

AMENDMENT NO. 7  
AGREEMENT FOR PROFESSIONAL SERVICES  
FOR  
ENVIRONMENTAL SERVICES  
BETWEEN  
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY AND  
AECOM TECHNICAL SERVICES, INC.

THIS SEVENTH AMENDATORY AGREEMENT is made effective 9-16, 2014, by and between Three Rivers Levee Improvement Authority (“TRLIA”) and AECOM Technical Services, Inc. (“the Consultant”), who agree as follows:

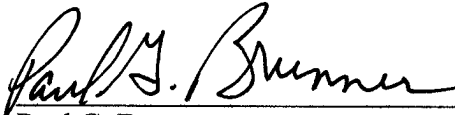
1. **Recitals.** This Amendment is made with reference to the following background recitals:
  - 1.1. Effective February 2, 2012 the parties entered into an Agreement for Professional Services relating to Environmental Services for TRLIA’s Construction Program.
  - 1.2. Effective August 7, 2012 the parties entered into the first Amendatory Agreement to increase the budget by \$25,000 to a total of \$125,000.
  - 1.3. Effective December 18, 2012 the parties entered into a second Amendatory Agreement to increase the budget by \$44,955 to a total of \$169,955.
  - 1.4. Effective April 9, 2013 the parties entered into a third Amendatory Agreement to increase the budget by \$74,000 to a total of \$243,955.
  - 1.5. Effective May 7, 2013 the parties entered into a fourth Amendatory Agreement to increase the budget by \$29,705 to a total of \$273,660.
  - 1.6. Effective October 1, 2013 the parties entered into a fifth Amendatory Agreement to increase the budget by \$475,000 to a total of \$748,660.
  - 1.7. Article C.23 of the AGREEMENT, states that modifications or amendments to the terms of the AGREEMENT shall be in writing and executed by both parties;
  - 1.8. Effective May 6, 2014 the parties entered into a sixth Amendatory Agreement to increase the budget by \$35,000 to a total of \$783,660.
  - 1.9. TRLIA and the CONSULTANT desire to amend the AGREEMENT;

NOW, THEREFORE, TRLIA and the CONSULTANT agree as follows.

2. **Seventh Amendment to Agreement.** The Professional Services Agreement is hereby amended as follows:
- 2.1. The scope of services (Attachment A to the Agreement for Professional Services between TRLIA and AECOM Technical Services, Inc.) is amended by the addition of effort to the original tasks as described in Exhibit 1 attached to this amendment agreement.
- 2.2. The payment, budget, and not-to-exceed amounts, Condition B.1 in Attachment B to the Agreement for Professional Services between TRLIA and AECOM Technical Services, Inc. are amended to include the additional amount of \$209,735 for a total contract amount of \$993,395.
3. **No Effect on Other Provisions.** Except for the amendments in Section 2, the remaining provisions of the Professional Services Agreement shall be unaffected and remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on  
SEPT 16, 2014.

THREE RIVERS LEVEE  
IMPROVEMENT AUTHORITY

  
Paul G. Brunner  
Executive Director

AECOM TECHNICAL SERVICES,  
INC.

  
Phil Dunn  
Vice President

ATTEST:  
DONNA STOTTEMEYER  
CLERK OF THE BOARD OF DIRECTORS

  
\_\_\_\_\_

APPROVED AS TO FORM:  
SCOTT L. SHAPIRO  
GENERAL COUNSEL

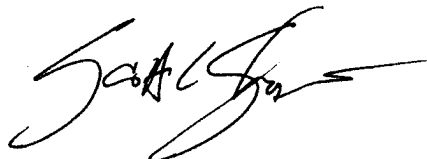
  
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EXHIBIT A  
AMENDED SCOPE OF SERVICES  
FOR AECOM TO PERFORM  
ENVIRONMENTAL SERVICES FOR THE  
WPIC WEST LEVEE IMPROVEMENT PROJECT  
SEPTEMBER 10, 2014

## **I. INTRODUCTION**

This amended scope of services identifies the environmental services that AECOM will provide to the Three Rivers Levee Improvement Authority (TRLIA) for the proposed Western Pacific Interceptor Canal (WPIC) West Levee Improvement Project.

TRLIA is proposing the WPIC West Levee Improvement Project (proposed project) to identify remedial actions that would bring the WPIC West Levee into compliance with existing Urban Levee Design Criteria (ULDC). Remedial actions could include cutoff walls, seepage berms, stability berms, relief wells, and grading. In addition, TRLIA proposes to construct a landside access road to facilitate future operations and maintenance activities along the levee. Implementation of these measures will require environmental compliance and clearances, which are the focus of this scope of services.

## **II. PROJECT APPROACH**

This scope of services is prepared consistent with the Environmental Compliance Strategy described in the Technical Memorandum dated August 7, 2014, from Mr. Phil Dunn (AECOM) to Mr. Paul Brunner (TRLIA).

## **III. SCOPE OF SERVICES**

The following scope of services describes the tasks that AECOM will perform to obtain the following environmental approvals and permits:

- California Environmental Quality Act (CEQA) compliance (Notice of Completion, Initial Study and Proposed Mitigated Negative Declaration [IS/MND], Notice of Determination, and Mitigation Monitoring and Reporting Program [MMRP])
- U.S. Army Corps of Engineers (USACE) Section 404 compliance
- Regional Water Quality Control Board Section 401 compliance
- United States Fish and Wildlife Service (USFWS) Endangered Species Act (ESA) compliance
- California Department of Fish and Wildlife (CDFW) California ESA compliance (2081)
- CDFW Streambed Alteration Agreement
- Native American Heritage Commission (NAHC) and State Office of Historic Preservation (SHPO) coordination

The following approvals and permits are *not* part of this scope of services and will be obtained by TRLIA and other contractors:

- Central Valley Flood Protection Board (CVFPB) approval
- USACE Section 408 compliance
- RWQCB Section 402 National Pollution Discharge Elimination System (NPDES) compliance
- Reclamation District 784 Encroachment Permit
- Feather River Air Quality Management District (FRAQMD) Authority to Construct
- Yuba County Grading Permit
- National Environmental Policy Act (NEPA) compliance (it is assumed that USACE will prepare its own Environmental Assessment and Finding of No Significant Impact (EA/FONSI) for the proposed project based on AECOM's CEQA evaluation, which will be expanded to preliminarily address NEPA issues)

#### **TASK 1: PREPARE IS/MND**

**Subtask 1.1 Prepare Project Description.** HDR will provide a detailed project description that AECOM will use to prepare the project description for the IS/MND, including the location of the project. In addition, AECOM will coordinate with TRLIA and its contractors to identify a list of environmental commitments to be folded into the project description as a means to create a self-mitigating project to the greatest extent possible.

HDR will also provide a detailed description of a project alternative that AECOM will use to prepare an alternative description (for NEPA purposes).

The draft project description will be submitted to TRLIA electronically for review and comment. AECOM will make necessary changes to the draft project description based on comments received from TRLIA and the project engineer. AECOM will submit a final project description to TRLIA electronically; this version will be included in the IS and used in all subsequent impact analyses.

**Subtask 1.2 Prepare IS/MND.** It is assumed that an IS/MND will satisfy CEQA requirements and an environmental impact report (EIR) is not required. With the assistance of MBK Engineers, AECOM will obtain and review all WPIC-related environmental documentation with the goal of using as much of that existing information as possible to expedite and streamline analyses in the IS/MND. AECOM will complete the environmental checklist form in Appendix G of the State CEQA Guidelines with explanations and analysis for each response, including "No Impact" responses. The level of analysis and degree of impact will vary depending upon the environmental topic. For each environmental issue, AECOM will describe existing conditions, assess potential environmental impacts, and recommend feasible mitigation measures, where applicable. Other federal, state, regional, or local agencies with permit requirements or other approval authority will be identified where appropriate. AECOM will also anticipate and include information that USACE would use to prepare an EA/FONSI. Consequently, the IS will be expanded to address several NEPA requirements such as purpose and need, analysis of one action alternative to the proposed project, socioeconomics and environmental justice sections, and more detailed information on wetlands, federally threatened and endangered species, and cultural resources covered under Section 106 of the NHPA. The IS analysis does not include visual simulations, water quality modeling, or traffic modeling; limited air quality modeling will be conducted.

Based upon the August 7, 2014 Draft Technical Memorandum, it is anticipated that the primary issues will be biological resources, and that the project would have less-than-significant effects without mitigation or with standard environmental commitments, on other resource areas.

AECOM will submit an electronic copy of the first draft IS/MND to TRLIA for review and comment. AECOM will incorporate and respond to one consolidated set of TRLIA comments on the administrative draft IS/MND and submit an electronic copy of the second draft IS/MND to TRLIA. AECOM will incorporate any comments and prepare the public draft IS/MND and submit to TRLIA in electronic format. AECOM will also prepare the Notice of Completion, Notice of Determination, and MMRP in a similar manner.

AECOM will file 15 copies of the public IS/proposed MND and a notice of completion with the State Clearinghouse for the 30-day public and agency review period. AECOM will deliver five bound copies, and Microsoft Word and PDF copies, of the public IS/proposed MND to TRLIA. AECOM will distribute the public IS/proposed MND on cd to up to 50 interested stakeholders. It is assumed that TRLIA will publish the notice of intent in a newspaper of general circulation in the area affected by the proposed project.

**Subtask 1.3 Prepare Response to Comments.** Upon completion of the public review process for the IS/MND, and after discussing with TRLIA any comments received on the environmental analysis, AECOM will prepare a draft response to comments report (RTC) for TRLIA's review. It is assumed that comments will be relatively minor and comments for all responses will not be more than 5 pages in length. AECOM will submit the draft RTC and draft Notice of Determination in electronic form to TRLIA for review and comment. Upon receipt of one set of consolidated TRLIA comments, AECOM will prepare and submit the final RTC to TRLIA in electronic format. It is assumed that TRLIA will file the NOD with the State Clearinghouse following MND adoption and pay any necessary filing fees (e.g., California Department of Fish and Wildlife).

## **TASK 2: PREPARE CULTURAL RESOURCES REPORT**

Compliance with NHPA Section 106 will be required for the proposed project.

**Subtask 2.1 Conduct Records Search.** A cultural resources investigation of the project area was conducted in support of the 2004 EIR for the Bear River and WPIC Levee Improvements Project. However, because these previous investigations were conducted approximately 10 years ago, USACE will likely require a records search update to identify any resources that may have been identified since the 2004 investigation. AECOM will conduct a records search at Northeast Information Center of the California Historical Resources Information System.

AECOM assumes that the cultural resources survey conducted for the 2004 EIR for the Bear River and WPIC Levee Improvements Project included a pedestrian archaeological survey adequate for compliance with NHPA Section 106 and that the Area of Potential Effects (APE) for the proposed project falls entirely within the survey boundaries of the 2004 study area.

**Subtask 2.2 Prepare Cultural Resources Report.** AECOM will prepare a technical report that updates the cultural resources information provided in the 2004 Bear River and WPIC Levee Improvements Project cultural resources technical report. The report will provide updated information based on the records search update and will provide a finding of effect to identify whether the project would result in significant impacts on cultural resources within the meaning of CEQA or adverse effects on NRHP-eligible cultural resources within the meaning of Section 106 of the NHPA. The report will

also demonstrate, to the extent feasible, that an intensive subsurface sampling strategy is not required. It is assumed that no additional cultural resources beyond those identified during preparation of the 2004 EIR will be identified.

AECOM will provide an electronic version of the draft cultural resources report to TRLIA for review, will incorporate comments sent to AECOM in one electronic file, and will submit an electronic copy of the final Cultural Resources Report to TRLIA and three hard copies (two for later submission to USACE).

**Subtask 2.3 Facilitate NHPA Section 106 Compliance.** The Section 106 process generally requires the SHPO to concur with any cultural resource findings. To facilitate SHPO review, the Cultural Resources Report will include, but will not necessarily be limited to, a description of the proposed project, results of a records search update and a finding of effect as appropriate/possible.

AECOM assumes that one hard copy of the final technical report submitted to USACE under Task 2.2 will be provided to the SHPO by USACE. AECOM will coordinate with USACE and/or SHPO to facilitate completion of the consultation process. This scope of work assumes a maximum 8 hours for coordination.

### **TASK 3: CONDUCT WETLAND DELINEATION**

The wetland delineation conducted for the Pacific Gas and Electric Company's (PG&E's) Palermo to East Nicolaus Transmission Line Reconstruction Project (PG&E project) included a portion of the area that would be affected by the proposed project. However, wetland regulations have been updated since the PG&E project delineation was completed, and these updated regulations may result in changes to the boundaries of the previously mapped wetlands. To facilitate project approval from USACE, AECOM wetland specialists will assess the accuracy of the previous jurisdictional delineation and will delineate all additional waters of the United States, including wetlands, within the portions of the project site that were not covered by the previous delineation. The exact location and boundary of all jurisdictional waters of the United States, including wetlands that could be affected by the proposed project, will be determined.

**Subtask 3.1 Conduct Literature Review and Field Preparation.** AECOM's wetland specialists will review existing wetland data, including the PG&E project wetland delineation report, USFWS National Wetland Inventory maps, U.S. Department of Agriculture Natural Resources Conservation Service soil survey information, U.S. Geological Survey 7.5-minute series topographic quadrangles, and existing topographic maps and aerial photographs of the project site.

**Subtask 3.2 Conduct Wetland Delineation.** AECOM's wetland specialists will conduct a field delineation of jurisdictional waters of the United States, including wetlands, affected by the proposed project. The study area will generally extend approximately 200 horizontal feet to the land and water sides of the WPIC West Levee crown in areas where construction of a landside access road and/or cutoff wall are proposed. Reaches in which a landside berm or landside fill is proposed would require a wider survey area (up to approximately 400 feet) to accommodate the full proposed project footprint. Each wetland mapped in the PG&E project delineation that overlaps with the TRLIA project site will be examined, and the location and boundaries will be confirmed or adjusted, as necessary. The USACE multi-parameter methodology will be used to delineate additional jurisdictional features on the project site; this will involve collection of soils, vegetation, and hydrologic data at several data points to establish the jurisdictional edge. Field data sheets will be completed for each data point. It is assumed that field work can be completed by two biologists in 2 days.

**Subtask 3.3 Prepare Wetland Map.** AECOM will prepare a wetland map showing the extent and location of all jurisdictional waters of the United States, including wetlands, within the project site. This map will be prepared in accordance with USACE requirements. The preferred base map for this effort is a recent aerial photograph (minimum scale of 1 inch = 200 feet).

**Subtask 3.4 Prepare Wetland Delineation Report.** A jurisdictional wetland delineation report that summarizes methodology, existing conditions, and findings will be prepared. Final copies of all wetland data sheets will be included as attachments to the report. AECOM will provide one electronic copy of the draft report to TRLIA for review and comment, and subsequently will prepare and submit the final report to TRLIA and to USACE with a request for verification.

**Subtask 3.5 Conduct USACE Field Verification Meeting.** An AECOM wetland specialist will coordinate and attend a field verification meeting with USACE.

#### **TASK 4: PREPARE ESA AND CESA COMPLIANCE**

The proposed project will require a Section 404 permit from USACE and, therefore, a Section 7 consultation between USACE and USFWS will be required. It is assumed that consultation with the National Marine Fisheries Service will not be required.

**Subtask 4.1 Conduct Biological Resources Field Surveys.** AECOM biologists have previously conducted a reconnaissance field survey of the project site. However, focused surveys and habitat evaluations for species to be addressed in the biological assessment are required. Based on permits issued for the previous WPIC West Levee improvements and results of surveys conducted for the PG&E project, the proposed project activities could affect vernal pool fairy shrimp and vernal pool tadpole shrimp (vernal pool crustaceans), valley elderberry longhorn beetle, and giant garter snake. Because listed vernal pool crustaceans have been previously documented in pools on the project site, USFWS is anticipated to assume presence of listed vernal pool crustaceans in all areas of suitable habitat. Therefore, protocol-level surveys for vernal pool crustaceans are not included in this scope of services as we are assuming presence based on vernal pool crustaceans being present in nearby ponds. AECOM biologists familiar with the natural resources of the project site will complete the following focused tasks:

- conduct protocol-level stem survey of elderberry shrubs on or within 100 feet of the project site, including staging areas and any on-site borrow sources;
- evaluate suitability of potential aquatic habitat for giant garter snake on the landside of the levee in Reach 2B and upland habitats within 200 feet of aquatic habitat in the WPIC; and
- confirm the location, boundaries, and suitability of vernal pool crustacean habitat mapped for the PG&E project; identify and map any additional areas of suitable habitat on or within 250 feet of proposed project ground disturbance; and evaluate potential hydrologic barriers that may limit potential for impacts.

Timing of these surveys may be dependent upon project schedule, but the preferred approach is to conduct surveys when habitat features are most apparent. The best time of year to complete the giant garter snake aquatic habitat assessment is during the snake's active season (May 1 – October 31). The best means to assess vernal pool crustacean habitat is by conducting several surveys at varying times following substantial rainfall. It is assumed that the field work can be completed by two biologists in 4 days.

The potential presence of any additional species or habitats considered sensitive, threatened, endangered, or otherwise unique by government agencies (e.g., USFWS, CDFW), or recognized conservation organizations (e.g., California Native Plant Society), will also be evaluated. This fieldwork will support preparation of the biological assessment and the biological resources section of the IS.

**Subtask 4.2 Prepare Biological Assessment and Facilitate Section 7 Consultation.** AECOM will prepare a biological assessment that evaluates effects to federally listed terrestrial species that would result from the proposed project, including vernal pool crustaceans, valley elderberry longhorn beetle, and giant garter snake. The biological assessment will be prepared in accordance with USFWS guidelines and will include a summary of consultation to date, a description of the proposed project, an account of each species addressed, an assessment of project effects, a description of measures to minimize and compensate for potential effects, and an effect determination for each species.

Impacts on suitable vernal pool crustacean habitat from the proposed levee improvements and access road construction will initially be quantified based on the PG&E habitat maps and results of the AECOM field surveys. Impact quantifications will be adjusted, if applicable, based on comparison with vernal pool crustacean impacts that were permitted and mitigated as part of the previous WPIC levee improvements. AECOM assumes hard copy maps and Geographic Information System (GIS) shapefiles of habitat impacted during the previous levee improvements will be available to facilitate the analysis.

AECOM will provide one draft of the biological assessment to TRLIA for review, will incorporate comments sent to AECOM in one electronic file, and will submit an electronic copy and one hard copy of the final biological assessment to TRLIA and USACE.

Upon transmittal of the biological assessment to USFWS, formal Section 7 consultation will be requested by USACE. The efforts required to complete the formal consultation period can vary greatly, depending on a number of factors, such as the extent of potential effects, proposed mitigation, and USFWS workload levels and staff assigned to the project. AECOM assumes that the proposed project will result in a likely to adversely affect determination on vernal pool crustaceans and that additional consultation and discussion to determine appropriate mitigation measures will be required. This scope of work assumes a maximum 40 hours will be needed for consultation. AECOM also assumes that with implementation of take avoidance and minimization measures, it will be possible to avoid direct take of state-listed species.

**Subtask 4.3 Prepare CESA Compliance Analysis.** The potential for the proposed project to result in direct take of state-listed species will be evaluated as part of Subtask 4.2 and the CEQA process (Task 1). If deemed necessary, CESA permitting will be conducted. It is assumed that 24 hours will be necessary to achieve CESA compliance.

## **TASK 5: PREPARE ENVIRONMENTAL PERMIT APPLICATIONS**

**Subtask 5.1 Prepare USACE Section 404 Individual Permit Application.** Based on the anticipated extent of impacts on waters of the United States, AECOM assumes that USACE will require processing of an individual permit for the project. On behalf of TRLIA, AECOM will prepare an application for a standard individual permit for submittal to the Sacramento District office of USACE.



**Subtask 5.1.1 Attend USACE Pre-Application Meeting.** AECOM will coordinate and attend a USACE pre-application meeting prior to submittal of the Section 404 permit application package. AECOM will provide USACE with a written project description and background information as required for USACE's regularly scheduled monthly interagency pre-application meetings. AECOM will prepare and conduct a presentation for the attending agencies and will solicit input on the project and on the components of the individual permit application under their regulatory purviews.

**Subtask 5.1.2 Prepare USACE Individual Permit Package.** An individual permit application package will be prepared including the following components:

- USAGE ENG Form 4345 and required project diagrams,
- Project Description/Project Purpose,
- Draft Public Notice/Response to Public Comments,
- 404(b)(1) Alternatives Analysis,
- Wetland Delineation (prepared as described under Task 3),
- Cultural Resources Technical Report (prepared as described under Task 2),
- Biological Assessment (prepared as described under Task 4), and
- Mitigation and Monitoring Plan/Operations and Management Plan (optional Subtask 5.1.7 if TRLIA elects to implement mitigation on-site or at a nearby location).

**Subtask 5.1.3 Complete USACE ENG Form 4345.** AECOM biologists will complete USACE ENG Form 4345 for submittal to USACE. A vicinity map and plan view diagram will be provided as attachments to the application form. The application will include but will not be limited to the following information that is assumed will be provided by TRLIA or the project engineer:

- amount (cubic yards) of fill material being placed within jurisdictional waters of the United States;
- acreage of area affected by dredging, excavation, or placement of fill material within the boundaries of jurisdictional waters of the United States (including acreages of both temporary and permanent effects);
- replacement quantities of native and imported material, and net permanent change (cubic yards);
- type of material placed within jurisdictional waters of the United States (i.e., clean fill dirt, rock, clay, concrete);
- identification and dimensions of structures and materials to be used in construction;
- construction equipment and methods by which work will be done;

- names and addresses of adjacent landowners;
- a written statement of how avoidance and minimization of impacts to waters of the United States will be achieved; and
- a site plan identifying existing structures, work limits, and property boundaries.

Telephone coordination with USACE will be conducted to discuss project characteristics, permit requirements, and permitting schedules. AECOM's coordination with USACE will ensure that the permit application materials are technically accurate and meet the needs of USACE.

**Subtask 5.1.4 Prepare Project Description/Project Purpose.** AECOM will use information from the CEQA document and other relevant project documents to develop a project description and project purpose and need statement for the application package. The overall project purpose statement ultimately will define the range of alternatives to be evaluated under the Section 404(b)(1) Alternatives Analysis.

**Subtask 5.1.5 Prepare Public Notice and Response to Public Comments.** AECOM will prepare a draft Public Notice for publication by USACE to facilitate permit processing. The Public Notice will be prepared pursuant to USACE regulations under Title 33 CFR, Section 325.3(a). AECOM will provide written responses to public and agency comments received on the Public Notice during the 30-day comment period. Public comments are likely to be minimal and are not expected to require additional research. A maximum time of 20 hours has been assigned for preparation of responses to comments.

**Subtask 5.1.6 Prepare 404(b)(1) Alternatives Analysis.** Under the Clean Water Act Section 404(b)(1) Guidelines (Guidelines), USACE may only permit discharges of dredged or fill material into waters of the United States for projects that are demonstrated to represent the least environmentally damaging practicable alternative (LEDPA). For non-water dependent projects that impact wetlands or other special aquatic sites, the burden of proof rests with the applicant and requires sufficient information to enable USACE to determine compliance with the Guidelines. The 404(b)(1) Alternatives Analysis generally includes a no-action alternative, on- and off-site alternatives, and project design alternatives. For this scope of work, AECOM anticipates evaluating a no-action alternative and two action alternatives in the 404(b)(1) Alternatives Analysis. AECOM assumes that TRLIA will provide sufficient information on an alternative to the proposed project. AECOM will include the Wetland Delineation Report, Cultural Resources Technical Report, and Biological Assessment prepared in other tasks as part of the Alternatives Analysis (and the CEQA IS).

**Subtask 5.1.7 Prepare Final 404 Permit Application.** AECOM will provide one draft of the application package to TRLIA for review, will incorporate comments sent to AECOM in one electronic file, and will submit one electronic and one hard copy of the final 404 permit application to USACE and TRLIA. This scope of services assumes that TRLIA will pay any USACE-required filing fees associated with obtaining the Section 404 permit.

**Subtask 5.2 Prepare Section 401 Water Quality Certification Application.** Applicants for a Section 404 permit from USACE also must submit an application to the Central Valley RWQCB for water quality certification, in accordance with Section 401 of the Clean Water Act. AECOM will

prepare an application to the Central Valley RWQCB, requesting water quality certification. The request will describe the proposed project and construction techniques and methods to minimize or avoid excessive erosion, turbidity, and other adverse water quality effects. This information will be drawn from the CEQA project description, construction drawings, and consultation with TRLIA.

**Subtask 5.2.1 Prepare Draft Application.** AECOM will prepare a draft application for water quality certification. The application will provide information on the proposed project including: a complete project description; assessors' parcel numbers; names, addresses, and contact information for landowners within the project area; at least 30% design drawings for the project (in CADD or ArcGIS); calculations of the volume of materials to be imported to or excavated from waters of the United States; calculations of the volume of materials to be imported to or excavated from waters of the state; plans showing the project construction area, staging areas, and temporary work spaces; project schedule; information on related projects done within the last 5 years and planned or proposed for the next 5 years in the project area; stream flow within streams in the project area; and a description of the construction methods to be used for installation of the project elements.

**Subtask 5.2.2 Prepare Final Application.** AECOM will provide one electronic draft of the application package to TRLIA for review, will incorporate comments sent to AECOM in one electronic file, and will submit an electronic and one hard copy of the final application to the Central Valley RWQCB and TRLIA. This scope of services assumes TRLIA will pay the RWQCB-required filing fee associated with obtaining Section 401 water quality certification.

**Subtask 5.2.3 Attend Coordination/Meetings.** AECOM assumes that one coordination meeting with the Central Valley RWQCB may be required (typically a field visit) and that this meeting will be attended by AECOM staff to discuss project characteristics, permit requirements, and permitting schedules. Additional telephone/e-mail coordination with the Central Valley RWQCB will be conducted by AECOM to ensure that the permit application materials are technically accurate and meet the needs of the Central Valley RWQCB. For purposes of this scope of work, a maximum 10 hours of consulting time will be allocated for AECOM to coordinate with the Central Valley RWQCB after the application is submitted.

### **Subtask 5.3 Prepare Section 1602 Streambed Alteration Agreement**

Because CDFW jurisdiction extends up the waterside of the WPIC levee to the levee crown, a Streambed Alteration Agreement would be required for levee degradation or any other disturbance of the waterside levee slope.

**Subtask 5.3.1 Prepare Draft Application.** AECOM will prepare a draft Streambed Alteration Notification. The notification will include: a complete project description; assessors' parcel numbers; names, addresses, and contact information for landowners within the project area; at least 30% design drawings for the project (in CADD or ArcGIS); quantification of riparian vegetation to be removed as part of the project; information on federally and state-listed species that could be affected by the project; plans showing the project construction area, staging areas, and temporary work spaces; project schedule; a description of the construction methods to be used for installation of the project elements; and proof of fee payment. This scope of work assumes that removal of riparian vegetation would be limited to shrubs. If riparian trees would be removed, a survey will be required to quantify the number, species, and diameter of trees to be removed; this may require a contract amendment. This scope of work also assumes TRLIA will pay the CDFW-required filing fee associated with obtaining a Streambed Alteration Agreement.

**Subtask 5.3.2 Prepare Final Application.** AECOM will provide one draft of the Streambed Alteration Notification to TRLIA for review, will incorporate comments sent to AECOM in one electronic file, and will submit one electronic and one hard copy to CDFW and TRLIA.

**Subtask 5.3.3 Attend Coordination/Meetings.** AECOM assumes that one coordination meeting with CDFW may be required (typically a field visit) and that this meeting will be attended by AECOM staff to discuss project characteristics, permit requirements, and permitting schedules. Additional telephone/e-mail coordination with CDFW will be conducted by AECOM, to ensure that the permit application materials are technically accurate and meet the needs of CDFW. For purposes of this scope of work, a maximum 10 hours of consulting time will be allocated for AECOM to coordinate with CDFW after the application is submitted.

#### **TASK 6:       MANAGE ENVIRONMENTAL TASKS**

AECOM will attend one project initiation meeting in Sacramento with TRLIA to review scope, schedule and communication protocols for the project; identify any additional information needs and sources, project databases, and key contacts; identify key issues known to be of concern to agencies, interest groups, and the public and discuss level of analysis anticipated; and discuss expected project environmental commitments to incorporate into the project description. AECOM will hold an internal kick-off meeting with staff.

AECOM will attend up to 10 monthly progress meetings in Sacramento from October 2014 through July 2015. AECOM will also participate in one public/board meeting in Marysville for the adoption of the IS/MND.

This scope of services assumes an average of 0.5 hour of preparation time and 0.5 hour of travel time for each meeting (1.5 hours for the Marysville meeting), and that each meeting will last an average of 2 hours.

AECOM will manage the environmental tasks described above and maintain close communication with TRLIA and the project engineer. AECOM will work with TRLIA to develop a schedule for the tasks identified in this scope of services.

#### **TASK 7 (OPTIONAL TASK): EVALUATE ON-SITE MITIGATION OPPORTUNITIES**

TRLIA may choose to fulfill compensatory mitigation requirements through participation in a USACE-approved mitigation bank, implementation of on-site mitigation, or a combination of both. If TRLIA would like to investigate the potential to implement mitigation on its own behalf, AECOM can evaluate opportunities to fulfill mitigation requirements on-site or at a nearby location (e.g., the Feather River Levee Setback Area). The objective would be to determine if feasible and more cost effective on-site mitigation opportunities are available to TRLIA compared to participation in a mitigation bank.

As indicated above, the proposed project is anticipated to result in impacts to vernal pool crustacean habitat, waters of the United States, elderberry shrubs, and upland habitat for giant garter snake. At least some of these impacts are likely to require compensatory mitigation. However, adequate information is not available at this time to determine the exact mitigation needs and identify the most appropriate approach for fulfilling these needs. Once the mitigation needs have been determined, AECOM can evaluate opportunities to implement mitigation on the project site or at a suitable nearby location (e.g., the Feather River Setback Area) and conduct a cost-benefit analysis of this approach

compared to using a mitigation bank. If, based on results of this evaluation, TRLIA chooses to proceed with implementing mitigation on its own behalf, AECOM can develop a conceptual mitigation strategy to be submitted with the 404 permit application. USACE and USFWS will likely require subsequent submittal of a Mitigation and Monitoring Plan and a long-term Operations and Management plan. These plans are not included in this optional task but can be prepared by AECOM if necessary through a contract amendment.

#### **IV. SCHEDULE**

Every effort will be made to complete this scope of services by July 31, 2015. However, obtaining permits is highly dependent on the review times of the regulatory agencies, which is beyond AECOM's control. A detailed schedule will be developed as part of Task 6.

#### **V. COST ESTIMATE**

AECOM will complete the above tasks (including the optional task) on a time-and-materials basis for a maximum not-to-exceed cost of \$226,730, with costs by task specified below. The cost estimate is based on completion of work by July 31, 2015.

TASK 1: PREPARE IS/MND (with NEPA sections) - \$68,010

TASK 2: PREPARE CULTURAL RESOURCES REPORT - \$14,175

TASK 3: CONDUCT WETLAND DELINEATION - \$23,940

TASK 4: PREPARE ESA AND CESA COMPLIANCE - \$29,665

TASK 5: PREPARE ENVIRONMENTAL PERMIT APPLICATIONS - \$51,505

TASK 6: MANAGE ENVIRONMENTAL TASKS - \$25,550

TASK 1 – 6 EXPENSES: \$3,900

TOTAL COST WITHOUT OPTIONAL TASK: \$216,735

TASK 7 (OPTIONAL TASK): EVALUATE ON-SITE MITIGATION OPPORTUNITIES AND DEVELOP MITIGATION STRATEGY - \$9,995

TOTAL COST WITH OPTIONAL TASK: \$226,730

AECOM • TRRIA WPC West Levee Improvement Project Environmental Compliance

**COST ESTIMATE**

| TASKS  | Rate/Hour | Project Director \$275 | Project Manager \$125 | Senior Regulatory \$185 | Regulatory Spec II \$145 | Sr. Architect. Historian \$130 | Archaeologist \$105 | Jr. Archaeologist \$80 | Biologist II \$145 | Biologist \$120 | Air Quality Spec \$130 | Sr. Restoration Ecologist \$135 | Sr. Env. Planner \$125 | Graphic Artist \$95 | GIS Spec \$95   | Tech Writer/Editor \$110 | Word Proc. \$85 | Project Coord. \$90 | Hours           | Dollars          |
|--|-----------|------------------------|-----------------------|-------------------------|--------------------------|--------------------------------|---------------------|------------------------|--------------------|-----------------|------------------------|---------------------------------|------------------------|---------------------|-----------------|--------------------------|-----------------|---------------------|-----------------|------------------|
| <b>Task 1 Prepare ISMND</b>  |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 1.1 Prepare Project Description                                    |           | 4                      | 24                    |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 52              | \$6,500          |
| 1.2 Prepare ISMND  |           | 16                     | 56                    | 2                       | 8                        | 16                             | 16                  |                        | 80                 | 20              | 50                     |                                 | 80                     | 18                  | 18              | 32                       | 32              |                     | 440             | \$58,430         |
| 1.3 Prepare Responses to Comments                                  |           |                        | 8                     |                         | 2                        | 2                              | 2                   |                        | 8                  |                 |                        |                                 | 8                      |                     | 4               | 4                        | 2               |                     | 38              | \$5,080          |
| <b>Subtotal Task 1</b>   |           | <b>22</b>              | <b>88</b>             | <b>2</b>                | <b>10</b>                | <b>18</b>                      | <b>18</b>           | <b>0</b>               | <b>88</b>          | <b>20</b>       | <b>50</b>              | <b>0</b>                        | <b>88</b>              | <b>24</b>           | <b>24</b>       | <b>44</b>                | <b>34</b>       | <b>0</b>            | <b>550</b>      | <b>\$69,010</b>  |
| <b>Task 2 Prepare Cultural Resources Report</b>                    |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 2.1 Conduct Records Search   |           |                        |                       |                         |                          | 16                             | 16                  | 16                     |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 50              | \$5,210          |
| 2.2 Prepare Cultural Resources Report                              |           | 2                      | 1                     |                         |                          | 40                             | 20                  |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 83              | \$7,875          |
| 2.3 Facilitate NHPA Section 106 Compliance                         |           |                        |                       |                         |                          | 6                              | 2                   |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 8               | \$960            |
| <b>Subtotal Task 2</b>   |           | <b>2</b>               | <b>1</b>              | <b>0</b>                | <b>0</b>                 | <b>62</b>                      | <b>38</b>           | <b>16</b>              | <b>0</b>           | <b>0</b>        | <b>0</b>               | <b>0</b>                        | <b>0</b>               | <b>0</b>            | <b>0</b>        | <b>0</b>                 | <b>2</b>        | <b>0</b>            | <b>121</b>      | <b>\$14,175</b>  |
| <b>Task 3 Conduct Wetland Delineation</b>                          |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 3.1 Conduct Literature Review and Field Preparation                |           |                        |                       | 1                       | 8                        |                                |                     |                        | 30                 | 8               |                        |                                 |                        |                     |                 |                          |                 |                     | 65              | \$8,505          |
| 3.2 Conduct Wetland Delineation                                    |           |                        |                       |                         | 8                        |                                |                     |                        |                    | 16              |                        |                                 |                        |                     |                 |                          |                 |                     | 32              | \$4,240          |
| 3.3 Prepare Wetland Map  |           |                        |                       |                         | 8                        |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 22              | \$2,480          |
| 3.4 Prepare Wetland Delineation Report                             |           | 2                      | 1                     | 4                       | 32                       |                                |                     |                        |                    | 8               |                        |                                 |                        |                     |                 |                          |                 |                     | 59              | \$8,035          |
| 3.5 Conduct USACE Field Verification Meeting                       |           |                        |                       |                         | 6                        |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 6               | \$570            |
| <b>Subtotal Task 3</b>   |           | <b>2</b>               | <b>1</b>              | <b>5</b>                | <b>70</b>                | <b>0</b>                       | <b>0</b>            | <b>0</b>               | <b>30</b>          | <b>32</b>       | <b>0</b>               | <b>0</b>                        | <b>0</b>               | <b>0</b>            | <b>0</b>        | <b>0</b>                 | <b>0</b>        | <b>184</b>          | <b>\$23,940</b> |                  |
| <b>Task 4 Prepare ESA and CEQA Compliance</b>                      |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 4.1 Conduct Biological Resources Field Surveys                     |           |                        |                       |                         | 32                       |                                |                     |                        | 32                 |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 64              | \$9,280          |
| 4.2 Prepare EA and Facilitate Section 7 Consultation               |           | 2                      | 1                     |                         | 32                       |                                |                     |                        | 68                 |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 123             | \$16,885         |
| 4.3 Prepare CEQA Compliance Analysis                               |           |                        |                       |                         |                          |                                |                     |                        | 24                 |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 24              | \$3,180          |
| <b>Subtotal Task 4</b>   |           | <b>2</b>               | <b>1</b>              | <b>0</b>                | <b>64</b>                | <b>0</b>                       | <b>0</b>            | <b>0</b>               | <b>122</b>         | <b>0</b>        | <b>0</b>               | <b>0</b>                        | <b>0</b>               | <b>0</b>            | <b>0</b>        | <b>0</b>                 | <b>0</b>        | <b>211</b>          | <b>\$28,065</b> |                  |
| <b>Task 5 Prepare Environmental Permit Applications</b>            |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 5.1 Prepare USACE Section 404 Individual Permit Application        |           |                        |                       |                         | 12                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 15              | \$2,075          |
| 5.1.1 Attend USACE Pre-Application Meeting                         |           |                        |                       | 1                       | 16                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 18              | \$2,460          |
| 5.1.2 Prepare USACE Individual Permit Package                      |           |                        |                       | 2                       | 38                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 68              | \$7,450          |
| 5.1.3 Complete USACE ENG Form 4345                                 |           |                        |                       |                         | 4                        |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 5               | \$655            |
| 5.1.4 Prepare Project Description/Project Purpose                  |           | 1                      |                       |                         | 24                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 25              | \$3,765          |
| 5.1.5 Prepare Public Notice and Response to Public Comments        |           |                        |                       | 6                       | 68                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 84              | \$13,070         |
| 5.1.6 Prepare 404(b)(1) Alternatives Analysis                      |           | 2                      |                       | 2                       | 30                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 60              | \$7,800          |
| 5.1.7 Prepare Final 404 Permit Application                         |           |                        |                       | 2                       | 38                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 51              | \$6,925          |
| 5.2 Prepare Section 401 Water Quality Certification Application    |           | 1                      |                       | 2                       | 38                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 4               | \$5,225          |
| 5.3 Prepare Section 1602 Streambed Alteration Agreement            |           |                        |                       | 2                       | 38                       |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     | 6               | \$810            |
| <b>Subtotal Task 5</b>   |           | <b>8</b>               | <b>2</b>              | <b>17</b>               | <b>262</b>               | <b>0</b>                       | <b>0</b>            | <b>0</b>               | <b>0</b>           | <b>0</b>        | <b>0</b>               | <b>0</b>                        | <b>0</b>               | <b>0</b>            | <b>0</b>        | <b>0</b>                 | <b>22</b>       | <b>0</b>            | <b>377</b>      | <b>\$51,605</b>  |
| <b>Task 6 Manage Environmental Tasks</b>                           |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 6 Project Management   |           | 62                     | 24                    | 1                       | 24                       | 1                              | 1                   | 1                      | 11                 | 1               | 1                      | 1                               | 1                      | 1                   | 1               | 1                        | 1               | 1                   | 143             | \$25,650         |
| <b>Subtotal Task 6</b>   |           | <b>62</b>              | <b>24</b>             | <b>1</b>                | <b>24</b>                | <b>1</b>                       | <b>1</b>            | <b>1</b>               | <b>11</b>          | <b>1</b>        | <b>1</b>               | <b>1</b>                        | <b>1</b>               | <b>1</b>            | <b>1</b>        | <b>1</b>                 | <b>1</b>        | <b>20</b>           | <b>143</b>      | <b>\$25,650</b>  |
| <b>Task 7 (Optional) Evaluate On-Site Mitigation Opportunities</b> |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 7 Evaluate On-Site Mitigation Opportunities (Optional)             |           | 0                      | 0                     | 0                       | 0                        | 0                              | 0                   | 0                      | 0                  | 0               | 0                      | 0                               | 0                      | 0                   | 0               | 0                        | 0               | 0                   | 0               | \$0              |
| <b>Subtotal Task 7</b>   |           | <b>0</b>               | <b>0</b>              | <b>0</b>                | <b>0</b>                 | <b>0</b>                       | <b>0</b>            | <b>0</b>               | <b>0</b>           | <b>0</b>        | <b>0</b>               | <b>0</b>                        | <b>0</b>               | <b>0</b>            | <b>0</b>        | <b>0</b>                 | <b>0</b>        | <b>0</b>            | <b>0</b>        | <b>\$0</b>       |
| <b>Total Labor Hours</b>   |           | <b>88</b>              | <b>117</b>            | <b>35</b>               | <b>439</b>               | <b>81</b>                      | <b>67</b>           | <b>17</b>              | <b>251</b>         | <b>63</b>       | <b>81</b>              | <b>1</b>                        | <b>89</b>              | <b>37</b>           | <b>124</b>      | <b>63</b>                | <b>79</b>       | <b>29</b>           | <b>1666</b>     |                  |
| <b>Total Direct Labor Dollars</b>                                  |           | <b>\$24,200</b>        | <b>\$14,335</b>       | <b>\$4,125</b>          | <b>\$62,390</b>          | <b>\$16,530</b>                | <b>\$5,995</b>      | <b>\$1,360</b>         | <b>\$36,345</b>    | <b>\$5,369</b>  | <b>\$4,530</b>         | <b>\$135</b>                    | <b>\$11,126</b>        | <b>\$5,518</b>      | <b>\$11,468</b> | <b>\$6,530</b>           | <b>\$6,376</b>  | <b>\$1,900</b>      |                 | <b>\$216,736</b> |
| <b>OTHER DIRECT COSTS</b>  |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 |                  |
| 1. Printing/Other Reproduction                                     |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | \$1,400          |
| 2. Database Searches   |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | \$760            |
| 3. Mileage/Vehicle Rental/Fuel/Per Diem                            |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | \$500            |
| 4. Postage/Delivery  |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | \$1,000          |
| 5. Miscellaneous   |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | \$250            |
| <b>Total Other Direct Costs</b>                                    |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | <b>\$3,900</b>   |
| <b>TOTAL ESTIMATED COST</b>  |           |                        |                       |                         |                          |                                |                     |                        |                    |                 |                        |                                 |                        |                     |                 |                          |                 |                     |                 | <b>\$216,736</b> |

Total Hrs Total Cost