

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

Statement of Understanding:

In 2020, Forsgren prepared a Tailwater/Runoff Control Workplan for implementation of tailwater/runoff controls at the land application areas utilized by TCSD for the discharge of its effluent from the wastewater treatment plant. The workplan included a conceptual design for the construction of a series of berms and ditches that would intercept potential runoff from the irrigation, thereby preventing the runoff from flowing into the nearby Turnback Creek, and instead, facilitating its infiltration into groundwater.

TCSD does not have sufficient funds to complete either the engineering or the construction for the project. However, TCSD *did* proceed with the environmental work for three reasons: 1) TCSD wanted to demonstrate its commitment to complying with the RWQCB Order, 2) TCSD recognized that the environmental permitting process is a long one and wanted to get a “jump” on this effort, and 3) TCSD anticipated that issues identified during the environmental analysis could constrain the project, and wanted to identify these constraints before the engineering was completed.

During the course of the environmental analysis, it was, in fact, determined that significant cultural resources are present within the project area, and that the presence of these resources would significantly impact the project as currently conceived. The presence of these resources will dictate where construction can and cannot occur, and/or will increase the cost of construction due to mitigation of the resources.

With this in mind, TCSD asked Forsgren to prepare an Alternatives Analysis that considers four alternatives: 1) No Action, 2) Berms and Ditches as conceived in the Workplan, 3) Automatic runoff controls using sensors and shut-off valves rather than physical construction, and 4) some combination of Alternatives 2 and 3. This Task Order authorizes Forsgren to prepare the needed Alternatives Analysis.

Scope of Services:

Forsgren Associates, Inc. (Forsgren) will work with TCSD to prepare an Alternatives Analysis for the Tailwater/Runoff Control Project. The Alternatives Analysis will be sufficiently detailed to help TCSD weigh the challenges and costs associated with the remainder of the environmental effort against the complexity and cost of the project construction. This Alternatives Analysis is not intended to be a rigorous engineering analysis. Our proposed scope and approach for the Analysis is described in further detail below.

Task 1 – Alternatives Analysis

Under this task we will:

- Plan and coordinate a Kickoff Meeting with TCSD team.
 - Prepare/Submit Agenda and Draft Outline.
 - Lead the Kickoff Meeting.
 - Gain consensus on Outline for the Alternatives Analysis.
 - Prepare Meeting Summary including Action Items and Decision Log.
- Prepare Alternatives Analysis:
 - Develop concepts for Alternatives 3 and 4.

- Prepare descriptions for each alternative.
 - Prepare conceptual drawings for Alternatives 3 and 4.
 - Estimate materials and costs for each alternative.
 - Write other sections of Alternatives Analysis report.
 - Compile and submit Draft Alternatives Analysis to TCSD for review.
 - Respond to comments from TCSD and make appropriate revisions.
 - Compile and submit Final Alternatives Analysis to TCSD.
- Perform 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
Kickoff Meeting	3 days after NTP
Submit Draft Alternatives Analysis to TCSD	+ 15 business days
Comments from TCSD	+5 business days
Submit Final Alternatives Analysis to TCSD	+5 business days

Compensation:

The services will be performed on a time and materials basis for an estimated fee of **\$18,100**. This fee will not be exceeded without prior authorization from TCSD. A spreadsheet showing the breakdown of this estimated fee is included as Attachment A.

Terms and Conditions:

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

FORSGREN ASSOCIATES, INC.

TUOLUMNE CITY SANITARY DISTRICT

By:



Printed

Name:

Alan Driscoll

Title:

VP, Division Manager

Date:

April 2, 2021

By:

Printed

Name:

Title:

Date:

FEE ESTIMATE

Tuolumne City Sanitary District

Tailwater/Runoff Control Alternatives Analysis

ATTACHMENT 1

	Role	PM	Lead Engineer	QA/QC	Drafter	Project Asst.	Total Labor Hours	Total Labor Costs	Related Project Fee	Total
	Title Code	ENG/SCI VI	ENG/SCI IV	ENG/SCI III	DRAFT V	CLE III				
	Employee	Driscoll	Gach	Wickman	Cale	Dela Cruz				
	Rate	\$235	\$170	\$170	\$125	\$70			\$5.00	
TASK 1 - MASTER CIP SCHEDULE										
							0	\$ -	\$ -	\$ -
Kick-Off Meeting		2	2			2	6	\$ 950	\$ 30	\$ 980
Prepare Alternatives Analysis							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
Project Management & Administration		4				8	12	\$ 1,500	\$ 60	\$ 1,560
							0	\$ -	\$ -	\$ -
Assumptions:							0	\$ -	\$ -	\$ -
2-month duration							0	\$ -	\$ -	\$ -
							0	\$ -	\$ -	\$ -
Subtotal Task 1		20	50	10	10	20	110	\$ 17,550	\$ 550	\$ 18,100
PROJECT TOTALS		20	50	10	10	20	110	\$ 17,550	\$ 550	\$ 18,100