From: Rangi, Aparjeet@Waterboards
To: Karkoski, Joe@Waterboards; Tosney, Meghan@Waterboards; Reeves, Robert@Waterboards; Pavelchik, Matthew@Waterboards; Amini, Nick@Waterboards; Sturdivant, Ann@Waterboards; Morales, Ozzie@Waterboards; Gee, Maile@Waterboards; Behrooz, Mehrnoosh@Waterboards; Bill Hunt (WHunt@ocwd.com); Mark, Dave; Shaffer, Caleb; Herndon, Roy; Pacifico, Oliver@Waterboards; McCarthy, Sean@Waterboards; Sandoval, Angela; DBolin@ocwd.com; Hiett, Richard
Cc: Saremi, Kamron@Waterboards; Law, Jessica@Waterboards; Saputo, Carolyn@Waterboards; Hoang, Kim; Clements, Mindy; Yolanda.Garza@dtsc.ca.gov; Stebbins, Michele@Waterboards; Cheung, Debbie@Waterboards; Yen, Chia Rin@DTSC; Bernhardt, Carl@Waterboards; Jahn-Bull, Valerie@Waterboards; Olson-Martin, Nancy@Waterboards; Williams, Ken@Waterboards
Subject: RE: Prop 1 OCWD- NB and SB RI/FS Meeting
Date: Monday, September 11, 2017 7:11:43 AM
Attachments: OCWD_meeting_agenda_SB_NB_EW-1_091317.pdf
OCWD_NBGPP_37510_9-11-2017_Clean_Copy.docx
D1712505_Orange County Water District_South-Basin_CLEAN COPY.DOCX

Greetings,

Please find attached Orange County Water District Prop 1 North Basin and South Basin draft grant agreements scope of work that will be discussed in the Wednesday (9/13) meeting along with the agenda. We are also planning to discuss Orange County Prop 1 EW-1 project, revised draft grant agreement scope of work for EW-1 would be distributed later today.

Thanks
Aparjeet

Aparjeet Rangi, P.E.
Water Resource Control Engineer
State Water Resources Control Board-Division of Financial Assistance
1001 I Street, 17th Floor
Sacramento, CA 95814
Office: (916) 319-8255
Email: aparjeet.rangi@waterboards.ca.gov

Water Boards

CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.

-----Original Appointment-----
From: Rangi, Aparjeet@Waterboards
Sent: Thursday, July 20, 2017 3:06 PM
To: Rangi, Aparjeet@Waterboards; Karkoski, Joe@Waterboards; Tosney, Meghan@Waterboards; Reeves, Robert@Waterboards; Pavelchik, Matthew@Waterboards; Amini, Nick@Waterboards; Sturdivant, Ann@Waterboards; Morales, Ozzie@Waterboards; Gee, Maile@Waterboards; Behrooz,

Mehrnoosh@Waterboards; Bill Hunt (WHunt@ocwd.com); Mark, Dave; Shaffer.caleb@Epa.gov; Herndon, Roy; Pacifico, Oliver@Waterboards; McCarthy, Sean@Waterboards; Sandoval.angela@Epa.gov; DBolin@ocwd.com; Hiett, Richard
Cc: Saremi, Kamron@Waterboards; Law, Jessica@Waterboards; Saputo, Carolyn@Waterboards; Hoang, Kim; Clements, Mindy; Yolanda.Garza@dtsc.ca.gov; Stebbins, Michele@Waterboards; Cheung, Debbie@Waterboards; Yen, Chia Rin@DTSC; Bernhardt, Carl@Waterboards; Jahn-Bull, Valerie@Waterboards; Olson-Martin, Nancy@Waterboards; Williams, Ken@Waterboards
Subject: Prop 1 OCWD- NB and SB RI/FS Meeting
When: Wednesday, September 13, 2017 9:30 AM-4:30 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Orange County Water District, 18700 Ward Street, Fountain Valley

All,

Place hold the dates for face to face meeting with Orange County, RB, DTSC, EPA, and State Board for Prop 1 NB and SB RI/FS Projects. We will send out the Prop 1 grant agreement scope of work and agenda before the meeting.

Meeting Schedule:
September 13, 2017:
9:30 – 11:30 SB-RI/FS Prop 1 Project discussion

12:30 – 4:00 NB-RI/FS Prop 1 Project discussion

Meeting Location:
Orange County Water District
18700 Ward Street
Fountain Valley, CA

Thanks
Aparjeet

Aparjeet Rangi, P.E.
Water Resource Control Engineer
State Water Resources Control Board-Division of Financial Assistance
1001 I Street, 17th Floor
Sacramento, CA 95814
Office: (916) 319-8255
Email: aparjeet.rangi@waterboards.ca.gov

<< OLE Object: Picture (Device Independent Bitmap) >>

CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.

AGENDA

Orange County Water District (OCWD) – SB and NB Prop 1 Project Meeting

September 13, 2017

9:30 – 9:35 Introductions

9:35 – 11:30 South Basin (SB) Scope of Work

*indicates tasks that were not part of OCWD's initial proposal

1. Project Management
   - Grant Manager Notifications

2. General Compliance*
   - ❖ Monitoring and Reporting Plan (MRP) or Sampling and Analysis Plan (SAP) – consists of:
     - Monitoring Plan
       - Monitoring wells samples, frequency, and chemical analysis
       - Coordination with Regional Board
   - ❖ Quality Assurance Project Plan (QAPP) – can be used for multiple projects
   - ❖ Geotracker – upload the following:
     - Project boundaries to be setup in Geotracker
     - Monitoring Wells data collection during Remedial Investigation activities
     - RI/FS deliverables
     - Modeling or other reports that support the project

3. Permitting

4. Technical Advisory Committee (TAC)*
   - ❖ Review of technical deliverables by TAC
   - ❖ TAC roles outlined in Memorandum of Understanding (MOU) (see below)
   - ❖ TAC to include Regional Board, Division of Financial Assistance, Division of Drinking Water, possibly other regulatory agencies

5. Stakeholder Advisory Group (SAG)*
   - ❖ Conduct SAG meetings to solicit feedback and comments

6. MOU*
   - ❖ OCWD can have one MOU for multiple projects

7. Remedial Investigation Workplan
   - ❖ Update to existing modeling, to aid in assessment of project performance
   - ❖ State and Regional Board staff are in the process of reviewing existing modeling report

8. Remedial Investigation and Reporting
   - ❖ Submit RI to TAC and Grant Manager

9. Feasibility Study Workplan
   - ❖ Update/Revise as necessary based on results of the RI

10. Feasibility Study and Reporting
    - ❖ Submit FS to TAC and Grant Manager.

11. Interim Remedial Action Plan

    - ❖ Submit IRAP and Responsiveness Summary to TAC and Grant Manager.

12. Environmental Compliance

    - ❖ Final CEQA

13. Public Outreach

    - ❖ At least 1 public workshop/meeting with relevant non-governmental organizations and disadvantaged community representatives prior to finalizing FS and IRAP

12:30 – 2:45 North Basin (NB) Scope of Work

1. Briefly review structure of proposed scope of work similar to South Basin, but more closely mirrors the scope of the USEPA Settlement Agreement

2. Discussion on additional wells proposed by Regional Board (not currently part of the USEPA RI/FS Workplan/scope)

2:45 – 3:00 Budget and Match (North Basin and South Basin)

- Revised budget for NB and SB and match amount associated with each
  - Consider wells proposed by Regional Board not included in the USEPA RI/FS project (Access agreement, well install, survey, bore logs, well development, loggers, oversight, etc.).
  - May incorporate reasonable additional cost for the tasks not initially included in OCWD's budget
    - QAPP
    - Geotracker
    - TAC
    - MOU
    - SAG
    - Public Outreach

3:00 – 3:45 Orange County Comments and Discussion on EW-1

- Regional Board proposed monitoring wells for Monitoring and Reporting Plan (wells, analysis, frequency, etc). EW-1 evaluation and plume monitoring
- Discuss OCWD's previous concerns and comments on EW-1 scope of work
- Discussion on OCWD revised budget:
  - Revised budget includes funding request for 20 years for updating O&M and MRP plan

3:45 – 4:00 Next Steps

- Provide any proposed comments/changes to the Scopes of Work (due date)
- Provide revised budget and schedule for deliverable items (due date)
- MOU Development
- Reach out to potential TAC/SAG members
- Others?

Draft Scope of Work – Orange County Water District North Basin RI/FS Project Sections A-1 through A-3

GA# D1712504 GM: Aparjeet Rangi PA: Carolyn Saputo

A-1. Completion Dates

The Work Completion Date is established as [6/30/2020]. Work occurring after the Work Completion Date, including corrective actions, is not eligible for reimbursement with Grant Funds and cannot be paid for using Match Funds.

A-2. Purpose

This grant is for the benefit of the Recipient. This grant is for the purpose of conducting a remedial investigation and feasibility study by installing monitoring wells, performing groundwater modeling and collecting groundwater samples to address data gaps in the North Basin of Orange County and producing a Remedial Investigation/Feasibility Report (RI/FS) that will allow evaluation of permanent remedies. The Recipient's receipt of funding under this Agreement is not a commitment to and does not obligate the State Water Board to provide funding for any eventual construction/implementation project. This scope of work is based on work being performed per the Administrative Settlement Agreement (United State Environmental Protection Agency [USEPA] Docket No. 2016-03) between Orange County Water District and USEPA for Remedial Investigation/Feasibility Study.

A-3 Scope of Work

1. Project Management

   1.1 Provide all technical and administrative services as needed for Project completion; monitor, supervise, and review all work performed; and coordinate budgeting and scheduling to ensure the Project is completed within budget, on schedule, and in accordance with approved procedures, applicable laws, and regulations.

   1.2 Notify the Grant Manager at least fifteen (15) working days in advance of upcoming meetings, workshops, trainings and fieldwork or construction activities.

   1.3 Develop and update appropriately a detailed Project schedule using a format provided by the Grant Manager, including key Project milestones, and submit to the Grant Manager.

   1.4 Conduct periodic and final site visits with the Grant Manager and other staff designated by the Division.

   1.5 Conduct pre-, during, and post-construction photo monitoring for monitoring wells installed at the Project site and submit to the Grant Manager.

2. General Compliance Requirements/Project Effectiveness and Performance

   2.1 Submit Global Positioning System (GPS) information for project site(s) and monitoring well location(s) for this Project. Submittal requirements for GPS data are available at: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/grant_info/docs/gps.pdf

DRAFT

2.2 Prepare a Sampling and Analysis Plan (SAP), which consists of a Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP), and submit to the Technical Advisory Committee for comment and the Grant Manager for approval. The SAP should be in accordance with the USEPA Settlement Agreement. All results of the sampling, tests, modeling, or other data (including raw data) generated by Orange County or on Orange County behalf, shall be made available to the TAC. Any costs related to monitoring data collected prior to and not supported by the approved SAP will not be reimbursed. The SAP may be submitted as separate documents or in one (1) report and shall include the following:

2.2.1 An FSP that includes the following:

2.2.1.1 Purpose: Describe the purpose of the SAP. The purpose of the SAP shall include gathering information necessary to address data gaps during the remedial investigation.

2.2.1.2 Project Area: Provide a map and narrative description of the plume delineation, location of the Project, and location of current and proposed monitoring wells.

2.2.1.3 Sampling Plan: Describe the methodology used and selection of monitoring locations, the frequency of monitoring, the analytical methods that will be utilized and the process that will be used to make any necessary changes.

2.2.1.4 Field Procedures: Provide a description of field procedures including sample collection methods, equipment decontamination, sample identification and handling, and documentation procedures.

2.2.2 A Quality Assurance Project Plan (QAPP), which shall be prepared, maintained, and implemented in accordance with the United States Environmental Protection Agency's (USEPAs) QAPP guidance documents (EPA QA/G-5 and EPA QA/R-5). Water quality monitoring data includes physical or chemical monitoring of any groundwater. Submit the QAPP to the Grant Manager for approval. Any costs related to monitoring data collected prior to and not supported by the approved QAPP will not be reimbursed. A template for the USEPA QAPP is available from the Grant Manager.

2.2.2.1 Upload the final approved document(s) in pdf format to the Financial Assistance Application Submittal Tool (FAAST) system.

2.4 Prepare and upload all groundwater analytical data collected in accordance with the SAP to the State Water Board's GeoTracker/GAMA system in Electronic Deliverable Format. Groundwater samples include: monitoring well samples, borehole samples, piezometer samples, and samples from drinking water wells. Locational information for these sampling points shall be submitted using the Geo_XY file. Contact the Grant Manager to obtain a Global ID prior to collecting samples.

3. Permitting and Environmental Compliance

3.1 Obtain all public agency approvals, entitlements, or permits required for Project implementation before field work begins. If the Project is carried out on lands not owned by the Recipient, the Recipient must obtain adequate rights of way for the

DRAFT

useful life of the Project. Submit a list and signed copies of such approvals, entitlements or permits to the Grant Manager.

3.2 Complete documentation required under the California Environmental Quality Act (CEQA). Take all required steps to prepare, circulate, and certify the required CEQA document(s). Provide the final CEQA document to the Grant Manager.

4. Technical Advisory Committee (TAC)

4.1 Establish a TAC comprised of the Division, the State Water Board Division of Drinking Water (DDW), the Regional Water Board, the Department of Toxic Substance Control and the United States Environmental Protection Agency (USEPA). Submit the final list of TAC members, their roles and responsibilities, and affiliations to the Grant Manager for review and approval.

4.2 Convene a kickoff meeting to establish TAC goals and objectives, formalize roles, and create a schedule for future meetings. Submit a summary of the kickoff meeting to the Grant Manager.

4.3 Conduct additional TAC meetings in accordance with schedule developed in Item 4.2 and submit the agendas, meeting minutes, and sign-in sheets for each meeting to the Grant Manager.

5. Memorandum of Understanding

5.1 Develop and execute a Memorandum of Understanding (MOU) with the State Water Board, the Regional Water Board. The MOU will identify the forum and processes for discussion and resolution of issues related to monitoring, modeling and implementation of the project. The MOU shall identify the respective roles and responsibilities of the signatories to the MOU. Submit the executed MOU to the Grant Manager.

6. Remedial Investigation/Feasibility Study Workplan

6.1 Prepare a Remedial Investigation/Feasibility Study (RI/FS) Workplan and submit to the TAC for comment and the Grant Manager for approval. The RI/FS Workplan shall include:

6.1.1 A description of the objectives of the remedial investigation and the associated tasks and deliverables necessary to address a significant data gap(s) in the Project area.

6.1.2 Identification of the proposed Project area.

6.1.3 A description of the monitoring well locations and the rationale for addressing data gaps in the proposed Project area. Groundwater sampling data must be provided that adequately supports the selection of the proposed monitoring well locations and supports the purpose of the Project. This data must be uploaded to GeoTracker as outlined in Item 2.4.

6.1.3.1 Proposal to install up to **XX** monitoring wells in XX well-cluster locations.

6.1.4 A description of the objectives and the steps necessary to support the technical and cost analyses of alternatives, and support the selection of a

cost-effective alternative that will provide prevention and/or cleanup of groundwater contamination in the Project area.

6.1.5 List of Remedial Action Objectives to be addressed.

6.1.6 An Applicable or Relevant and Appropriate Requirements (ARAR's) analysis to ensure the Project is in compliance with State or Federal regulatory requirements.

6.1.7 A Baseline Human Health Risk Assessment Report that identifies threats to human health as a result of potential exposure to contaminated groundwater in the Project area using existing data and information from the remedial investigation.

7. Remedial Investigation and Reporting

Objective: Produce information necessary to design and implement build a groundwater remediation project to prevent or cleanup contamination of groundwater that serves or has served as a source of drinking water.

7.1 Conduct a remedial investigation in the Project area in accordance with the approved RI/FS Workplan in Item 6.1.

7.1.1 Submit a Well Completion Report, including well completion logs, to the TAC and the Grant Manager.

7.1.2 Perform groundwater sampling of new and existing monitoring wells and conduct analytical sampling and measure water levels pursuant to the approved SAP in Item 2.2.

7.1.3 Submit any proposed changes from the approved RI/FS Workplan in Item 6.1 that arise during the investigation to the Grant Manager for approval.

7.2 Prepare a Remedial Investigation Report that summarizes the activities conducted in Items 7.1 and includes the results of each activity. Submit the Remedial Investigation Report to the TAC for comment and the Grant Manager for review and approval.

The Remedial Investigation Report must include, at a minimum, the following:

7.2.1 Summary of Project area's site history, past investigations, and the purpose and scope of the recent investigation.

7.2.2 Summary of field work activities completed, methods used, and supporting documentation including: well construction, well development, water level measurement (well construction diagram(s) and field notes) and soil and/or groundwater sampling (field notes).

7.2.3 Findings of the investigation completed by the Grantee and supporting documentation including: lithology (well logs and geologic cross-sections), analytical results (laboratory data sheets and chain-of-custody sheets), water levels (table including date of water level measurement, depths to groundwater, and groundwater elevations), groundwater gradient and flow direction and comparison to regional gradient and flow direction (groundwater contour map, gradient calculation).

DRAFT

7.2.4 Evaluation of data collected by the Grantee and by others in the Project area and provide an assessment of the nature and extent of contamination (contaminant plume maps, time-series plots for identified contaminants of concern).

7.2.5 Conclusions identifying any contamination found and/or suspected source of contamination, if possible.

7.2.6 Identification of any further investigations necessary in the Project area or data gaps that should be addressed prior to development of the Feasibility Study.

7.2.7 Description of the quality assurance and quality control procedures implemented during the investigation and the results (Quality Control sample identification, field blank analyses, comparison of duplicate sample results).

8. Groundwater Flow Modeling and Report

8.1 Submit an updated Groundwater Flow Modeling (Modeling) Refinement Report to the TAC and the Grant Manager for review and comment. The Modeling Refinement Report will serve as an update to the previously submitted Modeling Report for the Project area, dated October 6, 2016, and include the following:

8.1.1 The Modeling Refinement Report that include updates to the estimated capture zone, particle tracking analysis, model calibration, sensitivity analysis and pumping rates that are necessary to achieve remedial action objectives and includes data collected during Remedial Investigation to adequately assess the Groundwater flow. The model shall be calibrated over a wide range of hydrogeological conditions and should have the capability to simulate transient conditions in three dimensions. The modeling should be based on EPA guidance document "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA/600/R-08/003, January 2008."

8.1.2 Address comments received from the TAC and Grant Manager, if applicable, and submit the revised Modeling Report to the TAC for review and the Grant Manager for approval.

9. Feasibility Study and Reporting

Objective: Based on the Remedial Investigation Report, evaluate and develop remedial alternatives that prevent or cleanup contamination of groundwater that serves or has served has a source of drinking water.

9.1 Conduct a feasibility study in the Project area in accordance with the approved RI/FS Workplan in Item 6.1.

9.2 Prepare and submit a Risk Assessment Technical Memorandum to the TAC for comment and the Grant Manager for review and approval.

9.3 Prepare and submit an ARAR's Technical Memorandum to the TAC for comment and the Grant Manager for review and approval.

DRAFT

9.4 Prepare and submit a Remedial Alternatives Identification and Screening Technical Memorandum to the TAC for comment and the Grant Manager for review and approval.

9.5 Prepare and submit a Remedial Alternatives Evaluation Technical Memorandum to the TAC for comment and the Grant Manager for review and approval.

9.6 Prepare a Feasibility Study Report that summarizes the activities conducted in Item 6.1 and includes the results of each activity, and incorporates information from the Technical Memorandums completed per Items 9.2 through 9.4. Submit the Feasibility Study Report to the TAC for comment and the Grant Manager for review and approval.

The Feasibility Study Report must include, at a minimum, the following:

9.6.1 Summary of the Project area's history, geology, hydrogeology, surface water, local land use, previous investigations, and remedial actions.

9.6.2 Summary of the nature and extent of constituents of concern (COCs) in the impacted media (e.g., soils, groundwater, surface water, etc.) including types of contaminants, concentrations detected, and vertical and lateral extent of the contamination.

9.6.3 Summary of the contaminant properties and transport based on soil and aquifer properties.

9.6.4 Proposed remedial action objectives that the future proposed implementation project will achieve.

9.6.5 Description of the remedial action alternatives.

9.6.6 Evaluation of the remedial action alternatives.

9.6.7 Determine the need for treatability studies and additional investigations in the Project area.

9.6.8 Estimated total life cycle costs and estimated schedule for each cleanup alternative evaluated.

9.6.9 Description of the rationale for recommending the preferred alternative.

10. Stakeholder Outreach and Community Involvement

10.1 Develop outreach materials including flyers, posters, brochures, and advertisements, and update the website and associated social media web pages to include Project progress and outcomes. Provide copies of the outreach materials and web links to the Grant Manager.

10.2 In coordination with USEPA Community Involvement Activities, conduct a minimum of one (1) public workshop, inviting relevant stakeholders, including non-governmental organizations and disadvantaged community representatives, prior to finalization of the feasibility study in Item 9.0. Submit the workshop materials, sign-in sheet(s), and photo documentation of the meeting workshop to the Grant Manager.

A-4. Disclosure.

DRAFT

The Recipient shall include the following disclosure statement in any document, written report, or brochure prepared in whole or in part pursuant to this Agreement:

> "Funding has been provided in full or in part through an agreement with the State Water Resources Control Board using funds from Proposition 1. The contents of this document do not necessarily reflect the views and policies of the foregoing, nor does mention of trade names or commercial products constitute endorsement or recommendation for use."

A-5. Reporting.

(a) Progress Reports. The Recipient shall submit quarterly progress reports, using a format provided by the Grant Manager, within forty-five (45) days following the end of the calendar quarter (March, June, September, and December) to the Grant Manager. Progress Reports shall provide a brief description of activities that have occurred, milestones achieved, monitoring results (if applicable), and any problems encountered in the performance of the work under this Agreement during the applicable reporting period. Reporting shall be required even if no grant-related activities occurred during the reporting period. The Recipient shall document all activities and expenditures in progress reports, including work performed by contractors.

(b) As Needed Information or Reports. The Recipient agrees to provide expeditiously, during the term of this Agreement, such reports, data, and information as may be reasonably required by the Division, including but not limited to material necessary or appropriate for evaluation of the funding program or to fulfill any reporting requirements of the state or federal government.

(c) Annual Progress Summaries. The Recipient shall prepare and provide an Annual Progress Summary, using a format provided by the Grant Manager, annually by November 15 that covers the time period from October 1 of the previous year through September 30 of the current year to the Grant Manager. The summary must be no more than five (5) pages, and shall include pictures as appropriate. The Recipient shall upload an electronic copy of the Annual Progress Summary in pdf format to the FAAST system (available at https://faast.waterboards.ca.gov/). The summary shall include the following:

(1) A summary of the conditions the Project is meant to alleviate, the Project's objective, the scope of the Project, and a description of the approach used to achieve the Project objective.

(2) A summary of the progress made to date, significant milestones achieved, and the current schedule of completing the Project.

(d) Final Reports. At the conclusion of the Project, the Recipient must submit the following to the Grant Manager:

(1) Draft Final Project Report. Prepare and submit to the Grant Manager, for comment, a draft Final Project Report in a format provided by the Grant Manager.

(2) Final Project Report. Prepare a Final Project Report that addresses, to the extent feasible, comments made by the Grant Manager on the draft Final Project Report. Submit one (1) reproducible master copy and an electronic copy of the final. Upload an electronic copy of the final report in pdf format to the FAAST system.

(3) Final Project Summary. Prepare a brief summary of the information contained in the Final Project Report, using a format provided by the Grant Manager, and include accomplishments, recommendations, and lessons learned, as appropriate. Upload an electronic copy of the Final Project Summary in pdf format to the FAAST system.

A-6. Project Schedule

The dates in the "Estimated Due Date" column of this Schedule may be adjusted as necessary during the Disbursement Period with Grant Manager approval. However, all work or submittals must be achieved with relevant submittals approved by the Division prior to the Work Completion Date, and the final Disbursement Request submitted, prior to the Final Disbursement Request Date set forth in Exhibit B.

ITEM	DESCRIPTION OF SUBMITTAL	CRITICAL DUE DATE	ESTIMATED DUE DATE
EXHIBIT A-3 PROJECT-SPECIFIC SCOPE OF WORK			
1.	Project Management		
1.2	Notification of Upcoming Meetings, Workshops, and Trainings		Ongoing
1.3	Detailed Project Schedule	30 Days After Execution	
1.4	Periodic and Final Site Visits		As Needed
1.5	Pre-, During, and Post-Construction Photos		Ongoing
2.	General Compliance Requirements/Project Effectiveness and Performance		
2.1	GPS Information		DATE
2.2	Sampling and Analysis Plan (SAP)	DATE	
2.3	Quality Assurance Project Plan (QAPP)	DATE	
3.	Permitting and Environmental Compliance		
3.1	Public Agency Approvals, Entitlements, or Permits		DATE
3.2	California Environmental Quality Act (CEQA)		
4.	Technical Advisory Committee		
4.1	List of TAC Members, Roles and Responsibilities, and Affiliations		DATE
4.2	Summary of the Kickoff Meeting		DATE
4.3	Agendas, Meeting Minutes, and Sign-in Sheets		Ongoing
5.	Memorandum of Understanding (MOU)		
5.1	Executed MOU		DATE
6.	Remedial Investigation and Feasibility Study (RI/FS)		
6.1	RI/FS Workplan		DATE
7.	Remedial Investigation		
7.2	Remedial Investigation Report		DATE
8.	Groundwater Flow Modeling		
8.1	Groundwater Modeling Refinement Report		DATE
9.	Feasibility Study and Reporting		
9.2	Risk Assessment Technical Memorandum		DATE

DRAFT

ITEM	DESCRIPTION OF SUBMITTAL	CRITICAL DUE DATE	ESTIMATED DUE DATE
9.3	ARAR's Technical Memorandum		DATE
9.4	Remedial Alternatives Identification and Screening Technical Memorandum		DATE
9.5	Detailed Analysis of Remedial Alternatives Technical Memorandum		DATE
9.6	Feasibility Study Report		DATE
10.	Public Outreach		
10.2	Meeting Materials and Sign-in Sheets		DATE
EXHIBIT A-5 REPORTING			
(a)	Progress Reports	Quarterly	
(d)(1)	Draft Final Project Report	July 30, 2020	
(d)(2)	Final Project Report	August 30, 2020	
(d)(3)	Final Project Summary	Before Final Disbursement Request	
EXHIBIT B – FUNDING PROVISIONS			
4 (b)	Final Disbursement Request		
9 (b)(4)	Disbursement Requests		Quarterly

DRAFT

EXHIBIT A – SCOPE OF WORK

Draft Scope of Work – Orange County Water District South Basin RI/FS Project Sections A-1 through A-3

GA# D1712505 GM: Matt Pavelchik PA: Carolyn Saputo

A-1. Completion Dates

The Work Completion Date is established as MARCH 31, 2019. Work occurring after the Work Completion Date, including corrective actions, is not eligible for reimbursement with Grant Funds and cannot be paid for using Match Funds.

A-2. Purpose

This grant is for the benefit of the Recipient. This grant is for the purpose of conducting a remedial investigation and feasibility study consistent with relevant US EPA guidance by installing monitoring wells, performing aquifer testing and collecting groundwater samples to address data gaps in the South Basin of Orange County and evaluating feasible interim remedies. The Recipient's receipt of funding under this Agreement is not a commitment to and does not obligate the State Water Board to provide funding for any eventual construction/implementation project.

A-3 Scope of Work

1. Project Management

   1.1 Provide all technical and administrative services as needed for Project completion; monitor, supervise, and review all work performed; and coordinate budgeting and scheduling to ensure the Project is completed within budget, on schedule, and in accordance with approved procedures, applicable laws, and regulations.

   1.2 Notify the Grant Manager at least fifteen (15) working days in advance of upcoming meetings, workshops, trainings and fieldwork or construction activities.

   1.3 Develop and update appropriately a detailed Project schedule using a format provided by the Grant Manager, including key Project milestones, and submit to the Grant Manager.

   1.4 Conduct periodic and final site visits with the Grant Manager and other staff designated by the Division.

   1.5 Conduct pre-, during, and post-construction photo monitoring for monitoring wells installed at the Project site and submit to the Grant Manager.

2. General Compliance Requirements/Project Effectiveness and Performance

   2.1 Submit Global Positioning System (GPS) information for project site(s) and monitoring well location(s) for this Project. Submittal requirements for GPS data are available at: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/grant_info/docs/gps.pdf

   2.2 Prepare a Monitoring and Reporting Plan (MRP) and submit to the Technical Advisory Committee for comment and the Grant Manager for approval. The MRP becomes final upon Grant Manager approval. Any changes to the MRP, including sampling methodology and frequency, must be submitted to the TAC for comment

DRAFT

and the Grant Manager for approval. Any costs related to monitoring data collected prior to and not supported by the approved Monitoring Plan (MP) will not be reimbursed. The MRP may be submitted as separate documents or in one (1) report and shall include the following:

2.2.1 An MP that includes the following sections:

2.2.1.1 Purpose: Describe the purpose of the MP. The purpose of the MP shall include providing the information necessary to address datagaps during the remedial investigation, providing the pre-design data necessary to develop groundwater cleanup alternatives and providing performance monitoring data to assess the groundwater remedy once installed. Describe the relation of the proposed monitoring activities to any other monitoring activities in the project area.

2.2.1.2 Project Area: Provide a map and narrative description of the anticipated area of plume capture, location of the Project, and location of current and proposed monitoring wells.

2.2.1.3 Sampling Plan: Describe the methodology used and selection of monitoring locations, the frequency of monitoring, the analytical methods that will be utilized and the process that will be used to make any necessary changes to achieve the purpose of the MP.

2.2.1.4 Field Procedures: Provide a description of field procedures including sample collection methods, equipment decontamination, sample identification and handling, and documentation procedures.

2.3 Prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the United States Environmental Protection Agency's (USEPAs) QAPP guidance documents (EPA QA/G-5 and EPA QA/R-5). Water quality monitoring data includes physical or chemical monitoring of any groundwater. Submit the QAPP to the Grant Manager for approval. Any costs related to monitoring data collected prior to and not supported by the approved QAPP will not be reimbursed. A template for the USEPA QAPP is available from the Grant Manager.

2.3.1 Upload the final approved document(s) in pdf format to the Financial Assistance Application Submittal Tool (FAAST) system.

2.4 Prepare and upload all groundwater analytical data collected in accordance with the MRP, or additional groundwater data as requested by the Grant Manager, to the State Water Board's GeoTracker/GAMA system in Electronic Deliverable Format. Groundwater samples shall include: monitoring well samples, borehole samples, piezometer samples, and samples from drinking water wells. Locational information for these sampling points shall be submitted using the Geo_XY file. Contact the Grant Manager to obtain a Global ID prior to collecting samples.

3. Permitting and Environmental Compliance

3.1 Obtain all public agency approvals, entitlements, or permits required for Project implementation before field work begins. If the Project is carried out on lands not owned by the Recipient, the Recipient must obtain adequate rights of way for the useful life of the Project. Submit a list and signed copies of such approvals, entitlements or permits to the Grant Manager.

3.2 Complete documentation required under the California Environmental Quality Act (CEQA) for the proposed implementation project. Take all required steps to prepare, circulate, and certify the required CEQA document(s). Provide the final CEQA document(s) for the proposed implementation project to the Grant Manager.

4. Technical Advisory Committee

4.1 Establish a TAC comprised of the Division, the State Water Board Division of Drinking Water (DDW), the Regional Water Board, and the Department of Toxic Substance Control. Submit the final list of TAC members, their roles and responsibilities, and affiliations to the Grant Manager for review and approval.

4.2 Convene a kickoff meeting to establish TAC goals and objectives, formalize roles, and create a schedule for future meetings. Submit a summary of the kickoff meeting to the Grant Manager.

4.3 Conduct additional TAC meetings in accordance with schedule developed in Item 4.2 and submit the agendas, meeting minutes, and sign-in sheets for each meeting to the Grant Manager.

5. Stakeholder Advisory Group

5.1 Establish a Stakeholder Advisory Group (SAG) that consists of interested parties. Submit a list of the SAG members to the Grant Manager.

5.2 Conduct SAG meetings to inform SAG members of Project activities and solicit feedback and comments.

5.2.1 Submit a SAG meeting schedule to the Grant Manager for approval. .

5.2.2 Submit SAG meeting materials, a summary of feedback and comments received from the SAG, and sign-in sheet(s) to the Grant Manager.

6. Memorandum of Understanding

6.1 Develop and execute a Memorandum of Understanding (MOU) with the State Water Board, the Regional Water Board, and other appropriate government agencies. The MOU will identify the forum and processes for discussion and resolution of issues related to monitoring, modeling and implementation of the project. The MOU shall identify the respective roles and responsibilities of the signatories to the MOU. Submit the executed MOU to the Grant Manager.

7. Remedial Investigation Workplan

7.1 Prepare a Remedial Investigation Workplan and submit to the TAC for comment and the Grant Manager for approval. The Remedial Investigation Workplan shall include:

7.1.1 A description of the objectives of the remedial investigation and the associated tasks and deliverables necessary to address a significant data gap(s) in the Project area.

7.1.2 Identification of the proposed Project area.

7.1.3 A description of the monitoring well locations and the rationale for addressing data gaps in the proposed Project area. Groundwater sampling data must be provided that adequately supports the selection of the

DRAFT

proposed monitoring well locations and supports the purpose of the Project. This data must be uploaded to GeoTracker as outlined in Item 2.4.

7.1.4 Investigation activities including installation of a minimum of twenty-two (22) monitoring wells in (six) 6 well-cluster locations and an aquifer pump test of the newly installed monitoring wells.

8. Remedial Investigation and Reporting

Objective: Produce information necessary to design and implement a groundwater remediation project to prevent or cleanup contamination of groundwater that serves or has served as a source of drinking water.

8.1 Conduct a remedial investigation in the Project area in accordance with the approved Remedial Investigation Workplan in Item 7.1.

8.1.1 Submit a Well Completion Report, including well completion logs, to the TAC and the Grant Manager.

8.1.2 Perform groundwater sampling of new and existing monitoring wells and conduct analytical sampling and measure water levels pursuant to the approved MRP in Item 2.2

8.1.3 Submit any proposed changes from the approved Remedial Investigation Workplan in Item 7.1 that arise during the investigation to the Grant Manager for approval.

8.2 Prepare a Remedial Investigation Report that summarizes the activities conducted in Items 8.1 and includes the results of each activity. Submit the Remedial Investigation Report to the TAC for comment and the Grant Manager for approval. Circulate a copy of the Remedial Investigation Report for SAG comments.

The Remedial Investigation Report must include, at a minimum, the following:

8.2.1 Summary of Project area's site history, past investigations, and the purpose and scope of the recent investigation.

8.2.2 Summary of field work activities completed, methods used, and supporting documentation including: well construction, well development, water level measurement (well construction diagram(s) and field notes) and soil and/or groundwater sampling (field notes).

8.2.3 Findings of the investigation and supporting documentation including: lithology (well logs and geologic cross-sections), analytical results (laboratory data sheets and chain-of-custody sheets), water levels (table including date of water level measurement, depths to groundwater, and groundwater elevations), groundwater gradient and flow direction and comparison to regional gradient and flow direction (groundwater contour map, gradient calculation).

8.2.4 Evaluation of data collected by the Grantee and by others in the Project area and provide an assessment of the nature and extent of contamination (plume map for individual contaminants within each water bearing zone, time-series plots for identified contaminants of concern).

DRAFT

8.2.5 Conclusions identifying any contamination found and/or suspected source of contamination, if possible.

8.2.6 Identification of any further investigations necessary in the Project area or data gaps that should be addressed prior to development of the Feasibility Study.

8.2.7 Description of the quality assurance and quality control procedures implemented during the investigation and the results (Quality Control sample identification, field blank analyses, comparison of duplicate sample results).

9. Feasibility Study Workplan

9.1 Prepare a Feasibility Study Workplan and submit to the TAC for comment and the Grant Manager for approval. The Feasibility Study Workplan shall include:

9.1.1 A description of the objectives and the steps necessary to support the technical and cost analyses of alternatives, and support the selection of a cost-effective alternative that will provide prevention and/or cleanup of groundwater contamination in the Project area.

9.1.2 List of project objectives to be addressed.

9.1.3 An Applicable or Relevant and Appropriate Requirements analysis to ensure the Project is in compliance with any State or Federal regulatory requirements.

9.1.4 Groundwater Flow and Solute Transport Modeling for the purpose of evaluating potential implementation projects that will prevent or cleanup groundwater contamination.

9.1.5 A Baseline Human Health Risk Assessment Report that identifies threats to human health as a result of potential exposure to contaminated groundwater in the Project area using existing data and information from the remedial investigation.

10. Feasibility Study and Reporting

Objective: Based on the Remedial Investigation Report, evaluate and develop remedial alternatives that prevent or cleanup contamination of groundwater that serves or has served has a source of drinking water.

10.1 Conduct a feasibility study in the Project area in accordance with the approved Feasibility Study Workplan in Item 9.1.

10.2 Prepare a Feasibility Study Report that summarizes the activities conducted in Item 10.1 and includes the results of each activity. Submit the Feasibility Study Report to the TAC for comment and the Grant Manager for approval. Circulate a copy of the Feasibility Study Report for SAG comments.

The preparation of the Feasibility Study Report must include, at a minimum, the following content:

10.2.1 Summary of the Project Area's history, geology, hydrogeology, surface water, local land use, previous investigations, and remedial actions.

DRAFT

10.2.2 Summary of the nature and extent of constituents of concern (COCs) in the impacted media (e.g., soils, groundwater, surface water, etc.) including types of contaminants, concentrations detected, and vertical and lateral extent of the contamination.

10.2.3 Summary of the contaminant properties and transport based on soil and aquifer properties.

10.2.4 Proposed remedial action objectives that the future proposed implementation project will achieve.

10.2.5 Description of the remedial action alternatives.

10.2.6 Evaluation of the remedial action alternatives

10.2.7 Determine the need for treatability studies and additional investigations in the Project area.

10.2.8 Estimated total life cycle costs and estimated schedule for each cleanup alternative evaluated.

10.2.9 Description of the rationale for recommending the preferred alternative.

11. Interim Remedial Action Plan

Objective: Based on the Feasibility Study, develop an Interim Remedial Action Plan that will lead to the implementation of the preferred remediation alternative and that will prevent or cleanup contamination of groundwater that serves or has served as a source of drinking water.

11.1 Prepare a draft Interim Remedial Action Plan that considers the outcomes of Item 10.2 and includes the recommended interim implementation activities, an implementation schedule, identification of potential financing including cost recovery from the responsible party(ies), a governance plan, and stakeholder outreach. Submit the draft Interim Remedial Action Plan to the TAC for comment and the Grant Manager for approval.

11.2 Circulate the approved draft Interim Remedial Action Plan to the SAG and interested parties to solicit comments.

11.3 Complete the final Interim Remedial Action Plan incorporating comments received in Item 11.2. Prepare an Interim Remedial Action Responsiveness Summary that addresses any comments received in Item 10.2 and includes a detailed evaluation of regulatory and community acceptance.

11.3.1 Submit the Interim Remedial Action Plan and Responsiveness Summary to the TAC for comment and the Grant Manager for approval.

12. Public Outreach

12.1 Develop outreach materials including flyers, posters, brochures, and advertisements, and update the website and associated social media web pages to include Project progress and outcomes. Provide copies of the outreach materials and web links to the Grant Manager.

12.2 Conduct a minimum of one (1) public workshop, inviting relevant non-governmental organizations and disadvantaged community representatives, prior to finalization of the Feasibility Study in Item 10.1 and Interim Remedial Action Plan in Item 11.1. Submit the workshop materials, sign-in sheet(s), and photo documentation of the workshop to the Grant Manager.

A-4. Disclosure

The Recipient shall include the following disclosure statement in any document, written report, or brochure prepared in whole or in part pursuant to this Agreement:

> "Funding has been provided in full or in part through an agreement with the State Water Resources Control Board using funds from Proposition 1. The contents of this document do not necessarily reflect the views and policies of the foregoing, nor does mention of trade names or commercial products constitute endorsement or recommendation for use."

A-5. Reporting

(a) Progress Reports. The Recipient shall submit quarterly progress reports, using a format provided by the Grant Manager, within forty-five (45) days following the end of the calendar quarter (March, June, September, and December) to the Grant Manager. Progress Reports shall provide a brief description of activities that have occurred, milestones achieved, monitoring results (if applicable), and any problems encountered in the performance of the work under this Agreement during the applicable reporting period. Reporting shall be required even if no grant-related activities occurred during the reporting period. The Recipient shall document all activities and expenditures in progress reports, including work performed by contractors.

(b) As Needed Information or Reports. The Recipient agrees to provide expeditiously, during the term of this Agreement, such reports, data, and information as may be reasonably required by the Division, including but not limited to material necessary or appropriate for evaluation of the funding program or to fulfill any reporting requirements of the state or federal government.

(c) Annual Progress Summaries. The Recipient shall prepare and submit an Annual Progress Summary, using a format provided by the Grant Manager, annually by November 15 that covers the time period from October 1 of the previous year through September 30 of the current year to the Grant Manager. The summary must be no more than five (5) pages, and shall include pictures as appropriate. The Recipient shall upload an electronic copy of the Annual Progress Summary in pdf format to the FAAST system (available at https://faast.waterboards.ca.gov/). The summary shall include, at a minimum, the following:

(1) A summary of the conditions the Project is meant to alleviate, the Project's objective, the scope of the Project, and a description of the approach used to achieve the Project objective.

(2) A summary of the progress made to date, significant milestones achieved, and the current schedule of completing the Project.

(d) Final Reports. At the conclusion of the Project, the Recipient must submit the following to the Grant Manager:

(1) Draft Final Project Report. Prepare and submit to the Grant Manager, for comment, a draft Final Project Report in a format provided by the Grant Manager.

(2) Final Project Report. Prepare a Final Project Report that addresses, to the extent feasible, comments made by the Grant Manager on the draft Final Project Report. Submit one (1)

reproducible master copy and an electronic copy of the final. Upload an electronic copy of the final report in pdf format to the FAAST system.

(3) Final Project Summary. Prepare a brief summary of the information contained in the Final Project Report, using a format provided by the Grant Manager, and include accomplishments, recommendations, and lessons learned, as appropriate. Upload an electronic copy of the Final Project Summary in pdf format to the FAAST system.

DRAFT

A-6. Project Schedule

The dates in the "Estimated Due Date" column of this Schedule may be adjusted as necessary during the Disbursement Period with Grant Manager approval. However, all work or submittals must be achieved with relevant submittals approved by the Division prior to the Work Completion Date, and the final Disbursement Request submitted, prior to the Final Disbursement Request Date set forth in Exhibit B.

ITEM	DESCRIPTION OF SUBMITTAL	CRITICAL DUE DATE	ESTIMATED DUE DATE
EXHIBIT A-3 PROJECT-SPECIFIC SCOPE OF WORK			
1.	Project Management		
1.2	Notification of Upcoming Meetings, Workshops, and Trainings		Ongoing
1.3	Detailed Project Schedule	30 Days After Execution	
1.4	Periodic and Final Site Visits		As Needed
1.5	Pre-, During, and Post-Construction Photos		Ongoing
2.	General Compliance Requirements/Project Effectiveness and Performance		
2.1	GPS Information		Month Year
2.2	Monitoring and Reporting Plan (MRP)		Month Year
2.2.1	Monitoring Plan (MP)		Month Year
2.3	Quality Assurance Project Plan (QAPP)		Month Year
3.	Permitting		
3.1	List of Approvals, Entitlements or Permits		As Needed
3.2	California Environmental Quality Act (CEQA)		Month Year
4.	Technical Advisory Committee		
4.2	List of TAC Members		
5.	Stakeholder Advisory Group		
5.1	List of SAG Members		
5.2.1	Meeting Schedule	30 Days After Execution	
5.2.2	Meetings Materials, a Summary of Feedback and Comments, and Sign-In Sheet(s)		2 Weeks After Each Meeting
6.	Memorandum of Understanding		
6.1.	Executed Memorandum of Understanding	30 Days After Execution	

DRAFT

ITEM	DESCRIPTION OF SUBMITTAL	CRITICAL DUE DATE	ESTIMATED DUE DATE
7.	Remedial Investigation Workplan		
7.1	Remedial Investigation Workplan	60 Days After Execution	
8.	Remedial Investigation and Reporting		
8.1	Conduct a Remedial Investigation		
8.1.1	Well Completion Report		
8.1.3	Proposed Changes from Approved Workplan		As Needed
8.2	Remedial Investigation Report		
9.	Feasibility Study Workplan		
9.1	Feasibility Study Workplan		Month Year
10.	Feasibility Study and Reporting		
10.2	Feasibility Study Report		Month Year
11.	Interim Remedial Action Plan		
11.1	Draft Interim Remedial Action Plan		Month Year
11.3	Final Interim Implementation Plan		Month Year
11.3.1	Interim Remedial Action Responsiveness Summary		Month Year
12.	Stakeholder Outreach		
12.1	Outreach Materials		Month Year
12.2	Public Outreach Meeting Materials		Month Year
EXHIBIT A-5 REPORTING			
(a)	Progress Reports	Quarterly	
(b)	As Needed Information or Reports		
(c)	Annual Progress Summaries	Annually by XX/XX	
(d)	Final Reports		
(d)(1)	Draft Final Project Report	January 31, 2019	
(d)(2)	Final Project Report	February 28, 2019	
(d)(3)	Final Project Summary	Before Work Completion Date	
EXHIBIT B – FUNDING PROVISIONS			
4 (b)	Final Disbursement Request	April 30, 2019	
9 (b)(4)	Disbursement Requests		Quarterly

DRAFT