

CCNA2018 WORK ORDER 6

Proposal to Indian River County for the West Regional WWTF Florida Department of Environmental Protection Operating Permit Renewal

This Work Order Number 6 is entered into as of this ___ day of _____, 2020, pursuant to that certain Continuing Consulting Engineering Services Agreement for Professional Services entered into as of this 17th day of April, 2018 (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Tetra Tech, Inc. ("Consultant").

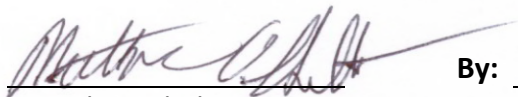
The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit B (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit C (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:

**BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY**

By:



By:

Susan Adams, Chairman

Print Name:

Matthew Shelton

Title:

Project Manager

BCC Approved Date:

Attest: Jeffrey R. Smith, Clerk of Court and Comptroller

By:

Deputy Clerk

Approved:

Jason E. Brown, County Administrator

Approved as to form and legal sufficiency:

Dylan T. Reingold, County Attorney



June 2, 2020

Via email: aweragoda@ircgov.com

Mr. Arjuna Weragoda, P.E.
Indian River County Department of Public Works
1801 27th Street
Vero Beach, FL 32960-3388

**Subject: Proposal to Indian River County for the West Regional WWTFP
Florida Department of Environmental Protection Operating Permit Renewal**

Tt # 200BP Indian River County

Dear Mr. Weragoda:

Tetra Tech, Inc. (Tetra Tech) is pleased to provide Indian River County Department of Utility Services (IRCDUS) with this proposal for services to assist in the preparation of the West Regional Wastewater Treatment Facility (WWTF) Florida Department of Environmental Protection (FDEP) Operating Permit Renewal Application.

I. BACKGROUND

The IRCDUS owns and operates the West Regional WWTF, a 6.0 million gallons per day (MGD) annual average daily flow (AADF) capacity domestic WWTF. The WWTF consists of two influent mechanical bar screens, two grit removal units, two fermentation basins, two 1st anoxic basins, four aeration basins, two 2nd anoxic basins, two reaeration basins, four secondary clarifiers, four tertiary filters, and six chlorine contact chambers. The WWTF has sodium hydroxide and alum chemical feed facilities. Also, the WWTF has a rotary drum thickener and an aerated sludge holding tank for processing biosolids.

Effluent from the WWTF is disposed through a 4.0 MGD AADF Surface Water Discharge, D-001, from the created wetland, R-001; a 6.97 MGD AADF slow-rate public access Land Application R-002 which provides reclaimed water for irrigation public access reuse within the City's service area; and a 0.1 MGD AADF Land Application R-003 rapid infiltration basin (RIBs).

R-001 is a 4.0 MGD-AADF, permitted capacity created wetland treatment/reuse system with 169+ acres (135+ total wetted acres) and consists of an influent deep settling pond, with 9 deep marsh flow-through cells and 3 shallow marsh cells with a final storage outfall cell. R-001 discharges to the Lateral D Canal, Class III fresh waters, (WBID# 3153), thence approximately 1.9 miles to the Lateral C Canal, thence approximately 1.0 miles to the Main Canal Class III fresh waters, (WBID# 3153A), thence approximately 7.5 miles to the Indian River Lagoon at Vero Beach (Class III marine waters). The discharge outfall for D-001 is a 24-inch pipe that is approximately 5 feet in length, from the edge of the canal's bank, and discharges at a depth of approximately 4 feet.

Tetra Tech, Inc.

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R-002 includes a county-wide public access reuse service area for irrigation of golf courses, residential developments, business parks, commercial parks, industrial parks, other landscape irrigation, and industrial uses/cooling water. R-002 also includes a 0.40 MGD-AADF permitted capacity rapid rate restricted access reuse system that includes seven off-site rapid infiltration basins (RIBs) referenced in the Central Regional WWTF permit. The RIBs also provide 14 million gallons (MG) of wet weather storage/disposal during wet weather conditions

The WWTF is operating under current Florida Department of Environmental Protection (FDEP) wastewater permit number FL0041637. The IRCDUS WEST Regional WWTF FDEP operating permit will expire on April 11, 2021. In accordance with Rule 62-620.335, Florida Administrative Code (F.A.C.), permittees who wish to continue to discharge subsequent to the expiration date of their existing wastewater permit shall submit an application for renewal no later than one-hundred and eighty days (180) prior to the expiration of their current permit. The permit renewal application and fee must be received by the FDEP by October 13, 2020.

II. SCOPE OF WORK

IRCDUS has requested that Tetra Tech provide engineering services to prepare the permit renewal application with necessary supporting documents per the Continuing Contract Agreement for Engineering Services Dated April 17th, 2018. Tetra Tech's proposal to provide the requested engineering services is presented in this scope of work. In addition to the permit application Forms 1 and 2A, the IRCDUS West Regional WWTF permit renewal will require the following items in the permit renewal package per Chapter 62-620, F.A.C., Wastewater Facility Permitting and The Guide to Wastewater Permitting:

Task 1: Kick-Off Meeting and FDEP Pre-Application Meeting

1. Tetra Tech will prepare for and conduct a kick-off meeting with IRCDUS. Tetra Tech will prepare and distribute meeting summary to attendees.
2. Tetra Tech will prepare for and conduct a pre-application meeting with IRCDUS and FDEP. Tetra Tech will prepare and distribute meeting summary to attendees.

Task 2: Historical Data Analysis

1. Evaluate monthly average daily flows, three-month average daily flows and annual average daily flows, permitted capacity and flow trends.
2. Evaluate seasonal variations
3. Characterize the flow and loadings currently being treated at the plant based on the most recent 3 years of data.

Task 3: Operation and Maintenance Performance Report

1. Tetra Tech will prepare an operation and maintenance performance report (OMPR) pursuant to Chapter 62-600, F.A.C. This task includes the following:
 - a. Updating descriptions of each operation/process prepared in the previous OMPR.
 - b. Prepare location map for WWTF, wetlands, outfalls, and RIBs.
 - c. Prepare site plan showing the current operations and unit processes, and process flow diagram showing the current status and current capacity of the facility.
 - d. Physical condition assessment including site visit with WWTF operations staff to perform visual observation of the physical status of the WWTF, completing the FDEP forms summarizing the physical conditions, individual components, systems, and processes, and disposal systems, document any evidence of hydraulic or organic overloading and document the general condition of each unit operation/process.
 - e. Treatment efficiency analysis and summarize performance trends.
 - f. Summarize O&M problems related to physical condition, treatment efficiency, performance trends and O&M program and develop schedule for corrective actions.
2. Tetra Tech will meet with IRCDUS personnel to review findings. Tetra Tech will prepare and distribute meeting summary to attendees.
3. Tetra Tech will finalize report to be submitted to FDEP.

Task 4: Prepare FDEP Permit Application Forms and compile supplemental data.

1. Tetra Tech will submit a draft of the permit applications (FDEP Application Forms 1 and 2A) to IRCDUS for review and IRCDUS comments will be incorporated into the final version. Upon receipt of the signed permit application from IRCDUS, Tetra Tech will submit the permit application, CAR, OMPR, and supporting documentation. FDEP permit fee (\$5,000) in accordance with Rule 62-4.050(b), F.A.C. has been included with this Task.
2. Tetra Tech will compile the following information, provided by IRCDUS to be included with the permit application
 - a. Reclaimed Water or Effluent Analysis Report for a sample collected within the last 12 months.
 - b. Annual Reuse Report

- c. Pathogen Monitoring Report for sample collected within the last two years.
- d. Updated Operating Protocol
- e. Flow meter calibration reports
- f. List of reclaimed water users and copies of the reuse agreements, if needed
- g. Annual Wetlands Report
- h. Summary of any modifications that occurred during the current permit period, if applicable.
- i. Summary of any ongoing plant modifications, for which permits were issued for and anticipated completion dates, if applicable.

Task 5: FDEP RAIs

1. Tetra Tech will prepare up to two (2) responses to requests for additional information (RAIs) for the FDEP wastewater permit.

Task 6A: Process Evaluation Due to High Organic Load (Additional Services)

1. In accordance with Section V.B of the current permit, it was noted that the organic load to the facility exceeds the design load. Per the current permit, at the time of renewal detailed calculations to evaluate the capacity of the WWTF based on the high organic load are required. It is believed that this requirement was a result of high loadings that were observed at the WWTF at the time of the previous renewal. Subsequently, IRCDUS has mitigated the source of the high loadings. The influent loadings are now consistent with the original plant design. Therefore, at the FDEP Pre-Application meeting IRCDUS will request that this requirement be removed upon demonstration that the loadings to the facilities are consistent with the original design. If FDEP requires that this permit requirement be met as part of the renewal, Tetra Tech will prepare detailed calculations for current loadings for the existing design of the WWTF.
2. Tetra Tech will summarize the finding in a draft technical memorandum.
3. Tetra Tech will meet with IRCDUS personnel to review findings. Tetra Tech will prepare and distribute meeting summary to attendees. It is assumed that this meeting will be a teleconference using Microsoft teams or similar app.
4. Tetra Tech will finalize the technical memorandum in the Capacity Analysis Report (Task 9A).

Task 7A: Capacity Analysis Report (Additional Services)

1. Per Chapter 62-600, F.A.C. in accordance with Section V.B of the current permit. Although the WWTF three-month average daily flow has not exceeded 50% of the permitted capacity, due to high organic load that exceeds the design for the WWTF an updated capacity analysis report is required with the permit application. It is believed that this requirement was a result of high loadings that were observed at the WWTF at the time of the previous renewal. Subsequently, IRCDUS has mitigated the source of the high loadings. The influent loadings are now consistent with the original plant design. Therefore, at the FDEP Pre-Application meeting IRCDUS will request that this requirement be removed upon demonstration that the loadings to the facilities are consistent with the original design. If FDEP requires that this permit requirement be met as part of the renewal, Tetra Tech will prepare a Capacity Analysis Report.
2. Develop flow projections for the next 10-years based on historical wastewater flows and population projections provided by IRCDUS.
3. Tetra Tech will summarize the finding in a draft technical memorandum.
4. Tetra Tech will meet with IRCDUS personnel to review findings. Tetra Tech will prepare and distribute meeting summary to attendees.
5. Tetra Tech will finalize the technical memorandum in the Capacity Analysis Report.
5. Tetra Tech will prepare a draft Capacity Analysis Report (CAR) Tetra Tech will meet with IRCDUS personnel to review findings. Tetra Tech will prepare and distribute meeting summary to attendees. It is assumed that if required, the Capacity Analysis Report review meeting will occur at the same time as the Operations Maintenance and Performance Report review meeting.
6. Tetra Tech will finalize report to be submitted to FDEP.

Task 8A: Biosolids Storage Plan (Additional Services)

1. IRCDUS does not currently have a Facility Biosolids Storage Plan. IRCDUS West Regional WWTF transfers its biosolids to Indian River County Biosolids Dewatering Facility and has not been required to submit one to FDEP in the past. FDEP has required getting an approved Facility Biosolids Plan on recent permit renewals for other facilities. If required by FDEP, Tetra Tech will assist IRCDUS develop a Facilities Biosolids Plan which will include a summary of the biosolids unit processes, disposal, and process back-up provisions.

III. INFORMATION AND SERVICES TO BE PROVIDED BY IRCDUS

3. Provide requested data including permit application supplemental data noted above and all WWTF operating data, service area description and map, O&M Manual and current population projections.
4. Record drawings and WWTF design reports.
5. Provide access to treatment facilities sites.

IV. SERVICES NOT INCLUDED

The following items are not anticipated to be required for the permit renewal and are not included in the scope of services. If needed they can be provided under a separate authorization.

1. *An updated Agricultural Use Plan or Dedicated Site Plan as described in Chapter 62-640, F.A.C is required for a facility that uses land application as a method of residuals disposal - IRCDUS West Regional WWTF transfers its biosolids to Indian River County Biosolids Dewatering Facility and the receiving facility is responsible for the biosolids disposal; therefore not included in this scope.*
2. The collection system will not be evaluated as IRCDUS is not aware of treatment plant problems resulting from the operation of collection and transmission facilities (such as excessive infiltration/inflow, septic wastewater, introduction of toxic substances, or lack of controls on industrial wastewater discharges to the collection system).

V. PROJECT SCHEDULE

The approximate duration noted for each task is based on our current understanding and best estimates of time required to perform the basic services.

Task	Phase	Completion Date
	Notice to Proceed (NTP)	June 15, 2020
1	Project Kick-Off Meeting and FDEP Pre-Application Meeting	July 10, 2020
2	Historical Data Analysis	June 26, 2020
3	OMPR	October 1, 2020
4	Application Package to FDEP	October 13, 2020
5	Respond up to 2 RAIs	TBD
6A	Process Evaluation Due to High Organic Load (Additional Services)	October 1, 2020
7A	CAR (Additional Services)	October 1, 2020
8A	Biosolids Storage Plan (Additional Services)	October 1, 2020

VI. COMPENSATION

The proposed total lump sum compensation for the Scope of Services described in Tasks 1 thru 5 is **\$44,608.94**. Tasks 6A, 7A, and 8A are additional services that may or may not be included. These services will be provided, as required by FDEP and if requested by IRCDUS, as part of the permit renewal. The proposed total lump sum compensation for the Scope of Services, including the additional services, Tasks 6A, 7A, and 8A described herein is **\$79,466.24**. Attachment A presents a detailed breakdown of the estimated compensation for the Scope of Services.

Task	Phase	Compensation
1	Project Kick-Off Meeting and FDEP Pre-Application Meeting	\$ 4,974.97
2	Historical Data Analysis	\$ 1,623.56
3	OMPR	\$23,408.80
4	Application Package to FDEP	\$ 8,291.27
5	Respond up to 2 RAIs	\$ 6,310.34
Subtotal Lump Sum Tasks 1 thru 5		\$44,608.94
6A	Process Evaluation Due to High Organic Load (Additional Services)	\$16,418.89
7A	CAR (additional Services)	\$14,837.90
8A	Biosolids Storage Plan (Additional Services)	\$ 3,600.51
Subtotal Lump Sum Tasks 6A thru 8A		\$34,857.30
Total Lump Sum		\$79,466.24



Mr. Arjuna Weragoda, P.E.
Indian River County Department of Utility Services
June 2, 2020
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Tetra Tech looks forward to working with you on this project. We are available to discuss our approach with you in detail at your convenience. Should you have any questions regarding this proposal, please contact me at (321) 637-8099 or Brenda Keenan at (407) 480-3970.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matthew D. Shelton', written over a light blue rectangular background.

Matthew D. Shelton
Project Manager

JDF/ab/WRWWTFP FDEP Permit Renewal/Permit Renewal Proposal_052620.doc

- C: Brian Watson, P.E., Tetra Tech
- Jon Fox, P.E., Tetra Tech
- Brenda Keenan, P.E., Tetra Tech