



STANDARD CONSULTANT AGREEMENT

(For Capital Consultant Contracts)
Terms and Conditions Template
Rev. A [5/11/2020-6/30/2021]

This agreement (Agreement) is effective once fully executed (Effective Date), by and between SANTA CLARA VALLEY WATER DISTRICT (Valley Water), and BLACK & VEATCH CORPORATION, a Delaware Corporation (Consultant), individually the Party or collectively the Parties.

WHEREAS, Valley Water desires certain services hereinafter described and Consultant affirms it has the requisite experience and expertise, and desires to provide such services.

NOW, THEREFORE, Valley Water and Consultant, for the consideration and upon the Terms and Conditions specified, agree as follows:

SECTION ONE

SCOPE OF SERVICES

The Scope of Services (Services) to be performed pursuant to this Agreement is described in the Schedule(s), Scope of Services, attached hereto and incorporated herein by this reference (Schedule(s)). Services described in each Schedule are considered a Scope of Services that is separate and apart from the Scope of Services described in another Schedule.

SECTION TWO

DUTIES OF CONSULTANT

1. Performance

- A. Each Scope of Service described in an attached Schedule(s) must be performed by Consultant, or at its direction, to meet the purposes specified in this Agreement. References to "Consultant" herein include those performing any portion of the Services at its direction such as Subconsultants, vendors, suppliers, subcontractors, and other business entities and individuals. Consultant will collaborate with Valley Water staff in engineering, asset management, operations, and maintenance units to be made aware of Valley Water operational constraints, procedures, or preferences relevant to Consultant's performance of the Services described in the attached Schedule(s).
- B. Unless the requirements for the Services described in the attached Schedule(s) are specifically modified in writing, Consultant must perform Services and provide all deliverables as required.
- C. Consultant shall not undertake any Services not described in the attached Schedule(s) unless authorized in writing by Valley Water prior to the performance of such Services by issuance of a Task Order or pursuant to an amendment to this Agreement signed by both Parties.

2. **Consultant Controlled Areas** Consultant is responsible for the security and safety of the area(s) it controls wherein it is required to perform field operations pursuant to the Scope of Services.

3. Licensing

Services performed by Consultant will be undertaken only by persons appropriately licensed, certified, or registered in California, as applicable to the Services described herein, when required by statutes or regulations, as well as pursuant to the relevant standard of care as described in subsection 11 Standard of Care. Examples of such Services include those performed by: California State Licensed Contractors, Professional Engineers and Architects, Inspectors, and Surveyors. Consultant shall make available upon Valley Water's request documentation of qualifications and licensing of personnel performing Services described herein. Consultant must be registered with the California Department of Labor Standards Enforcement if the Services or a portion thereof is determined to be "Public Works" pursuant to California Labor Code section 1720(a)(1).

4. Valley Water's Approval of Deliverables

Deliverables prepared by Consultant, notwithstanding acceptance and approval by Valley Water, which Valley Water determines must subsequently be modified due to errors or omissions, will be corrected at no additional cost to Valley Water.

5. Errors and Omissions

The Services may include preparation of deliverables by Consultant to be implemented in a public works construction project. Consultant is responsible for any direct or actual damages incurred by Valley Water which Valley Water determines result from Consultant's errors or omissions in Consultant's deliverables, including, but not limited to, any increase in Valley Water's payment(s) due to its construction contractor, which increase is directly attributable to required revisions to the construction contract documents to the extent caused by Consultant's negligent acts, errors, or omissions.

6. Valley Water Standardization Requirements

- A. Consultant shall perform the Services utilizing Valley Water nomenclature, standardized forms, software requirements, documented procedures, and best management practices. Consultant shall use Microsoft Office software and AutoCAD software that is compatible with Valley Water Microsoft Office software and AutoCAD software used at the time(s) Valley Water issues a Notice to Proceed pursuant to this Agreement.
- B. Engineering drawings prepared by Consultant must be in compliance with Valley Water's CADD and drafting standards including line types, line weights, text sizes, text orientation, dimensioning, labeling/numbering system for detailed plan views and detailed section views. Drawings prepared using different CADD software and versions must be converted to be compatible with Valley Water's CADD software at no additional cost to Valley Water. Prior to acceptance, Valley Water reserves the right to test the submitted CADD files to verify that the files are not corrupted or missing linkages (for blocks, etc., used in the drawing) and that the standards are retained during the conversion process used by the Consultant.

7. Consultant's Key Staff and Subconsultants

- A. Consultant's Key Staff and firms subcontracted by the Consultant (Subconsultants) assigned to perform the Services are identified in in the Schedule Scope of Services, Attachment Three, Consultant's Key Staff and Subconsultants.
- B. The Project team organization chart and delegated responsibilities of each team member will be submitted to Valley Water for concurrence.
- C. Consultant may utilize Subconsultants, subcontractors, suppliers, or vendors it deems appropriate to the complexity and nature of the required Services.
 - 1) Consultant must obtain Valley Water's approval of all Subconsultants. Upon Valley Water's request, Consultant must provide copies of all Subconsultant agreements.
 - 2) Consultant must require its delegates or Subconsultants to agree, in writing, to adhere to Terms and Conditions of this Agreement.
- D. Any delegation or use of Subconsultants by Consultant will not operate to relieve Consultant of its responsibilities as described in this Agreement.
- E. If any of Consultant's designated key staff persons or Subconsultants fail to perform to the satisfaction of Valley Water, on written notice from Valley Water, Consultant will have 15 calendar days to remove that person from the Project and provide a replacement acceptable to Valley Water.
- F. Consultant will not charge Valley Water for the time it takes Consultant's replacement personnel to obtain Valley Water-specific Project knowledge in the possession of the person(s) being replaced.
- G. Consultant's Key Staff: Valley Water Project Manager may approve any revisions to Consultant's list of key staff assigned to the Project as an administrative modification to this Agreement, and such approval will be confirmed in writing.
- H. Consultant's Subconsultants
 - 1) Valley Water Project Manager may approve any revisions to Consultant's list of authorized Subconsultants when the Subconsultant is deleted from the list and the Scope of Services is deleted from the Agreement or such services are assumed by the Consultant; such approval will be confirmed in writing.
 - 2) Valley Water's authorized representative may approve any revisions to Consultant's list of authorized Subconsultants when a listed Subconsultant is replaced (to perform the same Scope) or a new Subconsultant is added (to perform new Scope), provided the firm complies with all insurance requirements established by Valley Water for such work; such approval will be confirmed in writing.

8. Compliance with All Laws

- A. Consultant's performance must be in compliance with the most current versions of any and all laws relevant to the Services it performs pursuant to this Agreement, including, but not limited to adherence to: all applicable governmental laws, statutes, ordinances, rules, codes, regulations, orders, and other requirements; governmental requirements applicable to state and federal compliance with the Professional Land Surveyors Act; state and federal Endangered Species Act; state and federal water quality laws; and all other state and federal laws or regulations regarding environmental protection and compliance, health, safety, wages, hours, equal employment opportunity, nondiscrimination, working conditions, and transportation. In the event that Valley Water's assistance is necessary to achieve such compliance, Consultant shall promptly notify Valley Water.
- B. Consultant shall provide, at Valley Water's request, documentation demonstrating Consultant's compliance with all laws as described herein. After reasonable notice and according to reasonable conditions, Valley Water has the right to inspect and copy any records of Consultant regarding such compliance.
- C. Consultant represents and warrants that neither Consultant nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal government department or agency.

9. Occupational Safety and Health

- A. Consultant will perform the Services in compliance with the most current versions of all laws, standards, rules, and regulations of the Occupational Safety and Health Act, and all state and federal laws and regulations relating to safety and health standards. Consultant shall perform the Services in compliance with, will furnish only supplies, articles, and equipment that comply with such laws, standards, and regulations.
- B. Consultant shall immediately notify Valley Water in the event of any personal injury accident or occurrence occurring during the performance of the Services. Upon Valley Water's request, Consultant shall provide Valley Water with documentation fully describing the accident and injury and the actions implemented to prevent similar occurrences.

10. Consultant as Independent Contractor

Consultant will perform all Services as an independent contractor and not an agent or employee of Valley Water. Consultant represents and warrants that it and its contractors who are performing any of the Services as Subconsultants will perform such Services as an independent contractor, and neither Consultant nor Subconsultants nor their employees are the servants, agents or employees of Valley Water. Except as expressly provided in this Agreement, Valley Water exercises no direction, supervision or control over Consultant, its employees, agents, or Subconsultants.

11. Standard of Care

- A. Consultant must possess and maintain during the term of this Agreement all certifications, licenses, permits, and qualifications to perform the Services and prepare all deliverables. Consultant must perform all Services and prepare all deliverables in accordance with those standards and practices of care, skill, and diligence that are generally recognized and customarily observed by competent persons in Consultant's area of specialty in the State of California at the time such Services are rendered.
- B. Consultant shall perform the Services and prepare all deliverables without any errors or omissions, and in accordance with Section Two Duties of Consultant, subsection 8. Compliance with All Laws.
- C. Consultant and its Subconsultants must perform the Services in compliance with all applicable written federal, state and local codes, statutes, laws, regulations, and ordinances, including, but not limited to, environmental, energy conservation, and disabled access requirements as per the provisions of Section Two Duties of Consultant, subsection 8. Compliance with All Laws.

SECTION THREE

DUTIES OF VALLEY WATER

1. Available Data

Valley Water will make available to Consultant all data and information in its possession and control and which it deems necessary to the preparation of the deliverables specified in the Schedule(s). Valley Water will actively aid and assist Consultant in obtaining such information from other agencies and individuals as it deems necessary. Valley Water is not responsible for providing data and information that it does not possess.

2. Review of Deliverables

- A. Valley Water will designate a Project Manager (Valley Water Project Manager) for purposes of administering and managing this Agreement.
- B. Consultant's progress in completing the Services will be reviewed by Valley Water Project Manager at each milestone identified in the Schedule(s) and at such other time(s) at the discretion of Valley Water.
- C. Consultant must notify Valley Water in writing when it completes each deliverable described in the Schedule(s) and provide Valley Water with said deliverable. Deliverables deemed satisfactory and in compliance with this Agreement are subject to approval by Valley Water. Within 30 calendar days of receipt of each deliverable, Valley Water will either (1) notify Consultant that Valley Water accepts the deliverable, or (2) notify the Consultant that the deliverable is not acceptable and must be revised.
- D. If Valley Water advises Consultant that a deliverable must be revised due to errors or omissions by the Consultant, Consultant must correct, at no cost to Valley Water, those deficiencies as soon as possible and shall notify Valley Water upon completion of the revised deliverable and submit to Valley Water.

- E. Valley Water will then review the revised deliverable and within 30 calendar days of receipt, advise the Consultant if the revised deliverable is acceptable. All deficient deliverables will be revised at no cost to Valley Water and this process will continue until Consultant has corrected all deficiencies identified by Valley Water.
- F. None of the proposed changes or revisions or anything else in this Agreement will be construed to relieve the Consultant of professional or legal responsibility for the performance of the Services as otherwise required by the Terms and Conditions of this Agreement. Corrections to any deliverable as a result of Consultant's errors or omissions, as determined by Valley Water, will not result in additional costs or expenses to Valley Water.

3. Access to Valley Water Facilities

Valley Water will facilitate access to Valley Water facilities as required for the Consultant to perform the Services.

SECTION FOUR

FEES AND PAYMENTS

1. Total Fixed Not-to-Exceed Fees

- A. Payment for all Services performed by Consultant to the satisfaction of Valley Water, as described in the Schedule(s) will be based on the Total Fixed Not-to-Exceed (NTE) Fees stated in the Schedule, Attachment One, Fees and Payments, for completion of the associated tasks. Valley Water will make payments to the Consultant according to the terms provided for herein and in the Schedule, Attachment One, Fees and Payments. Payments made by Valley Water to the Consultant for Services rendered will be considered full compensation for all personnel, materials, supplies, Subconsultant(s), equipment, reimbursable travel and per diem expenses incurred by the Consultant to perform the Services.
- B. Upon the written approval of Valley Water Deputy Operating Officer referenced herein, unused fees from a completed or cancelled task may be re-allocated to a task that has not yet been completed, provided the Agreement Total Not-to-Exceed Fees is not exceeded. Transferring fees from a task not yet completed to a different task is not permitted.
- C. Upon the written approval of Valley Water Deputy Operating Officer referenced herein, the Scope of Services described in a task may be reduced or eliminated. If the Scope of Services of a task is reduced or eliminated, the portion of the fees attributable to that reduced or eliminated task may be allocated to revised existing tasks, or transferred to a Supplemental Services task, if provided for herein.
- D. Any reduction or elimination of tasks and any inter-task transfers will be clearly noted and described in the subsequent monthly progress report to Valley Water.
- E. Services to be performed pursuant to the Supplemental Services task, if provided for herein, will commence only after issuance of a fully executed Task Order.

- F. Automobile travel mileage expenses will be paid at the current IRS rate. Valley Water will not reimburse Consultant nor its Subconsultants for mileage nor travel time to and from Valley Water Headquarters and surrounding campus located at 5700 Almaden Expressway, San Jose, California. However, Valley Water will reimburse Consultant and its Subconsultants for mileage incurred from Valley Water Headquarters or Consultant's and Subconsultants' firm address, whichever is closer to the destination, to Project site(s) and, if directed or authorized by Valley Water, to meeting locations such as with regulatory agencies, for community outreach activities and meetings, for partnering meetings, and Dispute Review Board meetings.

2. Consultant Monthly Invoices

- A. Consultant's monthly invoices will be prepared in accordance with the terms of this Agreement, Section Four Fees and Payments, and represent Services performed and reimbursable costs incurred during the identified billing period. Invoices must be consistent with Scope of Services described in the Schedule(s) attached hereto; and include the following:
- 1) Employee classification and name itemized with all labor charges by Service task;
 - 2) Summary of the amount Consultant has been billed by their Subconsultants and further detailed by Service task;
 - 3) Other direct charges and expenses by Service task;
 - 4) Other direct charges and expenses must reflect actual fees versus the Agreement Not-to-Exceed Fees as stated in the Schedule, Attachment One, Fees and Payments; and
 - 5) To the extent that the Consultant is adding an administrative, processing, overhead or mark-up fee, Valley Water will not pay for such duplication of costs for both the Consultant and its Subconsultants.
- B. Before submitting monthly invoices, a progress report and draft invoice (in Adobe PDF format) will be provided by the Consultant for preliminary review by Valley Water Project Manager. Upon preliminary approval by Valley Water, the Consultant will mail the complete signed and dated hardcopy invoice, including all supporting documentation. Valley Water's preliminary review of the draft invoice does not represent final approval of the hardcopy invoice, but is intended to reduce potential for re-submittals of hardcopy invoice by Consultant.
- C. Each monthly invoice must include a monthly progress report that documents whether or not the Services are on schedule to be completed in accordance with the Schedule, Attachment Two, Schedule of Completion, which applies to the specific Scope of Services, and within the Agreement NTE Fees in accordance with the Schedule, Attachment One, Fees and Payments. The progress report shall document Services completed, the execution of the tasks described in this Services, and enable Valley Water to evaluate the Consultant's progress and performance towards completion of the Services.

1) The monthly progress report shall include:

- a. An assessment of actual versus planned progress in completing the Services, including a description of the tasks and deliverables completed to date;
 - b. A look-ahead schedule listing deliverables and activities planned for the next two months;
 - c. A statement that progress towards completion of the Services is on schedule and will be completed within the timeline set forth in the Schedule of Completion; or, if completion of the Services is not on schedule, then a statement of the anticipated length of the delay, the cause of the delay, measures proposed or taken to prevent or minimize the delay, and the schedule for implementation of such measures;
 - d. A summary of performed tasks to date, an updated Project work plan including estimate of work required to complete this Agreement, explanation of any major variances in percentage of services to be completed compared to percentage of this Agreement NTE fees remaining, and any anticipated changes to this Agreement that may be necessary to complete the Services;
 - e. For any proposed change to the Scope of Services, provide a summary of the proposed changes, including supporting rationale for such change;
 - f. For each task, the percentage of the fees incurred for the task compared to dollar amount allocated to the task, the percentage of services performed versus the percentage of Agreement NTE fees incurred for such task, and explanation of any significant variances in percentage of services performed compared to percentage of fees incurred;
 - g. A statement that all tasks, as specified in this Agreement, shall be completed within the NTE amount of the Agreement;
 - h. Level of Small Business Enterprise (SBE) participation, if applicable, documenting the level of SBE participation throughout the Project; and
 - i. Any changes in Consultant's key staff or Subconsultants.
- D. Invoices will include a summary of labor expenditures, direct costs, and billed Subconsultant charges. Invoices, transmitted separately from the monthly progress reports, will be organized such that the billing categories correspond with the Services tasks.
- E. Consultant shall send all invoices as follows:

- 1. Electronic copies to be sent via email: APinvoice5750@valleywater.org;
- 2. Hard Copies to be sent to:

Santa Clara Valley Water District
 Attention: Accounts Payable
 P.O. Box 20670
 San Jose, CA 95160-0670

- F. In addition to ensuring that each invoice is accompanied with a monthly progress report, Consultant must also ensure that each invoice contains the following information:
- 1) Agreement Number;
 - 2) Full Legal Name of Consultant/Firm;
 - 3) Payment Remit-to Address;
 - 4) Invoice Number;
 - 5) Invoice Date (the date invoice is mailed);
 - 6) Detailed description of services provided, including the “distribution account(s)” for those services; and
 - 7) Beginning and end date for billing period that services were provided.
- G. Consultant shall invoice for its performance of the Services on a monthly basis consistent with the task fee breakdown stated in the Schedule, Attachment One, Fees and Payments, which applies to the specific Scope of Services.
- H. Valley Water Project Manager will review Consultant’s written invoice within five Valley Water business days of receipt, address any questions with Consultant’s Contact/Principal Officer and approve the undisputed amount of the invoice within ten working days of receipt of the invoice. Valley Water will pay undisputed invoice amounts within 30 calendar days from date invoice is received by Valley Water Project Manager.
- I. Consultant’s services will be performed by its staff members and Subconsultants’ staff members at the lowest hourly and unit rates commensurate with the complexity of the required Services.

3. Prevailing Wages

- A. A portion of the Services to be performed pursuant to this Agreement may be considered “Public Works” subject to California Labor Code §1771, et. seq. and the applicable implementing regulations. If Consultant’s Services includes such work, Consultant and its Subconsultants must comply with all Labor Codes applicable to prevailing wages.
- B. Labor Code §1720 provides as follows:
- “(a) As used in this chapter, “public works” means all of the following:
- (1) Construction, alteration, demolition, installation, or repair work done under contract and paid for in whole or in part out of public funds, except work done directly by a public utility company pursuant to order of the Public Utilities Commission or other public authority. For purposes of this paragraph, “construction” includes work performed during the design, site assessment, feasibility study, and other preconstruction phases of construction, including, but not limited to, inspection and land surveying work, regardless of whether any further construction work is conducted, and work performed during the postconstruction phases of construction, including, but not limited to, all cleanup work at the jobsite. For purposes of this paragraph, “installation” includes, but is not limited to, the assembly and disassembly of freestanding and affixed modular office systems.”

- C. Consultant and its Subconsultants shall not engage in the performance of public work, as defined in California Labor Code §1771.1, unless currently registered and qualified to perform public work pursuant to California Labor Code §1725.5.
- D. The General Prevailing Wage Rates issued by the California Department of Industrial Relations may be adjusted by the State throughout the term of this Agreement. Notwithstanding any other provision of this Agreement, Consultant will not be entitled to any adjustment in compensation rates in the event there are adjustments to the General Prevailing Wage Rates.
- E. This Agreement is subject to compliance monitoring and enforcement by the State of California Department of Industrial Relations. Upon request, Consultant and Subconsultants must furnish the records specified in Labor Code §1776 directly to the Labor Commissioner, in a format prescribed by the Labor Commissioner.
- F. All records or documents required to be kept verifying statutory compliance with the prevailing wage requirement, such as certified payroll records, must be made available for audit at no cost to Valley Water, in electronic or hard copy format, at Valley Water's discretion, and hard copies made available at any time during regular business hours, upon written request by Valley Water.
- G. **California State Department of Industrial Relations Contractor and Sub-Contractor Registration Requirements**

Prior to Valley Water executing a Task Order for Services involving public works, as defined herein, Consultant, and its Subconsultant(s) performing public works, must provide evidence, in the form required by Valley Water, that Consultant and its Subconsultant(s) are in compliance with the California State Department of Industrial Relations Contractor and Sub-Contractor Registration Requirements.

4. Retention

- A. Unless otherwise specified in the Schedule, Attachment One, Fees and Payments, when the total compensation payable pursuant to this Agreement exceeds \$20,000, ten percent of each invoice will be withheld by Valley Water and not paid to Consultant until 30 calendar days after the assigned Valley Water representative signs the final approval for all Services/deliverables as stated in the applicable Schedule, Attachment Two, Schedule of Completion, and Section Three, Duties of Valley Water, subsection 2. Review of Deliverables.
- B. Provided that at any time after 50% of the work has been completed, Valley Water may, at its sole discretion, determine that satisfactory progress is being made in the completion of the Agreement, and prospectively make the remaining progress payments in full. The retention previously withheld on the first 50% of the work will continue to be withheld until final contract close out.

SECTION FIVE

SCHEDULE OF COMPLETION

1. Performance of Tasks

Consultant will commence performing the tasks described in the Scope of Services of the attached Schedule(s) to this Agreement upon receipt of the Notice to Proceed (NTP) issued by Valley Water.

2. Project Schedule Table

Consultant will perform and complete the services described in the Scope of Services in accordance with the Project Schedule table (Project Schedule) as stated in the Schedule, Attachment Two, Schedule of Completion. Consultant will coordinate services with Valley Water to provide the timeline of all tasks and subtasks, including the site visits, document review, meetings, and deliverables.

3. Monitoring of Project Schedule

The approved Project Schedule will be monitored monthly. Changes to the schedule for performance of tasks and deliverables are subject to advance written approval by Valley Water.

4. Project Delays

Consultant will make all reasonable efforts to comply with the Project Schedule as stated in the Schedule, Attachment Two, Schedule of Completion. In the event the Project Schedule will be delayed, Consultant will notify Valley Water Project Manager as soon as possible, providing the reason why, the length of the delay, and a description of the actions being taken to address the delay. In the event Consultant is delayed in performance of its services by circumstances beyond its control, Valley Water may, at its discretion, grant a reasonable adjustment in the Project Schedule.

5. Changes to the Project Schedule

Valley Water Project Manager and Consultant may agree to modify the Project Schedule specified for Consultant's performance as an administrative modification to the Agreement and will confirm such modifications in writing.

SECTION SIX

AGREEMENT MODIFICATIONS

The Parties may agree to modify the Terms and Conditions of this Agreement by executing a written amendment hereto.

SECTION SEVEN

TERM AND TERMINATION

1. Term & Automatic Termination

This Agreement encompasses all Services that Consultant is responsible to perform within the time limits and Not-to-Exceed Fees set forth herein. Consultant will not undertake to provide Services where it reasonably appears that the Services cannot be provided and expenses cannot be incurred within said total compensation limit and the applicable Not-to-Exceed Fees of any Task Order.

2. Valley Water Rights

- A. Suspension: Valley Water may, by written notice to Consultant, suspend any or all Services pursuant to this Agreement or to any individual Task Order. Valley Water may subsequently terminate this Agreement or any Task Order for convenience, or determine to proceed. If a decision to proceed is not made within 90 days from the date of the notice of suspension, any decision to proceed must be conditioned upon execution of a new Notice to Proceed or Task Order.
- B. Termination for Convenience: Valley Water may, by written notice to Consultant, terminate all or part of this Agreement or any Task Order at any time for Valley Water's convenience. Upon receipt of such notice, Consultant will immediately cease all work as specified in the notice. If this Agreement or any Task Order is so terminated, Consultant will be compensated as set forth in subsection 3. Consultant's Compensation upon Termination or Suspension.
- C. Termination for Breach: If Consultant violates any of the covenants, agreements or stipulations of this Agreement or a Task Order, or if Consultant fails to fulfill in a timely and proper manner its obligations pursuant to this Agreement or any Task Order, and does not cure such failure or violation within 30 days (or a reasonable extension thereof, if requested, which extension will not be unreasonably withheld) after receipt of written notice from Valley Water specifying such failure or violation, Valley Water will thereupon have the right to terminate this Agreement and any or all uncompleted Task Orders by giving written notice to Consultant of such termination. Such notice will specify the effective date thereof, and Consultant will not be entitled to compensation for services or expenses beyond the specified termination date.
- D. If, after notice of termination for breach of this Agreement or any Task Order, it is determined that Consultant did not breach the Agreement or Task Order, the termination will be deemed to have been effected for Valley Water's convenience, and Consultant will receive payment that is allowed by this Agreement for a termination for convenience.
- E. The rights and remedies provided herein to Valley Water are in addition to any other rights and remedies provided by law, this Agreement, or a Task Order.

3. Consultant's Compensation upon Termination or Suspension

In the event of termination of this Agreement or any Task Order, or suspension of Services by Valley Water, Consultant shall receive compensation based on satisfactory performance, accepted by Valley Water, as follows:

- A. Direct Labor: Consultant shall be entitled to receive compensation for all authorized direct labor performed prior to termination pursuant to the provisions of this Agreement or Task Order and all authorized labor expenses incurred to demobilize from the Project after the date of termination;
- B. Other Direct Costs and Expenses: Consultant shall be entitled to receive compensation for all authorized other direct costs and expenses incurred prior to termination and all authorized expenses incurred to demobilize from the Project after the date of termination; and
- C. In no event shall the total compensation paid for any item of Service exceed the payment specified in the Agreement or applicable Task Order for that item of Service.

4. Survival

The Terms and Conditions of this Agreement, that by their context and a standard of reasonableness, are intended to survive termination, suspension, completion, and expiration of this Agreement, shall survive, including but not limited to, the following Sections and subsections: Independent Contractor Status, Confidentiality, Indemnification, Insurance Requirements, and Dispute Resolution, as well as any Consultant representations and warranties.

SECTION EIGHT

INDEMNIFICATION

Notwithstanding any other provision of this Agreement, Consultant agrees to indemnify, defend and hold harmless Valley Water, its agents, officers, directors, and employees from and against any and all demands, claims, damages, losses and reasonable expenses, including but not limited to liabilities, obligations, claims, costs, reasonable expenses (including, without limitation, interest, penalties and reasonable attorney's fees), fines, taxes, levies, imposts, assessment, demands, damages or judgments of any kind or nature, whether in law or equity (including, without limitation, death or injury to any person, property damage, administrative and judicial orders and consents, or any other loss) to the extent they arise out of, pertain to, or relate to the Consultant's negligence, recklessness, or willful misconduct. The foregoing does not limit any strict liability imposed onto the Consultant by law. The rights, duties, and obligations of the Parties as set forth above in this Section Eight, Indemnification, survive termination, expiration, completion, and suspension of this Agreement.

SECTION NINE

INSURANCE REQUIREMENTS

Insurance requirements applicable to this Agreement are set forth in the Standard Consultant Agreement, Appendix Four Insurance Requirements. Consultant must provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, all insurance coverages as detailed in the Standard Consultant Agreement, Appendix Four Insurance Requirements, and comply with all provisions stated therein.

SECTION TEN

OWNERSHIP AND REUSE OF DELIVERABLES

1. Valley Water Ownership

All deliverables and other materials prepared by Consultant, including computer programs and media developed by the Consultant, to perform the Services, during the term of this Agreement, will be and remain the property of Valley Water following payment in full to Consultant for each task or portion of a completed task, or in accordance with Section Seven Term and Termination. In the event the work is not completed, the completed portions thereof will become the property of Valley Water. Consultant will provide Valley Water with such deliverables and material at appropriate times during this Agreement. Consultant may retain a copy for its records. Consultant does not convey, assign, or transfer the intellectual property rights it has so as to limit its ability or right to develop, design, or provide services on other projects of or for its other clients.

2. Reuse of Instruments of Service

If Valley Water desires to reuse the completed plans, specifications, or other deliverables, in total or in part, on project sites associated with this Agreement, or any other site, or to complete any incomplete portion of construction documentation which Valley Water has already paid Consultant, Valley Water will release Consultant from any liability incurred by Valley Water from reusing said deliverables.

3. Copies of Data

Copies of data exchanged by, through, and between Valley Water and Consultant that may be relied upon are limited to printed copies. Computer-generated files, disks, or tapes of text, data or graphics that are furnished are only for the mutual convenience of the Parties.

4. Computer-Generated Material

Any risk of translation or reliance on information obtained or derived from computer-generated material is at the user's sole risk, and no representations are made, either express or implied, as to the long-term performance of data thus transferred.

5. Work for Hire

Any and all original correspondence, memoranda, reports, designs, plans, specifications, data compilations, computer programs, or drawings delivered to Valley Water by Consultant according to the Terms of this Agreement, in or by any medium is deemed to be "work for hire" according to the copyright laws of the United States and the copyright belongs to Valley Water.

6. Copyright Claims

Co-venturers, subcontractors, Subconsultants, suppliers, and vendors to Consultant are likewise bound by these copyright terms. Valley Water makes no copyright claim and requires no release for copyrighted material or trademarked names used incidentally by Consultant.

SECTION ELEVEN

EQUAL OPPORTUNITY

1. Equal Opportunity Employer

Valley Water is an equal opportunity employer and requires its consultants to have and adhere to a policy of equal opportunity and non-discrimination. In the performance of the Agreement, Consultant will comply with all applicable federal, state, local laws and regulations, and will not discriminate against any subcontractor, employee, or applicant for employment in the recruitment, hiring, employment, utilization, promotion, classification or reclassification, transfer, recruitment advertising, evaluation, treatment, demotion, layoff, termination, rates of pay or other forms of compensation, and selection for professional development training (including apprenticeship), or against any other person, on the basis of sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding), race, religion, color, national origin (including language use restrictions), ancestry, religious creed (including religious dress and grooming practices), political affiliation, disability (mental and physical, including HIV or AIDS), medical condition (cancer and genetic characteristics), genetic information, marital status, parental status, gender, age (40 and over), pregnancy, military and veteran status, sexual orientation, gender identity and gender expression, the exercise of family and medical care leave, the exercise of pregnancy disability leave, or the request, exercise, or need for reasonable accommodation.

2. Compliance with Applicable Equal Opportunity Laws

The Consultant's policy must conform with applicable state and federal guidelines including the Federal Equal Opportunity Clause, "Section 60-1.4 of Title 41, Part 60 of the Code of Federal Regulations," Title VII of the Civil Rights Act of 1964 as amended; the Americans with Disabilities Act of 1990; the Rehabilitation Act of 1973 (§503 and §504); the Age Discrimination Act of 1975 (42 U.S.C. §6101 et seq.); the California Fair Employment and Housing Act (Government Code §12900 et. seq.); and California Labor Code §1101 and §1102.

3. Investigation of Claims

Consultant must designate a specific position within its organization to be responsible for investigating allegations of non-compliance with the anti-discrimination and anti-harassment provisions of this Agreement. Consultant must conduct a fair, prompt, and thorough investigation of all allegations directed to Consultant by Valley Water. In cases where such investigation results in a finding of discrimination, harassment, or hostile work environment, Consultant must take prompt, effective action against the offender.

SECTION TWELVE

MISCELLANEOUS PROVISIONS

1. Entire Agreement

This Agreement, which includes the Terms and Conditions, Appendices, the Schedule(s), Attachments to the Schedule(s), and all executed Task Orders, represents the entire understanding between the Parties hereto relating to the Services described in this Agreement and supersedes any and all prior proposals or agreements, whether written or oral, that may exist between the Parties. This Agreement may not be modified or amended except in writing as stated herein. To the extent that any Schedule conflicts with this Agreement, this Agreement shall control.

2. Formation of Agreement

- A. No agreement between the Parties is formed until all applicable actions have been completed to the satisfaction of Valley Water. Valley Water Project Manager will not issue a Notice to Proceed until all required documents have been submitted and accepted by Valley Water.
- B. Formation of this Agreement between the Parties requires accomplishment of the following, as applicable:
 - 1) Execution of the Agreement by Consultant;
 - 2) Submission by the Consultant, and acceptance by Valley Water, of evidence of all required insurance coverages and documents;
 - 3) Submission by the Consultant, and acceptance by Valley Water, of evidence of all required Form 700 documents, if applicable;
 - 4) Submission by the Consultant, and acceptance by Valley Water, of all required Non-Disclosure Agreements (NDA) documents as provided in the Schedule(s), Attachment Four, Reference Materials, if applicable;
 - 5) Submission by the Consultant, and acceptance by Valley Water, of a Health and Safety Plan, if applicable;
 - 6) Any other requirements that are deemed necessary by Valley Water; and
 - 7) Execution of the Agreement by Valley Water.

3. No Assignment

- A. The expertise and experience of Consultant are material considerations for Valley Water's award and execution of this Agreement. Consultant will not assign or transfer any interest in this Agreement nor the performance of any of Consultant obligations hereunder, without prior written consent of Valley Water in the form of an amendment executed by the Parties, and any attempt to so assign this Agreement, or any rights, duties or obligations arising hereunder, will be void and of no effect. Any assignment of

monies due or to become due in accordance with this Agreement, will be to the extent permitted by law, and will be subject to all proper set-offs, deductions, and withholdings in favor of Valley Water.

- B. In no event shall an assignment of any interest in this Agreement release the Consultant from its duties and responsibilities as described in this Agreement nor shall the Consultant be released from liability created by the provision of Services as described in this Agreement until such assignment takes effect. Any attempted or purported assignment without Valley Water's written consent in the form of an amendment executed by the Parties is null and void.

4. Reasonableness

Discretionary actions or approvals to be performed by the Parties will be exercised in a reasonable manner.

5. Gifts

Consultant hereby acknowledges that Valley Water policy prohibits the acceptance by Valley Water personnel of gifts of any kind from its contractors, consultants, suppliers or vendors. Consultant shall honor this policy by not sending or bringing gifts to Valley Water.

6. Audits

Consultant agrees that Valley Water and its agent(s) have the right to review, obtain, and copy all records pertaining to performance of this Agreement. Consultant agrees to provide Valley Water and its agent(s) with any relevant information requested, in electronic and hard copy format, at Valley Water's discretion, and will permit Valley Water and its agent(s) access to its premises, upon reasonable notice, during normal business hours for the purpose of interviewing employees (alternatively, by phone at Valley Water's discretion) and inspecting or copying books, records, accounts, computerized records, and other materials that may be relevant to the matter under investigation or subject to audit, such as by a government agency, providing Valley Water with grant funds to pay for Consultant's services for the purpose of determining compliance with this Agreement. Consultant further agrees to maintain such records for a period of three years after final payment as provided for in this Agreement.

7. Force Majeure

Neither Party will be held responsible for delays caused by acts beyond its control, such as acts of God or public enemies, utility or communication delays, or failures not caused by such Party's negligence or fault, accidents not caused by such Party's negligence or fault, labor disputes, war, or failure of the other Party to provide data as required pursuant to this Agreement.

8. Binding Effect

This Agreement is binding on the heirs, executors, administrators, successors and assigns of the Parties.

9. Choice of Law and Venue

The Parties agree that this Agreement is to be governed, construed and enforced in accordance with the laws of the State of California. The Parties also agree that the venue of any litigation arising out of or connected with this Agreement will lie exclusively in the state trial court or Federal District Court located in Santa Clara County in the State of California, and the Parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such courts, and consent to service of process issued by such courts.

10. Confidentiality

- A. Due to the nature of the services Consultant will provide pursuant to this Agreement, there may be disclosures made to Consultant of detailed information about Valley Water's operations, including on a need-to-know basis information which may be protected from public disclosure by confidentiality laws, the attorney-client privilege, and/or other provisions of law which govern the nature and timing of disclosure of public information.
- B. Consultant understands and acknowledges that Valley Water staff members providing information to the Consultant do so with the understanding that such information will be handled appropriately.
- C. In the event Consultant receives such restricted or confidential information, Consultant will limit access to the information to only those of Consultant's employees, its subcontractors and its Subconsultants authorized by Valley Water to have the information.
- D. Consultant will notify Valley Water immediately of any request by any third party to have access to confidential information and will not disclose the requested information without first receiving express written authorization from Valley Water.
- E. The requirements stated herein will survive completion, expiration, suspension, and termination of this Agreement.

11. Release of Information Prohibited

Consultant is not permitted to provide any information concerning the Project to the media nor anyone other than authorized Valley Water personnel. Consultant will not release any information pertinent to the Project for publication, public disclosure, or in any other manner without first obtaining clearance and a release in writing from Valley Water. Any media inquiry at any time to Consultant relating to any matter concerning Services provided or requested to be provided pursuant to this Agreement will be referred immediately to Valley Water. Consultant will not communicate with the media regarding any such matter.

12. Conflict of Interest

- A. Consultant represents that there exists no actual or potential conflict of interest concerning the services to be performed pursuant to this Agreement.
- B. Consultant represents that Consultant's performance required as stated in this Agreement does not require the breach of any agreement or obligation to keep in confidence the proprietary information of another party. Consultant will not bring to

Valley Water, or use in the performance of Consultant's duties as described in this Agreement, any materials or documents of another party considered confidential or proprietary unless Consultant has obtained written authorization from such party, and the informed consent of Valley Water, for the possession and use of such materials.

- C. Consultant represents and warrants that during the term of the Agreement, Consultant, Consultant's parent company, Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with Consultant shall not act as a Consultant or expert for any party in support of any potential or active claim or legal action against Valley Water by such party.
- D. CALIFORNIA FAIR POLITICAL PRACTICES COMMISSION STATEMENT OF ECONOMIC INTEREST FORM 700 ("FORM 700"): Upon Valley Water's request, Consultant employees, officers, agents, Subconsultants, and subcontractors shall complete, execute, and submit a Form 700 as follows:
 - 1) Consultant employees, officers, agents, Subconsultants, and subcontractors assigned to perform services pursuant to this Agreement, shall file, in a manner prescribed by Valley Water, an Assuming Office Statement. The Assuming Office Statement shall be filed:
 - a. Within 30 calendar days of the effective date of this Agreement; or
 - b. Within 30 calendar days of Consultant hiring, adding, or promoting to a designated filer position, employees, officers, agents, Subconsultants, and subcontractors to perform services pursuant to this Agreement.
 - 2) Consultant employees, officers, agents, Subconsultants, and subcontractors assigned to perform services pursuant to this Agreement, that filed an Assuming Office Statement, shall file in a manner prescribed by Valley Water, an amendment to their Form 700 any time there is a change to their disclosure information.
 - 3) Consultant employees, officers, agents, Subconsultants, and subcontractors assigned to perform services pursuant to this Agreement, that filed an Assuming Office Statement, shall file an Annual Statement in a manner prescribed by Valley Water, during Valley Water's annual filing season, as determined by Valley Water;
 - 4) Consultant employees, officers, agents, Subconsultants, and subcontractors assigned to perform services pursuant to this Agreement, that filed an Assuming Office Statement, shall file, in a manner prescribed by Valley Water, a Leaving Office Statement with Valley Water when one of the following occurs:
 - a. Upon termination of this Agreement; or
 - b. Within 30 calendar days of Consultant employees, officers, agents, Subconsultants, and subcontractors vacating a designated filing position (i.e., removed from the Project, promotion, demotion, transfer to non-designated position, end of employment, or as a result of changes in designated filer positions in Valley Water's Conflict of Interest Code).

- 5) Consultant understands and agrees that its employees, officers, agents, Subconsultants, and subcontractors may be disqualified from providing services to Valley Water pursuant to the California Political Reform Act, Gov. Code §81000 et. seq. and Government Code §1090. If any of Consultant's employees, officers, agents, Subconsultants, and subcontractors are disqualified from providing services, on written notice from Valley Water Project Manager, Consultant will have 15 calendar days to remove said employee(s), officer(s), agent(s), Subconsultant(s)' and subcontractor(s)' employee(s) from the Project and provide a replacement acceptable to Valley Water.
- 6) The failure of Consultant's employees, officers, agents, Subconsultants, and subcontractors to file an Assuming Office, Annual, Amended, or Leaving Office Statement within the time prescribed by Valley Water is deemed a material breach and may result in termination of the Agreement for cause.

13. Task Orders

- A. Some tasks and Services will be assigned to the Consultant through issuance of Task Orders. After the tasks and Services are identified and communicated to the Consultant by Valley Water Project Manager, Consultant will prepare a proposed Task Order (see Standard Consultant Agreement, Appendix Three Task Order Template). The proposed Task must identify the following:
 - 1) Description of the services, including deliverables;
 - 2) The total Not-to-Exceed Fees for Consultant to complete the services, including estimated number of hours per assigned staff to complete the services;
 - 3) Proposed staff that will be assigned to complete the services, including resumes if not previously provided to Valley Water's Project Manager;
 - 4) Estimated cost of each other direct cost and reimbursable expense, including any applicable fees;
 - 5) Schedule for completing the services; and
 - 6) Copies of applicable state and federal permits required to complete the services, unless previously provided to Valley Water.
- B. Consultant agrees that the Not-to-Exceed Fees specified in a proposed Task Order will be the product of a good faith effort in exercising its professional judgment. After an agreement has been reached on the negotiable items, the finalized Task Order will be signed by both Valley Water's authorized representative referenced in the Standard Consultant Agreement, Appendix One Additional Legal Terms, and Consultant's authorized representative.
- C. Consultant must not commence performance of work or services on a Task Order until it has been approved by Valley Water's authorized representative and Notice to Proceed has been issued by Valley Water Project Manager. No payment will be made for any services performed prior to approval or after the period of performance of the

Task Order. The period of performance for Task Orders will be in accordance with dates specified in the Task Order. No Task Order will be written which extends beyond the expiration date of this Agreement. The total amount payable by Valley Water for an individual Task Order will not exceed the amount agreed to in the Task Order.

- D. Prevailing Wage Requirements: The Scope of Services may be considered by Valley Water to be "Public Works" requiring the payment of prevailing wages. See the Standard Consultant Agreement Section Four, Fees and Payments, subsection 3. Prevailing Wages, and Appendix Three, Task Order Template.

14. Good Neighbor

Valley Water always strives to be a good neighbor to the community adjacent to its facilities. Consultant will ensure that disturbance to neighbors is minimized. Consultant, its staff, and Subconsultants will always interact with the members of the public in a polite and professional manner.

15. Governmental Permits and Notifications

Unless otherwise expressly stated herein or in an executed Task Order, Consultant represents and warrants that it has investigated the need for, and has or will procure, at its cost, and in its own name to the extent allowed by law, all governmental permits, notifications, approvals and inspections required for the performance of the Services. Consultant shall promptly notify Valley Water if any such permit or approval lapses or is modified or revoked. If, pursuant to applicable law, any such permits or approvals must be procured in Valley Water's name, Consultant shall promptly so inform Valley Water and assist Valley Water in obtaining such permits or approvals.

16. Taxes and Benefits

Consultant has full and exclusive liability for the payment of, and Consultant will pay, any and all taxes and contributions for unemployment insurance, retirement benefits, workers' compensation insurance or benefits, life insurance, pensions, annuities and similar benefits and any other employment-related costs, obligations, and duties that may now or hereafter be imposed by law, collective bargaining agreements or otherwise with respect to persons employed by Consultant for the performance of Services pursuant to this Agreement.

17. Nonwaiver of Rights

The failure of either Party to this Agreement to object to or to take affirmative action with respect to any conduct of the other Party that is in violation of the terms of this Agreement will not be construed as a waiver thereof, or as waiver of any future breach or subsequent wrongful conduct.

18. Notices

Unless otherwise specified in this Agreement, all requests for written approval or legal notices must be sent to the representatives below. All notices are deemed to have been given when made in writing and when delivered or mailed to the representatives of Valley Water and Consultant at their respective addresses as follows:

VALLEY WATER:

Deputy Operating Officer, as listed in Section 1. Representatives, of the attached Schedule(s), Scope of Services

CONSULTANT:

Consultant Principal Officer, as listed in Section 1. Representatives, of the attached Schedule(s), Scope of Services

19. No Third-Party Beneficiaries

Nothing in this Agreement, whether express or implied, shall be construed to give any person or entity, other than the Parties hereto, any legal or equitable right, remedy, or claim under or in respect of this Agreement or any covenants, conditions, or provisions contained herein.

20. Severability

If a court of competent jurisdiction holds any provision of this Agreement to be illegal, unenforceable, or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of them, will not be affected, unless an essential purpose of this Agreement would be defeated by the loss of the illegal, unenforceable, or invalid provision.

21. Debt Limitation

This Agreement is contingent on the appropriation of sufficient funding by Valley Water for the services described in this Agreement. Valley Water is subject to laws or policies which limit its ability to incur debt in future years. Nothing in this Agreement shall constitute an obligation of future legislative bodies of Valley Water to appropriate funds for purposes of this Agreement.

22. Appendices

The following listed Standard Consultant Appendices are incorporated herein by this reference as though set forth in full:

Appendix One - Additional Legal Terms
Appendix Two - Dispute Resolution
Appendix Three - Task Order Template
Appendix Four - Insurance Requirements

23. Schedule(s) and Attachments

Schedule PM, Scope of Services, and the following listed Attachments are incorporated herein by this reference as though set forth in full:

Attachment One - Fees and Payments
Attachment Two - Schedule of Completion
Attachment Three - Consultant's Key Staff and Subconsultants
Attachment Four - Reference Materials

(SIGNATURES FOLLOW ON NEXT PAGE)

IN WITNESS WHEREOF, THE PARTIES HAVE SET FORTH BELOW THEIR CONSENT TO THE TERMS AND CONDITIONS OF THIS AGREEMENT THROUGH THE SIGNATURES OF THEIR DULY AUTHORIZED REPRESENTATIVES.

SANTA CLARA VALLEY WATER DISTRICT
Valley Water

BLACK & VEATCH, CORPORATION
Consultant

By: _____
John L. Varela
Chair Pro Tem
Board of Directors

By:  _____
Craig Lichty
Vice President

Date: _____

Date: 5/13/2022

ATTEST:

Consultant's Address:
2999 Oak Road, Suite 490
Walnut Creek, CA 94597

Michele L. King, CMC
Clerk, Board of Directors

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**STANDARD CONSULTANT AGREEMENT
APPENDIX ONE
ADDITIONAL LEGAL TERMS**

1. Conflict of Interest for Future Services

Consultant, Consultant's parent company, Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with Consultant shall not submit a proposal:

- A. For any agreement to be awarded for [planning, design, construction management or the construction] of any project that is related to the Services provided pursuant to this Agreement;
- B. In response to any request for proposal or Valley Water solicitation developed or prepared by or with the assistance of Consultant, Consultant's parent company, Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with Consultant; or
- C. For any single or sole source products/services related to the Services pursuant to this Agreement or have a financial stake in any single or sole source products/services resulting from this Agreement.

2. Dispute Resolution

If a dispute occurs between the Parties as a result of this Agreement, then the Parties agree to use the Dispute Resolution process outlined in the Standard Consultant Agreement, Appendix Two Dispute Resolution.

3. Small Business Enterprise (SBE) Participation - NOT USED

4. Task Order Approvals

- A. Services to be performed pursuant to a Task Order may only commence once a specific Notice to Proceed for that Task Order has been issued by Valley Water.
- B. Task Orders are subject to approval by Valley Water Deputy Officer unless delegated to an Assistant Operating Officer and/or Unit Manager.
- C. Valley Water Unit Manager(s) is authorized to approve individual Task Orders in an amount not-to-exceed \$[authorization amount]. [NOT USED]
- D. The total not-to-exceed amount for any one Task Order shall not exceed \$[NTE Amount]. [NOT USED]

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**STANDARD CONSULTANT AGREEMENT
APPENDIX TWO
DISPUTE RESOLUTION**

1. Consultant's Questions and Concerns

Questions regarding the Terms, Conditions, and Services relating to this Agreement will be decided by Valley Water who will furnish the decisions to Consultant in writing within 30 days after receiving a written request from Consultant.

2. Dispute Resolution

A. Alternate Dispute Resolution

Valley Water intends to use Alternate Dispute Resolution (ADR) techniques including partnering and mediation to resolve disputes relating to the Project.

B. Consultant and its Subconsultants are expected to participate in all ADR efforts.

C. The cost of partnering, training facilities, and facilitator will be borne by Valley Water.

3. Negotiations Before and During Mediation

Negotiations to resolve disputes before and during mediation are initiated for settlement purposes only and are not binding unless otherwise agreed by Valley Water and Consultant.

4. Voluntary Mediation

A. Initiation of Mediation

Any Party to a dispute or claim may initiate mediation by notifying the other Party or Parties in writing.

B. Request for Mediation

A request for mediation must contain a brief written statement of the nature of the dispute or claim, and the names, addresses, and phone numbers of all parties to the dispute or claim, and those who will represent them, if any, in the mediation.

C. Selection of Mediator

- 1) Upon receipt of a written request for mediation, unless otherwise agreed by the Parties, within 14 days, the Parties will confer to select an appropriate mediator agreeable to all Parties.
- 2) If the Parties cannot agree on a mediator, they hereby agree to accept a mediator appointed by a recognized association such as the American Arbitration Association.

D. Qualifications of a Mediator

- 1) Any mediator selected must have expertise in the area of the dispute and be knowledgeable in the mediation process.

**STANDARD CONSULTANT AGREEMENT
APPENDIX TWO
DISPUTE RESOLUTION**

- 2) No person shall serve as a mediator in any dispute in which that person has any financial or personal interest in the result of the mediation.
- 3) Before accepting an appointment, the prospective mediator must disclose any circumstances likely to create a presumption of bias or prevent a prompt meeting with the Parties. Upon receipt of such information, the Parties will confer and decide whether to select another mediator.

E. Vacancies

If any mediator becomes unwilling or unable to serve, another mediator will be selected unless the Parties agree otherwise.

F. Representation

- 1) Any Party may be represented by person(s) of their choice who must have full authority to negotiate.
- 2) The names and addresses of such person(s) must be communicated in writing to both Parties and to the mediator.

G. Time and Place of Mediation

- 1) The mediator will set the time of each mediation session.
- 2) The mediation will be held at a convenient location agreeable to the mediator and the Parties, as determined by the mediator.
- 3) All reasonable efforts will be made by the Parties and the mediator to schedule the first session within 60 days after selection of the mediator.

H. Identification of Matters in Dispute

- 1) Parties shall comply with the process as required by the mediator with regard to providing the mediator with a memorandum setting forth its position with regard to the issues that need to be resolved. At the discretion of the mediator, or otherwise agreed by the Parties, the Parties may mutually exchange such memoranda.
- 2) At the first session, the Parties will be expected to produce all information reasonably required for the Mediator to understand the issue(s) presented. The mediator may require each Party to supplement such information.

I. Authority of Mediator

- 1) The mediator does not have authority to impose a settlement on the Parties but will attempt to assist the Parties in reaching a satisfactory resolution of their dispute.
- 2) The mediator is authorized to conduct joint and separate meetings with the Parties and to make oral and written recommendations for settlement.

**STANDARD CONSULTANT AGREEMENT
APPENDIX TWO
DISPUTE RESOLUTION**

- 3) Whenever necessary, the mediator may also obtain expert advice concerning technical aspects of the dispute, provided the Parties agree and assume the expenses of obtaining such advice. Arrangements for obtaining such advice will be made by the mediator or the Parties, as determined by the mediator.
- 4) The mediator is authorized to end the mediation whenever, in the mediator's judgment, further efforts at mediation would not contribute to a resolution of the dispute between the Parties.

J. Privacy

- 1) Mediation sessions are private.
- 2) The Parties and their representatives may attend mediation sessions.
- 3) Other persons may attend only with the permission of the Parties and with the consent of the mediator.

K. Confidentiality

Except as provided by California or federal law or regulation:

- 1) The mediator will not divulge confidential information disclosed to a mediator by the Parties or by witnesses in the course of the mediation.
- 2) All records, reports, or other documents received by a mediator while serving as mediator, are confidential.
- 3) The mediator must not be compelled to divulge such records or to testify in regard to the mediation in any adversary proceeding or judicial forum.
- 4) The Parties must maintain the confidentiality of the mediation and must not rely on, or introduce as evidence in any arbitration, judicial or other proceedings:
 - a. Views expressed, or suggestions made by the other Party with respect to a possible settlement of the dispute;
 - b. Statements made by the other Party in the course of the mediation proceedings;
 - c. Proposals made or views expressed by the mediator; and

L. Whether the other Party had or had not indicated willingness to accept a proposal for settlement made by the mediator.

M. No Stenographic Record

There shall be no stenographic record of the mediation.

**STANDARD CONSULTANT AGREEMENT
APPENDIX TWO
DISPUTE RESOLUTION**

N. Termination of Mediation

The mediation shall be terminated:

- 1) By the execution of a Settlement Agreement by the Parties;
- 2) By a written declaration of the mediator to the effect that further efforts at mediation are no longer worthwhile; or
- 3) By a written declaration of a Party or Parties to the effect that the mediation proceedings are terminated.

O. Exclusion of Liability

No mediator shall be a necessary Party in judicial proceedings related to the mediation.

P. Interpretation and Application of These Mediation Provisions

The mediator will interpret and apply these mediation provisions insofar as they relate to the mediator's duties and responsibility.

Q. Expenses

- 1) The expenses of witnesses for each Party must be paid by the Party producing the witnesses.
- 2) All other expenses of the mediation, including required travel and other expenses of the mediator, and the expenses of any witness called by the mediator, or the cost of any proofs or expert advice produced at the direct request of the mediator, will be apportioned as the mediator finds appropriate or as otherwise agreed to by the Parties.

5. Compensation for Participation in Mediation

Neither Consultant nor Valley Water is entitled to compensation for time spent in or for negotiations or mediation to resolve questions or disputes between Consultant and Valley Water arising out of this Agreement.

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**STANDARD CONSULTANT AGREEMENT
APPENDIX THREE
TASK ORDER TEMPLATE**

Task Order No. _____

Title: _____

Agreement: Standard Consultant Agreement _____ ("Agreement") Between the Santa Clara Valley Water District ("Valley Water") and _____ ("Consultant"), dated _____.

Valley Water: _____

Consultant: _____

Dollar Amount of Task Order: Not-to-Exceed \$ _____

1. Upon full execution of this Task Order No. _____, as set forth in the Standard Consultant Agreement, Section Twelve Miscellaneous Provisions, subsection 13. Task Orders, and the issuance of a Notice to Proceed by Valley Water Project Manager, the Consultant is hereby authorized to perform the Services described in Attachment A to this Task Order. Any costs incurred, Services performed or expenditures by the Consultant before this Task Order is executed or before the issuance of the Notice to Proceed will be considered outside the contracted Scope of Services and will not be eligible for payment.
2. Both the Scope of Services to be performed and the deliverables to be provided in accordance with this Task Order are described in Attachment A which is attached hereto and incorporated by this reference. Attachment A shall include at a minimum the following:
 - A. The Consultant personnel to be assigned to perform the Services, including resumes if not previously provided to Valley Water;
 - B. The total not-to-exceed fees amount for Consultant to complete the Services, including estimated number of hours required to perform the Services assigned to each Consultant classification;
 - C. Estimated cost of each other direct cost and reimbursable expense, including any applicable fees;
 - D. The distribution detail for each service, direct cost, and reimbursable expense. This information must be included in the invoice for the services authorized under this task order; and
 - E. Project schedule for completing the Scope of Services.
3. Consultant shall be compensated at fixed fees or at the hourly rates established in Attachment One to the Schedule(s), Fees and Payments. Consultant agrees that it will provide all equipment, furnish all materials, except as may be otherwise noted in the Attachment A.

**STANDARD CONSULTANT AGREEMENT
APPENDIX THREE
TASK ORDER TEMPLATE**

4. This Task Order becomes effective on the date of full execution by authorized representatives of the Parties and remains in effect until the earlier of: completion of the tasks set forth in Attachment A; or [expected completion date].
5. Copies of applicable local, state and federal permits required to perform the Services described in Attachment A are attached to this Task Order, unless the Consultant previously provided the appropriate permits to Valley Water.
6. Consultant shall perform all Services described in Attachment A to this Task Order in accordance with the Terms and Conditions of the Agreement.
7. Prevailing Wage Requirements [NOT USED]
 - A. The Scope of Services described in this Task Order is considered by Valley Water to be "Public Works" requiring the payment of prevailing wages. See the Standard Consultant Agreement, Section Four, Fees and Payments, subsection 3. Prevailing Wages.
 - B. In accordance with prevailing wage laws, the Director of the California Department of Industrial Relations (Director) has ascertained the general prevailing rate of wages and employer payments for health and welfare, pension, vacation, and similar purposes available to the particular craft, classification, or type of workers employed on the Project. These rates are set forth in the latest determination obtained from the Director, which is on file in Valley Water's Office of the Clerk of the Board of Directors and incorporated herein by reference the same as though set forth in full. The rates are also available on the State of California Department of Industrial Relations website at <http://www.dir.ca.gov>.

8. Signatures:

Signature:

NAME OF CONSULTANT FIRM
[PRINT NAME]
[PRINT TITLE]

DATE

Signature:

SANTA CLARA VALLEY WATER DISTRICT
[PRINT NAME]
[PRINT TITLE]

DATE

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**STANDARD CONSULTANT AGREEMENT
APPENDIX FOUR
INSURANCE REQUIREMENTS**

Please Note: Failure to comply with the instructions below could result in a delay in receiving the Notice to Proceed. The District will not be responsible for time lost or costs incurred due to failure to comply with these requirements. Please note the check-list of documents needed at the end of this Appendix Four Insurance Requirements.

Without limiting the Consultant's indemnification of, or liability to, the Santa Clara Valley Water District ("District" or "Valley Water"), the Consultant must provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions as listed below.

Consultant must provide its insurance broker(s)/agent(s) with a copy of these requirements and warrants that these requirements have been reviewed by Consultant's insurance agent(s) and/or broker(s), who have been instructed by Consultant to procure the insurance coverage required herein.

In addition to certificates, Consultant must furnish District with copies of all original endorsements affecting coverage required by this Appendix Four Insurance Requirements. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. **All endorsements and certificates are to be received and approved by District before the Agreement is executed.** In the event of a claim or dispute, District has the right to require Consultant's insurer to provide complete, certified copies of all required pertinent insurance policies, including endorsements affecting the coverage required by this Appendix Four Insurance Requirements.

If your insurance broker has any questions about the above requirements, please advise him/her to call Mr. David Cahen, District Risk Manager at (408) 630-2213.

Certificates of Insurance

Consultant shall furnish the District with a Certificate of Insurance. The certificates will be issued on a standard ACORD Form.

Consultant shall instruct their insurance broker/agent to submit all insurance certificates and required notices electronically in PDF format to the designated District Contract Administrator and email a copy to valleywater@ebix.com.

The certificates will:

1. Identify the underwriters, the types of insurance, the insurance limits, the deductibles and the policy term;
2. Include copies of all the actual policy endorsements required herein; and
3. In the "Certificate Holder" box include:

**Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
Agreement/CAS No. 5160**

IMPORTANT: The agreement or CAS number must be included.

**STANDARD CONSULTANT AGREEMENT
APPENDIX FOUR
INSURANCE REQUIREMENTS**

In the Description of Operations/Locations/Vehicles/Special Items Box:

1. Certificate Holder shall be named as Additional Insured;
2. District agreement or project number shall appear;
3. The list of policies scheduled as underlying on the Umbrella policy shall be listed; and
4. Waiver of Subrogation must be indicated as endorsed to all policies.

If Consultant receives any notice that any of the insurance policies required by this Appendix Four Insurance Requirements may be cancelled or coverage reduced for any reason whatsoever, Consultant or insurer shall immediately provide written notice to the designated District Contract Administrator that such insurance policy required by this Appendix Four Insurance Requirements is canceled or coverage is reduced.

Maintenance of Insurance

If Consultant fails to maintain such insurance as is called for herein, District, at its option, may suspend payment for work performed and/or may order Consultant to suspend all Consultant's work at Consultant's expense until a new policy of insurance is in effect.

Renewal of Insurance

Consultant will provide the District with a current Certificate of Insurance and endorsements within thirty (30) business days from the expiration of insurance.

Consultant shall instruct its insurance broker/agent to:

1. Submit all renewals of insurance certificates and required notices electronically in PDF format to: valleywater@ebix.com
2. Provide the following information in the "Certificate Holder" box:

**Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
Agreement/CAS No. 5160**

IMPORTANT: The agreement or CAS number must be included.

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STANDARD CONSULTANT AGREEMENT APPENDIX FOUR INSURANCE REQUIREMENTS

Consultant must, at its sole cost and expense, procure and maintain during the entire period of this Agreement the following insurance coverage(s).

Required Coverages

1. Commercial General/Business Liability Insurance with coverage as indicated:

\$2,000,000 per occurrence / **\$2,000,000** aggregate limits for bodily injury and property damage

General Liability insurance must include:

- a. Coverage at least as broad as found in standard ISO form CG 00 01.
- b. Contractual Liability expressly including liability assumed under this contract.
- c. If Consultant must be working within fifty (50) feet of a railroad or light rail operation, any exclusion as to performance of operations within the vicinity of any railroad bridge, trestle, track, roadbed, tunnel, overpass, underpass, or crossway must be deleted, or a railroad protective policy in the above amounts provided.
- d. Severability of Interest.
- e. Broad Form Property Damage liability.

2. Business Auto Liability Insurance with coverage as indicated:

\$2,000,000 combined single limit for bodily injury and property damage per occurrence, covering all owned, non-owned and hired vehicles.

3. Professional/Errors and Omissions Liability with coverage as indicated:

\$5,000,000 per claim/ **\$5,000,000** aggregate

Professional/Errors and Omission Liability appropriate to the Consultant's profession, and must include:

- a. If coverage contains a deductible, or self-insured retention, it shall not be greater than one hundred thousand dollars (\$100,000) per occurrence/event.
- b. Coverage shall include contractual liability
- c. If coverage is claims-made:
 - i. Certificate of Insurance shall clearly state that the coverage is claims-made.
 - ii. Policy retroactive date must coincide with or precede the Consultant's start of work (including subsequent policies purchased as renewals or replacements).
 - iii. Policy must allow for reporting of circumstances or incidents that might give rise to future claims.
 - iv. Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the contract of work.

STANDARD CONSULTANT AGREEMENT APPENDIX FOUR INSURANCE REQUIREMENTS

4. Workers' Compensation and Employer's Liability Insurance

Statutory California Workers' Compensation coverage covering all work to be performed for the District.

Employer Liability coverage for not less than \$1,000,000 per occurrence.

5. Cyber Liability Insurance

Cyber liability insurance in the amount of no less than \$2,000,000, designed to provide coverage from failure to protect sensitive information, and failure of network security (including unauthorized access, or unauthorized use of corporate systems, denial of service attacks, transmission of malicious code, or alteration or deletion of customer data).

General Requirements

With respect to all coverages noted above, the following additional requirements apply:

1. **Additional Insured Endorsement(s):** Consultant must provide an additional insured endorsement for Commercial General/Business Liability (for both on-going and completed operations) and Business Automobile liability coverage naming the **Santa Clara Valley Water District, its Directors, officers, employees, and agents, individually and collectively**, as additional insureds, and must provide coverage for acts, omissions, etc. arising out of the named insureds' activities and work. Other public entities may also be added to the additional insured endorsement as applicable and the Consultant will be notified of such requirement(s) by the District. **NOTE:** This section does not apply to the Workers' Compensation and Professional Liability policies.

(**NOTE:** Additional insured language on the Certificate of Insurance is **NOT** acceptable without a separate endorsement such as Form CG 20 10, CG 2033, CG 2037, or CG 2038. Editions dated 07/04 are not acceptable.)

2. **Primacy Clause:** Consultant will provide evidence (either through the Certificate of Insurance, endorsement or language in the insurance contract) that consultant's insurance is primary with respect to any other insurance which may be carried by the District, its Directors, its officers, agents and employees, and the District's coverage must not be called upon to contribute or share in the loss. **NOTE:** This section does not apply to the Workers' Compensation policies.
3. **Cancellation Clause:** Consultant will provide endorsements for all policies stating that the policy will not be cancelled without 30 days prior notification to the District.
4. **Acceptability of Insurers:** All coverages must be issued by companies admitted to conduct business in the State of California, which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the District's Risk Manager. Non-Admitted companies may be substituted on a very limited basis at the Risk Manager's sole discretion.

**STANDARD CONSULTANT AGREEMENT
APPENDIX FOUR
INSURANCE REQUIREMENTS**

5. **Self-Insured Retentions or Deductibles:** Any deductibles or self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the District, its officers, officials, employees and volunteers; or the Consultant shall provide a financial guarantee satisfactory to the Entity guaranteeing payment of losses and related investigations, claim administration, and defense expenses. Consultant agrees that in the event of a claim they will pay down any agreed upon SIR in a prompt manner as soon as bills are incurred in order to trigger the insurance related to the SIR.
6. **Subconsultants:** The Consultant shall secure and maintain or shall be responsible for ensuring that all subconsultants performing the Contract Services secure and maintain all insurance coverages appropriate to their tier and scope of work in a form and from insurance companies reasonably acceptable to the District.
7. **Amount of Liability not Limited to Amount of Insurance:** The insurance procured by Consultant for the benefit of the District must not be deemed to release or limit any liability of Consultant. Damages recoverable by the District for any liability of Consultant must, in any event, not be limited by the amount of the required insurance coverage.
8. **Coverage to be Occurrence Based:** Except for Professional Liability, all coverage must be occurrence-based coverage. Claims-made coverage is not allowed.
9. **Waiver of Subrogation:** Consultant agrees to waive subrogation against the District to the extent any loss suffered by Consultant is covered by any Commercial General Liability policy, Automobile policy, Workers' Compensation policy described in **Required Coverages** above. Consultant agrees to advise its broker/agent/insurer and agrees to provide evidence (either through the Certificate of Insurance, endorsement or language in the insurance contract) that subrogation has been waived by its insurer.
10. **Non-compliance:** The District reserves the right to withhold payments to the Consultant in the event of material noncompliance with the insurance requirements outlined above.

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**STANDARD CONSULTANT AGREEMENT
APPENDIX FOUR
INSURANCE REQUIREMENTS**

CHECK LIST OF DOCUMENTS NEEDED

General Liability:	A.	Limits (\$2,000,000)	
	B.	Additional Insured (Endorsement)	
	C.	Waiver of Subrogation (COI, Endorsement or policy language)	
	D.	Primacy (COI, Endorsement or policy language)	
	E.	Cancellation Endorsement	

Auto Liability:	A.	Limits (\$2,000,000)	
	B.	Additional Insured (Endorsement)	
	C.	Waiver of Subrogation (COI, Endorsement or policy language)	
	D.	Primacy (COI, Endorsement or policy language)	
	E.	Cancellation Endorsement	

Umbrella:	A.	Limits (\$)	
	B.	Primacy (Endorsement or policy language)	

Workers Comp:	A.	Limits (\$1,000,000)	
	B.	Waiver of Subrogation (Endorsement or policy language)	
	C.	Cancellation Endorsement	

Professional:	A.	Limits (\$5,000,000)	
	B.	Cancellation Endorsement	

Cyber:	A.	Limits (\$2,000,000)	
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Appendix Four Consultants rev. 6.30.21/ CAS rev. 4.12.22

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SCHEDULE PM SCOPE OF SERVICES

1. Representatives

- A. Valley Water's representatives are as listed below. Unless otherwise provided in this Agreement, all correspondence to Valley Water must be addressed to Valley Water Project Manager (VWPM).

Freddie Chak (Valley Water Project Manager)
Associate Control Engineer
Business Support and Asset Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3638

Phone: 408-630-2889

Email: fchak@valleywater.org

Erin Baker
Engineering Unit Manager
Business Support and Asset Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3638

Phone: 408-630-2608

Email: ebaker@valleywater.org

- B. The Consultant's Project Manager is as listed below. All Valley Water questions pertaining to this Agreement shall be referred to the Consultant's Project Manager.

Julie A. Inman (Consultant Project Manager)
Black & Veatch Project Manager
2999 Oak Road, Suite 490
Walnut Creek, CA 94597

Phone: 913-458-3209

Email: InmanJA@bv.com

- C. The Consultant's Principal Officer for this Agreement is as listed below. As per the Agreement, Section Twelve, Miscellaneous Provisions, subsection 18. Notices, all notices pertaining to this Agreement must be submitted to the Consultant's Principal Officer.

Craig Lichty (Consultant Principal Officer)
Vice President
2999 Oak Road, Suite 490
Walnut Creek, CA 94597

Phone: 925-949-5985

Email: LichtyC@bv.com

SCHEDULE PM SCOPE OF SERVICES

2. Scope of Services

- A. This Schedule PM, Preliminary Scope of Services, describes the professional design and environmental services to be performed by Consultant for Valley Water's Supervisory Control and Data Acquisition (SCADA) Master Plan Implementation Project (Project). The term "SCADA System" includes the SCADA system for remote facilities and the treatment plants' control systems.
- B. Consultant shall be responsible for the services authorized to be performed under the scope of services, and shall perform the services comprising each task, except where it is expressly stated that such services will be performed by others or Valley Water. Activities to be performed by Valley Water are included under the respective heading, "Assumptions."
- C. Consultant shall be responsible for the services authorized to be performed under each of the first five tasks described below in Section 7 - Tasks with the sixth task (Supplemental Services, including Implementation Program Management Services) being optional and dependent on the retention of the Consultant after Task 5 - Prepare Programmatic Environmental Impact Report (PEIR).

3. Project Objectives

- A. The main objectives of the SCADA Master Plan Implementation Project are as follows:
 - 1) Define Project goals and perform a needs assessment and gap analysis.
 - 2) Review and develop technology standards for Valley Water's SCADA.
 - 3) Develop a 15 year program of SCADA improvement projects including project design and definition.
 - 4) Prepare a PEIR for the Project.
 - 5) Manage the implementation program.

4. Project Background

- A. The mission of the Santa Clara Valley Water District, now known as Valley Water, is to provide Silicon Valley safe, clean water for a healthy life, environment, and economy. Valley Water is a public agency providing water supply, flood protection, and stream stewardship for Santa Clara County. Valley Water manages an integrated water resources system that includes the supply of clean safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 2 million residents. Valley Water effectively manages ten dams and surface water reservoirs, three water treatment plants, a state-of-the-art water quality laboratory, and more than 275 miles of streams. For information about Valley Water, visit www.valleywater.org.
- B. In February 2011, Valley Water completed its first Process Control Systems (SCADA) Master Plan. The Process Control Systems Master Plan provided a road map to guide Valley Water in its identified upgrades, replacement, and expansion of its process control and SCADA systems through the year 2021.

SCHEDULE PM SCOPE OF SERVICES

- C. The previous master plan was completed with collaborative participation of Valley Water Engineering, Operations, Maintenance, Water Quality, Information Technology, and Capital Planning staff. It followed a well-established methodology for the evaluation of process control and SCADA systems and included an evaluation of the costs and benefits of automation improvements as covered in the American Water Works Association Research Foundation Report - *The Costs and Benefits of Complete Water Treatment Plant Automation*.
- D. The 10-year plan included recommended technical improvements and identified budget, schedule, and resource requirements for their implementation, intending to be updated as progress was made and as conditions changed over time.
- E. The previous master plan was structured around “three levels of process control system improvements”. This approach focused toward identifying changes and improvements in the following categories or “Levels”:
- Level 1 – Changes to support the current level of Valley Water operations
 - Level 2 – Changes to provide or enable process and operations improvements by providing better tools for operations
 - Level 3 – Changes to provide or enable optimized operation, defined as making the process control systems as functional and effective as possible or providing more “intelligent features”
- F. The Master Plan identified the following seven projects for implementation:
- 1) Process Control System (PCS) Standards – Establish and document the PCS design standards, Human Machine Interface (HMI) and controller standards, SCADA security standards, and standards for management of changes
 - 2) HMI Improvements – Development of improved graphic displays, enhanced alarm management, procurement and configuration of the replacement HMI (if needed), and related activities
 - 3) Remote Architecture/Communications Upgrade – Detailed design and replacement/upgrade of the remote controls and communications infrastructure
 - 4) Process Control/Automation Improvements Phase 1 – Detailed evaluation of individual process control systems, focusing on instrumentation and control element replacements and upgrades and process sequence improvements
 - 5) Process Control/Automation Improvements Phase 2 – Automation improvements focused on process optimization, energy efficiency, and data access
 - 6) SCADA Expansion – Provide improved monitoring and control of remote recharge and stream outflows
 - 7) Automation Program Maintenance – Overall coordination efforts and management activities associated with implementation of the projects

SCHEDULE PM SCOPE OF SERVICES

- G. An opinion of probable costs for the recommended improvements projects was provided in the plan. This included consultant design services, materials, installation, programming and system integration and construction phase oversight. Budget estimates were also included for Valley Water's ongoing program management and Owner's Engineer support efforts needed for the work. The costs presented in the master plan were the estimated costs for the projects themselves, and did not include full life cycle costs, such as maintenance costs associated with the asset life cycle, for example.
- H. The 2011 Process Control Systems (SCADA) Master Plan, along with the Task 2 Goal Definition, Needs Assessment and Gap Analysis stakeholder workshops to review the work that has been done and changes that have been made to the operational systems since 2011, will serve as the starting point for this Project.

5. Assumptions and Requirements

A. General Assumptions and Requirements

- 1) **Manage Scope of services.** Consultant shall manage the Scope of Services such that the work is completed within the Not-to-Exceed Fees limit and in accordance with the Project schedule and ensure that all services and deliverables meet Valley Water and Project objectives and requirements.
- 2) **Deliverable Format.** Consultant shall submit deliverables in both electronic and hardcopy format, if requested. Deliverables shall be submitted in PDF and native (editable) format, including Word documents, Excel spreadsheets, PowerPoint files, AutoCAD files, etc. The hard copy deliverables shall be printed in professional quality presentation and submitted in 5 (five) copies, if requested. Valley Water may require original copies of signed documents and/or scanned (Adobe PDF) versions.
- 3) **Review of Deliverables.** Valley Water will review and comment on all Project deliverables and forward to the Consultant for revision and preparation of final versions. As determined by Valley Water, some of the deliverables may also be subject to review and comment from regulatory agencies and stakeholders following Valley Water review process. For each deliverable, Valley Water will collect comments from all Valley Water stakeholders and provide a single set of consolidated comments to the Consultant. The comments provided by Valley Water staff during the workshops will be documented by the Consultant as meeting minutes and will be included in the next revision of the documents.
- 4) **Valley Water Quality Environmental Management System.** Valley Water maintains a Quality Environmental Management System (QEMS) which has procedures, guidelines and work instructions for the performance of various Valley Water work. If requested, the Consultant will perform some of the Agreement tasks and/or sub-tasks in accordance with the QEMS framework. In such situations, Valley Water Project Manager (VWPM) will provide the Consultant with the specific QEMS procedure, guideline, and/or work instruction prior to the production of deliverables.

SCHEDULE PM SCOPE OF SERVICES

- 5) **Consultant Responsibility.** Consultant, with its expertise in performing the Services described herein, is responsible for making the appropriate assumptions in each task to complete each task's deliverables and to achieve the Project objectives of this Agreement as described in Section Three, Project Objectives of this Scope of Services.
- 6) **Document Control.** The Consultant is responsible for establishing and maintaining its own document control system to execute this Scope of Services. An internal document control system for this Project is maintained by Valley Water.
- 7) **File Exchange Service.** Valley Water will provide the Consultant with a Valley Water approved file exchange service to facilitate communications; particularly of large files over three megabytes. In the event, that transmitting or receiving information does not occur in a timely manner, Valley Water will not be responsible for delays in completing Project work. Details for how to use the file exchange service will be provided to the selected consultant during negotiations. Consultant may need to coordinate with Valley Water's Information Technology Division to address any firewall issues and/or permissions required to allow for these communications.
- 8) **Virtual Meeting Platform.** All meetings where sensitive information, as defined in Valley Water's Non-Disclosure Agreement, may be discussed must be conducted via Zoom or MS Teams using the end-to-end (E2EE) encryption for meetings feature.
- 9) **Cyber Security Controls and Guidelines.** Consultant will be required to adhere to Valley Water's Cyber Security Controls and Guidelines.

B. Project-Specific Assumptions and Requirements

- 1) The Consultant will only have indirect access to Valley Water's various SCADA and control systems, coordinated with and under the direct supervision of Valley Water's staff
- 2) Offline access, where feasible, will be provided to relevant documentation and files that exist, which may include:
 - a. Existing SCADA and Instrumentation & Control (I&C) guidelines and standards
 - b. Existing Electrical System design guidelines and standards
 - c. Existing IT design guidelines and standards
 - d. Remote site (reservoir, pumping plant, line valves, and turnouts) PLC and HMI programs
 - e. Treatment plants PLC and HMI programs
 - f. Example reports generated by the SCADA system
 - g. Project as-built drawings and controls specifications (P&IDs, system architecture drawings, network diagrams, input/output lists, instrumentation lists, etc.)

SCHEDULE PM SCOPE OF SERVICES

- h. Information on telemetry systems and networking
 - i. Cybersecurity documentation (software and hardware components, controls & policies, vulnerability assessments, risk analysis and/or security reports, if available)
 - j. Cyber Security Controls and Guidelines Document
 - k. Documentation for any planned improvement projects
 - l. Asset inventories for each control system including number of spares on hand
 - m. Five-year Maintenance Work Plan
 - n. Current five-year capital improvement program
- 3) Consultant meetings with Valley Water staff will be extensive and will include work at various operational facilities as well as office location and via online/teleworking meetings. Assumptions presented under each task provide information on the number of meetings, meeting duration, and number of attendees from the Consultant. Some meetings or workshops may need the full allocated hours in one sitting, while others may be split into multiple workshops with different participants.
 - 4) Consultant will confirm format of technical memoranda with Valley Water and will follow the same format for all deliverables
 - 5) Valley Water will distribute the deliverables to appropriate staff for review
 - 6) All Valley Water comments on draft deliverables will be addressed prior to finalizing deliverables

6. Tasks

The Consultant shall provide all services and deliverables as required by this **Scope of Services** to the satisfaction of Valley Water.

Task 1 - Project Management

The purpose of this task is for Consultant to manage this Scope of Services such that the work is completed within the fees limit stated in Attachment One to Schedule PM, Fees and Payments, and in accordance with the Project Schedule stated in Attachment Two to Schedule PM, Schedule of Completion, while ensuring that all services and deliverables by the Consultant meet Valley Water and Project requirements.

The Consultant will maintain effective communications among the Valley Water and Consultant team members, obtain Valley Water staff input on work in progress, and provide a forum for consensus building and decision-making.

SCHEDULE PM SCOPE OF SERVICES

1.1 Kickoff Meeting

Consultant will attend kickoff meeting with Valley Water. The purpose of the kickoff meeting is to introduce key Valley Water and Consultant team members to one another, acquaint all participants with the purpose of and expectations for the Project, describe team members' roles and responsibilities, describe Project procedures, and summarize scope and schedule. In addition, the team will review the overall Valley Water Vision and Mission and how the SCADA Master Plan Implementation Project will support Valley Water's mission. Consultant will develop a list of current system assessment evaluation criteria and will provide the criteria to the Valley Water core team at the kickoff meeting for review and comment.

Task 1.1 - Assumptions

1. Key Consultant team members will attend the kickoff meeting in person at Valley Water offices. For budgeting purposes, it is assumed that the kickoff meeting will be four hours in duration and attended by six team members.

Task 1.1 - Deliverables

1. Meeting Agendas, Minutes, and Presentations
2. Draft Current System Assessment Evaluation Criteria

1.2 Project Work Plan

- 1.2.1 Consultant will prepare a Project Work Plan in accordance with this Scope of Services.
- 1.2.2 The Project Work Plan shall include Project objectives, a discussion of the Consultant's approach to work, a copy of the final scope of work, requirements, constraints, a detailed Project Schedule (showing major tasks and deliverables), a breakdown of Consultant's costs for the major tasks, a list of the Consultant's team members and their roles and responsibilities, communication protocols (internal and external), document control procedures, and other administrative procedures. The work plan will also include a Decision Log template that will be used to document all project decisions and will be reviewed with VW PM on a regular basis.
- 1.2.3 The Project Work Plan shall include a Project Quality Assurance and Quality Control (QA/QC) Plan documenting the Consultant's procedures to ensure the Consultant's services and deliverables meet Valley Water requirements and accepted practices and standards of the Consultant's profession. Valley Water reserves the right to request and review the Consultant's Project documentation demonstrating its adherence with their own quality assurance procedures. A comment log will be developed for each Project deliverable to document all comments and their resolution.
- 1.2.4 Valley Water will review and provide comments on and requested edits to the Project Work Plan, including to the details of the work required for Project Tasks 2 – Project Goal Definition, Needs Assessment and Gap Analysis, Task 3 - Technology Evaluation and Standardization, Task 4 - Projects and Program

SCHEDULE PM SCOPE OF SERVICES

Definition, and Task 5 – Prepare Programmatic Environmental Impact Report (PEIR).

- 1.2.5 The Consultant and Valley Water will meet in workshop to go over and resolve all Valley Water's comments and edits to the Project Work Plan and scope of work.
- 1.2.6 The Consultant will issue an updated Project Work Plan, including finalized task scope details, for Valley Water's review and approval, prior to the beginning of each tasks' works.

Task 1.2 - Assumptions

- 1. The Consultant's standard Quality Assurance and Quality Control Plan will be used and modified as appropriate to meet Project specific needs.
- 2. Project Work Plan review comments workshop is assumed as four hours in duration and attended by two Consultant team members virtually.

Task 1.2 - Deliverables

- 1. Project Work Plan including QA/QC Plan (Outline, Draft, and Final)
- 2. One four-hour review workshop
- 3. Workshop Meeting Agenda, Minutes, and Presentation

1.3 Progress Meeting and Workshops

Consultant key staff and subconsultants as determined necessary and appropriate by Consultant, subject to VWPM approval, will coordinate, attend, and lead periodic progress meetings and workshops with Valley Water staff, as needed, to review and discuss progress of the work. For all meetings and workshops lead by the Consultant in this scope of service, the Consultant will prepare the meeting agenda, notes, minutes, and presentation (if needed) and submit them for review by Valley Water.

Task 1.3 - Assumptions

- 1. Progress meetings and workshops are covered under individual tasks as indicated below.
- 2. Valley Water will include all key stakeholders relevant to the discussion defined in each respective agenda.
- 3. PEIR Subconsultant Assumptions:
 - a. Assumes two initiation meetings in Task 1, up to 4 hours each for PM and one planner.

Task 1.3 - Deliverables

- 1. Meeting Agendas, Minutes, and Presentations

1.4 One-on-One Meetings with Valley Water

Consultant Project Manager must meet periodically with VWPM to provide a brief update of the team's work activities recently completed, the look-ahead activities, and the issues and actions that require Valley Water's attention. The meeting schedule will be established by Valley Water, weekly/biweekly, and will be either in person or by phone, at Valley Water's discretion.

SCHEDULE PM SCOPE OF SERVICES

Task 1.4 - Assumptions

1. It is assumed that bi-weekly meetings will be held by the Consultant's PM team (2 people) with Valley Water PM. 50% of the meetings will include an in-person participant. A total of fifty-four (54) one-hour meetings are included.

Task 1.4 - Deliverables

1. Meeting Agendas, Action Items by email

1.5 Coordination and Communication with External Agencies

Consultant will assist VWPM with coordination and communication with appropriate regulatory or other agencies, as necessary, to execute this Scope of Services. This task includes support in drafting correspondence related to the Consultant's Project activities as requested by Valley Water.

Task 1.5 - Assumptions

1. For budgeting purposes, 80 hours are included.

Task 1.5 - Deliverables

1. Drafting email correspondences, as requested by Valley Water, to communicate with external agencies

1.6 Project Schedule Updates

Consultant will prepare a baseline Project schedule with milestones and update regularly and achieve completion of the Project on schedule.

Project schedule shall track progress on all tasks at the subtask level. The schedule will not incorporate labor hours or costs. The monthly update to the Project schedule shall include an indication of the progress for each task, anticipated work during the next month and potential changes to Project schedule or scope.

Task 1.6 - Assumptions

1. 36 monthly updates to show work progress, schedule and budget status included to cover the anticipated Project duration.

Task 1.6 - Deliverables

1. Project Schedule (Baseline and Monthly Updates)

1.7 Coordination with Other Master Plans

A total of 8 quarterly meetings of 2 hours duration is included to be attended by up to two people in person and two by phone to coordinate the SCADA Master Plan Implementation Project with other Master Plans.

SCHEDULE PM SCOPE OF SERVICES

Task 1.7 - Deliverables

1. Drafting email correspondences, as requested by Valley Water, to communicate with other Master Plan consultants

Task 2 - Project Goal Definition, Needs Assessment and Gap Analysis

2.1 Goals Definition, Needs Assessment and Gap Analysis

2.1.1 Review Existing Documentation

Consultant will gain an understanding of Valley Water's SCADA systems by reviewing the 2011 SCADA Master Plan and additional sources of information as listed in Schedule PM: Scope of Services, Section 6B – Assumptions and Requirements.

The consultant will work with Valley Water to identify the specific documents to be reviewed. Consultant will develop a general assessment of the completeness and accuracy of the current system documentation.

A log of the information requested by the Consultant and provided by Valley Water shall be maintained by the Consultant. After the consultant has reviewed the documentation, a virtual meeting will be held with consultant team leads, Valley Water Project manager and SCADA leads to identify which previously identified improvements are still warranted, which improvements are no longer applicable, and what new improvements are necessary. The consultant will also solicit input on the future vision of the SCADA system and goals of the Project.

Consultant will schedule a two-hour cybersecurity policy focused discussion with Valley Water IT and OT personnel.

Task 2.1.1 - Deliverables

1. Existing Information Documentation Log
2. Virtual meeting to review existing documentation with stakeholders
3. One two-hour cybersecurity policy focused virtual meeting attended by four Consultant personnel with Valley Water IT and OT personnel

2.1.2 Field Investigations and Stakeholder Meetings

The consultant will conduct in-person field investigations and meet with system owners, maintainers, and stakeholders to discuss current system states.

The assessment criteria, initially introduced during the kick-off meeting, will consider various aspects of control systems and components such as condition based on visual inspection, age of components and useful remaining life, expected duration of vendor support and availability of spare parts, ease of maintenance, expansion capacity, and conformance to industry standards/best practices and Valley Water Cyber Security Controls and Guidelines. The consultant will develop a form, incorporating the assessment criteria, for use during field investigations.

SCHEDULE PM SCOPE OF SERVICES

After defining the current system assessment criteria, the Consultant will conduct a series of site visits at 11 key facilities to identify the condition and functionality of Valley Water's various control systems. Sites will include both control rooms, server rooms and representative remote locations. The following facilities will be included:

1. 3 water treatment plants (WTPs)
2. Silicon Valley Advanced Water Purification Center (SVAWPC)
3. 3 pumping stations
4. 4 representative remote facilities

During the site visits, the consultant will take digital photos and document assessment of major control system components at the site including:

1. SCADA Servers
2. SCADA historical data collection systems
3. Operators' SCADA workstations
4. HMI networks
5. PLCs
6. Control networks
7. RTUs
8. Wired and Wireless Telemetry networks
9. I/O Networks and Devices (representative samples)
10. Instrumentation and Actuators (representative samples)
11. Security
 - a. Network equipment (routers, switches, etc.)
 - b. Physical security (card readers, cameras, keys, etc.)
 - c. Cybersecurity tools

Assessment documentation will include item description, asset tag (if applicable), make and model of equipment, estimated age, visual condition and other criteria included in the current assessment criteria. For field instrumentation and field I/O devices at the WTPs, a few representative process control loops at each plant will be reviewed. This could include one pumping system, flow or level control loop or one set of filter controls. Other process areas will be covered through interviews to identify potential issues.

Existing network diagrams from the previous Master Plan or subsequent projects, will be compared against current installations and marked-up to document the current state of the SCADA and remote communications.

During the site visits, the Consultant will conduct informal interviews with key Valley Water staff to understand how they interact with the current SCADA system on a daily basis. This may include direct and indirect technical resources, such as IT and OT personnel. Consultant will review what features of the current systems work well and should be retained in any upgrade or expansion. Similarly, concerns or shortcomings of the existing systems will be discussed. Of particular importance will be identifying conditions that affect system security, reliability and maintainability. In some cases, consultant may shadow staff in the control room to gain a better understanding of the general operation and maintenance activities

SCHEDULE PM SCOPE OF SERVICES

and how the HMI could be improved to enhance functionality and ease of use. Consultant will document findings from informal interviews.

Consultant will conduct a series of small group stakeholder meetings with key Valley Water staff members in each operational area. The consultant will prepare an agenda and structured list of questions outlining system functions and features to be considered. Agenda and questions will be tailored to the specific needs of each group and will consider operational, business and strategic needs. Additional topics will include data and reporting needs and how well the system addresses those needs. Meeting agenda and questions will be provided to each participant prior to the meeting. It is anticipated that 5 stakeholder meetings, each 2-hours in duration, will be conducted.

Key stakeholders may include:

1. O&M supervisors and team members
2. SCADA and IT support team members
3. SCADA data users
4. Capital Project staff
5. Other knowledgeable staff as needed

SCADA assessment forms will be completed and compiled into a single document for use as an appendix in the Needs Assessment and Gap Analysis report. Informal interview documentation and stakeholder meeting minutes and completed questionnaires will be compiled for each meeting and included as an appendix in the Needs Assessment and Gap Analysis report.

Task 2.1.2 - Assumptions

1. Field investigations will be limited to non-invasive visual inspections and discussions with staff. Network testing or cybersecurity vulnerability assessments can be provided as a supplemental service.
2. Exposure of Consultant personnel to live electrical or arc flash hazards will not be required. Access to all panels will be made on panels confirmed to be de-energized by VW personnel or accessed (visually) from outside the arc flash boundary area.
3. Stakeholder meetings will be attended by 3 people. These meetings will be conducted along with the site visits to ensure face to face discussion with VW staff.
4. Site visits will occur over a period of two weeks, and will require at least two weeks lead time to organize
5. Site visits will be performed on average by four people and facilitated by the Consultant's Project management team

Task 2.1.2 - Deliverables

1. Final Current System Assessment Evaluation Criteria
2. Field Investigation Form
3. Current System Assessment Documentation
4. Site visits (three WTPs, one SVAWPC, three Pump Stations, four other Remote Sites)
5. Review workshop to summarize findings from Site Visits

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6. Five two-hour stakeholder meetings

2.1.3 Cybersecurity Workshops

Consultant will conduct workshops to discuss the cybersecurity policies and guidelines with Valley Water. Up to 2 Cybersecurity staff will attend these workshops in person.

Task 2.1.3 - Assumptions

1. Workshops will be held at VW location

Task 2.1.3 - Deliverables

1. One two-hour workshop to discuss at a minimum:
 - a. the gaps related to cybersecurity assessment based on the field investigations
 - b. system reliability requirements, including level of service and uptime targets
2. One two-hour workshop to discuss Valley Water's feedback on the assessment and determine actions to be included in the Implementation Plan

2.1.4 Goals Memorandum

Based on input received from Valley Water staff during the kickoff meeting, review of the 2011 SCADA Master Plan, and field investigations and stakeholder meetings, a SCADA System Goals Memorandum will be developed. The SCADA System Goals memorandum will serve as a foundational document used to support decisions made for SCADA System improvements. Subsequent development of SCADA System functional requirements, evaluation criteria, alternative analysis, platform selection and standards should be tied to the overall goals of the SCADA system as defined in the Goals Memorandum.

The Goals Memorandum will define SCADA system goals to enable Valley Water to achieve its mission and vision. The Goals Memorandum will describe the desired future state of broad areas such as SCADA reliability, cybersecurity, accessibility, standardization, resiliency, risk mitigation, maintenance support, user experience, process optimization, and decision support in addition to other areas identified by the consultant.

The consultant will develop a draft Goals Memorandum for Valley Water review and conduct a 2-hr workshop to discuss the Goals memorandum and receive initial comments. At the end of a 10 business day review period, Valley Water will provide the Consultant with written review comments. Consultant will produce a final version of the Goals Memorandum to be used as a section of the final report.

Task 2.1.4 - Deliverables

1. SCADA System Goals Memorandum (Outline, Draft, and Final)
2. One two-hour review workshop

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2.1.5 Failure Mode and Effects, and Criticality Analysis (FMECA)

Purpose of this work is to complete a FMECA on the Valley Water SCADA system to develop a risk matrix for all the SCADA failures based on likelihood of failure (LOF), consequence of failure (COF) and detectability (D) which will produce a risk score and a risk priority number (RPN) for each failure.

Risk score = likelihood (L) x consequence (C)

Risk Priority Number (RPN) = likelihood (L) x consequence (C) x detectability (D)

2.1.5.1 Consultant will facilitate the development of the scoring criteria for likelihood of failure (LOF) and consequence of failure (COF), taking into account Valley Water's Asset Management Program scoring criteria.

1. Consultant will facilitate a 2-hour scoring criteria development workshop to develop the scoring criteria for LOF, COF and detectability using the definitions below
 - a. Likelihood – Under current conditions and Valley Water practices, what is the likelihood that the failure mode might occur and lead to the indicated effect(s)/ consequence(s)?
 - b. Consequence – What is the severity of the failure effect(s)?
 - c. Detectability – Under current Valley Water practices, what is the likelihood of detecting the failure mode and/or cause(s) in time to prevent the failure effect(s)?

Task 2.1.5.1 - Deliverables

1. One two-hour scoring criteria development workshop
2. Scoring Matrix for LOF, COF and Detectability

2.1.5.2 Consultant shall use the initial list of assets associated with the SCADA systems from the needs assessment activity and develop the associated failure modes. Asset functions will be defined, failure modes will be identified with cause and effect of each failure mode. Failure modes are identified at the Asset Class level and not at the individual asset location level. Scores may be adjusted for facility location to address specific facility hazard risks or outages caused by wildfire or earthquake.

1. Consultant will facilitate one 2-hour workshop to identify the appropriate SCADA assets and functional description.
2. It is assumed that the following asset classes will be evaluated
 - a. Servers
 - b. SCADA historical data collection systems
 - c. Operators' SCADA workstations
 - d. HMI networks
 - e. PLCs
 - f. Control networks

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- g. RTUs
- h. Wired and Wireless Telemetry networks
- i. I/O Networks and Devices
- 3. Consultant will facilitate scoring all the identified failure modes, cause and effects using the LOF, COF and detectability criteria developed earlier. This task will be performed after the site visits are conducted.
- 4. Consultant will facilitate three 2-hour FMECA workshops to identify all the failure modes, cause and effects, and cybersecurity concerns, and complete the scoring matrix.
- 5. Consultant will compile and analyze results from the workshops. These results will be reviewed with Valley Water in a 2 hour workshop.

Task 2.1.5.2 - Deliverables

- 1. One two-hour SCADA assets identification and functional description workshop
- 2. Three two-hour FMECA workshops
- 3. One two-hour result review workshop
- 4. Spreadsheet that includes, assets and functional description, failure modes, failure cause and failure effects
- 5. Scoring results in spreadsheet and PowerBI format

2.1.5.3 Using the results from the previous task, the consultant will facilitate the identification of mitigations methods to reduce the high-risk items.

- 1. Consultant will facilitate up to two 2-hour risk mitigation workshop to identify the risk mitigation methods for the high-risk failures in the form of capital improvement projects or maintenance activities.
- 2. Using the information from the tasks above, the consultant will incorporate a section in the Needs Assessment and Gap Analysis Report to capture and summarize the FMECA process and results for the SCADA system.
- 3. Consultant will facilitate one 1-hour meeting to review results of the FMECA process.

Task 2.1.5.3 - Deliverables

- 1. Two two-hour risk mitigation workshops
- 2. One one-hour FMECA process review meeting
- 3. Spreadsheet with identified mitigation methods

2.1.6 Needs Assessment and Gap Analysis Report

Considering previous assessments and recommendations from the 2011 SCADA Master Plan, projects completed since 2011, as well as work done in tasks 2.1.1 through 2.1.5 including current system assessment, input from stakeholders, FMECA analysis, and overarching SCADA goals; the Consultant will develop a Needs Assessment and Gap Analysis Report. Specific system components which will be discussed include:

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1. SCADA Servers
2. SCADA historical data collection systems
3. Operators' SCADA workstations
4. HMI networks
5. PLCs
6. Control networks
7. RTUs
8. Wired and Wireless Telemetry networks
9. I/O Networks and Devices (representative samples)
10. Instrumentation and Actuators (representative samples)
11. Security (physical and cybersecurity)

The needs assessment portion of the report will document the current operational condition of the existing SCADA system as well as future needs. System needs will consider operation, maintenance, engineering and design, physical and cybersecurity, asset renewal, and staffing requirements based on field investigations, input from stakeholders, FMECA analysis, industry best practices and ability to meet overall goals of the SCADA system. The needs assessment will depict the current state of the SCADA system including updated plant control system and remote communication telemetry and network diagrams.

The gap analysis portion of the report will compare the existing system capabilities against each system need and requirement identified in the needs assessment section of the report. This comparison will help to identify system upgrades and improvements that should be considered to enhance the overall system performance, reliability and efficiency of Valley Water's SCADA system. The report will include a list of areas for improvement. The report will also consider the previous analysis and recommendations from the 2011 SCADA Master Plan report and determine if these are still valid.

Needs Assessment and Gap Analysis will consider:

1. Reliability and redundancy to minimize operational impacts due to catastrophic events, power outages and cybersecurity issues
2. Consistency with Valley Water Cybersecurity Guidelines and Controls and alignment with cybersecurity frameworks
3. Data architecture to facilitate data accessibility, reporting, optimization and decision support
4. System documentation to support operations, maintenance and other capital projects
5. Based on previous SCADA Master Plan and stakeholder input, conduct a high-level review of existing process control strategies to identify potential automation improvements that may optimize operations
6. Improving performance of existing systems to extend remaining useful life to maximize value
7. Industry best practices and benchmarking with partner agencies based on results from Task 2.2 below.

The consultant will develop a draft Needs Assessment and Gap Analysis Report for Valley Water review and conduct 2-hr workshop to discuss the report and receive initial comments. At the end of a 10 business day review period, Valley

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Water will provide the Consultant with written review comments. Consultant will produce a final version of the Needs Assessment and Gap Analysis Report to be used as a section of the final SCADA Implementation Plan (Task 4.2).

Task 2.1.6 - Deliverables

1. Needs Assessment and Gap Analysis Report (Outline, Draft, and Final)
2. One two-hour review and comment workshop

2.2 Industry Standards and Benchmarking

Once the needs of Valley Water have been established and the gaps identified, the purpose of this subtask is to develop a report that identifies the current SCADA and control system standards and best practices used by the water treatment industry that could address the needs of Valley Water. This will include providing benchmark examples from other agencies and/or utilities to show the range of improvements that exist.

The Consultant will:

1. Research industry standards and technologies that could fit the needs of Valley Water
2. Work with Valley Water to identify relevant partner agencies and other water utilities as benchmark examples
3. Summarize Valley Water's existing knowledge of other agencies' SCADA standards and technologies
4. Contact up to 5 other similar utilities in the region or elsewhere as appropriate to obtain pertinent information on standards and technologies
5. Consultant will spend one hour with the CIO of each utility contacted and provide a brief high level technical discussion on the findings related to the Cybersecurity equipment and configuration
6. Benchmarking information should include relative benefits and costs
7. Prepare a presentation and conduct a 4-hour workshop to review current SCADA industry standards, best practices and technologies.
8. Prepare a presentation and conduct a 4-hour workshop to review Water Utility SCADA system benchmarking information.

Consultant will prepare a draft Industry Standards and Benchmarking report for Valley Water review and conduct a 2-hr workshop to discuss the report and receive initial comments. At the end of a 10 business day review period, Valley Water will provide the Consultant with written review comments. Consultant will produce a final version of the Industry Standards and Benchmarking Report to be used as an appendix for Needs Assessment and Gap Analysis report.

Task 2.2 - Assumptions

1. Each workshop will be attended by two people in person and other team members will attend by phone.

Task 2.2 - Deliverables

1. Industry Standards and Benchmarking Report (Outline, Draft, and Final)
2. Two four-hour workshops to (a) review current SCADA industry standards, best practices and technologies and (b) review Water Utility SCADA system benchmarking information

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3. One two-hour review and comment workshop

2.3 Early Implementation Projects

Based on the results of the Needs Assessment and Gap Analysis report the Consultant will work with Valley Water to identify highly critical and urgent projects.

1. The 2011 Master Plan identified several SCADA projects, of which, Valley Water still believes the following two projects need to be evaluated for immediate implementation:
 - a. Remote Communication Improvements Phase 1
 - b. Alternate Control Center Development Phase 1
2. The scope of this task will be to evaluate the two projects in accordance with the goals, needs and gap analysis as defined in Task 2.1 as well as the industry standards and benchmarking defined in Task 2.2. Any additional early implementation projects identified through the FMECA or resulting from the other early planning activities can be added to the scope as a supplemental task.
3. All early implementation projects will consider elements that could be impacted by Task 3.2 Platform Selection and develop a strategy for mitigating impacts.

If the projects are determined to still be prudent, the Consultant will:

1. Immediately fast track development of Conceptual, Feasible and Recommended Alternatives per Valley Water's CIP delivery process up to 10% design (as similarly described in Task 4.1.1) for the two projects listed below (Subtask 2.3.1 and 2.3.2). The alternatives evaluation report developed for these two projects in 2011 SCADA Master Plan will be used as the starting point and modified as needed to develop the recommended solution.
2. Consider and evaluate downstream effects of the projects on potential future tasks and decisions related to SCADA system improvements
3. Coordinate between other urgent needs and develop an early implementation plan
4. Prepare a Planning Study Report per Step 5 of Task 4.1.2 for each project, documenting the evaluation methodology and selected alternative. This will be a summary of the alternatives evaluation report developed for the two projects

2.3.1 Remote Communication Improvements Phase 1

The scope of the project development will be based on the scope identified in the 2011 SCADA Master Plan with a focus on improvements related to the telecommunications media and systems. Valley Water has completed some of the recommended improvements since the plan was completed. The purpose of this project will be to identify any additional work needed to achieve the goals of the SCADA Master Plan Implementation Project. Goals from the 2011 SCADA Master Plan include:

1. Eliminate single points of failure
2. Migrate obsolete technologies to new technologies
3. Improve reliability and security
4. Support alternate control center location(s)

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5. Provide increased SCADA access
6. Support additional services such as CCTV and voice communications at select remote sites.
7. Upgrade existing telecommunication systems including leased lines, dial-up lines, District-owned copper cable, fiber, and radio. (Valley Water has completed much of the radio system upgrades.)
8. Recommend improvements

2.3.2 The Alternate Control Center Development Phase 1

The scope of the project will be based on the scope identified in the 2011 Process Control System Master Plan, which included:

1. Analyze potential locations to support remote monitoring and control. Potential locations are assumed to be within the existing facilities and a new facility is not anticipated.
2. Consider space and infrastructure improvements needed to support the alternate control center
3. Identification of potential communication improvements to support an alternate control center will be included in the Remote Communications Improvements Phase 1 described above
4. Recommend improvements

Task 2.3 - Deliverables

1. Early Implementation Project Alternatives Evaluation, Recommendations, and Project Definition Reports (Outline, Draft, and Final)
2. Early Implementation Project Planning Study Reports (Outline, Draft, and Final)
3. Four four-hour and two two-hour design and coordination workshops
4. Two two-hour review workshops

Task 3 - Technology Evaluation and Standardization

3.1 SCADA System Requirements and Functional Guidelines

Since multiple projects involving Valley Water's SCADA systems will be completed across multiple facilities, under different timelines and phases, and under different Valley Water and construction project management teams, it is important to specify a set of concise guidelines and rules that all designers must follow for future projects. Not only will these design guidelines help answer some of the early, common questions that come up in all projects, these guidelines will also help in producing a coherent district-wide system, minimizing training, and ensuring high-quality, consistent projects.

The SCADA System Requirements and Functional Guidelines developed under this task will be independent of SCADA System Platform Selection.

Elements that will be incorporated into the SCADA System Requirements and Functional Guidelines include:

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General SCADA System Requirements and Functional Guidelines

1. Purpose and Scope
2. Abbreviations and Acronyms
3. Codes and Standards
4. Control Philosophy
 - a. A common, overarching approach to how instruments, equipment and processes should behave and how they should be controlled
 - b. Control hierarchy
 - c. Redundancy, reliability and obsolescence management
 - d. Disaster recovery (unexpected power outage, component failure, cyber-attacks, other natural or man-made disasters)
5. General Tag Naming Guidelines

SCADA System Platform Requirements and Functional Guidelines

1. Control System Architecture Philosophy
2. SCADA system tagging
3. Network functionality requirements
4. HMI and Controller network architecture requirements
5. Controller processor and power supply requirements
6. Field networks
7. Equipment monitoring and control guidelines
8. Common control strategies (chemical feed pacing, lead/lag, setpoints, deadbands)
9. HMI display system functionality
10. Alarm management (SCADA and notification system)
11. Historical data collection, reporting, accessibility and integration with other systems
12. SCADA Cybersecurity requirements/controls
13. Redundancy requirements (controllers, servers, switches, power supplies)
14. Programming documentation

Consultant will conduct four SCADA system requirements and functional guidelines workshops, each 4 hours in duration, covering at least the following:

1. Control philosophy and network architecture
2. Controller processor/power supply
3. Network functionality and alarm management
4. A follow-up workshop on Cybersecurity and Disaster Recovery

Consultant will prepare a draft SCADA System Requirements and Functional Guidelines document for Valley Water review and conduct a 2-hr workshop to discuss the report and receive initial comments. At the end of a 10-day review period, Valley Water will provide the Consultant with written review comments. Consultant will produce a final version of the SCADA System Requirements and Functional Guidelines.

Task 3.1 - Assumptions

1. Workshops will be attended by up to four people. Other team members will attend virtually.

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Task 3.1 - Deliverables

1. Four four-hour SCADA system requirements and functional guidelines workshops
2. One two-hour review and comment workshop
3. SCADA System Requirements and Functional Guidelines Document (Outline, Draft, and Final)

3.2 Platform Selection Assistance

Once Valley Water's SCADA system requirements have been determined and outlined in the above tasks, Valley Water will begin evaluating and assessing various technology platforms that could address the needs of Valley Water. Based on the discoveries of the Needs Assessment task, this may include, but are not limited to, new Distributed Control System (DCS), PLC, RTU, and/or HMI/SCADA platforms to be implemented Valley Water wide. While the platform selection task will be performed by a Valley Water selection/evaluation committee, the Consultant will be tasked to assist in the planning of the platform proposal and demonstration trials with various technology vendors that Valley Water will perform under a separate public bid.

The Consultant will:

1. Coordinate with Valley Water Procurement staff and SCADA core team to develop SCADA Platform Selection Process and Selection Process Documents
 - a. Conduct three virtual meetings to discuss sole-source procurement requirements (for future continued use of a single SCADA platform), options for procurement process and selection, evaluation and documentation requirements, and approval for selection process.
 - b. Develop Draft SCADA Platform Selection Process documentation for VW's use in their procurement process. This includes:
 - i. Process selection flow diagrams
 - ii. Performance specification based on SCADA System Requirements and Functional Guidelines
 - iii. Draft formal testing scenario/script to be used for on-site demonstrations
 - iv. Draft selection criteria with quantitative scoring and weighting factors for the evaluation and selection process that Valley Water's Platform Selection Committee will review and approve
 - v. Other RFP/RFQ support documents that will support Valley Water's RFP/RFQ procurement process such as summaries, demonstration requirements and/or proposal requirements
 - c. Conduct four virtual review meetings with Valley Water's PM and SCADA team to review Platform Selection Process and RFQ/RFP documents.
2. Review a maximum of ten (10) proposals and summarize evaluation results in a Platform Selection Short-List memorandum for use by VW's Platform Selection Committee in selecting top three proposers.
 - a. Review proposals submitted by vendors to 1) recommend additions or modifications to the on-site vendor demonstrations and 2) be aware of proposed technologies to answer VW procurement or selection committee questions.
 - b. Consultant will evaluate each vendor software/hardware product for their cybersecurity capabilities and provide a short writeup for each vendor.

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3. The Consultant may be asked during the selection process to provide information on how each of the technologies being evaluated could best be used to address the needs identified during the assessment and analysis portion of this Project.
4. Finalize formal testing scenario/script for vendor on-site demonstrations
5. Coordinate, assist with scheduling, and attend on-site demonstrations for up to three short-listed vendors. Consultant on-site time will be limited to the introduction and formal testing/scripted scenario portions of the on-site demonstrations.
6. Consultant will assist with local off-site demonstrations at other utilities of the three short listed vendors
7. Compile and summarize evaluation results of vendor demonstrations in a Platform Selection Vendor Recommendation Memorandum for use by VW's Platform Selection Committee in selecting top ranked proposer.

Task 3.2 - Assumptions

1. VW procurement will issue formal RFQ/RFP and receive RFQ/RFP responses from proposers.
2. Consultant will not review vendor proposals for evaluation as a member of the Platform Selection Committee, but rather to summarize technological content for use of review committee in making their selections
3. Demonstration Trials
 - a. It is assumed that consultant will attend on-site demonstrations for each vendor introduction and formal testing scenario (2 days each for three vendors)
 - b. It is assumed that the Consultant will attend the off-site demonstrations (one person for one day for each vendor for a total of three offsite demonstrations)
4. Platform Selection Documents
 - a. Consultant will conduct three meetings with VW SCADA core team and procurement staff (each two-hour duration) to align with Valley Water procurement requirements for continued future use of the selected platform. Each meeting will be attended by up to one staff in-person and others will join by phone.
 - b. Consultant will conduct up to four meetings with VW SCADA core team (each two hour duration) to develop RFQ/RFP support documents for procurement process. Each meeting will be attended by up to two people in person and others will join by phone.

Task 3.2 - Deliverables

1. Three two-hour virtual meeting (SCADA Platform Selection Process Development)
2. Four two-hour virtual meeting (RFQ/RFP Document Development)
3. Platform Selection Process Documents:
 - a. Process selection flow diagrams
 - b. Performance specification
 - c. Formal testing scenario/script
 - d. Draft selection/evaluation criteria
 - e. RFP/RFQ support documents
4. Platform Selection Short-List Memorandum
5. Platform Selection Vendor Recommendation Memorandum

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3.3 Standard Design Details and Programming Implementation Standards

Once the standardized technology platform is selected, the Consultant will develop a set of Design and Programming Implementation Standards that will not only be given to designers during the design phase of a project but just as importantly to system integrators during the implementation phase of a project to provide implementation guidance. The aim of these standards is not only to reduce the cost of Project implementation but also to expedite the design/submittal review process, improve the QA/QC process, and ensure thorough testing.

Elements to incorporate into the Design and Programming Implementation Standards could include:

SCADA System Design Details and Work Process Standards

1. Philosophy of Control
2. Naming and tagging convention details for assets, equipment, instruments, individual control components
3. Deliverable Documents
 - a. Piping & Instrumentation Diagram (P&ID) drawing layout, templates and drawings
 - b. Control Algorithm format and templates
 - c. System architecture and networking drawing layout and templates
 - d. Wiring and loop drawings
 - e. Input/Output List
 - f. Fiber patching diagrams
 - g. Field network diagrams
 - h. Panel layout templates and drawings
 - i. Panel wiring templates and drawings
 - j. Control Narratives format and templates
 - k. Project record documentation
 - l. Construction documentation and submittals
 - i. Instrumentation
 - ii. Control Panels
 - iii. Network and Communications
 - iv. SCADA Hardware and Software
 - v. Network Hardware
 - vi. System testing, startup, commissioning and acceptance
4. Change management of programs and documents
 - a. Common storage locations for the latest programs and documents (both physical and electric location)
 - b. Protocols for managing ownership of the program and documents
 - c. Process for updating documents and control programs and tracking revision history
 - d. Process to ensure contractors and O&M staff update the programs and documents when a work order or project is complete
5. Approval processes for test documents, control narratives, and other deliverables by system owners, construction managers, project managers
6. Processes for identifying and requesting O&M support (time and scope) during the startup and commissioning of a new project

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SCADA System Programming Standards (specific to the selected platform in Task 3.2)

1. Programming Standards Governance
2. Programming Tagging - Controller and HMI tagging code and database structure
3. Controller Programming – Programming environment, firmware, version, control modes, alarm generation, general requirements, file naming, revision control, documentation requirements, programming template blocks (analog input blocks, analog output blocks, digital input block, digital output blocks, digital alarms, calculation block, PIDs)
4. HMI Programming – programming environment, versions, patches, development workshops, design philosophy, navigation, graphical structures including high-performance graphics, display layout, display characteristics (colors, objects, symbols, test), alarms, trending, historical data, system configuration tools, faceplates and objects (analog input, analog output, digital input, digital output, digital alarms, calculation block, Proportional-Integral-Derivative (PID) controllers)
5. Communications and Security – network architecture, hardware, software, network racks, controller panels, field networks, vendor control panels, network monitoring, physical security, network security, system integrity, wireless networks
6. Implementation Requirements
 - a. Workshops
 - b. Submittals
 - c. Testing terminology, and procedures
 - d. Test forms (Input/Output test, field wiring verification, panel wiring verification, equipment control test, calculation test, data entry test, alarms test, access and security test)

Task 3.3 - Assumptions

1. A total of seven standard design details and programming implementation standards workshops are included in this task
2. Each workshop will be about 4 hours in duration and will be attended by up to four people in person, with others calling in by phone.

Task 3.3 - Deliverables

1. SCADA System Design Details Work Process Standards (Outline, Draft, and Final)
2. Programming Implementation Standards (Outline, Draft, and Final)
3. Seven four-hour standard design details and programming implementation standards workshops

Task 4 - Projects and Program Definition

4.1 Projects Conceptual Design Development

The Consultant will develop a program of projects to address the issues identified in Task 2 (excluding those that will be address via Task 2.3's Early Implementation Projects). For capital projects, the Consultant will identify the recommended alternative for each project using the CIP Planning and Feasibility phase steps 1 to 5 as described below in Section 4.1.2.

The development of the projects will follow Valley Water's Capital Improvement Program (CIP) project delivery process through its Planning and Feasibility phase and will include preparing materials for and presenting at Board meetings as needed.

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4.1.1 Alternatives Evaluation, Recommendations and Project Definition

Based on the gap analysis report and considering results of the 2011 SCADA Master Plan, the Consultant will identify and evaluate alternatives and provide detailed recommendations to address gaps.

The recommendations for improvement will be grouped into a portfolio of projects that consider short- and long-term needs and align with other master planning projects.

The approach will include the following steps:

1) Evaluation Methodology

Consultant will develop an evaluation methodology, including the selection of relevant criteria that addresses the problems and deficiencies identified in Task 2 and will meet the project objectives and SCADA system requirements. Additional criteria will include initial purchase cost, maturity of technology, ease of maintenance and associated maintenance cost. Assignment of weights or weighting factors on the criteria developed, will be used to evaluate and scope and select alternatives. The selection of criteria will enlist input from VW stakeholders prior to evaluation. Consultant will schedule a 2-hour workshop to develop the evaluation criteria with VW.

2) Identify Potential Conceptual and Feasible Alternatives

For each gap or area of improvement, the Consultant will identify potential conceptual and feasible alternatives to meet the requirements. Each potential alternative will be described. Consultant will schedule a 4-hour workshop to review the list of alternatives with VW.

3) Evaluate Alternatives

Each of the potential alternatives will be evaluated to determine feasibility using the evaluation methodology described above. Consultant will schedule a 4-hour workshop to review the results of evaluation with VW.

4) Develop Recommendations

Recommendations may be organizational, procedural or technical. If new systems and/or equipment are being proposed, and the Consultant feels there is a specific product or system that best fit Valley Water's need, rationale shall be provided as to why these products or systems are preferred over other similar products on the market. Recommendations will build upon existing facilities and upon results from Task 3.2 Platform Selection where appropriate.

Recommendations should address migration and replacement approaches where needed and consider interoperability, commonality of spares and training, long-term development and support, and standardized pricing considerations.

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A summary of alternatives and recommendations will be developed to address all needs identified in the gap assessment, and for all major functional requirements for the SCADA system to include:

1. Hardware - servers, workstations, RTU/PLC
2. Software – HMI, Historian, Reporting, Decision Support, PLC software, and Drivers
3. Power Sources – station power, solar, battery/UPS backup
4. Communications – local area networks, wide area networks, radio systems, wireless applications
5. Standards Development – this would include recommendations for standards develop in addition to standards developed in Task 3.3.
6. Implementation Approach – project delivery, role of Valley Water Staff, Consultants, Contractors, System Integrator, Program Manager
7. SCADA Operation and Maintenance Procedures – ongoing, CIP project support, and emergency response
8. Security – intrusion detection, access control, CCTV, cybersecurity
9. Training – development team, user training, maintenance and follow-up

Consultant will schedule a 4-hour workshop to review the final recommendations with VW.

5) Preliminary Projects Definition Report

Based on alternatives analysis and recommendations, a preliminary list of projects will be identified, and a preliminary projects definition report will be developed. The preliminary projects definition report will include a conceptual description for each project. The scope of each project will include a group of recommended improvements and will consider similarity in scope, priority, and sequence of tasks. Projects will be prioritized based on risk assessment (under FMECA in Task 2), and short- and long-term needs. We have identified the following preliminary two projects. Each project includes a brief description to serve as a basis for fee proposal.

1. Project 1 - SCADA System Platform Upgrades (Design Bid Build)
 - a. Based on results of Task 3.2, SCADA system hardware, software and network upgrades will be implemented.
 - b. HMI software and historian will be upgraded or replaced for three treatment plants, the Advanced Water Purification Center, and remote facilities
 - c. HMI graphic displays will be re-configured to support enhanced operations and system maintenance
 - d. Server and workstation/thin client hardware will be replaced
 - e. SCADA and PLC network improvements to support SCADA needs, system reliability, data access and alignment with cybersecurity controls
 - f. Obsolete PLCs and RTUs will be replaced for treatment plants and remote facilities
2. Project 2 - Remote Communications Architecture and Alternate Control Center Improvements Phase 2 (Design Bid Build)
 - a. Project elements that were deferred from Task 2.3 Early Implementation Projects.

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- b. HMI software and historian upgrade or replacement
- c. Server and workstation/thin client hardware replacement
- d. Additional network improvements to support reliability, eliminate single points of failure and alignment with cybersecurity controls

For each identified project, the Consultant will:

1. Develop conceptual design for each project (10% level design)
2. Develop an opinion of probable construction cost (AACEI Level 4)
3. Develop a preliminary implementation schedule (MS Project) for each project.
4. Develop overall sequencing schedule that will consider how these projects will be sequenced/prioritized within the scope of the SCADA improvements.
5. Evaluate and provide a recommendation to VW on the delivery method. The evaluation will consider delivery approaches including traditional design-bid-build, alternative delivery (design-build), and incorporating as part of a larger Capital Improvement Project identified under other master planning efforts.

Consultant will present the preliminary projects definitions report to VW in a four-hour workshop for feedback. After incorporating the comments, Consultant will begin coordination with VW and Other Master Planning Consultants.

6) Coordination with VW and Other Master Planning Projects

The coordination effort with other master planning projects will help the Consultant determine how Valley Water can most efficiently and cost effectively implement the defined projects considering high-level prioritization, sequencing of tasks, interdependency of other projects, operational constraints, organization efficiency and coordination with other Master Plan projects.

The preliminary projects definitions report will be submitted to Valley Water and other master planning consultants for review and collaboration with other ongoing master planning efforts. Two four-hour workshops will be conducted (one workshop with VW and WTP Master Plan Implementation Project Consultant and one workshop with VW and Distribution System Master Plan Implementation Project Consultant) to:

1. Discuss the nature, budget, schedule, and priority of SCADA projects with relation to the other projects identified from other master planning efforts
2. Determine if any SCADA projects should/could be implemented as part of other master planning projects

7) Alternatives Evaluation, Recommendations, and Project Definition Report

Based on this collaboration, the final (preferred) list of SCADA improvements projects will be developed. The overall sequencing schedule will be updated to incorporate the final list of projects (MS Project Schedule) based on the projects' dependencies and sequencing and feedback from the Other Master Planning Consultants.

Consultant will prepare a draft Alternatives Evaluation, Recommendations, and Project Definition Report documenting the activities performed under Steps 1-6 of

SCHEDULE PM SCOPE OF SERVICES

this task. The draft report will be submitted to Valley Water for review and the Consultant will conduct a 2-hr review and comment workshop to discuss the report and receive initial comments. At the end of a 10-day review period, Valley Water will provide the Consultant with written review comments. Consultant will produce a final version of the Alternative Analysis and Recommendations Report.

Task 4.1.1 - Deliverables

1. One two-hour evaluation methodology workshop
2. One four-hour potential conceptual and feasible alternatives workshop
3. One four-hour evaluate alternatives workshop
4. One four-hour final recommendation workshop
5. One four-hour preliminary projects definition workshop
6. Two four-hour coordination workshops with Valley Water's other master planning efforts
7. One two-hour review and comment workshop
8. List of Preliminary Projects and Workshop Material for Coordination with VW and Other Master Planning Consultants (Outline, Draft, and Final)
9. Alternatives Evaluation, Recommendations, and Project Definition Report (Outline, Draft, and Final)

4.1.2 CIP Planning and Feasibility

CIP Planning and Feasibility documentation for each recommended capital project from the Project Definition Report will be derived from the Needs Assessment and Gap Analysis Report and SCADA System Alternatives Evaluation, Recommendations, and Project Definition Report. The CIP Planning and Feasibility phase steps will include the following documentation for each recommended capital project from the Project Definition Report:

- 1) Problem(s) Definition
 - a. Develop a Problem Definition Report that summarizes all the findings, problems, and identified recommendations identified from Task 2 while proposing any refinement to the initial project objectives
- 2) Conceptual Alternatives
 - a. Develop a Conceptual Alternative Report that includes a comprehensive list of alternatives that could address the needs and gaps of Valley Water's SCADA system identified from Task 2
- 3) Feasible Alternatives
 - a. Develop a Feasible Alternative Report that summarizes the pros and cons of each alternative and identify any constraints that make a proposed alternative infeasible.
- 4) Recommended Alternatives
 - a. Develop a Recommended Alternative Report that summarizes the recommended projects that will best meet the project objectives.
- 5) Planning Study Report
 - a. Develop a Planning Study Report that will fully document the project formulation process (Steps 1-4 above) (from defining the problems, to developing conceptual and feasible alternatives, to the final list of recommended alternatives).

SCHEDULE PM SCOPE OF SERVICES

- b. Develop a one page project information sheet that will include the following information:
 - Project Description
 - Opinion of Probable Construction Cost (AACE Level 4)
 - Project Implementation Schedule
- c. For each project, the Consultant will schedule a 2-hour workshop to review the final recommendations with VW.
- d. The Planning Study Reports will be transmitted to VW to inform the Board on the planning results for the Project.

Effort for development of CIP Planning and Feasibility documents is based on two major projects. This is in addition to the two projects listed in Task 2.3 – Early Implementation Projects. A planning study report will be prepared for each project.

Task 4.1.2 - Deliverables

- 1. Two-hour review workshop per project
- 2. Planning Study Reports (Outline, Draft, and Final) per project for two projects

4.1.3 Preliminary Staffing Evaluation

Consultant will also perform a staffing evaluation and provide a recommended staffing plan to compliment the implementation schedule of the preferred projects. A preliminary staffing evaluation will be provided as a deliverable to this Task 4.1.3. The final staffing evaluation will be documented as a section in the Implementation Plan under Task 4.2.

Staffing Evaluation will:

- a. Review and discuss in-house vs. outsourced responsibilities with Valley Water
- b. Identify additional staff needed for the projects identified in the Implementation Plan
- c. Perform a cursory review of the skill set of the current VW staff to determine how it matches up with the proposed solutions in terms of experience and knowledge. This will determine the addition of staff and/or training needs for the current staff.

Benchmarking with other utilities performed under Task 2 will also include staffing inquiries to compare and complement the implementation schedule. Staffing evaluation will not include an in-depth analysis of VW organization, reporting hierarchy, or analysis of duties and work shifts

Consultant will schedule a 4-hour workshop to review the results of evaluation with VW. The staffing evaluation will be documented as a section in the Implementation Plan under Task 4.2. A draft will be submitted to VW for review and comments.

Task 4.1.3 - Assumptions

- 1. Workshops identified in this task will be attended by up to four people on average.

SCHEDULE PM SCOPE OF SERVICES

Task 4.1.3 - Deliverables

1. One four-hour review workshop
2. Preliminary Staffing Evaluation (Outline, Draft, Final)

4.2 Implementation Plan Development

The Consultant will prepare an outline/structure of the SCADA Implementation Plan for Valley Water review. The reports and technical memoranda developed under Tasks 1 to 5 will be developed as chapters of the final SCADA Implementation Plan to allow easy incorporation into the final plan.

The Consultant will compile the previously developed reports and supporting documentation and create a schedule with associated project costs to form a comprehensive implementation plan for the identified projects over a 15-year period. The Implementation Plan will include the following major sections:

1. Executive Summary
2. SCADA System Vision and Goals
3. Needs Assessment and Gap Analysis
4. Early Implementation Projects
5. SCADA System Functional Requirements and Guidelines
6. Technology Evaluation (Platform Selection)
7. Alternatives Evaluation, Recommendations
8. Implementation Plan
 - a. Project Definition
 - b. Opinion of Probable Costs
 - c. Prioritization and Sequencing
 - d. Coordination with other CIP Master Planning Projects
 - e. Implementation Considerations
 - f. Staffing Evaluation
 - g. Project Schedule
 - h. Planning Study Report
9. SCADA System Design Details and Programming Implementation Standards
10. Appendices –Supporting Documents

This schedule and opinion of probable cost estimates (Level 4 AACEI) will determine the capital requirements for each year of the 15-year planning horizon. The plan will be a living document that will continue to be updated throughout the 15-year period to address any changes that arise. Scheduling and phasing of the preferred projects will align with Valley Water's other implementation and master plan projects. The plan will account for replacement of technologies or equipment with useful life less than 15 years, which needs to be updated multiple times over the 15 year planning horizon.

Consultant will finalize the preliminary staffing evaluation developed in subtask 4.1.3 to compliment the implementation schedule of the preferred projects and incorporate the final staffing evaluation into the overall SCADA Implementation Plan

A Draft SCADA Implementation Plan document will be submitted to VW for review. A review workshop (4 hours duration) will be conducted with VW to go over comments.

SCHEDULE PM SCOPE OF SERVICES

This SCADA Implementation Plan will be taken to Valley Water's Board of Directors for their review and approval. The Consultant will help the VW Project Management Team produce the informational presentations and reports needed for the Board and the public to explain the proposed projects themselves and the overall implementation plan that will be needed for their execution.

Task 4.2 - Assumptions

1. The Consultant will prepare presentation material and exhibits for a Board and public presentation. This will be attended by up to four people.

Task 4.2 - Deliverables

1. Comprehensive SCADA Implementation Plan for the SCADA Master Plan Implementation Project (Outline, Draft, and Final)
2. One four-hour review workshop

Task 5 - Prepare Programmatic Environmental Impact Report (PEIR)

PEIR Consultant, a subconsultant to the Consultant, will prepare a PEIR identifying the environmental impacts associated with construction, operation and maintenance of the identified projects under the SCADA Implementation Plan and recommend mitigation measures to reduce potential significant impacts from the proposed improvements. The PEIR will present a program level analysis for the different Project components. Impacts will be determined based on significance criteria defined in the CEQA Guidelines, as well as other thresholds defined in relevant federal, state and local regulations. Consultant will provide all information and manage all work and efforts by the PEIR Consultant.

5.1 PEIR Analysis Framework

PEIR Consultant will develop a memorandum describing the approach to analysis for the PEIR as a whole and for specific technical investigations. PEIR Consultant will work with Valley Water in a collaborative manner to document Valley Water's expectations for environmental clearance for program components, to resolve issues that affect the analytical framework for the PEIR in a timely manner, and to describe the analytical framework for the PEIR.

Task 5.1 - Deliverables

1. Draft and final memorandum

5.2 Environmental Investigations

PEIR Consultant will visit Valley Water facilities and review environmental reports completed in support of the program and reports completed on Valley Water facilities to develop an understanding of the environmental setting and potential environmental impacts. PEIR Consultant will also review applicable studies and data compiled for the surrounding area and region. Background reports collected during this task will be saved in the Project library (to reside on the secure Project website).

SCHEDULE PM SCOPE OF SERVICES

PEIR Consultant will then prepare an existing condition report that will summarize all environmental information relevant to evaluation of the program. This report will be organized by topic area and will serve to determine data gaps that may exist, and to guide further collection of information. The existing conditions report will provide preliminary information for the setting sections of the PEIR. The report will include text, tables and figures necessary to present the information gathered.

As early as possible, PEIR consultant shall identify the federal nexus, if any, and the requirements for compliance with NEPA. Should NEPA be required, a scope of work and budget will be prepared as a supplemental task.

In addition, this task will include initiation of technical cultural and biological analysis to be completed in Task 5.3.

Task 5.2 - Deliverables

1. Draft and final existing conditions report

5.3 Project Description

The PEIR Consultant will resolve outstanding issues related to the scope of the proposed action, review information provided by the Consultant, and develop the Project description.

The PEIR Consultant will work with Valley Water to develop the draft Project description, identify and fill data gaps, and determine the appropriate level of detail for presenting information to be included in the PEIR, as well as the need for and adequacy of supporting background documentation.

The Project description will be prepared in sufficient detail to satisfy CEQA PEIR standards, including tables and graphics, and will include the following:

1. Identification of program objectives. Program objectives identified in the SCADA Implementation Plan will be reviewed and amended as needed to ensure consistency with CEQA requirements.
2. Identification and description of all Project components that will be evaluated in the PEIR.
3. Determination of Project components to be analyzed at a program level of detail and Project components to be analyzed at a project level of detail.
4. For program-level components, PEIR Consultant will confirm with Valley Water and Consultant the range of options to be evaluated, describing each option in sufficient detail to facilitate determination of the nature and scale of environmental impacts associated with the components.
5. For components that will be analyzed at the project-level, describe the component in sufficient detail to allow detailed analysis of the environmental impacts. Consultant will provide sufficient detail on design and construction characteristics. Typical engineering information needed to support project level environmental analysis of treatment facilities includes facility size and location, design characteristics, construction techniques, facility capacity, truck-trips generated during construction and operation, and energy requirements.

SCHEDULE PM SCOPE OF SERVICES

PEIR Consultant will prepare a Draft Project Description defining all aspects of the Project requiring environmental review, including, but not limited to, Project background, location, goals and objectives, planning and engineering details, limits of construction, affected properties and phasing (if any), construction schedule and equipment, graphics to illustrate the Project plans, and anticipated permitting and approval actions.

PEIR Consultant, in coordination with VW staff, will determine what components of the Project will be evaluated at a project level under the PEIR. Once projects are defined, PEIR Consultant will prepare a memorandum documenting those projects. The draft memorandum will be reviewed with Valley Water for concurrence.

This task includes initiation of technical cultural and biological analysis. Technical analysis for cultural, biological areas, and identification of potential impacts and potential mitigation measures for the physical area of the projects, will be included in the Administrative Draft Program EIR. Any additional effort associated with environmental investigations beyond cultural and biological technical reports will be identified and presented to VW for review and approval as supplemental work (see below 5.6 Draft/Final Program EIR).

Task 5.3 - Deliverables

1. Technical analysis (cultural resources and biological resources) to be included in Draft PEIR
2. Draft Project description for the Program
3. Draft Memorandum on CEQA documentation

5.4 Notice of Preparation

PEIR Consultant will develop the NOP, consisting of an abbreviated Project description, a summary of potential environmental effects and other CEQA-required elements, for discussion with and review by Valley Water. The Project description provided in the NOP will be a summary of the Project description developed.

PEIR Consultant will work with Valley Water to develop the mailing list for NOP distribution. Valley Water will provide initial lists based on interested parties who participated in the Project process or otherwise expressed interest in it. Consultant will expand the list with responsible and trustee agencies required to receive the NOP.

PEIR Consultant will provide a summary of the NOP in formats suitable for publication in a newspaper of general circulation and web posting. The NOP will include notification of public scoping meetings to solicit public and agency input on the scope and content of the PEIR. This list will be maintained by the PEIR Consultant team for subsequent mailings.

Task 5.4 - Deliverables

1. Administrative draft NOP, second administrative draft NOP; screen-check NOP; final NOP for printing and distribution; distribution list

5.5 Early Agency Consultation

Valley Water must secure a number of environmental permits and approvals in order to implement the project level component identified under the SCADA Implementation Plan. PEIR Consultant will develop an agency consultation and permit strategy handbook that

SCHEDULE PM SCOPE OF SERVICES

identifies strategies for obtaining environmental permits and approvals and conducting consultation with responsible and trustee agencies. The handbook may describe:

1. Regulatory agencies, authorities, permit requirements.
2. Agency consultation protocol and strategy.
3. Potential environmental impacts and mitigation measures requirement and approach.
4. Permits or approvals requiring long-lead times and/or complex interagency consultation.
5. Schedule identifying timing/sequence of Permit actions relative to California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance and level of engineering required to support permit acquisition.
6. Opportunities for optimizing permitting timelines.

PEIR Consultant coordinate meeting(s) or conference calls with key regulatory and local agencies to identify issues and concerns for these agencies.

Task 5.5 - Deliverables

1. Agency Consultation and Permit Strategy Memorandum
2. Coordinate meeting(s) or conference calls with key regulatory and local agencies
3. Permit Strategy Handbook

5.6 Draft/Final Program EIR

The PEIR Consultant will prepare the administrative draft PEIR for Valley Water review. Valley Water will consolidate all Valley Water comments into one document (presumed to be annotated versions of Word files) and will resolve conflicting comments prior to submittal to PEIR Consultant. All comments will be received at approximately the same time.

Following Valley Water's review of the administrative draft PEIR, the PEIR Consultant will incorporate any minor changes and will prepare draft PEIR for public release. The PEIR Consultant will prepare the final PEIR with response to comments and a summary of changes made to the draft PEIR that were incorporated in the final draft PEIR.

The PEIR will include an evaluation of all required environmental impacts for topic areas, such as, biological resources, aesthetics, air quality, greenhouse gases, agriculture and forestry, cultural resources, energy consumption, geology, soils and seismicity, hazards and hazards materials, hydrology/water quality, land use/planning, mineral resources, noise/vibration, population and housing, recreation, transportation, public services, utilities/service systems, and/or cumulative impacts, as well as, other CEQA-mandated sections such as alternatives and growth inducing impacts.

Task 5.6 - Assumptions

1. It is currently assumed that there would be two individual SCADA projects identified and developed from Task 4.1 based on the 2011 master plan. The PEIR will evaluate the program that includes these two projects
2. The project description for each project will be developed to sufficient detail to satisfy the PEIR needs. If projects are defined that are greater in scope than the assumptions/approach in the

SCHEDULE PM SCOPE OF SERVICES

proposal, the scope and fee will be amended to capture and incorporate any additional pertinent details that may get developed as the project proceeds

3. It is assumed that the project area will not expand beyond the proposed projects footprint defined. If the proposed project area changes after the environmental survey, this would require additional effort in terms of re-surveying of project area
4. Final scope shall be refined once on-the-ground design components are identified. It is anticipated that no additional technical analysis will be needed after the review of existing environmental reports completed in support of the program and reports completed on Valley Water facilities as stated under Task 5.2. It is anticipated that cultural and biological resources technical analysis will be necessary to meet NEPA requirements. Any additional effort associated with environmental investigations will be identified and presented to VW for review and approval as supplemental work
5. Preparation of NEPA documents is not included in the scope of this task.

Task 5.6 - Deliverables

1. Administrative draft PEIR
2. Draft PEIR
3. Final PEIR with response to comments

Task 6 - Supplemental Services

Valley Water may require, and the Consultant and its subconsultants will perform, Supplemental Services on an as-needed basis. Prior to performing such Supplemental Services, Consultant must obtain written authorization in the form of a Task Order approved by Valley Water's authorized representative. The form of this Task Order will be as per the Standard Consultant Agreement, Section Twelve, Miscellaneous Provisions, Subsection 13, Task Orders; and, Appendix Three, of the Standard Consultant Agreement, Task Order Template.

Task 6 - Assumptions

1. For the purposes of our fee development, the effort for Task 6 is assumed as 10% of the subtotal cost for Tasks 1 to 5.

6.1 Implementation Program Management Services and Support

The Consultant may provide consultation to Designers as they further develop the 10% Conceptual Designs from Task 4 into Final Design, for purposes of ensuring that the technical guidelines and standards are being applied consistently and that the projects as they are further developed remain compatible with the overall SCADA Implementation Plan.

The Consultant may also provide program management support to Valley Water staff managing the design and construction of the SCADA Implementation Plan projects (identified under Task 4) and including the early implementation projects identified under Task 2.3.

SCHEDULE PM SCOPE OF SERVICES

The Consultant may be required to update the SCADA Implementation Program every five years to ensure that the proposed SCADA Projects are still up to date and should continue to proceed as planned. This may include reviewing the problem definition, conceptual alternatives, feasible alternatives, recommended alternatives, and planning study report defined from Task 4. Changes to the CIP Program may require check-ins and approval by Valley Water's board members and the public.

Task 6.1 - Assumptions

1. This activity will occur over a period of several years on an as-needed basis.

6.2 – National Environmental Policy Act (NEPA)

Task 6.2.1 - NEPA Strategy

Consultant shall assist Valley Water Program Manager in the review and identification of a NEPA strategy relative to proposed federal facilities. The NEPA Strategy Memorandum shall identify the project level or activities as proposed by Valley Water, triggers for federal nexus, and potential compliance mechanisms. The NEPA Strategy Memorandum will identify supplemental service to be engaged for completion of a CEQA/NEPA process, as appropriate. If NEPA Compliance is required the Consultant shall identify and, pending written approval from Valley Water, conduct NEPA compliance activities, as appropriate for the Project.

Task 6.2.2 - Administrative Draft EA

Consultant will prepare and submit an Administrative Draft Environmental Assessment (EA) assessing the environmental and human effects of the Project for review by the Reclamation and Valley Water. The draft EA will incorporate information developed from internal and external scoping, alternatives development, preliminary analysis of management situation and effects analysis. The Preliminary Draft will be prepared in accordance with NEPA, and Reclamation's NEPA Handbook.

Task 6.2.3 - Administrative Final EA

Consultant will prepare an Administrative Final EA containing copies of the comment letters received on the Public Draft EA, a specific response to each comment, and any text edits to the Draft EA as a result of the public comments. Consultant will carefully review the Administrative EA to ensure revisions that affect more than one portion of the document are changed throughout, that technical analysis in the various topic areas are based on consistent assumptions and inputs, and that the document is internally consistent.

Assumptions:

1. This scope assumes that NEPA would be provided through preparation of a separate Environmental Assessment, based on the most recent NEPA requirements, addressing those components of the Project that are deemed federal projects.

SCHEDULE PM SCOPE OF SERVICES

2. The scope of NEPA documentation is not fully defined at this stage. We propose finalizing the scope of work and associated effort after Task 4 is complete at which time, the full scope of SCADA improvements projects will be determined, based on which the NEPA assessment can be fully scoped.

Task 6.2 - Deliverables

1. Draft and Final NEPA Strategy Memorandum
2. Administrative Draft EIR/EIS or EA
3. Draft Response to Comments Report
4. Administrative Final EIR/EIS or EA

Task 6.3 Additional Services

Consultant may provide additional quantities of previously identified services as requested by Valley Water. Consultant may provide additional services for any quantity of tasks and deliverables beyond those stated in Tasks 1 through 5, to include but not limited to:

1. Additional meetings and workshops
2. Additional time allotted for meetings
3. Additional status/progress reports
4. Additional phone conference calls
5. Additional support to Valley Water in preparing Valley Water deliverables
6. Additional pages or copies of technical memoranda, plans, reports, drawings, and specifications
7. Additional public visual outreach materials
8. Additional field condition assessment work
9. Additional studies required
10. Additional work associated with integrating recommendations from the other implementation and master plan project efforts into SCADA recommendations
11. Additional work associated with environmental planning and permitting
12. Network testing and cybersecurity vulnerability assessments as requested by Valley Water.
13. Assist Valley Water with visiting other agencies to support SCADA platform selection.
14. Cybersecurity focused benchmarking
15. Radio path study if required
16. Additional work associated with environmental planning and permitting
17. The conceptual design, and planning study report for additional Early Implementation projects identified through the evaluation under Task 2.
18. The conceptual design, and planning study report for additional projects identified through the evaluation under Task 4.1.
19. Bridging documents for projects identified under Task 2.3 and Task 4.1.

SCHEDULE PM SCOPE OF SERVICES

8. Attachments

The following listed Schedule PM Attachments are incorporated herein by this reference as though set forth in full:

Attachment One - Fees and Payments

Attachment Two - Schedule of Completion

Attachment Three - Consultant's Key Staff and Subconsultants

Attachment Four - Reference Materials

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**SCHEDULE PM
ATTACHMENT ONE
FEES AND PAYMENTS**

1. Total Authorized Funding

Total payment for Services performed, to the satisfaction of Valley Water, as described in the Schedule(s) will not exceed a total amount of **\$2,999,864** (Not-to-Exceed Fees or NTE). Under no conditions will the total compensation to the Consultant exceed this NTE payment amount without prior written approval in the form of an amendment to this Agreement executed by Valley Water's Board of Directors (Board), or Chief Executive Officer, or designee, as authorized by the Board.

2. Cost Breakdown

The NTE total compensation of this Agreement consists of the following task fee breakdown. No services will be performed, or fees paid by Valley Water to the Consultant for Supplemental Services without prior written authorization by Valley Water as stated in this Agreement.

COST BREAKDOWN

Task	Description	Not-to-Exceed Fees
1	Project Management	\$388,272
2	Project Goal Definition, Needs Assessment and Gap Analysis	\$785,279
3	Technology Evaluation and Standardization	\$717,439
4	Projects and Program Definition	\$673,135
5	Prepare Programmatic Environmental Impact Report (PEIR)	\$163,024
6	Supplemental Services	\$272,715
Total Not-to-Exceed Fees		\$2,999,864.00

NOTE: The Scope of Services tasks including assumptions and deliverables shall be completed within the Not-to-Exceed Fees limit identified above. The level of effort to complete the tasks listed above are defined in the Consultant's detailed negotiated cost breakdown dated 02/4/2022.

3. Terms and Conditions

A. Payments for Services performed, as described in this Schedule, which applies to the specific Services, will be based on the following terms:

- 1) Valley Water will pay for Services provided by the Consultant according to the schedule of rates for professional, technical, and administrative personnel, as well as materials and supplies as listed below in the Hourly/Unit Rate Schedule.
- 2) The stated hourly rates are effective for the term of this Agreement unless otherwise revised as indicated. After 12 months from the date this Agreement is entered into by parties ("anniversary date"), and each 12 months thereafter, these hourly rates may be negotiated by the Consultant and Valley Water, provided Consultant submits

**SCHEDULE PM
ATTACHMENT ONE
FEES AND PAYMENTS**

written notice to Valley Water of Consultant's request to revise the hourly rates 90 calendar days prior to the anniversary date of this Agreement. Both parties will use as a benchmark for negotiations the percent change for the previous 12 months of the "Employment Cost Index (ECI), for total compensation for private industry workers, for the San Francisco-Oakland-San Jose, CA CSA Census region and metropolitan area (not seasonally adjusted)" as published by the U.S. Department of Labor, Bureau of Labor Statistics, or 3%, whichever is less. A negative index will result in rates remaining the same. Such rate revisions are subject to written approval by Valley Water's Deputy Operating Officer.

B. Reimbursable Expenses

- 1) All reimbursable expenses not already covered in overhead may include, but are not limited to, mapping, rendering, printouts, leased equipment, mailing and delivery services, printing services, film and processing, plotting, and supplies. These other direct expenses as approved by Valley Water Project Manager will be billed on a monthly basis at actual cost linked to each Agreement Task, provided that the Task total NTE amount is not exceeded. Consultant shall provide receipts for each other direct expense item(s) with monthly invoices submitted. No markup will be applied to reimbursable expenses, either by the Consultant or by its subconsultants, subcontractors, or vendors. Consultant shall provide invoices for all such services regardless of cost.
- 2) Equipment purchased on behalf of Valley Water that costs \$50 or more must receive the prior written approval of Valley Water Project Manager. All equipment purchased on behalf of Valley Water and paid for by Valley Water shall become the property of Valley Water and be delivered to Valley Water prior to expiration of this Agreement.
- 3) Travel expenses are reimbursed at actual costs. Travel and overnight accommodations, including per diem, required for performance of this Agreement will be paid at reasonable cost not to exceed the U.S. General Services Agency Per Diem Rates for Sunnyvale/Palo Alto/San Jose, California area, provided prior approval has been obtained from Valley Water Project Manager. For air travel, Valley Water will pay the cost of a coach class or equivalent ticket. Where air travel is required, Valley Water will pay the total cost of taxi, rideshare, public transportation, or a rental car, which may include insurance, gas, car fee, and taxes and will be paid at the actual costs incurred. Vehicle rental is limited to a compact or economy model, unless prior approval has been obtained from Valley Water Project Manager for a different type of vehicle.
- 4) A markup of 5% will apply to the Consultant only to manage Subconsultants, subcontractors and vendors, including lab services.

- C. For staff with rates exceeding the rate of \$[RATE LIMIT]/hr, the Consultant must obtain written approval from Valley Water Project Manager as to the numbers of hours per task prior to that individual working on the Project. [NOT USED]

**SCHEDULE PM
ATTACHMENT ONE
FEES AND PAYMENTS**

D. Prevailing Wage Requirements

- 1) The scope of service performed under this Agreement may be considered a “public work.” If prevailing wage rates apply to a Task or Task Order, then See Standard Consultant Agreement Section Four, Fees and Payments, subsection 3. Prevailing Wages.
- 2) In accordance with prevailing wage laws, the Director of the California Department of Industrial Relations (Director) has ascertained the general prevailing rate of wages and employer payments for health and welfare, pension, vacation, and similar purposes available to the particular craft, classification, or type of workers employed on the Project. These rates are set forth in the latest determination obtained from the Director, which is on file in Valley Water’s Office of the Clerk of the Board of Directors and incorporated herein by reference the same as though set forth in full. The rates are also available on the State of California Department of Industrial Relations website at <http://www.dir.ca.gov>.

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**SCHEDULE PM
ATTACHMENT ONE
FEES AND PAYMENTS**

HOURLY/UNIT RATE TABLE

CLASSIFICATION	HOURLY/ UNIT RATE
Consultant: Black & Veatch Corporation	
Project Director	\$338.73
Project Manager Level 3	\$321.92
Project Manager Level 2	\$302.41
Specialist Level 3	\$338.73
Specialist Level 1	\$250.29
Engineer Level 6	\$276.40
Engineer Level 4	\$227.62
Engineer Level 2/Sr. Technician	\$178.85
Engineer Level 1/Technician	\$146.33
Sr. Project Controls	\$178.85
Finance	\$113.82
Admin. Assistant	\$104.05
Subconsultant(s): CDM Smith, Inc.	
Vice President/Sr. V.P.	\$338.73
Engineer/Scientist Grade 9	\$311.80
Engineer/Scientist Grade 7	\$265.03
Engineer/Scientist Grade 6	\$233.85
Draftsperson/Designer	\$155.66
Contract/Project Admin.	\$171.50
Admin. Assistant	\$99.78
Subconsultant(s): TJC & Associates, Inc.	
Vice-President	\$309.00
Principal	\$282.90
Sr. Technician	\$196.15
Designer	\$141.39
Sr. Administrative/Project Controls	\$118.22
Administrative	\$98.57

**SCHEDULE PM
ATTACHMENT ONE
FEES AND PAYMENTS**

Subconsultant(s): Denise Duffy & Associates	
Principal	\$239.99
Sr. Project Manager	\$170.98
Sr. Environmental Planner/Scientist	\$159.65
Assoc. Planner/Scientist	\$115.36
Asst. Planner/Scientist	\$103.00
GIS Specialist	\$110.21
Admin/Editing	\$66.95
Sr. Project Manager	\$170.98
Subconsultant(s): Basin Research Associates	
Principal	\$166.86
Research Scientist PhD	\$141.11
Archaeologist (MA)	\$92.70
Archaeologist Tech	\$77.25
GIS/Graphics	\$97.85
Admin/Clerical	\$72.10
Subconsultant(s): Katz & Associates, Inc.	
Vice President	\$224.11
Director	\$176.06
Account Executive I	\$96.01
Graphic Design	\$111.33

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**SCHEDULE PM
ATTACHMENT TWO
SCHEDULE OF COMPLETION**

1. This Agreement commences on the Effective Date, subject to accomplishment of all conditions to formation of an agreement listed in the Agreement at Section Twelve, Miscellaneous Provisions, subsection 2. Formation of Agreement.
2. This Agreement expires three (3) years, with the option of two-one (1) year extensions, after the Effective Date, unless, prior to its expiration, its term is modified by a written amendment hereto, and signed by both Parties.
3. Valley Water and Consultant may agree to modify the schedule specified for Consultant's performance as an administrative modification to the Agreement and will confirm such modification in writing.

PROJECT SCHEDULE

Task	Description	Duration From Notice to Proceed (months)
1	Project Management	Duration of Agreement
2	Project Goal Definition, Needs Assessment and Gap Analysis	15 months
3	Technology Evaluation and Standardization	25 months
4	Projects and Program Definition	34 months
5	Prepare Programmatic Environmental Impact Report (PEIR)	34 months
6	Supplemental Services	Duration of Agreement

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**SCHEDULE PM
ATTACHMENT THREE
CONSULTANT'S KEY STAFF AND SUBCONSULTANTS**

1. Consultant's Key Staff assigned to the Project are as follows:

Team Member	Classification	Project Role	Contact Information
Julie Inman	Project Manager Level 2	Project Manager	8400 Ward Parkway Kansas City, MO 64114 (913) 458-3209 InmanJA@bv.com
Ashu Shirolkar	Project Manager Level 3	Deputy Project Manager	10995 Gold Center Drive, Suite 100 Rancho Cordova, CA 95670 (916) 858-2423/ (916) 642-6124 shirolkaras@bv.com
Dewey Smith	BV Engineer Level 6	Technical Lead	10995 Gold Center Drive, Suite 100 Rancho Cordova, CA 95670 (916) 858-2412 SmithDC@bv.com
Rahul Dave	BV Engineer Level 6	Technical Lead	10995 Gold Center Drive, Suite 100 Rancho Cordova, CA 95670 (916) 858-7216 DaveR@bv.com

2. The following Subconsultants are authorized to perform Services for this Agreement:

Firm	Project Role	Contact Information
CDM Smith	Cybersecurity Technical Lead, SCADA & I&C Technical Support	2300 Clayton Road, Suite 950 Concord, CA 94520 (925) 296-8024 MolinaS@cdmsmith.com
TJC and Associates	Standards Technical Lead, SCADA & I&C Technical Support	1111 Broadway, Suite 300 Oakland, CA 94607-4167 (510) 251-8980 (Ext. 201) paul@tjcaa.com
Denise Duffy & Associates	Programmatic EIR Lead	947 Cass Street, Suite 5 Monterey, CA 93940 (831) 373-4341 Dduffy@ddaplanning.com
Basin Research Associates (subconsultant to Denise Duffy & Associates)	Cultural Resources Lead	1933 Davis Street, Suite 215 San Leandro CA 94577 (510) 430 8441 collinbusby@basinresearch.com
Katz & Associates	Public Outreach Lead	1460 Mission Street San Francisco, CA 94103 (510) 388 1406, eotis@katzandassociates.com

**SCHEDULE PM
ATTACHMENT FOUR
REFERENCE MATERIALS**

Ref No.	Description
1	Santa Clara Valley Water District Non-Disclosure Agreement (NDA) and Personal Non-Disclosure Agreement (PNDA) (FC 1650 or FC 1882)
2	2011 Process Control Systems (SCADA) Master Plan
3	Santa Clara Valley Water District's Quality and Environmental Management System (QEMS) procedures, work instructions and forms

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