

Client Name: Tuolumne City Sanitary District
Address: 18050 Box Factory Road
Tuolumne, CA 95379
Phone: 209-928-3517

Task Order Name: Tailwater/Runoff Control Workplan

Task Order No: 21-01
Amendment No. 1

Statement of Understanding:

As part of the Waste Discharge Requirements adopted by the California Regional Water Quality Control Board, Central Valley Region (RWQCB), in Order R5-2019-0058 (Order) on June 7, 2019, the District is required to implement measures to control potential tailwater/runoff at its Land Application Area at Baker Ranch. The first mandated step in this process was to prepare a Work Plan for the implementation of these measures, which included a conceptual design for a controls system that consists of a series of berms and ditches. This effort was completed in compliance with the Order. The next mandated step in the process is the design and construction of the actual controls system. This step is underway; however, the District is not yet in compliance with this part of the Order for two reasons: 1) the environmental review process for the project requires more time than allowed for in the Order, and 2) the District does not have the funds to complete the full engineering and construction of the controls system.

The District is working to achieve compliance with the Order as quickly as possible, and is pushing forward with both environmental and engineering aspects of the project. Recognizing that the environmental permitting will likely end up being the lengthiest aspect of the project, the District completed a preliminary environmental study to identify issues that might constrain the project, and might therefore affect the engineering design of the controls system. At the same time, anticipating the presence of environmental/cultural resources in the project area, the District commissioned a study to evaluate alternatives (Forsgren Task Order No. 21-01) for the controls system that would enable the District to comply with the Order, while minimizing disturbances to the environmental/cultural resources. The preliminary environmental study was completed in July, and confirmed the presence of significant cultural and environmental resources. The Alternatives Analysis is still underway.

The Alternatives Analysis was intended to serve as a decision-making tool for the District, and was scoped and budgeted accordingly. However, during the course of the analysis, and through discussions with District staff, it was agreed that the audience for the Alternatives Analysis should be the RWQCB, and that a more robust Alternatives Analysis will be needed to demonstrate that TCSD is diligently working toward full compliance with the order. It was agreed, specifically, that the Alternatives Analysis should be expanded in order to do the following:

- Demonstrate the District's commitment to, and document its steps toward achieving compliance with the Tailwater/Runoff Controls aspect of the RWQCB Order,
- Refine the District's understanding of the constraints imposed by the environmental/cultural resources identified at the site, and how these constraints would affect the design, cost, schedule, and construction of the controls system alternatives,
- Provide the RWQCB with the documentation and analysis required to understand the alternatives selected for evaluation, and why the preferred alternative best meets the spirit of the RWQCB Order, while still satisfying the letter of the Order,
- Enable the District to initiate the pursuit of outside funding for the project by including a 30% Engineering Design of the preferred alternative.

This Task Order Amendment authorizes additional funds for Forsgren to complete the more robust Alternatives Analysis discussed above, and presented in more detail below.

Scope of Services:

Forsgren will work with TCSD to complete an Alternatives Analysis for the Tailwater/Runoff Control Project as described in Task Order 21-01, and as amended below.

Task 1 – Alternatives Analysis

The budget under this task has been expended, and this task is now closed.

Task 2 – Additional Work

Additional work was performed for the initial analysis, environmental coordination, and project management. No further work will be performed under this task.

Task 3 – Detailed Analysis & 30% Design

Under this task we will:

- Prepare 2nd Draft Alternatives Analysis:
 - Develop narrative of District’s efforts to comply with this aspect of the Order, and the District’s progress relative to the timeline presented in the Workplan.
 - Coordinate with APA to develop better understanding of constraints imposed by environmental/cultural resources, and how those constraints will impact engineering and construction.
 - Coordinate with TCSD and APA to develop better understanding of timeline and costs for the environmental/cultural review process.
 - Prepare additional detail in descriptions and drawings for each alternative, accounting for more detailed environmental/cultural resources analysis.
 - Develop descriptions and drawings for new Alternatives:
 - Alternative 2a – Berms
 - Alternative 2b – Curbing
 - Alternative 2c – Straw Wattles
 - Alternative 2d – Combination of Berms, Curbs, and Wattles
 - Compile supporting documentation for equipment/technologies used in the alternatives.
 - Perform additional research to develop more current and accurate construction cost data.
 - Update Capital Cost Estimates for each alternative.
 - Update Decision Matrix
 - Compile and submit 2nd Draft Alternatives Analysis to TCSD for review.
- Plan and coordinate second Workshop with TCSD team:
 - Prepare/Submit Agenda, and lead Workshop.
 - Discuss comments on 2nd Draft Alternatives Analysis, and agree on revisions.
 - Gain consensus on the scope and description of the alternatives.
 - Gain consensus on the scoring and weighting factors for the decision criteria.
 - Discuss and agree on a Preferred Alternative.
 - Prepare Workshop Summary including Action Items and Decision Log.
- Prepare Draft Final Alternatives Analysis:
 - Incorporate revisions from Workshop and District comments into Alternatives Analysis.
 - Prepare 30% Design for Preferred Alternative.
 - Prepare Plan Sheet w/ Notes
 - Prepare Detail/Section Sheet w/ Notes
 - Prepare Design section in report
 - Compile and submit Draft Final Alternatives Analysis to TCSD for review.

- Prepare Final Alternatives Analysis:
 - Revise document based on District’s comments on Draft Final.
 - Compile and submit Final Alternatives Analysis to TCSD.
- Continue performing Project Management and Administration duties, including:
 - Manage internal resources for the execution of the project work.
 - Track and control the project schedule and budget.
 - Communicate/coordinate with TCSD staff and Consultant team.
 - Provide verbal and written updates on project status/progress to TCSD.

Schedule:

An estimated schedule for development of the Alternatives Analysis is shown in the table below. An updated schedule will be developed in conjunction with TCSD upon receipt of notice to proceed.

Task/Milestone	Estimated Completion Date
Submit 2 nd Draft Alternatives Analysis to TCSD	20 business days after authorization
Workshop w/ TCSD	+15 business days
Submit Draft Final Alternatives Analysis w/ 30% Design	+20 business days
Review/comments by TCSD	+10 business days
Submit Final Alternatives Analysis to TCSD	+15 business days

Compensation:

The services will be performed on a time and materials basis for an estimated additional fee of **\$34,900**, bringing the total estimated fee for the Task Order to **\$53,000**, as shown in the attached estimate spreadsheet. This amount will not be exceeded without prior authorization from the District.

Terms and Conditions:

The requested services will be performed in accordance with the Terms & Conditions included as part of the Master Services Agreement between TCSD and Forsgren.

FORSGREN ASSOCIATES, INC.

TUOLUMNE CITY SANITARY DISTRICT

By:  _____

By: _____

Printed Name: _____
 Alan Driscoll

Printed Name: _____

Title: _____
 VP, Division Manager

Title: _____

Date: _____
 September 23, 2021

Date: _____

AMENDMENT NO. 1 - FEE ESTIMATE
 Tuolumne City Sanitary District
 Tailwater/Runoff Control Alternatives Analysis

ATTACHMENT 1

Role Title Code Employee Rate	PM	Lead Engineer	Stormwater Controls	QA/QC	Project Engineer	Drafter	Project Asst.	Total Labor Hours	Total Labor Costs	Related Project Fee	Total
	ENG/SCI VI Driscoll	ENG/SCI IV Gach	ENG/SCI IV Adams	ENG/SCI III Wickman	ENG/SCI II Vallarino	DRAFT V Cale	CLE III Dela Cruz				
	\$235	\$170	\$170	\$170	\$125	\$115	\$70				
TASK 1 - Alternatives Analysis											
								0	\$ -	\$ -	\$ -
<i>Kick-Off Meeting</i>	2	2					2	6	\$ 950	\$ 30	\$ 980
<i>Prepare Alternatives Analysis</i>								0	\$ -	\$ -	\$ -
Develop Concepts	2	16		4				22	\$ 3,870	\$ 110	\$ 3,980
Prepare Descriptions	4	8		2				14	\$ 2,640	\$ 70	\$ 2,710
Prepare Concept Drawings	1	4			8			13	\$ 1,915	\$ 65	\$ 1,980
Estimate Materials and Costs		4		2				6	\$ 1,020	\$ 30	\$ 1,050
Write Report	4	8					4	16	\$ 2,580	\$ 80	\$ 2,660
Compile and Submit Draft Report	1	4		2			4	11	\$ 1,535	\$ 55	\$ 1,590
Respond to/Address Comments	1	2			2			5	\$ 825	\$ 25	\$ 850
Compile and Submit Final Report	1	2					2	5	\$ 715	\$ 25	\$ 740
<i>Project Management & Administration</i>	4						8	12	\$ 1,500	\$ 60	\$ 1,560
Assume 4-month duration								0	\$ -	\$ -	\$ -
								0	\$ -	\$ -	\$ -
Subtotal Task 1	20	50	0	10	10	0	20	110	\$ 17,550	\$ 550	\$ 18,100
TASK 2 - Additional Work											
<i>Additional Work for Initial Analysis</i>								0	\$ -	\$ -	\$ -
Analysis, Environmental Coord., PM	1	29		14			5.25	49	\$ 7,913	\$ 246	\$ 8,159
								0	\$ -	\$ -	\$ -
Subtotal Task 2	1	29	0	14	0	0	5	49	\$ 7,913	246	\$ 8,159
TASK 3 - Detailed Analysis & 30% Design											
<i>Prepare 2nd Draft Alternatives Analysis</i>								0	\$ -	\$ -	\$ -
Develop narrative of District's compliance efforts	2	1		1			2	6	\$ 950	\$ 30	\$ 980
Coordinate environmental/cultural resources constraints	2			2			1	5	\$ 880	\$ 25	\$ 905
Develop timeline/costs for environmental/cultural review	2	2		2				6	\$ 1,150	\$ 30	\$ 1,180
Prepare additional detail in descriptions for each alternative	1	2		1	2			6	\$ 995	\$ 30	\$ 1,025
Prepare additional detail in drawings for each alternative		1			2	2		5	\$ 650	\$ 25	\$ 675
Develop descriptions/drawings for Alternatives 2a, 2b, 2c, 2d	1	4	2	1	8	2		18	\$ 2,655	\$ 90	\$ 2,745
Compile supporting documentation for equipment/technologies		1			2			3	\$ 420	\$ 15	\$ 435
Perform additional research on construction cost data		1			2			3	\$ 420	\$ 15	\$ 435
Update Decision Matrix	2	3		2	2			9	\$ 1,570	\$ 45	\$ 1,615
Update Capital Cost Estimates for each alternative		2			2			4	\$ 590	\$ 20	\$ 610
Compile and submit 2nd Draft Alternatives Analysis to TCSD	2	2		2			2	8	\$ 1,290	\$ 40	\$ 1,330
<i>Plan and coordinate second Workshop with TCSD team</i>								0	\$ -	\$ -	\$ -
Prepare/Submit Agenda, and lead Workshop.	4	4		1				9	\$ 1,790	\$ 45	\$ 1,835
Prepare Workshop Summary, Action Items, Decision Log	2	2					1	5	\$ 880	\$ 25	\$ 905
<i>Prepare Draft Final Alternatives Analysis:</i>								0	\$ -	\$ -	\$ -
Incorporate revisions from Workshop and Comments	2	2						4	\$ 810	\$ 20	\$ 830
Prepare 30% Design for Preferred Alternative		4	4		4			12	\$ 1,860	\$ 60	\$ 1,920
Prepare Plan Sheet w/ Notes	1	1	1		4	2		8	\$ 1,070	\$ 40	\$ 1,110
Prepare Detail Sheet w/ Notes		1	1		2			4	\$ 590	\$ 20	\$ 610
Prepare Design section in report		4		2	4			10	\$ 1,520	\$ 50	\$ 1,570
Compile and submit Draft Final Alternatives Analysis to TCSD	2	2		2				6	\$ 1,150	\$ 30	\$ 1,180
<i>Prepare Final Alternatives Analysis</i>								0	\$ -	\$ -	\$ -
Revise document based on Comments	2	2			2		2	8	\$ 1,200	\$ 40	\$ 1,240
Compile and submit Final Alternatives Analysis to TCSD		1					2	3	\$ 310	\$ 15	\$ 325
<i>Project Management & Administration</i>								0	\$ -	\$ -	\$ -
Assume 2-month duration	8						16	24	\$ 3,000	\$ 120	\$ 3,120
								0	\$ -	\$ -	\$ -
Subtotal Task 3	32	42	8	16	36	6	26	166	\$ 25,750	\$ 830	\$ 26,580
PROJECT TOTALS	53	121	8	40	46	6	51	325	\$ 51,213	\$ 1,626	\$ 52,839