



**From:** Jenn Fields, Morro Bay National Estuary Program (MBNEP)  
**Date:** March 19, 2024  
**Subject:** Request for Cost Estimate for Geomorphic Assessment Surveys in Chorro Creek Watershed

Attached are the specifications of the Morro Bay National Estuary Program's effort to conduct geomorphic assessment surveys (e.g., lidar, long profile, and cross-sections) at three locations within the Chorro Creek watershed, located in San Luis Obispo County, California.

We are requesting a cost estimate for the work outlined in the attached materials.

Please note that the project scope is based on the MBNEP's anticipated needs. The contractor can recommend alternate or more efficient approaches based on their professional judgment.

Please respond on or before April 24, 2024 to the contact information provided. Please include a budget table utilizing the template provided on the last page.

If you have any questions or require any further information, please do not hesitate to contact Jenn Fields at [jfields@mbnep.org](mailto:jfields@mbnep.org).

## REQUEST FOR COST ESTIMATE

### Geomorphic Assessment Surveys in Chorro Creek Watershed

#### 1. Background

The Morro Bay National Estuary Program (MBNEP) protects and restores Morro Bay and its watershed for people and wildlife. The organization has been working since 1995 to conserve lands and restore them to improve ecological function and habitat value. To support our efforts, we are seeking an experienced contractor to support geomorphic assessment surveys in the Chorro Creek watershed at three sites to inform floodplain enhancement projects.

#### 2. Geomorphic Assessment Surveys Project Overview

Under this contract, the MBNEP requires three surveys on two watershed creeks.

We are planning a levee removal project on lower Walters Creek. To support the effort, we are seeking channel cross-sectional surveys, a channel long profile, and a Digital Elevation Model (DEM).

We are planning a low tech process-based restoration project in the middle reach of Walters Creek. To support the effort, we are seeking channel cross-sectional surveys, a channel long profile, and a DEM.

Lastly, we are assessing adaptive management needs for an already completed five-acre floodplain restoration project along Chorro Creek at the Chorro Creek Ecological Reserve (CCER). This site underwent many changes due to the 50 to 100-year flow events in 2023, and the MBNEP would like better understand changes at the site to ensure continued fish passage and access to the site. We are seeking a DEM to compare the as-built elevations with existing 2021 elevations for calculating net site change. We also require twelve creek cross-sections and a creek long profile resurveyed to understand geomorphic change and fish passage under lower flow conditions.

### 3. Site Location and Descriptions



**Lower Walters Creek.** Lower Walters Creek, a tributary to Chorro Creek, was previously leveed for agriculture land use. It is currently owned and managed by California Polytechnic State University, San Luis Obispo (Cal Poly) under a carbon farming plan. An adjacent field (~20 acres) at the confluence of Walters and Chorro Creeks is no longer used for agriculture, and the area is available for enhancing floodplain connection and reducing downstream flooding potential. The project requires pre-project monitoring including DEMs, between five and 12 cross-sections, and one long profile to inform a future project to remove sections of levees on Walters Creek (35.3418745, -120.7675606).



**Middle Walters Creek.** Mid-reaches of Walters Creek (also managed by Cal Poly) have incised channels from past land use practices that limited connection of the creek to its floodplain and caused accelerated sedimentation downstream. There is ample undeveloped space adjacent to Walters Creek to install process-based practices to enhance floodplain connection and trap sediment on site. This project requires pre-design monitoring including DEMs, between five and 12 cross-sections, and one long profile surveys within Walters Creek (35.3491768, -120.7483168).



**Chorro Creek Ecological Reserve Floodplain.** The MBNEP partnered with CDFW to implement a five-acre floodplain restoration project in 2019 at CCER. The project created an additional 2,400 ft. of side channel and installed over 1,500 plantings. The approximately 50 to 100-year storm events in winter 2023 caused many changes to the site. An in-channel creek crossing was washed out by a large debris jam that routed flows to the channel bank and eroded out the road on one bank.

The proposed project requires a LiDAR survey of the five-acre restoration site (35.3511023, -120.7793144) and resurvey of twelve cross-sections and one long-profiles (2,400 ft.) to assess sediment erosion/deposition and fish passage.

#### **4. Project Scope**

##### **Task 1: Project Management and Coordination**

This task includes coordination with the MBNEP throughout the project for site visits, tracking progress on the scope of work, contract management, and invoicing. The contractor would submit no more frequently than monthly invoices and brief progress reports.

Deliverable: Progress reports and invoices which include budget status and work completed.

Schedule: Estimated contract issue date in May/June 2024.

##### **Task 2: Geomorphic Assessment of Walters Creek**

To determine pre-project baseline conditions, the contractor will conduct field site evaluations of between five and 12 cross-section surveys, one channel long-profile, and a DEM for the site on lower Walters Creek and the site on the middle Walters Creek.

Deliverable: DEM of project sites; Cross-section and long profile results; Brief memo summarizing findings.

Schedule: Completed by August 30, 2024.

##### **Task 3a: Chorro Creek Ecological Reserve Floodplain Geomorphic Assessment**

Contractor will conduct a DEM to assess floodplain sediment capture performance and calculate net site change. Specifically, the DEM will be used to calculate the elevation changes from 1) pre-project to current 2024 conditions, and 2) 2021 conditions compared to 2024 conditions. The DEM of 2021 conditions will be provided by the MBNEP. Contractor will create a table of erosion/aggradation calculations. The contractor will also resurvey twelve creek cross-sections and one creek long profile to understand geomorphic change and fish passage under lower flow conditions.

Deliverables: DEM of project site; Two elevation change maps; Table of erosion/aggradation calculations; Cross-section and long profile results; Brief memo summarizing findings including any areas of concern for fish passage.

Schedule: Completed by October 30, 2024.

##### ***Optional Task 3b. Roadway Crossing Geomorphic Assessment***

Consultants will conduct a DEM to assess net change of the drive-through creek crossing into the project site. The DEM will be used to calculate the elevation changes from pre-project to current 2024 conditions. No DEM of 2021 conditions are available. Additional monitoring methods (e.g., establishment of cross sections, photo analysis) may be included as needed to

track erosion and deposition over time. Depending on the cost for this task, the MBNEP may opt to not pursue this portion of the scope.

Deliverables: DEM of project site; One elevation change map; Table of erosion/aggradation calculations; Additional monitoring results if needed.

Schedule: Completed by October 30, 2024.

### 5. Project Schedule

Tasks	Timeline
1: Project Management & Coordination	Estimated contract in May/June 2024.
2: Geomorphic Assessment of Walters Creek	Completed by August 30, 2024.
3a: Chorro Creek Ecological Reserve Floodplain Geomorphic Assessment	Completed by October 30, 2024.
<i>Optional 3b: Roadway Crossing Geomorphic Assessment</i>	Completed by October 30, 2024.

### 6. Point of Contact:

Jenn Fields  
Restoration Coordinator  
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**Geomorphic Assessment Surveys in Chorro Creek Watershed**

**Requested Information for Cost Estimate**

**Date:**

**Company Name:**

**Point of Contact, Contact Information:**

**Qualifications:**

**[Include a brief description of experience and staff expertise with this type of project.]**

**Proposed Project Schedule:**

**[Please include due dates built into the project schedule]**

**Project Scope:**

**[Include a brief description of your organization's approach for completing the proposed tasks]**



**Cost Estimate Table:**

**[Please include costs for labor and any materials, by task, needed to complete the scope]**

Tasks	Estimated Hours	Lump Sum Cost Estimate
1: Project Management & Coordination		\$ (Labor)
2: Geomorphic Assessment of Walters Creek		\$ (Labor) <i>[If any materials are needed, please list separately.]</i>
3a: Chorro Creek Ecological Reserve Floodplain Geomorphic Assessment		\$ (Labor) <i>[If any materials are needed, please list separately.]</i>
<i>Optional 3b: Roadway Crossing Geomorphic Assessment</i>		\$ (Labor) <i>[If any materials are needed, please list separately.]</i>
TOTAL COSTS		\$