



## REPORT TO CITY COUNCIL

Approved by:

A handwritten signature in blue ink, appearing to read "D. Foss".

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Daniel Foss, Interim Director of Public Works

A handwritten signature in blue ink, appearing to read "Arnaldo Rodriguez".  
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Arnaldo Rodriguez, City Manager

Council Meeting of: December 16, 2020

Agenda Number:     D-4    

### SUBJECT:

Amendment No. 1 to the Agreement with Stantec Consulting Services, Inc. to Update the Waste Discharge Permit for the City's Wastewater Treatment Plant

### RECOMMENDATION:

Adopt a Resolution Approving Contract Amendment No. 1 to the Professional Engineering Consulting Services to Update the Waste Discharge Permit for the Wastewater Treatment Plant in the amount of \$157,000

### SUMMARY:

The City of Madera Wastewater Treatment Facility (WWTF) operates under Waste Discharge Requirements (WDR) Permit Order No. 95-046. The discharge permit has not been updated by the Regional Water Quality Control Board (Regional Board) since 1995. At the request of the Regional Board, on May 23, 2019, the City submitted a Report of Waste Discharge (RoWD) to the Regional Board to officially begin the WWTF discharge permit renewal process, and to incorporate the new treatment facilities (installed in 2006 and updated in 2019) into the new permit.

### DISCUSSION:

In 2018, the City contracted with Stantec Consulting Services, Inc. (Stantec) for Professional Engineering Consulting Services for the Update of the Waste Discharge Permit for the WWTF. At a cost not to exceed \$50,000 Stantec was to assist the City in the initial negotiations and preparation of a Report of Waste Discharge document, including engineering services, preparation of engineering documents, meetings, correspondence, and the preparation of the Waste Discharge (RoWD) document submitted to the Regional Board on May 23, 2019 to officially begin the WWTF discharge permit renewal process.

On August 19, 2019, the Regional Board responded to the RoWD by requesting additional information in order to consider the City's request to be permitted to discharge flows above 7 million gallons per day (MGD) (treatment processes installed in 2006 were designed to treat flow rates up to 10.1 MGD). The Regional Board requested a description of the hydrogeologic conditions (groundwater information), an evaluation on impacts to groundwater (anti-degradation analysis), an updated water balance, and a WWTF treatment capacity assessment to receive a discharge permit for flow rates over 7 MGD.

Although the population growth in the last decade averaged only 0.8 percent in the City, planned future developments could result in a higher growth rate if some speculative projects move forward. Consequently, the WWTF is projected to potentially treat wastewater flow rates higher than 7-MGD within 20-years. To avoid limiting the new permitted disposal capacity (and development potential) to 7 MGD, the City responded to the Regional Board's request on September 18, 2019, with a proposed work plan schedule to meet the requested information (the Regional Board approved the Workplan on December 20, 2019).

The work plan identified a need to install new groundwater monitoring wells because 7 of the 8 existing groundwater monitoring wells have been dry since 2015, resulting in insufficient data to provide an appropriate anti-degradation evaluation. As such, new monitoring wells need to be installed before any of the follow-up evaluation can take place. Once the wells are installed and groundwater sampling data can be analyzed, the City can respond to the Regional Boards request for information.

Implementation of this work plan requires specialized engineering support services for the new installations or repair of groundwater monitoring wells, sampling, testing and preparation of groundwater monitoring reports; the preparation of an Antidegradation Analysis, and a Wastewater Treatment Facility Capacity Assessment study and analysis.

On December 7, 2020, Stantec provided a proposal to provide the services identified above. A project to install groundwater monitoring wells and appurtenances as necessary per the recommendations for compliance with the Report of Waste Discharge (RoWD) was included in the FY 2020-21 Budget as CIP Project WWTP20-21. The proposed budget includes design services for the project, construction management and oversight costs.

**FINANCIAL IMPACT:**

There is no fiscal impact to the City's General Fund. The cost of Professional Engineering Consulting Services associated with this amendment in the amount of \$157,000 is budgeted under CIP Project WWTP20-21 in the Sewer Enterprise Fund.

**CONSISTENCY WITH THE VISION MADERA 2025 PLAN:**

This project is consistent with the Vision Madera 2025 Plan. Abundant Natural Resources - provide adequate sewage capacity to accommodate community growth and improve the quality of the water discharged from the facility.

**ALTERNATIVES:**

Although the population growth in the last decade averaged only 0.8 percent in the City, planned future developments could result in a higher growth rate if some speculative projects move forward. Consequently, the WWTF is projected to potentially treat wastewater flow rates higher than 7-MGD within 20-years. Should Council not approve this amendment, the City's Wastewater Treatment Facilities would be limited the current 7.0 million gallons per day treatment and disposal capacity.

**ATTACHMENTS:**

1. Resolution
2. Contract Amendment
  - a. Exhibit A-Professional Services Agreement Change Order

**RESOLUTION NO. \_\_\_\_\_**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA,  
CALIFORNIA APPROVING FIRST AMENDMENT TO AGREEMENT FOR  
PROFESSIONAL ENGINEERING SERVICES RELATING TO THE PROFESSIONAL  
ENGINEERING CONSULTING SERVICES FOR THE UPDATE OF THE WASTE  
DISCHARGE PERMIT FOR THE CITY OF MADERA WASTEWATER  
TREATMENT PLANT**

**WHEREAS**, the City Council adopted Resolution No. 18-240 entering into an agreement with Stantec; and

**WHEREAS**, the existing agreement was to initiate the process of renewing the Wastewater Treatment Plant's Waste Discharge requirements permitting process; and

**WHEREAS**, after a more in-depth analysis and communication with the Central Valley Regional Water Quality Control Board, it has been determined that additional analysis is warranted to update the City of Madera's Wastewater Treatment Plant, Waste Discharge Permit; and

**WHEREAS**, Stantec has been identified as a firm having the necessary experience and qualifications to provide Professional Engineering Services; and

**WHEREAS**, the cost for the additional services is \$157,000.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY** finds, orders, and resolves as follows:

1. The above recitals are true and correct.
2. The City Council approves the Amendment No. 1 to the Agreement with Stantec Consulting Services, Inc. for Professional Engineering Consulting Services for the Update of the Waste Discharge Permit for the City of Madera Wastewater Treatment Plant.
3. This resolution is effective immediately upon adoption.

\* \* \* \* \*

**FIRST AMENDMENT TO PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR THE UPDATE OF THE WASTE DISCHARGE PERMIT FOR THE CITY OF MADERA WASTEWATER TREATMENT PLANT AGREEMENT**

This First Amendment to the Agreement titled “Professional Engineering Consulting Services for the Update of the Waste Discharge Permit for the City of Madera Wastewater Treatment Plant” dated 19 December 2018, is made and entered into this 16<sup>th</sup> day of December, 2020 between the City of Madera, hereinafter called “City,” and Stantec Consulting Services, Inc. hereinafter called “Consultant.”

**RECITALS**

WHEREAS, on December 19, 2018, CITY and Consultant entered into an Agreement for the Update of the Waste Discharge Permit for the City Wastewater Treatment Plant (“Agreement”); and

WHEREAS, during the course of performance of the Agreement, the Parties have determined that additional work is required; and

WHEREAS, City and Consultant wish to amend the Agreement to add to the scope of services and timeframes in the original Agreement and to increase compensation for the additional work per this First Amendment to Agreement (“First Amendment”).

**AGREEMENT**

Based on the foregoing recitals, the Parties hereto mutually agree as follows:

SECTION 1. Section 2 of the Agreement titled “Scope of Work” provides for the services to be provided under the Agreement. The Parties agree that the Agreement is amended to provide that additional services will be performed by Consultant. The additional services and timeframes for performance are set forth in Exhibit A to this First Amendment which is incorporated by reference and which is titled “Reference: Scope of Work for Madera WWTF Permit Assistance, Contract Amendment” and dated December 7, 2020.

Section 2 Section 4 of the Agreement titled “Compensation” provides the compensation to be paid for services under the Agreement. The Parties agree that the Agreement is amended to provide that the compensation to be paid for the additional services as provide in Section 1 above shall be \$157,000 in accordance with the Project Budget and Task Summary Report in Exhibit A to this First Amendment.

SECTION 3. Except as amended by this First Amendment, all other terms and conditions of the Agreement remain in full force and effect.

SECTION 4. This First Amendment to Agreement shall be effective upon full execution by both Parties.

*Signatures on next page*

CITY OF MADERA  
A municipal Corporation of  
the State of California

CONSULTANT  
Steven L. Beck, PE  
Principal-in-Charge  
Stantec Consulting Services, Inc.

By: \_\_\_\_\_  
Santos Garcia, Mayor

By: \_\_\_\_\_  
Steven L. Beck

Date: \_\_\_\_\_

Date: \_\_\_\_\_

ATTEST

By: \_\_\_\_\_  
Alicia Gonzales, City Clerk

APPROVED AS TO FORM:

By: \_\_\_\_\_  
Hilda Cantu Montoy, City Attorney

EXHIBIT A



PROFESSIONAL SERVICES AGREEMENT CHANGE ORDER

Change Order # "Stantec"      Change Order No. 1      Date 07 December 2020  
 Stantec Consulting Services Inc.

Stantec Project # 184031094  
 3875 Atherton Road  
 Rocklin, CA 95765  
 Ph: (916) 773-8100  
 email: steven.beck@stantec.com

Client City of Madera  
 Client Project #  
 1030 South Gateway Dr  
 Madera, CA 93637  
 Ph: (559) 662-4961  
 email: hmolina@cityofmadera.com

Project Name and Location: Update of the Waste Discharge Permit for the Madera WWTP

In accordance with the original Professional Services Agreement dated December 19, 2018 and Change Orders thereto, the Agreement changes as detailed below are hereby authorized.

See attached scope of work, in Exhibit A.

Total fees this Change Order		\$	157,000.00
Original agreement amount		\$	50,000.00
Change Order Number	_____	\$	-
Change Order Number	_____	\$	-
Change Order Number	_____	\$	-
Change Order Number	_____	\$	-
<b>Total Agreement</b>		<b>\$</b>	<b><u>207,000.00</u></b>

Effect on Schedule: All work to be Complete by July 2023

Payments shall be made in accordance with the original agreement terms. All other items and conditions of the original Agreement shall remain in full force and effect.

**Stantec Consulting Services Inc.**

**City of Madera**

Steven L. Beck, PE, Sr. Principal  
 \_\_\_\_\_  
 Print Name and Title

\_\_\_\_\_  
 Print Name and Title

Signature   
 \_\_\_\_\_

Signature \_\_\_\_\_

Date Signed: 12/07/2020  
 \_\_\_\_\_

Date Signed: \_\_\_\_\_



**Stantec Consulting Services Inc.**  
3875 Atherton Road, Rocklin CA 95765-3716

**DECEMBER 07, 2020**

File: 184031094

**Attention: Humberto Molina**

City of Madera  
1030 S. Gateway Dr.  
Madera, CA 93637

**Reference: Scope of Work for Madera WWTF Permit Assistance, Contract Amendment**

Mr. Molina,

Stantec is submitting this proposal for Change Order No. 1 for the Madera Wastewater Treatment Facility (WWTF) Waste Discharge Permit Project.

**Background**

On May 23, 2019, the City submitted the Report of Waste Discharge (RWD) to the Regional Water Quality Control Board (Regional Board) to officially begin the WWTF discharge permit renewal process. On August 19, 2019, the Regional Board responded to the RWD requesting additional information in order for the City to discharge flows above 7.0 MGD (treatment processes installed in 2006 were designed to treat flow rates up to 10 MGD). The Regional Board requested a description of the hydrogeologic conditions (groundwater information), an evaluation on impacts to groundwater (anti-degradation analysis), an updated water balance, and a WWTF treatment capacity assessment to receive a discharge permit for flow rates over 7 MGD.

Although the population growth in the last decade averaged only 0.8 percent in the City, planned future developments could result in a higher growth rate if some speculative projects move forward. Consequently, the WWTF is projected to potentially treat wastewater flow rates higher than 7-MGD within 20-years. To avoid limiting the new permitted disposal capacity (and development potential) to 7 MGD, the City responded to the Regional Board's request on September 18, 2019, with a proposed work plan schedule to meet the requested information.

Since seven of the eight existing groundwater monitoring wells have been dry since 2015, resulting in insufficient data to provide an appropriate anti-degradation evaluation, new monitoring wells need to be installed before any of the follow-up evaluation can take place. Below is a task breakdown of work needed to accomplish the proposed work plan schedule (dates are based on a notice to proceed December 20, 2020).





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Mr. Molina  
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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

## **Task 1 – Support Services for Groundwater Monitoring Well Installation**

### Task 1.1 Groundwater Monitoring Well Installation/Repair Workplan

This task includes evaluating the existing groundwater monitoring network, and where feasible, developing an appropriate strategy to either repair or reconstruct the network such that it provides groundwater elevation and quality data that are representative of both background/ambient and compliance (down gradient) sources. The intent of the monitoring network will be to provide data necessary to evaluate compliance with the WDRs and support a future Anti-degradation Analysis. Once completed, the workplan will be submitted to the Regional Board for Approval. The workplan will provide the design criteria for the monitoring wells such that bids from qualified drilling contractors can be obtained. Formal plans and specifications will not be prepared, as they are not required.

Our estimated time to complete the workplan is by March 2021.

### Task 1.2 – Monitoring Well Bidding Assistance

Stantec will assist the City in soliciting and reviewing bids from three C57 licensed well drilling contractors, to drill and install or repair the groundwater monitoring network pursuant to the Regional Board approved workplan. Stantec will conduct one pre-bid meeting for perspective drilling contractors. Stantec will review the bids and provide a recommendation to the City for award. Stantec will also solicit bids for groundwater monitoring and analytical services from a qualified sampler/California licensed analytical laboratory and provide a recommendation for award to the City.

For the purpose of this proposal, we have assumed that the City will use its contract surveyor to survey the location and casing elevation of each monitoring well, as required by the Regional Water Quality Control Board.

Our estimated time to complete bidding is by May 2021.

### Task 1.3 – Services During Well Construction

Stantec will provide field monitoring well construction services pursuant to the Regional Water Quality Control Board requirements for installing groundwater monitoring wells. These services will include the collection and logging of the subsurface lithology during drilling and monitoring the selected well drilling contractor during construction and development of the monitoring wells in order to assure they are installed pursuant to the Regional Board Approved workplan. The professional services fee associated with this project will depend on the number and depth of the wells being constructed.



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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

The fee included herein is based on installing five new wells to an approximate depth of 200 feet below ground surface using the direct mud rotary drilling method, assuming up to 3 days to drill, construct, and develop each monitoring well. If additional wells are necessary or if difficult drilling conditions are encountered, additional time may be necessary and will be billed at rate not to exceed \$2,400 per day (which can be done, if previously authorized by the City, using the contingency task).

Our estimated time to complete construction is by November 2021

#### Task 1.4 – Monitoring Well Construction Report

Based on information gathered in Task 1.3, Stantec will prepare the Groundwater Monitoring Well Construction report for the newly constructed or repaired monitoring wells, pursuant to the Regional Water Quality Control Boards requirements. The report will summarize well drilling, construction, and development activities, provide detailed lithologic and well construction logs, as well as summarize the results of the City's monitoring well survey.

Our estimated time to complete the well construction report is by January 2022.

#### **Task 2 – Preparation of Quarterly Groundwater Monitoring Reports**

Stantec will prepare the quarterly groundwater monitoring reports for one year (Fourth Quarter 2020 through Third Quarter 2021). Each groundwater monitoring report will be prepared under the direction of a California Registered Geologist or Professional Engineer and contain the following: a summary of the groundwater monitoring results; a narrative of preparatory, monitoring, sampling, and analytical testing; calculation of groundwater elevation, assessment of groundwater contours, determination of gradient and flow direction, and comparison to previous events including any relevant discussion of trends; preparation of summary tables of water quality and elevation data; scaled map showing relevant facility features and monitoring locations; and copies of the laboratory analytical reports (sampling and lab analysis excluded from Stantec scope). Stantec will also prepare a groundwater monitoring database that will be used to track monitoring data for future statistical analysis.



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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

### **Task 3 – Antidegradation Analysis**

#### Task 3.1 Statistical Analysis of Groundwater Monitoring Data

Stantec will provide a statistical analysis of groundwater monitoring data in order to evaluate facility compliance. Groundwater quality at compliance monitoring locations will be compared to both background/ambient groundwater quality as well as water quality goals for potable and agricultural use. In addition to groundwater elevation contours and gradient, available geochemical data collected from the groundwater monitoring wells and effluent will be used to further determine which wells are under the influence of wastewater disposal activities. This analysis will be prepared as a component of the facilities anti-degradation analysis. This statistical analysis will be based on a minimum of four quarterly groundwater monitoring events; however eight monitoring events are generally preferred. It is assumed that groundwater monitoring will begin immediately following well construction and during the fourth quarter of 2020.

Our estimated time to complete the well construction report is by March 2023

#### Task 3.2 Antidegradation Analysis Report

Using the above evaluation and below capacity assessment, Stantec will prepare an anti-degradation analysis that summarizes the potential impacts expanded flows (i.e. 20-year service area development at 2.5% growth) will have on the underlying groundwater for constituents of concern (salinity, nitrogen, and pathogens). Stantec will document the analysis in a report to be submitted to the Regional Board.

### **Task 4 – WWTF Capacity Assessment**

Stantec will analyze historical average and peak monthly influent flow rates and use the results as a basis for projecting future design conditions associated with the 20-year service area development (assuming 2.5% growth rate within the City, to accommodate Village D and other minor developments). Stantec will review the existing WWTF influent flows and loads (BOD, nitrogen, and TSS) data and compare it to design criteria of the existing secondary treatment and solids handling processes (scope excludes modeling processes and relies on original design criteria from design documents). Stantec will project anticipated City growth rate, based on current trends, to approximate a date at which the City will likely reach capacity of the existing secondary and solids handling processes. The analysis will be summarized in a capacity assessment memorandum for submittal to the Regional Board.



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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

### **Task 5 – Updated WWTF Water Balance**

Using the projected future design influent flow rates determined in Task 4, the engineering team will forecast the monthly design 100-year influent flows (establishing the design influent flow for the critical 100-year influent by month). Each month will be less than a 100-year influent flow “month”, but the summation of the design monthly flows will represent the 100-year influent flow “year”. Based on local and regional statistical climatic conditions, Stantec will determine the best apparent estimates of total precipitation and evaporation at the WWTF for the design 100-year water balance. Using available geotechnical data and soil maps (for percolation rates) and WWTF operational experience, Stantec will forecast the monthly effluent disposal potential in the existing percolation ponds under the 100-year conditions.

The above information will be used to prepare the 100-year water balance calculation for the WWTF. This task will also identify whether the WWTF disposal potential is limited in wet season storage volume. Stantec will prepare a technical memorandum describing the input values and results of the water balance, for submittal to the Regional Board.

### **Task 6 – Contingency**

As-needed contingency hours are budgeted to address potential project tasks that may be required in the permit renewal. The hours budgeted under Contingency will only be utilized after receiving authorization from the City of Madera.



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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

## PROJECT BUDGET AND TASK SUMMARY REPORT

The following table provides an estimate of budget needed to complete the permitting services for Change Order 1 tasks, identified above:

<b>Change Order 1 Description</b>	<b>Fee</b>
Task 1, Support Services for Groundwater Monitoring Well Installation	
Task 1.1, Groundwater Monitoring Well Installation/Repair Workplan	\$8,000
Task 1.2, Monitoring Well Bidding Assistance	\$6,000
Task 1.3, Services During Well Construction	\$36,000
Task 1.4, Monitoring Well Construction Report	\$10,000
<b>TASK 1 SUBTOTAL</b>	<b>\$60,000</b>
Task 2, Preparation of Quarterly Groundwater Monitoring Reports	\$10,000
Task 3, Antidegradation Analysis	
Task 3.1, Statistical Analysis of Groundwater Monitoring Data	\$10,000
Task 3.2, Antidegradation Analysis Report	\$15,000
<b>TASK 3 SUBTOTAL</b>	<b>\$25,000</b>
Task 4, WWTF Capacity Assessment	\$25,000
Task 5, Updated WWTF Water Balance	\$20,000
Task 6, Contingency*	\$17,000
<b>Change Order 1 Total Fee</b>	<b>\$157,000</b>

\*Task 6 provides the City of Madera a prudent allowance for additional services that may be requested by client during the project. Stantec will not use this contingency without written authorization from the City.

Change Order 1 will be conducted on a time and materials basis, using Stantec's most current Fee Schedule, in an amount not to exceed \$157,000. Task 6 is a contingency fund that will not be used without written authorization from the City of Madera. We propose amending our existing, December 2018, Professional Services Agreement with the City to include the tasks described in this proposal. Please do not hesitate to contact me with any questions you may have regarding this proposal.



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Reference: Scope of Work for WWTF Permit Assistance Change Order No. 1

Regards,

**STANTEC CONSULTING SERVICES INC.**

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**STANTEC CONSULTING SERVICES INC.**

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