



San Gabriel Basin Water Quality Authority

1720 W. Cameron Avenue, Suite 100, West Covina, CA 91790 • 626-338-5555 • Fax 626-338-5775

**WQA ADMINISTRATIVE/FINANCE COMMITTEE
AND SPECIAL MEETING OF THE BOARD OF DIRECTORS
TO BE HELD ON TUESDAY, NOVEMBER 10, 2020 AT 10:00 A.M.
AT
1720 W. CAMERON AVE., SUITE 100 IN WEST COVINA, CA**

To attend the meeting please register at:

<https://attendee.gotowebinar.com/register/1513513350790291982>

After registering, you will receive a confirmation email containing information about joining the webinar.

In light of the Governor's Executive Orders N-25-20 dated March 12, 2020 and N-29-20 dated March 17, 2020 (collectively, the "Executive Order") issued in response to the Covid-19 outbreak, the WQA Board Has Suspended Application of Certain Public Meeting Requirements otherwise required under Brown Act during the term of the Executive Order, Including Restrictions and Noticing Requirements Relating to the Conduct of Teleconferenced Board Meetings .Due to the essential nature of the WQA Board Meetings in conducting Authority business, the WQA Board meeting will take place via online and teleconference. Copies of Executive Order will be made available to members of the public upon request.

Public Comments can be emailed prior to the meeting to Stephanie@wqa.com

**The Administrative/Finance Committee meeting is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board that are not assigned to the Administrative/Finance Committee may attend and participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the Committee as advisory to the Board, members of the Board who are not assigned to the Administrative/Finance Committee will not vote on matters before the Committee*

AGENDA

Committee Members: Mike Whitehead, Bob Kuhn and Mark Paulson

Liaison Member: Dave Michalko

- I. Call to Order
- II. Public Comment
- III. Discussion Regarding Wildermuth Task Order for Database and Animation Updates [enc]
- IV. Discussion Regarding Wildermuth Task Order for 3D Transport Model Needs Assessment [enc]
- V. Discussion Regarding WQA Budgeted Projects [enc]
- VI. Executive Director's Report
- VII. Adjournment



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AGENDA SUBMITTAL

To: Administrative/Finance Committee
From: Randy Schoellerman
Date: November 10, 2020
Subject: **Database and Animation Update Task Order for Wildermuth Environmental, Inc.**

Summary

Staff is requesting authorization to issue a Task Order to Wildermuth Environmental, Inc. (WEI) to update WQA's integrated groundwater database and animations for the San Gabriel Valley.

Discussion

WEI created an integrated groundwater database for WQA and developed four groundwater animations that show the historical movement of the contaminant plume in the San Gabriel Basin. This information has been helpful as a public relations tool to inform the public and elected officials about the impact the groundwater remediation efforts are having on the various contaminant plumes.

Staff is recommending issuing a Task Order to WEI not to exceed \$50,064 to update WQA's groundwater database and animations through June 2020.

Recommendation / Proposed Actions

Authorize staff to issue a Task Order to WEI not to exceed \$50,064 to update WQA's groundwater database and animations.

Attachment:

WEI Proposal to update database and animations



April 7, 2020

San Gabriel Basin Water Quality Authority
Attn: Ken Manning, Executive Director
1720 W. Cameron Ave # 100
West Covina, CA 91790

Subject: 2020 Update of the Groundwater Database for the San Gabriel Basin and Animations of Contaminant Plumes

Wildermuth Environmental, Inc. (WEI) has prepared this proposal for the San Gabriel Basin Water Quality Authority (WQA) to: (i) update its groundwater database for the San Gabriel Basin through June 2020 using HydroDaVE Managed Services (HDMS), and (ii) update four animations of the various Operable Unit (OU) contaminant plumes over the period 1990 to 2020.

Background

Pursuant to an April 5, 2018 Task Order, WEI migrated the US Environmental Protection Agency (EPA) groundwater database for the San Gabriel Basin prepared by EA Engineers (EPA database) into HDMS. In a subsequent October 31, 2018 Task Order, WEI updated HDMS with the latest EPA database, and used the data to prepare the following four water-quality animations:

- Animation of total trichloroethene and tetrachloroethene (TCE+PCE) concentrations for the Baldwin Park Operable Unit (BPOU) plume from 1990 to 2018.
- Animation of perchlorate concentrations for the BPOU plume from 1990 to 2018.
- Animation of the total contaminants of concern (total COC) for the BPOU plume, as represented by total TCE+PCE+perchlorate concentrations, from 1990 to 2018.
- Animation of total COC for all OUs in the San Gabriel Basin, as represented by total TCE+PCE+perchlorate concentrations, from 2000 to 2018.

In February 2020, the WQA requested that WEI consider the following three tasks for continued characterization of water-quality conditions in the San Gabriel Basin: 1) update the groundwater database and water-quality animations of the contaminant plumes in the San Gabriel Basin 2) project the movement of the OU plumes in the future; and 3) prepare three-dimensional visualizations of the OU plumes in their current state. This proposal is for the first task. A separate proposal will be prepared for the second and third tasks.

Scope of Work

Table 1 is a line-item cost estimate to update the WQA groundwater database for the San Gabriel Basin and use the database to update four animations of the contaminant plumes in the basin through 2020. The scope of work includes the following major tasks:

Task 1: Migrate the latest EPA database (updated through June 2020) into HDMS.

Task 2: Update three animations of the TCE+PCE, perchlorate, and total COC plumes for the BPOU through 2020.

Task 3: Update animation of total COC plumes for all OUs in the San Gabriel Basin.

Task 4: Project Management.

Task 1 - Migrate the Latest EPA Database (updated through June 2020) into HDMS

The last EPA database collected from EA Engineering and uploaded to HDMS included data through about June 2018. The objective of this task is to collect the latest EPA database from EA Engineering and upload the groundwater-quality and groundwater-level data to HDMS. EA Engineering is continually updating the EPA database with data as it becomes available from various data sources. By the beginning of November 2020, the EPA database is expected to be complete with all data in the San Gabriel Basin through June 2020. All available groundwater-quality and groundwater-level data for the period of July 2018 through June 2020 will be processed, uploaded to HDMS, and reviewed for QA/QC.

Task 2 – Update Three Animations of the TCE+PCE, Perchlorate, and Total COC plumes for the BPOU through 2020

This task includes updating the three different groundwater-quality animations previously prepared for the BPOU for the period of 1990 through 2018, showing the constituent concentrations and spatial distribution of the contaminant plume for: 1) TCE+PCE, 2) perchlorate, and 3) total COC.

To update each of the three BPOU animations, the concentration data for the contaminants at each well, for the 2.5-year period of January 2018 through June 2020, will be extracted from HDMS and compiled. A well-point shapefile will be prepared of the maximum concentration value for each contaminant over the 2.5-year period. For animations showing more than one contaminant (i.e. PCE+TCE and total COC) the sum of the normalized concentration values for each contaminant (measured concentration divided by the primary maximum contaminant level for drinking water) will be calculated. The point shapefile will be used to create a raster using ordinary kriging interpolation model in Golden Software's Surfer. The raster will be clipped based on the interpreted non-detect concentration boundary from the kriging results. An image of the rasterized plumes with the point-concentration data will be provided to WQA for review. Following this review, the rasters will be used to extend the animation of the plume concentrations from 2018 through 2020 using a linear interpolation method. Secondary information of total volume of water treated and total mass of contaminants removed for all

OUs, and groundwater elevation at the Baldwin Park Key Well will be updated through 2020. A draft animation will be provided to the WQA for review. WQA comments on the draft animation will be addressed and a final animation will be prepared and delivered to the WQA.

The preparation of each of the three animations for the BPOU includes the following subtasks:

- 2.1 - Extract concentration data from HDMS for the period January 2018 to June 2020 and prepare point shapefile of maximum concentration data
- 2.2 - Prepare raster from point shapefile and clip on non-detect boundaries
- 2.3 - Prepare image of draft raster with the data points and send to WQA Staff for review, and edit if necessary
- 2.4 - Update animation of the plume through 2020 based on the raster prepared in subtask 2.3
- 2.5 - Compile and format updated secondary data/information for the animation
- 2.6 - Prepare draft animation and send to WQA for review and comment
- 2.7 - Incorporate WQA comments, edit as necessary, and prepare final animation

Task 3 – Update the Animation of Total COC Plumes for all OUs in the San Gabriel Basin through 2020

This task includes updating the one groundwater-quality animation previously prepared for the entire San Gabriel Basin for the period of 2000 to 2018 for the total COC contaminant plumes for all OUs.

To update the basin-wide animation, an updated raster of the total COC plume for the five other OUs in the San Gabriel Basin will be prepared. The same methods and steps described above to prepare the BPOU plume animations will be used to prepare the basin-wide animation.

The preparation of the animation includes the following subtasks:

- 3.1 - Extract concentration data from HDMS for the period January 2018 to June 2020 and prepare point shapefile of maximum concentration data
- 3.2 - Prepare raster from point shapefile and clip on non-detect boundaries
- 3.3 - Prepare image of draft raster with the data points and send to WQA Staff for review, and edit if necessary
- 3.4 - Update animation of the plumes through 2020 based on the raster prepared in subtask 3.3
- 3.5 - Compile and format updated secondary data/information for the animation
- 3.6 - Prepare draft animation and send to WQA for review and comment
- 3.7 - Incorporate WQA comments, edit as necessary, and prepare final animation

Task 4 – Project Management

The objective of this task is to manage project staffing, schedule, and budget and coordinate with the WQA staff on project status. The project management task assumes a project duration of five months (November 2020 through March 2021).

Fee Estimate and Schedule

The proposed fee estimate is shown in Table 1 as a line-item work-breakdown structure with cost estimates. The fee estimate was developed using WEI's 2020 rate schedule shown in Table 2. The total fee to execute the project \$50,064.

Task 1 can start in November 2020 once EA Engineers has provided an updated EPA database through June 2020. Once Task 1 is completed, Task 2 and Task 3 will commence with the goal of completing all final animations within five months of project commencement.


We appreciate the opportunity to assist the WQA on this important manner. Please contact us at 949.600.7520 if you have any questions or concerns.

Very truly yours,

Wildermuth Environmental, Inc.



Veva Weamer
Supervising Scientist



Eric Chiang, PhD
Principal Engineer

Encl: Table 1: Line-Item Work Breakdown Structure and Cost Estimate
Table 2: WEI Time and Material Rate Sheet for 2020

Table 1
Line-Item Work Breakdown Structure and Cost Estimates
2020 Update of the Groundwater Database for the San Gabriel Basin and Animations of Contaminant Plumes

Description	Labor (person days)						Other Direct Charges				Total Project Costs		
	Principal III	Principal I	Supervising I	Staff I	Task Rep Multiplier	Total Labor	Travel	Annual License	Total ODCs		Subtask	Task	
									Subtask	Task			
Task 1 - Migrate the Latest EPA Database (updated through June 2020) into HDMS													
1.1 Collect, review, and query the EPA San Gabriel Database compiled by EA Engineering		0.5	1		1	1.50	\$2,964						\$2,964
1.2 Process, upload, and perform QA/QC of groundwater-quality data through June 2020			0.75	2.75	1	3.50	\$4,976						\$4,976
1.3 Process, upload, and perform QA/QC of groundwater-level data through June 2020			0.5	1.50	1	2.00	\$2,888						\$2,888
Task 2 - Update Three Animations of the TCE+PCE, Perchlorate, and Total COC plumes for the BPOU through 2020													
2.1 Extract concentration data from HDMS for the period January 2018 to June 2020 and prepare point shapefile of maximum concentration data			0.10	0.25	3	1.05	\$1,540						\$1,540
2.2 Prepare raster from point shapefile and clip on non-detect boundaries			0.20	0.70	3	2.70	\$3,852						\$3,852
2.3 Prepare image of draft raster with the data points and send to WQA Staff for review, and edit if necessary			0.10	0.25	3	1.05	\$1,540						\$1,540
2.4 Update animation of the plume through 2020 based on the raster prepared in subtask 2.3		0.75	0.10	0.20	3	3.15	\$6,080						\$6,080
2.5 Compile and format updated secondary data/information for the animation			0.50		1	0.50	\$956						\$956
2.6 Prepare draft animation and send to WQA for review and comment	0.10	0.25	0.10		3	1.35	\$2,862						\$2,862
2.7 Incorporate WQA comments, edit as necessary, and prepare final animation	0.10	1.00	0.25		1	1.35	\$2,819						\$2,819
Task 3 - Update the Animation of Total COC Plumes for all OUs in the San Gabriel Basin through 2020													
3.1 Extract concentration data from HDMS for the period January 2018 to June 2020 and prepare point shapefile of maximum concentration data			0.10	0.25	5	1.75	\$2,566						\$2,566
3.2 Prepare raster from point shapefile and clip on non-detect boundaries			0.20	0.70	5	4.50	\$6,420						\$6,420
3.3 Prepare image of draft raster with the data points and send to WQA Staff for review, and edit if necessary			0.10	0.25	5	1.75	\$2,566						\$2,566
3.4 Update animation of the plumes through 2020 based on the raster prepared in subtask 3.3		1.00	0.10	0.30	1	1.40	\$2,682						\$2,682
3.5 Compile and format updated secondary data/information for the animation			0.25		1	0.25	\$478						\$478
3.6 Prepare draft animation and send to WQA for review and comment		0.25	0.20		1	0.45	\$908						\$908
1C.7 Incorporate WQA comments, edit as necessary, and prepare final animation		0.75	0.25		1	1.00	\$2,056						\$2,056
Task 4: Project Management													
4.1 Project Management			0.20		5.00	1.00	\$1,912						\$1,912
Total Project	0.4	6.5	8.6	14.75		30.25							\$0
													\$50,064

Table 2
WEI Time and Material Rate Sheet for 2020

Staff Type	Hourly Rate
Principal Engineer III/Scientist III	\$296
Principal Engineer II/Scientist II	\$278
Principal Engineer I /Scientist I	\$263
Supervising Engineer/Scientist II	\$245
Supervising Engineer/Scientist I	\$239
Senior Engineer II/Scientist II	\$214
Senior Engineer I/Scientist I	\$201
Staff Engineer/Scientist II	\$174
Staff Engineer/Scientist I	\$161
Database Manager	\$239
Technical Editor	\$137
Field Technician	\$87
Admin Assistant	\$137
Expert Witness ¹	\$593

¹ Preparation of testimonial material is billed at the normal hourly rate. Witness preparation, depositions, and testimony are billed at the expert witness rate - with a minimum charge of one day.

a Mileage for passenger vehicles will be billed at the IRS rate.

Subject to annual adjustments.

b Other project-related travel costs will be passed through.



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DRAFT - AGENDA SUBMITTAL

To: Administrative/Finance Committee
From: Randy Schoellerman
Date: November 10, 2020
Subject: **Needs Assessment Task Order for Wildermuth Environmental, Inc.**

Summary

Staff is requesting authorization to issue a Task Order to Wildermuth Environmental, Inc. (WEI) to conduct a needs assessment as a preliminary step to creating a 3D groundwater flow-and-transport model of the basin.

Discussion

Staff is considering the development of a 3D groundwater flow-and-transport model that will allow for the projection of plume movements and for the generation of 3D visualization images and animations. The effort requires a significant cost estimated at \$700K - \$800K and staff plans to utilize future grants opportunities to implement the work. However, staff is recommending moving ahead with a needs assessment to refine and finalize the necessary scope of work that would provide the basis for a grant application. WEI has provided the attached proposal for \$39,936 to complete the needs assessment.

Recommendation / Proposed Actions

Authorize staff to issue a Task Order to WEI not to exceed \$39,936 to conduct a needs assessment for a 3D groundwater flow-and-transport model of the basin.

Attachment:

WEI Proposal for Needs Assessment



April 14, 2020

Memorandum

TO: San Gabriel Basin Water Quality Authority

FROM: Wildermuth Environmental Inc.

RE: Outline of proposed scope of work, and cost estimate range, for projection of movement of the Operable Unit Plumes in the future and preparing three-dimensional visualizations of the OU plumes, and recommended next steps.

Background and Purpose

The San Gabriel Basin Water Quality Authority (WQA) has asked Wildermuth Environmental, Inc. (WEI) to consider the necessary work to: (1) project the movement of the Operable Unit (OU) plumes in the future; and (2) prepare three-dimensional (3D) visualizations and animation of the OU plumes. The general scope of work described below is WEI's recommendation for the best approach to accomplish the two tasks.

Scope of Work

The recommended approach is to develop a 3D groundwater flow-and-transport model that will allow for the projection of plume movement and for the generation of 3D visualization images and animations. The proposed scope of work would include the following major tasks:

- Data Collection and Preparation of Hydrologic Database and Library of Reports
- Describe Model Area and Prepare Basin Setting (conceptual model of the San Gabriel Basin)
- Construct and Calibrate a Numerical Flow Model
- Construct a Numerical Solute-Transport Model and Prepare Water Quality Simulations
- Stakeholder Engagement [optional]
- Project Administration and Management

The scope includes an optional task for stakeholder engagement to educate all interested stakeholders in the San Gabriel Basin on the robust process to develop the groundwater flow and transport model, and validate the efficacy of the model as a tool to project movement of the OU plumes and generate 3D visualizations of the plumes.



Three technical memorandums (TMs) will be prepared as part of the model development process to document the work. These TMs include:

- TM 1 - Hydrogeologic Conceptual Model
- TM 2 - Construction and Calibration of the Groundwater Flow-and-Transport Model for San Gabriel Basin
- TM 3 - Model Simulation Results

Fee Estimate and Schedule

WEI's initial estimate of the cost to perform this proposed scope of work ranges from \$700,000 to \$800,000—the range primarily dependent the availability of data and the utility of past modeling work. The cost will increase if significant stakeholder engagement is desired by the WQA. The work is assumed to be completed over a two -year period.

For fiscal year 2020/21, WEI recommends that the WQA consider a fee of \$39,936 to: 1) complete a needs assessment to refine, finalize, and document the necessary scope of work; and 2) perform the first implementation tasks of the scope of work, which is data collection and preparation of a hydrologic database and library of reports. Table 1 is a line-item scope of work and cost estimate to perform these steps and includes: Task 1 - Prepare Needs Assessment for the Development and Implementation of the Model, and Task 2 - Collect Data and Prepare Hydrologic Database and Library of Reports. Task 1 can start immediately upon notice to proceed and can be completed within two months. Task 2 can start after Task 1 is completed upon notice to proceed and can be completed within three months.

Table 1
Line-Item Work Breakdown Structure and Cost Estimates
*Prepare Needs Assessment and Perform Initial Steps to Develop and Implement
a 3D Groundwater Flow-and-Transport Model of the San Gabriel Basin*

Description	Labor (person days)						Other Direct Charges				Total Project Costs		
	Principal III	Principal II	Principal I	Supervising I	Staff I	Task Rep Multiplier	Total Labor	Travel	Annual License	Total ODCs		Subtask	Task
										Subtask	Task		
Task 1 - Prepare Needs Assessment for the Development and Implementation of the Model							\$21,960			\$0			\$21,960
1.1 Define the needs and objectives of the Model	0.15		0.25	0.65		1	1.05	\$2,116					\$2,116
1.2 Research existing work that can be used to support the development of the Model	0.2		1	1	0.30	1	2.50	\$4,876					\$4,876
1.3 Prepare a line-item scope and cost estimate to develop the Model and perform water-quality simulations	0.5		2	1.6		1	4.10	\$8,451					\$8,451
1.4 Prepare a technical memorandum to document the Needs Assessment	0.3		1	1.6	0.50	1	3.40	\$6,518					\$6,518
Task 2 - Collect Data and Prepare Hydrologic Database and Library of Reports ¹							\$17,975			\$0			\$17,975
2.1 Collect and review historical reports on the San Gabriel Basin			1.00	1.00	0.60	1	2.60	\$4,789					\$4,789
2.2 Collect, compile, and review GIS shapefiles (topography, soil type, land use, hydrology, water use, water disposal, etc.)		0.20		0.50	1.30	1	2.00	\$3,075					\$3,075
2.3 Collect, compile, review and upload well borehole lithology		0.60		1.20	2.60	1	4.40	\$6,978					\$6,978
2.4 Prepare project GIS and map template		0.40		0.50	1.00	1	1.90	\$3,134					\$3,134
Total Project	1.15		5.25	8.0456	6.3		21.95				\$0		\$39,936

Notes:

1-These are the first steps towards the preparation of the hydrogeologic conceptual model of the San Gabriel Basin



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AGENDA SUBMITTAL

To: Administrative/Finance Committee
From: Randy Schoellerman
Date: November 10, 2020
Subject: **WQA Budgeted Projects**

Summary

Staff will provide a discussion of the recent and anticipated budgeted projects.

Recommendation / Proposed Actions

None - discussion item only.