

January 16, 2025

Roberto Yano, PE
Assistant General Manager
Sweetwater Authority
505 Garrett Avenue
Chula Vista, CA 91912-2328

Re: Proposal to Provide Fire System Infrastructure Assessment

Dear Mr. Yano,

HDR Engineering, Inc. (HDR) appreciates the opportunity to submit this proposal to Sweetwater Authority (Authority) to provide engineering planning services to Sweetwater Authority (Authority) providing an evaluation of the potable water fire system infrastructure.

Scope of Services

This scope of work includes efforts required to conduct fire service evaluations on the Authority's potable water distribution system and present system results to Authority staff.

Task 1 – Project Management and Coordination

Based on our current understanding of the Project, HDR will provide the following engineering services:

- Project Management and Meetings
 - Kickoff Meeting: HDR Project Manager and one (1) additional project team member will prepare for and attend a Kickoff meeting via Microsoft Teams with the Authority project team to confirm the goals and objectives of the project evaluation.
 - Progress Meetings: Meet with the Authority up to two (2) times during the Project to discuss status, issues, concerns, and progress.
 - Quality Assurance/Quality Control: Provide quality assurance and control over deliverables by having independent review of documents by senior level staff, who are knowledgeable and experienced in these areas.
 - Coordinate up to two (2) meetings as needed with Project team and Authority staff to discuss evaluation results.
 - Presentations: HDR will prepare for and present at one (1) meeting with Authority staff and one (1) Board meeting.
- Project Management Controls
 - HDR will prepare and submit to the Authority a monthly narrative progress report with an update on the current Project status and work progress for the month. Based on the anticipated two (2) month schedule, a total of two (2) Project updates have been included.
 - HDR will prepare monthly invoices, which will include a written summary of the Project work completed for that billing period. Based on the schedule, a total of two (2) monthly invoices are assumed.

Task 2 – Fire System Infrastructure Assessment

HDR will utilize the Authority's current potable water InfoWater Pro hydraulic model to analyze system performance with key identified infrastructure components out of service.

- HDR will obtain, organize and file all data available and provided by the Authority. It is assumed that data will be made available in electronic format: InfoWater Pro, Microsoft Word and Excel, PDF, and GIS/geodatabase.
- HDR will perform a hydraulic analysis of the existing potable water system to evaluate alternatives for operating the water system with the Reservoir out of service.
 - The hydraulic analysis will evaluate available supply within each pressure zone with one pump station out of service. The Authority's existing InfoWater model Extended Period Simulation scenario will be used for the modeling run.
 - The hydraulic analysis will evaluate pressure and flow against 2021 WDSMP criteria using the existing InfoWater model Extended Period Simulation scenario.
 - One (1) additional model scenario will be performed to determine the available fire flow demand within each pressure zone.
 - HDR will present results of the model simulations for each pressure zone, identifying facilities out of service, resulting service pressures within the distribution system, and available fire flows at hydrants within each pressure zone. HDR and Authority staff will meet to discuss results and recommendations.
- HDR will review and summarize challenges tied to the following:
 - Direct Fire Damage - Pipes/conveyances, source water, water collection/intake pretreatment, treatment, storage and distribution, electronic, computer, or other automated systems (including security)
 - Storage or handling of chemicals
 - Power Disruptions - Emergency Power, fuel, treatment and distribution systems
 - Access and Response - Brush Clearance and tree trimming
 - Wildfire induced water contamination
 - Emergency Planning and Response
- Deliverables: Prepare and submit to the Authority a draft technical memorandum including tables, figures, summarization of challenges, and model result appendices in electronic pdf format. HDR will participate in one conference call or virtual meeting to review comments with the Authority. Based on Authority input and review comments, HDR will prepare a final technical memorandum.

Task 3 – Optional Task

Optional task: HDR will research and review any pertinent grants that the Authority may be qualified to pursue to mitigate system challenges, up to 80 hours.

KEY UNDERSTANDINGS & ASSUMPTIONS

- Requested project background data is required to be provided in a timely manner. To maintain the Project schedule, we assume that the background data is furnished over a period not to exceed two (2) weeks.
- HDR shall utilize the Authority's 2021 Water Distribution System Master Plan (WDSMP) as a basis for this evaluation.
- The Authority's InfoWater hydraulic model under existing scenarios will be used for the analysis.

DATA NEEDS

- Request and compile the background data provided by Authority in electronic format, as available, and hard copy, if needed.
- Authority to confirm normal operating conditions for pumps station and tank, if changed from the 2021 WDSMP.
- Current Authority InfoWater Hydraulic Model (HDR has in possession as of 8/14/2024)

Scope of Services – Fire System Infrastructure Assessment

- HDR will utilize readily available information from the Authority's AWIA study and supporting documentation

AUTHORITY ACTIVITIES

- Coordinate Authority staff participation and actively participate in meetings and workshops.
- Identify and provide additional relevant prior studies, reports, and drawings.
- Provide input and feedback on desired distribution system operations.
- The Authority will consolidate the multiple reviewer comments into one single review comment document and combine or remove redundant comments and resolve conflicting comments prior to providing to HDR. Authority comments on Draft Technical Memoranda will be provided to HDR within five (5) working days of receipt in order to remain on the schedule presented below.

PROJECT SCHEDULE - MILESTONES

The proposed project schedule is summarized in the table below.

Project Task	Estimated Schedule
Consultant Notice to Proceed (Upon contract approval)	2/01/2025
Draft Technical Memorandum	NTP + 4 Weeks
Final Technical Memorandum	NTP + 8 Weeks

FEE ESTIMATE

Our estimated fee to complete this scope of work is \$60,700. The fee estimate includes an optional task for \$12,400 that allows for additional model scenario analysis or appropriate grant review and research, at the direction of the Authority, for a total contract fee of \$73,200. A breakdown of hours and rates are provided below:

Sweetwater Authority												HDR			
Fire Service Infrastructure Assessment															
Estimated Level of Effort and Fee															
TASKS		LEVEL OF EFFORT										FEE			
No.	Description	Principal \$390	Project Manager \$375	Quality Reviewer \$250	Project Engineer \$160	Staff Engineer \$140	GIS Analyst \$125	Document Specialist \$120	Accountant \$145	Project Coordinator \$110	Total Labor \$193	Labor	Direct Costs	Total	Rounded Total
Fire Infrastructure Assessment															
1	Project Management and Meetings	4	24	2	20		2		5	5	62	\$15,785	\$316	\$16,101	
2	Infrastructure Assessment	2	12	20	196		12	5			247	\$43,740	\$875	\$44,615	
Subtotal Fire Infrastructure Assessment		6	36	22	216	0	14	5	5	5	309	\$59,525	\$1,191	\$60,716	\$60,700
TOTAL, hours		6	36	22	216	0	14	5	5	5	309				
TOTAL, dollars												\$59,525	\$1,191	\$60,716	\$60,700
OPTIONAL TASKS		OPTIONAL LEVEL OF EFFORT										OPTIONAL FEE			
3	Optional Task														
	Grant Research and Review	4				76					80	\$12,200	\$244	\$12,444	
Subtotal 3 Optional Task		4	0	0	0	76	0	0	0	0	80	\$12,200	\$244	\$12,444	\$12,400
TOTAL for all Tasks (including Optional Tasks), hours		10	36	22	216	76	14	5	5	5	389				
TOTAL for all Tasks (including Optional Tasks), dollars												\$71,725	\$1,435	\$73,160	\$73,100