Atmospheric River Capture Project Environmental Services – Amendment #1

Need for Amendment

Several locations within the project area are considered highly sensitivity for subsurface Native American deposits and include nearby precontact sites and artifacts. To comply with Section 106 of the National Historic Preservation Act (Section 106) and California Environmental Quality Act (CEQA), additional identification efforts are necessary to determine if archaeological deposits are located within the proposed Stafford Lake Pump Station footprint and locations along the new pipeline alignment that may be subject to impacts as a result of project-related ground disturbances. Additional effort is required to comply with state and federal cultural resources regulations including: developing a testing plan, conducting extended Phase I field testing and documenting the results; and Section 106 consultation support with agencies. In addition an alternative pipeline alignment was added to the project in late February and requires investigation after the investigation and reporting for the remaining project areas were completed. An archaeological testing plan will need to be developed in consultation with Native Americans and the testing plan will need to be implemented to comply with the requirements of CEQA and Section 106 and determine impacts on archaeological resources.

Scope of Work

The scope of work for the archaeological testing as follows is added to Task 2A.2.2 in the contracted scope of work.

Project Alternative

Far Western will address one project alternative segment for the proposed pipeline alignment. A pedestrian survey is not warranted as the area is an existing roadway and is completely paved. The location will be added to the current inventory report maps and examined based on previous research to determine if there are any known resources or areas of high sensitivity. The area will be identified on all report maps as "project alternative."

Testing Plan

Far Western will prepare a Testing Plan that will outline the methods and protocols for the testing program. Subsurface testing methods will employ a combined approach using

mechanical excavations (backhoe/coring rig) and hand augering. This plan will identify areas of high sensitivity (both known and anticipated) based on the results of the archaeological survey and background research. For the purpose of this scope of work, the testing program is assumed to include approximately 25 trenches, 16 cores, and over 200 auger holes, however, final numbers will be determined in the testing plan. The primary goal is to identify archaeological deposits and to consult regarding avoidance and/or appropriate design measures prior to construction to avoid costly stop work orders and construction delays.

This plan will be developed in coordination with MMWD and the Federated Indians of Graton Rancheria (Graton Rancheria).

Prefield
Prefield preparation will include prepping handheld GPS units with necessary field data; compiling and printing project area maps; conducting a prefield visit to mark the testing locations for utility locating (e.g., Underground Surface Alert Ticket) and coordination with a private utility locator to further define underground obstructions and utilities prior to testing.

Extended Phase I Testing at Stafford Lake Pump Station (Backhoe Trenching)
To ascertain the presence/absence of buried archaeological resources within the Stafford Lake Pump Station, Far Western will use a backhoe for mechanical trenching. Trenching is the most efficient and effective method for identifying buried sites in most settings, in addition to quickly ascertain surface site structure and integrity. Mechanical trenches will be excavated by a backhoe with a three-foot bladed bucket, excavating up to five feet (max depth without shoring) and up to 12 feet (max depth with shoring). Testing will not begin until the vertical and horizontal footprint of the Pump Station has been determined and the Testing Plan has been approved by Graton Rancheria and MMWD. Testing at Stafford Lake is expected to take up to three days with a crew of three archaeologists. Costs for tribal monitoring by Graton Rancheria are included (one monitor for three days).

Extended Phase I Testing along Proposed Pipeline Alignment (Hand Auger and Hydraulic Coring)
To ascertain the presence/absence of buried archaeological resources within sensitive areas along the proposed pipeline alignment, Far Western will perform targeted hand auger testing within areas determined to have high sensitivity and/or near known precontact archaeological sites. Since the new pipeline will be installed within an existing paved road that is subject to high traffic and usage, an extensive testing program within the roadway footprint is not feasible. As such, testing will be conducted immediately adjacent to the proposed alignment along the road edges or center median where accessibility is safe and logistically feasible. Far Western has reviewed the project alignment to effectively strategize time and costs to eliminate testing where there is a steep drop off or narrow work corridor and thus reasonably precluding testing efforts.

Using the methodology detailed in the Testing Plan, and assuming underground utilities and other factors will limit accessibility, Far Western will conduct testing over the course of five days using three crews of two archaeologists. Approximately 7,820 meters (25,600 feet) of the

alignment have been determined to have high to very high sensitivity. Teams will excavate hand augers spaced approximately 25-50 meters to the maximum depth of the proposed project footprint (approximately eight feet) or to bedrock if encountered before maximum depth. Far Western will execute testing as best as possible given field conditions and legal access to work areas.

In addition, two days of geoarchaeological coring will be performed where precontact archaeological site P-21-000551 has been documented on the south side of San Marin Drive and estimated to continue beneath the road. The coring effort will be carried out during the day and will include traffic control and permitting fees and coordination as necessary. A hydraulic coring device will be used to recover continuous core samples of subsurface deposits within the paved roadway. The exact number and location of each core will be determined in the field based on existing conditions, physical and safety constraints, and ongoing results of coring. The continuous core samples will be recovered and stored in clear plastic liners that are five feet long and three inches in diameter. Cores will be drilled to a depth of up to eight feet to determine the presence or absence of archaeological resources. All core samples will be transported to the Far Western office in Sausalito to be opened, photographed, documented, and examined for archaeological materials. The presence or absence of archaeological materials will be determined by examining the deposits as the core is opened. Additionally, surficial and deeply buried soils (A horizons) will be wet-screened through 1/8-inch mesh to determine if archaeological materials are present or absent. Although relatively small, the core samples can reliably determine the presence or absence of potential archaeological materials and allow for determination of the nature and extent of subsurface deposits. County of Marin Department of Public Health guidelines require that the lower portion of the core holes be backfilled with a cement slurry to prevent groundwater contamination, and a county inspector will be present for core backfilling. Costs for tribal monitoring by Graton Rancheria are included (one monitor for seven days).

Testing Report
Far Western will prepare a technical document to comply with CEQA and Section 106. The report will describe the methods and findings of the fieldwork investigations. A draft, revised draft, and final report will be prepared based on consolidated comments from Panorama Environmental, Inc., and MMWD. The draft report will be shared with Graton Rancheria for review and input. DPR 523 site records will be completed for up to three newly identified sites and/or updates to existing sites.

Section 106 Consultation Support with Agencies and Finding of No Adverse Effect
Far Western will support MMWD with State Historic Preservation Officer consultation and next step recommendations should potentially significant resources be identified during testing. This task also includes the preparation of a Finding of No Adverse Effect should such a document be required. However, should a Finding of Adverse Effect be determined or the need for a Memorandum of Agreement, Far Western can prepare these documents under a separate phase of work based on consultation with MMWD and Graton Rancheria and the results of testing.

Coordination with Graton Rancheria
Far Western will provide coordination and communication support with Graton Rancheria during the testing program, including up to four project meetings (no more than two hours each) with MMWD and the Tribe to discuss the testing approach and results, as needed.

Management
Panorama would coordinate with Marin Water to ensure site access. Panorama will coordinate with Far Western to discuss findings from the additional cultural resource investigations and communicate those findings to Marin Water. This task assumes up to three meetings with Marin Water to discuss the results.

Cultural Resource Section Update
Panorama will update the Cultural Resource section of the EIR to incorporate the results of the alternative alignment record search and the testing report. The methodology will also describe the testing program implemented.

Budget

The budget for services included Amendment #1 is **$179,829**. The total budget with Amendment #1 is provided below. The detailed budget for this work is attached.

	Budget
Prior Authorization	$1,249,809
Amendment #1	$179,829
Contract Total with Amendment #1	**$1,429,638**

Schedule

The schedule for completion of fieldwork is dependent upon site access and Graton Rancheria approval of the testing plan. The results report will be completed within 45 days of the completion of testing.