and the Natural Resources Conservation Service (NRCS) to identify potential well construction and reliability issues. Issues of concern may include surface expressions of subsurface dissolution or subsurface collapse near the proposed well sites, location of wetlands, locations of environmental or contamination hazards, flood zones, and unsuitable soil types.

3. Upon completion of the raw water supply well site screening, Tetra Tech will compile the data obtained and prepare a memorandum summarizing the findings and recommendations for siting of the raw water supply wells.

4. Provide professional surveying and utility locating services in support of design of the raw water supply wells. Surveying services will be secured from Johnston's Surveying, Inc. and will consist of boundary and topographic surveys of the well sites as well as locations of wetland boundaries and underground utilities. Survey work will be in accordance with "Minimum Technical Standards" established by the Florida Administrative Code.

5. Prepare a project manual that contains bidding and contract requirements, technical specifications and engineering drawings for competitive bidding. The project manual and its

contents will be formatted in accordance with the Construction Specification Institute (CSI) and prepared using Microsoft WORD®. The drawings will be prepared using the latest version of AutoCAD. The project manual will include the following:

a. Bidding and contract requirements will be prepared using TWA standard front-end documents. Tetra Tech will prepare the project bid form, summary of work and measurement and payment sections. Any changes to the TWA standard documents will be reviewed and approved by TWA.

b. Technical specifications and engineering drawings for construction and testing of five (5) Lower Floridan Aquifer (LFA) raw water supply wells will include, at a minimum, drill-stem water quality sampling and analysis, geophysical and video logging, aquifer performance testing, and other miscellaneous items required to determine the water quality and capacity of the wells. Design will include modification of existing Well CL-1 to include extending the final casing by slipping lining to a total depth of 1,350 ft, bls.

6. Provide ten (10) sets of project manual and attend design review meetings with representatives from the Cooperative at the Draft and Final completion levels. Comments, responses, and revisions will be logged following each review meeting.

7. Provide ten (10) sets of drawings and specifications at the Final completion level along with electronic files.

8. Prepare an opinion of construction cost based on previous bid tabulations, vendor quotes and estimates provided by contractors. Opinion of construction costs will be submitted with the Draft and Final progress submittals.

9. Conduct discipline coordination and QA/QC reviews in accordance with Tetra Tech's documented procedures.

10. Prepare a well drilling contractor pre-bid qualification package for this work to prequalify well drilling contractors prior to bidding. Each prequalified bidder will be qualified to drill and test deep Lower Floridan aquifer large diameter water supply wells. Tetra Tech will review and evaluate pre-qualification submittals from potential well drillers and provide recommendation.

B. Permitting Services

Tetra Tech will assist the Contractor with the following permit applications and supporting documentation for submission to the South Florida Water Management District (SFWMD) and/or the Osceola County Department of Health (DOH) and the Florida Department of Environmental Protection (FDEP) to obtain permits for construction. Tetra Tech will assist the Contractor in responding to requests for additional information (RAIs) from permitting agencies to clarify the original applications. Also, Tetra Tech will prepare the 10-year compliance report required under WUP Limiting Condition No. 22. All permit application fees will be paid by the Cooperative.

1. SFWMD/DoH Well Construction Permit. A Well Construction Permit must be obtained for well construction by the licensed well driller. Tetra Tech will assist by providing the well driller information needed to complete the application.

2. FDEP Generic Discharge Permit (GDP). A Generic Permit for discharge of groundwater may be required during construction and testing of the raw water supply wells. Tetra Tech will assist the Contractor by preparing a letter request and supporting documentation for the GDP from the FDEP (if needed).

3. 10-year Compliance Report per WUP Limiting Condition No. 22:

    a. Document projected demands versus allocation.
    b. Prepare draft 10-year WUP compliance report.
    c. Finalize draft 10-year WUP compliance report pursuant to review comments.

C. Bidding Services

It is anticipated that the Cooperative will handle administrative tasks related to competitive bidding of the proposed facilities. Tetra Tech will address the following tasks.

1. Furnish the Cooperative with a "master set" of construction documents in electronic format, as well as 24" x 36" full scale drawings and a "master set" of technical specifications for use in reproducing individual bidding packages. The Cooperative will be provided three (3) copies of the "master set" of construction documents with copier reproducible 11" x 17" scaled half size drawings. Electronic formats for the drawings will be the current version of AutoCAD and Acrobat PDF. For the specifications, the formats will be Microsoft WORD® and Acrobat PDF.

2. Attend a prebid conference to discuss the general scope of the project and document questions from prospective bidders.

3. Prepare addenda, as approved by the Cooperative, containing clarifications or technical revisions that become apparent during the bidding process for distribution by the Cooperative.

4. Review and tabulate bids and provide the Cooperative with recommendations regarding contract award.

Contract II: Raw Water Main & Water Treatment Plant

A. Final Design

1. Attend a kick-off meeting with representatives of the Cooperative to discuss: i) raw water main locations, utility needs, material considerations, valve spacing, and other design considerations, and ii) WTP site access and layout, equipment preferences, security needs, permitting challenges, and schedule considerations.

2. Refine design hydraulics for raw water main sizing and prepare a Technical Memorandum with final recommendations.

3. Perform a transient analysis for raw water main and evaluate surge mitigation options.

4. Prepare a memorandum presenting the results and the transient analysis and recommended surge control measures.

5. Meet with representatives from the Cooperative to discuss sizing, select surge control measures and the material and pressure class of the raw water main.

6. Meet with representatives of Osceola County to discuss WTP site access and roadway improvements.

7. Update the WTP site plan based on the most current site acquisition activities and feedback from representatives from the Cooperative.

8. Prepare a technical memorandum presenting the updated site plan and access concept.

9. Conduct a workshop with representative from the Cooperative to discuss the site plan and access concept and finalize these design elements.

10. Prepare design calculations and refinement of calculations performed during preliminary design.

11. Prepare supporting documentation and conduct workshops to address the following design issues and challenges.

    - Major pumping and process equipment selections (2-day workshop)
    - Piping materials/corrosion control (1-day workshop)
    - Building design and appearance (2-day workshop)
    - Laboratory design (1-day workshop)
    - Site and building security system design (1-day workshop)
    - Electrical system design and equipment selections (2-day workshop)
    - Instrumentation system design and equipment selections (2-day workshop)
    - Control narratives (3-day workshop)

12. Prepare a phasing evaluation to address the initial plant capacity and subsequent phasing recognizing the modular nature of the currently proposed components under the preliminary design report. Such components include, but are not limited to the main process building, RO treatment trains, chemical feed systems, intermediate pumping facilities, storage tanks, high service pumping facilities, and standby power components. Subtasks are described below:

    a. Prepare a draft plant phasing summary and distribute to Cooperative members.

    b. Organize and conduct a workshop with Cooperative members to present the various options and initial findings and to identify two (2) preferred options for the initial plant capacity. Options featuring current component sizing will be considered along with alternatives featuring modified sizing.

c. Compile comments resulting from the workshop and refine two (2) preferred options as identified above and subsequently prepare a draft technical memorandum that clearly presents the options under consideration as well as cost capacity and design implications.

d. Compare and conduct a workshop to discuss the draft technical memorandum and finalize the document pursuant to feedback received at the workshop.

13. Coordinate with Duke Energy for primary power service to the WTP site and six (6) well sites.

14. Provide professional surveying and utility locating services in support of the design of the WTP and raw water mains. Surveying services will be secured from Johnston's Surveying, Inc. and will consist of a boundary and topographic survey of the WTP site and pipeline route which will include topographic and right-of-way locations. Also, the location of wetland boundaries will be ascertained as well as the locations of underground utilities. Survey work will be in accordance with "Minimum Technical Standards" established by the Florida Administrative Code.

15. During design, Tetra Tech shall arrange and pay for an ecological consulting firm to perform an ecological investigation of the six (6) raw water supply well sites, raw water transmission mains route, and water treatment plant site for jurisdictional wetlands and threatened & endangered species (T&E). Field-delineate the jurisdictional wetland limits pursuant to current methodologies of the South Florida Water Management District (SFWMD) [Florida Unified Wetland Delineation Methodology, Chapter 62-340, F.A.C.]. Perform a field assessment to determine the presence of state and/or federally listed species and their associated habitats within the proposed 200' x 200' well sites, 25 – 30 acre water treatment plant site, and along 20,000 LF of raw water transmission main. Survey location of investigation flagging and relocation of T&E species are not included herein.

16. During design, Tetra Tech shall arrange and pay for geotechnical investigation/testing firm to provide necessary soils data and other pertinent information required for final design of raw water mains, well sites and WTP structural, roadways and stormwater management elements. Soil boring logs and classifications, existing groundwater levels and estimated seasonal high levels, pipe trench and backfill requirements, and structure/tank foundation requirements will be submitted in report format. Standard Penetration Test (SPT) borings will be conducted within footprint of structures and auger borings will be performed along the raw water main route (spacing of 600 feet) and at the WTP stormwater ponds, roadways and access road. It is estimated that 29 SPT borings will be drilled within the footprint of structures. The field investigation for the pipelines, pond and roadways will include 68 auger borings.

17. Prepare a draft of an updated preliminary design report to clearly present the size, type, and configuration of the proposed facilities.

18. Meet with the Cooperative to discuss the updated preliminary design report.

19. Finalize the draft update of the preliminary design report.

20. Prepare construction drawings for the proposed facilities. A preliminary list of drawings is presented below:

General
Cover Sheet
Location Map, General Notes, and Drawing Index (3 sheets)
Legend and Abbreviations

Raw Water Main
Plan & Profile (24 Sheets) (Scale 1" = 30' horizontal, 1" = 3' vertical)
Details (4 Sheets)

Civil
Raw Water Well Existing Conditions and Site Geometry Plan (6 well sites/6 sheets)
Raw Water Well Grading and Drainage Plans (6 well sites/3 sheets)
Raw Water Civil Details (2 Sheets)
WTP Existing Conditions (2 sheets)
WTP Access Road Geometry (4 sheets)
WTP Access Road Plan & Profile (4 sheets)
WTP Access Road Cross Sections (2 sheets)
WTP Site Geometry Plan (2 sheets)
WTP Site Geometry Table (1 sheet)
WTP Grading and Drainage Plan (2 sheets)
WTP Stormwater Management Pond Section and Details (2 sheets)
WTP Drainage Structure Schedules (2 sheets)
WTP Civil Details (4 Sheets)

Landscaping and Irrigation
Raw Water Well Landscaping Plans (6 well sites/3 sheets)
WTP Landscaping Plan (2 sheets)
Landscaping Schedule & Details (2 sheets)
WTP Irrigation Plan (2 sheets)
WTP Irrigation Schedule & Details (2 sheets)

Architectural
General Notes and Abbreviations
ADA and Life Safety Standards
RO Operations and MCC/Electrical Building Life Safety
RO Process Building Life Safety (2 sheets)
RO Generator Building Life Safety
Post Treatment Chemical Building Life Safety
Post Treatment MCC/Generator Building Life Safety
High Service Pump Building Life Safety
RO Operations/Process Areas Composite Plan (2 sheets)
RO Operations and MCC/Electrical Area Floor Plan
RO Process Area Upper Floor Plan
RO Process Area Lower Floor Plan
RO Operations and MCC/Electrical Area Reflected Ceiling Plan
RO Process Area Upper Floor Reflected Ceiling Plan

Architectural (Cont'd)

RO Process Area Lower Floor Reflected Ceiling Plan
RO Operations/Process Building Roof Plan Composite (2 sheets)
RO Generator Building Floor Plan
RO Generator Building Reflected Ceiling Plan
RO Generator Building Roof Plan
Post Treatment Chemical Building Floor Plan
Post Treatment Chemical Building Reflected Ceiling Plan
Post Treatment Chemical Building Roof Plan
Post Treatment MCC/Generator Building Floor Plan
Post Treatment MCC/Generator Building Reflected Ceiling Plan
Post Treatment MCC/Generator Building Roof Plan
High Service Pump Building Floor Plan
High Service Pump Building Reflected Ceiling Plan
High Service Pump Building Roof Plan
RO Operations/Process Building Elevations (4 sheets)
RO Generator Building Elevations (3 sheets)
Post Treatment Chemical Building Elevations (2 sheets)
Post Treatment MCC/Generator Building Elevations (2 sheets)
High Service Pump Building Elevations (2 sheets)
RO Operations/Process Building Sections (4 sheets)
RO Generator Building Sections
Post Treatment Chemical Building Sections
Post Treatment MCC/Generator Building Sections
High Service Pump Building Sections (2 sheets)
Wall Sections (7 sheets)
Architectural Details (4 sheets)
Architectural Schedules (2 sheets)
Renderings (4 sheets)

Structural

Structural General Notes (3 sheets)
Typical Well Pump Pad Plan, Section, & Details
Typical Generator Fuel Storage Tank Pad Plan, Section, & Details
RO Building Foundation Plan (2 sheets)
RO Operations/Process Building Foundation Plan (2 sheets)
RO Operations/Process Building Roof Plan (2 sheets)
RO Operations/Process Building Sections (5 sheets)
RO Operations/Process Building CMU Wall Reinforcing Elevations (2 sheets)
RO Operations/Process Building Roof Sections (3 sheets)
RO Generator Building Foundation Plan
RO Generator Building Roof Plan
RO Generator Building CMU Wall Reinforcing Elevations
RO Generator Building Sections
RO Generator Fuel Storage Slab Plan & Sections
Degasifier/Biotrickling Filter Foundation Plan
Degasifier/Biotrickling Filter Slab Plan
Degasifier/Biotrickling Filter Upper Plan

Structural (Cont'd)

Degasifier/Biotrickling Filter Sections (2 sheets)
Chlorine Contact Structure Foundation Plan
Chlorine Contact Structure Top Slab Plan
Chlorine Contact Structure Sections (2 sheets)
Transfer Pump Station Foundation Plan
Transfer Pump Station Top Slab Plan
Transfer Pump Station Sections (2 sheets)
High Service Pump Building Foundation Plan
High Service Pump Building Slab Plan
High Service Pump Building Roof Plan
High Service Pump Building Fuel Storage Slab Plan & Sections
High Service Pump Building CMU Wall Reinforcing Elevations
High Service Pump Building Sections (2 sheets)
Post Treatment Chemical Building Foundation Plan
Post Treatment Chemical Building Slab Plan
Post Treatment Chemical Building Roof Plan
Post Treatment Chemical Building CMU Wall Reinforcing Elevations
Carbon Dioxide Feed Area Plan & Sections
Lime Feed Area Slab Plan & Sections
Post Treatment MCC/Generator Building Foundation Plan
Post Treatment MCC/Generator Building Roof Sections
Post Treatment MCC/Generator Building Sections (2 sheets)
Post Treatment MCC/Generator Building CMU Wall Reinforcing Elevations
Post Treatment Generator Fuel Storage Slab Plan & Sections
Supply Well Slab Plan & Sections
Injection Well Slab Plan & Sections
Standard Concrete Details (4 sheets)
Standard CMU Details
Standard Steel Details (2 sheets)
Grating, Stairway, & Handrail Details (2 sheets)
Miscellaneous Structural Details (4 sheets)

Process/Mechanical

Process Legend & Abbreviations
Raw Water Supply & Conveyance Process Flow Diagram
RO Pretreatment Process Flow Diagram
RO Skid No. 1 and No. 2 Process Flow Diagram
RO Skid No. 3 and No. 4 Process Flow Diagram
RO Skid No. 5 Process Flow Diagram
Concentrate Loop & Disposal Process Flow Diagram
RO Clean-In-Place System Process Flow Diagram
Blend Cartridge Filter System Process Flow Diagram
Degasification Process Flow Diagram
Biotrickling Filter System Process Flow Diagram
Chlorine Contact Process Flow Diagram
Post Treatment Clearwell Process Flow Diagram
Finished Water Transfer Pump Station Process Flow Diagram

Process/Mechanical (Cont'd)

Finished Water Storage System Process Flow Diagram
High Service Pump Station Process Flow Diagram
Sulfuric Acid Feed System Process Flow Diagram
Antiscalant Feed System Process Flow Diagram
Fluoride Feed System Process Flow Diagram
Corrosion Inhibitor Feed System Process Flow Diagram
Sodium Hydroxide Feed System Process Flow Diagram
Sodium Hypochlorite Feed System Process Flow Diagram
Carbon Dioxide Feed System Process Flow Diagram
Lime Feed System Process Flow Diagram
Yard Piping/Plans (6 well sites/3 sheets)
Well Head Plans & Sections (6 sheets)
Well Details (2 Sheets)
Overall WTP Site Yard Piping Plan
Enlarged Yard Piping Plan (2 sheets)
Yard Piping Plan & Profile (4 sheets)
Yard Piping Schedules (2 sheets)
RO Process Building - RO Skid Room Overall Plan
RO Process Building - Pipe Gallery Overall Plan
RO Process Building - Cartridge Filters Enlarged Plan & Sections
RO Process Building - RO Feed Pump Enlarged Plan & Sections
RO Process Building - Typical RO Skid Enlarged Plan & Sections (2 sheets)
RO Process Building - Overall Process Area Sections (2 sheets)
RO Process Building - Membrane Cleaning System Enlarged Plan & Sections (2 sheets)
RO Process Building - Sulfuric Acid Bulk Storage & Feed System Plan & Sections (2 sheets)
RO Process Building - Antiscalant Bulk Storage & Feed System Plan & Sections (2 sheets)
RO Process Building - Fluoride Bulk Storage & Feed System Plan & Sections (2 sheets)
RO Process Building - Concentrate Loop Sections
RO Process Building - Instrument Panels (3 sheets)
RO Process Building - RO Feed Pump 3D Perspectives
RO Process Building - RO Skid 3D Perspectives
RO Process Building - Overall RO Skid Room 3D Perspectives (2 sheets)
RO Process Building - Overall Pipe Gallery 3D Perspectives
RO Process Building - Chemical Feed System 3D Perspectives (4 sheets)
Post Treatment Overall Lower Level Equipment Plan
Post Treatment Overall Upper Level Equipment Plan
Post Treatment Degasifier & Biotrickling Filter System Enlarged Plan
Post Treatment Degasifier & Biotrickling Filter System Sections (2 sheets)
Post Treatment Chlorine Contact Chamber Sections
Post Treatment Area 3D Perspectives
Clearwell & Transfer Pump Station Lower Level Equipment Plan
Clearwell & Transfer Pump Station Upper Level Equipment Plan
Clearwell & Transfer Pump Station Sections (2 sheets)
Clearwell& Transfer Pump Station 3D Perspectives
Finished Water 5.0 MG Ground Storage Tank No. 1 Lower Plan
Finished Water 5.0 MG Ground Storage Tank No. 1 Upper Plan
Concentrate 2.0 MG Storage Tank Lower & Upper Plans

Process/Mechanical (Cont'd)

Finished Water 5.0 MG Ground Storage Tank No. 1 Sections
Concentrate 2.0 MG Storage Tank Sections
High Service Pump Station Equipment Plan
High Service Pump Station Sections
High Service Pump Station 3D Perspective
Concentrate Booster Pump Station Plan & Section
Post Treatment Chemical Building Overall Plan
Corrosion Inhibitor Feed System Enlarged Plan
Corrosion Inhibitor Feed System Sections
Sodium Hydroxide Feed System Enlarged Plan
Sodium Hydroxide Feed System Sections
Sodium Hypochlorite Feed System Enlarged Plan
Sodium Hypochlorite Feed System Sections
Carbon Dioxide Feed System Plan
Carbon Dioxide Feed System Sections
Lime Feed System Plan
Lime Feed System Sections
Concentrate Repump Station Plan & Section
Typical Deep Injection Well & Pad Plan & Section
Process Details (6 sheets)

Fire Protection

Fire Protection Legend and Abbreviations
Fire Protection Site Plan
RO Operations/Process Building Fire Protection Overall Plan
RO Operations Building Fire Protection Admin Area Enlarged Plan
RO Process Building Fire Protection Upper Area Enlarged Plan (2 sheets)
RO Process Building Fire Protection Lower Area Enlarged Plan (2 Sheets)
Post Treatment Chemical Building Fire Protection Plan
Fire Protection Details

Plumbing

Plumbing Legend and Abbreviations
Fuel System Legend and Abbreviations
RO Operations/Process Building Plumbing Overall Plan
RO Operations Building Domestic Water Plan
RO Operations Building Sanitary Waste & Vent Plan I
RO Operations Building Storm Drainage Plan
RO Operations Building Plumbing Domestic Water Enlarged Plans
RO Operations Building Plumbing Sanitary Waste & Vent Enlarged Plans
RO Operations Building Domestic Water Riser Diagram
RO Operations Building Admin Area Sanitary Waste & Vent Riser Diagram
RO Operations Building Admin Area Storm Drainage Riser Diagram
RO Process Building Domestic Water Plan I
RO Process Building Domestic Water Plan II
RO Process Building Sanitary Waste & Vent Plan I
RO Process Building Sanitary Waste & Vent Plan II

Plumbing (Cont'd)

RO Process Building Storm Drainage Plan I
RO Process Building Storm Drainage Plan II
RO Process Building Plumbing Domestic Water Enlarged Plans
RO Process Building Plumbing Sanitary Waste & Vent Enlarged Plans
RO Process Building Domestic Water Riser Diagram
RO Process Building Sanitary Waste & Vent Riser Diagram
RO Operations/Process Building Plumbing Schedules
RO Generator Building Fuel System Overall Plan
RO Generator Building Fuel Storage Plan
RO Generator Building Fuel Piping Plan
RO Generator Building Fuel System Schematic & Schedules
Post Treatment Chemical Building Domestic Water Plan
Post Treatment Chemical Building Sanitary Waste & Vent Plan
Post Treatment Chemical Building Riser Diagrams
Post Treatment Chemical Building Plumbing Schedules
Post Treatment Generator Building Overall Fuel Plan
Post Treatment Generator Building Fuel Storage Plan
Post Treatment Generator Building Fuel Piping Plan
Post Treatment Generator Building Fuel System Schematic & Schedules
High Service Pump Building Domestic Water Plan
High Service Pump Building Sanitary Waste & Vent Plan
High Service Pump Building Fuel System Overall Plan
High Service Pump Building Fuel Storage Plan
High Service Pump Building Fuel Piping Plan
High Service Pump Building Domestic Water Riser Diagrams
High Service Pump Building Sanitary Waste & Vent Riser Diagrams
High Service Pump Building Fuel System Schematics & Schedules
High Service Pump Building Plumbing Schedules
Plumbing Details (3 sheets)
Fuel System Details

HVAC

HVAC Legend and Abbreviations
RO Operations/Process Building HVAC Overall Plan
RO Operations Building HVAC Plan
RO Operations Building Electrical Room HVAC Plan
RO Process Building HVAC Plan I
RO Process Building HVAC Plan II
RO Operations/Process Building HVAC Enlarged Plans I
RO Operations/Process Building HVAC Enlarged Plans II
RO Operations/Process Building HVAC Sections I
RO Operations/Process Building HVAC Sections II
RO Operations/Process Building HVAC Controls I
RO Operations/Process Building HVAC Controls II
RO Operations/Process Building HVAC Schedules I
RO Operations/Process Building HVAC Schedules II
RO Generator Building HVAC Plan

HVAC (Cont'd)

RO Generator Building HVAC Sections
RO Generator Building HVAC Controls
RO Generator Building HVAC Schedules
Post Treatment Chemical Building HVAC Plan
Post Treatment Chemical Building HVAC Sections
Post Treatment Chemical Building HVAC Controls
Post Treatment Chemical Building HVAC Schedules
Post Treatment Generator Building HVAC Plan
Post Treatment Generator Building HVAC Sections
Post Treatment Generator Building HVAC Controls
Post Treatment Generator Building HVAC Schedules
High Service Pump Building HVAC Plan
High Service Pump Building Enlarged HVAC Plans
High Service Pump Building HVAC Sections
High Service Pump Building HVAC Controls
High Service Pump Building HVAC Schedules
HVAC Details (5 sheets)

Electrical

Electrical Legend and Abbreviations
Function Diagram – Raw Water Supply Wells
Function Diagram- Treatment Plant
Functional Diagram - Injection Wells
Raw Water Well Site Electrical/Lighting Plan (6 well sites/3 sheets)
Raw Water Well Single Line Diagrams (6 well sites/3 sheets)
Typical Generator & Fuel Storage System Electrical Plan
Electrical Schedules
Electrical Details (2 Sheets) Electrical Location Plan
Electrical Site Plan
Electrical Site Plan Networks
Electrical Site Lighting and Security Plan
Site Lighting Illumination Levels
Electrical Site Plan - Injection Wells
Electrical Site Plan – On-Site Raw Water Supply Well
Electrical Site Plan - Remote Injection Well
Ductbank Sections (4 sheets)
RO Building Switchgear Single-Line
RO Building MCC Single-Line (2 Sheets)
Electrical Switchgear Single-Line HSP's
High Service Pump MCC Single-Line
Post-Treatment Switchgear Single-Line
Post-Treatment MCC Single-Line
RO Generators Switchgear
Injection Well Single-Line
RO Building Main Switchgear Control Schematics
High Service Pump Building Main Switchgear Control Schematics
Generator Switchgear Control Schematics (2 sheets)

Electrical (Cont'd)

Post Treatment Power Systems Control Schematics
High Service Pump Control Schematics (6 sheets)
Post Treatment MCC Control Schematics (2 sheets)
RO MCC Control Schematics (4 sheets)
Calcium Hydroxide Area Power Plan and Grounding
Carbon Dioxide Area Power Plan and Grounding
Transfer Pump Area Power Plan and Grounding (2 sheets)
Chlorine Contact Basin Power and Grounding (2 sheets)
Biotrickling Filter/Degasifiers Power and Grounding (2 sheets)
Concentrate Repump Station Power Plan
ROC Booster Pump System Power Plan
Concentrate Storage Tank Power Plan
Concentrate Storage Tank Lightning Protection
Ground Storage Tank Power Plan
Ground Storage Tank Lightning Protection
RO Generator Fuel Storage Power and Grounding Plan
High Service Pump Fuel Storage Power and Grounding Plan
Post-Treatment Fuel Storage Power and Grounding Plan
Main Gate Power and Controls
Access Driveway Power and Controls
Operations Building Power Plan (2 sheets)
Operations Building Lighting Plan (2 sheets)
Operations Illumination Calculations (2 sheets)
Operations Building Grounding Plan
Operations Building Lightning Protection Plan
Operations Building Enlarged Plans (3 sheets)
Process Building Power Plan (2 sheets)
Process Building Lighting Plan (2 sheets)
Process Building Illumination Calculations (2 sheets)
Process Building Grounding Plan
Process Building Lightning Protection Plan
Process Building Enlarged Plans (3 sheets)
RO Generator Power Plan
RO Generator Lighting Plan
RO Generator Illumination Levels
RO Generator Grounding Plan
RO Generator Lightning Protection Plan
High Service Pump Generator Power Plan
High Service Pump Generator Lighting Plan
High Service Pump Generator Illumination Levels
High Service Pump Generator Grounding Plan
High Service Pump Generator Lightning Protection Plan
High Service Pump Building Power Plan
High Service Pump Building Lighting Plan
High Service Pump Building Illumination Levels
High Service Pump Building Grounding Plan
High Service Pump Building Lightning Protection Plan

Electrical (Cont'd)

Post Treatment Building Power Plan
Post Treatment Building Lighting Plan
Post Treatment Building Illumination Levels
Post Treatment Building Grounding Plan
Post Treatment Building Lightning Protection Plan
Post Treatment Chemical Building Power Plan
Post Treatment Chemical Building Lighting Plan
Post Treatment Chemical Building Illumination Levels
Post Treatment Chemical Building Grounding Plan
Post Treatment Chemical Building Lightning Protection Plan
Panel Schedules (6 sheets)
Control Schematics (3 sheets)
Remote Raw Water Well Control Schematic
Remote Injection Well Control Schematic
Standard Electrical Details (5 sheets)

Instrumentation

Instrumentation Legend and Abbreviations
Concentrate Storage Process & Instrumentation Diagram
Concentrate Repump Process & Instrumentation Diagram
On-Ste Injection Well Process & Instrumentation Diagram
Raw Water Supply Well Process & Instrumentation Diagram
Remote Injection Well Process & Instrumentation Diagram
ROC Booster and Repump Process & Instrumentation Diagram
Ground Storage Tank Process & Instrumentation Diagram
Chlorine Contract Process & Instrumentation Diagram
Transfer Pump Process & Instrumentation Diagram
Degasifier Process & Instrumentation Diagram
Biotrickling Filter Process & Instrumentation Diagram
Chemical Area Process & Instrumentation Diagram
RO Process & Instrumentation Diagram (8 sheets)
Network Architecture (2 sheets)
Remote Telemetry Architecture Remote Wells
RO Process PLC Layout
Post Treatment PLC Layout
HSP PLC Layout
Remote Injection Well RTU Layout
I/O Lists (8 sheets)

21. Prepare a project manual that contains technical specifications for competitive bidding by the CMAR. The project manual and its contents will be formatted in accordance with the Construction Specification Institute (CSI) and prepared using Microsoft WORD®. The drawings will be prepared using the latest version of AutoCAD.

22. Provide ten (10) sets of drawings and specifications and attend design review meetings with representatives from the Cooperative at the 60% and 90% completion levels. Comments, responses, and revisions will be logged following each review meeting.

23. Assist the Cooperative in review of construction cost estimates prepared by the CMAR.

24. Provide ten (10) sets of drawings and specifications at the 100% completion level along with electronic files.

25. Conduct discipline coordination and QA/QC reviews in accordance with Tetra Tech's documented procedures.

B. Permitting

Tetra Tech will prepare and submit the following permit applications and supporting documentation to the Florida Department of Environmental Protection (FDEP) and the Osceola County Growth Management Department to obtain permits for construction and operation the proposed facilities. Tetra Tech will also respond to requests for additional information (RAIs) from permitting agencies to clarify the original applications. All permit application fees will be paid by the Cooperative.

1. Prepare and submit an application for a utility permit to Osceola County for the raw water main and respond to RAIs.

2. Complete FDEP Permit Application Form 62-555.900(1) for the proposed raw water main and respond to RAIs.

3. Complete FDEP Permit Application Form 62-555.900(1) for the proposed raw water supply wells and WTP and respond to RAIs.

4. Prepare and submit applications for FDEP Bulk Fuel Storage Tank Registrations.

5. Prepare and submit application for FDOH onsite septic system.

6. Prepare and submit a single application for an FDEP Environmental Resource Permit (ERP) for the Raw Water Supply Well sites, raw water main and WTP and respond to RAIs. It is anticipated that construction within wetlands will be minimized with limited offsite and mitigation not required.

7. Attend a preapplication meeting and subsequently prepare and submit documentation in support of an Osceola County rezoning application pertaining to the well and WTP sites. Also, attend two (2) public meetings regarding the rezoning process.

8. Prepare and submit a single application to Osceola County Growth Management Department for a Site Development Plan (SDP) review for the WTP and Raw Water Supply Well sites. Prepare for and attend one (1) Technical Review Committee (TRC) pre-application meeting, one (1) TRC meeting, one (1) Planning Board meeting, and one (1) County Commission meeting. Tetra Tech will respond to requests of the TRC and Osceola County engineering with the Cooperative's authorization as required for approval.

C. CMAR Bidding Services

It is anticipated that the Cooperative will retain a Construction Manager at Risk (CMAR) to handle bidding, procurement, and construction of the proposed facilities. Tetra Tech will not be a part of the CMAR evaluation and selection process and will only address the following tasks once the CMAR is formally under contract with the Cooperative.

1. Furnish the Cooperative with a set of construction documents in electronic format (Acrobat PDF) for use in bidding of the project by the CMAR. Assist the Cooperative during bidding and provide technical clarifications as needed.

2. Furnish the selected CMAR with a "master set" of construction documents in electronic format, as well as 24" x 36" full scale drawings and a "master set" of technical specifications for use in reproducing individual bidding packages. The Cooperative will be provided three (3) copies of the "master set" of construction documents with copier reproducible 11" x 17" scaled half size drawings. Electronic formats for the drawings will be the current version of AutoCAD and Acrobat PDF. For the specifications, the formats will be Microsoft WORD® and Acrobat PDF.

3. Prepare and issue addenda, as approved by the Cooperative, containing clarifications or technical revisions that become apparent during the CMAR bidding process.

Contract III: Deep Injection Well

The Cooperative received the FDEP Underground Injection Control (UIC) well construction and testing permit for three (3) Class V Group 4 desalination concentrate injection wells on January 30, 2017 which will accept concentrate from the proposed WTP. The FDEP UIC Class V permit requires the installation of a shallower single-zone monitoring well located within 150 feet from each injection well.

The first injection well will be used as an exploratory well to evaluate the potential feasibility for disposal of RO concentrate with a targeted capacity of 2.0 MGD. Based on the data collected from the construction of the first injection well IW-1, well IW-2 will be constructed. This scope of work only includes budget for final design, bidding and construction of well IW-2. Due to the nature of this first injection well, FDEP is requiring that Class I injection well design and testing criteria be followed for this Class V Group 4 injection well. As with Well IW-1, a well drilling contractor pre-qualification package will be used to screen interested bidders such that only qualified well drilling contractors with FDEP UIC Class I well drilling experience will bid on the work.

A. Final Design

1. Attend a kick-off meeting with representatives of the Cooperative to finalize well locations and other design considerations.

2. Prepare updates to the well design, bidding and contract requirements, and technical specifications based on information obtained from the construction of Injection Well IW-1 for the construction of one (1) additional injection well and one (1) single-zone monitoring well. A preliminary list of drawings is presented below:

General
Cover Sheet
Location Map, General Notes, and Drawing Index
Legend and Abbreviations
Flow Schematic

Civil
Proposed Well Location and Site Plan

Process/Mechanical
Proposed Injection Well (IW-2) Construction Details
Proposed Single-Zone Monitor Well Construction Details
Proposed Shallow Monitor Well Construction Details
Proposed Injection Well Head and Single-Zone Monitor Well Head Construction Details

3. Prepare a project manual that contains bidding and contract requirements and technical specifications for competitive bidding. The project manual and its contents will be formatted in accordance with the Construction Specification Institute (CSI) and prepared using Microsoft WORD®. The drawings will be prepared using the latest version of AutoCAD.

    a. Bidding and contract requirements will be prepared using TWA standard front-end documents. Tetra Tech will prepare the project bid form, summary of work and measurement and payment sections. Any changes to the TWA standard documents will be reviewed and approved by TWA.

    b. Technical specifications and engineering drawings for construction and testing of one (1) injection well (IW-2) and one (1) single-zone monitor well will include, at a minimum, drill-site water quality sampling and analysis, geophysical and video logging, packer testing and other miscellaneous items required.

4. Provide professional surveying and utility locating services in support of the design of the injection and monitoring wells. Surveying services will be secured from Johnston's Surveying, Inc. and will consist of boundary and topographic surveys of the injection well sites along with the location of wetland boundaries and underground utilities. Survey work will be in accordance with "Minimum Technical Standards" established by the Florida Administrative Code.

5. Provide ten (10) sets of drawings and specifications and attend design review meetings with representatives from the Cooperative at the Draft and Final completion levels. Comments, responses, and revisions will be logged at following each review meeting.

6. Prepare an opinion of construction costs based on previous bid tabulations, vendor quotes and estimates provided by contractors. Opinion of construction costs will be provided with the Draft and Final submittals.

7. Provide ten (10) sets of drawings and specifications at the Final completion level along with electronic files.

8. Conduct discipline coordination and QA/QC reviews in accordance with Tetra Tech's documented procedures.

B. Permitting

Since the existing Class V Well Construction and Testing permit was received on January 30, 2017, it will expire on January 30, 2022. Once the injection wells are placed into operation, they will operate for approximately two years in the operational testing phase under the Class V Well Construction and Testing permit prior to receiving an Operating Permit. Since these wells are expected to take 12 months each to construct, it is expected that the existing Class V Well Construction and Testing permit will need to be renewed at least once and possibly twice prior to applying for the Operating Permit. No budget is provided for this Class V permitting renewal task at this time.

C. Bidding Services

It is anticipated that the Cooperative will handle administrative tasks related to competitive bidding of the proposed facilities. Tetra Tech will address the following tasks.

1. Furnish the Cooperative with a "master set" of construction documents in electronic format, as well as 24" x 36" full scale drawings and a "master set" of technical specifications for use in reproducing individual bidding packages. The Cooperative will be provided three (3) copies of the "master set" of construction documents with copier reproducible 11" x 17" scaled half size drawings. Electronic formats for the drawings will be the current version of AutoCAD and Acrobat PDF. For the specifications, the formats will be Microsoft WORD® and Acrobat PDF.

2. Attend a prebid conference to discuss the general scope of the project and document questions from prospective bidders.

3. Review qualification submittals from prospective well drilling contractors and provide recommendations related to prequalification for bidding.

4. Prepare addenda, as approved by the Cooperative, containing clarifications or technical revisions that become apparent during the bidding process for distribution by the Cooperative.

5. Review and tabulate bids and provide the Cooperative with recommendations regarding contract award.

III. COMPENSATION SUMMARY

The total lump sum compensation for the Scope of Services described in Section II is summarized below. **Attachment A** presents a detailed breakdown of the estimated compensation for the Scope of Services.

Task	Phase	Compensation
Project Management		**$766,829**
Contract I: Raw Water Supply Wells		
A	Final Design	$128,951
B	Permitting	$25,120
C	Bidding Assistance	$23,183
Sub-Total		**$177,255**
Contract II: Raw Water Main & Water Treatment Plant		
A	Final Design	$5,437,573
B	Permitting	$184,463
C	CMAR Bidding Assistance	$91,574
Sub-Total		**$5,713,611**
Contract III: Class V Deep Injection Well IW-2		
A	Final Design	$66,950
C	Bidding Assistance	$11,588
Sub-Total		**$78,538**
	TOTAL ESTIMATED LUMP SUM COMPENSATION	**$6,736,233**

IV. SCHEDULE

A detailed project schedule that addresses each activity is presented in **Attachment B**, along with estimated fee drawdown over the project duration in **Attachment C**.

Price Proposal

Cypress Lake Program - Final Design, Permitting, and Bidding

Submitted to: Toho Water Authority (Attn: Deb Beatty)

Contract Type: Lump Sum

Labor Plan

Pricing by Resource

Project Phases / Tasks	Total Labor Hrs	Labor	Subs	ODCs	Task Pricing Totals
Project Management	[illegible]	[illegible]		[illegible]	[illegible]
1. Project Administration	1,008	[illegible]			[illegible]
2. Prepare Project Management Plan	[illegible]	[illegible]			[illegible]
3. Prepare Project Schedule	[illegible]	[illegible]			[illegible]
4. Risk Register	[illegible]	[illegible]			[illegible]
4.1 Risk Workshop	[illegible]	[illegible]			[illegible]
4.2 Risk Identification	[illegible]	[illegible]			[illegible]
4.3 Impact Assessment & Contingency Allocation	[illegible]	[illegible]			[illegible]
4.4 Risk Register Workshop	[illegible]	[illegible]			[illegible]
4.5 Finalize Risk Register	[illegible]	[illegible]			[illegible]
4.6 Meet with CMAR Firm for Constructor Risk Assessment	[illegible]	[illegible]			[illegible]
4.7 Update Risk Register	[illegible]	[illegible]			[illegible]
5. Monthly Project Status Reports	1,008	[illegible]			[illegible]
5.1 Project Status Reports	[illegible]	[illegible]			[illegible]
5.2 Update Schedule and Budget	[illegible]	[illegible]			[illegible]
6. Quality Management Plan	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A. Final Design	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. Prepare and Attend Project Kick-off Meeting	[illegible]	[illegible]			[illegible]
2. Preliminary Well Site Screening (6 Well Sites)	[illegible]	[illegible]			[illegible]
3. Clearstone Project Survey	[illegible]	[illegible]	[illegible]		[illegible]
4. Design Project Manual Tech Specs (6 Well Sites)	[illegible]	[illegible]			[illegible]
5. Design Project Manual Drawings (6 Well Sites)	[illegible]	[illegible]			[illegible]
6. Opinion of Cost (90 & 100% Submittals)	[illegible]	[illegible]			[illegible]
7. Project Coordination and QA/QC	[illegible]	[illegible]			[illegible]
8. Design Review Meeting (90 and 100% Submittals) (2)	[illegible]	[illegible]			[illegible]
9. Prequalification of Well Drillers	[illegible]	[illegible]			[illegible]
10. Subconsultant Adj			[illegible]		[illegible]
11. ODC's				[illegible]	[illegible]
B. Permitting	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. SFWMD/DOH Well Construction Permit Assistance	[illegible]	[illegible]			[illegible]
2. FDEP Generic Drainage Permit Assistance	[illegible]	[illegible]			[illegible]
3. 20 Year Compliance Report per WUP Condition No. 32	[illegible]	[illegible]			[illegible]
3.1 Document Project Demands versus Allocation	[illegible]	[illegible]			[illegible]
3.2 Prepare Draft WUP Compliance Report	[illegible]	[illegible]			[illegible]
3.3 Finalize Draft Compliance Report	[illegible]	[illegible]			[illegible]
4. Subconsultant Adj			[illegible]		[illegible]
5. ODC's				[illegible]	[illegible]
C. Bidding Services	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. Prepare Contract Documents for Bid Set	[illegible]	[illegible]			[illegible]
2. Prepare for and Attend a Pre-Bid Conference	[illegible]	[illegible]			[illegible]
3. Prepare Addenda	[illegible]	[illegible]			[illegible]
4. Tabulate and Evaluate Bids	[illegible]	[illegible]			[illegible]
5. Prepare a Recommendation of Award	9	[illegible]			[illegible]
6. Subconsultant Adj			[illegible]		[illegible]
7. ODC's				[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A. Final Design	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Price Proposal

Cypress Lake Program - Final Design, Permitting, and Bidding

Submitted to: Toho Water Authority (Attn: Deb Beatty)

Contract Type: Lump Sum

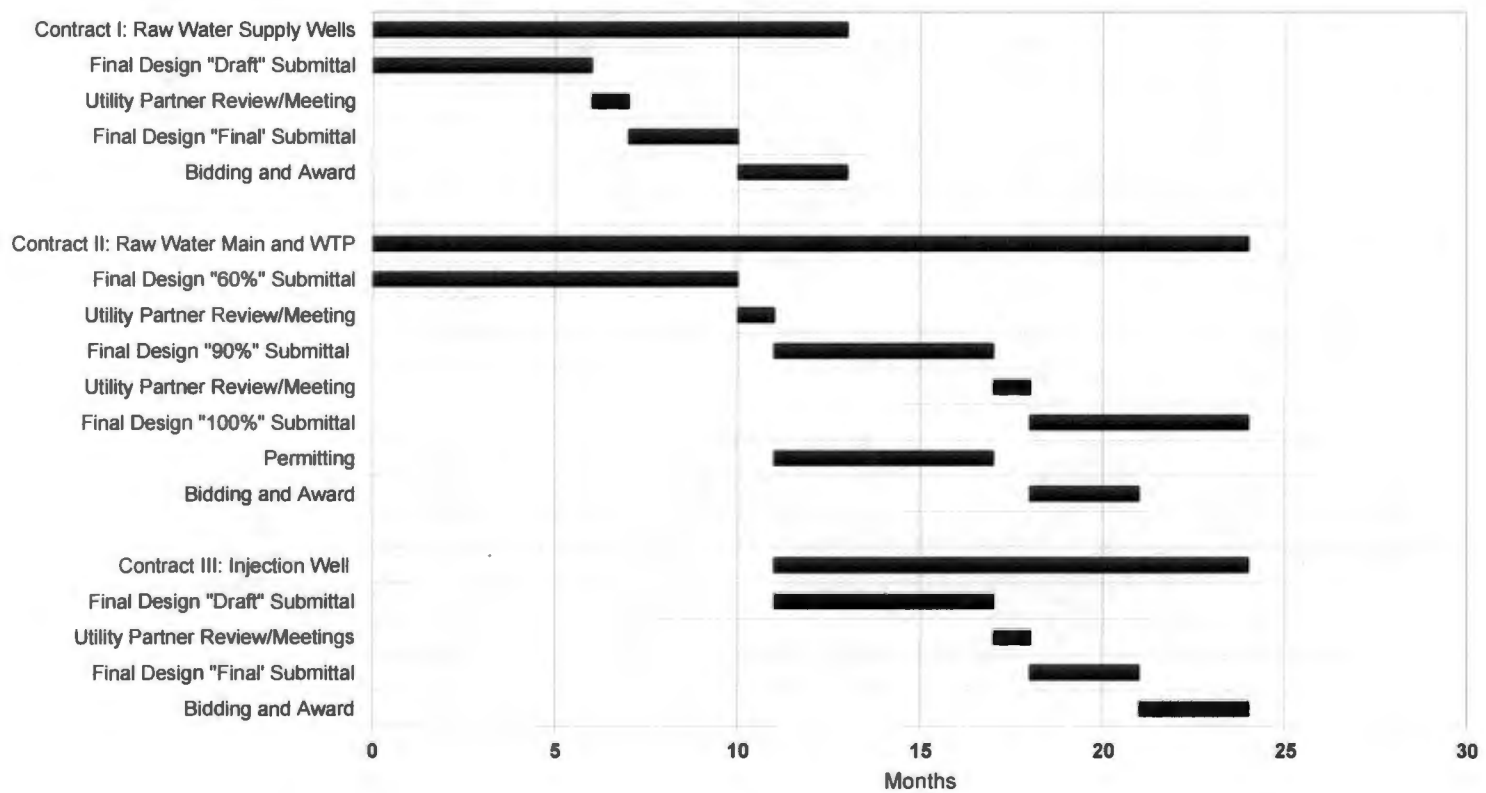
Labor Plan

43 Resource

Pricing by Resource

Project Phases / Tasks	Total Labor Hrs	Labor	Subs	ODCs	Task Pricing Totals
7.1 SJRWMD Major Surface Permit	66	6,750			6,750
8. ODC				375	375
9. Osceola County Rezoning	148	13,447		375	[illegible]
9.1 Preapplication Meeting	24	3,324			3,324
9.2 Prepare Application & Documentation	100	11,700			11,700
9.3 BAT Reviews	52	7,450			7,450
9.4 Public Meetings	146	20,000			20,000
9.5 ODCs				375	375
10. Osceola County Site Development Plan (SDP)	210	10,001		500	[illegible]
10.1 DRC Pre-Application Meeting	30	4,005			4,005
10.2 DRC Meeting	54	6,410			6,410
10.3 Planning Board Meeting	24	4,044			4,044
10.4 County Commission Meeting	8	3,201			3,201
10.5 Engineering Plan Review	140	18,700			18,700
10.6 ODCs				500	500
C. Bidding Services (CMAR)	660	15,304		500	[illegible]
1. Prepare CMAR Mat'ls RFQ	40	3,006			3,006
2. Prepare and Issue CMAR Addenda	500	60,572			[illegible]
3. ODC				500	500
[illegible]	440	40,000	22,870	[illegible]	[illegible]
A. Final Design Services	211	30,342	24,057	500	[illegible]
1. Prepare for and Attend a Project Kick-Off Meeting	32	4,370			4,370
2. Prepare Grading and Erosion Improvements	24	3,004			3,004
3. Survey/Geotechnical	30	3,240	11,000		[illegible]
4. Prepare Design Drawings and Specifications	60	10,375			10,375
5. Opinion of Cost (90% & 100% Submittal)	18	3,367			3,367
6. Project Coordination and QA/QC	12	2,402			2,402
7. Design Review Meetings (60 and 90% Submittals)	48	8,332			8,332
8. Subconsultant: H&G			17,002		[illegible]
9. ODCs				500	500
B. Bidding Services	40	7,200	4,210	375	[illegible]
1. Produce Pre-Bid Meeting Minutes	5	483			483
2. Prepare for and Attend a Pre-Bid Conference	4	776			776
3. Prepare Addenda	10	2,007			2,007
4. Tabulate and Analyze Bids	11	1,646			1,646
5. Prepare Recommendation of Award	10	1,460			1,460
6. Subconsultant			4,210		4,210
7. ODCs				375	375
Totals	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

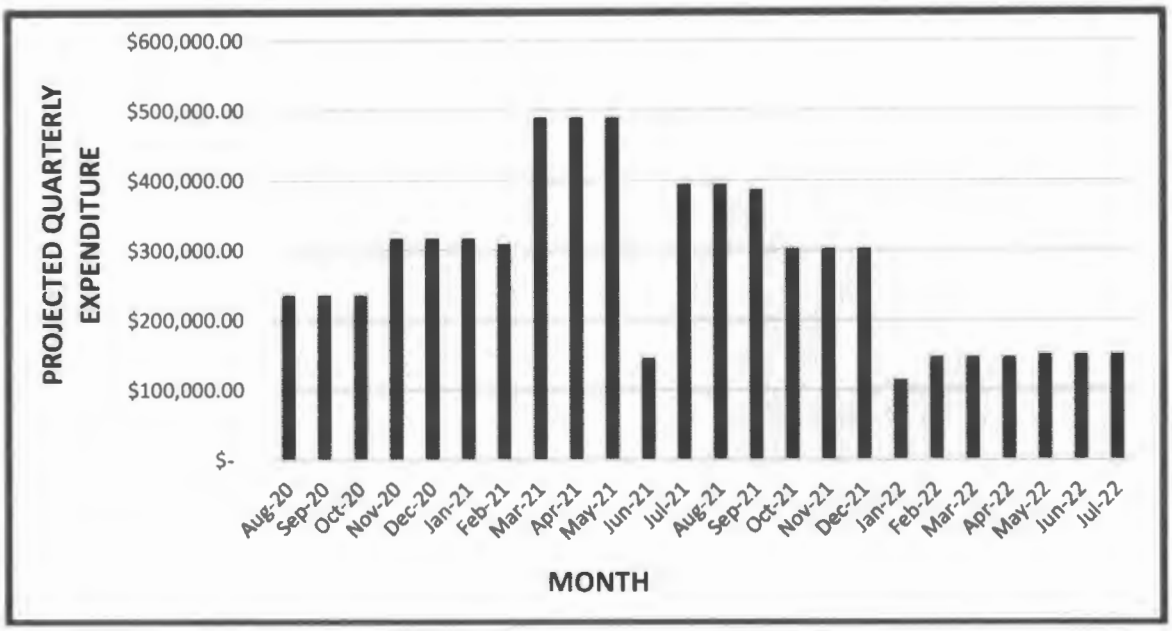
Attachment B
Cypress Lake Wellfield, Raw Water Main & Water Treatment Plant
Final Design, Permitting, and Bidding Services Schedule



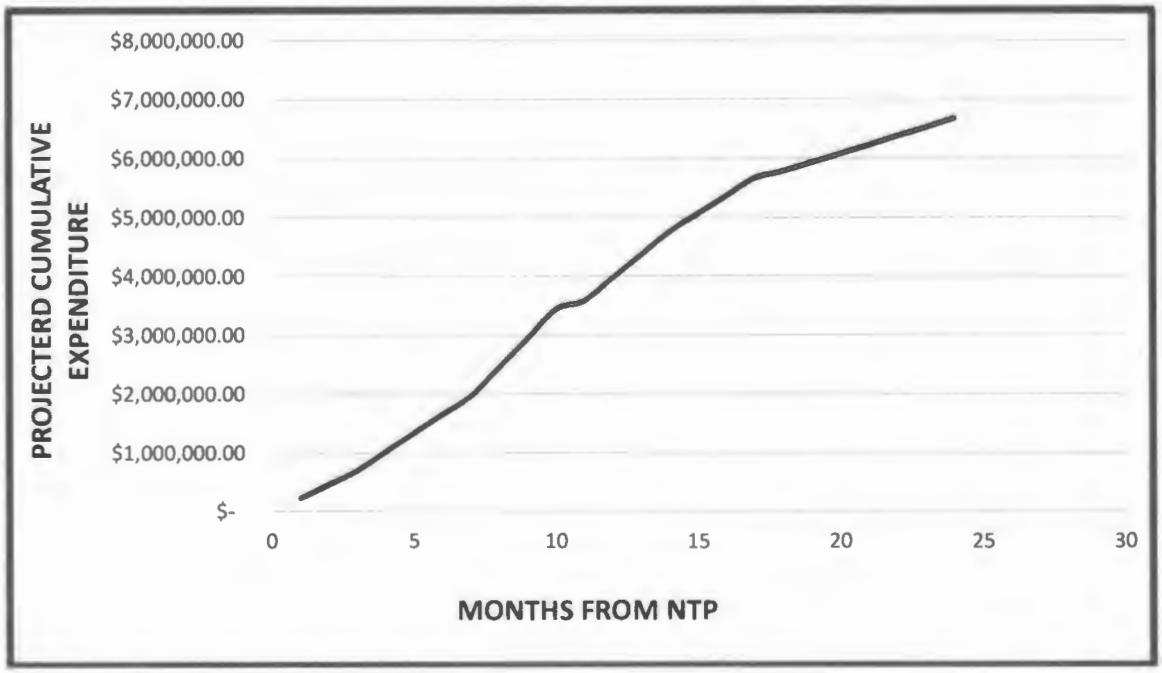
ATTACHMENT C

TOHO WATER AUTHORITY

CYPRESS LAKE WELLFIELD, RAW WATER MAIN, & WATER TREATMENT PLANT
(FINAL DESIGN, PERMITTING, AND BIDDING SERVICES)



Tetra Tech, Inc.
Projected Monthly Fee Expenditure Drawdown Schedule



Tetra Tech, Inc.
Projected Cumulative Fee Expenditure

Exhibit 6

Phase III Stage 5 Costs

Phase III Stage 5 Costs

Cypress Lake Wellfield, Raw Water Main and Water Treatment Plant Final Design, Permitting, and Bidding and 10-Year Report for WUP 49-02052-W with 10% Contingency	$ 7,410,000.00
Permitting Allowance	$ 100,000.00
Budget to prepare an update to the hydraulic model and infrastructure cost estimate found in the Water Wheeling Plan	$ 350,000.00
Total	$ 7,860,000.00