

Phase 2 Proposed Scope of Services

Task 1. Program Management and Administration

West Yost Associates (West Yost) will provide the necessary resources, Project/Program Management, and guidance to ensure that this Project is completed successfully. Program Management tasks, defined in the subtasks below; include utilization of effective Program Management tools and resources developed during Phase 1 of the Project, administrative support to track all consultant resources; regular meetings with members of the Technical Advisory Committee (TAC) and the Executive TAC, and SRWA General Manager (GM), and presentations to the SRWA Board as required. We will also maintain a Program communications and document management website accessible to the Program Team. The following subtasks further describe West Yost's anticipated Program Management and Administration services. The contract period for Phase 2 is assumed to be November 1, 2017 through August 31, 2019.

Subtask 1.01. Executive TAC and TAC Meetings

It is important to maintain regular communication among the Program Team members to facilitate efficient decision making and expeditiously address issues as they arise. West Yost will conduct and coordinate regular Program meetings with the Executive TAC, TAC, and GM to monitor progress and discuss Program issues. To maintain a record of all decisions and work assignments, a decision log and action item list will be maintained, tracked, and reviewed at regular Program meetings. Additional meetings which will be required to maintain work progress are identified under each relevant work task.

SRWA Involvement:

- Meeting participation

Deliverables:

- TAC and Executive TAC meeting agenda and participation
- Decision log
- Action item list

Assumptions:

- Semi-monthly TAC meetings (i.e., 44 TAC meetings)
- Monthly Executive TAC meetings (i.e., 22 Executive TAC meetings)
- Weekly calls with GM
- Attendance by Program Manager (PM) and Deputy PM (attendance by other PM team members is identified under each relevant work task)
- Two hours per week allocated for communication and coordination with TAC between meetings
- 16 hours dedicated to integration of new GM

Subconsultants:

- None

Subtask 1.03. Updated Program Management Plan

West Yost will update the Program Management Plan created during Phase 1 and circulated to the TAC. Updates may include adjustments to the roles and responsibilities of the GM, TAC, SRWA staff, staff from the Cities of Turlock and Ceres (Cities), and the West Yost Team with regards to organization,

schedule, communications, decision making and quality assurance/quality control (QA/QC) procedures, decision and communication protocols, how work efforts will be tracked, how proper resources are allocated to each task, and how work between tasks is coordinated.

SRWA Involvement:

- Review and comment on Updated Program Management Plan

Deliverables:

- Updated Program Management Plan

Assumptions:

- Updated Program Management Plan will be distributed to the TAC once per year (i.e., two times during contract period)

Subconsultants:

- None

Subtask 1.04. Program Controls

Program Controls include the means for maintaining and tracking the Program budget and expenditures, preparing monthly Program Status Reports, providing document controls, maintaining the Project SharePoint site, preparing work plans for contract amendments, and performing contract administration, such as reallocating task budgets as necessary. Each of these aspects of Program Controls is described in further detail below.

Budget Tracking: West Yost will track the Project master cost baseline (original budget), develop and track cash flow projections, and produce monthly reports on the actual and anticipated cost of the entire Project. This cash flow projection will allow SRWA to compare Project cost projections to available funding. Budget updates will be presented in the monthly Program Status Reports described below.

Program Status Reports: These monthly reports serve as an informational tool for the Board and City Managers, as a management tool for the SRWA GM and members of the TAC, and as a reference document for technical and administrative staff and other SRWA consultants. West Yost will provide a monthly comprehensive report covering the status of the entire Program. This report will include:

- An Executive Summary
- Contract expenditures to-date for each SRWA consultant
- SRWA fiscal year budget update
- Narrative of work accomplished during the month and work scheduled for the following month
- Overall Project schedule and budget summary updates showing actual and projected cash flow, variances to date, projected cost at completion and estimated budget surplus or deficit

Document Controls: Effective management of all records associated with the Program is important for historical documentation, confidentiality, and quality assurance purposes. Document control encompasses the recording, control, storage, retrieval, and reporting of all types of written documentation. Because the SRWA has limited administrative staff, West Yost will provide document control.

Project SharePoint Site: West Yost will maintain the Project SharePoint website that was developed during Phase 1. The Project Team SharePoint website provides access to draft and final technical memoranda (TM), meeting materials, copies of agreements, news articles related to the Project, Project Team contact information, Project Team correspondence, a common Project schedule and more.

Work Plans for Contract Amendments: As contract amendments are required to authorize unanticipated activities, West Yost will prepare the work plans and budgets for the new activities that West Yost, or West Yost subconsultants, will perform.

Contract Administration: West Yost will perform all necessary duties related to contract administration including, but not limited to, reallocating West Yost task budgets as-needed using the Budget Transfer Request Form, developing and administering subcontracts with West Yost subconsultants, and tracking all SRWA contract amendments and the impact to the overall Project budget.

SRWA Involvement:

- Review Executive Summary of Program Status Reports
- Provide West Yost team with schedule and budget expenditure updates for SRWA schedule and budget line items
- Provide West Yost with monthly SRWA Summary of Activity budget summary tables and invoices for SRWA consultants for use in preparing monthly Program Status Reports

Deliverables:

- Monthly Executive Summary of Program Status Report
- Monthly Project Status Reports, including schedule and budget updates, and Project cash flow projections
- Regularly Updated Project SharePoint site
- Budget Transfer Request Forms
- Monthly review and approval of invoices for up to five (5) SRWA consultants

Assumptions:

- SRWA updates their Summary of Activity budget summary at least monthly
- SRWA consultants will be limited to an environmental consultant, legal consultant, and up to three additional consultants

Subconsultants:

- None

Subtask 1.06. SRWA Board Meetings

West Yost will attend all SRWA Board Meetings and will provide a Project Status Update presentation at each meeting. Budget for development of staff reports and presentations, other than Consultant Update, are included under each relevant work task.

SRWA Involvement:

- Meeting participation

Deliverables:

- Consultant Update presentation

Assumptions:

- Once monthly SRWA Board Meetings
- Monthly preparation and presentation of Consultant Update
- Attendance by PM and Deputy PM (attendance by other PM team members is identified under each relevant work task)
- Board meetings occur on the same days as TAC meetings so travel costs are only included in Task 1.01

Subconsultants:

- None

Task 2. Assist with SRWA General Manager Selection

The SRWA Board has decided to delay the hiring of a new GM until early 2018. West Yost will assist SRWA in developing an expanded candidate list and preparing a revised Request for Proposals for

distribution and public notification. It is assumed that the interview questions developed during Phase 1 will be utilized for the GM interviews. Support for the evaluation and selection process may include calling top candidates' references, evaluating skills and strengths needed to succeed at the position, and participation in the candidate interviews.

SRWA Involvement:

- TAC and/or Board members will review candidate materials, attend interviews, and participate on selection panel

Deliverables:

- Updated potential candidate list
- Summary of reference calls for top candidates
- Summary of candidate evaluations
- Participation in interviews, evaluation and selection process

Assumptions:

- Minor revisions to Request for Proposals (RFP) and candidate list
- SRWA will prepare the media releases, job postings, and other forms of recruitment to attract interested candidates
- TAC and/or Board members will comprise the selection panel with West Yost providing input to the panel
- Four applications/proposals received
- Two reference checks per candidate for the top three candidates
- Interviewing top three candidates
- SRWA staff will negotiate the GM contract with West Yost providing input, when requested

Subconsultants:

- None

Task 3. Water Supply Analysis

West Yost will conduct an evaluation of drinking water demands, supplies and potential deficits applicable to SRWA and the Cities. The objective of this analysis will be to understand and optimize the quality and reliability of water supplies for the Cities. This work will include the following:

- Evaluation of existing and future available drinking water sources (i.e., treated surface water and native groundwater) and their potential supply limitations both from a hydrologic and quantity standpoint
- Development of a time series analysis (based on hydrologic conditions) of potential future supply deficits and their impacts on the availability of adequate drinking water supplies
- Identification and evaluation of approaches and recommendations for addressing potential future supply deficits

The results of this work will be documented in a TM.

SRWA Involvement:

- Workshop/meeting participation
- Review and response to draft TM

Deliverables:

- Draft and final Water Supply Analysis TM
- Two (2) TAC presentations
- One (1) Board presentation and staff report

Assumptions:

- Cities will provide drinking water demand and existing or planned demand management information not previously analyzed or developed as part of this Program
- Cities will provide as-needed, detailed information related to the condition and operation of individual existing groundwater wells
- Cities will provide as-needed information for existing and anticipated wastewater treatment plant discharge limits for parameters which may be impacted by the introduction of surface water
- Turlock Irrigation District (TID) will provide as-needed results from SED-related modeling relevant to SRWA surface water supply limitations
- The budget for this subtask includes a total of 156 hours of engineering staff time

Subconsultants:

- None

Task 4. Environmental Support

West Yost will continue providing technical support of SRWA's ongoing environmental documentation and permitting efforts and will incorporate resulting environmental permitting, mitigation and monitoring requirements into the design-build (DB) Request for Proposal (RFP) documents.

Subtask 4.01. Environmental Documentation and Permitting Technical Support to Horizon

West Yost will continue to provide as-needed engineering and other technical support to Horizon Water and Environment (Horizon) throughout Horizon's ongoing development and coordination of CEQA documents and environmental permits for the Project. West Yost's involvement will include the development of technical descriptions of work related to the construction and operation of regional and local Project facilities, review of the draft CEQA documents and any public comments received, review of draft environmental permit applications, consultation on anticipated environmental permitting construction constraints, tracking of environmental permit costs and schedules in an Environmental Permit Matrix, and as-needed participation in a variety of site visits and meetings coordinated by Horizon. Additionally, the budget for this subtask includes engineering time to prepare as-needed exhibits or technical background information requested by environmental permitting agencies upon review of draft permit applications.

SRWA Involvement:

- Review and response to draft environmental documents and permit applications in parallel with West Yost reviews

Deliverables:

- Written responses to draft CEQA documents and environmental permit applications
- Periodic updates to Environmental Permit Matrix

Assumptions:

- Participation by West Yost in up to four (4) meetings with Horizon and/or natural resource agency staff
- Up to eight (8) hours of engineering time for preparation of as-needed exhibits or technical background information in support of up to eight (8) environmental permit applications
- The budget for this subtask includes a total of 208 hours of West Yost engineering staff time

Subconsultants:

- VE Solutions
- A T.E.E.M. Electrical Engineering

- Ewing Construction Services

Subtask 4.02. RFP Technical Appendices

Under this subtask, West Yost will develop the portions of RFP Technical Appendix 9 (Permitting Requirements) pertinent to the environmental permitting requirements identified and tracked under Subtask 4.01. Appendix 9 will list and define all relevant environmental permit requirements, mitigation monitoring and reporting requirements, and water right permit agreement conditions. Appendix 9 will clearly distinguish between requirements of the design-build contractor (DBC) and those of SRWA or its partner agencies.

SRWA Involvement:

- Review and response to draft RFP technical appendices

Deliverables:

- Draft and final Appendix 9 (Permitting Requirements)

Assumptions:

- The budget for this subtask includes a total of 132 hours of engineering staff time

Subconsultants:

- None

Task 5. Non-Environmental Permits/Agreements/Utility Coordination

Requirements for permits and agreements with governmental and non-governmental entities will be tracked and coordinated for the following Project components: raw water pump station, water treatment plant (WTP), pipelines, and local Project facilities. The timelines and costs for permit procurement will be estimated for each phase of the Project: planning, design, construction, and operation. Non-environmental permit and coordination requirements will be defined in RFP Technical Appendix 9 (Permitting Requirements).

Subtask 5.01. Non-Environmental Permits/Agreements/Utility Coordination

West Yost will meet with federal, state, and local regulatory agencies of jurisdiction, utilities, and other local stakeholders to determine Project permitting, agreement, and coordination requirements. The results of these discussions will be used to develop permitting requirements, costs, and schedules. Permits and agreements identified for this effort include the following:

- Coordination of permit and agreement requirements:
 - DBC to take lead on obtaining permits/agreements for the following:
 - Storm Water Pollution Prevention Plan (SWPPP)
 - City of Hughson Encroachment Permits
 - City of Ceres Encroachment Permits
 - City of Turlock Encroachment Permits
 - Stanislaus County Transportation Permit
 - Cal OSHA Permits
 - San Joaquin Valley Air Pollution Control District
 - West Yost to take lead on obtaining permits/agreements for the following:
 - California Department of Fish and Wildlife Fox Grove Park Access Agreement for raw water pump station and raw water pipeline access
 - State Water Resources Control Board Division of Drinking Water (DDW) Permit to Operate

- Stanislaus County – Encroachment Permits, Building Permit, Fire Marshal Review, Grading Permit, Street Restoration Agreements, Fox Grove Park Access Coordination
- Central Valley Flood Protection Board (CVFPB) Encroachment Permit for raw water pump station and raw water pipeline access
- Burlington Northern Santa Fe Railway (BNSF)
- Disposal of construction water (pipelines, start-up)
- Coordination with agencies having jurisdiction:
 - DBC to take lead on coordination of the following:
 - City of Hughson Traffic Control/Management Plans
 - City of Ceres Traffic Control/Management Plans
 - City of Turlock Traffic Control/Management Plans
 - Stanislaus County Noise Ordinance Compliance
 - West Yost to take lead on coordination of the following:
 - Local Farm Bureau
 - TID new service application(s) and temporary power application(s)
 - Existing Utility Services (fiber optic, gas, fuel)
- Up to eighteen (18) meetings with agencies having jurisdiction:
 - DDW – four (4) meetings
 - TID – three (3) meetings
 - Stanislaus County – three (3) meetings
 - City of Hughson – one (1) meeting
 - BNSF – one (1) meeting
 - Farm Bureau – two (2) meetings
 - Existing Utility Service Providers – four (4) meetings

SRWA Involvement:

- SRWA staff will participate in meetings with agencies and stakeholders when needed

Deliverables:

- Agendas, meeting notes, and meeting action items
- Draft and final permit applications
- Permitting cost and schedule table

Assumptions:

- Up to eighteen (18) face-to-face meetings will be held with agencies and stakeholders
- Coordination with Stanislaus County to execute the street restoration agreements in not anticipated to require extraordinary effort (in excess of \$25,000)
- DBC is to be ultimately responsible for the filing of and final DDW approval of the Permit to Operate. West Yost will coordinate with the DDW, identify elements which are required for completion of the permit, and communicate responsibilities for the completion of each permit element to the DBC, SRWA, and others.
- Development of a Watershed Sanitary Survey is addressed separately as an optional or separately contracted task

Subconsultants:

- Trussell Technologies

Subtask 5.02. RFP Technical Appendices

West Yost will develop the portions of RFP Technical Appendix 9 (Permitting Requirements) pertinent to the non-environmental permitting requirements and agreements identified and tracked under Subtask 5.01. Appendix 9 will list and define all relevant non-environmental permit/agreement requirements and coordination requirements.

- Prepare pertinent portions of RFP Technical Appendix 9 – Permitting and Utility Coordination Requirements
- Define SRWA coordination commitments
- Define DBC permit requirements
- Define DB coordination requirements for permits/agreements to be obtained by SRWA

SRWA Involvement:

- Review Draft Appendix 9

Deliverables:

- Draft and Final Appendix 9

Assumptions:

- Incorporate requirements for up to ten (10) non-environmental permits

Subconsultants:

- None

Task 6. Funding Tracking and Support

West Yost will lead SRWA's tracking and pursuit of funding opportunities including State Revolving Fund (SRF) loans for the regional portions of the Project.

Subtask 6.01. Funding Tracking and Support

Potential funding options, including federal and state grant and loan funding programs, will continue to be evaluated to refine the Program funding strategy to lessen the financial burden of the Program on the ratepayers. Information about new programs and updates to existing programs will be identified on the funding opportunities log and summarized in quarterly funding update memos addressed to the TAC. Under this task, West Yost will also continue to coordinate with the Gualco Group, with whom SRWA has a separate contract for government relations and public affairs support, to set-up meetings with representatives from potential funding programs and to track potential funding opportunities.

SRWA Involvement:

- SRWA representatives to attend meetings with funding agencies for grant and loan programs

Deliverables:

- Funding Opportunities Log updates
- Quarterly funding update memos
- Funding agencies meeting agendas, notes, and meeting action items

Assumptions:

- West Yost will coordinate and participate in up to seven (7) meetings with funding agencies

Exclusions:

- Grant and loan applications are included in Subtask 6.03
- Meetings to discuss the SRF application are included in Subtask 6.02

Subconsultants:

- None

Subtask 6.02. SRF Application and Process Support

As stated in the approved SRWA funding strategy, SRWA will continue to pursue SRF loan funds in coordination with the Cities and TID. West Yost prepared and submitted the general application package on behalf of SRWA in December 2016 and the tax questionnaire portion of the financial application package in August 2017. West Yost will continue to lead the SRF application process by coordinating with the State Water Resources Control Board (SWRCB) Division of Financial Assistance (DFA) staff and DDW staff and preparing the following remaining portions of the SRF application: environmental package, financial package, and technical package. West Yost will coordinate and provide additional documentation during the SRF application review process, through final approval of a loan agreement.

In addition to preparing the remaining SRF applications and coordinating with DFA and DDW staff as needed to support the SRF application process, West Yost will also help prepare Appendix 14, titled State Revolving Fund Loan Financing, of the DB RFP. This appendix will be prepared jointly with the SRWA legal counsel. The purpose of this appendix is to inform the bidding DB teams of the Drinking Water SRF Program's specific requirements for bidding, design, and construction. Examples of requirements include federal conditions and cross-cutters, disadvantaged business enterprise requirements, federal wage requirements (Davis-Bacon Act) and SRF/DDW staff review of DB packages.

In short, the work under this task will include research, gathering data from the Cities and preparation of materials for key meetings with funding agencies (such as the DDW and SWRCB), and local/regional officials who may be influential in helping to secure such funding/financing. The application and loan agreement process requires significant, detailed and often complex documentation and, through our experience, requires significant coordination, organization, research, and time to manage and complete. Although there are many documents and requirements of which we are currently aware, there will inevitably be unforeseen documents and follow-up required to satisfy SRF financial, environmental, and technical review staff who will approve the loan agreement. Furthermore, because SRF staff typically receive applications for projects using traditional project delivery, there will be additional education and coordination required for this Project application because of the alternative delivery method being used.

SRWA Involvement:

- SRWA and City representatives to attend meetings with SWRCB DFA staff
- SRWA to provide data for, and review, all SRF application packages and draft loan agreements
- SRWA staff to respond to requests for additional information as required by SWRCB DFA staff

Deliverables:

- Meeting agendas, notes, and meeting action items
- Environmental package (in coordination with Horizon, see Assumptions below)
- Full financial package (note that tax questionnaire portion of the financial package was submitted in August 2017)
- Technical package
- Appendix 14 of the DB RFP

Assumptions:

- Time for coordination with SRF staff assumes six (6) hours per week after application packages are submitted
- Draft Environmental package is completed by Horizon under a separate contract with SRWA. West Yost will coordinate with Horizon as they complete the environmental package and review the final draft before it is submitted to DFA.
- Cities complete their Prop 218 processes by Spring 2018

- Project Alternatives Analysis is complete by Spring 2018 (see Subtask 6.04)
- West Yost will coordinate and participate in up to seven (7) meetings and weekly conference calls with SWRCB DFA staff
- SRWA will receive SRF loan agreement within the Phase 2 period
- Includes coordination and gathering of all required information as requested by the state as much as the task budget allows
- Frequent communication with DFA PM

Exclusions:

- Review of DB Proposals. This activity will be performed under a separate task
- Coordination or completion of any special studies, not already identified in this scope, that SWRCB requires to maintain eligibility for SRF loan

Subconsultants:

- None

Subtask 6.03. Funding Application

As promising grant funding opportunities are identified in Subtask 6.01, applications for these grants will be completed under this subtask, as requested and authorized by the GM. West Yost will take the lead on preparing the application packages to submit to the prospective grant programs on SRWA’s behalf. This service will be provided on an as-requested basis. West Yost will lead efforts for preparing and submitting funding proposal packages and will be responsible for identifying and coordinating the required information for each funding proposal, including the writing and organization of such information, and the submission of the final application package. West Yost will assist SRWA with gathering all initial documentation required by the funding agencies for new grant programs. SRWA will be included in the development and review of each proposal, and final submission will require SRWA’s approval.

The submission of the funding proposals is often time sensitive, and the West Yost team will work closely with SRWA to meet funding deadlines. West Yost will also, as-needed, gather additional information that may be needed to better position the SRWA for grant funding. These types of services could include optional group funding meetings with state/federal agencies and participating in regional meetings or groups such as the East Stanislaus Regional Water Management Partnership or West Turlock Subbasin Groundwater Sustainability Agency.

The effort required for this task will vary depending on the type of grant application. Therefore, the budget for each grant application will be developed and negotiated when and if the services under this task become necessary. The budget shown in this proposal represents the budget anticipated to be needed for one or two grant applications depending on application complexity.

SRWA Involvement:

- SRWA and City staff support may include any of the following: reports/studies; data regarding existing conditions/limitations/violations—pending/past/current; environmental documents; financial statements; assisting with budget development; staff bios; information concerning previous experience with managing grant funds; and Board and/or City Council resolutions authorizing the funding application.
- SRWA to review draft applications and supporting materials.

Deliverables:

- Grant applications (as requested)

Assumptions:

- Budget for each grant application will be developed, negotiated, and authorized when and if the services under this task become necessary.

Subconsultants:

- None

Subtask 6.04. Project Alternatives Analysis

This subtask is intended to satisfy a prerequisite for SRWA receiving SRF loan financing. West Yost will review a previous “Water Supply Alternatives Evaluation” report (RMC and Carollo, February 2015) and prepare an addendum to capture additional conceptual, screening-level alternatives deemed necessary. The objective of the addendum is to demonstrate that the Project represents the most cost-effective approach to achieving SRWA’s objectives. This work will include the identification and definition of three new or modified alternatives, evaluation of the alternatives’ ability to address SRWA objectives, development of comparative impact information for each alternative (e.g., planning-level cost, schedule, environmental, water quality) and life cycle cost analyses of each alternative. The cost information presented for the alternatives presented in the 2015 RMC/Carollo report will be updated to current dollars and compared with any new alternatives developed. The resulting addendum document can be attached to the Technical Package portion SRWA’s SRF loan application(s).

SRWA Involvement:

- Workshop/meeting participation (including identification and discussion of all project alternatives and history of why other project variations were not pursued)
- Review and response to draft report addendum

Deliverables:

- Draft and final addendum to Water Supply Alternatives Evaluation
- Two (2) TAC presentations
- One (1) Board presentation and staff report

Assumptions:

- Cities will provide as-needed information related to capital costs, operation and maintenance of existing groundwater wells
- Includes development and evaluation of up to three (3) new or modified alternatives to the Project not included in the 2015 RMC/Carollo report
- Two (2) workshops/meetings with TAC
- One (1) Board presentation
- The budget for this subtask includes a total of 186 hours of West Yost engineering staff time

Subconsultants:

- Trussell Technologies
- Ewing Construction Services

Task 7. Water Quality and Intake Facilities

Subtask 7.03. Water Quality Sampling and Analysis

West Yost and Trussell will continue to coordinate the ongoing sampling and analysis of raw water as part of the Project’s 24-month source water characterization study, a prerequisite for obtaining a Permit to Operate from the DDW. After the conclusion of the last 12 months of the Project’s two-year sampling program (scheduled for approximately October 2018), documentation of microbiological results will be prepared to support pathogen removal requirements for *Giardia* and viruses as well as a proposed Bin

Classification for *Cryptosporidium* removal, in accordance with Long Term 2 Enhanced Surface Water Treatment Rule (LT2) requirements.

To address information gaps identified during the remainder of the 24-month sampling program, to respond to unforeseen raw water sampling results (e.g., elevated total organic carbon concentrations associated with high river levels), or to respond to DDW requests for additional sampling, the fee for this subtask includes a sampling contingency budget for as-needed additional water quality monitoring. This contingency will only be utilized at the direction of the TAC.

After construction of the raw water pump station wet well (currently anticipated to be complete in the second half of 2019), the PM Team will coordinate limited parallel sampling and analysis of raw water from the Tuolumne River (sampled from the river, above the existing infiltration gallery) and from the wet well. A TM will be prepared to document similarities and differences between the two sampling locations and key outcomes on the design and/or operation of the new WTP.

As part of the above efforts, the PM Team will periodically meet with DDW staff to present and discuss source water quality data.

SRWA Involvement:

- Participation in meetings with DDW staff
- Review and response to draft TMs

Deliverables:

- Agendas and minutes for meetings with DDW staff
- Four (4) TAC presentations
- Two (2) Board presentations and staff reports
- Draft and final TMs:
 - LT2 Report (to document proposed pathogen removal requirements and bin classification); submitted at conclusion of 24-month sampling program
 - Parallel River and Wet Well Raw Water Sampling Plan
 - River and Wet Well Raw Water Quality Comparison TM

Assumptions:

- Raw water sampling, analysis and bench testing activities previously authorized under Phase 1 activities are excluded from this scope of work and will be completed under the PM Team's existing contract
- Participation by West Yost and Trussell in up to two (2) meetings with DDW staff to discuss results of second 12 months of 24-month source water sampling program and parallel river and wet well raw water sampling program
- As-needed, additional raw water sampling and analysis totaling up to \$20,000 in sampling and analytical laboratory fees may be conducted at the direction of the TAC.
- Fishbio and Eurofins Analytical will continue to be utilized for raw water sampling and laboratory analyses, respectively.

Exclusions

- Analysis of additional constituents under Unregulated Contaminants Monitoring Rule No. 4 (UCMR4). If desired, this additional sampling can be provided for approximately \$15,000.

Subconsultants:

- Trussell Technologies
- Fishbio
- Eurofins

Subtask 7.04. Coordination of Wet Well Construction and Oversight of Infiltration Gallery Development and Testing

In conjunction with engineering services during construction being provided under separate contract, West Yost will coordinate the infiltration gallery development and testing activities near the end of the construction period. As a subconsultant to West Yost, SPF Water Engineering (SPF) will participate in the oversight of development and testing of the existing TID infiltration gallery. (The development and testing work itself will be performed as part of the construction of the raw water pump station wet well). SPF will review the wet well construction contractor's submittals related to development and testing activities, and will witness a portion of the testing activities. Upon completion of field activities and receipt and acceptance of the contractor's development and testing report, SPF will prepare a TM summarizing the results and their expected impact on long-term utilization of the infiltration gallery and raw water pump station. This subtask also includes budget for construction progress meeting participation (approximately twice monthly) for a representative of the PM Team, for the anticipated construction duration of up to 24 months.

SRWA Involvement:

- Review and response to draft TM

Deliverables:

- Draft and final Infiltration Gallery Development and Testing TM

Assumptions:

- Up to two (2) site visits during infiltration gallery development and testing
- Up to 16 site visits for construction progress meeting attendance and participation by phone in up to 24 meetings by PM Team representative

Subconsultants:

- SPF Water Engineering

Subtask 7.05. Raw Water Pump Station Preliminary Design

West Yost will prepare preliminary design information for the second phase of the raw water pump station. The purpose of the preliminary design information will be to illustrate a "benchmark" design for reference in the DB RFP, to substantiate updated construction and operation and maintenance (O&M) cost estimates for the pump station, and to provide a basis for key technical requirements included in appendices to the RFP. Preliminary design activities will include the development of key design criteria and preliminary drawings (site plan, mechanical layouts, and process and instrumentation diagrams). A TM will be prepared to document critical assumptions and present a conceptual construction schedule. Additional technical materials relevant to the design and construction of the pump station (e.g., draft RFP technical appendices, geotechnical investigations, summary of infiltration gallery development and testing activities, etc.) will be attached to the TM as standalone documents. Development of such additional technical materials are described below.

Updated Geotechnical Document: The preliminary design work will include the preparation of updated geotechnical documents for the pump station site. This work will be performed by Crawford and Associates (Crawford) as a subconsultant to West Yost. Crawford will prepare an amendment to the geotechnical memorandum prepared in 2016 for the wet well to identify recommendations for the design of foundations for the pump station building and other ancillary structures at the site. The amended document will be structured to facilitate separation into 1) a geotechnical data report, intended to be incorporated by reference into the DB RFP and 2) a geotechnical recommendations report, intended to be made available to bidders as a background document.

Corrosion Report: The preliminary design work will include the preparation of updated corrosion reports for the pump station site. This work will be performed by JDH Corrosion Engineers (JDH) as a subconsultant to West Yost. JDH will re-analyze specific portions of the report developed for the in 2007, and develop a stray current analysis for work near high voltage power lines. No additional field work is assumed. The results of this work will be documented in a report, intended to be incorporated by reference into the DB RFP.

Power Distribution and Backup Evaluation: As a subconsultant to West Yost, A T.E.E.M. Electrical Engineering (A T.E.E.M.) will conduct evaluations of alternatives for electrical power distribution (e.g., low voltage vs. medium voltage) and backup power supply (e.g., standby generator vs. dual utility feed). The results of these evaluations will be considered during the development of preliminary design criteria, updated construction cost and RFP technical requirements for the raw water pump station. The results of this work will be documented in a TM.

RFP Technical Appendices: As a part of this subtask, West Yost will also develop the portions of RFP Technical Appendices 3 (Project Technical Requirements), 4 (Project Discipline Design Requirements) and 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards) pertinent to the raw water pump station. Appendix 3 will include general requirements specific to the raw water pump station. Appendix 4 will establish discipline-specific requirements (e.g., civil, architectural, structural, mechanical, electrical, instrumentation, controls, etc.) intended to apply to all SRWA regional facilities included in the DB service contract, including the raw water pump station. Appendix 8 will establish requirements for demonstrating that Project facilities, including the raw water pump station, meet the specified performance standards.

SRWA Involvement:

- Review and response to draft predesign materials

Deliverables:

- Draft and final preliminary design drawings:
 - Design criteria (1 drawing)
 - Site plan (1 drawing)
 - Mechanical plan and sections (up to 4 drawings)
 - Process & instrumentation diagrams (up to 4 drawings)
- Draft and final Geotechnical Memorandum Amendment TM
 - Draft and final updated Geotechnical Data Report
 - Draft and final updated Geotechnical Recommendations Report
- Draft and final Corrosion Report
- Draft and final Power Supply Alternatives Evaluation TM
- Draft and final Raw Water Pump Station Preliminary Design TM
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)

Assumptions:

- No additional field or laboratory geotechnical evaluations will be required to support design and construction of the second phase of the raw water pump station
- Communication between the pump station and the WTP will be by fiber optic cable installed parallel to the raw water transmission main

Subconsultants:

- VE Solutions
- A T.E.E.M Electrical Engineering
- Crawford and Associates

- JDH Corrosion Consultants
- Ewing Construction Services

Task 8. Technical Support and Review of TID's Water Right Modifications

In order for the SRWA to purchase Tuolumne River water from TID and utilize it for a municipal supply, TID's water right will need to be modified for the change in use from agricultural to municipal supply. SRWA will continue to coordinate with TID to modify the water right until the modification is complete (which is currently anticipated to be in June 2018). West Yost will provide technical peer review to the SRWA and its water rights attorney for the change in use modification of the TID water right, as needed and as requested by SRWA.

SRWA Involvement:

- SRWA and water rights attorney to lead water rights modification effort
- SRWA to coordinate with TID as needed

Deliverables:

- Electronic document review in tracked changes as requested
- In-person or conference call meetings with SRWA and/or SRWA's water rights attorney as requested

Assumptions:

- SRWA and its water rights attorney, in coordination with TID, will lead the effort to modify TID's water right for the change in use
- The budget for this subtask includes a total of 120 hours of engineering staff time

Subconsultants:

- None

Task 9. Pipeline Predesign and Right-of-Way Acquisition

West Yost will continue work on acquiring right-of-way (ROW) for the raw water facilities, and acquire necessary ROW for the finished water transmission mains. West Yost will provide preliminary design for the raw water and finished water transmission mains, including geotechnical and corrosion investigations related to transmission mains.

Subtask 9.01: ROW Acquisition-Related to Raw Water Facilities

West Yost will oversee the ROW acquisition process as it relates to the Raw Water Facilities. This work will include the following:

- Coordinate with GDR to prepare and WY to review plat map and legal description for TID-owned Raw Water Pipeline through WTP site
- Continue work on Fish and Wildlife Access Permit on a separate Access Permit for construction of the Raw Water Pump Station and Raw Water Transmission Main

Surveying: Survey work will be performed by GDR Engineering as a subconsultant to West Yost. ROW support includes preparation of plats and legals for the Raw Water Transmission Main through WTP site for TID.

- Obtain Preliminary Title Report for APN 018-006-013 (TID)
- Prepare Appraisal Map showing proposed easement and dimensions
- Prepare Plat and legal description for permanent easement

- Stake location of easement

SRWA Involvement:

- Review Plat and legal description and file deed for Raw Water Transmission Main through WTP site for TID.
- Review Fish and Wildlife Access Permit

Deliverables:

- Electronic copies of documentation of all rights-of-way acquired

Assumptions:

- No work related to transfer of WTP site from TID to SRWA
- No work related to eminent domain
- ROW work outside WTP and access permit for wet well are included in Phase 1 contract

Subconsultants:

- GDR Engineering, Survey

Subtask 9.02: ROW Acquisition-Related to Ceres Finished Water Transmission Main

West Yost will oversee the ROW acquisition process related to the Ceres Transmission Main, including coordination with GDR to prepare and West Yost to review plat maps and legal descriptions, and coordination with ARWS to process acquisitions on the following parcels:

- One parcel (APN 018-006-012), north of Ceres Main Canal between WTP and Geer Road
- One parcel (APN 039-012-014) at entrance to tank site (owned by the City of Ceres), legal descriptions only

Technical support related to ROW acquisition is described below:

Surveying: Survey work will be performed by GDR Engineering as a subconsultant to West Yost. Survey in support of ROW acquisition includes the following:

- Obtain Preliminary Title Report for APN 018-006-012 (Beard) and 039-012-014 (City of Ceres)
- Prepare Appraisal Maps showing proposed easement and dimensions
- Prepare Plat and legal description for permanent easements and TCE
- Stake location of easements

Appraisal and Acquisition Services: Appraisal and acquisition services will be performed by ARWS as a subconsultant to West Yost. ARWS completed the appraisal and acquisition process for one parcel (APN 018-006-012), north of Ceres Main Canal between WTP and Geer Road which includes the following work:

- Project management and meetings, including coordinating with SRWA, West Yost, property acquisition agent and legal counsel, implementing Uniform Act guidelines, and maintaining accurate records and monitoring work plans/work flows.
- Developing necessary contracts, conveyance documents, and escrow instructions;
- Reviewing appraisals, title reports, maps and descriptions of each parcel
- Preparing appraisals in conformance with the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute including restorative and crop loss costs.
- Providing acquisition services for the parcels listed including delivering all written offers, acquiring tenant consent where necessary, negotiating fairly and diligently until acceptance or

impasse is reached. Negotiation shall include minimum of five (5) contacts over a period of at least 45 calendar days

SRWA Involvement:

- Review appraisals
- Establish Just Compensation
- Negotiation of terms
- Decisions regarding subrogation and escrow instructions including “subject to” title exceptions
- Signature on Approval to Acquire

Deliverables:

- Electronic copies of documentation of all rights-of-way acquired

Assumptions:

- Assumes no work related to transfer of easement from City of Ceres to SRWA
- Assumes no work related to eminent domain

Subconsultants:

- GDR Engineering, Survey
- ARWS, Appraisal and Acquisition Services

Subtask 9.03: ROW Acquisition – Related to Turlock Finished Water Transmission Main

West Yost will oversee the ROW acquisition process related to the Turlock Transmission Main, including coordination with GDR to prepare and West Yost to review plat maps and legal descriptions, and coordination with ARWS to process acquisitions on the following parcels:

- Railroad crossing (APN 045-044-037)

Technical support related to ROW acquisition is described below:

Surveying: Survey work will be performed by GDR Engineering as a subconsultant to West Yost. ROW Acquisition Support -plats and legals for permanent and temporary construction easements over one parcel:

- Obtain Preliminary Title Report for APN 045-044-012 (Mote)-Railroad Crossing
- Prepare Appraisal Maps showing proposed easement and dimensions
- Prepare Plat and legal description for permanent easement and TCE
- Stake location of easement

Appraisal and Acquisition Services: Appraisal and acquisition services will be performed by ARWS as a subconsultant to West Yost. ARWS will complete the appraisal and acquisition process for one parcel (APN 045-044-03) at the railroad crossing which includes the following work:

- Project management and meetings, including coordinating with SRWA, West Yost, property acquisition agent and legal counsel, implementing Uniform Act guidelines, and maintaining accurate records and monitoring work plans/work flows.
- Developing necessary contracts, conveyance documents, and escrow instructions;
- Reviewing appraisals, title reports, maps and descriptions of each parcel
- Preparing appraisals in conformance with the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute including restorative and crop loss costs.

- Providing acquisition services for the parcels including delivering all written offers, acquiring tenant consent where necessary, negotiating fairly and diligently until acceptance or impasse is reached. Negotiation shall include minimum of five (5) contacts over a period of at least 45 calendar days

SRWA Involvement:

- Review appraisals
- Establish Just Compensation
- Negotiation of terms
- Decisions regarding subrogation and escrow instructions including “subject to” title exceptions
- Signature on Approval to Acquire

Deliverables:

- Electronic copies of documentation of all rights-of-way acquired

Assumptions:

- The City of Turlock will prepare the plat maps, legal descriptions, and easement deeds for SRWA to the terminal tank site
- No work related to transfer of easement from City of Turlock to SRWA
- No work related to eminent domain

Subconsultants:

- GDR Engineering, Survey
- ARWS, Appraisal and Acquisition Services

Subtask 9.04: RFP Technical Appendix 1 – Property and Easement Data

This subtask includes preparation of Technical Appendix 1, Property and Easement Data. This appendix describes the following: Project site, ownership and easements, acquired right of way, encumbrances and constraints.

SRWA Involvement:

- Workshop/meeting participation
- Review and response to draft RFP technical appendices

Deliverables:

- Two (2) TAC presentations
- One (1) Board presentation and staff report
- Draft and final Appendix 1 (Property and Easement Data)

Assumptions:

- Attendance at two (2) TAC meetings
- No attendance at Board meeting; Board presentation will be handled by Program Management team

Subconsultants:

- None

Subtask 9.05: Preliminary Design for Raw Water Transmission Main

West Yost will complete preliminary investigations and prepare preliminary design information for the Raw Water Transmission Main. Preliminary design activities will include the development of key design criteria and preliminary drawings. A TM will be prepared to document critical assumptions, provide a description of unique design or construction challenges (e.g., flow split structure, outfall structure), and

present a conceptual construction schedule. Additional technical materials relevant to the design and construction of the Raw Water Transmission Main (e.g., draft RFP technical appendices, surveying, corrosion investigations etc.) will be attached the TM as standalone documents. Development of such additional technical materials are described below.

Surveying: The preliminary design work will include completion of the supplemental field survey and ROW support services along the raw. Survey work will be performed by GDR Engineering as a subconsultant to West Yost.

- ,
- This task will provide supplemental topographic mapping for the raw water facilities including the Raw Water Transmission Main and Raw Water Pump Station. This work will be a manual survey to verify previous work, tie new survey and old survey together, and locate and measure structure details that are not captured in aerial photography.

Corrosion Report: The preliminary design work will include the preparation of updated corrosion reports for the Raw Water Transmission Main. This work will be performed by JDH Corrosion as a subconsultant to West Yost. JDH will re-analyze specific portions of the report developed for the Project in 2007, and develop a stray current analysis for work near high voltage power lines. The results of this work will be documented in a report, intended to be incorporated by reference into the DB RFP.

Preliminary Drawings: West Yost will develop conceptual design drawings based largely on the design prepared by Brown and Caldwell in 2007. The drawings will reflect new information gathered during ROW acquisition, and wet well design activities. Because there is abundant existing information, it is anticipated that plan and profiles will be prepared, and the details for the flow split and outfall structures will be updated.

RFP Technical Appendices: As a part of this subtask, West Yost will also develop the portions of RFP Technical Appendices 3 (Project Technical Requirements), 4 (Project Discipline Design Requirements) and 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards) pertinent to the Raw Water Transmission Main.

SRWA Involvement:

- Review and response to draft predesign materials

Deliverables:

- Draft and final preliminary design TM
- Draft and final preliminary design Drawings
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)

Assumptions:

- No new geotechnical investigations will be performed. It is assumed that geotechnical information provided for the WTP in Subtask 11.05 and Raw Water Wet Well design, will provide sufficient information for the Raw Water Transmission Main.
- No additional field work for corrosion evaluation.
- Approximately five (5) plan and profile and two (2) detail sheets
- No potholing
- No additional funding included in this amendment for portions of this task shown as “already in progress.”

Subconsultants:

- GDR Engineering, Survey
- JDH Corrosion, Corrosion Testing and Design

Subtask 9.06: Preliminary Design for Ceres Finished Water Transmission Main

West Yost will complete preliminary investigations and prepare preliminary design information for the Ceres Finished Water Transmission Main (CFWTM). Preliminary design activities will include the development of key design criteria and preliminary drawings. A TM will be prepared to document critical assumptions, provide a description of unique design or construction challenges (e.g., trenchless crossings, canal crossings, etc.), and present a conceptual construction schedule. Additional technical materials relevant to the design and construction of the CFWTM (e.g., draft RFP technical appendices, surveying, geotechnical and corrosion investigations etc.) will be attached the TM as standalone documents. Development of such additional technical materials are described below.

Surveying: Survey work will be performed by GDR Engineering as a subconsultant to West Yost. The preliminary design will include providing new topographic mapping for the full length of the finished water transmission main, to provide consistent mapping for full length of transmission main alignments as Hatch Road has been significantly improved over the last 10 years. Work will also include supplemental field survey to determine channel depths, and ROW support services.

- Tie out existing monuments that may be impacted by future construction of transmission line. Prepare Record of Survey or Corner Records to perpetuate their location.
- Topographic Survey (new aerial topographic mapping completed during interim Phase 1/Phase 2 period)
 - Provide supplemental field survey to determine depths of channels and other gravity structures

New Geotechnical Reports: The preliminary design work will include the preparation of new geotechnical reports for the CFWTM. This work will be performed by Crawford as a subconsultant to West Yost. Crawford will perform additional geotechnical borings and pavement corings and incorporate the geotechnical investigations performed by Kleinfelder in 2007. Borings beyond those completed in 2007 are recommended due to the previously documented significant variation in the types, thicknesses and depths of sandy materials in near-surface soils along the CFWTM alignment, as well as the lack of pocket penetrometer values for the silts present. Additional borings will help to reduce the risk of changes orders associated with unforeseen conditions. The results of this work will be documented in two reports: a geotechnical data report, intended to be incorporated by reference into the DB RFP; and a geotechnical recommendations report, intended to be made available to bidders as a background document.

Corrosion Report: The preliminary design work will include the preparation of updated corrosion reports for the CFWTM. This work will be performed by JDH as a subconsultant to West Yost. JDH will re-analyze specific portions of the report developed for the Project in 2007, provide laboratory testing on geotechnical samples, and develop a stray current analysis for work near high voltage power lines. No additional field work is assumed. The results of this work will be documented in a report, intended to be incorporated by reference into the DB RFP.

Preliminary Drawings: West Yost will develop conceptual design drawings to approximately 20% design level. Drawings will be plan view only with profiles at three (3) critical locations such as canal and railroad crossings.

RFP Technical Appendices: As a part of this subtask, West Yost will also develop the portions of RFP Technical Appendices 3 (Project Technical Requirements), 4 (Project Discipline Design Requirements) and 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards) pertinent to the Raw Water Transmission Main.

SRWA Involvement:

- Review and response to draft predesign materials

Deliverables:

- Draft and final preliminary design TM
- Draft and final preliminary design Drawings
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)

Assumptions:

- Three (3) days of supplemental field survey work
- Subsurface Investigations:
 - Seven (7) borings to supplement the 4 borings that were completed for the 2007 project to provide a consistent 2,500-foot spacing.
 - Six (6) core samples to determine thickness of existing asphalt and base
- Additional core samples can be provided at a cost of \$5,500 per 6 core samples, assuming they are added to the scope of work prior to beginning geotechnical investigations.
- No additional field work for corrosion evaluation.
- Naturally occurring ground water is not anticipated, so no borings will be completed as test wells.
- No groundwater sampling or testing for disposal
- Approximately 14 plan sheets (2 strips per sheet) and 2 detail/profile sheets
- No potholing

Exclusions

- Borings at the Ceres Tank Site

Subconsultants:

- GDR Engineering, Survey
- Crawford and Associates, Geotechnical Investigations
- JDH Corrosion, Corrosion Testing and Design

Subtask 9.07: Preliminary Design for Turlock Finished Water Transmission Main

West Yost will complete preliminary investigations and prepare preliminary design information for the Turlock Finished Water Transmission Main (TFWTM). Preliminary design activities will include the development of key design criteria and preliminary drawings. A TM will be prepared to document critical assumptions, provide a description of unique design or construction challenges (e.g., trenchless crossings, canal crossings, etc.), and present a conceptual construction schedule. Additional technical materials relevant to the design and construction of the TFWTM (e.g., draft RFP technical appendices, surveying, geotechnical and corrosion investigations etc.) will be attached the TM as standalone documents. Development of such additional technical materials are described below.

Surveying: The preliminary design will include providing new topographic mapping for the full length of the finished water transmission main. The majority of this alignment is new since 2007 but mapping will include the northern one-half mile of Aldrich Road to provide photo and mapping. Work will also include supplemental field survey to determine channel depths.

- Tie out existing monuments that may be impacted by future construction of transmission line.
Prepare Record of Survey or Corner Records to perpetuate their location
- Topographic Survey (new aerial topographic mapping completed during interim Phase 1/Phase 2 period)
 - Provide supplemental field survey to determine depths of channels and other gravity structures

New Geotechnical Reports: The preliminary design work will include the preparation of geotechnical reports for the TFWTM. This work will be performed by Crawford as a subconsultant to West Yost. No existing geotechnical data is available along the TFWTM alignment. Crawford will complete new geotechnical borings and pavement corings. The results of this work will be documented in two reports: a geotechnical data report, intended to be incorporated by reference into the DB RFP; and a geotechnical recommendations report, intended to be made available to bidders as a background document.

Corrosion Report: The preliminary design work will include the preparation of a new corrosion reports for the TFWTM. This work will be performed by JDH as a subconsultant to West Yost. No existing corrosion data is available along the TFWTM alignment. JDH will perform in-situ soil investigations, provide laboratory testing on geotechnical samples, and develop a stray current analysis for work near high voltage power lines. The results of this work will be documented in a report, intended to be incorporated by reference into the DB RFP.

Preliminary Drawings: West Yost will develop conceptual design drawings to approximately 20% design level. Drawings will be plan view only with profiles at four (4) critical locations such as canal and railroad crossings.

RFP Technical Appendices: As a part of this subtask, West Yost will also develop the portions of RFP Technical Appendices 3 (Project Technical Requirements), 4 (Project Discipline Design Requirements) and 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards) pertinent to the Raw Water Transmission Main.

SRWA Involvement:

- Review and response to draft predesign materials

Deliverables:

- Draft and final preliminary design TM
- Draft and final preliminary design Drawings
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)

Assumptions:

- Subsurface Investigations:
 - Fourteen (14) borings along the TFWTM alignment to provide a consistent 2,500-foot spacing
- Six (6) core samples to determine thickness of existing asphalt and base
- Site Soil Corrosively Evaluation at approximately 1,500 to 2,500 foot intervals
- Three (3) days of supplemental field survey work
- City of will prepare plat and legal for SRWA at tank site entrance.
- Approximately 20 plan sheets (2 strips per sheet) and 2 detail/profile sheets
- No potholing
- Additional core samples can be provided at a cost of \$5,500 per 6 core samples, assuming they are added to the scope of work prior to beginning geotechnical investigations.
- Naturally occurring ground water is not anticipated, so no borings will be completed as test wells
 - No groundwater sampling or testing for disposal

Exclusions

- Borings at the Turlock Tank Site – see Optional Services

Subconsultants:

- GDR Engineering, Survey
- Crawford and Associates, Geotechnical Investigations

- JDH Corrosion, Corrosion Testing and Design

Task 10. Hydraulic Analyses

West Yost will complete hydraulic evaluations in support of Phase 2 of the Project to more fully define Project improvements, identify hydraulic transient protection required for pump station facilities and support the Integration Study development. Hydraulic modeling support for startup planning activities to integrate surface water into the Ceres and Turlock distribution systems will be contracted directly with the Cities of Ceres and Turlock.

Subtask 10.01 Hydraulic Transient Analysis for Raw and Finished Water Pump Stations

West Yost will prepare hydraulic transient evaluations for the raw water pump station and finished water pump station at the WTP to identify surge protection to incorporate into facilities design. West Yost will perform the following:

- Develop criteria for the hydraulic transient analysis. Review criteria and analysis assumptions with SRWA TAC
- Develop a hydraulic model of the raw water and finished water transmission systems. Models will include design information for the booster pump stations, raw and finished water transmission mains, and terminal reservoirs
- Prepare a hydraulic transient analysis for the raw and finished water booster pump stations. Evaluate booster pump station power failure while operating under design flowrate for initial phase and buildout. Identify mitigation measures required to protect the systems, including type of mitigation, sizing, etc.
- Prepare TM with appropriate figures illustrating potential problem areas, recommended mitigation measures and phasing
- Meet with SRWA TAC to review analysis results

SRWA Involvement:

- Meeting participation to confirm criteria and provide input on analysis results

Deliverables:

- TAC meeting presentation
- Draft and final TMs documenting the evaluations

Assumptions:

- Evaluate two scenarios
- Attendance at two TAC meetings, one to review criteria, one to review results
- 10- to 15-page TM

Subconsultants:

- None

Subtask 10.02. Hydraulic Modeling Support for Integration Study

West Yost will provide as-needed modeling support for the Integration Study (to be completed as an optional or separately contracted task). The types of evaluations to be performed may include: water source tracing to identify areas receiving surface water and supply blends, overlaid with pipeline material types and ages; analysis of system flow reversals/high velocity pipelines that could cause water quality issues

- Perform evaluation
- Prepare results for use in Integration Study

Evaluation to be performed only after written authorization from SRWA.

SRWA Involvement:

- Provide input at TAC meetings

Deliverables:

- Summarized results of analysis Integration Study engineer

Assumptions:

- A placeholder budget has been developed with 240 hours available for this task, 120 hours for each system.

Subconsultants:

- None

Task 11. Treatment Process

Subtask 11.04. Water Treatment Plant Preliminary Design

West Yost and Trussell will prepare preliminary design information for the new WTP. The purpose of the preliminary design information will be to illustrate a “benchmark” design for reference in the DB RFP, to substantiate updated O&M cost estimates for the WTP, and to provide a basis for key technical requirements included in appendices to the RFP. Preliminary design activities will include the development of key design criteria and preliminary drawings (design criteria sheet, site plan, hydraulic profile, and process flow diagrams). A TM will be prepared to document critical assumptions and provide a description of unit processes and justify their design criteria. Additional technical materials relevant to the design and construction of the WTP (e.g., draft RFP technical appendices, geotechnical investigations, etc.) will be attached to the TM as standalone documents. Development of such additional technical materials are described below.

Updated Geotechnical Reports: The preliminary design work will include the preparation of updated geotechnical reports for the WTP site. This work will be performed by Kleinfelder as a subconsultant to West Yost. Kleinfelder will re-analyze specific portions of a report developed for the WTP site in 2007, including sections addressing geologic hazards and seismic assessment and a site-specific response spectrum analysis. An allowance for additional field explorations is included, pending the development of an updated WTP site plan and a corresponding list of potential structure depths. No additional borings are assumed, however. The results of this work will be documented in two reports: a geotechnical data report, intended to be incorporated by reference into the DB RFP; and a geotechnical recommendations report, intended to be made available to bidders as a background document.

Surveying: The preliminary design work will include completion of the supplemental field survey. Survey work will be performed by GDR Engineering as a subconsultant to West Yost. The preliminary design work will include completion of the supplemental field survey at the WTP as follows:

- Establish Survey Control Network, including property boundaries
- Topographic Survey and Mapping,
 - Perform topographic of the +/-47-acre site to supplement 2007 aerial survey information.
 - Combine new survey information with 2007 survey

Corrosion Report: The preliminary design work will include the preparation of updated corrosion reports for the pump station site. This work will be performed by JDH as a subconsultant to West Yost. JDH will re-analyze specific portions of the report developed for the in site in 2007, and develop a stray current analysis for work near high voltage power lines. No additional field work is assumed. The results of this work will be documented in a report, intended to be incorporated by reference into the DB RFP.

Power Distribution and Backup Evaluation: As a subconsultant to West Yost, A T.E.E.M. will conduct evaluations of alternatives for electrical power distribution (e.g., low voltage vs. medium voltage) and backup power supply (e.g., standby generator vs. dual utility feed). The results of these evaluations will be considered during the development of preliminary design criteria, updated construction cost and RFP technical requirements for the WTP. The results of this work will be documented in a TM.

Communications Evaluation: Preliminary design work will also include an evaluation of communication methods between the WTP and the points of interconnection between the finished water transmission mains and the Cities' distributions systems. Communication between the WTP and raw water pump station is assumed to be by fiber optic connection installed parallel to the raw water transmission main.

Evaluation of WTP Waste Disposal Options: West Yost will evaluate options for the disposal of sanitary sewage and solids generated by the treatment process. Options to be evaluated include onsite leach fields, solids drying beds and/or dewatered solids stockpile areas, and conveyance to the Hughson wastewater treatment plant by way of a new sanitary sewer. The results of this evaluation will be documented in a TM.

Structural Evaluation of Aldrich Road Bridge: A structural evaluation of the existing Aldrich Road Bridge over the Ceres Main Canal, which will see increased traffic after the construction of the new WTP, will be conducted to determine if structural modifications are required. This work will be performed by VE Solutions (VES) as a subconsultant to West Yost. If it is determined that improvements are necessary, VES will prepare preliminary design drawings. The results of this work will be documented in a TM.

RFP Technical Appendices: As a part of this subtask, West Yost will also develop portions of the following RFP Technical Appendices that are pertinent to the WTP:

- Appendix 3 (Project Technical Requirements)
 - Includes general requirements specific to the WTP
- Appendix 4 (Project Discipline Design Requirements)
 - Establishes discipline-specific requirements (e.g., civil, architectural, structural, mechanical, electrical, instrumentation, controls, etc.) applicable to the WTP.
- Appendix 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards)
 - Includes requirements for demonstrating that the WTP meets all performance standards.
- Appendix 10 (Project Performance Standards)
 - Includes requirements for the quality of finished water produced by the WTP, including those which are in addition to requirements set forth by State or Federal regulations

SRWA Involvement:

- Review and response to draft predesign materials
- Review and response to draft RFP technical appendices

Deliverables:

- Draft and final preliminary design drawings:
 - Design criteria (1 drawing)
 - Site plan (1 drawing)
 - Hydraulic profile (1 drawing)
 - Process flow diagrams (2 drawings)
- Draft and final Water Treatment Plant Preliminary Design TM
- Draft and final Power Supply Alternatives Evaluation TM
- Draft and final WTP Waste Disposal Evaluation TM
- Draft and final updated Geotechnical Data Report
- Draft and final updated Geotechnical Recommendations Report
- Draft and final Aldrich Road Bridge Structural Evaluation TM
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)
- Draft and final Appendix 8 (Pre-Acceptance Testing Requirements and Acceptance Procedures and Standards)
- Draft and final Appendix 10 (Project Performance Standards)

Assumptions:

- No revisions to the WTP Predesign TM (after responding to TAC comments on draft TM) are assumed
- Radio study between the WTP and points of interconnection is *excluded*
- Special studies or provisions for noise and light pollution at the WTP site will *not* be required. WTP design will be to Stanislaus County standards
- Topographic survey includes three to four (3-4) days field work

Subconsultants:

- Trussell Technologies
- VE Solutions
- A T.E.E.M Electrical Engineering
- Kleinfelder
- Landscape Architect (TBD)
- JDH Corrosion Consultants
- Ewing Construction Services
- GDR Engineering

Subtask 11.05. Operations Technology and Cybersecurity Preliminary Design

West Yost will prepare preliminary design information for the Operations Technology and Cybersecurity (OTC) design components of the Project. OTC design elements include Supervisory Control and Data Acquisition (SCADA) software, computer hardware, communications network equipment, Programmable Logic Controller (PLC) hardware and associated software, and associated programming and configuration. OTC design components also include select elements of instrumentation and operational control strategies.

The primary purposes of the preliminary design will be as follows:

- To establish key OTC system requirements for the TAC and Cities

- To delineate design elements that will be provided by the DBC (and therefore included in the DB contract) and elements that will be provided by the Owner (and therefore excluded from the DB contract)
- To provide a basis for key technical requirements included in the RFP Technical Appendices
- To develop construction and O&M cost information relevant to the instrumentation and control systems

Preliminary design activities will include the development of key design criteria and preliminary drawings (listed below). A TM will be prepared to document critical assumptions and present a conceptual system architecture. West Yost will also develop the portions of RFP Technical Appendices 3 (Project Technical Requirements) and 4 (Project Discipline Design Requirements).

After the DB contract has been awarded and design of the regional facilities has begun, West Yost will develop detailed construction documents for the systems identified in the preliminary design documents. The detailed documents are excluded from Phase 2 work, but will be prepared during Phase 3 on a schedule that is mutually acceptable to West Yost and the DBC.

SRWA Involvement:

- Participate in West Yost-led workshops to solicit TAC, Ceres, Turlock and TID Information Technology (IT) input on OTC design elements
- Participate in West Yost-led workshops to review and respond to draft predesign materials

Deliverables:

- Draft and final preliminary design drawings:
 - PLC Hardware Architecture (one [1] drawing)
 - Computer System Architecture (one [1] drawing)
 - Communications Network Architecture (one [1] drawing)
 - Typical Process & Instrumentation Diagrams (up to four [4] drawings)
 - Typical Control Strategies (up to four [4] strategies)
- Draft and final OTC Preliminary Design TM
- Draft and final Appendix 3 (Project Technical Requirements)
- Draft and final Appendix 4 (Project Discipline Design Requirements)

Assumptions:

- Ceres, Turlock and TID IT staff tasked with system maintenance will have significant involvement in the preliminary design
- Key elements of the OTC design will be explicitly excluded from the DB contract
- West Yost will develop 30%, 60% and 90% and FINAL design documents during Phase 3, on behalf of SRWA and in coordination with the DB Firm

Subconsultants:

- None

Task 12. Project Procurement

On May 3, 2017, the Board concurred with the TAC's and Executive TAC's recommendation to utilize lump sum DB (DB) as the procurement method for the regional portion of the Project. The regional Project scope includes the Raw Water Pump Station, Raw Water Transmission Main, Water Treatment Plant and the Ceres and Turlock Finished Water Transmission Mains. The Finished Water Transmission Mains will be included as optional scope items in the DB procurement documents, with the decision whether to include them in the scope made prior to Contract execution. The scope presented here assumes that the Finished Water Transmission Mains will remain a part of the DB scope and Contract. This task includes the development and evaluation of the documents needed to facilitate a DB procurement.

Documents to be prepared include a Request for Qualifications (RFQ) and an RFP, including the necessary technical appendices and attachments. Proposers will submit a Statement of Qualifications (SOQ), and shortlisted proposers will submit an initial concept submittal (ICS) and a Proposal for evaluation by the SRWA. The procurement document development and proposal evaluation processes are outlined in more detail in the subtasks below.

Exclusions:

- Finished Water Transmission Mains design-bid-build procurement
- Local facility procurement (to be completed by Cities)

Subtask 12.01. Request for Qualifications Development

The RFQ preparation will be the first step in the procurement process. The process is meant to provide the interested DB firms with an understanding of the Project and the anticipated risk allocation between SRWA and the selected DB firm. (DB firms may come in many forms, including but not limited to a single company, a group of firms teamed together with one acting as the prime, or a joint venture. For this scope, the terms “DB firm” and “proposer” will be used interchangeably.) The proposers’ SOQs provide SRWA with firm and team qualifications to allow for a shortlisting of three (3) DB firms to receive and prepare a lump sum price proposal. DB proposals are expensive to prepare; therefore, it is advisable to limit the number of firms investing money in preparation of a proposal. Below is a list of activities that will be completed in association with the development of the RFQ.

- Completion of the Procurement Guidance Document that was drafted in Phase 1
- Outreach to the DB community – it is important to reach out to prospective DB firms to keep them engaged in the process and ensure there is interest in the Project and competition when the RFQ is released
- RFQ preparation – it is anticipated that the RFQ will include the following elements:
 - Project information
 - Background
 - Scope of work
 - Project sites
 - Background documents (i.e., technical evaluations, geotechnical information, etc.)
 - Permitting, including which entity (SRWA or the DB firm) will be responsible for obtaining each permit
 - Risk allocation matrix
 - Legal authority – specifically, the legal authority allowing the use of DB procurement (predicated on the success of SB 373)
 - Procurement process overview – provided for the proposers so that they can understand generally what to expect from the RFP/Proposal process
 - Procurement and Project schedule
 - SOQ submittal requirements, including a standard template for SOQs (as required by Public Contract Code (PCC) 22160)
 - SOQ evaluation– provided so that the proposers know how the SOQs will be evaluated and ranked
- Field proposer calls/questions and preparation of addenda to the RFQ, as needed
- Pre-bid meeting –one pre-bid meeting is envisioned following release of the RFQ

SRWA Involvement:

- Review and comment on Procurement Guidance Document
- Review and comment on RFQ
- Participate in meetings with DB firms

- Participate in workshop/meeting
- Attend pre-bid meeting

Deliverables:

- Procurement Guidance Document
- RFQ and two (2) addenda
- Two (2) TAC presentations
- One (1) Executive TAC presentation
- One (1) Board presentation and staff report
- Pre-bid meeting agenda and presentation

Assumptions:

- Development of five (5) SOQ submittals forms
- Two (2) RFP addenda
- Six (6) meetings with DB firms (assumed to be scheduled such that no travel time is required)
- One (1) pre-bid meeting
- Two (2) workshops/meetings with TAC
- One (1) Executive TAC meeting
- One (1) Board presentation

Subconsultants:

- Trussell Technologies

Subtask 12.02. Statement of Qualifications Evaluation and Shortlist Process

As mentioned, the proposers' SOQs provide SRWA with firm and team qualifications for evaluation. The process will conclude with the three most highly qualified DB firms, as determined by the SRWA selection panel, being shortlisted to receive the RFP and prepare a lump sum proposal. Evaluation of the SOQs will generally be qualitative since selection will be based primarily on qualifications and references. To get to know the teams, it is assumed that interviews with the firms will be held and reference calls will be made. A detailed financial evaluation (to be completed by others) of the firms will also be completed to ensure the financial stability of the firms proposing. Below is a list of activities that will be completed in association with the evaluation of the SOQs.

- Identify SOQ evaluation criteria/categories and develop selection panel feedback form
- Make reference calls for key individuals from the proposing firms
- Perform SOQ review, evaluation, and ranking based on pre-established criteria
- Meet with TAC to discuss SOQs and obtain feedback for consideration by selection panel
- Consolidate SOQ evaluation ranking for selection panel review
- Participate in interviews, including meeting coordination, development of draft interview questions and preparation of interview notes
- Meet with selection panel to discuss SOQs and interviews, and to develop recommended shortlist for Board consideration
- Prepare Board staff report and presentation of recommended shortlisted firms (to be presented by selection panel member)
- Prepare letters to notify all proposers of the shortlisted DB firms

SRWA Involvement:

- Review and comment on draft evaluation criteria and interview questions
- Participate in workshop/meeting
- Review and evaluate SOQs
- Participate in interviews (selection panel only)

Deliverables:

- SOQ Evaluation Feedback Form
- Draft interview questions for consideration
- Interview notes
- One (1) Board presentation and staff report (to be presented by selection panel member)
- Letters to proposers
- Reference call notes

Assumptions:

- Six (6) SOQs received
- Six (6) interviews
- Twenty-four (24) reference calls
- Two (2) workshops with TAC
- Two (2) meetings with selection panel
- Shortlist to three (3) DB firms
- One (1) Board presentation

Exclusions:

- Financial subconsultant (assumed to be hired directly by SRWA)

Subconsultants:

- Trussell Technologies

Subtask 12.03. Request for Proposals Development

The RFP, the draft service contract, and the technical appendices will be sent to the three shortlisted DB firms. The RFP provides the shortlisted DB firms with the technical criteria and guidelines that must be followed during development of their proposals and later during design and construction. A draft service contract (prepared by SRWA legal counsel) will be provided for proposer comment. Below is a list of activities that will be completed in association with the development of the RFP.

- RFP – it is anticipated that this document will include the following elements:
 - Project information (similar to RFQ, but with more detail)
 - Draft service contract (West Yost will work with legal counsel and the procurement advisor on the development of the service contract and the interconnection between the contract and the technical appendices)
 - Technical Appendices (identified below)
 - Background documents (i.e., technical evaluations, geotechnical information, etc.) – these documents are for information only and cannot be relied upon by the DB firms when preparing their proposal
 - Reference documents – these documents are attached to the service contract and include both requirements of the DB firm (e.g., permits, legal agreements, etc.) and information that can be relied upon during design (e.g., geotechnical data)
 - Project milestone schedule and detailed procurement schedule
 - Initial Concept Submittal requirements – an early submittal of the DB firm’s design approach to ensure that SRWA is comfortable with the proposed approach before significant investment goes into developing a preliminary design and price proposal
 - Proposal submittal requirements
 - Proposal evaluation criteria – provided so that the proposers know how the proposals will be evaluated and ranked (PCC 22160 requires selection procedures be specifically

identified with weighting given to each selection criteria including, at a minimum, price, technical design and construction expertise, and life-cycle cost)

- Proposal forms (if desired by the TAC)
- Technical Appendices – attached to the service contract, the technical appendices define the design and construction criteria and constraints. It is assumed that the following technical appendices will be prepared:
 - Appendix 1 – Property and Easement Data (prepared in Task 9)
 - Appendix 2 – General Design-Build Work Requirements
 - Appendix 3 – Project Technical Requirements (prepared in Tasks 9, 11, and 12)
 - Appendix 4 – Project Discipline Design Requirements (prepared in Tasks 9 & 11)
 - Appendix 5 – Design-Build Quality Management Plan Requirements
 - Appendix 6 – Design-Build Work Review Procedures
 - Appendix 7 – Construction Period Work Requirements
 - Appendix 8 – Pre-Acceptance Testing Requirements and Acceptance Test Procedures and Standards (prepared in Task 11)
 - Appendix 9 – Governmental Approvals, Utilities, and Landowner Requirements (prepared in Tasks 4 and 5)
 - Appendix 10 – Project Performance Standards (prepared in Task 11)
 - Appendix 11 – Key Personnel and Approved Subcontractors
 - Appendix 12 – Additional Labor Requirements (prepared by legal counsel)
 - Appendix 13 – Insurance Requirements (prepared by legal counsel)
 - Appendix 14 – State Revolving Loan Financing (prepared jointly with legal counsel in Task 6)
- Responses to bidder's questions
- Addenda to the RFP

SRWA Involvement:

- Review and comment on RFP, technical appendices and service contract
- Participate in workshop/meeting

Deliverables:

- RFP and addenda
- Technical Appendices
- TAC, Exec TAC, and Board presentations and staff reports

Assumptions:

- Development of ten (10) proposal forms
- Five (5) TAC meetings/presentations
- Four (4) Executive TAC presentations
- Two (2) Board meeting presentations
- Three (3) meetings with DB firms
- Three (3) RFP addenda
- 120 hours to coordinate with legal counsel

Subconsultants:

- Trussell Technologies
- Ewing Construction Services

Subtask 12.04. Initial Concept Submittal and Proposal Evaluation

The proposal process will be a two-step process. The first step is an Initial Concept Submittal (ICS) to allow SRWA to understand each DB firm's design approach, and to provide early feedback to the DB firms before significant investment goes into developing a preliminary design and price proposal. The ICS presentations/meetings with the DB firms are confidential but can result in the need to amend the RFP. The price proposals developed by the DB firms will include: a) preliminary design details (including drawings, design criteria, key equipment manufacturers, etc.); b) a lump sum price for design, construction, start-up, and testing; and c) operational cost information for use in evaluating life cycle costs. Proposals will be evaluated against the criteria listed in the RFP and in accordance with PCC 22160. This task will conclude with a recommendation to the Board to negotiate with the most favorable proposer. Below is a list of activities that will be completed in association with the evaluation of the Initial Concept Submittals and Price Proposals.

Initial Concept Submittal Evaluation:

- Review submittals and attend TAC meeting to discuss approach to ICS presentations
- Coordinate, attend, and prepare confidential notes for DB firm ICS presentations
- Conduct a TAC meeting to discuss feedback to DB firms
- Prepare confidential written feedback to DB firms on design approach
- Revise RFP, as necessary, based on results of ICS review
- Provide DB communication/response to questions

Proposal Evaluation:

- Perform reference checks for additional key DB firm members
- Identify proposal evaluation criteria/categories and develop selection panel feedback form
- Perform proposal review, evaluation, and ranking based on pre-established criteria
- Meet with TAC to discuss proposals and obtain feedback for consideration by selection panel
- Participate in interviews, including meeting coordination, development of draft interview questions, and preparation of interview notes
- Consolidate proposal evaluation ranking for selection panel review
- Meet with selection panel to discuss proposals, interviews, and recommendation for Board consideration of most favorable proposer
- Prepare Board staff report and presentation of recommendation to negotiate with the most favorable proposer (recommendation to be presented by selection panel member)
- Perform DB communication/response to questions
- Prepare letters to DB firms identifying the most favorable proposer

SRWA Involvement:

- Review and comment on evaluation criteria and interview questions
- Participate in interviews/presentations (six [6] total)
- Participate in workshop/meeting
- Review ICS and Proposals

Deliverables:

- Proposal Evaluation Feedback Form
- Draft interview questions for consideration
- Interview notes
- Board presentation and staff report (to be presented by selection panel member)
- Letters to proposers

- Reference call notes

Assumptions:

- Three (3) proposals received
- Participation in six (6) interviews/presentations
- One additional meeting with each DB team, three (3) total meetings
- Nine (9) reference calls
- Four (4) workshops with TAC
- Three (3) meetings with selection panel
- Two (2) Board presentations

Exclusions:

- Site visits to DB firm reference projects
- Financial subconsultant (assumed to be hired directly by SRWA)

Subconsultants:

- Trussell Technologies
- A T.E.E.M Electrical Engineering
- Crawford and Associates
- Ewing Construction Services

Subtask 12.05. Contract Negotiation

Following the proposal evaluation process, SRWA will enter into contract negotiations with the identified most favorable proposer. The negotiation process is a collaborative process where modifications can be made to the design approach, technical criteria, team composition, contract provisions, etc. The negotiations will include an evaluation of the proposed modifications and the associated impacts to cost and schedule. The negotiation process will result in the modification to the service contract and the technical appendices. The result of this task is an executed contract for design and construction of the regional Project facilities. Phase 3 will commence upon execution of the DB contract. Below is a list of activities that will be completed in association with contract negotiations.

- Participate in Contract negotiations with DB firm
- Work with legal counsel on changes to the service contract
- Evaluate proposed design and technical changes and present associated impacts to TAC
- Evaluate Project cost changes associated with contract modifications
- Modify technical appendices based on results of negotiation process
- Prepare Board staff report and presentation for recommendation to execute contract with DB firm (to be presented by SRWA)

SRWA Involvement:

- Participate in meetings with DB firm
- Participate in workshop/meeting
- Review final contract and technical appendices

Deliverables:

- Final Technical Appendices
- One (1) TAC presentation
- One (1) Board presentation and staff report (to be presented by SRWA)
- Copy of reference call notes

Assumptions:

- Negotiation with one proposer
- Ability to achieve an agreement between SRWA and the selected bidder
- Four (4) meetings with selected DB firm
- Five (5) workshops with TAC
- Two (2) Exec TAC meeting presentations
- One (1) Board presentation

Subconsultants:

- Trussell Technologies
- A T.E.E.M Electrical Engineering
- Crawford and Associates
- Ewing Construction Services

Task 13. Discussions with Potential Water Contractors/Project Partners

SRWA has already contacted numerous potential partners and water contractors to gauge their interest and ability to participate in this Project. West Yost will provide support to the SRWA in the form of technical analyses assessing the feasibility and requirements of partner involvement, and to estimate the costs associated with partner participation. As requested by the GM, West Yost will participate in discussions with SRWA and potential partners.

SRWA Involvement:

- Lead interaction with interested potential partners

Deliverables:

- Water supply analyses to evaluate impacts of Project Partner participation
- Preliminary pipeline sizing and alignment evaluations
- Cost estimates for Project Partner participation

Assumptions:

- Meet with three (3) potential water contractors or Project Partners; two hours each meeting
- Prepare water supply analyses, pipeline sizing and routing, and cost estimates for the participation of three (3) potential Project Partners
- The budget for this subtask includes a total of 92 hours of engineering staff time

Subconsultants:

- None

Task 14. Master Project Schedule Maintenance

West Yost will maintain the Master Project Schedule created in Microsoft Project during Phase 1. The Master Project Schedule will be updated at least monthly with input from Horizon and SRWA as needed as scheduled activity dates shift. Following the monthly updates to the master schedule, West Yost will prepare schedule summary tables highlighting actual or potential delays and comments on their effects on the overall Project schedule.

Although much detail will be included within the master schedule, separate project schedules will be produced and maintained under their relevant task. For example, the detailed permitting schedule will be maintained under the permitting task. The details of the permitting schedule, however, may be incorporated into the master schedule.

SRWA Involvement:

- Provide West Yost team with schedule updates for SRWA and City schedule line items.
- Review schedule summary tables and provide comments.

Deliverables:

- Updated milestone schedule summary tables to be distributed at TAC meeting once per month.
- PDF copy of full detailed schedule or custom view of the schedule as requested.

Assumptions:

- SRWA consultants, such as Horizon, provide West Yost with timely updates to their portion of the master schedule

Exclusions:

- Creation of separate detailed schedules for specific tasks or projects.

Subconsultants:

- None

Task 15. Cash Flow and Cost Sharing Allocations

Subtask 15.01. Cash Flow and Cost Sharing Allocation

West Yost will develop an excel tool to forecast Project expenditures by fiscal year. The tool will also capture actual expenditures from prior years. The tool will use the cost allocation percentages that were previously developed, and will be updated as needed as part of this task, to allocate costs between the project partners. Costs can also be forecasted for the upcoming year by quarter. This cash flow tool will be used for the duration of the Project to track against the budget. Modifications to the cash flow are anticipated twice yearly. Cost sharing allocations will be evaluated based on the potential participation of additional project partners. This task may involve evaluating water supply quantities and priorities, facilities sizing, and other calculations to assign appropriate cost sharing allocations.

SRWA Involvement:

- Review cash flow projections twice annually
- Review modifications to project partner cost allocations

Deliverables:

- Cash flow excel tool
- Updates to project partner cost allocations in cash flow spreadsheet

Assumptions:

- Twice annually cash flow updates
- Four (4) evaluations of/modifications to the project partner cost allocations (averaging twice per year)

Subconsultants:

- None

Subtask 15.02. Construction Cost Estimates

Updates to previously developed planning-level construction cost estimates for the regional facilities or local distribution facility improvements are not planned. However, West Yost's fee reflects an allowance for up to 80 hours of engineering and cost estimating time to respond to significant changes in the preliminary design approach for these facilities.

In anticipation of various "what if" scenarios identified subsequent to the development of the updated construction cost estimates, West Yost has included an allowance of up to 40 hours of engineering and cost estimating staff time to revisit previously developed planning-level construction costs that may be impacted by such scenarios. Examples of such scenarios might include varying treatment capacity levels for the WTP, varying finished water storage volumes for either or both city, and so forth. The intent of the allowance included herein is to provide timely responses to TAC and/or Board inquiries related to decisions which are likely to affect the cost of DB proposals.

SRWA Involvement:

- Workshop/meeting participation

Deliverables:

- One (1) TAC workshop

Assumptions:

- Cities will base Prop 218 rate processes on previously developed planning-level construction cost estimates for regional facilities and local distribution system facility improvements
- Updates to regional facilities or local distribution facility improvements are limited to 80 hours' worth of engineering and cost estimating staff time
- As-needed responses to "what if" construction cost scenarios are limited to 40 hours' worth of engineering and cost estimating staff time

Subconsultants:

- Ewing Construction Services
- Gary Johns Consulting

Subtask 15.03. O&M Cost Estimates

West Yost will prepare updated annual O&M cost estimates for the regional Project facilities, including the raw water pump station, the WTP and the finished water pump stations located at the WTP. Updated estimates will reflect the preliminary design information developed under Tasks 7, 9 and 11, and will include detailed estimates for the following:

- Electricity demand and utilization
- Chemical consumption
- Major equipment repair and replacement
- Facility O&M labor
- Other miscellaneous services and utilities not described above

The O&M cost estimates will be summarized in a technical memorandum.

SRWA Involvement:

- Workshop/meeting participation
- Review and response to draft TM

Deliverables:

- One (1) TAC workshop
- Draft and final O&M Cost Estimate TM

Assumptions:

- O&M cost estimates for the terminal storage tanks, booster pump stations and local distribution systems are *excluded*
- Electric rates applicable to the raw water pump station and WTP will be confirmed by TID based on estimates of maximum demand

Subconsultants:

- Trussell Technologies
- A T.E.E.M Electrical Engineering

Subtask 15.04. Life Cycle Cost Analysis

West Yost will refine and maintain the life cycle cost analysis (LCCA) tool initially developed during Phase 1 of the Program. The primary purposes of the LCCA tool are to develop and track the estimated total per annum and present worth costs of both the “benchmark” regional Project facilities (i.e., the facilities described by the preliminary design documents) and the facilities included in each of DB proposals received. Critical assumptions used in the development and operation of the LCCA tool, including the analysis period, financing interest rates and terms, and discount and inflation rates will be proposed by West Yost and vetted with the TAC. The configuration, purpose and intended application of the LCCA tool to DB proposals will be documented in a technical memorandum. Upon receipt of DB proposals, the LCCA tool will be used to generate proposal-specific estimates of life cycle costs.

SRWA Involvement:

- Workshop/meeting participation
- Review and response to draft TM

Deliverables:

- One (1) TAC workshop
- One (1) Board presentation and staff report
- Draft and final Life Cycle Cost Analysis TM

Subconsultants:

- None

Task 17. Scope for Next Phase

Upon completion of Phase 2, costs and schedule will be known for the DB contract and, therefore, a scope and budget for contract compliance oversight can be developed to coincide with the negotiated DB contract. Phase 3 services are expected to include continued Program Management, SRWA technical support, and DB contract compliance oversight.

SRWA Involvement:

- Work jointly with West Yost to develop Phase 3 scope
- Review and comment on draft scope

Deliverables:

- Draft and final scope and budget for Phase 3

Subconsultants:

- None

Task 19. Public Outreach

Subconsultant Circlepoint will continue to work with West Yost to continue the implementation of the Public Outreach Plan, development of collateral materials, maintenance of the stakeholder list, coordination related to stakeholder group meetings, and coordination logistics associated with Public Outreach meetings. West Yost regularly updates Circlepoint to keep them apprised of pertinent Project details and progress, and will provide technical input and review on Circlepoint's draft deliverables.

Public Outreach Plan Implementation: The Public Outreach Plan is intended to be a dynamic document, and will be updated as Project milestones necessitate. Since Phase 2 of the Project will lead towards the selection of a DB contract, a more robust public outreach presence will be needed during Phase 2.

- Circlepoint will continue to review and update the messaging associated with the Project on a regular basis as the Project moves forward.
- A schedule of outreach activities will be developed and updated under this task. Updates to the schedule will be made monthly or more frequently if needed.
- Circlepoint and West Yost will also meet regularly to review technical progress to ensure that outreach activities are in sync.
- Circlepoint will also participate in planning meetings with West Yost, SRWA internal funding team and the Project government relations/public affairs consultant (government relations) to ensure that outreach materials are prepared that are appropriate for use related to their efforts.

Develop Collateral Materials: Circlepoint will use collateral materials as one of the tools to disseminate the Project message points. This work includes development and production of four informational pieces such as fact sheets or brochures. The type of materials distributed will be determined by the technical milestone and will vary throughout the Project process and can be updated as these milestones are achieved.

- Collateral materials produced for the Project will be clearly written with an attractive design, and will be developed for both English and Spanish speakers.

Stakeholder List Maintenance: West Yost will work with the Project team to update the existing draft stakeholder list. The stakeholder list will be a living document that is updated regularly.

Coordination related to stakeholder group meetings: Reaching out to the community early in the Project will be a key part in helping residents overcome any misconceptions they may have about the Project. Circlepoint will assist West Yost and TAC members with making presentations to existing community groups and neighborhood associations such as the Rotary and Kiwanis clubs in both Ceres and Turlock, and the Chambers of commerce in both communities. Circlepoint will research appropriate groups to offer presentations to, using the stakeholder list as a starting point, and will provide the list of groups to the TAC for their review and input.

- Circlepoint will schedule the presentations and will coordinate with the TAC and SRWA GM to identify the appropriate person to give the presentation. Circlepoint will also assist SRWA with developing a standard presentation to provide to stakeholder groups. The presentations would likely be given by the TAC members, or senior members of the PM team.

Coordination logistics associated with Public Outreach meetings: Circlepoint will provide logistical support for up to three public outreach meetings. These meetings will be targeted to attract potentially affected residents and other interested parties. Circlepoint will work with the SRWA TAC and West Yost to determine the most suitable venue for the meeting. Circlepoint will coordinate the logistics of the meetings including reserving the venue, notifying stakeholders, preparing meeting materials (such as sign

in sheets, agendas, other handouts etc.), providing presentation materials (such as PowerPoint presentations, display boards), staffing the meeting, and setting up and cleaning up after the meeting.

- To notify stakeholders of the meetings Circlepoint will distribute a postcard mailer to stakeholders. Circlepoint will develop the text and design for the postcard. Circlepoint will also coordinate printing and mailing.
- Circlepoint will assist with the development of a presentation for the meeting. Circlepoint will also produce up to three (3) display boards for the meetings. West Yost will develop the board content and graphics. Circlepoint will provide sign in sheets, nametags and one (1) handout for the meetings. Circlepoint will provide the text, design and production coordination for these items.
- All meeting materials developed by Circlepoint will be sent to the SRWA TAC and PM team in a format that can be modified (including presentations, handouts, etc.).
- Circlepoint will document the meetings by providing a meeting summary.

SRWA Involvement:

- Participation in public outreach meetings
- Review of draft collateral materials
- Communicate with West Yost or Circlepoint if there are stakeholders that should be added to the stakeholder list
- Pay for postage for mailing postcards
- Provide GIS database for mailing postcards to affected residents

Deliverables:

- Continued implementation of Public Outreach Plan
- Develop and maintain Public Outreach Activities schedule
- Review and revise messaging on a regular basis
- Update Public Outreach Plan as needed
- Attend team meetings with West Yost, as requested
- Meetings with West Yost and government relations consultant related to outreach materials needed for outreach purposes
- Development of four information pieces/fact sheets
 - Develop draft and final copy for review and approval by West Yost and SRWA TAC
 - Develop draft and final information piece design (four color design, printed on double sided 8 ½ x 11 paper)
 - Coordinate translation of copy into Spanish for information piece
 - Hi-resolution PDF file provided for printing purposes
- Maintain stakeholder database
- Identify appropriate stakeholder groups to provide presentations to
- Schedule presentations
- Assist with development of presentation
- Develop stakeholder group tracking log
- Meeting materials (sign in sheets, agendas, other handouts)
- Presentation materials (PowerPoint presentation, up to three (3) display boards)
- Providing key team members at Public Outreach Meetings
- Postcard mailer for public outreach meetings

Assumptions:

- Public Outreach Activities schedule will be updated monthly

- Public Outreach Plan will be updated quarterly
- Team meetings with West Yost will be bi-weekly and conducted via teleconference
- One in-person meeting per quarter with SRWA TAC
- No more than two rounds of review/approval for copy of Collateral Materials
- No more than two rounds of review/approval for design of Collateral Materials
- West Yost or SRWA to provide technical graphics (maps, design drawings, etc.)
- No more than two presentations per month will be scheduled
- Circlepoint will not be responsible for providing laptop or projector for presentation
- All presentations will be given by SRWA and/or West Yost; West Yost will make up to nine (9) presentations, including City Council meetings and TID Board meetings
- No more than two rounds of revision per public outreach meeting item developed.
- Circlepoint will provide up to 75 copies of each of the Public Outreach meeting handouts.
- Up to three Public Outreach meetings
- One PowerPoint for each Public Outreach meeting in a format that the SRWA TAC and West Yost can modify.
- One 8.5" x 5.5" two-sided color postcard mailer for the Public Outreach meeting; up to two rounds of review/revision for copy and design
 - SRWA will pay for postage costs for mailing postcards
 - SRWA will provide GIS database for mailing postcards to affected residents
 - Up to 2,500 postcards printed for public outreach meeting

Exclusions:

- No attendance at special committee meetings

Subconsultants:

- Circlepoint

Task 20. Engineering Contingency

The engineering contingency task is calculated as ten percent of the West Yost total budget for Phase 2 services. This contingency will be used to fund unanticipated out-of-scope engineering work on an as-needed basis. The scope and budget for these out-of-scope items will be defined in Budget Modification Requests (BMRs) that will be sent to the SRWA GM, and appropriate City staff for approval. Examples of potential uses for engineering contingency funds from other surface water supply projects include the following:

- Extended negotiations with Stanislaus County regarding road restoration requirements
- Additional grant and low interest grant funding applications
- Design-bid-build procurement for the finished water pipelines to Ceres and Turlock
- Eminent domain proceedings for easement acquisition
- Support in preparing for water right hearing
- Submittal of more than six SOQs
- Extensive support needed to address environmental permitting process

SRWA Involvement:

- Notify West Yost of as-needed additional engineering evaluations
- Review and approval of BMRs
- Review and response to draft deliverables

Deliverables:

- BMRs submitted for approval prior to expenditure of any contingency funds

- Other deliverables in accordance with approved BMRs

Optional or Separately Contracted Tasks

Subtask 5.03. Watershed Sanitary Survey

Trussell Technologies, Inc (Trussell) will coordinate the preparation of a Watershed Sanitary Survey (WSS) for SRWA, which is a prerequisite for obtaining a Permit to Operate from DDW. A variety of options existing for satisfying this requirement, as outlined below:

- Develop a new WSS tailored to SRWA's watershed, including analysis of potential contaminating sources within the entire watershed
- Develop information for just the portion of SRWA's watershed outside of Modesto Irrigation District's (MID) 2014 WSS watershed and/or the City and County of San Francisco (CCSF) most recent WSS, and incorporate either or both WSSs by reference
- Collaborate with MID consultant on an update to their 2014 WSS, whereby SRWA contributes to the cost of preparation of an expanded WSS by MID consultant

West Yost and Trussell understand that the preferred approach will be identified following discussion with the TAC and one or more of the agencies listed above, and that the fees related to the preparation of the WSS cannot be precisely determined at this time. However, a preliminary fee estimate has been provided as a placeholder for this subtask; the preliminary fee reflects Trussell's preparation of a new WSS tailored to SRWA's watershed.

SRWA Involvement (Pending Discussion with TAC):

- As-needed participation in discussion and/or negotiation with MID, CCSF and/or other agencies related to potential collaboration on a new or updated WSS
- Workshop/meeting participation
- Review and response to draft WSS

Deliverables (Pending Discussion with TAC):

- One (1) TAC presentation
- Agendas and minutes from potential meetings with collaborating agencies
- Draft and final WSS
- Other deliverables TBD

Assumptions (Pending Discussion with TAC):

- The budget included for this subtask assumes preparation of a new WSS without collaboration with other agencies
- Other assumptions TBD following additional discussion with TAC

Subconsultants:

- Trussell Technologies

Subtask 11.03. Surface Water/Groundwater Integration Study

West Yost and Trussell will carry out a surface water / groundwater integration study in advance of the future blending of treated surface water with groundwater in the Cities' distribution systems. The primary objective of this study is the development of recommendations for preparatory and long-term operational measures to minimize the incidence of colored water complaints. The study will be comprised by three distinct parts, as described below. Part 1 will be completed during Phase 2 of the Program, Part 2 is assumed to be completed during Phase 2 but portions could be delayed until Phase 3, and Part 3 is planned for Phase 3 and is excluded from this scope of work (but described below for reference).

Part 1 – Information and Data Gathering (completed during Phase 2):

- Surface water/groundwater quality comparisons
- Local distribution system characterization (e.g., pipe age, materials, flow directions)
- Distribution System Water Quality in relation to Lead and Copper Rule and Total Coliform Rule, and Customer Complaints
- Expert Panel Review (e.g., engage early to review recommendations. This will show DDW and Community that the Cities are being proactive regarding delivered water quality)
- Prepare Draft and Final TMs of findings and recommendations for path forward

Part 2 - Implementation of Part 1 Recommendations (assumed to be completed during Phase 2; portions may be delayed until Phase 3):

- Distribution system flushing program recommendations
- Evaluation of additional water quality monitoring results
- Recirculation pipe loop study of conditions and corrosion inhibitor designed to minimize impact to the distribution systems when surface water is introduced. Pipe loop test system location, duration, materials and conditions will be defined in the test plan.
- Prepare Draft and Final TMs of Part 2 findings

Part 3 – Development of Corrosion Control Optimization Plan (*excluded* in Phase 2; planned for Phase 3):

- Finished surface water and groundwater chemical conditioning recommendations
- Evaluation of distribution system monitoring results (sampling and testing by others)
- Ramp-up schedule
- Corrosion Control Treatment (CCT) Plan for submittal to DDW

SRWA Involvement:

- Review and response to draft Integration Study documents
- Close coordination with West Yost and Trussell staff during development of distribution system characterization, flushing protocols, and recirculation pipe loop study

Deliverables:

- Draft and Final TM describing and comparing current distribution system(s) groundwater quality and Tuolumne River water quality.
- Detailed flushing protocols for up to two (2) pilot segments in each City's distribution system.
- Distribution system monitoring plan, as needed
- Recirculation pipe loop study test plan
- Draft and final TMs of recirculation pipe loop study results

Assumptions:

- Parts 1 and 2 of the study will be completed during Phase 2 of the Program
- Part 3 of the study will be completed during Phase 3 of the Program
- Expert panel comprised of Steve Reiber, Ph. D and Vern Snoeyink, Ph.D.
- Development of flushing protocol will be coordinated between West Yost and Trussell. Initial protocol development will be for two pilot segments in each City's distribution system. If desired, budget can be increased to facilitate development of system-wide Flushing Protocols for each City.
- Budget for this subtask includes up to 45 days of travel for Trussell staff engineer to collect samples, monitor pipe loop test system, change test conditions, etc. It is assumed treated surface water from MID can be used to represent finished water from the new SRWA WTP; Budget for a conventional surface water treatment pilot system is *excluded*.
- CCT Plan for DDW will be budgeted under Phase 3

Subconsultants:

- Trussell Technologies