



Stantec Consulting Services Inc.

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Sacramento, CA 95814-4583

June 19, 2024

Joel Metzger

Utica Water and Power Authority
1168 Booster Way
Angels Camp, CA 95222

Dear Mr. Metzger,

Reference: UWPA Utica and Angels Projects FERC Exemption – Proposal for Water Quality Monitoring Program

Stantec Consulting Services Inc. (Stantec) is pleased to provide this Scope of Work (SOW) and cost estimate to Utica Water and Power Authority (UWPA) for initiating water quality monitoring consulting services for the Utica and Angels Projects in Calaveras County, California. UWPA is seeking a conduit exemption for both projects from the Federal Energy Regulatory Commission (FERC), which would remove FERC's oversight of the UWPA system, except for the two powerhouses UWPA operates as part of the Utica and Angels Projects.

In the State Water Resources Control Board (SWRCB) Comments on Exemption and Surrender Applications dated April 2, 2024, the had the following comments:

In section 2.3.1.2, the (UWPA) Applications present data on several water quality constituents throughout the city of Angels Camp's water supply system and in post-treatment water from (Utica Public Utility District) UPUD; however, no data is presented for water quality constituents in water that flows into UPUD. To assess the existing environmental setting and protect all designed beneficial uses, additional water quality data is needed.

State Water Board staff is interested in understanding if the timing and magnitude of reservoir and powerhouse releases are impacting water quality parameters (e.g., temperature, turbidity, dissolved oxygen) in Mill Creek and Angels Creek. The goal of the State Water Board's water quality study is to address water quality data gaps and evaluate Project impacts to designated beneficial uses and water quality objectives.

In a meeting to Discuss SWRCB Comments on UWPA FERC Conduit Exemption which occurred on May 20 2024, SWRCB recommended the following water quality monitoring program be implemented by UWPA:

- Real-time (i.e., 15-minute interval) data collection for temperature, dissolved oxygen, and pH – for one calendar year. *The SWRCB had also noted that turbidity would be preferred to be collected in "real time", but this would increase the data collection costs and it is recommended that UWPA request this constituent be added to the periodic "grab samples" described below, assuming samples can be collected in a manner that meets the data needs of the SWRCB.*
- Periodic "grab samples" (assumed to be semiannually or quarterly) for:
 - Nutrients (phosphorous, nitrogen, etc.) plus E.coli and fecal coliform, that would commonly be present in agricultural communities.
 - Metals (toxic) including arsenic, mercury – as described in the ELAP program. Garrett Long sent UWPA an email with ELAP program details.
 - As noted above, it is recommended that turbidity is included in this sampling program, which will result in lower overall study costs.

Reference: UWPA Utica and Angels Projects FERC Exemption Proposal for Water Quality Monitoring Program

Stantec has prepared this proposed scope of work to assist UWPA with a Water Quality Monitoring Program, as outlined by the SWRCB. Our impression is that these recommendations are somewhat excessive for this project and we further recommend that UWPA work to negotiate a less-comprehensive water quality monitoring program that is more appropriate for this project and facilities; however, we are costing the project to meet SWRCB recommendations.

Scope of Work

The scope of work provided below has been designed to be both cost effective and efficient to meet UWPA's desired schedule, while conforming to the request of the SWRCB (including the April 2, 2024 comment letter and May 24, 2024 conference call). Stantec has developed this comprehensive scope in order to develop a Water Quality Monitoring Program for UWPA, which can be implemented in a step wise approach and approval process.

Stantec has identified six locations that meet SWRCB's request for more water quality at locations where water that enters and leaves project reservoirs, powerhouse and generating stations. These locations include upstream and downstream of Hunter Reservoir, upstream of Murphy's Powerhouse, downstream of Murphy's Afterbay Dam, downstream of Angels Diversion Dam, and downstream Angels Powerhouse. This scope of work includes the following six key elements in the development and implementation of the proposed water quality monitoring program:

- Developing a comprehensive Water Quality Monitoring Program that meets the requirements outlined by the SWRCB (with the noted modification regarding real-time turbidity monitoring);
- Meetings with SWRCB to present a modified water quality monitoring program;
- Implementation of real-time water quality monitoring program;
- Implementation of periodic sampling for nutrients and metals;
- Develop and implement data reporting program that meets the requirements of the SWRCB; and
- Project Management and Project Administration

Task 1. Water Quality Monitoring Program Development

Stantec's Project Manager (Robert Stoddard) and Technical Lead (Wayne Lifton) will develop a comprehensive Water Quality Monitoring Program that meets the requirements outlined by the SWRCB. The study plan will detail the monitoring program elements that UWPA proposed to conduct in response to the SWRCB requests, including the proposed modification to real-time turbidity monitoring. The plan will outline the recommended data collection parameters, sampling frequency, sampling methodology, and proposed reporting details. Specifically, the scope includes:

Deliverables:

- Draft Water Quality Monitoring Program
- Final Water Quality Monitoring Program

Assumptions:

- One round of client review on Draft Water Quality Monitoring Program, where a single consolidated round of comments will be addressed; Final Water Quality Monitoring Program to be submitted.

Reference: UWPA Utica and Angels Projects FERC Exemption Proposal for Water Quality Monitoring Program

Task 2. Water Quality Monitoring Program Meeting and Negotiations

Stantec's Water Quality Monitoring Program for UWPA to present to SWRCB. This program will address the issues raised by the SWRCB, but scoped in a manner that is more appropriate for the Utica and Angels project and facilities. Stantec will support UWPA to schedule a meeting with the SWRCB to present the proposed Water Quality Monitoring Program, with the specific goal of this meeting and negotiations to seek concurrence of a more reasonable approach for the Water Quality Monitoring Program.

Deliverables:

- Stantec will provide a draft and final Water Quality Monitoring Program concept to UWPA to be proposed to SWRCB.
- Attend a meeting with SWRCB and negotiate a Water Quality Monitoring Program

Assumptions:

- One round of client review on the draft Water Quality Monitoring Program concept, where a single consolidated round of comments will be addressed, and final versions will be provided to UWPA.
- SWRCB is assumed to accept the proposed Water Quality Monitoring Program sampling plan, and no further negotiations or program modifications are necessary.
- Virtual meeting with UWPA, SWRCB, and up to two Stantec representatives to present the proposed Water Quality Monitoring Program

Task 3. Implementation of Real-Time Water Quality Monitoring Program

This task includes procurement of the equipment, installation, calibration, training for UWPA staff, and equipment removal and return for components of real-time data collection for temperature, dissolved oxygen, and pH. Regarding the real-time monitoring elements, Stantec's approach will be to rent and install the equipment, train UWPA staff on equipment calibration and maintenance, and then uninstall equipment after approximately one year of monitoring is complete. UWPA staff would be responsible for monthly servicing, calibration, and trouble-shooting issues. Stantec will purchase and provide calibration and cleaning solution for UWPA to use during equipment calibrations.

UWPA representatives should be on site to assist with the install and will be expected to weigh on exact equipment locations. The real-time monitoring equipment will be rented and UWPA will be responsible for equipment replacements after the initial install. Replacing potentially faulty equipment, if necessary, is part of the rental service and does not come with a cost to UWPA, other than the required time if Stantec personnel are needed to assist. UWPA will be responsible for the costs for lost or damaged equipment, as charged by the rental equipment provider.

Deliverables:

- Establish real-time water quality monitoring at up to six sites, as agreed to between UWPA and SWRCB.
- Provide a half-day training for UWPA staff on equipment calibration, maintenance, and trouble shooting.

Assumptions:

- UWPA will be responsible for the maintenance and operation of the monitoring equipment, including but not limited to equipment damage or data loss.

Reference: UWPA Utica and Angels Projects FERC Exemption Proposal for Water Quality Monitoring Program

- UWPA responsible for maintaining sonde calibration, monitoring real-time data, checking sonde statuses, and dealing with potential sonde replacements.

Task 4. Implementation of Periodic Sampling Program for Nutrients and Metals

This task includes twice annual sampling for nutrients and metals. Our Stantec team will collect samples at the six sites noted above and submit samples for analysis. The timing of sampling will be dependent on final approval of the Water Quality Monitoring Program negotiations with SWRCB.

Deliverables:

- Stantec will supply the sampling results and include laboratory results in a report.

Assumptions:

- Assumes sampling at six sites for nutrients (phosphorous, nitrogen, etc.) plus E.coli and fecal coliform, and mercury and arsenic.
- Collect samples for toxic metals using methods consistent with the Environmental Protection Agency (EPA) 1669 and 1638 sampling protocol Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria. Mercury sampling and analysis to follow EPA 1630 and 1631E protocols.
- Assume turbidity measurements will be periodically collected at the following locations, consistent with the other periodic sampling locations: upstream and downstream of Hunter Reservoir, upstream of Murphy's Powerhouse, downstream of Murphy's Afterbay Dam, downstream of Angels Diversion Dam, and downstream Angels Powerhouse.

Task 5. Develop and Implement a Data Reporting Program

Stantec will develop and data reporting program in coordination with UWPA to collect and analyze the water quality data, and generate a data report that is acceptable to the SWRCB. It is expected that the reporting program will include the data files (Excel) from real-time monitoring, data results from the water quality laboratory, and a summary report describing key findings.

Deliverables:

- Monitoring report including data summaries for real-time water quality monitoring data and periodic sampling results (nutrients, E.coli, fecal coliform, and toxic metals).
- Raw real-time water quality monitoring data in Microsoft Excel file
- Nutrients, E.coli, fecal coliform, and toxic metals laboratory reports

Assumptions:

- Data report summary to provide summary of testing and sampling results and any unusual water quality findings.
- One round of client review, where a single consolidated round of comments will be addressed, and final versions will be provided.

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Task 6. Project Management and Project Administration

This scope item covers the task order project management and administration. Specifically, it includes:

- Initial task order kickoff call between UWPA and Stantec's Project Manager and Technical Lead.
- Bi-weekly calls with UWPA will include Stantec's Project Manager and Technical Lead.
- This task also covers project administration, including project management, field support, development of safety plans and field team oversight and other administrative functions.

Deliverables:

- Kick-off meeting notes; action item lists (from biweekly meetings), and monthly progress reports

Assumptions:

- All meetings will be virtual; kick-off call will be up to 1-hour for two Stantec people; bi-weekly (every two weeks) calls will be up to 30 minutes for two Stantec people.
- Assumes 15 months of project management support (July 2024 to September 2025)

Schedule

The following provides an estimated schedule for the tasks listed above:

Task No.	Task Description	Schedule Estimate*
Task 1	Water Quality Monitoring Program Development	3 weeks from notice to proceed
Task 2	Water Quality Monitoring Program Meeting	4 weeks from notice to proceed
Task 3	Implementation of Real-Time Water Quality Monitoring	2 weeks after SWRCB negotiations
Task 4	Implementation of Periodic Sampling Program	2 weeks after SWRCB negotiations
Task 5	Develop and Implement Data Reporting Program	30 days after sampling program start
Task 6	Project Management and Project Administration	Continuous; begins immediately after notice to proceed

*Note that these time frames are estimated, and delays might occur due to changes to the project, etc.

Reference: UWPA Utica and Angels Projects FERC Exemption Proposal for Water Quality Monitoring Program

Cost Estimate

Stantec will perform the below tasks for a fee not to exceed [\$332,259]. The fee will be billed on a time and materials basis under the existing contract with Stantec and UWPA dated October 1, 2022.

Task No.	Task Description	Budget
Task 1	Water Quality Monitoring Program Development	\$8,156
Task 2	Water Quality Monitoring Program Meeting	\$4,136
Task 3	Implementation of Real-Time Water Quality Monitoring	\$192,922
Task 4	Implementation of Periodic Sampling Program	\$91,977
Task 5	Develop and Implement Data Reporting Program	\$13,304
Task 6	Project Management and Project Administration	\$21,694

[Note the cost estimate for Task 1, Task 2, and Task 6 are \$33,986. which are the initial tasks recommended for approval.]

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Staff may be exchanged depending on availability and will be billed at the appropriate rate from the rate table below.

Stantec Resource Title (By work classification)	2024 Rate
Senior QA/QC (Regulatory)	\$284
Principal Scientist/FERC Specialist	\$274
Senior Associate Scientist/Analyst/Specialist	\$257
Associate Scientist/Analyst/Specialist	\$223
Senior Professional Scientist/Analyst/Specialist II	\$196
Senior Professional Scientist/Analyst/Specialist I	\$178
Professional Scientist/Analyst/Specialist II	\$164
Professional Scientist/Analyst/Specialist I	\$154
Staff Scientist/Analyst/Specialist II	\$140
Staff Scientist/Analyst/Specialist I	\$118
Assistant Staff Scientist/Analyst/Specialist II	\$95
Assistant Staff Scientist/Analyst/Specialist I	\$90
Senior Principal Engineer	\$345
Principal Engineer	\$312
Senior Associate Engineer	\$279
Associate Engineer	\$241
Senior Professional Engineer II	\$220
Senior Professional Engineer I	\$202
Professional Engineer II	\$181
Professional Engineer I	\$167
Staff Engineer II	\$153
Staff Engineer I	\$130
Assistant Staff Engineer II	\$113
Assistant Staff Engineer I	\$103
Senior GIS / CADD Support	\$185
Professional GIS / CADD Support	\$153
Assistant GIS / CADD Support	\$130
Project Management/PMCL	\$208
Senior Project Management	\$185
Project Management	\$164
Project Controls/Accounting	\$164
Administrative Professional	\$130
Intern	\$80

Rates will be escalated on January 1st of each year, assumed to be 3.5% for 2025.

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Thank you for the opportunity to provide this SOW and cost estimate for assisting UWPA in the ongoing FERC Conduit Exemption process. We look forward to the opportunity to work with you. Please feel free to contact the undersigned with any questions.

Regards,

STANTEC CONSULTING SERVICES INC.