



TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT

SDLF Platinum-Level of Governance



PLATINUM LEVEL

President – Michael Callahan • Vice-President – Carolyn Graham • Director – Kevin Graves • Director – Bryon Gutow • Director – Ashley Porter

**NOTICE OF THE REGULAR MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday, August 7, 2024, 5:30 P.M.**

TO ATTEND IN PERSON: The meeting will be held at the Community Center located at 1601 Discovery Bay Boulevard.

In addition to physical attendance at the address indicated above, the Town of Discovery Bay Community Services District is offering the following teleconferencing options as an alternative means for the public to participate in this meeting.

TO ATTEND BY ZOOM WEBINAR: <https://us06web.zoom.us/j/81370654114>

TO ATTEND BY PHONE: +1 (669) 444 9171 or +1 (719) 359 4580 **WEBINAR ID:** 813 7065 4114

Download Agenda Packet and Materials at <http://www.todb.ca.gov/>

Water and Wastewater Committee Members

Chair Kevin Graves

Vice-Chair Ashley Porter

1. Consider and Approve Request of Director Graves to attend meeting remotely under the “Emergency Circumstances” of AB 2449

A. ROLL CALL

1. Call business meeting to order 5:30 p.m.
2. Roll Call.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

During Public Comments, the public may address the Committee on any issue within the District’s jurisdiction which is not on the Agenda. The public may comment on any item on the Agenda at the time the item is before the Committee for consideration. Any person wishing to speak will have 3 minutes to make their comment. There will be no dialog between the Committee and the commenter as the law strictly limits the ability of Committee members to discuss matters not on the agenda. We ask that you refrain from personal attacks during comment, and that you address all comments to the Committee only. Any clarifying questions from the Committee must go through the Chair. Comments from the public do not necessarily reflect the viewpoint of the Committee members.

C. DRAFT MINUTES TO BE APPROVED

1. None

D. UPDATES

1. None

E. DISCUSSION

1. Discussion and Possible Feedback Regarding the Denitrification Project Close Out and Project Summary.
2. Discussion and Possible Feedback Regarding the Approval of Stantec Consulting Inc's Proposal to Update the Town's Existing Wastewater Operations and Maintenance (O&M) Manual.
3. Discussion and Possible Feedback Regarding Communication Consultant.

F. FUTURE DISCUSSION/AGENDA ITEMS

G. ADJOURNMENT

1. Adjourn to the next Standing Water and Wastewater Committee meeting on August 7, 2024, at the Community Center located at 1601 Discovery Bay Boulevard.

"This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting."

"Materials related to an item on the Agenda submitted to the Town of Discovery Bay after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."



Town of Discovery Bay

“A Community Services District”

STAFF REPORT

Agenda Title: Discussion and Possible Feedback Regarding the Denitrification Project Close Out and Summary.

Meeting Date: August 7, 2024

Prepared By: Name, Title

Submitted By: Dina Breitstein, General Manager

RECOMMENDED ACTION:

Provide Feedback to staff on the project summary report.

EXECUTIVE SUMMARY:

The Town’s National Pollution Discharge Elimination System (NPDES) permit that governs the operation of the wastewater treatment plants included a requirement that the Town remove total nitrogen from the wastewater to a level below 10 mg/l. The permit required all new facilities be constructed and operational by December 31, 2023.

Bids to construct the Denitrification Project were received on Tuesday May 11, 2021. Anderson Pacific Engineering Construction Inc. was the apparent low bidder with a bid cost of \$15,994,000. There were 3 other bids received ranging in cost from \$19,887,667 to \$20,261,200. Anderson Pacific Engineering Construction Inc. was awarded the construction of the project.

Construction was completed on 2/15/2024 with the first phase of the project started up in April 2023. A notice of completion for the project has been filed with the County.

Total cost of the project was \$18,346,872.

NPDES effluent limit was 10 mg/l Total Nitrogen. Prior to the project, effluent total Nitrogen was 40 to 50 mg/l. After the project, total Nitrogen averages between 6 to 7 mg/l. This is a reduction of 422 lbs/day of Nitrogen from the effluent discharge. No major issues with starting up the new process.

Project challenges included:

- Maintaining existing facilities in service while new facilities were constructed.
- Extensive wastewater bypassing
- Very deep excavations with high and moving groundwater
- Covid/supply chain issues
- Failure of existing rotors before they could be replaced
- Extensive rain and weather delays and asphalt damage from heavy rains

FISCAL IMPACT: \$ N/A

PREVIOUS RELEVANT BOARD ACTIONS FOR THIS ITEM:

The Board previously approved design of the improvements at the November 20, 2019, Board Meeting.

The Board previously awarded the construction of the Denitrification Project to Anderson Pacific at the May 19, 2021 Board Meeting.

ATTACHMENTS:

PDF of the Board Presentation on the Project



Denitrification Project Update 8/7/2024

Town of Discovery Bay

HERWIT Engineering

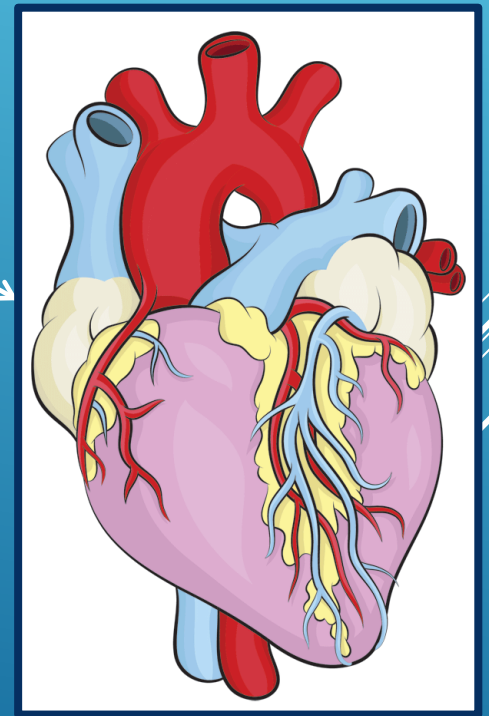
Anderson Pacific
Engineering Constructors

7/22/2024

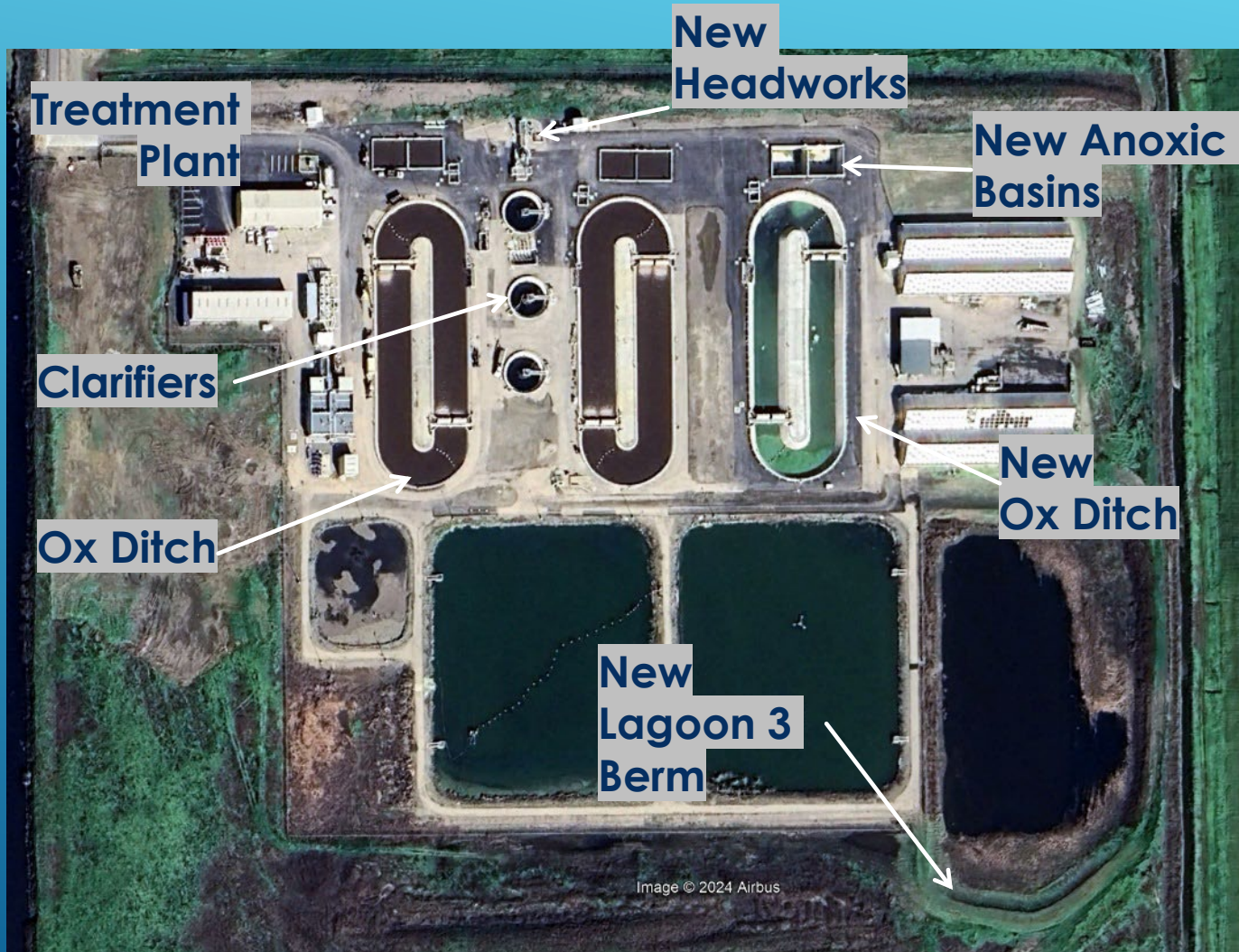
Image © 2024 Airbus

HERWIT
ENGINEERING

DISCO BAY WWTP NO. 2



DISCO BAY WWTP NO. 2



PROJECT INFORMATION

- **Denitrification and Master Plan Upgrade Project**
- **Anderson Pacific Engineering Constructors**
- **Notice to Proceed: 6/14/2021**
- **Original Finish Date: 6/15/2023**
- **Actual Finish Date: 2/15/2024**
- **Startup of Denitrification Process: April 2023**
- **New Permit Conditions: 12/31/2023**
- **Original Contract Amount: \$ 15,994,000**
- **Total Cost: \$ 18,545,067**
- **Change Order for PS-W and INF-PS (\$1.76 M)**

PROJECT PERFORMANCE

- **NPDES Limit: 10 mg/l Total N**
- **Prior to project: Averaged 40 to 50 mg/l total N**
- **After Project: Average 6 to 7 mg/l total N**
- **Reduction of: 422 lbs/day Nitrogen to Old River**
- **Started up without issue and no upsets since starting up the process.**

PROJECT CHALLENGES

- **Maintaining Existing Facilities in Service While Building New Facilities**
- **Extensive Bypassing Required**
- **Deep Excavations with High Ground Water**
- **COVID/Supply Chain Issues**
 - **Construction Team got COVID**
 - **Canceled Slide Gate Order**
 - **Pipe and Fittings Not Available**
- **Rotor No.3 Failure**
- **Weather Impacts and Delays**
- **Plant No. 1 Rehabilitation Issues**

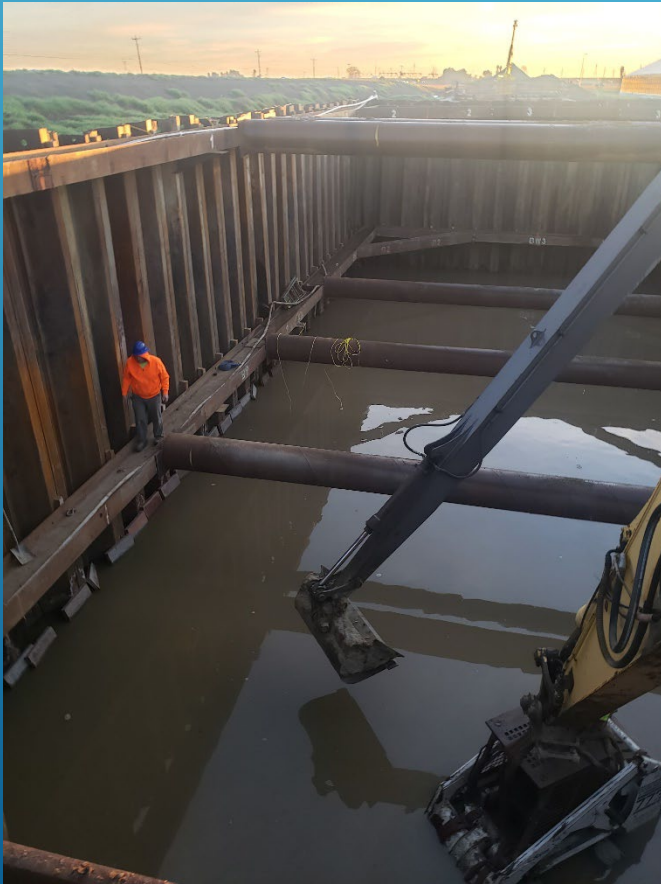
Anoxic Basin NO. 4



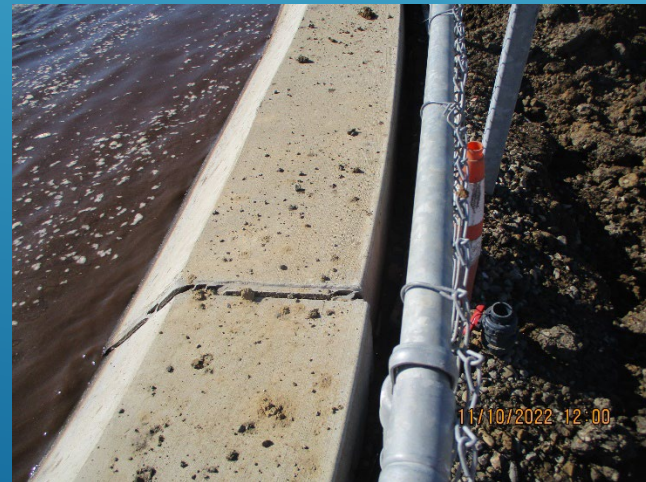
Oxidation Ditch No. 4



Anoxic Basin No. 3



Movement at Ox Ditch No. 3



Plant No. 2 Headworks



INFLUENT PUMP STATION



RIP Pump Station W



Rotor No. 3 Failure



Aerobic Digester Repair



Weather Impacts





Town of Discovery Bay

“A Community Services District”

STAFF REPORT

Agenda Title: Discussion and Possible Feedback Regarding the Approval of Stantec Consulting Inc's Proposal to Update the Town's Existing Wastewater Operations and Maintenance (O&M) Manual.

Meeting Date: August 7, 2024

Prepared By: Gregory Harris, District Wastewater Engineer

Submitted By: Dina Breitstein, General Manager

RECOMMENDED ACTION:

It is recommended that the Board take the following Action:

- a. Approve proposal for Stantec Consulting Inc. to update the Towns Operations and Maintenance Manual in the amount of \$90,000.
- b. Authorize the General Manager to Execute a Contract with Stantec to update the Wastewater Operation and Maintenance Manual.
- c. Authorize the General Manager to Execute any additional change orders to Stantec for up to 10% of the Contract value.

EXECUTIVE SUMMARY:

The Town owns and operates an extensive wastewater collection system that includes multiple pump stations and two waste treatment plants to treat wastewater for the community. The Town is required to maintain an Operations and Maintenance (O&M) Manual for the wastewater facilities as part of their National Pollutions Discharge Elimination System (NPDES) permit. HERWIT prepared the original O&M Manual covering the wastewater treatment plants and sewage pump stations in 2006. This manual went through an extensive revision and update to both hard copy and web based manual in 2020. Stantec performed the latest revision and conversion of the manual to a web based on-line manual and currently hosts the web portal for the manual on Stantec Servers. The cost to update the O&M Manual in 2024 was \$200,000.

The Town was required by the Regional Water Quality Control Board to modify their wastewater treatment systems to remove nitrogen. During the design of this project, the Town opted to eliminate wastewater treatment at Plant No. 1 and construct a 3rd oxidation ditch at Plant No. 2, along with several other changes to the process at Plant No. 2. During Construction of this process, the Town opted to demolish and replace Pump Station W at Plant No. 1 and install a Bar screen at the Influent Pump Station at Plant No. 1. None of these changes are reflected in the current O&M Manual.

The Pantages development is now selling homes. As part of this development, a new Pump Station P was constructed and will begin operation soon. There is no information about Pump Station P in the current O&M Manual.

All of the recent changes to the wastewater facilities have left the existing O&M Manual significantly out of date and the manual now needs to be updated. The Town requested a cost proposal from Stantec to update the hard copy and on-line versions of the O&M Manual. Stantec's cost is \$90,000. Proposal is attached. In addition, HERWIT will need approximately \$10,000 of support assistance to Stantec for them to complete the manual. HERWIT will conduct their portion of the work under their existing general services contract with the Town and does not need a specific authorization at this time. The Stantec contract does need a specific authorization from the Town Board.

The Town has \$100,000 budgeted for updating the Wastewater O&M Manual in the current CIP.

FISCAL IMPACT: \$100, 000

PREVIOUS RELEVANT BOARD ACTIONS FOR THIS ITEM:

The Town Authorized the 2020 Wastewater Operations and Maintenance Manual update to Stantec in the amount of \$186,000 and HERWIT Engineering for support up to \$14,000.

The Town approved the current CIP with a budget of \$100,000 to update the Wastewater O&M Manual at the June 19, 2024 Board of Directors Meeting.

ATTACHMENTS:

Stantec Proposal Dated June 24, 2024.



June 24, 2024

Attention: Dina Breistein, General Manager

1800 Willow Lake Rd
Discovery Bay, CA 94505

Reference: Updates to the Operation and Maintenance Manual for the Town of Discovery Bay Wastewater Treatment Plants (WWTPs) and Sewer Conveyance Pump Stations

Dear Ms. Breistein,

Background

The Town of Discovery Bay owns and operates wastewater treatment and disposal facilities that serve the residential community of Discovery Bay, California. The overall treatment system is arranged in two distinct areas, referred to as Plant 1 and Plant 2. Plant 1 is located about ¼ mile north of Highway 4 within the Discovery Bay Development area, while Plant 2 is located immediately south of Highway 4. The two plants are interconnected and are dependent upon each other for various functions. Plant 1 was the original plant, which was started as a pond treatment system. Over the years, Plant 1 was upgraded to its current configuration with an oxidation ditch and clarifiers for secondary treatment. Plant 2 was originally constructed in 2001 and has undergone several upgrades since then. The facilities include extended aeration activated sludge system, tertiary filtration and disinfection, and effluent disposal through surface water discharge.

In 2018, Stantec and Herwit Engineering prepared the Operation and Maintenance (O&M) Manual for the WWTPs. Since that time, Plant 1 has been decommissioned (remaining in place for emergency use only) and Plant 2 underwent significant upgrades (including the addition of a fourth oxidation ditch and anoxic basins on all ditches). Recent improvements also included the addition of Sewage Lift Station "P", modifications to the influent pump station, headworks, and outfall diffusers, and the addition of a third sludge lagoon. Furthermore, the treatment process has been converted from extended aeration to nitrification/denitrification and the associated process controls and instrumentation have been updated. As such, it is imperative to update the Existing O&M Manual chapters and figures to capture the current conditions of the WWTPs and Lift Stations.

A detailed scope and fee to update the operation and maintenance manual for the Discovery Bay WWTP (Plant 1 and 2) and sewage conveyance pump stations is provided below.



June 24, 2024
Mr. Koehne
Page 2 of 4

Reference: Updates to the O&M Manual for Discovery Bay WWTP and Sewer Conveyance Pump Stations

Task 1 – Update Operation and Maintenance Manual

Stantec will update the existing operation and maintenance manual to capture recent WWTP improvements and explain the design intent, function, and operation requirements of the new wastewater treatment facilities and sewage conveyance pump station. Manual content will provide District operations staff guidance as to why facilities are needed and how they are expected to be operated to meet the regulatory standards.

The hard copy manual will incorporate cross referencing with equipment-specific operating and maintenance instructions and equipment tag numbers. Assets taken from the wastewater CMMS software (Hach Job Cal Plus) parts inventory list and submittals from the 2021 WWTP Upgrades Project will be used to populate the basic equipment data with the addition of the anoxic basins, third sludge lagoon, and fourth oxidation ditch. Operating procedures will be summarized based on the facilities' Process Control Narratives and referenced, as necessary, in chapters.

The following sixteen chapters will be revised (with varying levels of text and figure changes), to capture recent upgrades:

- Chapter 2 (Plant Process Overview)
- Chapter 3 (Influent Pump Station)
- Chapter 4 (Headworks)
- Chapter 5 (Oxidation Ditches and Anoxic Basins)
- Chapter 6 (Transfer Station)
- Chapter 7 (Secondary Clarifiers)
- Chapter 8 (RAS/WAS Pump Station)
- Chapter 9 (Secondary Treatment Process Control)
- Chapter 11 (UV Disinfection)
- Chapter 12 (Effluent Handling and Disposal)
- Chapter 14 (Sludge Lagoons)
- Chapter 18 (SCADA System and Instrumentation)
- Chapter 19 (Electrical Supply and Distribution)
- Chapter 21 (Monitoring and Sampling Stations)
- Chapter 22 (Personnel)
- Chapter 41 (Sewage Lift Station "P")



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Reference: Updates to the O&M Manual for Discovery Bay WWTP and Sewer Conveyance Pump Stations

In addition to being a critical reference and training source of information for operations staff, the manual is a required element for conformance with State guidelines and compliance with the NPDES permit. A draft of the updated chapters (electronic PDFs) will be prepared for review by District staff within 6-months of notice to proceed. Three copies of the updated chapters, incorporating review comments, will be prepared and submitted to the District for replacement in the Town's existing three ring binders and a companion electronic zip drive within 2-months from receiving comments back from the District.

District staff will provide the following items to allow for Stantec to prepare the manual:

- Provide all existing AutoCAD and PDF as-built construction drawings necessary to create figures
- Provide CMMS parts inventory list exported into MS Word or excel
- Provide process control narratives from design
- Provide available manufacturer's O&M manuals
- Respond to questions on missing plant data from existing files (tag numbers, nameplate data, manufacturer's information, etc.)

Task 2 – Update Interactive Online Manual (iOM)

After the hard copy of the O&M manual is completed, from Task 1, Stantec will update the “interactive online manual” (IOM) by replacing figures and chapters with the updates completed in Task 1.

This task does not extend the duration of the IOM remote hosting on Stantec servers (currently set to expire in 2025).

Excluded from Scope

1. Field visits to wastewater facilities
2. Original figure drafting (figures included in O&M manual will be prepared from AutoCAD files provided by District)
3. Researching and locating equipment O&M manuals (all equipment O&M manuals will be provided to Stantec electronically, in PDF or MS Word format, by District)



June 24, 2024
Mr. Koehne
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Reference: Updates to the O&M Manual for Discovery Bay WWTP and Sewer Conveyance Pump Stations

Budget

This work will be done on a time and materials basis, using Stantec's most current Fee Schedule, in an amount not to exceed \$90,000 for Tasks 1 and 2.

Task Description	Fee
Task 1, Update O&M Manual	\$79,300
Task 2, Update Interactive Online Manual	\$10,700
Total	\$90,000

Schedule

Draft chapter updates will be prepared within 6 months of notice to proceed and the final operations and maintenance manual will be prepared within 2 months after receiving comments from District staff. Once the final O&M Manual is complete, it will take 2 months to update the draft iOM for staff review and 1 month to incorporate staff comments into the final iOM.

Regards,

Stantec Consulting Inc.

Steven L. Beck, PE
Senior Principal

Stantec Consulting Inc.

Beth Cohen, PE
Project Manager

Attachments: 2024 Stantec Fee Schedule

SCHEDULE OF BILLING RATES – 2024 (USD)

Billing Level	Hourly Rate	Description
3	\$128	Junior Level position <ul style="list-style-type: none"> <input type="checkbox"/> Independently carries out assignments of limited scope using standard procedures, methods and techniques <input type="checkbox"/> Assists senior staff in carrying out more advanced procedures <input type="checkbox"/> Completed work is reviewed for feasibility and soundness of judgment <input type="checkbox"/> Graduate from an appropriate post-secondary program or equivalent <input type="checkbox"/> Generally, one to three years' experience
4	\$135	
5	\$152	
6	\$158	Fully Qualified Professional Position <ul style="list-style-type: none"> <input type="checkbox"/> Carries out assignments requiring general familiarity within a broad field of the respective profession <input type="checkbox"/> Makes decisions by using a combination of standard methods and techniques <input type="checkbox"/> Actively participates in planning to ensure the achievement of objectives <input type="checkbox"/> Works independently to interpret information and resolve difficulties <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, three to six years' experience
7	\$172	
8	\$179	
9	\$187	First Level Supervisor or first complete Level of Specialization <ul style="list-style-type: none"> <input type="checkbox"/> Provides applied professional knowledge and initiative in planning and coordinating work programs <input type="checkbox"/> Adapts established guidelines as necessary to address unusual issues <input type="checkbox"/> Decisions accepted as technically accurate, however may on occasion be reviewed for soundness of judgment <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, five to nine years' experience
10	\$196	
11	\$210	
12	\$222	Highly Specialized Technical Professional or Supervisor of groups of professionals <ul style="list-style-type: none"> <input type="checkbox"/> Provides multi-discipline knowledge to deliver innovative solutions in related field of expertise <input type="checkbox"/> Participates in short and long range planning to ensure the achievement of objectives <input type="checkbox"/> Makes responsible decisions on all matters, including policy recommendations, work methods, and financial controls associated with large expenditures <input type="checkbox"/> Reviews and evaluates technical work <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, ten to fifteen years' experience with extensive, broad experience
13	\$231	
14	\$250	
15	\$263	Senior Level Consultant or Management <ul style="list-style-type: none"> <input type="checkbox"/> Recognized as an authority in a specific field with qualifications of significant value <input type="checkbox"/> Provides multi-discipline knowledge to deliver innovative solutions in related field of expertise <input type="checkbox"/> Independently conceives programs and problems for investigation <input type="checkbox"/> Participates in discussions to ensure the achievement of program and/or project objectives <input type="checkbox"/> Makes responsible decisions on expenditures, including large sums or implementation of major programs and/or projects <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, more than twelve years' experience with extensive experience
16	\$280	
17	\$289	
18	\$290	Senior Level Management under review by Vice President or higher <ul style="list-style-type: none"> <input type="checkbox"/> Recognized as an authority in a specific field with qualifications of significant value <input type="checkbox"/> Responsible for long range planning within a specific area of practice or region <input type="checkbox"/> Makes decisions which are far reaching and limited only by objectives and policies of the organization <input type="checkbox"/> Plans/approves projects requiring significant human resources or capital investment <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, fifteen years' experience with extensive professional and management experience
19	\$300	
20	\$311	
21	\$330	

Expert Witness Services carry a 50% premium on labor. Overtime will be charged at 1.5 times the standard billing rate. All labor rates will be subject to annual increase