

**AMENDMENT NO. 2  
TO THE STANDARD CONSULTANT AGREEMENT A3778A  
BETWEEN THE SANTA CLARA VALLEY WATER DISTRICT  
AND URS CORPORATION, a Nevada Corporation dba URS CORPORATION AMERICAS**

This Amendment No. 2 (Amendment), effective as of the date it is fully executed by the Parties, amends the terms and conditions of the Standard Consultant Agreement A3778A (Agreement) dated September 9, 2014, as amended by Amendment No. 1 dated October 26, 2016 between the SANTA CLARA VALLEY WATER DISTRICT (District) and URS CORPORATION, a Nevada Corporation dba URS CORPORATION AMERICAS (Consultant), collectively the Parties.

**RECITALS**

**WHEREAS**, Consultant is currently performing Dam Safety Evaluation studies for the District's Coyote, Chesbro, and Uvas Dams (Project); and

**WHEREAS**, the Parties desire to amend the Agreement to include additional Supplemental Services for Consultant to perform spillway condition assessments at Coyote, Chesbro, and Uvas Dams; and

**WHEREAS**, the Parties desire to amend the Agreement to increase the Agreement Total Not-to-Exceed Amount to provide funds for Consultant in consideration of the added Supplemental Services scope.

**NOW, THEREFORE**, in consideration of the mutual promises and agreements stated herein and notwithstanding anything to the contrary in the Agreement, Consultant and the District hereby agree to amend the Agreement as follows:

1. Revised Appendix One, Scope of Services, is amended as set forth in the attached Revised Appendix One, Scope of Services, and incorporated herein by this reference.
2. Revised Attachment One to Revised Appendix One, Consultant's Key Staff and Subconsultants, is amended as set forth in the attached Revised Attachment One to Revised Appendix One, Consultant's Key Staff and Subconsultants, and incorporated herein by this reference.
3. Revised Attachment Three to Revised Appendix One, Task Order Template, is amended as set forth in the attached Revised Attachment Three to Revised Appendix One, Task Order Template, and incorporated herein by this reference.
4. Attachment Four to Revised Appendix One, Non-Disclosure Agreement (NDA), is amended as set forth in the attached Revised Attachment Four to Revised Appendix One, Non-Disclosure Agreement (NDA).
5. Attachment Six to Revised Appendix One, District Standards for GIS Products, is amended as set forth in the attached Revised Attachment Six to Revised Appendix One, District Standards for GIS Products, and incorporated herein by this reference.
6. Revised Attachment Seven to Revised Appendix One, Quality and Environmental Management System (QEMS) Fact Sheet, is amended as set forth in the attached Revised Attachment Seven to Revised Appendix One, QEMS Fact Sheet, and incorporated herein by this reference.

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7. Revised Appendix Two, Fees and Payments, is amended to increase the Agreement Total Not-to-Exceed Amount payable to Consultant for its performance of additional Supplemental Services, as set forth in the attached Revised Appendix Two, Fees and Payments, and incorporated herein by this reference.
8. Appendix Three, Schedule of Completion, is amended as set forth in the attached Revised Appendix Three, Schedule of Completion, and incorporated herein by this reference.
9. Appendix Four, Insurance Requirements, is amended as set forth in the attached Revised Appendix Four, Insurance Requirements, and incorporated herein by this reference.
10. All other terms and conditions stated in Agreement A3778A, and Amendment No. 1, not amended herein, remain in full force and effect.

**IN WITNESS WHEREOF, THE PARTIES HAVE SET FORTH BELOW THEIR CONSENT TO THE TERMS AND CONDITIONS OF THIS AMENDMENT NO. 2 TO AGREEMENT A3778A THROUGH THE SIGNATURES OF THEIR DULY AUTHORIZED REPRESENTATIVES.**

SANTA CLARA VALLEY WATER DISTRICT  
"District"

URS CORPORATION, a Nevada  
Corporation dba URS CORPORATION  
AMERICAS  
"Consultant"

By: \_\_\_\_\_  
John L. Varela  
Chair/Board of Directors

By: \_\_\_\_\_  
Noel Wong, P.E.  
Vice President

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Firm Address:

300 Lakeside Drive, Suite 400  
Oakland, CA 94612

ATTEST:

\_\_\_\_\_  
Michele L. King, CMC  
Clerk/Board of Directors

Date: \_\_\_\_\_

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED APPENDIX ONE SCOPE OF SERVICES**

#### **Dam Safety Evaluation of Coyote, Chesbro, and Uvas Dams (DSE1)**

This Revised Appendix One describes the scope of services to be undertaken by the Consultant to complete comprehensive dam safety evaluations for the District's Coyote, Chesbro, and Uvas Dams (Project).

#### **I. STATEMENT OF WORK (UNCHANGED)**

- A. The Dam Safety Evaluation Project (DSE1) will be executed by the Consultant for the District's Coyote, Chesbro, and Uvas Dams. Consultant will utilize the services of professionally registered geotechnical engineers, civil engineers, engineering geologists, other licensed personnel, and other qualified personnel working under the direction of registered or licensed personnel to complete the following objectives:
  - 1. Comprehensive Independent Dam Safety Reviews (IDSR) of each dam, which include Potential Failure Mode Analysis (PFMA) with recommendations to address identified deficiencies;
  - 2. Seismic stability evaluations (SSE) for each dam, which include fault rupture hazards;
  - 3. Probable Maximum Flood (PMF) studies for each dam;
  - 4. Outlet works evaluations at Chesbro and Uvas Dams; and
  - 5. Supplemental engineering services performed as follow-up to recommendations in the IDSR report.
- B. Unless otherwise noted in this Agreement, the Consultant will:
  - 1. Perform the Scope of Services outlined in this Agreement as per all applicable federal, state, and local regulatory standards and guidelines;
  - 2. Use California Licensed Contractors, Engineers, and Surveyors to perform the work appropriate to their licensing that is described in the Scope of Services outlined in this Agreement. The Consultant will make available upon request by the District, qualifications and licensing of personnel used in execution of the work;
  - 3. Meet all requirements of the resource and regulatory agencies (i.e. permitting agencies) including the Division of Safety of Dams (DSOD);
  - 4. Develop sufficient information and analysis to enable the District's Board of Directors to make Project decisions;

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5. Perform all evaluations and technical analysis as per DSOD and District's requirements and standards; and
6. Execute all work consistent with District's policies and procedures.

#### **II. PROJECT TASKS—GENERAL CONDITIONS (REVISED)**

- A. The Consultant will prepare draft, final draft and final versions for all Plans, Reports, and Technical Memoranda, unless otherwise stated hereinafter. All other deliverables will be submitted in draft and final forms only.
- B. The Consultant must receive written authorization from the District's Project Manager prior to starting work on any Task or Subtask identified as "conditional." "Conditional" tasks are supplemental tasks to be performed only with the approval and written authorization of the District.
- C. Review of Deliverables: All plans, reports, and memoranda shall be reviewed by the District. As detailed herein, some deliverables will also be reviewed by the Technical Review Board (TRB) and regulatory agencies (e.g. DSOD) following District's review.
- D. The Consultant shall use Microsoft Office 2010 versions of applications for word processing, spreadsheets, and presentations; Adobe Acrobat Reader XI compatible scanned documents and figures; GIS files meeting District's GIS requirements (see Revised Attachment Six—District Standards for GIS Products), and CADD applications that meet District's drafting requirements.
- E. The Consultant shall submit deliverables in both electronic and hardcopy format. The electronic copies of the deliverables shall be submitted in PDF and native (editable) format, including Word documents, Excel spreadsheets, PowerPoint files, AutoCAD files, GIS files, etc. The hard copy deliverables shall be printed in professional quality presentation and submitted in 5 (five) copies. District may require original copies to be signed and/or scanned (Adobe PDF).
- F. Drawings shall comply with District'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).
- G. The District will facilitate access to District facilities as required for the Consultant to complete this Scope of Services.
- H. All Scope of Service changes resulting in expenditures in excess of the budgeted amount shall be approved by the District prior to execution.

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#### III. ELEMENT 1—COYOTE DAM EVALUATION TASKS

##### Task 1—Project Management Services (REVISED)

- A. The purpose of Task 1 activities is for the Consultant to manage this Scope of Services such that the work is completed within the not-to-exceed fee limit stated in Revised Appendix Two, Fees and Payments; in accordance with the Project schedule stated in Revised Appendix Three, Schedule of Completion; and ensuring that all services and deliverables by the Consultant meet the District and Project requirements.

##### *Subtask 1.1 Project Planning, Scheduling, Communication, Monitoring and Control*

##### 1.1.1 Prepare Project Execution Plan (PXP)

- a. The Consultant will prepare the Project Execution Plan in accordance with the District's Quality Environmental Management System (QEMS) or as otherwise approved by the District's Project Manager. At a minimum, the Project Execution Plan shall include the Project objectives and requirements, constraints, detailed Project schedule (showing major tasks and deliverables), a list of the Consultant's team members and their roles and responsibilities, updated communication protocols (internal and external), updated document control procedures and other administrative procedures.

##### 1.1.2 Progress Meetings

- a. Consultant will coordinate and attend periodic progress meetings and workshops with District staff and other agencies as needed to review and/or discuss progress of the work and/or deliverables. For each meeting or workshop, Consultant will prepare the meeting agenda and notes and submit them for review by the District. A kickoff meeting will be held with the District to discuss Project objectives, constraints, information needs, roles and responsibilities, and communication protocols. It is anticipated that progress meetings will be by teleconference and workshops will be held at the Consultant's office in Oakland, California. Progress meetings will be held every two months for the duration of this Agreement unless mutually agreed to delay or skip a meeting, or to add meetings.

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#### **1.1.3 Communications**

- a. The Consultant will coordinate all communication necessary to execute this Scope of Services with all regulatory agencies, including DSOD, through the District. Such communications include preparing meeting agendas and meeting notes.

#### **1.1.4 Document Control**

- a. The Consultant will establish and maintain its own document control system as required to execute this Scope of Services.

#### **1.1.5 Monthly Progress Reports**

- a. The Consultant shall submit a Monthly Progress Report. The Progress Report shall document the work completed and document the execution of the tasks described in this Scope of Services to enable the District to evaluate the Consultant's progress and performance towards completion of the work. The Progress Report shall include:
  - (1) An assessment of actual versus planned progress in completing the work, including a description of the tasks and deliverables completed to date;
  - (2) For each task, the percentage of the fees incurred for the task compared to dollar amount budgeted to the task;
  - (3) A statement that all remaining tasks shall be completed within the agreed upon not-to-exceed total amount of the Agreement;
  - (4) A statement that progress towards completion of the work is on schedule and will be completed within the milestones in the Agreement Project schedule; or, if completion of the work 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, the schedule for implementation of such measures, and a schedule analysis and catch-up plan for District's review and approval; and
  - (5) For any proposed change to this Scope of Services, provide the supporting rationale for such change.

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Deliverables for Subtask 1.1 (see Table 1)

1. Project Execution Plan including QA/QC Plan;
2. Monthly Progress Reports;
3. Meeting Agendas and Meeting Notes; and

Meetings for Subtask 1.1 (see Table 2)

1. Kickoff Meeting with District; and
2. Progress Meetings—every other month by teleconference or in person at District's discretion.

Basis for Budget Estimate for Subtask 1.1—The task budget estimates are based on the following:

1. A single PXP will be prepared for the Project including all three dams. The PXP will be reviewed annually and updated as needed;
2. Thirty-Six (36) progress meetings;
3. Review workshops conducted with the District, TRB, and DSOD are included and part of the not-to-exceed amount in other tasks;
4. Progress reports will be prepared monthly for the duration (72 months) of this Agreement;
5. Progress meetings and progress reports will discuss current work on all three dams. There will not be separate meetings and progress reports for individual dams; and
6. All travel and other incidental costs associated with this task are included in the budget estimates.

#### *Subtask 1.2 Quality Assurance and Quality Control Plan*

- a. The Project Execution Plan will include the Project Quality Assurance and Quality Control (QA/QC) Plan documenting the Consultant's procedures to ensure the Consultant's services and deliverables meet District requirements, regulatory agencies' requirements (including DSOD), and accepted practices and standards of the Consultant's profession. District reserves the right to request and review the Consultant's documentation demonstrating their adherence with their quality assurance procedures.

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Deliverables for Subtask 1.2 (see Table 1)

1. Quality Assurance Plan and Quality Control Plan to be included in PXP.

Meetings for Subtask 1.2 (see Table 2)

1. No meetings are planned for this subtask.

Basis for Budget Estimate for Subtask 1.2—The task budget estimates are based on the following:

1. QA/QC Plan will be reviewed annually and updated as needed; and
2. Quality Assurance Audits will be performed at Project initiation and at about 18 month intervals thereafter.

#### *Subtask 1.3 Technical Review*

##### 1.3.1 Independent Technical Review Board (TRB)

- a. The Consultant will coordinate a two-person independent Technical Review Board (TRB) to provide guidance and review of the work. The District will select the TRB members, and the TRB members will report directly to the District, but will be contracted through this Agreement. The TRB members will sign the District's Conflict of Interest Statement, Form 700 (as described in detail in section VII, Additional Terms and Conditions, paragraph I.), and Non-Disclosure Agreement (see Attachment Four).
- b. The TRB will provide independent review comments on the following topics and objectives:
  - (1) The proposed geologic and geotechnical investigation work plans;
  - (2) The recommended design earthquakes and ground motions;
  - (3) The characterization of geotechnical engineering properties;
  - (4) The characterization of local faults and geology;
  - (5) The engineering analyses for seismic response, liquefaction potential, fault rupture, seismic deformations, and the overall dam stability assessment; and

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- (6) The potential interim and permanent conceptual dam remedial alternatives (as needed).
- c. The Consultant will schedule and coordinate up to seven meetings with the TRB and the District, as listed in Table 2, Summary of Meetings. Consultant will provide review materials, including an agenda, for the TRB members five business days prior to each TRB meeting. The Consultant's subcontract with the TRB will require that the TRB prepare a draft summary letter report for District review within three business days after each TRB meeting, with the final TRB report delivered within three business days of receipt of the District's comments. The Consultant will coordinate TRB participation in unspecified teleconferences as determined appropriate by the Consultant and/or the District.
- d. As part of its monthly invoice submitted in accordance with Appendix Three, Schedule of Completion, the Consultant will invoice the District for the TRB member's work on a monthly basis, based on invoices received from the TRB members for meetings as listed in Table 2, Summary of Meetings, and reviews of associated materials.

#### 1.3.2 Subject Matter Experts

- a. The Consultant will coordinate the work of up to two subject matter experts who will report to the District, but will be contracted through this Agreement. The Consultant will arrange for the following reviewers, or suitable alternates acceptable to the District, to provide review services to the District for Coyote Dam:
  - Dr. Ross Boulanger
  - Dr. Roger Bilham
- b. Dr. Boulanger will review presentation material prior to TRB meetings and review Technical Memoranda and Reports provided by the Consultant for the same topics and objectives as listed above for the TRB. The Consultant will schedule and coordinate up to seven (7) reviews by Dr. Boulanger prior to TRB meetings. As needed, Consultant will coordinate conference calls with Dr. Boulanger and the District to discuss review comments.
- c. Dr. Bilham will review local fault kinematics studies at Coyote Dam including results from creep meter and Gamma Portable Radar Interferometer, if used. The Consultant will schedule and coordinate up to four (4) reviews by Dr. Bilham. As needed, Consultant will coordinate conference calls with Dr. Bilham and the District to discuss review comments.

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- d. The Consultant's subcontract with the reviewers will require that the reviewers prepare a draft summary letter report for District's review within five business days after each review, with the final summary letter report delivered within five business days of receipt of the District's comments

Deliverables for Subtask 1.3 (see Table 1)

1. TRB Review Reports; and
2. Subject matter expert review reports.

Meetings for Subtask 1.3 (see Table 2)

1. Up to seven (7) TRB meetings will be held as listed in Table 2, Summary of Meetings;
2. Up to seven (7) conference calls will be held with Dr. Boulanger and District prior to TRB meetings if needed; and
3. Up to four (4) conference calls will be held with Dr. Bilham and District discussing fault activity.

Basis for Budget Estimate for Subtask 1.3—The task budget estimates are based on the following:

1. The TRB and Dr. Boulanger will review the Seismic Safety Evaluations including field exploration, analyses, technical memoranda, and reports; and
2. Dr. Bilham will review fault displacement evaluations at Coyote Dam.

#### **Task 2—Data Collection and Preliminary (Phase 1) Field Investigations (REVISED)**

- A. The purpose of Task 2 activities is to collect and review available information relevant to the Project, evaluate additional information needed to evaluate the safety of the dam, and to plan and perform preliminary field investigations.

##### *Subtask 2.1 Kickoff Meeting With DSOD*

- a. The Consultant will organize and participate in a kickoff meeting between the District and the California Division of Safety of Dams (DSOD) to discuss the Project requirements and Project approach for all three dams.

Deliverables for Subtask 2.1 (see Table 1)

1. Meeting Agenda; and
2. Meeting Notes.

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Meetings for Subtask 2.1 (see Table 2)

1. Kickoff Meeting with DSOD.

Basis for Budget Estimate for Subtask 2.1—The tasks budget estimates are based on the following:

1. This meeting is intended to present an overview of the Project and to discuss the approach and schedule for satisfying DSOD's safety concerns for the dams.

#### *Subtask 2.2 Data Collection and Review*

- a. The Consultant will collect and review relevant available reference documents from District files, DSOD files, and other sources such as USGS reports and other published documents. DSOD files will be reviewed at the DSOD office and relevant documents will be copied. Relevant information will be collected into a database to form the basis of the Supporting Technical Information Document (STID) and safety evaluations of the dam.

Deliverables for Subtask 2.2 (see Table 1)

1. Preliminary STID.

Meetings for Subtask 2.2 (see Table 2)

1. No meetings planned.

Basis for Budget Estimate for Subtask 2.2—The tasks budget estimates are based on the following:

1. District will provide all relevant information from their files on the construction, performance, monitoring, and evaluations of the dam.

#### *Subtask 2.3 Preliminary Potential Failure Mode Analysis (PFMA) Workshop*

- a. The Consultant will perform a preliminary Potential Failure Mode Analysis workshop for Coyote Dam to identify the priorities for the Project and to confirm that all potential dam safety issues are being addressed. The Consultant will provide, for review, information to workshop participants developed in Subtask 2.2 at least one week before the workshop. At the end of the workshop, the Consultant will categorize the potential failure modes using the guidelines and procedures developed by the Federal Energy Regulatory Commission (FERC) and then prepare a Preliminary PFMA Report to identify and document the discussions, findings and recommendations from the workshop.

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Deliverables for Subtask 2.3 (see Table 1)

1. Preliminary PFMA Report.

Meetings for Subtask 2.3 (see Table 2)

1. PFMA Workshop including dam site visit.

Basis for Budget Estimate for Subtask 2.3—The tasks budget estimates are based on the following:

1. The Preliminary PFMA Workshop will be based on existing information and reports.

#### *Subtask 2.4 Phase 1 Geologic and Geotechnical Investigation Work Plan*

- a. Phases—The geologic and geotechnical field investigation for safety evaluation of Coyote Dam will be executed in two phases. Phase 1 investigation is described in this task, and Phase 2 investigation is described in Section 5.1.
- b. Work Plan—The Consultant will prepare the Phase 1 field exploration work plan and the associated laboratory testing plan for safety evaluation of Coyote Dam. The primary purpose of this phase is to identify extent of materials in the embankment and foundation in order to plan for the Phase 2 field exploration. This task will include up to four (4) borings drilled from land using sonic drilling or other suitable techniques approved by the District. Laboratory testing will include index and classification tests on soil and rock samples obtained during the exploration. Two (2) piezometers will be installed in downstream borings.
- c. Environmental Clearance—The plan will consider environmental constraints. The Consultant will:
  - (1) Finalize the work plans for geotechnical investigations based on the results of an environmental site review;
  - (2) Prepare California Environmental Quality Act (CEQA) documentation for the proposed preliminary geotechnical investigations;
  - (3) Prepare applications for Santa Clara Valley Habitat Conservation Plan (SCVHCP) coverage, and permit applications for submittal to the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW);

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- (4) Submit applications to the relevant regulatory and local agencies in hard copy binders, with copies provided to the District; and
- (5) Be responsible for all work necessary to obtain environmental clearance including permits. The environmental work may include the following:
  - (a) Site Visits—The Consultant will conduct a field site visit to review the potential investigation sites. A qualified biologist and a cultural resource specialist will review each site to identify potential biological and cultural resource impacts and options for avoidance and minimization.
  - (b) Cultural Records Search—The Consultant will conduct a cultural records search and analysis and then draft a memorandum to the District to document the findings for use in future permitting and environmental clearance.
  - (c) Notice of Categorical Exemption—The Consultant will prepare Notice of Categorical Exemption for both phases of borings.
  - (d) SCVHCP Application and Follow-Up Coordination— The Consultant will work with the District to prepare an application for coverage under the SCVHCP and provide follow-up coordination for borings, trenching, and test pits. The Consultant will assist the District to prepare the following items in support of the Santa Clara Valley Habitat Agency (SCVHA) permit application:
    - i) Cover Letter;
    - ii) Coverage Screening Form;
    - iii) Habitat Plan Fees and Conditions Worksheet;
    - iv) An Application Package; and
    - v) Supplemental Information.
  - (e) Tri-colored blackbird potential nesting habitat surveys.
  - (f) Rare Plant Surveys.
  - (g) Initial Study/Mitigated Negative Declaration.
- d. The Consultant will present the proposed geologic and geotechnical investigation work plan to the District and TRB, and after incorporating their recommendations, will then prepare and submit draft copies of the work plan to DSOD for their concurrence. After DSOD's review, the

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Consultant will make any necessary modifications to the work plan and finalize it for execution.

Deliverables for Subtask 2.4 (see Table 1)

1. Draft and Final Phase 1 Geologic and Geotechnical Investigation Work Plan; and
2. Environmental Documents for Clearance of Phase 1 Field Exploration:
  - a. Field Site Visit Results Technical Memorandum. This will include an initial habitat map and descriptions and photographs of each habitat type, field observations, and, protected resources. Memorandum will be submitted electronically in PDF;
  - b. Summary memorandum of cultural records search and official records report;
  - c. Draft and Final Notices of Exemption for borings;
  - d. Technical memorandum summarizing the results of the rare plant surveys for trenching and test pits;
  - e. Completed Draft and Final Applications to SCVHCP; and
  - f. Draft and Final Initial Study/Mitigated Negative Declaration for trenching and test pits.

Meetings for Subtask 2.4 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB; and
3. Telephone meeting with DSOD.

Basis for Budget Estimate for Subtask 2.4—The tasks budget estimates are based on the following:

1. The initial site visit will not reveal any wetlands or other sensitive habitats on the dam face or on any access roads that would be constructed or modified from their existing conditions;
2. A formal jurisdictional delineation of the reservoir for in-water investigations is unnecessary because the jurisdictional status of the work areas is known;

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3. Field surveys and habitat mapping will include up to 250 feet around the potential Project area;
4. The preliminary site visit will include one biologist, one cultural resource specialist, and one geologist for one 12-hour day;
5. Compliance with the SCVHCP will require rare plant surveys for the test pits and trenches at Coyote Dam;
6. Rare plant surveys at Coyote Dam will require two biologists for a total of three days per person (six total field days). Habitat mapping and tri-colored blackbird nesting habitat surveys (if required) will be performed concurrent with the first rare plant survey and will not require additional personnel or field visits;
7. A pedestrian survey for cultural resources will be conducted concurrent with the site visit. Proposed cost includes a Northwest Information Center (NWIC) record search;
8. The cultural records searches for each dam will be negative, or the Project will avoid impacts to Cultural and Historical Resources, if any are present in the exploration footprint, so that no mitigation actions (e.g. recordation) would need to be implemented;
9. The Notices of Exemption will be based on existing information and field study data;
10. The Consultant will respond to up to two rounds of District review on the Notice of Exemption;
11. The District will file Notice of Exemption with the Santa Clara County Clerk/Recorder;
12. The SCVHCP fee zones and required surveys at each dam are as follows: The dam is in basic Fee Zone A, contains part of a wetland fee zone, contains part of a stream setback and buffer zone downstream of the dam, and has at least part of the exploration footprint in a required field survey area for tri-colored blackbird. In addition, Coyote Dam appears to be in special zones for Coast Live Oak Woodlands and Mixed Oak Woodlands, which require rare plant surveys;
13. Field surveys for specific wildlife species other than tri-colored blackbird will not be required;
14. Project activities will avoid wetlands, serpentine rock outcrop, serpentine bunch grass, and coastal and sage scrub;

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15. The proposed activities will not result in take of listed species not covered under the SCVHCP plan;
16. The Consultant will revise the draft permit applications based on one round of input per document provided by the District;
17. The District will provide review comments of the draft applications and other documents within one week;
18. The IS will be based on existing information and field study data;
19. The IS will not identify any significant and unavoidable impacts;
20. The Consultant will respond to one round of District review on the IS; and
21. The District will file the IS/MND with the State Clearinghouse, Santa Clara County Clerk/Recorder and other responsible agencies, as appropriate.

#### *Subtask 2.5 Phase 1 Field Exploration and Laboratory Testing*

- a. After receiving DSOD's approval of the Phase 1 work plan and environmental regulatory permits, the Consultant will perform field and laboratory investigation for Coyote Dam in accordance with the work plan. Land-based borings shall be drilled with sonic drilling techniques or other suitable techniques as identified in the Phase 1 work plan. The logs of the borings and results of the laboratory tests will be included in a data report.
- b. The Consultant will instrument two (2) borings with vibrating wire piezometers.

Deliverables for Subtask 2.5 (see Table 1)

1. Data report with logs of borings and results of laboratory tests.

Meetings for Subtask 2.5 (see Table 2)

1. Meeting in field with District and DSOD personnel.

Basis for Budget Estimate for Subtask 2.5—The tasks budget estimates are based on the following:

1. Drilling up to four (4) sonic borings from land based drill rigs.

#### *Subtask 2.6 Phase 1 Site Geology and Fault Evaluations*

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- a. In accordance with the DSOD approved Phase 1 work plan, the Consultant will map and develop a geologic model for Coyote Dam and its vicinity using historical construction records and ground-based photographs, historical aerial photography, previous geologic maps, existing detailed topographic data (from the County of Santa Clara), existing LiDAR-derived hillshade data (from National Center for Airborne Laser Mapping, NCALM), existing and new borehole and geophysical data, and field observations. The Consultant will focus on delineating the types and distributions of bedrock and surficial deposits, including alluvium and landslide deposits. Mapped fault traces will be field-verified and potentially significant geologic structure will be identified and characterized.
- b. The Consultant will develop field-based fault-displacement data for the main trace of the Calaveras fault, located beneath the dam. The Consultant will develop preliminary (Phase 1) fault related data including, but not limited to, possible fault offsets during a moderate or large earthquake on the Calaveras Fault, orientation of the fault, and fault creep movement. The investigation will include detailed fault mapping, up to two (2) geologic test pits, and one (1) short (i.e., up to 150 feet long) paleoseismic trench, and include review and evaluation of data obtained from the creepmeter installed across the fault at the toe of the dam, and the Radar surveys, if authorized, as per Subtask 2.9.
- c. The Consultant will characterize the activity, location, and width of the secondary fault trace located within the dam's right abutment. The Consultant will focus on developing an estimate of the amount of coseismic displacement that can be expected beneath the embankment during a moderate or large earthquake on the Calaveras Fault. Investigation will include detailed fault mapping in the vicinity of the dam, up to two (2) geologic test pits, and one (1) short (i.e. up to 150 ft long) paleoseismic trench.
- d. The Consultant will coordinate and obtain the environmental permits required to excavate test pits and trenches as described above under Subtask 2.4.

#### Deliverables for Subtask 2.6 (see Table 1)

1. Technical memorandum with results of geologic and fault investigations including:
  - a. Detailed geologic map of dam site.
  - b. Logs of trenches and test pits.

#### Meetings for Subtask 2.6 (see Table 2)

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1. Meeting in field with District and DSOD.

Basis for Budget Estimate for Subtask 2.6—The task budget estimates are based on the following:

1. District will provide support in obtaining access to exploration locations; and
2. District will support permitting process for exploration locations.

#### *Subtask 2.7 Geotechnical Support for Access Road Construction for Preliminary Phase 1 Field Exploration*

- a. The Consultant will provide geotechnical support during construction of the access roads on the dam for the Phase 1 explorations. The Consultant will provide layout, profile, and cross sections for the access roads, provide earthwork requirements for the roads, observe road construction materials, and review the road material quantity estimates.
- b. The Consultant will ensure that all activities comply with the requirements of DSOD and will prepare all necessary submittals on behalf of the District. The Consultant will observe road construction to ensure that construction complies with their recommendations and the needs of the exploration program.
- c. The Consultant will prepare a Technical Memorandum (TM), which will summarize the field and laboratory compaction test results. The TM will be a brief construction report that will provide a general description of the construction (with photos), and will certify that the construction work for the access roads was performed as per recommendations.

Deliverables for Subtask 2.7 (see Table 1)

1. Technical Memorandum of Access Road Construction.

Meetings for Subtask 2.7 (see Table 2)

1. No meetings planned.

Basis for Budget Estimate for Subtask 2.7—The task budget estimates are based on the following:

1. Construction work will be performed by District personnel and equipment or if Subtask 2.8 is authorized by District, Consultant-provided personnel and equipment.

#### *Subtask 2.8 Access Road Construction for Phase 1 Field Exploration (Conditional) (REVISED PER AMENDMENT NO. 1)*

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This scope is deleted.

#### *Subtask 2.9 Gamma Portable Radar Interferometer Measurements (Conditional)*

- a. If authorized by the District, the Consultant will contract with a firm to provide equipment rental, transportation costs for equipment, training, consulting and travel costs for their personnel for portable radar interferometer measurements of ground movements along the Calaveras fault and Coyote Dam. The purpose of these measurements is to detect movement of the fault and response of the dam to fault movement (deformation of the dam resulting from fault movement). District personnel will set up the equipment and gather data under the instruction of Consultant's subconsultant. The Consultant will review the results of the measurements provided by such subconsultant for fault rupture evaluation.

Deliverables for Subtask 2.9 (see Table 1)

1. Technical Memorandum on results of measurements to be prepared by subconsultant.

Meetings for Subtask 2.9 (see Table 2)

1. No separate formal meetings for this subtask. Results to be presented and discussed at other meetings with District and TRB.

Basis for Budget Estimate for Subtask 2.9—The task budget estimates are based on the following:

1. District personnel will set up the equipment and gather data under the instruction of subconsultant; and
2. Duration of measurements will be approximately three months.

#### **Task 3—Updated Probable Maximum Flood (PMF) (UNCHANGED)**

- A. The Consultant will develop Probable Maximum Precipitation (PMP) for the watershed. The Consultant will use this information to perform a Probable Maximum Flood analysis to evaluate the adequacy of the existing spillway.

#### *Subtask 3.1 Develop PMP using HMR 58/59*

- a. The Consultant will calculate the PMP using Hydrometeorological Report (HMR) 58/59. The work will involve reviewing the PMPs and PMFs calculated using HMR 36, as documented in the DSOD Phase 1 Inspection Report for Coyote Dam (DSOD, 1981), and the 2012 PMF

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study completed by the District for Anderson Dam, which includes the Coyote Reservoir watershed.

Deliverables for Subtask 3.1 (see Table 1)

1. No separate deliverable. Results will be included in Technical Memorandum under Subtask 3.2.

Meetings for Subtask 3.1 (see Table 2)

1. Meeting with District to discuss results of the PMP and PMF.

Basis for Budget Estimate for Subtask 3.1—The task budget estimates are based on the following:

1. District will provide models used for Anderson Dam PMF study.

#### *Subtask 3.2 Develop PMF for Coyote Dam*

- a. After the PMP Study results have been reviewed and accepted by DSOD, the Consultant will determine the PMF and evaluate the adequacy of the hydraulic capacity of the existing spillway. The hydrology model will incorporate rainfall hydrograph distribution, rainfall losses due to land uses, lag times, and channel routing (if applicable). The capacity of the spillway will be reviewed and updated as necessary.

Deliverables for Subtask 3.2 (see Table 1)

1. Technical Memorandum on PMP and PMF.

Meetings for Subtask 3.2 (see Table 2)

1. Conference call with District and DSOD to discuss results.

Basis for Budget Estimate for Subtask 3.2—The task budget estimates are based on the following:

1. District will provide models used for Anderson Dam PMF study.

### **Task 4—Preparation of Supporting Technical Information Documents (STID) (UNCHANGED)**

#### *Subtask 4.1 Supporting Technical Information Document (STID)*

- a. The Consultant will prepare a Supporting Technical Information Document (STID) for Coyote Dam. The STID will summarize the dam elements and details and include sufficient information to understand the design and current engineering analyses for the dam. The STID will be

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assembled in loose-leaf fashion so that it can be updated on an on-going basis to provide historical and current information for the dam with an emphasis on dam safety. The document will also be delivered to the District in an electronic format with a hyperlinked database.

- b. The STID will include such information as a Project description, basic data for the dam, design and construction history, past performance and analytical evaluations such as spillway and outlet adequacy and stability including seismic stability. The document will also contain a section on instrumentation and a compilation of historical and current drawings for the dam. A typical document layout would be as follows:

- (1) Potential Failure Mode Analysis;
- (2) Project Description and Drawings;
- (3) Construction History;
- (4) Standard Operating Procedures;
- (5) Geology and Seismicity including fault rupture hazard;
- (6) Hydrology and Hydraulics;
- (7) Surveillance and Monitoring Plan;
- (8) Structural Adequacy;
- (9) Spillway Gates;
- (10) Pertinent Correspondence; and
- (11) References.

Deliverables for Subtask 4.1 (see Table 1)

1. STID.

Meetings for Subtask 4.1 (see Table 2)

1. No meeting planned for this subtask.

Basis for Budget Estimate for Subtask 4.1—The task budget estimates are based on the following:

1. District to provide all relevant files and drawings from their files.

### **Task 5—Seismic Stability Evaluation (SSE) (UNCHANGED)**

#### *Subtask 5.1 Phase 2 Geologic and Geotechnical Investigation*

##### *5.1.1 Phase 2 Geologic and Geotechnical Investigation Work Plan*

- a. The Consultant will prepare the Phase 2 field exploration work plan and laboratory testing plan based on the results of the Phase 1 explorations performed in Task 2.5. The primary purpose of this phase is to evaluate engineering properties of materials in the embankment and foundation for the seismic safety evaluations. These field explorations will include rotary

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wash borings drilled from both land and over water. Laboratory testing will include index, classification, and strength tests.

- b. The plan will consider environmental constraints. The Consultant will include the Phase 2 borings in the Categorical Exemption for the Phase 1 borings. In addition, the Consultant will prepare the permit applications and receive the permits necessary for regulatory compliance for the in-water work prior to Phase 2 geotechnical investigative activities. The environmental work will include the following:
- (1) Regulatory Agency Coordination;
  - (2) Regulatory Agency Permits for In-Water Work. Consultant will prepare the following draft permit applications:
    - (a) San Francisco Bay Regional Water Quality Control Board (RWQCB) Water Quality Certification: Consultant will prepare the following items in support of the RWQCB permit application:
      - i) Cover Letter;
      - ii) Form R2C502-E, Application for 401 WQC and/or Report of Waste Discharge; and
      - iii) Supplemental Information.
    - (b) California Department of Fish and Wildlife (CDFW) Section 1600 Lake and Streambed Alteration Agreement. Consultant will pursue approval for the Project from CDFW pursuant to Fish and Game Code Section 1602 (Lake or Streambed Alteration [LSAA]). Consultant will prepare the following items in support of the notification for a LSAA:
      - i) Cover Letter;
      - ii) Form FG2023, Notification of Lake or Streambed Alteration; and
      - iii) Supplemental Information.
    - (c) USACE Nationwide Permit: The geotechnical investigations are typically authorized under Nationwide Permit (NWP) #6, which does not require submittal of a Preconstruction notification, however, Consultant will prepare the following items in support of the notification under the NWP:

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- i) Cover Letter;
  - ii) Nationwide Permit Pre-construction Notification (PCN) Form; and
  - iii) Supplemental Information.
- c. The Consultant will present this proposed work plan to the District and TRB, and after incorporating their recommendations, prepare and submit draft copies of the work plan to DSOD for their concurrence. After DSOD's review, the Consultant will make any necessary modifications to the work plan and finalize it for execution.

#### 5.1.2 Phase 2 Field Investigation

- a. After receiving DSOD's approval of the Phase 2 work plan and environmental regulatory permits, the Consultant will perform field and laboratory investigation for Coyote Dam in accordance with the work plan.
- b. The Consultant will drill up to six (6) borings at Coyote Dam at the locations identified in the Work Plan.
- c. If additional samples or blow counts are needed at specific depth intervals, the Consultant will drill additional companion borings approximately 5 feet away from original borings.
- d. The Consultant will instrument up to three (3) borings with vibrating wire piezometers.
- e. The Consultant will perform downhole OYO suspension logging in up to three (3) borings to measure the shear- and compression-wave velocities in the embankment and foundation materials.

#### 5.1.3 Phase 2 Laboratory Testing

- a. The Consultant will refine and finalize the laboratory testing program after the soil and rock samples have been inspected in the laboratory. All laboratory tests will be conducted in accordance with appropriate ASTM standards.
- b. The undrained shear strength for clay soils will be measured using consolidated undrained triaxial tests with pore pressure measurements. For sandy soils, the residual strength will be estimated using the results of SPT measurements and correlations with published charts.
- c. If the results of index tests reveal that certain embankment or foundation soils fall in the range where plasticity of the fines indicate behavior in between a clay-like and a sand-like behavior, then cyclic triaxial tests may

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be performed to assess the potential for build-up of pore pressure and loss of strength for these soils. The cyclic tests will be followed by monotonic loading to assess the potential for reduction in undrained strength due to cyclic loading.

#### *5.1.4 Additional Borings and Laboratory Testing (Conditional)*

- a. If needed, the Consultant will drill up to four (4) additional borings at Coyote Dam. During the execution of Subtask 5.1.2, the Consultant will assess the need for these additional borings to provide additional information. The Consultant will provide recommendations to the District to either exercise this conditional task or eliminate the additional borings from the exploration program. These additional borings will be drilled only if District so authorizes.

#### *5.1.5 Additional Geologic and Fault Studies (Conditional)*

- a. As authorized by the District, the Consultant will perform additional office- and field-based geological analyses to assess fault activity. This subtask will include analysis of aerial photography, geologic or geomorphologic field mapping, deposit age-dating, or other geologic analyses appropriate for assessing fault activity. No additional paleoseismic trenching is included in the subtask.

#### *5.1.6 Geotechnical Support for Access Road Construction During Recommended Phase 2 Field Investigation Program*

- a. The Consultant will provide geotechnical support during construction of the access roads on the dam for the Phase 2 explorations. The Consultant will provide layout, profile, and cross- sections for the access roads, provide earthwork requirements for the roads, observe road construction materials, and review the road material quantity estimates. The Consultant will ensure that all activities comply with the requirements of DSOD and will prepare all necessary submittals on behalf of the District. The Consultant will observe road construction to ensure that construction complies with their recommendations and the needs of the exploration program.
- b. The Consultant will prepare a Technical Memorandum (TM), which will summarize the field and laboratory compaction test results. The TM will be a brief construction report that will provide a general description of the construction (with photos), and will certify that the construction work for the access road was performed as per recommendations.

#### *5.1.7 Access Road Construction for Phase 2 Field Investigation Program (Conditional)*

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- a. As authorized by the District, the Consultant will provide for construction of the access roads on the dam for the explorations. This work will be performed by a subcontractor selected by the Consultant and acceptable to the District and the Consultant will oversee this work. The subcontractor must be California-licensed general contractor with either an A or a B license and comply with all laws applicable to this work. Consultant will pay its general contractor prevailing wages and require it to pay its subcontractors prevailing wages, as well as fully comply with all applicable California state laws regarding such wages. Consultant's subcontractor will provide all insurance coverages and with limits established by the District. Consultant will provide stamped, signed engineering drawings for the road construction and submit to District for review.

#### **Deliverables for Subtask 5.1 (see Table 1, Summary of Deliverables)**

1. Draft and Final Phase 2 Field Exploration Work Plan and Laboratory Testing Plan.
2. Environmental Documents for Clearance of Phase 2 Field Exploration:
  - a. Draft and Final Notices of Exemption for Phase 2 Borings;
  - b. Meeting Agendas and Meeting Summaries;
  - c. Draft and Final Permit Applications with Reference Materials; and
  - d. Supporting information used or referenced in the permit applications, including GIS files and cultural data.
3. Phase 2 Data Report including:
  - a. Field logs of borings;
  - b. Laboratory test results; and
  - c. Report on suspension logging.
4. Phase 2 Geology and Fault Studies TM (conditional).
5. Technical Memorandum of Road Construction.
6. Engineering design drawings, signed and stamped to be included in Technical Memorandum of Road Construction.

#### **Meetings for Subtask 5.1 (see Table 2)**

1. Conference call with District and Subject Matter Expert to discuss plan;

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2. Meeting with TRB to discuss plan;
3. Telephone meeting with DSOD to discuss plan; and
4. Field meeting with District and DSOD to review exploration.

Basis for Budget Estimate for Subtask 5.1—The task budget estimates are based on the following:

1. The Notice of Exemption will be based on existing information and field study data;
2. The Consultant will respond to no more than two rounds of District review for Notice of Exemption;
3. The District will file Notice of Exemption with Santa Clara County Clerk/Recorder;
4. The Consultant will revise the draft permit applications based on one round of input per document provided by the District;
5. In-water survey activities will meet the conditions for coverage under Nationwide Permit (NWP) #6 and do not require a Preconstruction Notification, however, Consultant will submit a notification for these types of Projects;
6. A formal jurisdictional delineation of wetlands associated with the dam, reservoir, or downstream area will not be required by the USACE, RWQCB, or the CDFW for the proposed in-water work;
7. All impacts requiring regulatory permits, whether those impacts are covered under the Dam Maintenance Program EIR or additional CEQA documents, will be incorporated into a single permit application per agency; and
8. The District will pay all permit application fees, including but not limited to those associated with the Santa Clara County Habitat Conservation Plan and the Section 1600 Lake and Streambed Alteration Agreement.

#### *Subtask 5.2 Data Summary, Material Characterization and Methodology for Seismic Stability Evaluation (SSE) Engineering Analyses*

- a. The Consultant will summarize the results of the field and laboratory investigations performed in Tasks 2.5 and 5.1. Using the results of the field investigations and laboratory testing from previous investigations and the data gathered for the Project, the Consultant will recommend the static and dynamic material properties for the SSE analyses in

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a Technical Memorandum (TM). The proposed methodologies for the engineering analyses will also be described in the TM.

- b. The proposed methodology for assessing the seismic performance evaluation will follow state-of-the-practice and DSOD-accepted procedures used for evaluating the potential for liquefaction and earthquake-induced deformations of earth-fill embankments on potentially liquefiable foundations. The procedure will generally involve the following steps:
- (1) Estimate ground motions at the site due to postulated earthquake events, and develop response spectra and acceleration time histories at bedrock underlying the dam. This will be accomplished in Task 3;
  - (2) On the basis of field and laboratory investigations and construction records, develop representative cross-sections of the embankment and underlying foundation;
  - (3) Estimate pre-earthquake stresses within the embankment and underlying foundation using static analysis procedures;
  - (4) Evaluate earthquake-induced accelerations and stresses within the embankment and underlying foundation using dynamic analysis procedures;
  - (5) Evaluate the cyclic strength of the embankment soils using undrained strength for clays and in situ SPT results for cohesionless soils;
  - (6) Evaluate the potential for liquefaction and estimate the potential for reduction in undrained strength (if any) and/or the residual strength of soils comprising the embankment and foundation;
  - (7) Evaluate the post-earthquake stability of the embankment using either the reduced undrained strength or residual strength;
  - (8) If the embankment section analyzed is found to be stable, estimate the corresponding value of the yield acceleration and the magnitude of earthquake-induced permanent deformation; and
  - (9) Perform nonlinear analyses to assess the deformed embankment shape, assess the remaining freeboard, and provide recommendations for interim reservoir restrictions, if needed.
- c. The Consultant will also present proposed methodology for evaluating dam response to fault offsets in the foundation following the general

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procedure of Mejia and Dawson (2012). Included with this discussion of the methodology will be the proposed fault displacements to be used in the evaluations.

- d. The Consultant will participate in, and prepare meeting notes for, meetings with the District, the TRB, and DSOD. The purpose of the meetings will be to review comments provided by the agencies and to answer questions regarding the proposed engineering properties and engineering methodologies. The Consultant will revise the TM as necessary to obtain approvals from the District and DSOD before the stability analyses in Task 5.3 can be initiated.

Deliverables for Subtask 5.2 (see Table 1)

1. Draft Technical Memorandum on Material Properties and Engineering Methodology.

Meetings for Subtask 5.2 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB; and
3. Meeting with DSOD.

Basis for Budget Estimate for Subtask 5.2—The task budget estimates are based on the following:

1. Properties will be based on field and laboratory investigations from this study as well as previous investigations; and
2. Comments on Technical Memorandum will be incorporated in Dam Safety Evaluation Report.

#### *Subtask 5.3 Static, Rapid Drawdown, and Pseudo-Static Stability Analyses*

- a. The Consultant will perform limit equilibrium slope stability analyses to evaluate the static, rapid drawdown, and pseudo-static stability of the upstream and downstream slopes of the embankments. Static stability analyses will be performed for long-term steady-state seepage conditions and for rapid draw down conditions. The analyses for steady state seepage will be performed using effective strength parameters. For rapid drawdown conditions, the undrained strength and the Lowe and Karafiath strength as described by Duncan and Wright (2005) will be used in the analyses. Computer program UTEXAS4 will be used in these analyses.
- b. Pseudo-static analyses will be used to estimate the yield acceleration for potential sliding surfaces. These surfaces will be used in the deformation analyses. The strength parameters used in these analyses will include

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modified undrained strength for clays and residual strength for liquefiable cohesion-less soils. The pseudo-static analyses will be based on the results of the liquefaction assessments performed in Subtask 5.5.2 described below.

- c. Seepage analyses will be performed using finite element computer program SEEP/W to evaluate pore pressures and phreatic surface in the dam. These will be used as input to the stability analyses. Seepage forces can be included in the FLAC analyses for the static stresses in the dam.

Deliverables for Subtask 5.3 (see Table 1)

1. No separate deliverables for this subtask.

Meetings for Subtask 5.3 (see Table 2)

1. No separate meetings for this subtask.

Basis for Budget Estimate for Subtask 5.3—The task budget estimates are based on the following:

1. Analyses results will be presented at meetings for Subtasks 5.5 and 5.6; and
2. The Consultant will inform District immediately of any analyses results indicating safety concerns.

#### *Subtask 5.4 Develop Site-Specific Design Earthquake Motions*

- a. The Consultant will develop design ground motions in the following two steps:
  - (1) Earthquake parameters; and
  - (2) Time histories.
- b. The Consultant will confirm DSOD concurrence on the first step before proceeding with the second step.

##### *5.4.1 Review and Develop Earthquake Parameters*

- a. The Consultant will develop earthquake parameters including magnitude, distance, type of faulting, response spectra, and Arias Intensity for events on the Calaveras Fault and other nearby faults. The response spectra will be developed for standard rock conditions using the Next Generation Attenuation relationships. The response spectra will consider the shear-wave velocities measured in the bedrock at the dam.

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#### 5.4.2 *Develop Design Earthquake Motions*

- a. After receiving concurrence from DSOD on the proposed response spectra, the Consultant will develop the acceleration time histories for use in the analysis of Coyote Dam. The Consultant will develop time histories for each of the approved design spectra as required by DSOD. The time histories will represent the site-specific ground motions associated with the controlling near-field earthquake event.
- b. Each acceleration time history will be developed from a pair of orthogonal horizontal components that are matched to the fault normal and fault parallel components of the design spectra, and are then resolved into a single record representing the expected earthquake motions orthogonal to the dam axis. Natural records with characteristics (e.g., earthquake magnitude, faulting mechanism, source-to-site distance, site conditions) similar to those expected for the earthquake dominating the ground motion hazard at each dam site will be selected from available strong motion recordings obtained during previous earthquakes in California. Worldwide recordings of earthquakes that have occurred in similar tectonic environments also may be selected. A time-domain approach (Abrahamson, 1991; Lilhanand and Tseng, 1988) will be used to modify the natural recordings and to generate time histories compatible with a respective target response spectrum. This approach preserves the non-stationary characteristics (e.g., phasing) of natural records and therefore provides realistic time histories for the response analyses. The response spectra from the resolved acceleration time history will reasonably match the spectral amplitudes of the smooth target spectrum through the period range of interest for each dam.
- c. The Consultant will use the time histories as input motions for dynamic response and deformation analyses described in Subtask 5.5.
- d. The Consultant will discuss response spectra with DSOD prior to developing acceleration time histories. The Consultant will present the time histories that match the response spectra of the scenario earthquakes for the dams in a meeting with the District and the TRB. The comments from the District and TRB will be incorporated into a draft version of a TM that will be submitted to DSOD for its review and concurrence. On receiving comments from the District and DSOD, the Consultant will finalize the TM.

Deliverables for Subtask 5.4 (see Table 1)

1. Draft and Final Technical Memorandum on Ground Motions.

Meetings for Subtask 5.4 (see Table 2)

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1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB;
3. Telephone meeting with DSOD to discuss earthquake parameters; and
4. Meeting with DSOD to discuss time histories.

Basis for Budget Estimate for Subtask 5.4—The task budget estimates are based on the following:

1. Time histories will be developed after DSOD approval of earthquake parameters.

#### *Subtask 5.5 Seismic Response Analyses*

- a. The response of the dam to the earthquake ground motions including the potential for liquefaction will be developed in this subtask.

##### *5.5.1 Response Analyses*

- a. The Consultant will estimate the earthquake-induced stresses using two-dimensional equivalent linear dynamic finite element analyses programs such as QUAD4MU. One representative cross-section (i.e., the maximum section) will be analyzed for the design earthquake ground motions developed in Task 5.3.

##### *5.5.2 Liquefaction Analyses*

- a. The Consultant will determine if the embankment or foundation soils are potentially liquefiable.
- b. If potentially liquefiable soils are found to be present at the site the consultant will evaluate liquefaction potential using the results of the two-dimensional dynamic response analyses performed in Task 5.5.1 and the empirically-based methods of Youd et al. (2001), Seed et al. (2003), and Idriss and Boulanger (2004), per the requirements of DSOD.
- c. The Consultant will use the dynamic response analyses to evaluate the earthquake-induced accelerations and stresses within the embankments and foundations, and appropriate in situ measurements such as SPT or BPT will be used to estimate the cyclic strength and liquefaction resistance. The Consultant will use the results of these analyses to estimate the reduction in shear strength (if any) of the clayey soils.
- d. The Consultant will assess the liquefaction potential by comparing the earthquake-induced stresses to the cyclic resistance of the soils. The cyclic resistance of the soils is governed by the in situ density and the

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initial stresses before the earthquake. The Consultant will perform static finite difference analyses using the program FLAC to estimate the initial stresses within the embankment and foundation.

#### 5.5.3 *Newmark-Type Deformation Analyses*

- a. The Consultant will estimate permanent deformations of the embankment slopes from seismic shaking using the yield acceleration concept proposed by Newmark (1965) and modified by Makdisi and Seed (1978).
- b. The dynamic response analyses performed in Task 5.5.1 will provide average seismic coefficient time histories within potential sliding masses in the upstream and downstream slopes of the embankments. These time histories will be double integrated (using a yield acceleration estimated from Task 5.3) to estimate the permanent deformation for each potential sliding mass. The Consultant will use the computed deformations to estimate the available freeboard, the potential for cracking, and to assess the overall stability of the embankment.

#### 5.5.4 *Nonlinear Deformation Analyses*

- a. The Consultant will perform two-dimensional finite difference nonlinear deformation analyses using the computer program FLAC, which incorporates nonlinear constitutive model capable of simulating earthquake induced pore-pressure generation (e.g. Dawson et al., 2001; Wang and Makdisi, 1999). The Consultant will use the nonlinear analyses to estimate the deformed shape of the embankment due to strength loss and seismic loading. If needed, the Consultant will use the results on the nonlinear analyses in the evaluation of reservoir restriction in Task 7.

#### 5.5.5 *Nonlinear Fault Displacement Analyses*

- a. The Consultant will analyze the structural deformation response of Coyote Dam to the estimated fault surface displacement using the 3-D FLAC program following the procedure described by Mejia and Dawson (2012).
- b. The Consultant will develop the numerical model based on the geometry of the Coyote Dam and foundation at the location where the fault crosses the dam foundation and the base of the model will be offset at this location to simulate the surface displacements. All three components of the displacements (vertical, separation, dip-slip and strike-slip) will be applied simultaneously to the base and sides of the model.
- c. The Consultant will evaluate the expected performance of the dam to fault displacements including offsets to core and filter zones. Evaluations will

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consider potential for crack development and crack stopper ability of filter zones to limit potential for piping.

#### 5.5.6 *Presentation of Results*

- a. The Consultant will use the results of the seismic stability analyses to develop conclusions regarding the expected performance of the dam and recommendations concerning their future operation. The Consultant will discuss the deformation analysis results and conclusions in meetings with the District and TRB.

Deliverables for Subtask 5.5 (see Table 1)

1. No separate deliverable for this subtask. Results will be included in Technical Memorandum in Subtask 5.6.

Meetings for Subtask 5.5 (see Table 2)

1. Conference call with District and Subject Matter Expert, if needed, and meeting with TRB.

Basis for Budget Estimate for Subtask 5.5—The task budget estimates are based on the following:

1. The Consultant will inform District of results of analyses during progress meetings; and
2. The Consultant will inform District immediately of any analyses results indicating safety concerns.

#### *Subtask 5.6 Overall Dam Seismic Safety Assessment*

- a. The Consultant will perform an assessment of all seismic hazards including liquefaction, deformation, earthquake-induced cracking, and the potential impact of surface fault rupture with regard to the overall seismic performance of Coyote Dam. The results of the seismic stability engineering analyses will be summarized and submitted in a Technical Memorandum. The Consultant will discuss the assessment results and conclusions in a meeting with the District and the TRB before preparing a draft TM. The draft TM will be submitted to the District for review and comment. The Consultant will incorporate comments from the District and the TRB into a final version of the TM that will be submitted to DSOD.
- b. If authorized by the District, upon completion of the conditional Subtask 5.7, the Consultant will participate in, and prepare meeting notes for, a joint meeting with the District and DSOD. The purpose of the meeting will be to present to DSOD the results of the seismic stability

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engineering analyses from Subtasks 5.2 through 5.6 as well as the recommended interim reservoir restriction if needed.

Deliverables for Subtask 5.6 (see Table 1)

1. Draft Technical Memorandum.

Meetings for Subtask 5.6 (see Table 2)

1. Meeting with DSOD.

Basis for Budget Estimate for Subtask 5.6—The task budget estimates are based on the following:

1. If Subtask 5.7 is authorized, the results will be discussed at the meeting with DSOD; and
2. Comments on Draft Technical Memorandum will be incorporated in Dam Safety Evaluation Report.

#### *Subtask 5.7 Reservoir Restriction Evaluation (Conditional)*

- a. Consultant will evaluate and review the current Coyote Reservoir restriction based on the results of the seismic stability and PMF evaluations, and make recommendations regarding the appropriate restriction level.
- b. Should the results of the seismic stability analyses indicate that the dam embankment may experience excessive deformations during or after earthquake shaking that would require seismic remediation, the Consultant will, at the direction of the District, provide recommendations for an interim restriction of the reservoir level. On the basis of the results of the analyses in Task 5, the Consultant will provide recommendations for such interim measures. If required, the results of these evaluations will be presented in a TM, along with any recommendations for reservoir-level restrictions.
- c. The Consultant will discuss the evaluation results and interim reservoir restriction recommendations in a meeting with the District and the TRB before preparing a draft version of the TM. The draft TM will be submitted to the District for review and comment. The Consultant will incorporate comments from the District and TRB and submit the recommendations to DSOD. After review by DSOD the Consultant will prepare and submit a final version of the TM.

Deliverables for Subtask 5.7 (see Table 1)

1. Draft and Final Technical Memorandum.

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Meetings for Subtask 5.7 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed; and
2. Meeting with TRB.

Basis for Budget Estimate for Subtask 5.7—The task budget estimates are based on the following:

1. Subtask 5.7 results will be discussed with DSOD in meeting in Subtask 5.6.

#### *Subtask 5.8 Seismic Dam Safety Evaluation Report*

- a. The Consultant will prepare a comprehensive seismic dam safety report. The report will be compiled from the appropriate technical memoranda to document the results of the evaluations for each dam including base and additional field and laboratory investigations, engineering analysis methodologies and results, and conclusions and recommendations. The seismic stability evaluation report will be documentation of the safety of Coyote Dam or a repository for the conclusions and recommendations for future remedial work if required.

Deliverables for Subtask 5.8 (see Table 1)

1. Draft and Final Seismic Dam Safety Evaluation Report.

Meetings for Subtask 5.8 (see Table 2)

1. No meetings planned for this subtask.

Basis for Budget Estimate for Subtask 5.8—The tasks budget estimates are based on the following:

1. District will have option of including results of Subtask 5.7 in report.

### **Task 6—Independent Dam Safety Review (IDSR) and Potential Failure Mode Analysis (PFMA) Update Workshop and Recommendations (UNCHANGED)**

#### *Subtask 6.1 Independent Dam Safety Review (IDSR)*

- a. The Consultant will prepare an IDSR of the dam. The IDSR will include a review of past performance to become familiar with any identified or potential dam safety deficiencies and then assess through inspection, document review, and initial independent evaluations whether the deficiencies and potential deficiencies have been appropriately identified.

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- b. Following the evaluations, a report will be prepared with findings and recommendations to identify, evaluate, and/or remediate dam safety deficiencies. The IDSR will focus on the major dam safety categories of foundation integrity, structural dam stability, spillway adequacy, low-level outlet adequacy and leakage and seepage, with additional attention given to instrumentation readings and indications, past performance and visibly observable defects.

Deliverables for Subtask 6.1 (see Table 1)

1. Draft and Final IDSR Report.

Meetings for Subtask 6.1 (see Table 2)

1. Meeting with District; and
2. Field visit to dam.

Basis for Budget Estimate for Subtask 6.1—The task budget estimates are based on the following:

1. District will provide access for field visit.

#### *Subtask 6.2 Potential Failure Mode Analysis (PFMA) Update Workshop*

- a. The Consultant will perform PFMA update following the FERC dam safety process to identify and highlight the most vulnerable components of the dam and the appurtenant structures.
- b. The Consultant will perform the PFMA in following three major steps:
  - (1) Pre-workshop review of existing documents and Preliminary PFMA in Task 2;
  - (2) Workshop; and
  - (3) Report preparation.
- c. The workshop will be run by a facilitator or co-facilitators provided by the Consultant and attended by a group of participants generally composed of: the owner's representatives from management, engineering, and operations and maintenance, regulators such as DSOD, and a group of engineering and dam safety experts, which may consist of consultants or experts from other agencies.
- d. At the end of the workshop, the Consultant will categorize the potential failure modes using the classifications developed by FERC and then prepare a comprehensive report to identify and document the discussions, findings and recommendations from the workshop.

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- e. The PFMA report will identify specific issues of concern or non-concern and summarize the overall safety of the dam. The Consultant will also prepare a separate memorandum of recommendations to improve dam safety. With the new information, the Consultant will update the STID prepared under Task 3 of this scope.

Deliverables for Subtask 6.2 (see Table 1)

1. Draft and Final PFMA Workshop Update Report;
2. Draft and Final Memorandum of Recommendations; and
3. Updated STID.

Meetings for Subtask 6.2 (see Table 2)

1. PFMA Workshop.

Basis for Budget Estimate for Subtask 6.2—The task budget estimates are based on the following:

1. District will coordinate participation of District employees.

#### **Task 7—Supplemental Services (Conditional) (REVISED)**

The District may require, and the Consultant shall perform, Supplemental Services on an as-needed basis.

- A. Prior to performing any Supplemental Service, the Consultant must obtain written authorization in the form of a Task Order (see Revised Attachment Three—Task Order Template) approved by the District's Water Utility Capital Division Deputy Operating Officer (DOO). Written authorization will state the agreed upon scope of the services requested, the classifications performing the Supplemental Services, associated not-to-exceed fees, and schedule.
- B. Details of the specific scope, deliverable, schedule, and fees for any Supplemental Services will be developed with the District and submitted in writing prior to approval to begin work.
- C. The Not-To-Exceed Fees for each Supplemental Services Task Order will be based upon the negotiated hourly rate schedule (time and materials), and must include all of the following information:
  1. The total price for the Consultant to complete the Supplemental Services Task Order on a Time and Materials basis;
  2. The schedule for completing the Supplemental Services Task Order; and
  3. The Consultant key staff and classifications that will be assigned to complete the Supplemental Services.

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- D. The Supplemental Services Task Order fees will not be exceeded by the Consultant without prior written authorization from the District's Water Utility Capital Division DOO.
- E. Under no circumstances will the Consultant commence the Supplemental Services until:
  - 1. The Supplemental Services Task Order is received, reviewed, and executed by the District's Water Utility Capital Division DOO; and
  - 2. The Consultant receives a Task Order Notice-To-Proceed from the District's Project Manager.
- F. The Consultant will perform, but not be limited to, the Supplemental Services described in Subtask 7.1 to 7.4.

#### *Subtask 7.1 Problem Definition Memo (Conditional)*

- a. If a determination is made that remedial measures will be necessary and if approved by the District, the Consultant will develop problem definition memorandum presenting the issues and constraints for performing an alternatives evaluation for mitigating the identified deficiencies.

#### Deliverables for Subtask 7.1 (see Table 1)

- 1. Draft and Final Problem Definition Memorandum.

#### Meetings for Subtask 7.1 (see Table 2)

- 1. Meeting with District.

Basis for Budget Estimate for Subtask 7.1—The task budget estimates are based on the following:

- 1. District will provide example of previous problem definition memoranda as a guide for Consultant in preparing their memoranda.

#### *Subtask 7.2 Conceptual Remedial Alternatives (Conditional)*

- a. If a determination is made that remedial measures will be necessary and if approved by the District, the Consultant will develop conceptual remedial design alternatives based on detailed results from the evaluations performed for the dam. The Consultant will present the recommended conceptual remedial design alternatives in a meeting with the District and the TRB before preparing a draft version TM. The draft TM will be submitted to the District for review and comment. Comments from the District and TRB will be incorporated into a revised version of the

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TM that will be submitted to DSOD. After review by DSOD a final version will be prepared and submitted.

Deliverables for Subtask 7.2 (see Table 1)

1. Draft and Final Technical Memorandum.

Meetings for Subtask 7.2 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB; and
3. Meeting with DSOD.

Basis for Budget Estimate for Subtask 7.2—The task budget estimates are based on the following:

1. Consultant will provide conceptual cost estimate for up to two remedial alternatives.

#### *Subtask 7.3 Additional Basic Services (Conditional)* **REVISED PER AMENDMENT NO. 1)**

- a. Additional Basic Services may include: additional geotechnical field investigation and laboratory testing, additional geologic fault evaluations, additional Supporting Technical Information Documents preparation, additional seismic stability evaluation investigation and analysis, additional Independent Dam Safety Review and Potential Failure Mode Analysis, or additional regulatory support and project management services.

#### *Subtask 7.4 Spillway Condition Assessments (Conditional)* **(REVISED PER THIS AMENDMENT NO. 2)**

- a. The Consultant will perform a comprehensive condition assessment of the spillway structures at Coyote Dam, as required by the California Division of Safety of Dams (DSOD).
- b. The spillway assessment will focus on identifying potential geologic hazards associated with the spillway, including characterization of the foundation materials underlying and adjacent to the spillway structures and their susceptibility to erosion and instability. The integrity of the spillway concrete will also be investigated, if necessary.
- c. An evaluation will be performed of the concrete lining and the existing drainage system, and any potential for slab undermining and hydraulic jacking.

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- d. Consultant will perform this work in sequential steps in the following order:
  - 1. Review of spillway design and spillway inspection;
  - 2. Field and laboratory testing;
  - 3. Spillway analyses; and
  - 4. Evaluation of potential repairs and remedial measures.

#### Deliverables for Subtask 7.4 (See Table 1)

- 1. Spillway Inspection Technical Memorandum;
- 2. Spillway Testing Technical Memorandum;
- 3. Spillway Analyses Technical Memorandum; and
- 4. Remedial Spillway Measures Technical Memorandum.

#### Meetings for Subtask 7.4 (See Table 2)

- 1. No meetings planned for this subtask.

Basis for Budget Estimate for Subtask 7.4 – The tasks budget estimates are based on the following:

- 1. DSOD's current approval of the scope of services to conduct spillway condition assessments at Coyote Dam.

## IV. ELEMENTS 2 AND 3—CHESBRO AND UVAS DAMS EVALUATION TASKS

### Task 1—Project Management Services (REVISED)

- A. The purpose of Task 1 activities is for Consultant to manage this Scope of Services such that the work is completed within the not-to-exceed fee limit stated in Revised Appendix Two, Fees and Payments; in accordance with the Project schedule stated in Revised Appendix Three, Schedule of Completion; and ensuring that all services and deliverables by the Consultant meet the District and Project requirements.

#### *Subtask 1.1 Project Planning, Scheduling, Communication, Monitoring and Control*

##### 1.1.1 Project Execution Plan

- a. Project Execution Plan (PXP) described in Element 1, Task 1 will also include Chesbro and Uvas Dams.

##### 1.1.2 Progress Meetings

- a. Progress meetings described in Element 1, Task 1 will also include Chesbro and Uvas Dams.

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#### **1.1.3 Communications**

- a. The Consultant will use the same communication protocols for Chesbro and Uvas Dams as described in Element 1, Task 1.

#### **1.1.4 Document Control**

- a. The Consultant will use the same document control system for Chesbro and Uvas Dams as described in Element 1, Task 1.

#### **1.1.5 Progress Reports**

- a. The Consultant shall submit a Monthly Progress Report as described in Element 1, Task 1 that includes Chesbro and Uvas Dams.

#### **1.1.6 Invoices**

- a. The Consultant shall submit a monthly invoice in accordance with the terms of the attached Appendix Two, Fees and Payments, and the Standard Consultant Agreement Section IV, Fees and Payments. Invoice will clearly show charges for each dam.

#### **Deliverables for Subtask 1.1 (see Table 1)**

1. Project Execution Plan including QA/QC Plan.
2. Attendance at Progress Meetings and Workshops.
3. Monthly Progress Reports.
4. Meeting Agendas and Notes.
5. Monthly Invoices.

#### **Meetings for Subtask 1.1 (see Table 2)**

1. Progress Meetings by teleconference or in person at District's discretion.

**Basis for Budget Estimate for Subtask 1.1—**The task budget estimates are based on the following:

1. A single PXP will be prepared for the Project including all three dams. The PXP will be reviewed annually and updated as needed;
2. This scope includes a total of 36 progress meetings to be held by telephone or in person at District's discretion;
3. Review workshops conducted with the District, TRB, and DSOD are included and part of the not-to-exceed amount in other tasks;

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4. Progress reports will be prepared monthly for the duration (72 months) of this Agreement;
5. Progress meetings and progress reports will discuss current work on all three dams. There will not be separate meetings and progress reports for individual dams; and
6. All travel and other incidental costs associated with this task are included in the budget estimates.

#### *Subtask 1.2 Quality Assurance*

##### 1.2.1 Quality Assurance and Quality Control Plan

- a. The Project Execution Plan including the Quality Assurance and Quality Control Plan described in Element 1, Task 1 will also include Chesbro and Uvas Dams.

Deliverables for Subtask 1.2 (see Table 1)

1. No separate deliverables for Element 2.

Meetings for Subtask 1.2 (see Table 2)

1. No meetings are planned for this subtask.

Basis for Budget Estimate for Subtask 1.2—The tasks budget estimates are based on the following:

1. QA/QC Plan will be reviewed annually and updated as needed; and
2. Quality Assurance Audits will be performed at Project initiation and at about 18-month intervals thereafter.

#### *Subtask 1.3 Technical Review*

##### 1.3.3 Independent Technical Review Board (TRB)

- a. The Consultant will coordinate a two-person independent Technical Review Board (TRB) to provide guidance and review of the work as described in Element 1, Task 1. The District will select the TRB members, and the TRB members will report directly to the District, but will be contracted through this Agreement. The TRB members will sign the District's Conflict of Interest Statement, Form 700 (as described in detail in section VII. Additional Terms and Conditions, paragraph I.), and Non-Disclosure Agreement (see Attachment Four).

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- b. The TRB will provide independent review comments on the following topics and objectives:
  - (1) the proposed geologic and geotechnical field investigation work plans;
  - (2) the recommended design earthquakes and ground motions;
  - (3) the characterization of geotechnical engineering properties;
  - (4) the characterization of local faults and geology;
  - (5) the engineering analyses for seismic response, liquefaction potential, fault rupture, seismic deformations, and the overall dam stability assessment; and
  - (6) the potential interim and permanent reservoir restriction and conceptual dam remedial alternatives (as needed).
- c. The Consultant will schedule and coordinate up to 7 meetings with the TRB and the District, as listed in Table 2, Summary of Meetings. The Consultant will provide review materials, including an agenda, for the TRB members five business days prior to each TRB meeting. The Consultant's subcontract with the TRB will require the TRB prepare a draft summary letter report for District review within three business days after each TRB meeting, with the final TRB report delivered within three business days of receipt of the District's comments. The Consultant will coordinate TRB participation in unspecified teleconferences as determined appropriate by the Consultant and/or the District.
- d. As part of its monthly invoice submitted in accordance with Appendix Three, the Consultant will invoice the District for the TRB member's work on a monthly basis, based on invoices received from the TRB members for meetings as listed in Table 2, Summary of Meetings, and reviews of associated materials.

#### **1.3.4 Subject Matter Expert**

- a. The Consultant will coordinate and arrange for Dr. Ross Boulanger, or a suitable alternate acceptable to the District, to provide review services to the District for Chesbro and Uvas Dams. Dr. Boulanger will report to the District, but be contracted through this agreement.

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- b. Dr. Boulanger will review presentation material prior to TRB meetings and review Technical Memoranda and Reports provided by the Consultant for the same topics and objectives as listed above for the TRB. The Consultant will schedule and coordinate up to seven (7) reviews by Dr. Boulanger prior to TRB meetings. As needed, Consultant will coordinate conference calls with Dr. Boulanger and the District to discuss review comments.
- c. The Consultant's subcontract with the reviewer will require that the reviewer prepare a draft summary letter report for District's review within five business days after each review, with the final summary letter report delivered within five business days of receipt of the District's comments.

#### Deliverables for Subtask 1.3 (see Table 1)

- 1. TRB Review Reports.
- 2. Subject matter expert review reports.

#### Meetings for Subtask 1.3 (see Table 2)

- 1. Up to seven (7) TRB meetings will be held as listed in Table 2, Summary of Meetings; and
- 2. Up to seven (7) conference calls will be held with Dr. Boulanger and District prior to TRB meetings if needed.

Basis for Budget Estimate for Subtask 1.3—The tasks budget estimates are based on the following:

- 1. The TRB and Dr. Boulanger will review the Seismic Safety Evaluations including field exploration, analyses, technical memoranda, and reports.

### **Task 2—Data Collection and Preliminary Field Investigations (REVISED)**

- A. The purpose of Task 2 activities is to collect and review available information relevant to the Project, evaluate additional information needed to evaluate the safety of the dams, and to plan and perform preliminary field investigations.

#### *Subtask 2.1 Kickoff Meeting With DSOD*

- a. The Consultant will organize and participate in a kickoff meeting between the District and the California Division of Safety of Dams (DSOD) to discuss the Project requirements and Project approach for all three dams.

#### Deliverables for Subtask 2.1 (see Table 1)

- 1. No separate deliverables for Element 2.

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Meetings for Subtask 2.1 (see Table 2)

1. Combined meeting with Element 1.

Basis for Budget Estimate for Subtask 2.1—The tasks budget estimates are based on the following:

1. This meeting is intended to present an overview of the Project and to discuss the approach and schedule for satisfying safety concerns for all three dams; and
2. Costs for meeting will be allocated between the three dams.

#### *Subtask 2.2 Data Collection and Review*

- a. The Consultant will collect and review relevant available reference documents from District files, DSOD files, and other sources such as USGS reports and other published documents. DSOD files will be reviewed at the DSOD office and relevant documents will be copied. Relevant information will be collected into a database to form the basis of the Supporting Technical Information Document (STID) and safety evaluations of the dams.

Deliverables for Subtask 2.2 (see Table 1)

1. Preliminary STID for each dam.

Meetings for Subtask 2.2 (see Table 2)

1. No meetings planned.

Basis for Budget Estimate for Subtask 2.2—The tasks budget estimates are based on the following:

1. District will provide all relevant information from their files on the construction, performance, monitoring, and evaluations of the dams.

#### *Subtask 2.3 Preliminary Potential Failure Mode Analysis (PFMA) Workshop*

- a. The Consultant will coordinate preliminary Potential Failure Mode Analysis workshops for Chesbro and Uvas Dams to identify the priorities for the Project and to confirm that all potential dam safety issues are being addressed. The Consultant will provide, for review, information to workshop participants developed in Subtask 2.2 at least one week before the workshop. At the end of the workshop, the Consultant will categorize the potential failure modes using the guidelines and procedures developed by the Federal Energy Regulatory Commission (FERC) and

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then prepare a Preliminary PFMA Report to identify and document the discussions, findings and recommendations from the workshop.

Deliverables for Subtask 2.3 (see Table 1)

1. Preliminary PFMA Report for each dam.

Meetings for Subtask 2.3 (see Table 2)

1. Preliminary PFMA Workshop including dam site visit for each dam.

Basis for Budget Estimate for Subtask 2.3—The tasks budget estimates are based on the following:

1. The Preliminary PFMA Workshops will be based on existing information and reports.

#### *Subtask 2.4 Phase 1 Geologic and Geotechnical Investigation Work Plans*

- a. The geologic and geotechnical field investigation for safety evaluation of Chesbro and Uvas Dams will be executed in two phases. Phase 1 investigation is described in this task, and Phase 2 investigation is described in Section 5.1.
- b. The Consultant will prepare the Phase 1 field exploration work plans and the associated laboratory testing plans for safety evaluations of Chesbro and Uvas Dams. The primary purpose of this phase is to identify extent of materials in the embankment and foundation in order to plan for the Phase 2 field exploration. This task will include up to seven (7) borings at each dam drilled from land using sonic drilling or other suitable techniques approved by District. Laboratory testing will include index and classification tests on soil and rock samples obtained during the exploration. Up to five (5) piezometers will be installed in selected borings at each dam.
- c. The plan will consider environmental constraints. The Consultant will:
  - (1) finalize the work plans for geotechnical investigations based on the results of an environmental site review;
  - (2) prepare California Environmental Quality Act (CEQA) documentation for the proposed preliminary geotechnical investigations;
  - (3) prepare applications for Santa Clara Valley Habitat Conservation Plan (SCVHCP) coverage, and permit applications for submittal to the United States Army Corps of Engineers (USACE), Regional

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Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW);

- (4) submit applications to the relevant regulatory and local agencies in hard copy binders, with copies provided to the District; and
- (5) be responsible for all work necessary to obtain environmental clearance including permits. The environmental work may include the following:
  - (a) Site Visits. The Consultant will conduct a field site visit to review the potential investigation sites at each dam. A qualified biologist and a cultural resource specialist will review each site to identify potential biological and cultural resource impacts and options for avoidance and minimization.
  - (b) Cultural Records Search. For each dam, the Consultant will conduct a cultural records search and analysis and then draft a memorandum to the District to document the findings for use in future permitting and environmental clearance.
  - (c) Notices of Categorical Exemption. The Consultant will prepare separate Notices of Categorical Exemption for the borings at each dam. These notices will include both phases of borings.
  - (d) SCVHCP Application and Follow-Up Coordination. The Consultant will work with the District to prepare an application for coverage under the SCVHCP and provide follow-up coordination for the borings. The Consultant will assist the District to prepare the following items in support of the SCVHA permit application:
    - i) Cover Letter;
    - ii) Coverage Screening Form;
    - iii) Habitat Plan Fees and Conditions Worksheet;
    - iv) An Application Package; and
    - v) Supplemental Information.
  - (e) Tri-colored blackbird potential nesting habitat surveys
- d. The Consultant will present the proposed geologic and geotechnical investigation work plans to the District and TRB, and after incorporating their recommendations, will then prepare and submit draft copies of the work plans to DSOD for their concurrence. After DSOD's review, the

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Consultant will make any necessary modifications to the work plans and finalize them for execution.

Deliverables for Subtask 2.4 (see Table 1)

1. Draft and Final Phase 1 Geologic and Geotechnical Investigation Work Plan for each dam.
2. Environmental Documents for Clearance of Phase 1 Field Explorations for each dam:
  - a. Field Site Visit Results Technical Memorandum. This will include an initial habitat map and descriptions and photographs of each habitat type, field observations, and, protected resources. Memorandum will be submitted electronically in PDF;
  - b. Summary memorandum of cultural records search and official records report; and
  - c. Draft and Final Notices of Exemption for the borings.

Meetings for Subtask 2.4 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB; and
3. Telephone meeting with DSOD for each dam.

Basis for Budget Estimate for Subtask 2.4—The tasks budget estimates are based on the following:

1. The initial site visits will not reveal any wetlands or other sensitive habitats on the dam face or on any access roads that would be constructed or modified from their existing conditions.
2. A formal jurisdictional delineation of the reservoirs for in-water investigations is unnecessary because the jurisdictional status of the work areas is known.
3. Field surveys and habitat mapping will include up to 250 feet around the potential Project area.
4. The preliminary site visit will include one biologist, one cultural resource specialist, and one geologist for one 12-hour day.
5. A pedestrian survey for cultural resources will be conducted concurrent with the site visit. Proposed cost includes a Northwest Information Center (NWIC) record search.

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6. The cultural records searches for each dam will be negative, or the Project will avoid impacts to Cultural and Historical Resources, if any are present in the exploration footprint, so that no mitigation actions (e.g. recordation) would need to be implemented.
7. The Notices of Exemption will be based on existing information and field study data.
8. The Consultant will respond to up to two rounds of District review on the Notice of Exemption.
9. The District will file Notice of Exemption with the Santa Clara County Clerk/Recorder.
10. The SCVHCP fee zones and required surveys at each dam are as follows: The dams are in basic Fee Zone A, contain part of a wetland fee zone, contain part of a stream setback and buffer zone downstream of the dams, and have at least part of the exploration footprint in a required field survey area for tri-colored blackbird. At Chesbro Dam and Uvas Dam, the nearby Serpentine and Mixed Chaparral Zones specified by the SCVHCP would be avoided; therefore, no rare plant surveys will be required.
11. Field surveys for specific wildlife species other than tri-colored blackbird will not be required.
12. Project activities will avoid wetlands, serpentine rock outcrop, serpentine bunch grass, and coastal and sage scrub.
13. The proposed activities will not result in take of listed species not covered under the SCVHCP plan.
14. The Consultant will revise the draft permit applications based on one round of input per document provided by the District.
15. The District will provide review comments of the draft applications and other documents within one week.

#### *Subtask 2.5 Phase 1 Field Exploration and Laboratory Testing*

- a. After receiving DSOD's approval of the Phase 1 work plans and environmental regulatory permits, the Consultant will perform field and laboratory investigations for Chesbro and Uvas Dams in accordance with the work plans. Land-based borings shall be drilled with sonic drilling techniques or other suitable techniques as identified in the Phase 1 work plans. The logs of the borings and results of the laboratory tests will be included in brief data reports.

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- b. The Consultant will instrument up to five (5) borings in each dam with vibrating wire piezometers.

Deliverables for Subtask 2.5 (see Table 1)

1. Data report with logs of borings and results of laboratory tests for each dam.

Meetings for Subtask 2.5 (see Table 2)

1. Meeting in field with District and DSOD personnel for each dam.

Basis for Budget Estimate for Subtask 2.5—The tasks budget estimates are based on the following:

1. Drilling up to seven (7) sonic borings from land based drill rigs for each dam.

#### *Subtask 2.6 Site Geology and Fault Evaluations*

- a. In accordance with the DSOD approved Phase 1 work plan, the Consultant will map and develop geologic models for Chesbro Dam and Uvas Dam and their vicinity using historical construction records and ground-based photographs, historical aerial photography, previous geologic maps, existing detailed topographic data (from the County of Santa Clara), existing and new borehole and geophysical data, and field observations.
- b. The Consultant will focus on delineating the types and distributions of bedrock and surficial deposits, including alluvium and landslide deposits. Any mapped fault traces will be field-verified and potentially significant geologic structures will be identified and considered for detailed characterization. The intent is to provide evidence supporting the current understanding that the mapped local fault traces are not considered active faults according to DSOD criteria.

Deliverables for Subtask 2.6 (see Table 1)

1. Technical memorandum with results of geologic and fault investigations for each dam site including detailed geologic map of each dam site.

Meetings for Subtask 2.6 (see Table 2)

1. Meeting in field with District and DSOD.

Basis for Budget Estimate for Subtask 2.6—The tasks budget estimates are based on the following:

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1. No fault trenching or test pits are included in this subtask.

#### *Subtask 2.7 Geotechnical Support for Access Road Construction for Preliminary Field Exploration*

- a. The Consultant will provide geotechnical support during construction of the access roads on the dam for the Phase 1 explorations. The Consultant will provide layout, profile, and cross sections for the access roads, provide earthwork requirements for the roads, observe road construction materials, and review the road material quantity estimates.
- b. The Consultant will ensure that all activities comply with the requirements of DSOD and will prepare all necessary submittals on behalf of the District. The Consultant will observe road construction to ensure that construction complies with their recommendations and the needs of the exploration program.
- c. The Consultant will prepare a Technical Memorandum (TM), which will summarize the field and laboratory compaction test results. The TM will be a brief construction report that will provide a general description of the construction (with photos), and will certify that the construction work for the access roads was performed as per recommendations.

Deliverables for Subtask 2.7 (see Table 1)

1. Technical Memorandum of Access Road Construction for each dam.

Meetings for Subtask 2.7 (see Table 2)

1. No meetings planned.

Basis for Budget Estimate for Subtask 2.7—The tasks budget estimates are based on the following:

1. Construction work will be performed by District personnel and equipment or if Subtask 2.8 is authorized by District, Consultant-provided personnel and equipment.

#### *Subtask 2.8 Access Road Construction for Phase 1 Field Exploration (Conditional) (REVISED PER AMENDMENT NO. 1)*

This scope is deleted.

### **Task 3—Updated Probable Maximum Flood (PMF) (UNCHANGED)**

- A. The Consultant will develop Probable Maximum Precipitation (PMP) studies for the watersheds of Chesbro and Uvas Dams. The Consultant will use this

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information to perform Probable Maximum Flood analyses to evaluate the adequacy of the existing spillways for each dam.

#### *Subtask 3.1 Develop PMP Using HMR 58/59*

- a. The Consultant will calculate the PMP using Hydrometeorological Report (HMR) 58/59. The work will involve reviewing the PMPs and PMFs calculated using HMR 36 as documented in the DSOD Phase 1 Inspection Reports for Chesbro and Uvas Dams (DSOD, 1982 and 1979).

Deliverables for Subtask 3.1 (see Table 1)

1. No separate deliverable. Results will be included in Technical Memorandum under Subtask 3.3.

Meetings for Subtask 3.1 (see Table 2)

1. Meeting with District to discuss results of PMP.

Basis for Budget Estimate for Subtask 3.1—The tasks budget estimates are based on the following:

1. District will provide topography of watersheds, if available.

#### *Subtask 3.2 Develop PMF for Chesbro and Uvas*

- a. After the PMP Study results have been reviewed and accepted by DSOD, the Consultant will determine the PMFs and evaluate the adequacy of the hydraulic capacity of the existing spillways. The hydrology models will incorporate rainfall hydrograph distribution, rainfall losses due to land uses, lag times, and channel routing (if applicable). The capacity of the spillways will be reviewed and updated as necessary.

Deliverables for Subtask 3.2 (see Table 1)

1. Technical Memorandum on PMP and PMF for each dam.

Meetings for Subtask 3.2 (see Table 2)

1. Conference call with District and DSOD to discuss results.

Basis for Budget Estimate for Subtask 3.2—The tasks budget estimates are based on the following:

1. District will provide drawings with dimensions of spillways.

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#### Task 4—Inspections and Preparation of Supporting Technical Information Documents (STID) (UNCHANGED)

##### *Subtask 4.1 Inspection of Outlet Pipe*

- a. The Consultant will inspect the original outlet pipes and appurtenant valves at Chesbro and Uvas Dams and prepare an inspection report for each dam. The purposes of the inspection reports are to:
  1. Document and compile the results of the mechanical and structural inspections of the outlet works;
  2. Assess the expected ability of the outlet works to continue to meet operational requirements; and
  3. Provide guidance on needed repairs or replacement.
- b. The Chesbro Dam outlet consists of a 56-inch-diameter, 480-foot long welded steel pipe with a 54-inch butterfly outlet valve and two 42-inch sluice gate inlets. The Uvas Dam outlet consists of a 36-inch-diameter, 850-foot long welded steel pipe with a 30-inch butterfly outlet valve, a 20-inch gate outlet, and a 42-inch sluice gate inlet.
- c. The Consultant will conduct both a general and detailed underwater investigation of the submerged Inlet Structures and Outlet Pipes at Chesbro and Uvas Dams using methods approved by the District. Both of the reservoirs have good access to mobilize both floating and deep air diving equipment that will be launched using the concrete boat ramps and adjacent parking lots. The inspections and surveys at both locations will be conducted using the following combination of equipment:  
(a) commercial diving utilizing a surface-supplied compressed air diving mode of equipment and (b) Remotely Operated Vehicles (ROVs) to provide both video and sonar profiling documentation of the various valves, outlet pipe and other appurtenances.
- d. Prior to beginning work, the Consultant will prepare and submit a detailed outlet pipe inspection work plan for each dam for District review and approval. The work plan will include task descriptions and work sequence that meets the objectives of the District.
- e. The Consultant will evaluate the capacity of the outlet pipes and compare it with the DSOD drawdown criteria for Chesbro and Uvas Dams.

##### Deliverables for Subtask 4.1 (see Table 1)

1. Outlet pipe inspection work plan for each dam.
2. Inspection reports for each dam.

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Meetings for Subtask 4.1 (see Table 2)

1. No meeting planned for this subtask.

Basis for Budget Estimate for Subtask 4.1—The tasks budget estimates are based on the following:

1. Work will be scheduled during a mild weather period with minimal winds and warmer weather.

#### *Subtask 4.2 Supporting Technical Information Document (STID)*

- a. The Consultant will prepare a Supporting Technical Information Document (STID) for each of the dams. The STIDs will summarize the dam elements and details and include sufficient information to understand the design and current engineering analyses for the dam. The STIDs will be assembled in loose-leaf fashion so that they can be updated on an on-going basis to provide historical and current information for the dam with an emphasis on dam safety. The document will also be assembled in an electronic format with a hyperlinked database.
- b. The STID will include such information as a Project description, basic data for the dam, design and construction history, past performance and analytical evaluations such as spillway and outlet adequacy and stability including seismic stability. The document will also contain a section on instrumentation and a compilation of historical and current drawings for the dam. A typical document layout would be as follows:
  - (1) Potential Failure Mode Analysis
  - (2) Project Description and Drawings
  - (3) Construction History
  - (4) Standard Operating Procedures
  - (5) Geology and Seismicity
  - (6) Hydrology and Hydraulics
  - (7) Surveillance and Monitoring Plan
  - (8) Structural Adequacy
  - (9) Spillway Gates
  - (10) Pertinent Correspondence
  - (11) References

Deliverables for Subtask 4.2 (see Table 1)

1. STID for each dam.

Meetings for Subtask 4.2 (see Table 2)

1. No meeting planned for this subtask.

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Basis for Budget Estimate for Subtask 4.2—The tasks budget estimates are based on the following:

1. District to provide all relevant files and drawings from their files.

#### **Task 5—Seismic Stability Evaluation (SSE) (UNCHANGED)**

##### *Subtask 5.1 Phase 2 Geologic and Geotechnical Investigations*

##### *5.1.1 Phase 2 Geologic and Geotechnical Investigation Work Plans*

- a. The Consultant will prepare the Phase 2 field exploration work plans and laboratory testing plans for each dam based on the results of the Phase 1 explorations performed in Task 2.5. The primary purpose of this phase is to evaluate engineering properties of materials in the embankment and foundation for the seismic safety evaluations. These field explorations will include rotary wash borings drilled from both land and over water. Laboratory testing will include index, classification, and strength tests.
- b. The plans will consider environmental constraints. The Consultant will include the Phase 2 borings in the Categorical Exemption for the Phase 1 borings. In addition, the Consultant will prepare the permit applications and receive the permits necessary for regulatory compliance for the in-water work prior to Phase 2 geotechnical investigative activities. The environmental work will include the following:
  - (1) Regulatory Agency Coordination;
  - (2) Regulatory Agency Permits for In-Water Work. Consultant will prepare the following draft permit applications:
    - (a) San Francisco Bay Regional Water Quality Control Board (RWQCB) Water Quality Certification: Consultant will prepare the following items in support of the RWQCB permit application:
      - i) Cover Letter;
      - ii) Form R2C502-E, Application for 401 WQC and/or Report of Waste Discharge; and
      - iii) Supplemental Information.
    - (b) California Department of Fish and Wildlife (CDFW) Section 1600 Lake and Streambed Alteration Agreement: Consultant will pursue approval for the Project from CDFW pursuant to Fish and Game Code Section 1602 (Lake or

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Streambed Alteration [LSAA]). Consultant will prepare the following items in support of the notification for a LSAA:

- i) Cover Letter;
  - ii) Form FG2023, Notification of Lake or Streambed Alteration; and
  - iii) Supplemental Information.
- (c) USACE Nationwide Permit: The geotechnical investigations are typically authorized under Nationwide Permit (NWP) #6 and do not require submittal of a Preconstruction notification, however, Consultant will prepare the following items in support of the notification under the NWP:
- i) Cover Letter;
  - ii) Nationwide Permit Preconstruction Notification (PCN) Form; and
  - iii) Supplemental Information.
- c. The Consultant will present these proposed work plans to the District and TRB, and after incorporating their recommendations, prepare and submit draft copies of the work plans to DSOD for their concurrence. After DSOD's review, the Consultant will make any necessary modifications to the work plans and finalize them for execution.

#### 5.1.2 Phase 2 Field Investigation

- a. After receiving DSOD's approval of the Phase 2 work plans and environmental regulatory permits, the Consultant will perform field and laboratory investigations for Chesbro and Uvas Dams in accordance with the work plans.
  - (1) The Consultant will drill up to eight (8) borings at Chesbro Dam and up to seven (7) borings at Uvas Dam at the locations identified in the Work Plan.
  - (2) If additional samples or blow counts are needed at specific depth intervals, the Consultant will drill additional companion borings approximately 5 feet away from original borings.
  - (3) The Consultant will perform downhole OYO suspension logging in up to three (3) borings at each dam to measure

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the shear- and compression-wave velocities in the embankment and foundation materials.

#### 5.1.3 *Laboratory Testing*

- a. The Consultant will refine and finalize the laboratory testing program after the soil and rock samples have been inspected in the laboratory. All laboratory tests will be conducted in accordance with appropriate ASTM standards.
- b. The undrained shear strength for clay soils will be measured using consolidated undrained triaxial tests with pore pressure measurements. For sandy soils, the residual strength will be estimated using the results of SPT measurements and correlations with published charts.
- c. If the results of index tests reveal that certain embankment or foundation soils fall in the range where plasticity of the fines indicate behavior in between a clay-like and a sand-like behavior, then cyclic triaxial tests will be performed to assess the potential for build-up of pore pressure and loss of strength for these soils. The cyclic tests will be followed by monotonic loading to assess the potential for reduction in undrained strength due to cyclic loading.

#### 5.1.4 *Additional Borings and Laboratory Testing (Conditional)*

- a. If needed, the Consultant will drill up to five (5) additional borings at each dam. During the execution of Subtask 5.1.2, The Consultant will assess the need for these additional borings. The Consultant will then provide recommendations to the District to either exercise this conditional task or eliminate the additional borings from the exploration program. These additional borings will be drilled only if District so authorizes.

#### 5.1.5 *Becker Penetration Testing (Conditional)*

- a. If the gravel content in the foundation soils for either Chesbro Dam or Uvas Dam is found to be higher than about 20 percent, the Consultant will recommend Becker Penetration Testing (BPT) to evaluate the liquefaction potential of the gravelly materials.
- b. On receiving approval from the District to implement this testing, the Consultant will perform the BPT at up to five locations near the downstream toe or on the downstream shell. BPT will be performed using Instrumented BPT developed at U.C. Davis. The select BPT testing locations will be in the vicinity of existing SPT

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borings to facilitate the comparison and correlation between the two testing techniques.

#### 5.1.6 *Additional Phase 2 Geology and Fault Studies/Assessment (Conditional)*

- a. If Quaternary activity is suspected along the controlling fault beneath the purported Uvas Antiform and DSOD requires further assessment, after authorization from the District, The Consultant will perform additional office- and field-based geological analyses to assess fault activity. This work may include analysis of existing geologic information and site-specific geologic mapping and borehole drilling in the Hayes Valley or other alluviated areas across the antiform. Field paleoseismic investigations of the Uvas Antiform are not included in this scope of services.
- b. The Consultant will analyze available high-quality stereo-paired aerial photography to develop detailed, site-specific geologic maps of Quaternary deposits along the antiform. Photo-interpretation will include geologic and geomorphic features typically associated with folding and detailed mapping of bedrock types and surficial deposits to assess possible fold-related deformation of late Quaternary deposits. The Consultant will conduct field reconnaissance to verify and refine the geologic mapping. The mapping effort will provide data for characterizing the geologic relationships along Uvas Antiform, an initial assessment of fault activity, and possible target locations for developing detailed field-based paleoseismic information if later determined necessary.
- c. The Consultant will analyze geologic data developed and develop a Draft Technical Memorandum that describes the results and conclusions of the fault-hazard mapping investigation. The memorandum will include a GIS-based database of geologic mapping, as well as figures that document results and support conclusions. The Consultant will also participate in a Project meeting as part of this subtask with TRB to summarize results of the mapping effort. The Consultant will receive and respond to District, TRB, and DSOD comments on the Draft Technical Memorandum, and issue a Final Technical Memorandum that incorporates these comments and provides final results and conclusions.

#### 5.1.7 *Geotechnical Support for Phase 2 Access Road Construction*

- a. The Consultant will provide geotechnical support during construction of the access roads on the dam for the Phase 2 explorations. The Consultant will provide layout, profile, and cross

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sections for the access roads, provide earthwork requirements for the roads, observe road construction materials, and review the road material quantity estimates.

- b. The Consultant will ensure that all activities comply with the requirements of DSOD and will prepare all necessary submittals on behalf of the District. The Consultant will observe road construction to ensure that construction complies with their recommendations and the needs of the exploration program.
- c. The Consultant will prepare a Technical Memorandum (TM), which will summarize the field and laboratory compaction test results. The TM will be a brief construction report that will provide a general description of the construction (with photos), and will certify that the construction work for the access road was performed as per recommendations.

#### 5.1.8 *Access Road Construction for Phase 2 Field Investigation Program (Conditional)*

- a. As authorized by the District, the Consultant will provide for construction of the access roads on the dam for the explorations. This work will be performed by a subcontractor selected by the Consultant and acceptable to the District and the Consultant will oversee this work. The subcontractor must be California-licensed general contractor with either an A or a B license and comply with all laws applicable to this work. Consultant will pay its general contractor prevailing wages and require it to pay its subcontractors prevailing wages, as well as fully comply with all applicable California state laws regarding such wages. Consultant's subcontractor will provide all insurance coverages and with limits established by the District. Consultant will provide stamped, signed engineering drawings for the road construction and submit to District for review.

#### Deliverables for Subtask 5.1 (see Table 1)

- 1. Draft and Final Phase 2 Exploration Work Plan and Laboratory Testing Plan for each dam.
- 2. Environmental Documents for Clearance of Phase 2 Field Exploration:
  - a. Meeting Agendas and Meeting Summaries;
  - b. Draft and Final Permit Applications with Reference Materials; and

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- c. Supporting information used or referenced in the permit applications, including GIS files and cultural data.
- 3. Phase 2 Data Report including:
  - a. Field logs of borings;
  - b. Laboratory test results;
  - c. Report on suspension logging; and
  - d. Instrumented BPT results (Conditional).
- 4. Technical Memorandum of road construction;
- 5. Technical Memorandum on additional fault studies (Conditional); and
- 6. Engineering design drawings, signed and stamped to be included in Technical Memorandum of Road Construction.

#### Meetings for Subtask 5.1 (see Table 2)

- 1. Conference call with District and Subject Matter Expert to discuss plan;
- 2. Meeting with TRB to discuss plan;
- 3. Telephone meeting with DSOD to discuss plan for each dam;
- 4. Field meeting with District and DSOD to review exploration; and
- 5. Field meeting with District and DSOD to discuss fault evaluations (conditional).

#### *Subtask 5.1 Basis for Budget Estimate—The tasks budget estimates are based on the following:*

- a. The Notice of Exemption will be based on existing information and field study data.
- b. The Consultant will respond to no more than two rounds of District review for Notice of Exemption.
- c. The District will file Notice of Exemption with Santa Clara County Clerk/Recorder.
- d. The Consultant will revise the draft permit applications based on one round of input per document provided by the District.

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- e. In-water survey activities will meet the conditions for coverage under Nationwide Permit (NWP) #6, which do not require a Preconstruction Notification, however, at District's direction, a notification will be submitted.
- f. A formal jurisdictional delineation of wetlands associated with the dam, reservoir, or downstream area will not be required by the USACE, RWQCB, or the CDFW for the proposed in-water work.
- g. All impacts requiring regulatory permits, whether those impacts are covered under the Dam Maintenance Program EIR or additional CEQA documents, will be incorporated into a single permit application per agency.
- h. The District will pay all permit application fees, including but not limited to those associated with the Santa Clara County Habitat Conservation Plan and the Section 1600 Lake and Streambed Alteration Agreement.

#### *Subtask 5.2 Data Summary, Material Characterization and Methodology for Seismic Stability Evaluation (SSE) Engineering Analyses*

- a. The Consultant will summarize the results of the field and laboratory investigations performed in Tasks 2.5 and 5.1. Using the results of the field investigations and laboratory testing from previous investigations and the data gathered for the Project, the Consultant will recommend the static and dynamic material properties for the SSE analyses in a Technical Memorandum (TM). The proposed methodologies for the engineering analyses will also be described in the TM.
- b. The proposed methodology for assessing the seismic performance evaluations will follow state-of-the-practice and DSOD-accepted procedures used for evaluating the potential for liquefaction and earthquake-induced deformations of earth-fill embankments on potentially liquefiable foundations. The procedure will generally involve the following steps:
  - (1) Estimate ground motions at the site due to postulated earthquake events, and develop response spectra and acceleration time histories at bedrock underlying the dam. This will be accomplished in Task 5.4;
  - (2) On the basis of field and laboratory investigations and construction records, develop representative cross-sections of the embankment and underlying foundation;
  - (3) Estimate pre-earthquake stresses within the embankment and underlying foundation using static analysis procedures;

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- (4) Evaluate earthquake-induced accelerations and stresses within the embankment and underlying foundation using dynamic analysis procedures;
  - (5) Evaluate the cyclic strength of the embankment soils using undrained strength for clays and in situ SPT results for cohesion-less soils;
  - (6) Evaluate the potential for liquefaction and estimate the potential for reduction in undrained strength (if any) and/or the residual strength of soils comprising the embankment and foundation;
  - (7) Evaluate the post-earthquake stability of the embankment using either the reduced undrained strength or residual strength;
  - (8) If the embankment section analyzed is found to be stable, estimate the corresponding value of the yield acceleration and the magnitude of earthquake-induced permanent deformation; and
  - (9) Perform nonlinear analyses to assess the deformed embankment shape, assess the remaining freeboard, and provide recommendations for interim reservoir restrictions, if needed.
- c. The Consultant will participate in, and prepare meeting notes for, meetings with the District, the TRB, and DSOD. The purpose of the meetings will be to review comments provided by the agencies and to answer questions regarding the proposed engineering properties and engineering methodologies. The Consultant will revise the TM as necessary to obtain approvals from the District and DSOD before the stability analyses in Task 5.3 can be initiated.

#### Deliverables for Subtask 5.2 (see Table 1)

1. Draft Technical Memorandum on Material Properties and Engineering Methodology for each dam.

#### Meetings for Subtask 5.2 (see Table 2)

1. Conference call with District and Subject Matter Expert.
2. Meeting with TRB.
3. Meeting with DSOD.

Basis for Budget Estimate for Subtask 5.2—The tasks budget estimates are based on the following:

1. Properties will be based on field and laboratory investigations from this study as well as previous investigations.

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2. Comments on Technical Memorandum will be incorporated in Dam Safety Evaluation Reports

#### *Subtask 5.3 Static, Rapid Drawdown, and Pseudo-Static Stability Analyses*

- a. The Consultant will perform limit equilibrium slope stability analyses to evaluate the static, rapid drawdown, and pseudo-static stability of the upstream and downstream slopes of the embankments for each dam. Static stability analyses will be performed for long-term steady-state seepage conditions and for rapid draw down conditions. The analyses for steady state seepage will be performed using effective strength parameters. For rapid drawdown conditions, the undrained strength and the Lowe and Karafiath strength as described by Duncan and Wright (2005) will be used in the analyses. Computer program UTEXAS4 will be used in these analyses.
- b. The Consultant will use pseudo-static analyses to estimate the yield acceleration for potential sliding surfaces. These surfaces will be used in the deformation analyses. The strength parameters used in these analyses will include modified undrained strength for clays and residual strength for liquefiable cohesionless soils. The pseudo-static analyses will be based on the results of the liquefaction assessments performed in Subtask 5.5.2 described below.
- c. Seepage analyses will be performed using finite element computer program SEEP/W to evaluate pore pressures and phreatic surface in the dam. These will be used as input to the stability analyses. Seepage forces can be included in the FLAC analyses for the static stresses in the dam.

#### Deliverables for Subtask 5.3 (see Table 1)

1. No separate deliverables for this subtask.

#### Meetings for Subtask 5.3 (see Table 2)

1. No separate meetings for this subtask.

Basis for Budget Estimate for Subtask 5.3—The tasks budget estimates are based on the following:

1. Analyses results will be presented at meetings for Subtasks 5.5 and 5.6.
2. The Consultant will inform District immediately of any analyses results indicating safety concerns.

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#### *Subtask 5.4 Develop Site-Specific Design Earthquake Motions*

- a. The Consultant will develop design ground motions for each dam in the following two steps:
  1. Earthquake parameters, and
  2. Time histories.
- b. The Consultant will confirm DSOD concurrence on the first step before proceeding with the second step.

#### *5.4.1 Review and Develop Earthquake Parameters*

- a. The earthquake parameters and response spectra were developed in the SSE1 study and presented to DSOD in a Technical Memorandum as part of that study. The Consultant will update earthquake parameters for each dam including magnitude, distance, style of faulting, response spectra, and Arias Intensity for events on multiple seismically capable faults. The response spectra will be developed for standard rock conditions using the Next Generation Attenuation relationships. The response spectra will consider the shear-wave velocities measured in the bedrock at the dams.

#### *5.4.2 Develop Design Earthquake Motions*

- a. After receiving concurrence from DSOD on the proposed response spectra, the Consultant will develop the acceleration time histories for use in the analyses of Chesbro and Uvas Dams. The Consultant will develop time histories for each of the approved design spectra as required by DSOD. The time histories will represent the site-specific ground motions associated with the controlling earthquake event.
- b. Each acceleration time history will be developed from a pair of orthogonal horizontal components that are matched to the fault normal and fault parallel components of the design spectra, and are then resolved into a single record representing the expected earthquake motions orthogonal to the dam axis. Natural records with characteristics (e.g., earthquake magnitude, faulting mechanism, source-to-site distance, site conditions) similar to those expected for the earthquake dominating the ground motion hazard at each dam site will be selected from available strong motion recordings obtained during previous earthquakes in California. Worldwide recordings of earthquakes that have occurred in similar tectonic environments also may be selected. A time-domain approach (Abrahamson, 1991; Lilhanand and Tseng, 1988) will be used to modify the natural recordings and to generate time histories compatible with a respective target response spectrum. This approach preserves the non-stationary characteristics (e.g., phasing) of natural records and therefore provides realistic time histories for the response analyses. The

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response spectra from the resolved acceleration time history will reasonably match the spectral amplitudes of the smooth target spectrum through the period range of interest for each dam.

- c. The Consultant will use the time histories as input motions for dynamic response and deformation analyses described in Subtask 5.5.
- d. The Consultant will discuss response spectra with DSOD prior to developing acceleration time histories. The Consultant will present the time histories that match the response spectra of the scenario earthquakes for the dams in a meeting with the District and the TRB. The comments from the District and TRB will be incorporated into a draft version of a TM that will be submitted to DSOD for its review and concurrence. On receiving comments from the District and DSOD, the Consultant will finalize the TM.

#### Deliverables for Subtask 5.4 (see Table 1)

- 1. Draft and Final Technical Memorandum on Ground Motions for each dam.

#### Meetings for Subtask 5.4 (see Table 2)

- 1. Conference call with District and Subject Matter Expert if needed;
- 2. Meeting with TRB;
- 3. Telephone meeting with DSOD to discuss earthquake parameters; and
- 4. Meeting with DSOD to discuss time histories.

Basis for Budget Estimate for Subtask 5.4—The tasks budget estimates are based on the following:

- 1. Time histories will be developed after DSOD approval of earthquake parameters.

#### *Subtask 5.5 Seismic Response Analyses*

- a. The response of the dams to the earthquake ground motions including the potential for liquefaction will be developed in this subtask.

##### *5.5.1 Response Analyses*

- a. The Consultant will estimate the earthquake-induced stresses using two-dimensional equivalent linear dynamic finite element analyses programs such as QUAD4MU. One representative cross-section (i.e., the

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maximum section) will be analyzed for each dam for the design earthquake ground motions developed in Task 5.3.

#### 5.5.2 *Liquefaction Analyses*

- a. The Consultant will evaluate liquefaction potential using the results of the two-dimensional dynamic response analyses performed in Task 5.5.1 and the empirically-based methods of Youd et al. (2001), Seed et al. (2003), and Idriss and Boulanger (2004), per the requirements of DSOD.
- b. The Consultant will use the dynamic response analyses to evaluate the earthquake-induced accelerations and stresses within the embankments and foundations, and in situ SPT measurements will be used to estimate the cyclic strength and liquefaction resistance. The Consultant will use the results of these analyses to estimate the reduction in shear strength (if any) of the clayey soils.
- c. The Consultant will assess the liquefaction potential by comparing the earthquake-induced stresses to the cyclic resistance of the soils. The cyclic resistance of the soils is governed by the in situ density and the initial stresses before the earthquake. Initial stresses within the embankment and foundation will be estimated by performing static finite difference stress analyses using the program FLAC.

#### 5.5.3 *Newmark-Type Deformation Analyses*

- a. The Consultant will estimate permanent deformations of the embankment slopes from seismic shaking using the yield acceleration concept proposed by Newmark (1965) and modified by Makdisi and Seed (1978).
- b. The dynamic response analyses performed in Task 5.5.1 will provide average seismic coefficient time histories within potential sliding masses in the upstream and downstream slopes of the embankments. These time histories will be double integrated (using a yield acceleration estimated from Task 5.3) to estimate the permanent deformation for each potential sliding mass. The computed deformations will be used to estimate the available freeboard, the potential for cracking, and to assess the overall stability of the embankment.

#### 5.5.4 *Nonlinear Deformation Analyses*

- a. The Consultant will perform two-dimensional finite difference nonlinear deformation analyses using the computer program FLAC which incorporates nonlinear constitutive model capable of simulating earthquake induced pore-pressure generation (e.g. Dawson et al., 2001; Wang and Makdisi, 1999). The nonlinear analyses can be used to estimate the deformed shape of the embankment due to strength loss

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and seismic loading. The results on the nonlinear analyses can be used in the evaluation of reservoir restriction in Task 7.

#### 5.5.5 *Presentation of Results*

- a. The Consultant will use the results of the seismic stability analyses to develop conclusions regarding the expected performance of the dams and recommendations concerning their future operation. The Consultant will discuss the deformation analysis results and conclusions in a meeting with the District and TRB.

Deliverables for Subtask 5.5 (see Table 1)

1. No separate deliverable for this subtask. Results will be included in Technical Memorandum in Subtask 5.6.

Meetings for Subtask 5.5 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed.
2. Meeting with TRB.

Basis for Budget Estimate for Subtask 5.5—The tasks budget estimates are based on the following:

1. The Consultant will inform District of results of analyses during progress meetings.
2. The Consultant will inform District immediately of any analyses results indicating safety concerns.

#### *Subtask 5.6 Overall Dam Seismic Safety Assessment*

- a. The Consultant will perform an assessment of all seismic hazards including liquefaction, deformation, earthquake-induced cracking, and the potential impact of surface fault rupture with regard to the overall seismic performance of Chesbro and Uvas Dams. The results of the seismic stability engineering analyses will be summarized and submitted in a Technical Memorandum. The Consultant will discuss the assessment results and conclusions in a meeting with the District and the TRB before preparing a draft TM. The draft TM will be submitted to the District for review and comment. Comments from the District and the TRB will be incorporated into a final version of the TM that will be submitted to DSOD.
- b. If authorized by the District, upon completion of the conditional Subtask 5.7, the Consultant will participate in, and prepare meeting notes for, a joint meeting with the District and DSOD. The purpose of the meeting will be to present to DSOD the results of the seismic stability

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engineering analyses from Subtasks 5.2 through 5.6 as well as the recommended interim reservoir restriction if needed.

Deliverables for Subtask 5.6 (see Table 1)

1. Draft Technical Memorandum for each dam.

Meetings for Subtask 5.6 (see Table 2)

1. Meeting with DSOD.

Basis for Budget Estimate for Subtask 5.6—The tasks budget estimates are based on the following:

1. If Subtask 5.7 is authorized, the results will be discussed at the meeting with DSOD.
2. Comments on Draft Technical Memorandum will be incorporated in Dam Safety Evaluation Report.

#### *Subtask 5.7 Reservoir Restriction Evaluation (Conditional)*

- a. Should the results of the seismic stability analyses for Chesbro or Uvas Dam indicate that the dam embankment may experience excessive deformations during or after earthquake shaking that would require seismic remediation, the Consultant will, at the direction of the District, provide recommendations for an interim restriction of the reservoir level. On the basis of the results of the analyses in Task 5, recommendations will be provided for such interim measures. If required, the results of these evaluations will be presented in a TM, along with any recommendations for reservoir-level restrictions.
- b. The Consultant will discuss the evaluation results and interim reservoir restriction recommendations in a meeting with the District and the TRB before preparing a draft version of the TM. The draft TM will be submitted to the District for review and comment. Comments from the District and TRB will be incorporated and it will be submitted to DSOD. After review by DSOD a final version will be prepared and submitted.

Deliverables for Subtask 5.7 (see Table 1).

1. Draft and Final Technical Memorandum.

Meetings for Subtask 5.7 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed; and
2. Meeting with TRB.

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Basis for Budget Estimate for Subtask 5.7—The tasks budget estimates are based on the following:

1. Subtask 5.7 results will be discussed with DSOD in meeting in Subtask 5.6.

#### *Subtask 5.8 Seismic Dam Safety Evaluation Report*

- a. The Consultant will prepare a comprehensive seismic dam safety report. The report will be compiled from the appropriate technical memoranda to document the results of the evaluations for each dam including base and additional field and laboratory investigations, engineering analysis methodologies and results, and conclusions and recommendations. These seismic stability evaluation reports will be documentation of the safety of Chesbro and Uvas Dams or a repository for the conclusions and recommendations for future remedial work if required.

Deliverables for Subtask 5.8 (see Table 1)

1. Draft and Final Dam Seismic Safety Evaluation Report for each dam.

Meetings for Subtask 5.8 (see Table 2)

1. No meetings planned for this subtask.

Basis for Budget Estimate for Subtask 5.8—The tasks budget estimates are based on the following:

1. District will have option of including results of Subtask 5.7 in report.

### **Task 6—Independent Dam Safety Review (IDSR) and Potential Failure Mode Analysis (PFMA) Update Workshop and Recommendations (UNCHANGED)**

#### *Subtask 6.1 Independent Dam Safety Review (IDSR)*

- a. The Consultant will prepare an IDSR of the dams. The IDSR will include a review of past performance to become familiar with any identified or potential dam safety deficiencies and then assess through inspection, document review, and initial independent evaluations whether the deficiencies and potential deficiencies have been appropriately identified.
- b. Following the evaluations, a report will be prepared with findings and recommendations to identify, evaluate, and/or remediate dam safety deficiencies. The IDSR will focus on the major dam safety categories of foundation integrity, structural dam stability, spillway adequacy, low-level outlet adequacy and leakage and seepage, with additional attention given to instrumentation readings and indications, past performance and visibly observable defects.

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Deliverables for Subtask 6.1 (see Table 1)

1. Draft and Final IDSR Report for each dam.

Meetings for Subtask 6.1 (see Table 2)

1. Meeting with District for each dam; and
2. Field visit to each dam.

Basis for Budget Estimate for Subtask 6.1—The tasks budget estimates are based on the following:

1. District will provide access for field visit.

#### *Subtask 6.2 Potential Failure Mode Analysis (PFMA) Update Workshop*

- a. The Consultant will perform PFMA update following the FERC dam safety process to identify and highlight the most vulnerable components of each dam and the appurtenant structures.
- b. The Consultant will perform the PFMA in following three major steps:
  1. Pre-workshop review of existing documents including PFMA developed in Task 2.2;
  2. Workshop; and
  3. Report preparation.
- c. The workshops will be run by a facilitator or co-facilitators provided by the Consultant and attended by a group of participants generally composed of: the owner's representatives from management, engineering and operations and maintenance, regulators such as DSOD and a group of engineering and dam safety experts, which may consist of consultants or experts from other agencies.
- d. At the end of the workshops the Consultant will categorize the potential failure modes using the classifications developed by FERC and then prepare a comprehensive report to identify and document the proceedings, findings and recommendations from the workshop.
- e. The PFMA reports will identify specific issues of concern or non-concern and summarize the overall safety of the dams. The Consultant will also prepare a separate memorandum of recommendations to improve dam safety for each dam. With the new information the Consultant will update the STIDs prepared under Task 3 of this scope.

Deliverables for Subtask 6.2 (see Table 1)

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1. Draft and Final PFMA Workshop Report for each dam.
2. Draft and Final Memorandum of Recommendations for each dam.
3. Updated STID for each dam.

Meetings for Subtask 6.2 (see Table 2)

1. PFMA Workshop for each dam.

Basis for Budget Estimate for Subtask 6.2—The tasks budget estimates are based on the following:

1. District will coordinate participation of District employees.

#### **Task 7—Supplemental Services (Conditional) (REVISED)**

The District may require, and the Consultant shall perform, Supplemental Services on an as-needed basis.

- A. Prior to performing any Supplemental Service, the Consultant must obtain written authorization in the form of a Task Order (see Revised Attachment Three – Task Order Template) approved by the District's Water Utility Capital Division Deputy Operating Officer (DOO). Written authorization will state the agreed upon scope of the services requested, the classifications performing the Supplemental Services, associated not-to-exceed fees, and schedule.
- B. Details of the specific scope, deliverable, schedule, and fees for any Supplemental Services will be developed with the District and submitted in writing prior to approval to begin work.
- C. The Not-To-Exceed Fees for each Supplemental Services Task Order will be based upon the negotiated hourly rate schedule (time and materials), and must include all of the following information:
  1. The total price for the Consultant to complete the Supplemental Services Task Order on a Time and Materials basis;
  2. The schedule for completing the Supplemental Services Task Order; and
  3. The Consultant key staff and classifications that will be assigned to complete the Supplemental Services.
- D. The Supplemental Services Task Order fees will not be exceeded by the Consultant without prior written authorization from the District's Water Utility Capital Division DOO.
- E. Under no circumstances will the Consultant commence the Supplemental Services until:

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1. The Supplemental Services Task Order is received, reviewed, and executed by the District's Water Utility Capital Division DOO; and
  2. The Consultant receives a Task Order Notice-To-Proceed from the District's Project Manager.
- F. The Consultant will perform, but not be limited to, the Supplemental Services described in Subtask 7.1 to 7.4.

#### *Subtask 7.1 Problem Definition Memo (Conditional)*

- a. If it is determined that remedial measures are required for Chesbro or Uvas Dams and if such work is approved by the District, the Consultant will develop problem definition memorandum presenting the issues and constraints for performing an alternatives evaluation for mitigating the deficiencies found for each applicable dam.

Deliverables for Subtask 7.1 (see Table 1)

1. Draft and Final Problem Definition Memorandum for each applicable dam.

Meetings for Subtask 7.1 (see Table 2)

1. Meeting with District.

Basis for Budget Estimate for Subtask 7.1—The tasks budget estimates are based on the following:

1. District will provide example of previous problem definition memoranda as a guideline for Consultant.

#### *Subtask 7.2 Conceptual Remedial Alternatives (Conditional)*

- a. If it is determined that remedial measures are required for Chesbro or Uvas Dams and if such work is approved by the District, the Consultant will develop conceptual remedial design alternatives based on detailed results from the evaluations performed for each applicable dam. The Consultant will present the recommended conceptual remedial design alternatives in a meeting with the District and the TRB before preparing a draft version TM. The draft TM will be submitted to the District for review and comment. Comments from the District and TRB will be incorporated into a revised version of the TM that will be submitted to DSOD. After review by DSOD a final version will be prepared and submitted.

Deliverables for Subtask 7.2 (see Table 1)

1. Draft and Final Technical Memorandum for each applicable dam.

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Meetings for Subtask 7.2 (see Table 2)

1. Conference call with District and Subject Matter Expert if needed;
2. Meeting with TRB; and
3. Meeting with DSOD.

Basis for Budget Estimate for Subtask 7.2—The tasks budget estimates are based on the following:

1. Consultant will provide conceptual cost estimate for up to two remedial alternatives.

#### *Subtask 7.3 Additional Basic Services (Conditional) (REVISED PER AMENDMENT NO. 1)*

- a. Additional Basic Services may include: additional geotechnical field investigation and laboratory testing, additional geologic fault evaluations, additional Supporting Technical Information Documents preparation, additional seismic stability evaluation investigation and analysis, additional Independent Dam Safety Review and Potential Failure Mode Analysis, or additional regulatory support and project management services.

#### *Subtask 7.4 Spillway Condition Assessments (Conditional) (REVISED PER THIS AMENDMENT NO. 2)*

- a. The Consultant will perform a comprehensive condition assessment of the spillway structures at Chesbro and Uvas Dams, as required by the California Division of Safety of Dams (DSOD).
- b. The spillway assessment will focus on identifying potential geologic hazards associated with the spillway, including characterization of the foundation materials underlying and adjacent to the spillway structures and their susceptibility to erosion and instability. The integrity of the spillway concrete will also be investigated, if necessary.
- c. An evaluation will be performed of the concrete lining and the existing drainage system, and any potential for slab undermining and hydraulic jacking.
- d. Consultant will perform this work in sequential steps in the following order:
  1. Review of spillway design and spillway inspection;
  2. Field and laboratory testing;
  3. Spillway analyses; and
  4. Evaluation of potential repairs and remedial measures.

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Deliverables for Subtask 7.4 (See Table 1)

1. Spillway Inspection Technical Memorandum for each dam;
2. Spillway Testing Technical Memorandum for each dam;
3. Spillway Analyses Technical Memorandum for each dam; and
4. Remedial Spillway Measures Technical Memorandum for each dam.

Meetings for Subtask 7.4 (See Table 2)

1. No meetings planned for this subtask.

Basis for Budget Estimate for Subtask 7.4 – The task budget estimates are based on the following:

1. DSOD's current approval of the scope of services to conduct spillway condition assessments at each dam.

#### V. TABLE 1—SUMMARY OF DELIVERABLES (REVISED)

| TABLE 1—SUMMARY OF DELIVERABLES |           |                 |  |                            |
|---------------------------------|-----------|-----------------|--|----------------------------|
| Dam                             | Subtask   | Deliverable No. | Title                                  | Target Year for Completion |
| All                             | 1.1 & 1.2 | PXP             | Project Execution Plan with QA/QC Plan | 2014                       |
| All                             | 1.1       | PROG 1-72       | Monthly Progress Report                | Monthly                    |
| All                             | various   | –               | Meeting Agendas and Notes              | On-going                   |
| All                             | 1.1       | INV 1-72        | Monthly Invoice                        | Monthly                    |
| All                             | 1.3       | TRB 1-14        | TRB Review Reports                     | On-going                   |
| All                             | 1.3       | SME 1-18        | Subject Matter Expert Review Reports   | On-going                   |
| Coyote                          | 2.2       | STID 1A         | Preliminary STID                       | 2014                       |
| Coyote                          | 2.3       | PFMA 1A         | Preliminary PFMA                       | 2014                       |
| Coyote                          | 2.4       | TM1-1           | Phase 1 Work Plan                      | 2015                       |
| Coyote                          | 2.4       | ENV1-1          | Phase 1 Environmental Clearance        | 2015                       |
| Coyote                          | 2.5       | TM1-2           | Phase 1 Data Report                    | 2015                       |
| Coyote                          | 2.6       | TM1-3           | Geology TM                             | 2015                       |
| Coyote                          | 2.7       | TM1-4           | Phase 1 Access Road TM                 | 2015                       |
| Coyote                          | 2.9*      | TM1-5           | Portable Radar Interferometer TM       | 2015                       |
| Coyote                          | 3.2       | TM1-6           | PMP and PMF TM                         | 2015                       |
| Coyote                          | 4.1       | STID 1B         | STID                                   | 2018                       |
| Coyote                          | 5.1       | TM1-7           | Phase 2 Work Plan                      | 2016                       |
| Coyote                          | 5.1       | ENV1-2          | Phase 2 Environmental Clearance        | 2016                       |
| Coyote                          | 5.1       | TM1-8           | Phase 2 Data Report                    | 2016                       |

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| TABLE 1—SUMMARY OF DELIVERABLES |         |                 |  |                            |
|---------------------------------|---------|-----------------|--|----------------------------|
| Dam                             | Subtask | Deliverable No. | Title                                  | Target Year for Completion |
| Coyote                          | 5.1.5*  | TM1-9           | Phase 2 Geology and Fault Studies TM   | 2016                       |
| Coyote                          | 5.1     | TM1-10          | Phase 2 Access Road TM                 | 2016                       |
| Coyote                          | 5.2     | TM1-11          | Material Properties and Methodology TM | 2016                       |
| Coyote                          | 5.4     | TM1-12          | Earthquake Ground Motions TM           | 2016                       |
| Coyote                          | 5.6     | TM1-13          | Seismic Safety Assessment TM           | 2017                       |
| Coyote                          | 5.7*    | TM1-14          | Reservoir Restriction TM               | 2017                       |
| Coyote                          | 5.8     | SSE 1           | Seismic Safety Evaluation Report       | 2018                       |
| Coyote                          | 6.1     | IDSR 1          | IDSR Report                            | 2019                       |
| Coyote                          | 6.2     | PMFA 1B         | PFMA Report                            | 2019                       |
| Coyote                          | 6.2     | TM1-15          | PFMA Recommendations TM                | 2019                       |
| Coyote                          | 6.2     | STID 1C         | Updated STID                           | 2019                       |
| Coyote                          | 7.1*    | TM1-16          | Problem Definition TM                  | 2020                       |
| Coyote                          | 7.2*    | TM1-17          | Conceptual Remedial Alternatives TM    | 2020                       |
| Coyote                          | 7.4*    | TM1-18          | Spillway Inspection TM                 | 2017                       |
| Coyote                          | 7.4*    | TM1-19          | Spillway Testing TM                    | 2018                       |
| Coyote                          | 7.4*    | TM1-20          | Spillway Analyses TM                   | 2019                       |
| Coyote                          | 7.4*    | TM1-21          | Remedial Spillway Measures TM          | 2020                       |
| Chesbro                         | 2.2     | STID 2A         | Preliminary STID                       | 2014                       |
| Chesbro                         | 2.3     | PFMA 2A         | Preliminary PFMA                       | 2014                       |
| Chesbro                         | 2.4     | TM2-1           | Phase 1 Work Plan                      | 2015                       |
| Chesbro                         | 2.4     | ENV2-1          | Phase 1 Environmental Clearance        | 2015                       |
| Chesbro                         | 2.5     | TM2-2           | Phase 1 Data Report                    | 2015                       |
| Chesbro                         | 2.6     | TM2-3           | Geology TM                             | 2015                       |
| Chesbro                         | 2.7     | TM2-4           | Phase 1 Access Road TM                 | 2015                       |
| Chesbro                         | 3.2     | TM2-5           | PMP and PMF TM                         | 2015                       |
| Chesbro                         | 4.1     | TM2-6           | Outlet Pipe Inspection Work Plan       | 2015                       |
| Chesbro                         | 4.1     | TM2-7           | Outlet Pipe Inspection TM              | 2015                       |
| Chesbro                         | 4.2     | STID 2B         | STID                                   | 2018                       |
| Chesbro                         | 5.1     | TM2-8           | Phase 2 Work Plan                      | 2016                       |
| Chesbro                         | 5.1     | ENV2-2          | Phase 2 Environmental Clearance        | 2016                       |
| Chesbro                         | 5.1     | TM2-9           | Phase 2 Data Report                    | 2016                       |
| Chesbro                         | 5.1     | TM2-10          | Phase 2 Access Road TM                 | 2016                       |
| Chesbro                         | 5.1.6*  | TM2-11          | Fault Studies TM                       | 2016                       |
| Chesbro                         | 5.2     | TM2-12          | Material Properties and Methodology TM | 2016                       |

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| TABLE 1—SUMMARY OF DELIVERABLES |         |                 |  |                            |
|---------------------------------|---------|-----------------|--|----------------------------|
| Dam                             | Subtask | Deliverable No. | Title                                  | Target Year for Completion |
| Chesbro                         | 5.4     | TM2-13          | Earthquake Ground Motions TM           | 2016                       |
| Chesbro                         | 5.6     | TM2-14          | Seismic Safety Assessment TM           | 2017                       |
| Chesbro                         | 5.7*    | TM2-15          | Reservoir Restriction TM               | 2017                       |
| Chesbro                         | 5.8     | SSE 2           | Seismic Safety Evaluation Report       | 2018                       |
| Chesbro                         | 6.1     | IDSR 2          | IDSR Report                            | 2019                       |
| Chesbro                         | 6.2     | PMFA 2B         | PFMA Report                            | 2019                       |
| Chesbro                         | 6.2     | TM2-16          | PFMA Recommendations TM                | 2019                       |
| Chesbro                         | 6.2     | STID 2C         | Updated STID                           | 2019                       |
| Chesbro                         | 7.1*    | TM2-17          | Problem Definition TM                  | 2020                       |
| Chesbro                         | 7.2*    | TM2-18          | Conceptual Remedial Alternatives TM    | 2020                       |
| Chesbro                         | 7.4*    | TM2-19          | Spillway Inspection TM                 | 2017                       |
| Chesbro                         | 7.4*    | TM2-20          | Spillway Testing TM                    | 2018                       |
| Chesbro                         | 7.4*    | TM2-21          | Spillway Analyses TM                   | 2019                       |
| Chesbro                         | 7.4*    | TM2-22          | Remedial Spillway Measures TM          | 2020                       |
| Uvas                            | 2.2     | STID 3A         | Preliminary STID                       | 2014                       |
| Uvas                            | 2.3     | PFMA 3A         | Preliminary PFMA                       | 2014                       |
| Uvas                            | 2.4     | TM3-1           | Phase 1 Work Plan                      | 2015                       |
| Uvas                            | 2.4     | ENV3-1          | Phase 1 Environmental Clearance        | 2015                       |
| Uvas                            | 2.5     | TM3-2           | Phase 1 Data Report                    | 2015                       |
| Uvas                            | 2.6     | TM3-3           | Geology TM                             | 2015                       |
| Uvas                            | 2.7     | TM3-4           | Phase 1 Access Road TM                 | 2015                       |
| Uvas                            | 3.2     | TM3-5           | PMP and PMF TM                         | 2015                       |
| Uvas                            | 4.1     | TM3-6           | Outlet Pipe Inspection Work Plan       | 2015                       |
| Uvas                            | 4.1     | TM3-7           | Outlet Pipe Inspection TM              | 2015                       |
| Uvas                            | 4.2     | STID 3B         | STID                                   | 2018                       |
| Uvas                            | 5.1     | TM3-8           | Phase 2 Work Plan                      | 2016                       |
| Uvas                            | 5.1     | ENV3-2          | Phase 2 Environmental Clearance        | 2016                       |
| Uvas                            | 5.1     | TM3-9           | Phase 2 Data Report                    | 2016                       |
| Uvas                            | 5.1     | TM3-10          | Phase 2 Access Road TM                 | 2016                       |
| Uvas                            | 5.1.6*  | TM3-11          | Fault Studies TM                       | 2016                       |
| Uvas                            | 5.2     | TM3-12          | Material Properties and Methodology TM | 2016                       |
| Uvas                            | 5.4     | TM3-13          | Earthquake Ground Motions TM           | 2016                       |
| Uvas                            | 5.6     | TM3-14          | Seismic Safety Assessment TM           | 2017                       |
| Uvas                            | 5.7*    | TM3-15          | Reservoir Restriction TM               | 2017                       |

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| TABLE 1—SUMMARY OF DELIVERABLES |         |                 |                                     |                            |
|---------------------------------|---------|-----------------|-------------------------------------|----------------------------|
| Dam                             | Subtask | Deliverable No. | Title                               | Target Year for Completion |
| Uvas                            | 5.8     | SSE 3           | Seismic Safety Evaluation Report    | 2018                       |
| Uvas                            | 6.1     | IDSR 3          | IDSR Report                         | 2019                       |
| Uvas                            | 6.2     | PMFA 3B         | PFMA Report                         | 2019                       |
| Uvas                            | 6.2     | TM3-16          | PFMA Recommendations TM             | 2019                       |
| Uvas                            | 6.2     | STID 3C         | Updated STID                        | 2019                       |
| Uvas                            | 7.1*    | TM3-17          | Problem Definition TM               | 2020                       |
| Uvas                            | 7.2*    | TM3-18          | Conceptual Remedial Alternatives TM | 2020                       |
| Uvas                            | 7.4*    | TM3-19          | Spillway Inspection TM              | 2017                       |
| Uvas                            | 7.4*    | TM3-20          | Spillway Testing TM                 | 2018                       |
| Uvas                            | 7.4*    | TM3-21          | Spillway Analyses TM                | 2019                       |
| Uvas                            | 7.4*    | TM3-22          | Remedial Spillway Measures TM       | 2020                       |

\* Conditional Task

1 = Coyote

2 = Chesbro

3 = Uvas

### VI. TABLE 2—SUMMARY OF MEETINGS (UNCHANGED)

| TABLE 2—SUMMARY OF MEETINGS |         |             |            |                |  |
|-----------------------------|---------|-------------|------------|----------------|--|
| Dam                         | Subtask | Meeting No. | Location   | Target Year    | Purpose  |
| All                         | 1.1     | MTG-1       | Consultant | 2014           | Kickoff with District                            |
| All                         | 1.1     | PM 1-36     | Telephone  | Every 2 Months | Project Management (status & progress)           |
| All                         | 2.1     | MTG-2       | DSOD       | 2014           | Kickoff with DSOD                                |
| Coyote                      | 2.3     | PFMA MTG1-1 | District   | 2014           | Preliminary PFMA                                 |
| Coyote                      | 2.4     | MTG1-3A     | Telephone  | 2015           | Phase 1 Exploration Plan with District           |
| Coyote                      | 2.4     | MTG1-3B     | Consultant | 2015           | Phase 1 Exploration Plan with TRB                |
| Coyote                      | 2.4     | MTG1-3C     | Telephone  | 2015           | Phase 1 Exploration Plan with DSOD               |
| Coyote                      | 2.5     | MTG1-4      | Coyote     | 2015           | Phase 1 Field Exploration with District and DSOD |
| Coyote                      | 2.6     | MTG1-5      | Coyote     | 2015           | Field Geology with District and DSOD             |

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| TABLE 2—SUMMARY OF MEETINGS |         |             |            |             |   |
|-----------------------------|---------|-------------|------------|-------------|---|
| Dam                         | Subtask | Meeting No. | Location   | Target Year | Purpose   |
| Coyote                      | 3.1     | MTG1-6A     | Consultant | 2015        | Results of PMP and PMF with District              |
| Coyote                      | 3.2     | MTG1-6B     | Telephone  | 2015        | Results of PMP and PMF with DSOD                  |
| Coyote                      | 5.1     | MTG1-7A     | Telephone  | 2016        | Phase 2 Exploration Plan with District            |
| Coyote                      | 5.1     | MTG1-7B     | Consultant | 2016        | Phase 2 Exploration Plan with TRB                 |
| Coyote                      | 5.1     | MTG1-7C     | Telephone  | 2016        | Phase 2 Exploration Plan with DSOD                |
| Coyote                      | 5.1     | MTG1-8      | Coyote     | 2016        | Phase 2 Field Exploration with District and DSOD  |
| Coyote                      | 5.2     | MTG1-9A     | Telephone  | 2016        | Material Properties and Methodology with District |
| Coyote                      | 5.2     | MTG1-9B     | Consultant | 2016        | Material Properties and Methodology with TRB      |
| Coyote                      | 5.2     | MTG1-9C     | DSOD       | 2016        | Material Properties and Methodology with DSOD     |
| Coyote                      | 5.4     | MTG1-10     | Telephone  | 2016        | Earthquake Parameters with DSOD                   |
| Coyote                      | 5.4     | MTG1-11A    | Telephone  | 2016        | Ground Motions with District                      |
| Coyote                      | 5.4     | MTG1-11B    | Consultant | 2016        | Ground Motions with TRB                           |
| Coyote                      | 5.4     | MTG1-11C    | DSOD       | 2016        | Ground Motions with DSOD                          |
| Coyote                      | 5.5     | MTG1-12A    | Telephone  | 2017        | Seismic Response with District                    |
| Coyote                      | 5.5     | MTG1-12B    | Consultant | 2017        | Seismic Response with TRB                         |
| Coyote                      | 5.6     | MTG1-12C    | DSOD       | 2017        | Overall Seismic Safety with DSOD                  |
| Coyote                      | 5.7*    | MTG1-13A    | Telephone  | 2017        | Reservoir Restriction with District               |
| Coyote                      | 5.7*    | MTG1-13B    | Consultant | 2017        | Reservoir Restriction with TRB                    |
| Coyote                      | 6.1     | MTG1-14     | Coyote     | 2019        | ISDR Field Visit                                  |
| Coyote                      | 6.1     | ISDR 1      | Consultant | 2019        | ISDR with District                                |
| Coyote                      | 6.2     | PFMA MTG1-2 | District   | 2019        | PFMA Workshop                                     |
| Coyote                      | 7.1*    | MTG1-15     | Consultant | 2020        | Problem Definition with District                  |

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| TABLE 2—SUMMARY OF MEETINGS |         |             |                |             |  |
|-----------------------------|---------|-------------|----------------|-------------|--|
| Dam                         | Subtask | Meeting No. | Location       | Target Year | Purpose  |
| Coyote                      | 7.2*    | MTG1-16A    | Telephone      | 2020        | Remedial Alternatives with District              |
| Coyote                      | 7.2*    | MTG1-16B    | Consultant     | 2020        | Remedial Alternatives with TRB                   |
| Coyote                      | 7.2*    | MTG1-16C    | DSOD           | 2020        | Remedial Alternatives with DSOD                  |
| Chesbro                     | 2.3     | PFMA MTG2-1 | District       | 2014        | Preliminary PFMA                                 |
| Uvas                        | 2.3     | PFMA MTG3-1 | District       | 2014        | Preliminary PFMA                                 |
| Chesbro & Uvas              | 2.4     | MTG23-3A    | Telephone      | 2015        | Phase 1 Exploration Plan with District           |
| Chesbro & Uvas              | 2.4     | MTG23-3B    | Consultant     | 2015        | Phase 1 Exploration Plan with TRB                |
| Chesbro                     | 2.4     | MTG2-3C     | Telephone      | 2015        | Phase 1 Exploration Plan with DSOD               |
| Uvas                        | 2.4     | MTG3-3C     | Telephone      | 2015        | Phase 1 Exploration Plan with DSOD               |
| Chesbro                     | 2.5     | MTG2-4      | Chesbro        | 2015        | Phase 1 Field Exploration with District and DSOD |
| Uvas                        | 2.5     | MTG3-4      | Uvas           | 2015        | Phase 1 Field Exploration with District and DSOD |
| Chesbro & Uvas              | 2.6     | MTG23-5     | Chesbro & Uvas | 2015        | Field Geology with District and DSOD             |
| Chesbro & Uvas              | 3.1     | MTG23-5     | Consultant     | 2015        | Results of PMP with District                     |
| Chesbro & Uvas              | 3.2     | MTG23-5     | Telephone      | 2015        | Results of PMP and PMF with DSOD                 |
| Chesbro & Uvas              | 5.1     | MTG23-6A    | Telephone      | 2016        | Phase 2 Exploration Plan with District           |
| Chesbro & Uvas              | 5.1     | MTG23-6B    | Consultant     | 2016        | Phase 2 Exploration Plan with TRB                |
| Chesbro                     | 5.1     | MTG2-6C     | Telephone      | 2016        | Phase 2 Exploration Plan with DSOD               |
| Uvas                        | 5.1     | MTG3-6C     | Telephone      | 2016        | Phase 2 Exploration Plan with DSOD               |
| Chesbro                     | 5.1     | MTG2-7      | Chesbro        | 2016        | Phase 2 Field Exploration with District and DSOD |

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| TABLE 2—SUMMARY OF MEETINGS |         |             |            |             |   |
|-----------------------------|---------|-------------|------------|-------------|---|
| Dam                         | Subtask | Meeting No. | Location   | Target Year | Purpose   |
| Uvas                        | 5.1     | MTG3-7      | Uvas       | 2016        | Phase 2 Field Exploration with District and DSOD  |
| Uvas                        | 5.1*    | MTG3-8      | Uvas       | 2016        | Fault Evaluations with District and DSOD          |
| Chesbro & Uvas              | 5.2     | MTG23-9A    | Telephone  | 2016        | Material Properties and Methodology with District |
| Chesbro & Uvas              | 5.2     | MTG23-9B    | Consultant | 2016        | Material Properties and Methodology with TRB      |
| Chesbro & Uvas              | 5.2     | MTG23-9C    | DSOD       | 2016        | Material Properties and Methodology with DSOD     |
| Chesbro & Uvas              | 5.4     | MTG23-10    | Telephone  | 2016        | Earthquake Parameters with DSOD                   |
| Chesbro & Uvas              | 5.4     | MTG23-11A   | Telephone  | 2016        | Ground Motions with District                      |
| Chesbro & Uvas              | 5.4     | MTG23-11B   | Consultant | 2016        | Ground Motions with TRB                           |
| Chesbro & Uvas              | 5.4     | MTG23-11C   | DSOD       | 2016        | Ground Motions with DSOD                          |
| Chesbro & Uvas              | 5.5     | MTG23-12A   | Telephone  | 2017        | Seismic Response with District                    |
| Chesbro & Uvas              | 5.5     | MTG23-12B   | Consultant | 2017        | Seismic Response with TRB                         |
| Chesbro & Uvas              | 5.6     | MTG23-12C   | DSOD       | 2017        | Overall Seismic Safety with DSOD                  |
| Chesbro & Uvas              | 5.7*    | MTG23-13A   | Telephone  | 2017        | Reservoir Restriction with District               |
| Chesbro & Uvas              | 5.7*    | MTG23-13B   | Consultant | 2017        | Reservoir Restriction with TRB                    |
| Chesbro                     | 6.1     | MTG2-14     | Chesbro    | 2019        | ISDR Field Visit                                  |
| Uvas                        | 6.1     | MTG3-14     | Uvas       | 2019        | ISDR Field Visit                                  |
| Chesbro                     | 6.1     | ISDR 2      | Consultant | 2019        | ISDR with District                                |
| Uvas                        | 6.1     | ISDR 3      | Consultant | 2019        | ISDR with District                                |
| Chesbro                     | 6.2     | PFMA MTG2-2 | District   | 2019        | PFMA Workshop                                     |
| Uvas                        | 6.2     | PFMA MTG3-2 | District   | 2019        | PFMA Workshop                                     |
| Chesbro & Uvas              | 7.1*    | MTG23-15    | Consultant | 2020        | Problem Definition with District                  |

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### REVISED APPENDIX ONE SCOPE OF SERVICES

| TABLE 2—SUMMARY OF MEETINGS |         |             |            |             |                                     |
|-----------------------------|---------|-------------|------------|-------------|-------------------------------------|
| Dam                         | Subtask | Meeting No. | Location   | Target Year | Purpose                             |
| Chesbro & Uvas              | 7.2*    | MTG23-16A   | Telephone  | 2020        | Remedial Alternatives with District |
| Chesbro & Uvas              | 7.2*    | MTG23-16B   | Consultant | 2020        | Remedial Alternatives with TRB      |
| Chesbro & Uvas              | 7.2*    | MTG23-16C   | DSOD       | 2020        | Remedial Alternatives with DSOD     |

\* Conditional Task

1 = Coyote

2 = Chesbro

3 = Uvas

#### VII. ADDITIONAL TERMS AND CONDITIONS (REVISED)

##### A. Consultant as Independent Contractor

1. Consultant will perform all services as an independent contractor and not an agent or employee of District.
2. The expertise and experience of Consultant are material considerations for District'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's obligations hereunder, without prior written consent of District, 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 moneys 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 the District.

##### B. Consultant's General Responsibilities

1. Standard of Care
  - a. Consultant and its subconsultants must perform services in accordance with those standards of care that are generally recognized as being used by competent persons in Consultant's area of specialty in the State of California.
  - b. Consultant and its subconsultants must perform 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.

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX ONE SCOPE OF SERVICES

2. Unless the requirements for the Scope of Services described in this Agreement are specifically modified in writing, Consultant must provide its services and deliverables as required.

#### C. Confidentiality

Due to the nature of the services the Consultant will provide under the Agreement, there may be disclosure to the Consultant of detailed information about the District'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. As such, the Consultant, its subcontractors, and its subconsultants are required to execute a Non-Disclosure Agreement (see Attachment Four).

The Consultant understands and acknowledges that District staff members providing information to the Consultant do so with the understanding that such information will be handled appropriately. In the event the Consultant receives such restricted or confidential information, the Consultant will limit access to the information to only those of the Consultant's employees, its subcontractors, and its subconsultants authorized by the District to have the information. The Consultant will notify the District's Project Manager immediately of any request by any third party to have access to the information, and will not disclose the requested information without first receiving express written authorization from the District's Project Manager. Written authorization includes emails from the District Project Manager. The requirements of this section will survive completion, expiration, and termination of this Agreement.

#### D. Project Management

1. The Project Manager for the District is Steven M. Wu, Senior Engineer.
2. The Project Manager for Consultant is as indicated in Revised Attachment One of this Revised Appendix One.
3. The District's Project Manager and his designee are the only persons authorized to accept Consultant's deliverables on behalf of the District.

#### E. Task Orders

1. Supplemental Services will be assigned to the Consultant through issuance of Task Orders. After Supplemental Services to be performed under this Agreement are identified and communicated to Consultant by the District's Project Manager, the Consultant will prepare a proposed Task Order. The proposed Task Order must identify the following:
  - a. Description of the services, including deliverables;

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- b. The total not-to-exceed amount for Consultant to complete the services, including estimated number of hours per assigned staff to complete the services;
  - c. Proposed staff that will be assigned to complete the services, including resumes if not previously provided to the District's Project Manager;
  - d. Estimated cost of each reimbursable expense, including any applicable fees;
  - e. Time schedule for completing the services and
  - f. Copies of applicable state and federal permits required to complete the services, unless previously provided to the District's Project Manager.
- 2. The Consultant agrees that the not-to-exceed amount 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 the District's Water Utility Capital Division Deputy Operating Officer, and the Consultant's authorized representative.
  - 3. The Consultant must not commence performance of work or services on a Task Order until it has been approved by the District's Water Utility Capital Division Deputy Operating Officer and notice to proceed has been issued by the District's Project Manager. No payment will be made for any work 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 the District for an individual Task Order will not exceed the amount agreed to in the Task Order.

#### **F. Conflict of Interest**

- 1. Consultant represents that there exists no actual or potential conflict of interest concerning the services to be performed under this Agreement.
- 2. Consultant represents that Consultant's performance under the Agreement does not require the breach of any agreement or obligation to keep in confidence the proprietary information of another party.
- 3. Consultant will not bring to the District or use in the performance of Consultant's duties under the Agreement any materials or documents of another party considered confidential or proprietary unless Consultant

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has obtained written authorization from such party, and the informed consent of the District, for the possession and use of such materials.

4. 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 will not act as a Consultant or expert for any party in support of any potential or active claim or legal action against the District by such party.
5. Consultant, Consultant's parent company, Consultant's subsidiaries, any affiliated entity sharing substantially similar ownership of or control with Consultant, or their subconsultants, will not submit a proposal: (i) for any contract to be awarded for construction management or the construction of any project that is related to the services provided pursuant to this Agreement; or (ii) in response to any request for proposal or District 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, (iii) for any single source products/services related to the services under this Agreement, or have a financial stake in any single source products/services resulting from this Agreement. However, subcontractors, vendors and suppliers providing no professional services such as but not limited to lab testing, soil borings, or other technical services may propose and contract with prime Contractor or the District for construction management or the construction.

#### **G. Term and Termination**

1. This Paragraph G., Term and Termination and the following Paragraph H., Consultant's Compensation Upon Termination or Suspension, of Section VII. Additional Terms and Conditions, replaces the second paragraph stated in the Standard Consultant Agreement portion of this Agreement, at Section VI. Changes in Work.

#### **2. Term and Automatic Termination**

This Agreement encompasses all services for which Consultant is responsible to provide within the time limits and not-to-exceed amount 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 amount of any Task Order.

#### **3. District's Rights**

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### REVISED APPENDIX ONE SCOPE OF SERVICES

- a. Formation of an Agreement between the Parties requires accomplishment of the following: (1) execution of the Agreement by Consultant; (2) submission by the Consultant, and acceptance by District, of all required insurance coverages and documents; (3) submission by the Consultant and acceptance by District of all required Form 700 documents; (4) submission by the Consultant and acceptance by District of all required QEMS certifications; and (5) execution of the Agreement by the District. No contract between the Parties is formed until all five actions items have been accomplished to the satisfaction of the District. The District's Project Manager will not issue a Notice to Proceed until all required documents have been submitted and accepted by the District, if applicable.
- b. Suspension: District may, by written notice to Consultant, suspend any or all services pursuant to this Agreement or to any individual Task Order. District may subsequently terminate this Agreement or any Task Order for convenience, or determine to proceed. If a decision to proceed is not made within ninety (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.
- c. Termination for Convenience: District may, by written notice to Consultant, terminate all or part of this Agreement or any Task Order at any time for District'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 Paragraph H., Consultant's Compensation Upon Termination or Suspension, referenced below.
- d. 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 thirty (30) days (or a reasonable extension thereof, if requested, which extension will not be unreasonably withheld) after receipt of written notice from District specifying such failure or violation, District 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.

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### REVISED APPENDIX ONE SCOPE OF SERVICES

- e. 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 District's convenience, and Consultant will receive payment that is allowed by this Agreement for a termination for convenience.
- f. The rights and remedies provided herein to District are in addition to any other rights and remedies provided by law, this Agreement, or a Task Order.

#### H. Consultant's Compensation Upon Termination or Suspension

- 1. In the event of termination of this Agreement or any Task Order, or suspension of services by District, Consultant shall receive compensation based on satisfactory performance, accepted by the District's Project Manager, as follows:
  - a. For 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. For Reimbursable Expenses—Consultant shall be entitled to receive compensation for all authorized Reimbursable Expenses incurred prior to termination and all authorized expenses incurred to demobilize from the Project after the date of termination.
  - c. In no event shall the total compensation paid for any item of service exceed the payment specified in the applicable Task Order for that item of service.

#### I. CALIFORNIA FAIR POLITICAL PRACTICES COMMISSION STATEMENT OF ECONOMIC INTEREST FORM 700 ("FORM 700"): Upon District'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 the District, an Assuming Office Statement. The Assuming Office Statement shall be filed:
  - a. Within thirty (30) calendar days of the effective date of this Agreement; and

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED APPENDIX ONE SCOPE OF SERVICES**

- b. Within thirty (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 the District 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 the District during the District's annual filing season as determined by the District.
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 the District a Leaving Office Statement when one of the following occurs:
  - a. Upon termination of this Agreement; and
  - b. Within thirty (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 the Districts Conflict of Interest Code.)
5. Consultant understands and agrees that its employees, officers, agents, subconsultants, and subcontractors may be disqualified from providing services to the District pursuant to the California Political Reform Act, Gov. Code Sections 81000 et. seq. and Government Code Section 1090. If Consultant's employees, officers, agents, subconsultants, and subcontractors are disqualified from providing services, on written notice from District's Project Manager, Consultant will have fifteen (15) calendar days to remove that employee(s), officer(s), agent(s), subconsultant's, and subcontractor's person from the Project and provide a replacement acceptable to the District.
6. Further, 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 the

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED APPENDIX ONE SCOPE OF SERVICES**

District is deemed a material breach and may result in termination of the Agreement for cause.

- J. District Quality Environmental Management System (QEMS) Awareness and Training (See Revised Attachment Seven to Revised Appendix One)

As an on-site provider of services that has the potential to result in significant environmental impacts, Consultant is required to review the QEMS Fact Sheet, incorporated herein by this reference hereto, with any of the employee(s), subcontractor(s), and/or subconsultant(s) ("Staff") performing services on behalf of the District, and make Staff aware of the District's Quality and Environmental Policy and their role and responsibility in achieving conformity with the expectations.

- K. Release of Information Prohibited

The Consultant is not permitted to provide any information concerning the Project to the media nor anyone other than authorized District personnel. The Consultant will not release any information pertinent to the Project under design or construction for publication, public disclosure, or in any other manner without first obtaining clearance and a release in writing from the District's Project Manager. 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 the District's Project Manager. Consultant will not communicate with the media regarding any such matters.

- L. Notices

All notices will be deemed to have been given when made in writing and when delivered or mailed to the representatives of the District and the Consultant at their respective addresses as follows:

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### REVISED APPENDIX ONE SCOPE OF SERVICES

#### District:

Santa Clara Valley Water District  
5750 Almaden Expressway  
San Jose, CA 95118-3638  
Attention: Katherine Oven, Deputy Operating Officer, Water Utility Capital  
Division  
E-mail: [koven@valleywater.org](mailto:koven@valleywater.org)  
Phone: (408) 630-3126

#### Consultant:

URS Corporation Americas  
300 Lakeside Drive, Suite 400  
Oakland, CA 94612  
Attention: Robert K. Green, Principal Geotechnical Engineer  
E-mail: [Robert.K.Green@urs.com](mailto:Robert.K.Green@urs.com)  
Phone: (510) 874-3036

#### M. Good Neighbor

The District always strives to be a good neighbor to the community adjacent to its facility. The Consultant shall ensure that disturbance to neighbors is minimized. The Consultant, its staff, and subconsultants will always interact with the members of the public in a polite and professional manner.

#### N. Revised Appendix One, Scope of Services, Attachments

The following listed Attachments referred to herein are incorporated in this Scope of Services as though set forth in full:

Revised Attachment One to Revised Appendix One—Consultant's Key Staff and Subconsultants (REVISED)

Revised Attachment Two to Revised Appendix One—Dispute Resolution (UNCHANGED)

Revised Attachment Three to Revised Appendix One—Task Order Template (REVISED)

Revised Attachment Four to Revised Appendix One—Non-Disclosure Agreement (NDA) (REVISED)

Attachment Five to Revised Appendix One—Reference Documents (UNCHANGED)

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SCOPE OF SERVICES**

Revised Attachment Six to Revised Appendix One—District Standards for GIS Products (REVISED)

Revised Attachment Seven to Revised Appendix One—QEMS Fact Sheet (REVISED)

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS

1. Consultant's key staff assigned to the Project are as follows:

| Team Member          | Project Role                            | Contact Information   |
|----------------------|---|---|
| Noel Wong            | Principal-in-Charge                     | 300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-3112<br><a href="mailto:noel.wong@aecom.com">noel.wong@aecom.com</a>                        |
| Robert Green         | Project Manager                         | 1300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-3036<br><a href="mailto:robert.k.green@aecom.com">robert.k.green@aecom.com</a>             |
| Rajendram Arulnathan | Chesbro and Uvas Task Leader            | 1300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-1763<br><a href="mailto:rajendram.arulnathan@aecom.com">rajendram.arulnathan@aecom.com</a> |
| Noel Wong            | QA/QC Officer                           | 300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-3112<br><a href="mailto:noel.wong@aecom.com">noel.wong@aecom.com</a>                        |
| David Simpson        | Field Investigation/Geology Task Leader | 300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-1775<br><a href="mailto:david.simpson@aecom.com">david.simpson@aecom.com</a>                |
| Shannon Leonard      | Hydrology/PMP/PMF Task Leader           | 300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-3215<br><a href="mailto:shannon.leonard@aecom.com">shannon.leonard@aecom.com</a>            |
| Steve Leach          | Permitting Task Leader                  | 300 Lakeside Drive, Suite 400<br>Oakland, CA 94612<br>510-874-3205<br><a href="mailto:steve.leach@aecom.com">steve.leach@aecom.com</a>                    |

2. If necessary and appropriate, Consultant will employ subconsultants it deems appropriate to the complexity and nature of the required Services. All subconsultants must, if their specialty is licensable, be licensed by the State of California to perform their specific Services. Consultant must obtain District's approval of all subconsultants. Upon

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### REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS

District's request, Consultant must provide copies of all subconsultant contract agreements. Any delegation or subcontracting of any services by Consultant will not operate to relieve Consultant of its responsibilities under this Agreement.

The following subconsultants are authorized to work on the Project:

| Firm                                  | Project Role                  | Contact Information   |
|---------------------------------------|-------------------------------|---|
| Applied Geodynamics, Inc.             | Analyses                      | Shahriar Vahdani<br><a href="mailto:shah.vahdani@gmail.com">shah.vahdani@gmail.com</a><br>1205 Contra Costa Drive<br>El Cerrito, CA 94530<br>510-816-1323   |
| Cal Engineering & Geology, Inc.       | Field Investigation           | Dan Peluso<br><a href="mailto:dpeluso@caleng.com">dpeluso@caleng.com</a><br>6455 Almaden Expressway, Suite 100<br>San Jose, CA 95120<br>408-440-4542        |
| Cooper Testing Labs, Inc.             | Laboratory Services           | Peter Jacke<br><a href="mailto:peter@coopertestinglabs.com">peter@coopertestinglabs.com</a><br>937 Commercial Street<br>Palo Alto, CA 94303<br>650-213-8436 |
| David Ford Consulting Engineers, Inc. | Hydraulics and Hydrology      | David Ford<br><a href="mailto:ford@ford-consulting.com">ford@ford-consulting.com</a><br>2015 J Street, Suite 200<br>Sacramento, CA 95811<br>916-447-8779    |
| dot.dat.inc.                          | Geotechnical Data Management  | Dotti S. Nelson<br><a href="mailto:dotdat@cox.net">dotdat@cox.net</a><br>4 Sweetwater<br>Irvine, CA 92603<br>949-854-3522                                   |
| Gamma Remote Sensing                  | Portable Radar Interferometer | Charles Werner<br><a href="mailto:cw@gamma-rs.ch">cw@gamma-rs.ch</a><br>Worbstrasse 225<br>Gümligen, Switzerland CH-3073<br>+41 31 950-7005                 |

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### REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS

| Firm                                   | Project Role                | Contact Information   |
|--|-----------------------------|---|
| GEI Consultants, Inc.                  | STID, PFMA/ISDR             | Stephen Verigin<br><a href="mailto:sverigin@geiconsultants.com">sverigin@geiconsultants.com</a><br>180 Grand Avenue, Suite 1410<br>Oakland, CA 94612<br>510-350-2900                      |
| Geoinsite, Inc.                        | PFMA/ISDR                   | William Cole<br><a href="mailto:rockguy@geoinsite.com">rockguy@geoinsite.com</a><br>15919 Orange Blossom Lane<br>Los Gatos, CA 95032<br>408-839-5404                                      |
| Lettis Consultants International, Inc. | Geology and Seismic Hazards | John Baldwin<br><a href="mailto:Baldwin@lettisci.com">Baldwin@lettisci.com</a><br>1981 North Broadway, Suite 330<br>Walnut Creek, CA 94596<br>925-482-0360 ext. 202                       |
| NORCAL Geophysical Consultants, Inc.   | Geophysical Surveys         | Kenneth Blom<br><a href="mailto:kblom@norcalgeophysical.com">kblom@norcalgeophysical.com</a><br>321A Blodgett Street<br>Cotati, CA 94931<br>707-796-7170                                  |
| Robert Y. Chew Geotechnical, Inc.      | Field Investigation         | Robert Chew<br><a href="mailto:Robert.chew@robertchewgeotech.com">Robert.chew@robertchewgeotech.com</a><br>55 New Montgomery Street, Suite 222<br>San Francisco, CA 94105<br>415-512-1881 |
| Taber Drilling                         | Geotechnical Exploration    | Steve Taber<br><a href="mailto:staber@taberdrilling.com">staber@taberdrilling.com</a><br>536 Galveston Street<br>West Sacramento, CA 95691<br>916-371-8234                                |
| Terra Mater, Inc.                      | STID                        | Carol Buckles<br><a href="mailto:cbuckles@terramatereng.com">cbuckles@terramatereng.com</a><br>917 Contra Costa Avenue<br>Berkeley, CA 94707<br>510-551-4160                              |
| TRA Environmental Sciences, Inc.       | Environmental Permitting    | Barbara Beard<br><a href="mailto:beard@traenviro.com">beard@traenviro.com</a><br>545 Middlefield Road, Suite 200<br>Menlo Park, CA 94025<br>650-464-5217                                  |

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### REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS

| Firm                               | Project Role                          | Contact Information   |
|------------------------------------|---------------------------------------|---|
| Underwater Resources, Inc.         | Outlet Pipe Inspection                | Thomas Belcher<br><a href="mailto:tbelcher@underwater-resources.com">tbelcher@underwater-resources.com</a><br>Pier 26, The Embarcadero<br>San Francisco, CA 94105<br>415-974-5464   |
| University of California, Berkeley | Cyclic Triaxial Tests                 | Michael Riemer<br><a href="mailto:riemer@ce.berkeley.edu">riemer@ce.berkeley.edu</a><br>451 Davis Hall<br>Berkeley, CA 94720-1710<br>510-642-7457   |
| University of California, Davis    | Instrumented Becker Penetration Tests | Jason DeJong<br><a href="mailto:idejong@ucdavis.edu">idejong@ucdavis.edu</a><br>3101 Engineering III<br>One Shields Avenue<br>Davis, CA 95616<br>530-754-8995   |
| Lloyd Cluff                        | Technical Review Board                | Lloyd Cluff<br><a href="mailto:lloydcluff@gmail.com">lloydcluff@gmail.com</a><br>33 Mountain Spring Avenue<br>San Francisco, CA 94114<br>415-564-9371   |
| Raymond Seed                       | Technical Review Board                | Raymond Seed<br><a href="mailto:RMSeed6@aol.com">RMSeed6@aol.com</a><br>2380 Watts Lane<br>Bozeman, MT 59718<br>925-899-6101  |
| Roger Bilham                       | Subject Matter Expert                 | Roger Bilham<br><a href="mailto:roger.bilham@Colorado.edu">roger.bilham@Colorado.edu</a><br>University of Colorado<br>Department of Geological Sciences<br>2200 Colorado Avenue<br>Boulder, CO 80309-0399<br>303-492-6189 |
| Ross Boulanger                     | Subject Matter Expert                 | Ross Boulanger<br><a href="mailto:rboulanger@ucdavis.edu">rboulanger@ucdavis.edu</a><br>University of California, Davis<br>Room 3151 Ghausi Hall<br>Davis, CA 95616-5294<br>530-752-2947                                  |

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS**

3. Consultant Key Staff and Subconsultants.
  - A. Consultant's key staff and Subconsultants assigned to perform the Services are identified in Revised Attachment One to Revised Appendix One, Consultant's Key Staff and Subconsultants.
  - B. The Project team organization chart and delegated responsibilities of each team member will be submitted to the District 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 the District's approval of all Subconsultants. Upon the District'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 the District, on written notice from the District, Consultant will have fifteen (15) calendar days to remove that person from the Project and provide a replacement acceptable to the District.
  - F. Consultant will not charge the District for the time it takes Consultant's replacement personnel to obtain the District-specific Project knowledge in the possession of the person(s) being replaced.
  - G. Consultant's Key Staff

The District 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. Consultants Subconsultants.
    1. The District 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.

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT ONE TO REVISED APPENDIX ONE CONSULTANT'S KEY STAFF AND SUBCONSULTANTS**

2. The District Project Manager may not approve any revisions to Consultant's list of authorized Subconsultants when the Subconsultant is deleted from the list; the services are not deleted from the Agreement; and the scope of services is not assumed by the Consultant. Such revisions to the list of authorized Subconsultants are subject to approval by the District and documented in an executed amendment to this Agreement.

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## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT TWO TO REVISED APPENDIX ONE DISPUTE RESOLUTION**

#### **1. CONSULTANT'S QUESTIONS AND CONCERNS**

Questions regarding the terms, conditions and services relating to this Agreement will be decided by the District who will furnish the decisions to Consultant in writing within thirty (30) days after receiving a written request from Consultant.

#### **2. DISPUTE RESOLUTION**

##### **A. Alternate Dispute Resolution (ADR)**

1. District intends to use 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 District.**

#### **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 District and Consultant.

#### **4. VOLUNTARY MEDIATION**

##### **A. In the event a dispute or issue is not resolved by the Internal Review process stated in the Standard Consultant Agreement, Section VIII. Resolution of Disputes, District and Consultant agree to attempt to resolve the matter by mediation. The External Review paragraph of Section VIII. is hereby deleted.**

##### **B. Said mediation is voluntary, non-binding, and intended to provide an opportunity for the Parties to evaluate each other's cases and arrive at a mutually agreeable solution.**

##### **C. These provisions relating to voluntary mediation shall not be construed or interpreted as mandatory arbitration.**

#### **5. INITIATION OF MEDIATION**

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

#### **6. REQUEST FOR MEDIATION**

##### **A. 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.**

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT TWO TO REVISED APPENDIX ONE DISPUTE RESOLUTION**

#### **7. SELECTION OF MEDIATOR**

- A. Upon receipt of a written request for mediation, unless otherwise agreed by the Parties, within fourteen (14) Days, the Parties will confer to select an appropriate mediator agreeable to all Parties.
- B. 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.

#### **8. QUALIFICATIONS OF A MEDIATOR**

- A. Any mediator selected must have expertise in the area of the dispute and be knowledgeable in the mediation process.
- B. 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.
- C. 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.

#### **9. VACANCIES**

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

#### **10. REPRESENTATION**

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

#### **11. TIME AND PLACE OF MEDIATION**

- A. The mediator will set the time of each mediation session.
- B. The mediation will be held at a convenient location agreeable to the mediator and the Parties, as determined by the mediator.
- C. All reasonable efforts will be made by the Parties and the mediator to schedule the first session within sixty (60) Days after selection of the mediator.

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT TWO TO REVISED APPENDIX ONE DISPUTE RESOLUTION**

#### **12. IDENTIFICATION OF MATTERS IN DISPUTE**

- A. The Parties shall comply with the process as required by the mediator, with regard to providing the mediator with 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.
- B. 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.

#### **13. AUTHORITY OF MEDIATOR**

- A. 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.
- B. The mediator is authorized to conduct joint and separate meetings with the Parties and to make oral and written recommendations for settlement.
- C. 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.
- D. 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.

#### **14. PRIVACY**

- A. Mediation sessions are private.
- B. The Parties and their representatives may attend mediation sessions.
- C. Other persons may attend only with the permission of the Parties and with the consent of the mediator.

#### **15. CONFIDENTIALITY**

Except as provided by California or federal law or regulation:

- A. The mediator will not divulge confidential information disclosed to a mediator by the Parties or by witnesses in the course of the mediation.

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT TWO TO REVISED APPENDIX ONE DISPUTE RESOLUTION**

- B. All records, reports, or other documents received by a mediator while serving as mediator, are confidential.
- C. 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.
- D. 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:
  - 1. Views expressed or suggestions made by the other Party with respect to a possible settlement of the dispute.
  - 2. Statements made by the other Party in the course of the mediation proceedings.
  - 3. Proposals made or views expressed by the mediator.
  - 4. Whether the other Party had or had not indicated willingness to accept a proposal for settlement made by the mediator.

#### **16. NO STENOGRAPHIC RECORD**

- A. There shall be no stenographic record of the mediation.

#### **17. TERMINATION OF MEDIATION**

- A. 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.

#### **18. EXCLUSION OF LIABILITY**

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

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## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT TWO TO REVISED APPENDIX ONE DISPUTE RESOLUTION**

#### **19. INTERPRETATION AND APPLICATION OF THESE MEDIATION PROVISIONS**

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

#### **20. EXPENSES**

- A. The expenses of witnesses for each Party must be paid by the Party producing the witnesses.
- B. 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.

#### **21. COMPENSATION FOR PARTICIPATION IN MEDIATION**

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

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT THREE TO REVISED APPENDIX ONE TASK ORDER TEMPLATE

Task Order No. \_\_\_\_\_

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

District: \_\_\_\_\_

Consultant: \_\_\_\_\_

**Dollar Amount of Task Order: Not-to-exceed \$** \_\_\_\_\_

1. Upon full execution of this Task Order Number: \_\_\_\_\_, as set forth in Revised Appendix One, Scope of Services, Article VII. Additional Terms and Conditions, paragraph E. Task Orders, and issuance of a notice to proceed by the District, 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 under this Task Order are described in Attachment A which is attached hereto and incorporated by this reference. Attachment A identifies the following:
  - a. The Consultant personnel to be assigned to perform the services, including resumes if not previously provided to the District.
  - b. The estimated number of hours required to perform the services assigned to each assigned Consultant personnel.
  - c. Estimated cost of each reimbursable expense, including any applicable fees.
  - d. Project schedule for completing the scope of services.
3. The Consultant shall be compensated at the hourly rates established in Revised Appendix Two of the Agreement. The Consultant agrees that it will provide all equipment, furnish all materials, except as may be otherwise noted in the Attachment A.
4. This Task Order is effective on the date of full execution by the authorized representatives of both Parties and remain in effect until the earlier of: completion of the tasks set forth in Attachment A or {enter expected completion date}.
5. Copies of applicable state and federal permits required to complete the work in Attachment A are attached to this Task Order, unless the Consultant previously provided the appropriate permits to the District.
6. The Consultant shall perform all services described in Attachment A to this Task Order in accordance with the terms and conditions of the Agreement.

**AMENDMENT NO. 2 TO AGREEMENT A3778A**

**ATTACHMENT THREE TO APPENDIX ONE  
TASK ORDER TEMPLATE**

7. Signatures:

Signature:

\_\_\_\_\_  
NAME OF CONSULTANT FIRM

\_\_\_\_\_  
DATE

Print Name

Print Title

Signature:

\_\_\_\_\_  
SANTA CLARA VALLEY WATER DISTRICT

\_\_\_\_\_  
DATE

Print Name

Print Title

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AMENDMENT NO. 2 TO AGREEMENT A3778A

REVISED ATTACHMENT FOUR TO REVISED APPENDIX ONE  
NON-DISCLOSURE AGREEMENT (NDA)



SANTA CLARA VALLEY WATER DISTRICT  
NON-DISCLOSURE AGREEMENT (NDA)

FC 1650 (03-19-08)

This Agreement is between the Santa Clara Valley Water District (hereinafter "District"), and ("Company") identified as:

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Street Address, City, State, Zip, Country)

Now, in consideration of the mutual covenants herein contained, District and Company agree as follows:

1. **Purpose.** This Agreement is to protect District from the misuse or inadvertent disclosure of District confidential and proprietary information that is disclosed in connection with the Company performing work for the District. District confidential information is described as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The information described above will hereinafter be referred to as "Confidential Information."

2. **Limits on Use of Confidential Information.** Company shall maintain in confidence and will not disclose or disseminate the Confidential Information, whether or not in written form. Company agrees that Company shall treat all Confidential Information with at least the same degree of care as Company accords its own confidential information. Company shall encrypt Confidential Information that is electronic data, and store hard copies in a locked secure location. Company further represents that Company exercises at least reasonable care to protect its own confidential information. If Company is not an individual, Company agrees that Company will only disclose Confidential Information to those of its employees who need to know such information, and certifies that such employees have previously signed a copy of this Agreement.
3. **Acknowledgment of Title.** District, by reason of this Agreement, has not relinquished any right of ownership to the Confidential Information. Nor does District create a non-exclusive right in favor of Company as to the Confidential Information. Company acknowledges that title to Confidential Information delivered to Company under this Agreement shall, at all times remain with District.

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT FOUR TO REVISED APPENDIX ONE NON-DISCLOSURE AGREEMENT (NDA)

4. **Restrictions on Use of Confidential Information.** Company shall not directly or indirectly disclose, display, provide, transfer or otherwise make available all or any part of the Confidential Information to any person (including its consultants and independent contractors), unless Company has received prior written permission from the District and such person previously signed a copy of this Agreement. Company shall not make copies of the Confidential Information or any portion thereof. Company acknowledges that Confidential Information may be utilized only in accordance with providing services to the District.
5. **Return.** Company agrees to return to District all Confidential Information. Company shall return to District all Confidential Information and copies thereof of documents, computer media and other items of District at such time as further retention is no longer necessary for future performance in connection with performing work for the District or upon 30 days written notice from District. In addition, Company agrees to erase, delete or destroy any notes, documents, magnetic media, or other computer storage, including system backups that contain any Confidential Information copies or derived from the Confidential Information. Company acknowledges that District, because of the unique nature of the Confidential Information, would suffer irreparable harm in the event that Company breaches its obligation under this Agreement in that monetary damages would be inadequate to compensate District for such breach. Company agrees that in such circumstances, District shall be entitled, in addition to monetary relief, to injunctive relief as may be necessary to restrain any continuing or further breach by Company, without showing or approving any actual damages sustained by District.
6. **Notice of Disclosure.** Company shall immediately notify District of any unauthorized disclosure, loss of Confidential Information and shall further take all reasonable steps to retrieve and prevent further unauthorized disclosure of such proprietary information. Such disclosure of a loss shall in no way limit District's remedies under this Agreement including, but not limited to, immediate injunctive relief. Notwithstanding the foregoing, nothing herein shall restrict the right of Company to disclose such Confidential Information that is disclosed pursuant to a judicial order, but only to the extent so ordered, provided, however, that Company receiving such order shall notify District of such order in sufficient time to permit District to intervene in response to such order and provided that the confidential or proprietary markings remain on the information disclosed.
7. **General**
  - 7.1 **Entire Agreement.** This Agreement sets forth the entire understanding and agreement between the parties hereto as to the subject matter of this Agreement and supersedes any previous communications, negotiations, warranties, representations, and prior non-disclosure agreements, either oral or written, with respect to obligations of confidentiality of the subject matter hereof, and no addition or modification of this Agreement shall be binding on either party hereto unless reduced to writing and duly executed by each of the parties hereto.
  - 7.2 **Applicable Law/Disputes.** This Agreement is governed by the laws of the State of California. In any dispute arising out of this Agreement, the parties hereby consent to personal and exclusive jurisdiction and venue in the State and Federal Courts in Santa Clara County, California.
  - 7.3 **Survival of Company's Obligations.** All obligations of Company under this Agreement shall survive the return of the Confidential Information and termination of this Agreement.

**AMENDMENT NO. 2 TO AGREEMENT A3778A**

**REVISED ATTACHMENT FOUR TO REVISED APPENDIX ONE  
NON-DISCLOSURE AGREEMENT (NDA)**

7.4 **Authority.** The undersigned individuals represent that they have the authority to enter into and bind the parties to this Agreement.

**COMPANY:**

**SANTA CLARA VALLEY WATER DISTRICT:**

**By:** \_\_\_\_\_  
(Signature)

**By:** \_\_\_\_\_  
(Signature)

**Name:** \_\_\_\_\_  
(Printed)

**Name:** \_\_\_\_\_  
(Printed)

**Title:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### ATTACHMENT ONE TO REVISED ATTACHMENT FOUR TO REVISED APPENDIX ONE PERSONAL NDA

I acknowledge that the Santa Clara Valley Water District ("District") will make available to me from time to time certain information that is highly confidential to the District. I acknowledge that such information is extremely sensitive and agree that I will not disclose all or any part of this confidential information to any person, firm, corporation, association, or partnership without the express written permission of the District. This confidential information includes, but is not limited to, the following kinds of information: citizen complaints, utility records, plans, security data, vulnerability assessments, draft documents, network data, control systems data, security protocols, personnel data, computer programs, remote application access, computer information licensed to the District, work product of the District's employees and agents, and other non-public information.

I will at all times hold all of the District's confidential information in trust and in the strictest confidence. This obligation shall continue after my employment at the District has ended. I will prevent the impermissible release of the District's confidential information. I will neither retain nor incorporate any of the confidential information into any database or any medium other than as may be required for the District's exclusive benefit. I will not duplicate or disclose or otherwise reveal such confidential information in any manner inconsistent with this NDA.

In addition, I will not perform any illegal acts with respect to the confidential information, and I will not share the password or account access provided exclusively to me. When leaving a workstation unattended, or out of sight, I will save my work and log off or lock the workstation to prevent unauthorized access. I will make no attempt to circumvent access codes or information protection schemes or uncover security loopholes or attempt to break authentication procedures or encryption protocols. I will make no attempts to increase the level of access to which I have been authorized. I will not attempt to use or obtain access codes in an unauthorized manner or from another user. I will not allow non-employees to access District computer systems.

I acknowledge that my faithful compliance with this NDA is necessary to protect the District and that any action on my part that is inconsistent with this NDA will cause the District irreparable and continuing harm. Therefore, if anything I do is inconsistent with this NDA, I agree that the District may obtain a court order to stop my inconsistent actions and to otherwise prevent any inconsistent actions, without the District having to post any bond or security for such order. I further agree that the District may pursue other remedies available to it, all of which are nonexclusive and cumulative.

#### PLEASE COMPLETE THE FOLLOWING SECTION (PLEASE PRINT):

|  |          |
|--|----------|
| Full Name:   |          |
| Company Name:  |          |
| Phone No.:   | Fax No.: |
| Email Address:   |          |
| What department(s) do you work with within the District? |          |
| Signature:   | Date:    |

**AMENDMENT NO. 2 TO AGREEMENT A3778A****ATTACHMENT FIVE TO REVISED APPENDIX ONE  
REFERENCE DOCUMENTS**

| Ref # | Description  |
|-------|--|
| 1.    | Dames & Moore, 1954b, Report—Part II field load tests & laboratory testing serpentine bedrock formation proposed Elmer J. Chesbro Dam, Llagas Creek, near Morgan Hill, Santa Clara County, California, for the South Santa Clara Valley Water Conservation District: unpublished consultant's report on file at the SCVWD, San Jose, CA. |
| 2.    | Department of Water Resources, Division of Safety of Dams, 1981, Task I inspection report for Elmer J. Chesbro Dam.  |
| 3.    | Department of Water Resources, Division of Safety of Dams, 2007, 2006-09 seismic reevaluation program (third screen) Elmer J. Chesbro Dam No. 72-11, Santa Clara County: unpublished internal DSOD memorandum by Barron, R.F., Ford, L.B., and Fraser, W.A., dated January 22, 2007.   |
| 4.    | Nelson, J. L., 2012, Surveillance Report, Chesbro Dam, no. 72-11, Santa Clara County.  |
| 5.    | Tepel, R.E., January 16, 1997, Elmer J. Chesbro Dam, No. 72-11, Santa Clara County, Interim Summary Report and Analysis of Surveillance Data, SCVWD unpublished report.  |
| 6.    | William Cotton and Associates, Inc., 1990, Reconnaissance of geology and landslide conditions, Chesbro reservoir and vicinity, Santa Clara County, California: unpublished consultant's report on file at the SCVWD, San Jose, CA.   |
| 7.    | Department of Water Resources, Division of Safety of Dams, 1982, Coyote Dam safety review report.  |
| 8.    | Earth Science Associates, 1977, Coyote Dam spillway final design report: unpublished consultant's report on file at SCVWD, San Jose, CA.   |
| 9.    | Earth Science Associates (ESA), 1985a, Geotechnical investigation and evaluation, Task 2, Coyote Dam spillway: unpublished consultant's report on file at SCVWD, San Jose, CA.   |
| 10.   | Earth Science Associates (ESA) and Calpine Corp., 1989, Coyote Dam outlet works, Task I, geotechnical investigation: unpublished consultant's report on file at SCVWD, San Jose, CA.   |
| 11.   | Earth Science Associates (ESA), 1990a, Coyote Dam outlet works, Task II, geotechnical investigation addendum report: unpublished consultant's report on file at SCVWD, San Jose, CA.   |
| 12.   | Earth Science Associates (ESA), 1990b, Geotechnical design summary report for Coyote Dam outlet works replacement: unpublished consultant's report on file at SCVWD, San Jose, CA.   |
| 13.   | Earth Science Associates (ESA), 1991b, Coyote Dam outlet works replacement, Task III, geologic mapping and construction observation, Volume II: unpublished consultant's report on file at SCVWD, San Jose, CA.  |
| 14.   | Galloway, J. D., Herrman, F. C., and Louderback, G. D., 1935, Report on the plans for the Coyote Dam of Santa Clara Valley Water Conservation District: unpublished consultant's report on file at SCVWD, San Jose, CA.  |
| 15.   | Geomatrix, 1994, Final report, evaluation of landslide potential at the left abutment of Coyote Dam: unpublished consultant's report on file at SCVWD, San Jose, CA.   |

# AMENDMENT NO. 2 TO AGREEMENT A3778A

## ATTACHMENT FIVE TO REVISED APPENDIX ONE REFERENCE DOCUMENTS

| Ref # | Description   |
|-------|---|
| 16.   | Geomatrix, 1997, Final report, evaluation of activity and hazard of Calaveras fault near Coyote Dam: consultant's report on file at SCVWD, San Jose, CA.  |
| 17.   | Marliave, C., 1936, Final geological report on Coyote Dam, situated on Coyote River in Santa Clara County: State of California Department of Public Works Division of Water Resources, internal memorandum report on file at SCVWD, San Jose, CA.   |
| 18.   | Nelson, J.L., Volpe, R.L., Tepel, R.E., and Baker, F.B., 2010, Coyote Dam an Incidental Fault Alignment Array Across the Central Calaveras Fault, Santa Clara County, California: in Knudsen, Baldwin, Brocher, Burgmann, Craig, Cushing, Hellweg, Wieggers, and Wong (Eds.), Proceedings of the Third Conference on Earthquake Hazards in the Eastern San Francisco Bay Area, October 22-24, 2008, California Geological Survey, California Department of Conservation, pp. 283-298. |
| 19.   | Proctor, R. J. and R. L. Volpe and Associates, 1988, Feasibility investigation and conceptual design, new outlet facilities, Coyote Dam: unpublished consultant's report on file at SCVWD, San Jose, CA.  |
| 20.   | SCVWD, 1985, Analysis of a hypothetical Coyote Dam failure and the resulting impact on Anderson Reservoir.  |
| 21.   | Scott, J. B., 1976, Reconnaissance of landslide conditions at Coyote reservoir: office report on-file at the SCVWD, San Jose, CA.   |
| 22.   | Tepel, R.E., 1985, Engineering geology evaluation of Coyote Dam spillway, Santa Clara Valley Water District Office Report.  |
| 23.   | Tibbetts, F.H., 1936, Earthquake-proof earth dams: July 2, 1936 Engineering News-Record, p. 10-13.  |
| 24.   | Tolman, C. F. and Tolman, J. V. S., 1934, Detailed geology of the Coyote Damsite and general geology of the Haywards and Calaveras-Sunol faults in the vicinity of the Coyote Damsite, Santa Clara County, California: unpublished consultant report on-file at the SCVWD, San Jose, CA.  |
| 25.   | Uhrhammer, R., Gee, L.S., Murray, M., Dreger, D., and Romanowicz, R., 1999, The Mw 5.1 San Juan Bautista, California earthquake of 12 August 1998: Seismological Research Letters, V. 70, No. 1, January/February 1999, p. 10-18.   |
| 26.   | Wahler Associates, 1977, Evaluation of stability and performance Coyote Dam, Santa Clara County, California: unpublished consultant report on-file at the SCVWD, San Jose, CA.  |
| 27.   | Department of Water Resources, Division of Safety of Dams, 1979, Task I inspection report for Uvas Dam.   |
| 28.   | Department of Water Resources, Division of Safety of Dams, 2006, 2006-09 seismic reevaluation program (third screen) Uvas Dam No. 72-12, Santa Clara County: unpublished internal DSOD memorandum by Malvick, E.J., Ordoubigian, A., and Lessman, J., dated October 27, 2006, 8 p.  |
| 29.   | ESA Consultants, 1995, Final design report, Uvas Dam right abutment seepage mitigation measures: unpublished consultant report on-file at the SCVWD, San Jose, CA.  |

**AMENDMENT NO. 2 TO AGREEMENT A3778A**

**ATTACHMENT FIVE TO REVISED APPENDIX ONE**

**REFERENCE DOCUMENTS**

| <b>Ref #</b> | <b>Description</b>   |
|--------------|--|
| 30.          | ESA Consultants, 1997, Final construction report, Uvas Dam right abutment seepage mitigation measures: unpublished consultant report on-file at the SCVWD, San Jose, CA.   |
| 31.          | Nelson, J. L., 2013, Surveillance Report, Uvas Dam, No. 72-12, Santa Clara County.   |
| 32.          | Wahler Associates, 1985, Construction Report: Uvas Dam Interceptor Drain Installation: unpublished consultant report on-file at the SCVWD, San Jose, CA.   |
| 33.          | William Cotton and Associates, Inc., 1990, Reconnaissance of geology and landslide conditions, Uvas reservoir and vicinity, Santa Clara County, California: unpublished consultant's report on file at the SCVWD, San Jose, CA.        |
| 34.          | AMEC Geomatrix, 2009, Technical Memorandum No. 3, Seismotectonic and Ground Motion Study, Seismic Stability Evaluation of DIP Task 1 Dams, Santa Clara County, CA: unpublished consultant's report on file at the SCVWD, San Jose, CA. |
| 35.          | Nelson, J.L., 2009, Foundation analysis report of Chesbro, Lenihan, Stevens Creek, and Uvas Dams (SSE2 Dams): Santa Clara Valley Water District report on file at SCVWD, San Jose, CA.   |
| 36.          | R.L. Volpe and Associates, 1990, Investigation of SCVWD dams affected by the Loma Prieta earthquake of October 17, 1989: unpublished consultant's report on file at the SCVWD, San Jose, CA.   |
| 37.          | SCVWD, 2005, Dam Safety Program Report: Santa Clara Valley Water District report dated May 2005.   |

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE DISTRICT'S STANDARD FOR GIS PROJECTS VERSION JULY 2017

#### A. INTRODUCTION

1. A Geographic Information System (GIS) is an organized collection of computer hardware, software, and geographic data designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.

#### B. GENERAL POLICIES

1. The diverse nature of GIS precludes policies that cover every situation that can arise. However, the general policies of the District as they apply to the GIS include:
  - a. The District GIS standard coordinate system is California State Plane Coordinate System (Feet) using the North American Datum of 1983 California Zone 3 (NAD 83) for horizontal data and the North American Vertical Datum of 1988 (NAVD 88) for vertical data;
  - b. Each dataset must have a complete, District-compliant metadata file specific to that dataset. Datasets that do not include metadata will not be accepted by the District; and
  - c. All GIS products must be reviewed by the Software Services Unit or a reviewer authorized by the Software Services Unit before they can be accepted by the District.

#### C. DEFINITIONS

1. **ESRI**—Environmental Systems Research Institute. A GIS software company. The District is standardized on ESRI GIS software.
2. **Dataset**—Any tabular, vector, or raster data including, but not limited to, ESRI shapefile, ESRI geodatabase, dBase IV (DBF), ESRI GRID, Multiresolution Seamless Image Database (MrSID), Tag Image File (TIFF or GeoTIFF) format, or other ESRI-compliant format.
3. **Metadata**—Information that describes the content, quality, condition, origin, and other characteristics of data or other pieces of information. Metadata for spatial data may describe and document its subject matter; how, when, where, and by whom the data was collected; availability and distribution information; its projection, scale, resolution, and accuracy; and its reliability with regard to some standard. Metadata consists of properties and documentation. Properties are derived from the data source (for example, the coordinate system and projection of the data), while documentation is entered by a person (for example, keywords used to describe the data).

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4. **PRJ File**—The PRJ (projection) file contains the coordinate system information for the data.
5. **World File**—A text file containing information about where an image should be displayed in real world coordinates. When an image has a properly configured world file, GIS software can use the information (a total of six values, including the starting coordinates, the cell size in both x and y dimensions, and any rotation and scaling information) to accurately overlay the image with any other data already in that coordinate system.

#### D. DATASET STANDARDS

1. All GIS feature datasets will be created in ESRI shapefile, ESRI geodatabase, or other ESRI-compliant format. Tabular datasets will be in dBase IV (DBF) format, ESRI geodatabase, or other ESRI-compliant format. Image data will be in ESRI GRID, Multiresolution Seamless Image Database (MrSID), or Tag Image File (TIFF or GeoTIFF) format.
2. All GIS datasets must include coordinate system information. Shapefiles must include ESRI-compliant PRJ files and image data must include ESRI-compliant World files. PRJ files can be created using ArcGIS. Non-ArcGIS users can create a PRJ file by copying the information from Attachment Four-A Sample PRJ file for California State Plane Zone 3 NAD 83 feet, pasting it in Notepad, and then saving it as the name of the dataset with a PRJ extension. For example, the shapefile **creek.shp** should have a PRJ file named **creek.prj**.

#### E. METADATA STANDARDS

1. A metadata file for each dataset must be completed in order to comply with the Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata. The Content Standard for Digital Geospatial Metadata adopted by the State Land Information Board, State of California, can be found on the Federal Geographic Data Committee website (<https://www.fgdc.gov/>).
2. If a new dataset is derived from an existing dataset that does not have metadata, a complete, District-compliant metadata file must be provided with the new dataset.
3. If using ArcGIS software, metadata should be created using ArcCatalog and provided in eXtensible Markup Language (XML) file format. All required fields must be completed. A list of required fields can be found in Attachment Four-B SCVWD GIS Dataset Metadata Template. Attachment Four-C SCVWD GIS Dataset Metadata Help provides information about each required field.

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4. If not using ArcGIS software, metadata can be provided in Rich Text (RTF) file format using the District's metadata template, Attachment Four-B SCVWD GIS Dataset Metadata Template.
5. If the originator of the dataset is not a District employee, metadata contact information must be provided for both the originator as well as a District employee who can answer questions about the dataset.

#### **F. PROJECT STANDARDS**

1. ArcGIS Project files (MXD) provided to the District must be created so that they can be easily transferred to the District's file system without broken links to datasets or pictures. Any non-standard marker symbols, fonts, or other special files must be included with the Project. Project files must be saved with relative path names. Pictures (such as logos) must be saved as part of the document. Use of layer packages (LPK) and map packages (MPK) is encouraged.

#### **G. APPLICATION STANDARDS**

1. All desktop, web, and mobile GIS applications must be developed using technology compatible with ESRI products if they are to be transferred to the District for hosting and/or maintenance. Alternatively, the project should include budget to fund hosting, maintenance, and support of the application. The Software Services Unit must be contacted before development begins on any desktop, web, or mobile GIS application to discuss specific requirements.

#### **H. CARTOGRAPHY STANDARDS**

1. All maps must have the following standard map components:
  - a. Title
  - b. Legend
  - c. North Arrow
  - d. Scale Bar
  - e. Map Date
  - f. Map Author
  - g. Data Sources/Credits (when applicable)

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## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT SIX TO APPENDIX ONE DISTRICT STANDARDS FOR GIS PRODUCTS JULY 2017**

#### **I. ATTACHMENTS**

The following listed Attachments referred to herein are incorporated in this document (District Standards for GIS Products) as though set forth in full:

1. Attachment A Sample PRJ File for California State Plane Zone NAD 83 Feet
2. Attachment B SCVWD GIS Dataset Metadata Template
3. Attachment C SCVWD GIS Dataset Metadata Help

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**REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE  
DISTRICT'S STANDARD FOR GIS PROJECTS  
VERSION JULY 2017**

**ATTACHMENT A  
SAMPLE PRJ FILE FOR CALIFORNIA STATE PLANE  
ZONE III NAD 83 FEET**

PROJCS["NAD\_1983\_StatePlane\_California\_III\_FIPS\_0403\_Feet",GEOGCS["GCS\_North\_American\_1983",DATUM["D\_North\_American\_1983",SPHEROID["GRS\_1980",6378137,298.257222101]],PRIMEM["Greenwich",0],UNIT["Degree",0.017453292519943295]],PROJECTION["Lambert\_Conformal\_Conic"],PARAMETER["False\_Easting",6561666.666666666],PARAMETER["False\_Northing",1640416.666666667],PARAMETER["Central\_Meridian",-120.5],PARAMETER["Standard\_Parallel\_1",37.06666666666667],PARAMETER["Standard\_Parallel\_2",38.43333333333333],PARAMETER["Latitude\_Of\_Origin",36.5],UNIT["Foot\_US",0.30480060960121924]]

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**AMENDMENT NO. 2 TO AGREEMENT A3778A**  
**REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE**  
**DISTRICT'S STANDARD FOR GIS PROJECTS**  
**VERSION JULY 2017**

**ATTACHMENT B**  
**SCVWD GIS DATASET METADATA TEMPLATE**

**FGDC METADATA INFORMATION.** REQUIRED INFORMATION FOR FGDC COMPLIANCE—ALL ITEMS UNDER "REQUIRED INFORMATION" MUST BE COMPLETED!

**A. REQUIRED INFORMATION**

1. CITATION INFORMATION
  - a. ORIGINATOR:
  - b. PUBLICATION DATE:
  - c. TITLE:
2. DESCRIPTION INFORMATION
  - a. ABSTRACT:
  - b. PURPOSE:
3. TIME PERIOD OF CONTENT INFORMATION
  - a. CALENDAR DATE:
  - b. CURRENTNESS REFERENCE:
4. STATUS INFORMATION
  - a. PROGRESS:
  - b. UPDATE FREQUENCY:
5. KEYWORDS INFORMATION
  - a. THEME:
  - b. THESAURUS:
6. ACCESS INFORMATION
  - a. ACCESS CONSTRAINTS:
  - b. USE CONSTRAINTS:
7. ATTRIBUTE INFORMATION
  - a. ATTRIBUTE LABEL:
  - b. ATTRIBUTE DEFINITION:
8. POINT OF CONTACT INFORMATION  
SCVWD CONTACT:

**AMENDMENT NO. 2 TO AGREEMENT A3778A**

**REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE  
DISTRICT'S STANDARD FOR GIS PROJECTS  
VERSION JULY 2017**

**ATTACHMENT B  
SCVWD GIS DATASET METADATA TEMPLATE**

Attn: GIS Analyst  
Santa Clara Valley Water District  
5750 Almaden Expressway  
San Jose, CA 95118-3614  
(408) 630-3040

9. DISTRIBUTION CONTACT INFORMATION (If Applicable)

- a. CONTACT PERSON:
- b. CONTACT ORGANIZATION:
- c. ADDRESS:
- d. CITY:
- e. STATE OR PROVINCE:

10. METADATA CONTACT INFORMATION

- a. CONTACT PERSON:
- b. CONTACT ORGANIZATION:
- c. ADDRESS:
- d. CITY:
- e. STATE OR PROVINCE:
- f. METADATA DATE:

11. SPATIAL REFERENCE INFORMATION

- a. PROJECTION: California State plane, NAD 83, Zone 3, Feet

**B. ADDITIONAL INFORMATION**

1. DATA ACCURACY/QUALITY

- a. ORIGINAL SOURCE/SCALE:
- b. LOGICAL CONSISTENCY:
- c. COMPLETENESS:
- d. PROCESS DESCRIPTION:
- e. ATTRIBUTE ACCURACY REPORT:

2. NOTES:

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## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE DISTRICT'S STANDARD FOR GIS PROJECTS VERSION JULY 2017**

#### **ATTACHMENT C SCVWD GIS DATASET METADATA HELP**

**FGDC METADATA INFORMATION.** REQUIRED INFORMATION FOR FGDC COMPLIANCE—ALL ITEMS UNDER "REQUIRED INFORMATION" MUST BE COMPLETED!

#### **A. REQUIRED INFORMATION**

##### **1. CITATION INFORMATION**

- a. **ORIGINATOR:** The organization or individual who developed the data; for example, authors would be the originators of a book.
- b. **PUBLICATION DATE:** The date when the data set is made available for release or otherwise published. Dates can be provided as a year, a year and a month, or as a year, month, and day. Dates should be provided in the format YYYYMMDD (e.g., 20000921). If the publication date is unknown, put unknown. If the material (data) is unpublished, put unpublished material.
- c. **TITLE:** The name of the dataset, filename.

##### **2. DESCRIPTION INFORMATION**

- a. **ABSTRACT:** Abstract briefly describes the "what" aspects of the data. For example, what information is in the data set? What area is covered?
- b. **PURPOSE:** Purpose describes the "why" aspects. For example, why was the data set created?

##### **3. TIME PERIOD OF CONTENT INFORMATION**

- a. **CALENDAR DATE:** The year (and optionally month, or month and day) for which the data set corresponds to the ground, or "ground condition." The ground condition is the date for when the real world looked the way it is described by the data (e.g., the calendar date/ground condition for a set of aerial photographs would be the date or dates that the pictures were taken). Dates should be provided in the format YYYYMMDD (e.g., 20000921). If the data was collected during a series of dates, please provide a beginning date and an ending date (e.g., Beginning Date: 20020912, Ending Date: 20031225).
- b. **CURRENTNESS REFERENCE:** Indicate the basis on which the time period of content information was determined. Most potential users are interested in a data set's currentness with regard to the "ground condition" (that is, when the "real world" looked the way it is described in

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE DISTRICT'S STANDARD FOR GIS PROJECTS VERSION JULY 2017**

#### **ATTACHMENT C SCVWD GIS DATASET METADATA HELP**

the data set). Unfortunately, sometimes only the date that the information was recorded or published—perhaps weeks, months, or even years after it was collected—is known. Or the time period of content dates may have been derived in some other fashion (e.g., from a text phrase such as Summer, 1992). The Currentness Reference element requires the producer to identify whether the Time Period of Content dates refer to the ground condition, to some later time when the information was published, or are derived from some source. The choices for this section would be: ground condition, publication date, or free text.

#### **4. STATUS INFORMATION**

- a. **PROGRESS:** The state of the data set. Use words such as complete, in work, or planned.
- b. **UPDATE FREQUENCY:** The frequency with which changes and additions are made to the data set after the initial data set is complete. Use words such as annually, as needed, continually, daily, irregular, monthly, none planned, quarterly, unknown, weekly, or other text describing when the data is updated.

#### **5. KEYWORDS INFORMATION**

- a. **THEME:** Common use word or phrase (keywords) used to describe the subject of the data set. Keywords are words or phrases that index the contents of the data source; they are very useful when searching for data. Theme is not the file name (e.g., creeks.shp, pipeline.shp, etc.).
- b. **THESAURUS:** You must specify whether or not the theme keywords were derived from a formal thesaurus. If not, type "None"; otherwise, provide the name of the thesaurus.

#### **6. ACCESS INFORMATION**

- a. **ACCESS CONSTRAINTS:** Restrictions and legal prerequisites for accessing the data set. If there are no access constraints, the value of the appropriate element should be "None."
- b. **USE CONSTRAINTS:** Restrictions and legal prerequisites for using the data set after access is granted. If there are no use constraints, the value of the appropriate element should be "None."

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE DISTRICT'S STANDARD FOR GIS PROJECTS VERSION JULY 2017**

#### **ATTACHMENT C SCVWD GIS DATASET METADATA HELP**

7. **ATTRIBUTE INFORMATION:** Attribute Labels and Definitions must be included for each attribute.
  - a. **ATTRIBUTE LABEL:** The name of the attribute field.
  - b. **ATTRIBUTE DEFINITION:** A description of the attribute necessary to clarify or explain the dataset.
8. **POINT OF CONTACT INFORMATION:** The name of the individual/organization to contact to gain information about the data set. The current information will be used as the default for the point of contact information.
  - a. **SCVWD CONTACT:**  
  
GIS Analyst  
Santa Clara Valley Water District  
5750 Almaden Expressway  
San Jose, CA 95118-3614  
(408) 630-3040
9. **DISTRIBUTION CONTACT INFORMATION (If Applicable):** The name of the individual/organization that is responsible for the creation and distribution of the original data set.
  - a. **CONTACT PERSON:** The name of the individual to contact where the data set was acquired.
  - b. **CONTACT ORGANIZATION:** The name of the organization to contact where the data set was acquired.
  - c. **ADDRESS:** The address of the organization or the individual.
  - d. **CITY:** The city of the address.
  - e. **STATE OR PROVINCE:** The state or province of the address.
10. **METADATA CONTACT INFORMATION:** The party who is responsible for creating the metadata must be included as the metadata contact; they should be able to answer questions about or receive reports about errors in the metadata.
  - a. **CONTACT PERSON:** The name of the individual who created the metadata.

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### REVISED ATTACHMENT SIX TO REVISED APPENDIX ONE DISTRICT'S STANDARD FOR GIS PROJECTS VERSION JULY 2017

#### ATTACHMENT C SCVWD GIS DATASET METADATA HELP

- b. CONTACT ORGANIZATION: The **organization** associated with the creation of the metadata.
- c. ADDRESS: The address of the organization or the individual.
- d. CITY: The city of the address.
- e. STATE OR PROVINCE: The state or province of the address.
- f. METADATA DATE: When the metadata was last updated (YYYYMMDD).

#### 11. SPATIAL REFERENCE INFORMATION

- a. PROJECTION: California State plane, NAD 83, Zone 3, Feet

### B. ADDITIONAL INFORMATION

#### 1. DATA ACCURACY/QUALITY

- a. ORIGINAL SOURCE/SCALE: The original source and scale at which the data was derived from.
- b. LOGICAL CONSISTENCY: Describes the topological integrity of the data. For example, do lines intersect only where intended? Are there any duplicate lines? Are any polygons too small? You may want to report the software used to test and verify the topological integrity of the data.
- c. COMPLETENESS: Includes information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data. For example, you may want to include information about thresholds such as the minimum area for polygons.
- d. PROCESS DESCRIPTION: Provide details of the steps taken to construct the data. For each detail, provide a description including the parameters or tolerances used; as well as dates, software, and the process contact. (i.e., "update log")
- e. ATTRIBUTE ACCURACY REPORT: An explanation of the accuracy of the identification of entities and assignments of values in the data set and a description of the tests used. Attribute descriptions should go in this section as well.

#### 2. NOTES:

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT SEVEN TO REVISED APPENDIX ONE QEMS FACT SHEET



#### What is ISO?

The International Organization for Standardization (ISO) is the world's largest developer of voluntary international standards, which are state of the art specifications for products, services, and good practices, helping make industry more efficient and effective. For the Santa Clara Valley Water District's (district) customers and public, this means greater confidence in consistent, high quality products and services the district provides.

The district has extensive history of ISO commitment, having first been registered to ISO 9001 in 2002 for Quality Management Systems and to ISO 14001 in 2004 for Environmental Management Systems.

#### Principles of ISO

The district's management system is implemented based on the following ISO principles:

- **Customer Focus:** customer satisfaction.
- **Leadership on purpose and direction:** management creates engagement.
- **Involvement of people at all levels:** everyone is involved.
- **Process approach to resources and activities:** process consistency and stability.
- **Systems approach to management:** plan the work; work the plan.
- **Continual improvement as a permanent objective:** seek regular, constant improvement.
- **Factual approach to decision making:** ensure the facts before making decisions.
- **Mutually beneficial relationships:** if they fail, then the organization fails.

#### What are the Benefits of ISO?

- Improves efficiency and productivity.
- Reduces variation, waste, inefficiencies, and defects.
- Facilitates continual improvement.
- Improves process consistency and stability.
- Improves employee motivation and participation.
- Improves customer confidence and satisfaction.
- Improves conformity to quality and environmental requirements.

#### District's Quality and Environmental Policy

The Santa Clara Valley Water District is committed to organizational excellence and

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT SEVEN TO REVISED APPENDIX ONE QEMS FACT SHEET

environmental stewardship, and as such, maintains an integrated Quality and Environmental Management System (QEMS) conforming to ISO standards. The QEMS supports the organization's continual improvement through the development of a robust employee knowledge base, which ensures continuity of daily operations and facilitates succession planning. Compliance with this policy is the responsibility of each individual working for or on behalf of the District.

#### Purpose

Provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

#### Customers

Meet customer requirements and enhance customer satisfaction.

#### Environmental Stewardship

Provide environmental stewardship through prevention of pollution and minimizing and managing environmental impacts by setting and regularly reviewing quality and environmental objectives.

#### Continual Improvement

Ensure the QEMS is regularly monitored and improved in accordance with ISO requirements to ensure that all District products and services offer the highest level of quality while maximizing the District's environmental stewardship efforts.

#### Compliance

Compliance with Board policies and statutory and regulatory requirements related to the District's quality and environmental processes.

#### Policy, Objectives, and Targets

Ensure this policy is documented, maintained, and implemented, and, in addition to the District's quality and environmental objectives and targets, reviewed for continuing suitability through periodic Management Reviews.

#### Awareness and Competence

Ensure, through workforce development, training, communication, and succession planning, that each individual working for and on behalf of the District has the awareness, skills, and knowledge to carry out this policy in a manner that maximizes effectiveness, ensures continuity of daily operations, promotes continual improvement, and contributes to environmental stewardship.

#### Public

Ensure this policy is available to the public.

### District's Significant Environmental Aspects

For each type of activity, product, or service, the district has identified its unique environmental aspects and determined the most significant environmental aspects that have or could have a significant environmental impact.

Management recognizes the following two major activities, within the scope of the QEMS, as having or could have a significant impact on the environment:

#### **Bulk Chemical Storage**

Amendment No. 2 to Agreement A3778A

Dam Safety Evaluation of Coyote, Chesbro, and Uvas Dams (DSE1)

Ver. 10/17/17

C14144

CAS File #4513  
Attachment 1

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED ATTACHMENT SEVEN TO REVISED APPENDIX ONE QEMS FACT SHEET

The district water treatment plants utilize several bulk chemicals in the water treatment process. The chemical of greatest concern, which could create a significant impact, is 19.5% aqueous ammonia. This chemical is regulated under the California Accidental Release Program. This chemical is singled out for greater control because accidental releases have the potential to create offsite consequences that could spread to residential neighborhoods adjacent to the water treatment plants.

#### ***Construction of water utility and flood protection capital projects***

Construction of water utility infrastructure and flood protection projects can involve significant changes to riparian environments and other landforms. The district recognizes the impact of these changes by integrating projects into watersheds as a whole, ensuring that ecological functions and processes are supported, ensuring that the quality and availability of water are protected for ecological and water supply functions, and that environmental impacts of projects are avoided, minimized, or mitigated.

#### **District's Quality and Environmental Objectives**

The district has identified operational objectives throughout the organization. Specifically, in support of ISO, the district analyzes and determines goals for meeting customer product requirements and overall environmental goals consistent with the environmental policy.

The following in-scope quality and environmental objectives act as a general framework for continual improvement in the organization.

#### ***Quality Objectives:***

- Prepare and respond effectively to flood emergencies countywide to protect life and property.
- Current and future water supply for municipalities, industries, agriculture, and the environment is reliable.
- Reliable high-quality drinking water is delivered.
- Maintain effective relationships with the retailer and other stakeholders to ensure high quality, reliable drinking water.
- Provide natural flood protection for residents, businesses, and visitors.
- Protect parcels from flooding by applying an integrated watershed management approach that balances environmental quality and protection from flooding.

#### ***Environmental Objectives:***

- Prepare for and respond to emergencies that threaten local waterways.
- Reduce greenhouse gas emissions to achieve carbon neutrality by 2020.

#### **Environmental Impacts**

Pollution prevention is the cornerstone of ISO's environmental standard. ISO requires that every individual working for or on behalf of the District is responsible for being aware of how their work could impact or potentially impact the environment. ISO specifies that staff, vendors, and contractors are aware of the QEMS policy, the District's significant environmental aspects, and

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Dam Safety Evaluation of Coyote, Chesbro, and Uvas Dams (DSE1)

Ver. 10/17/17

C14144

CAS File #4513

Attachment 1

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### REVISED ATTACHMENT SEVEN TO REVISED APPENDIX ONE QEMS FACT SHEET

the impacts of their work on the environment. Processes and programs are designed and implemented to help control environmental impacts resulting from District operations and therefore, deviating from these could have unintended adverse impacts on the environment.

#### Assessing the QEMS for Effectiveness

To ensure that the district is continually improving its QEMS and conforms to the ISO standards, regularly scheduled audits of the system are conducted by an external third party. This organization, known as a registrar, audits the QEMS and makes findings based on interviews and review of district procedures and records. Any deviations from the ISO standards are captured as non-conformities and require the district to take the necessary corrective and preventive actions to prevent reoccurrence. If the district is found to be in conformance to the ISO standards of which it is registered, the registrar recommends certification.



**CONTACT US**

For more information, contact us at **(408) 265-2600** or by email at **ISOMgtRep@valleywater.org**. Or use our **Access Valley Water** customer request and information system at **valleywater.org** to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.

*Follow us on:*

-  /scvwd
-  /valleywater
-  /valleywater



 To get eNews, text **VALLEYWATER** to **22828**.

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX TWO FEES AND PAYMENTS

#### I. GENERAL

Payment for all services performed by Consultant to the satisfaction of the District as described in Revised Appendix One, Scope of Services for this Agreement will be based on the Total Not-to-Exceed (NTE) Fees stated in this Revised Appendix Two for the completion of the associated tasks. The District will make payments to the Consultant according to the terms provided for in this Revised Appendix Two. Payments made by the District to the Consultant for services rendered will be considered full compensation for all personnel, materials, supplies, subconsultant(s), and equipment including reimbursable, travel, and per diem expenses incurred by the Consultant to complete the work.

#### II. TOTAL AUTHORIZED FUNDING

Total payment for services performed, as described in Revised Appendix One, Scope of Services, will not exceed a total amount of **\$8,600,359** during the term of this Agreement. Under no conditions will the total compensation to the Consultant exceed this NTE amount without prior written approval in the form of an amendment to this Agreement executed by the District's Board of Directors ("Board"), or Chief Executive Officer, or designee, as authorized by the Board. The Consultant guarantees that it will complete the contracted Scope of Services for the Total NTE Amount stated herein.

#### III. COST BREAKDOWN

The not-to-exceed total compensation of this Agreement consists of the following task fee breakdown. No services will be performed or fees paid by the District to the Consultant for Supplemental Services without prior written authorization by the District as stated in Revised Appendix One of this Agreement.

#### COST BREAKDOWN BY MAJOR TASK FOR EACH DAM

##### Original Agreement

| Task | Task Name  | Coyote Dam  | Chesbro Dam | Uvas Dam    | Total Fixed NTE Fees |
|------|--|-------------|-------------|-------------|----------------------|
| 1    | Project Management Services  | \$152,746   | \$107,468   | \$107,468   | <b>\$367,682</b>     |
| 2    | Data Collection and Preliminary Field Investigation (including Conditional Tasks)                            | \$1,012,791 | \$488,982   | \$532,129   | <b>\$2,033,902</b>   |
| 3    | Updated Probable Maximum Flood (PMF) Studies   | \$32,566    | \$28,778    | \$28,778    | <b>\$90,122</b>      |
| 4    | Inspections and Supporting Technical Information Documents (STID)  | \$93,940    | \$192,146   | \$182,838   | <b>\$468,924</b>     |
| 5    | Seismic Stability Evaluations (including Conditional Tasks)  | \$1,613,497 | \$1,208,182 | \$1,183,855 | <b>\$4,005,534</b>   |
| 6    | Independent Dam Safety Review (IDSR) and Potential Failure Mode Analysis (PFMA) Workshop and Recommendations | \$120,039   | \$109,346   | \$109,346   | <b>\$338,731</b>     |

**AMENDMENT NO. 2 TO AGREEMENT A3778A****REVISED APPENDIX TWO  
FEES AND PAYMENTS**

| Task                    | Task Name             | Coyote Dam         | Chesbro Dam        | Uvas Dam           | Total Fixed NTE Fees |
|-------------------------|-----------------------|--------------------|--------------------|--------------------|----------------------|
| 7                       | Supplemental Services | \$168,430          | \$163,517          | \$163,517          | <b>\$495,464</b>     |
| <b>Total NTE Amount</b> |                       | <b>\$3,194,009</b> | <b>\$2,298,419</b> | <b>\$2,307,931</b> | <b>\$7,800,359</b>   |

**Amendment No. 1**

| Task                    | Task Name  | Coyote Dam         | Chesbro Dam        | Uvas Dam           | Total Fixed NTE Fees |
|-------------------------|--|--------------------|--------------------|--------------------|----------------------|
| 1                       | Project Management Services  | \$152,746          | \$107,468          | \$107,468          | <b>\$367,682</b>     |
| 2                       | Data Collection and Preliminary Field Investigation (including Conditional Tasks)                            | \$950,047          | \$415,615          | \$444,998          | <b>\$1,810,660</b>   |
| 3                       | Updated Probable Maximum Flood (PMF) Studies   | \$32,566           | \$28,778           | \$28,778           | <b>\$90,122</b>      |
| 4                       | Inspections and Supporting Technical Information Documents (STID)  | \$93,940           | \$192,146          | \$182,838          | <b>\$468,924</b>     |
| 5                       | Seismic Stability Evaluations (including Conditional Tasks)  | \$1,613,497        | \$1,208,182        | \$1,183,855        | <b>\$4,005,534</b>   |
| 6                       | Independent Dam Safety Review (IDSR) and Potential Failure Mode Analysis (PFMA) Workshop and Recommendations | \$120,039          | \$109,346          | \$109,346          | <b>\$338,731</b>     |
| 7                       | Supplemental Services  | \$231,174          | \$236,884          | \$250,648          | <b>\$718,706</b>     |
| <b>Total NTE Amount</b> |  | <b>\$3,194,009</b> | <b>\$2,298,419</b> | <b>\$2,307,931</b> | <b>\$7,800,359</b>   |

**Amendment No. 2**

| Task | Task Name  | Coyote Dam  | Chesbro Dam | Uvas Dam    | Total Fixed NTE Fees |
|------|--|-------------|-------------|-------------|----------------------|
| 1    | Project Management Services  | \$152,746   | \$107,468   | \$107,468   | <b>\$367,682</b>     |
| 2    | Data Collection and Preliminary Field Investigation (including Conditional Tasks)                            | \$950,047   | \$415,615   | \$444,998   | <b>\$1,810,660</b>   |
| 3    | Updated Probable Maximum Flood (PMF) Studies   | \$32,566    | \$28,778    | \$28,778    | <b>\$90,122</b>      |
| 4    | Inspections and Supporting Technical Information Documents (STID)  | \$93,940    | \$192,146   | \$182,838   | <b>\$468,924</b>     |
| 5    | Seismic Stability Evaluations (including Conditional Tasks)  | \$1,613,497 | \$1,208,182 | \$1,183,855 | <b>\$4,005,534</b>   |
| 6    | Independent Dam Safety Review (IDSR) and Potential Failure Mode Analysis (PFMA) Workshop and Recommendations | \$120,039   | \$109,346   | \$109,346   | <b>\$338,731</b>     |

**AMENDMENT NO. 2 TO AGREEMENT A3778A****REVISED APPENDIX TWO  
FEES AND PAYMENTS**

| <b>Task</b>             | <b>Task Name</b>      | <b>Coyote Dam</b>  | <b>Chesbro Dam</b> | <b>Uvas Dam</b>    | <b>Total Fixed NTE Fees</b> |
|-------------------------|-----------------------|--------------------|--------------------|--------------------|-----------------------------|
| 7                       | Supplemental Services | \$531,174          | \$486,884          | \$500,648          | <b>\$1,518,706</b>          |
| <b>Total NTE Amount</b> |                       | <b>\$3,494,009</b> | <b>\$2,548,419</b> | <b>\$2,557,931</b> | <b>\$8,600,359</b>          |

**IV. TERMS AND CONDITIONS**

Payments for work completed, as described in Revised Appendix One, Scope of Services, will be based on the following terms:

- A. District will pay for services provided by the Consultant according to the schedule of rates for professional, technical, and administrative personnel as listed below in the Hourly and Unit Rate Schedule.
- B. The stated hourly rates are effective for the term of this Agreement unless otherwise revised as indicated. After twelve (12) months from the date this Agreement is entered into by parties ("anniversary date"), and each 12 months thereafter, these hourly and unit rates may be negotiated by the Consultant and the District, provided Consultant submits written notice to District of Consultant's request to revise the hourly rates ninety (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 twelve (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 2.0%, whichever is less. A negative index will result in rates remaining the same. Such rate revisions are subject to written approval by the District Deputy Operating Officer.

**HOURLY RATE SCHEDULE**

| <b>Classification/Staff</b>       | <b>First Year Hourly Rate</b> | <b>Second Year Hourly Rate</b> | <b>Third Year Hourly Rate</b> | <b>Fourth Year Hourly Rate</b> |
|-----------------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|
| <b>PRIME—URS</b>                  |                               |                                |                               |                                |
| Principal Engineer/Scientist      | \$237                         | 241.74                         | \$245.61                      | \$250.52                       |
| Project Manager                   | \$220                         | 224.40                         | \$227.99                      | \$232.55                       |
| Senior Project Engineer/Scientist | \$177                         | 180.54                         | \$183.43                      | \$187.10                       |
| Project Engineer/Scientist        | \$140                         | 142.80                         | \$145.08                      | \$147.98                       |
| Senior Engineer/Scientist         | \$118                         | 120.36                         | \$122.29                      | \$124.74                       |
| Staff Engineer/Scientist          | \$100                         | 102.00                         | \$103.63                      | \$105.70                       |
| Senior GIS/CAD/Graphics           | \$136                         | 138.72                         | \$140.94                      | \$143.76                       |
| GIS/CAD/Graphic Technician        | \$107                         | 109.14                         | \$110.89                      | \$113.11                       |

# AMENDMENT NO. 2 TO AGREEMENT A3778A

## REVISED APPENDIX TWO FEES AND PAYMENTS

| Classification/Staff                                     | First Year<br>Hourly Rate | Second<br>Year Hourly<br>Rate | Third Year<br>Hourly Rate | Fourth Year<br>Hourly Rate |
|--|---------------------------|-------------------------------|---------------------------|----------------------------|
| Editor   | \$122                     | 124.44                        | \$126.43                  | \$128.96                   |
| Contract Administrator                                   | \$113                     | 115.26                        | \$117.10                  | \$119.44                   |
| Project Assistant  | \$90                      | 91.80                         | \$93.27                   | \$95.14                    |
| <b>SUBCONSULTANT(s)</b>                                  |                           |                               |                           |                            |
| <b>GEI Consultants, Inc.</b>                             |                           |                               |                           |                            |
| Principal Engineer/Geologist                             | \$244                     | 248.88                        | \$252.86                  | \$257.92                   |
| Project Manager  | \$239                     | 243.78                        | \$247.68                  | \$252.63                   |
| Project Engineer/Geologist                               | \$133                     | 135.66                        | \$137.83                  | \$140.59                   |
| Project Assistant  | \$88                      | 89.76                         | \$91.20                   | \$93.02                    |
| <b>Technical Review Board and Subject Matter Experts</b> |                           |                               |                           |                            |
| Board Members  | \$250                     | 255.00                        | \$259.08                  | \$264.26                   |
| Subject Matter Experts                                   | \$250                     | 255.00                        | \$259.08                  | \$264.26                   |
| <b>Applied Geodynamics, Inc.</b>                         |                           |                               |                           |                            |
| Principal Engineer                                       | \$250                     | 255.00                        | \$259.08                  | \$264.26                   |
| <b>David Ford Consulting Engineers, Inc.</b>             |                           |                               |                           |                            |
| Principal Engineer                                       | \$266                     | 271.32                        | \$275.66                  | \$281.17                   |
| Senior Engineer  | \$189                     | 192.78                        | \$195.86                  | \$199.78                   |
| Project Engineer   | \$139                     | 141.78                        | \$144.05                  | \$146.93                   |
| Middle Engineer  | \$132                     | 134.64                        | \$136.79                  | \$139.53                   |
| Staff Engineer   | \$88                      | 89.76                         | \$91.20                   | \$93.02                    |
| Project Coordinator                                      | \$89                      | 90.78                         | \$92.23                   | \$94.07                    |
| Editor   | \$112                     | 114.24                        | \$116.07                  | \$118.39                   |
| CAD/Graphic Technician                                   | \$106                     | 108.12                        | \$109.85                  | \$112.05                   |
| <b>dot.dat.inc.</b>                                      |                           |                               |                           |                            |
| Principal  | \$80                      | 81.60                         | \$82.91                   | \$84.57                    |
| <b>Geosite, Inc.</b>                                     |                           |                               |                           |                            |
| Project Manager  | \$150                     | 153.00                        | \$155.45                  | \$158.56                   |
| <b>Lettis Consultants International, Inc.</b>            |                           |                               |                           |                            |
| Principal Geologist                                      | \$190                     | \$193.80                      | \$196.90                  | \$200.84                   |
| Senior Geologist   | N/A                       | \$170.00                      | \$172.72                  | \$176.17                   |
| Senior Project Geologist                                 | N/A                       | \$140.00                      | \$142.24                  | \$145.08                   |
| Project Geologist  | \$121                     | \$123.42                      | \$125.39                  | \$127.90                   |
| Senior Staff Geologist                                   | N/A                       | \$110.00                      | \$111.76                  | \$114.00                   |
| Staff Geologist/GIS                                      | N/A                       | \$95.00                       | \$96.52                   | \$98.45                    |

# AMENDMENT NO. 2 TO AGREEMENT A3778A

## REVISED APPENDIX TWO FEES AND PAYMENTS

| Classification/Staff                       | First Year<br>Hourly Rate | Second<br>Year Hourly<br>Rate | Third Year<br>Hourly Rate | Fourth Year<br>Hourly Rate |
|--|---------------------------|-------------------------------|---------------------------|----------------------------|
| CAD/Graphic Technician                     | \$95                      | \$96.90                       | \$98.45                   | \$100.42                   |
| Technical Typist/Support                   | N/A                       | \$87.00                       | \$88.39                   | \$90.16                    |
| Technician                                 | N/A                       | \$60.00                       | \$60.96                   | \$62.18                    |
| <b>Cal Engineering &amp; Geology, Inc.</b> |                           |                               |                           |                            |
| Principal Engineer/Geologist               | N/A                       | \$203                         | \$206.25                  | \$210.38                   |
| Associate Engineer/Geologist               | N/A                       | \$189                         | \$192.02                  | \$195.86                   |
| Senior Engineer/Geologist                  | N/A                       | \$144                         | \$146.30                  | \$149.23                   |
| Project Engineer/Geologist                 | N/A                       | \$114                         | \$115.82                  | \$118.14                   |
| Technician                                 | N/A                       | \$106                         | \$107.70                  | \$109.85                   |
| Assistant                                  | N/A                       | \$73                          | \$74.17                   | \$75.65                    |
| <b>Robert Y. Chew Geotechnical, Inc.</b>   |                           |                               |                           |                            |
| Principal Engineer/Geologist               | \$202                     | 206.04                        | \$209.34                  | \$213.53                   |
| Project Engineer/Geologist                 | \$128                     | 130.56                        | \$132.65                  | \$135.30                   |
| Senior Engineer/Geologist                  | \$111                     | 113.22                        | \$115.03                  | \$117.33                   |
| Staff Engineer/Geologist                   | \$71                      | 72.42                         | \$73.58                   | \$75.05                    |
| <b>Terra Mater, Inc.</b>                   |                           |                               |                           |                            |
| Project Manager                            | \$140                     | 142.80                        | \$145.08                  | \$147.98                   |
| <b>TRA Environmental Sciences, Inc.</b>    |                           |                               |                           |                            |
| Principal                                  | \$200                     | 204.00                        | \$207.26                  | \$211.41                   |
| Senior Project Manager II                  | \$160                     | 163.20                        | \$165.81                  | \$169.13                   |
| Senior Biologist II                        | \$140                     | 142.80                        | \$145.08                  | \$147.98                   |
| Senior Biologist I                         | \$125                     | 127.50                        | \$129.54                  | \$132.13                   |
| Biologist II                               | \$90                      | 91.80                         | \$93.27                   | \$95.14                    |
| Support Staff                              | \$75                      | 76.50                         | \$77.72                   | \$79.27                    |
| CAD/GIS/GRAPHICS                           | \$90                      | 91.80                         | \$93.27                   | \$95.14                    |
| Field Crew                                 | \$40                      | 40.80                         | \$41.45                   | \$42.28                    |
| <b>Underwater Resources, Inc.</b>          |                           |                               |                           |                            |
| Project Manager                            | \$135                     | 137.70                        | \$139.90                  | \$142.70                   |
| Diver (OT)                                 | \$310                     | 316.20                        | \$321.26                  | \$327.69                   |
| Diver (Reg)                                | \$235                     | 239.70                        | \$243.54                  | \$248.41                   |
| Diving Supervisor (OT)                     | \$190                     | 193.80                        | \$196.90                  | \$200.84                   |
| Diving Supervisor (Reg)                    | \$150                     | 153.00                        | \$155.45                  | \$158.56                   |
| Shop Labor                                 | \$90                      | 91.80                         | \$93.27                   | \$95.14                    |

# AMENDMENT NO. 2 TO AGREEMENT A3778A

## REVISED APPENDIX TWO FEES AND PAYMENTS

### CONTRACTORS/VENDORS UNIT RATE SCHEDULE

| Description   | Unit      | First Year Unit Rate | Second Year Unit Rate | Third Year Unit Rate | Fourth Year Unit Rate |
|---|-----------|----------------------|-----------------------|----------------------|-----------------------|
| <b>Cooper Testing Labs, Inc.</b>                    |           |                      |                       |                      |                       |
| Moisture  | Each      | \$17                 | \$17                  | \$18                 | \$18                  |
| MD (2.0–2.5")                                       | Each      | \$21                 | \$21                  | \$22                 | \$22                  |
| MD (3.0")   | Each      | \$32                 | \$33                  | \$33                 | \$34                  |
| PI  | Each      | \$160                | \$163                 | \$166                | \$169                 |
| Sieve w/ -#200                                      | Each      | \$105                | \$107                 | \$109                | \$111                 |
| *Add Special Handling for Bulk Sieve                | Each      | N/A                  | \$67                  | \$68                 | \$69                  |
| Sieve w/ hydro                                      | Each      | \$175                | \$179                 | \$181                | \$185                 |
| Falling Head Permeability                           | Each      | \$305                | \$311                 | \$316                | \$322                 |
| Constant Head Rigid Wall Permeability               | Each      | \$305                | \$311                 | \$316                | \$322                 |
| Unconfined soil                                     | Each      | \$70                 | \$71                  | \$73                 | \$74                  |
| Triaxial UU   | Each      | \$130                | \$133                 | \$135                | \$137                 |
| 3 point TX-ICU-PP                                   | Each      | \$1,380              | \$1,408               | \$1,430              | \$1,459               |
| Consolidation                                       | Each      | \$360                | \$367                 | \$373                | \$381                 |
| R-Value   | Each      | \$245                | \$250                 | \$254                | \$259                 |
| D-1557 (4-inch)                                     | Each      | \$250                | \$255                 | \$259                | \$264                 |
| D-1557 (6-inch)                                     | Each      | \$300                | \$306                 | \$311                | \$317                 |
| Unconfined rock                                     | Each      | \$210                | \$214                 | \$218                | \$222                 |
| Pinhole (dispersivity)                              | Each      | N/A                  | \$423                 | \$430                | \$439                 |
| <b>Gamma Remote Sensing</b>                         |           |                      |                       |                      |                       |
| Portable Radar System                               | 3 Months  | \$57,000             | N/A                   | N/A                  | N/A                   |
| Portable Radar System (for the first 3 months only) | Per Month | N/A                  | \$19,000              | \$19,000             | \$19,380              |
| Technical Support                                   | Per Day   | N/A                  | \$1,890               | \$1,890              | \$1,928               |
| GPRI Software Training                              | Per Day   | N/A                  | \$1,820               | \$1,820              | \$1,856               |
| Data Analysis                                       | Per Day   | N/A                  | \$1,890               | \$1,890              | \$1,928               |
| Report Preparation                                  | Per Day   | N/A                  | \$1,890               | \$1,890              | \$1,928               |
| Instrument Rental per day of Measurement            | Per Day   | N/A                  | \$1,750               | \$1,750              | \$1,785               |
| Travel  | Per       | N/A                  | \$945                 | \$945                | \$964                 |

# AMENDMENT NO. 2 TO AGREEMENT A3778A

## REVISED APPENDIX TWO FEES AND PAYMENTS

| Description                                 | Unit     | First Year<br>Unit Rate | Second<br>Year Unit<br>Rate | Third Year<br>Unit Rate | Fourth Year<br>Unit Rate |
|---|----------|-------------------------|-----------------------------|-------------------------|--------------------------|
|   | Day      |                         |                             |                         |                          |
| <b>NORCAL Geophysical Consultants, Inc.</b> |          |                         |                             |                         |                          |
| Mobilization                                | Each     | \$500                   | \$510                       | \$518                   | \$529                    |
| PS Log for Boring up to 100 ft              | Each     | \$2,500                 | \$2,550                     | \$2,591                 | \$2,643                  |
| Report                                      | Each     | \$1,500                 | \$1,530                     | \$1,554                 | \$1,586                  |
| <b>Cal Engineering &amp; Geology, Inc.</b>  |          |                         |                             |                         |                          |
| Phase 1 Road Construction—Coyote Dam        | Lump Sum | \$205,676               | Deleted                     | Deleted                 | Deleted                  |
| Phase 1 Road Construction—Chesbro Dam       | Lump Sum | \$73,982                | Deleted                     | Deleted                 | Deleted                  |
| Phase 1 Road Construction—Uvas Dam          | Lump Sum | \$115,441               | Deleted                     | Deleted                 | Deleted                  |
| Phase 2 Road Construction—Coyote Dam        | Lump Sum | \$20,568                | N/A                         | TBD                     | TBD                      |
| Phase 2 Road Construction—Chesbro Dam       | Lump Sum | \$14,796                | N/A                         | TBD                     | TBD                      |
| Phase 2 Road Construction—Uvas Dam          | Lump Sum | \$23,088                | N/A                         | TBD                     | TBD                      |
| Sonic Drilling Mobilization                 | Each     | \$4,095                 | N/A                         | N/A                     | N/A                      |
| Truck-Mounted Sonic Drilling                | Day      | \$4,935                 | N/A                         | N/A                     | N/A                      |
| Track-Mounted Sonic Drilling                | Day      | \$4,935                 | N/A                         | N/A                     | N/A                      |
| Borehole Grouting                           | Foot     | \$6                     | N/A                         | N/A                     | N/A                      |
| Sonic Core Boxes, 5' long, 6" Dia           | Each     | \$88                    | N/A                         | N/A                     | N/A                      |
| Sonic Crew Per Diem                         | Day      | \$395                   | N/A                         | N/A                     | N/A                      |
| BPT Mobilization                            | Each     | \$8,925                 | \$9,104                     | \$9,249                 | \$9,434                  |
| BPT Testing                                 | Hour     | \$662                   | \$675                       | \$686                   | \$700                    |
| BPT Crew Travel                             | Hour     | \$263                   | \$268                       | \$273                   | \$278                    |
| BPT Crew Per Diem                           | Day      | \$473                   | \$482                       | \$490                   | \$500                    |
| BPT Standby                                 | Hour     | \$557                   | \$568                       | \$577                   | \$589                    |
| Portland Cement—94 pound bag                | Bag      | \$16                    | \$16                        | \$17                    | \$17                     |
| Bentonite—50 pound bag                      | Bag      | \$20                    | \$20                        | \$21                    | \$21                     |

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX TWO FEES AND PAYMENTS

| Description                                 | Unit     | First Year Unit Rate | Second Year Unit Rate | Third Year Unit Rate | Fourth Year Unit Rate |
|---|----------|----------------------|-----------------------|----------------------|-----------------------|
| Forklift                                    | Day      | \$420                | \$428                 | \$435                | \$444                 |
| <b>Taber Drilling</b>                       |          |                      |                       |                      |                       |
| Initial Mobilization (onshore)              | Each     | \$3,750              | \$3,825               | \$3,886              | \$3,964               |
| Rig, Crew (onshore)                         | Hour     | \$275                | \$281                 | \$285                | \$291                 |
| Standby (onshore)                           | Hour     | \$200                | \$204                 | \$207                | \$211                 |
| Per diem                                    | Day      | \$300                | \$306                 | \$311                | \$317                 |
| Grout/Materials (onshore)                   | Foot     | \$18                 | \$18                  | \$19                 | \$19                  |
| Cutting Disposal                            | Each     | \$10,000             | \$10,200              | \$10,363             | \$10,570              |
| Hammer Calibration                          | Each     | \$2,500              | \$2,550               | \$2,591              | \$2,643               |
| Initial Mobilization (offshore)             | Each     | \$10,000             | \$10,200              | \$10,363             | \$10,570              |
| Crane Assistance (offshore)                 | Each     | \$10,500             | \$10,710              | \$10,881             | \$11,099              |
| Barge, Rig, Crew (offshore)                 | Hour     | \$450                | \$459                 | \$466                | \$476                 |
| Standby (offshore)                          | Hour     | \$300                | \$306                 | \$311                | \$317                 |
| Grout/Materials (offshore)                  | Foot     | \$38                 | \$39                  | \$39                 | \$40                  |
| <b>University of California, Berkeley</b>   |          |                      |                       |                      |                       |
| Cyclic Triaxial Test                        | Set of 3 | \$9,000              | \$9,180               | \$9,327              | \$9,513               |
| <b>University of California, Davis</b>      |          |                      |                       |                      |                       |
| iBPT (Instrumented Becker Penetration Test) | Dam      | \$65,000             | \$66,300              | \$67,361             | \$68,708              |

- C. Upon the written approval of the District's Water Utility Capital Division Deputy Operating Officer referenced herein, unused fees from a completed or cancelled task may be reallocated 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.
- D. Upon the written approval of the District's Water Utility Capital Division Deputy Operating Officer referenced herein, the scope of services described in a task may be reduced or eliminated. If the scope of services 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.
- E. Any reduction or elimination of tasks and any inter-task transfers will be clearly noted and described in the subsequent monthly progress report to the District.

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED APPENDIX TWO FEES AND PAYMENTS**

- F. 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.
- G. Expenses incurred by the Consultant for subconsultants providing professional services and for subcontractors, including lab services, will be reimbursed at actual cost plus 5 percent. Consultant shall provide invoices for all lab services regardless of cost.
- H. All other direct expenses not included in overhead including, but not limited to, mapping, rendering, printouts, leased equipment, mailing and delivery services, printing services, film and processing, plotting, and supplies, will be billed monthly at cost linked to each Agreement Task, as approved by the District's Project Manager.
- I. Automobile travel mileage expenses will be paid at the current IRS rate. District will not reimburse Consultant and its subconsultants for mileage and travel time to and from District Headquarters and surrounding campus located at 5700 Almaden Expressway, San Jose, California. District will reimburse Consultant and its subconsultants for mileage incurred from District Headquarters or Consultant's and subconsultants' firm addresses, whichever is closer to the destination, to Project site(s) and, if directed or authorized by the District, to meeting locations such as community outreach meetings, partnering meetings, Dispute Review Board meetings, and meetings with regulatory agencies, if directed or authorized by the District.
- J. Consultant's monthly invoices will be prepared in accordance with the terms of this Revised Appendix Two and the Standard Consultant Agreement Section IV, FEES AND PAYMENTS. The invoices will represent work performed and reimbursable costs incurred during the identified billing period; be consistent with Appendix One and Revised Appendix One; and include the following:
  - 1. Personnel Category and employee name itemized with all labor charges by Scope of Service Task.
  - 2. Direct charges by Scope of Service Task.
  - 3. Consultant's summary of the amount Consultant has been billed by their subconsultants and subcontractors and further detailed by Scope of Service Task.
  - 4. Direct charges must reflect actual fees versus the Agreement not to exceed fees in this Revised Appendix Two.
- K. Before submitting monthly invoices, the Monthly Progress Report and draft invoice (in Adobe PDF format) will be provided by the Consultant for preliminary

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX TWO FEES AND PAYMENTS

review by the District Project Manager. Upon preliminary approval by the District, the Consultant will mail the complete signed and dated hardcopy invoice, including all supporting documentation. District'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.

- L. Invoices will include a summary of labor expenditures, direct costs, and billed subconsultant charges. Billing statements, transmitted separately from the Monthly Progress Reports, will be organized such that the billing categories correspond with the Scope of Services tasks.
- M. District's Project Manager will review invoice within five (5) working days of receipt, address any questions with Consultant's Construction Manager, and approve the undisputed amount of the invoice within ten (10) working days of receipt of the invoice. District will pay undisputed invoices within thirty (30) calendar days from date invoice is approved by District's Project Manager.
- N. Prevailing Wages
  - 1. A portion of the Services to be performed pursuant to this Agreement may be considered "Public Works" subject to California Labor Code Section §1771, et. seq. and the applicable implementing regulations.
  - 2. Labor Code Section §1720 includes "Inspection and Land Surveying" in its definition of "Public Works." If Consultant's Services includes such work, Consultant and its Subconsultants must comply with all Labor Codes applicable to prevailing wages.
  - 3. The Consultant and its Subconsultants shall not engage in the performance of public work, as defined in California Labor Code Section 1771.1, unless currently registered and qualified to perform public work pursuant to California Labor Code Section 1725.5.
  - 4. 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.
  - 5. This Agreement is subject to compliance monitoring and enforcement by the State of California Department of Industrial Relations. Upon request, the 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.

## **AMENDMENT NO. 2 TO AGREEMENT A3778A**

### **REVISED APPENDIX TWO FEES AND PAYMENTS**

- 6. All records or documents required to be kept to verify statutory compliance with the prevailing wage requirement such as certified payroll records must be made available for audit at no cost to the District, at any time during regular business hours, upon written request by the District.
- O. Consultant's services will be performed by its staff members and subconsultants' staff members at the lowest hourly rates commensurate with the complexity of the required services.
- P. Consultant's attention is directed to Section IV of the Standard Consultant Agreement regarding FEES AND PAYMENT and the corresponding retention clause.
- Q. Small Business Enterprise (SBE) Participation

This Agreement provides for the Consultant to include California Department of General Services certified Small/Micro Businesses in the performance of the services, estimated to be 30 percent or more of the Total Not to Exceed Amount stated in this Revised Appendix Two and Consultant agrees to use its best efforts to meet this goal.

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX THREE SCHEDULE OF COMPLETION

1. This Agreement commences on the date specified in the introductory paragraph of this Agreement. This Agreement expires December 31, 2020, unless its term is modified by a written amendment hereto, signed by both Parties prior to its expiration.
2. Consultant will commence tasks listed in Appendix One and Revised Appendix One of this Agreement upon receipt of the Notice-to-Proceed (NTP) issued by District.
3. Consultant will perform and complete the services described in Appendix One and Revised Appendix One, Scope of Services, in accordance with the Project Schedule table as shown below. Consultant will coordinate services with the District to provide the timeline of all tasks and subtasks including the site visits, document review, meetings, and deliverables.
4. The approved Project Schedule will be monitored monthly. Changes in the schedule for performance of Tasks and deliverables are subject to advance written approval by District. Consultant's attention is directed to the District's Standard Consultant Agreement, Section VII. Delays and Extensions.
5. Project Delays—The Consultant will make all reasonable efforts to comply with the Project Schedule as shown in the table below. In the event Consultant becomes aware that the Project Schedule will be delayed, Consultant will notify the District as soon as possible; explain the reason(s) for the delay; the estimated length of the delay; and a description of the actions being taken to address the delay. If the Consultant is delayed in performance of its services by circumstances beyond its control, District may in its discretion grant a reasonable adjustment in the Project Schedule. This language will prevail should any conflict or discrepancy occur between this provision and the Standard Consultant Agreement, Section VII. Delays and Extensions.
6. District's Project Manager and Consultant may agree to modify the schedule specified for Consultant's performance as a written administrative modification to the Agreement and such approval will be confirmed in writing.

#### PROJECT SCHEDULE (Time from NTP)

| Task | Task Name  | Coyote Dam                | Chesbro Dam | Uvas Dam  |
|------|--|---------------------------|-------------|-----------|
| 1    | Project Management Services                                      | Duration of the Agreement |             |           |
| 2    | Data Collection and Preliminary Field Investigation              | 18 months                 | 18 months   | 18 months |
| 3    | Updated Probable Maximum Flood (PMF) Studies                     | 12 months                 | 15 months   | 15 months |
| 4    | Inspections and Supporting Technical Information Document (STID) | 30 months                 | 36 months   | 36 months |
| 5    | Seismic Stability Evaluations                                    | 42 months                 | 48 months   | 48 months |

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**APPENDIX THREE  
SCHEDULE OF COMPLETION**

| <b>Task</b> | <b>Task Name</b>   | <b>Coyote<br/>Dam</b> | <b>Chesbro<br/>Dam</b> | <b>Uvas<br/>Dam</b> |
|-------------|--|-----------------------|------------------------|---------------------|
| 6           | Independent Dam Safety Review (IDSR)<br>and Potential Failure Mode Analysis<br>(PFMA) Workshop and Recommendations | 56 months             | 60 months              | 60 months           |
| 7           | Supplemental Services  | 72 months             | 72 months              | 72 months           |

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## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX FOUR INSURANCE REQUIREMENTS

Please refer to the insurance requirements listed below.

Without limiting the Consultant's indemnification of, or liability to, the Santa Clara Valley Water District ("District"), 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:

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. All Certificates of Insurance complete with copies of all required endorsements must be sent to: **Contract Administrator, Santa Clara Valley Water District, 5750 Almaden Expressway, San Jose, CA 95118.**

In addition to certificates, Consultant must furnish District with copies of original endorsements affecting coverage required by this Appendix. 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 work commences.** 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.

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
- f. If the standard ISO Form wording for "OTHER INSURANCE," or other comparable wording, is not contained in Consultant's liability insurance policy, an

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX FOUR INSURANCE REQUIREMENTS

endorsement must be provided that said insurance will be primary insurance and any insurance or self-insurance maintained by District, its Directors, officers, employees, agents or volunteers must be in excess of Consultant's insurance and must not contribute to it.

**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:
  - (1) Certificate of Insurance shall clearly state that the coverage is claims-made
  - (2) Policy retroactive date must coincide with or precede the Consultant's start of work (including subsequent policies purchased as renewals or replacements).
  - (3) Policy must allow for reporting of circumstances or incidents that might give rise to future claims.
  - (4) Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the contract of work.

**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.

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX FOUR INSURANCE REQUIREMENTS

#### 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 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: 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. Note: Editions dated 07/04 are not acceptable)
2. **Primacy Clause:** Consultant's insurance must be primary with respect to any other insurance which may be carried by the District, its officer, agents and employees, and the District's coverage must not be called upon to contribute or share in the loss.
3. **Cancellation Clause Revision:** The Certificate of Insurance **MUST** provide **30 days notice of cancellation, (10 days notice for non-payment of premium)**. **NOTE: The standard wording in the ISO Certificate of Insurance is not acceptable.** The following words must be crossed out or deleted from the standard cancellation clause: "...endeavor to..." AND "...but failure to mail such notice must impose no obligation or liability of any kind upon the company, its agents or representatives."
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 Management Administrator.
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.
6. **Subconsultants:** Should any of the work under this Agreement be sublet, the Consultant must require each of its subconsultants of any tier to carry the aforementioned coverages, or Consultants may insure subconsultants under its own policies.

## AMENDMENT NO. 2 TO AGREEMENT A3778A

### REVISED APPENDIX FOUR INSURANCE REQUIREMENTS

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:** With the exception of the Professional Liability/Errors and Omissions coverage mentioned above, all coverage must be occurrence-based coverage. Claims-made coverage is not allowed.
9. **Waiver of Subrogation:** Consultant agrees on 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, or Professional policy described in **Required Coverages** above. Consultant agrees to advise its broker/agent/insurer about this provision and obtain any endorsements, if needed, necessary to ensure the insurer agrees.
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.
11. **Renewal certificates and endorsements must be submitted to:**  
  
[certificates-santaclara@riskworks.com](mailto:certificates-santaclara@riskworks.com)

Please also note that the Certificate Holder on the certificates of insurance should read:

Santa Clara Valley Water District  
c/o EXIGIS Risk Management Services  
P.O. Box 4668 - ECM #35050  
New York, NY 10163-4668

Steven Wu, Senior Engineer  
Coyote, Chesbro, and Uvas Dams Safety Evaluations (DSE1) Project, CAS File #4513

**IMPORTANT:** On the certificate of insurance, please note either the name of the project or the name of the District contact person or unit for the contract.

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

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