

COASTAL CONSERVANCY

Staff Recommendation
February 2, 2023

MATILIJAM DAM ECOSYSTEM RESTORATION PROJECT: PRE-CONSTRUCTION ACTIVITIES

Project No. 99-099-07
Project Manager: Sam Jenniches

RECOMMENDED ACTION: Authorization to disburse up to \$358,000 to the County of Ventura to conduct pre-construction activities associated with the Matilija Dam Ecosystem Restoration Project, including hydraulic and sediment modeling, environmental compliance, and design planning in Ventura County.

LOCATION: Ventura River watershed, Ventura County

EXHIBITS

Exhibit 1: [Project Location Map](#)

Exhibit 2: [Project Graphics](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed three hundred fifty-eight thousand dollars (\$358,000) to the County of Ventura (“the grantee”) to conduct pre-construction activities associated with the Matilija Dam Ecosystem Restoration Project, including hydraulic and sediment modeling, environmental compliance, and design planning in Ventura County (the project).

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following:

1. A detailed work program, schedule, and budget.
2. Names and qualifications of any contractors to be retained in carrying out the project.

Findings:

Based on the accompanying staff recommendation and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 5.5 of Division 21 of the Public Resources Code, regarding protection and restoration of fish and wildlife habitat in coastal watersheds.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends the State Coastal Conservancy (Conservancy) authorize a grant of an amount not to exceed three hundred fifty-eight thousand dollars (\$358,000) to the County of Ventura to conduct pre-construction activities associated with the Matilija Dam Ecosystem Restoration Project, including hydraulic and sediment modeling, environmental compliance, and design planning in Ventura County (the project).

The removal of Matilija Dam from the Ventura River watershed has been identified as a critical action for the recovery of the federally endangered southern California steelhead in the National Marine Fisheries Service's Southern California Steelhead Recovery Plan. Efforts to safely remove the obsolete Dam and its sediment-laden reservoir are part of the Matilija Dam Ecosystem Restoration Project (MDERP), a watershed-scale compendium of efforts to plan, design and implement essential improvements to downstream infrastructure; and to undertake a host of other pre-construction activities (such as real-property acquisitions and adaptive management planning) that must be completed before Dam removal can take place.

A 2017 grant from the California Department of Fish and Wildlife (CDFW) provided \$3.3M for pre-Dam removal work as part of the Matilija Dam Removal 65% Design Planning Project. CDFW recently approved an approximately \$1.7 million augmentation to address budget shortfalls stemming from the grant approved in 2017. Subsequent additional grants from CDFW, the Conservancy and the Wildlife Conservation Board have combined to provide support to advance other MDERP components. The current Conservancy funding request is to fill an additional funding gap that was identified by the County after the CDFW augmentation had been approved.

A complex series of numeric modeling studies have been undertaken since 2017 to evaluate sediment transport, sediment disposition, and changes in water surface elevations and flood risks downstream of Matilija Dam, both during and after the initial sediment "flush" that will be part of the Dam removal sequence. These studies inform many of the discrete downstream physical components of MDERP as well as real estate plans and risk assessment associated with the MDERP. Initially, those studies focused on one-dimensional (1D) sediment transport and hydraulic modeling to determine downstream impacts within Matilija Creek and Ventura River due to sediment deposition and resulting 100-year water surface elevation increases. However, based on the relatively coarse nature of the 1D models, the MDERP team (County Watershed

Protection, National Marine Fisheries Service, US Bureau of Reclamation, MDERP contractors, Conservancy staff, CDFW staff and others) determined that two-dimensional (2D) modeling was needed to provide more detailed analyses in areas with potential flood risks where the 1D model did not account for complex flow patterns associated with overbank flooding.

The subsequent 2D modeling was conducted in two phases. Phase I utilized a coarse mesh model that encompassed the full MDERP reach of the Ventura River from upstream of Camino Cielo to the Ventura Water Purification Plant. The coarse mesh model is quicker to set up and run but delivers broad, but less accurate, results. Based on the Phase I results, the MDERP team elected to utilize a finer and more accurate mesh for Phase II. This model run focused on an upstream reach that includes the Camino Cielo crossing, the Robles Diversion Facility, and the community of Meiners Oaks; and a downstream reach that extends from upstream of Live Oak Acres to the Coyote Creek confluence.

A Technical Report completed in July 2022 provides a composite of 2D modeling results for the full Project reach (AECOM 2022). At that point, however, technical reviews by the U.S. Bureau of Reclamation (USBR) – whose Ventura River Project includes the Robles Diversion Facility – identified concerns regarding an early decision to exclude the finer-grained sediment (primarily sand ranging from 0.0625 to 2.0 mm) now stored in Matilija Reservoir from the 1D and 2D studies completed to-date. These concerns were also held by National Marine Fisheries Service (NMFS) staff. The concerns led Conservancy staff to recommend the formation of a technical working group in August led by AECOM and Stillwater Sciences – the original modeling team – and by October culminated in a proposed series of additional 2D studies to test the sensitivity of the prior 2D results to the inclusion of finer-grained sediment, along with a greater rate of assumed sediment release during the initial flushing event.

The County seeks this grant from the Conservancy to fill a funding gap in the CDFW funds for the 65% Design Planning Project budget. The need for this modeling was identified after the CDFW funds were granted. The County urgently needs the funding for the final 2D results to inform environmental impact (CEQA) analyses and associated outreach tasks.

The proposed project includes conducting the recommended additional 2D studies to address what USBR believes could be an important data gap in all the hydraulic and sediment transport modeling studies completed to-date. As such, the goal for the additional 2D studies is to resolve whether the incorporation of finer-grained sediments and an increased rate of sediment supply will have significant effects on the prior 2D modeling results, or if the original decision to ignore (for modeling purposes) the finer-grained sediment was justified.

The additional studies will be conducted to yield at least three sets of new simulation results (see Exhibit 2):

- 2D Coarse Mesh model outputs for the Full Project reach, with sand, gravel and cobble added as sediment supply inputs;
- 2D Fine Mesh model outputs for the Upstream reach with sand, gravel and cobble added as sediment supply inputs; and

- 2D Fine Mesh model outputs for the Upstream reach, with sand, gravel and cobble added as sediment supply inputs and with the impoundment (reservoir) sediment input rate increased by 30 percent.

In an effort to better understand the potential increased sediment transport and flood risks associated with Matilija Dam removal, the proposed project also includes conducting up to three additional simulations at the Robles Diversion and at other key downstream locations if needed once the above results are obtained.

The proposed project includes funding for environmental compliance and design planning. As discussed above, the proposed additional modeling is to address a potential data gap to ensure that the range of potential outcomes is described as fully as possible. The full suite of modeling results (previous and proposed) provides the foundation for design planning and the impact analysis associated with environmental compliance. The proposed project funds integration of these new results into those ongoing efforts.

The proposed project also includes funding for design planning by supporting USBR's ongoing technical assistance for the project. This will ensure that USBR standards and expertise continue to be integrated into MDERP planning and design decisions, with particular focus on proposed improvements at the Robles Diversion Facility, which USBR owns. This will be particularly important for ensuring continuity in moving from the current Robles Phase 2 collaborative alternatives refinement phase, funded in 2021 by the Conservancy, to conceptual design through feasibility studies and on to preliminary design. At this point in the design, USBR will develop and utilize a physical model (a scale replication of the watershed) to verify the proposed 30 percent design while CEQA work is being completed. Resource Legacy Fund has funded the previous four years of USBR technical assistance.

In February 2020, the County initiated an ongoing series of Spring and Fall updates to keep the local community and stakeholders apprised of progress on the MDERP's planning, design, and implementation efforts, associated funding initiatives, and environmental compliance activities. Conducted in collaboration with the Ventura River Watershed Council, these regular public updates have included more in-depth technical sessions for all who might wish to learn more and have been conducted both in-person (initially) and virtually (since Fall 2020) with opportunities for questions and discussion as part of each agenda. Local tribal representatives are invited to, and have attended some of, these meetings. Further discussion of tribal outreach can be found in #3 of the "Consistency with Conservancy's Project Selection Criteria" section below.

Site Description: The Ventura River Watershed lies in the northeastern part of Ventura County, approximately 80 miles north of Los Angeles, and flows from its headwaters in the Santa Ynez Mountains approximately 33 miles to the river mouth at Surfer's Point in Ventura (see Exhibit 1). The Ventura River watershed is a remarkable watershed for several reasons. Unlike most watersheds in southern California, residents rely 100 percent on local water supplies and the land in the watershed is largely undeveloped. The northern half of the watershed lies within the Los Padres National Forest. Rainfall in the Matilija Wilderness, the river's headwaters, is the

highest in Ventura County, with average annual rainfall over twice that at the coast. The steep terrain of the Ventura River watershed headwaters, coupled with intense downpours that can occur in its upper portions, result in flash flood conditions where floodwaters rise and fall in a matter of hours. Major or moderate floods with substantial sediment loads have occurred once every five years on average since 1933. The 2017 Thomas Fire burned more than 95 percent of the upper watershed, and only magnified the sediment challenges confronting critical downstream infrastructure.

At least 65 special-status wildlife species, 54 special-status plant species, and six sensitive natural communities have been documented in the middle reaches of the Ventura River watershed. In addition, the U.S. Fish and Wildlife Service has designated Critical Habitat for six wildlife species.

The primary species to benefit from the project as well as the broader MDERP include the federally endangered southern California steelhead (*Oncorhynchus mykiss irideus*) and federally designated species of special concern, Pacific lamprey (*Entosphenus tridentatus*).

Grant Applicant Qualifications: Ventura County has been the principal project proponent of the MDERP for over two decades. The County, through its Watershed Protection department of the Ventura County Public Works Agency, recently completed the Santa Ana Bridge Replacement project and is currently conducting the Camino Cielo Bridge Replacement Design, both pre-removal downstream components of MDERP involving funding from the Conservancy. The Conservancy has a long history of partnering with Ventura County.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on December 1, 2022, in the following respects:

Selection Criteria

1. Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.

See the "Consistency with Conservancy's Strategic Plan" section below.

2. Project is a good investment of state resources.

The proposed project builds on significant state investment in the MDERP and addresses a critical gap in modeling that is necessary to move all aspects of the broader project forward in a timely manner. The project was developed in consultation with specialists at USBR and NMFS, federal agencies that own or permit components of the MDERP and the project budget and goals are based upon cost estimates developed during that consultation.

The proposed project is generally consistent with several state plans, and specifically with the *Southern California Steelhead Recovery Plan* (NMFS, 2012) and the *Steelhead Restoration and Management Plan* (CDFW, 1996). The Ventura River watershed is a priority watershed for

recovery in both plans. The 2012 NMFS Recovery Plan includes the following priority recovery action that is furthered by this project:

Physically modify Casitas, Matilija, and Robles Diversion dams to allow steelhead natural rates of migration to upstream spawning and rearing habitats, and passage of smolts and kelts downstream to the estuary and ocean.

Matilija Dam is also recognized as a statewide anadromous fish passage priority in the California *Updated List of Anadromous Fish Passage Statewide Priority Barriers* (CDFW, 2012).

3. Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.

Government-to-government consultations with local Chumash representatives have been and remain central to the County of Ventura's efforts to evaluate potential impacts to tribal cultural resources related to the MDERP, as part of the Subsequent Environmental Impact Report (SEIR) currently under development for Matilija Dam removal, and for the SEIRs now planned for each of the Project's essential downstream components.

The County is also working in partnership with the Ojai Valley Land Conservancy and Resources Legacy Fund on a new post-Dam removal "visioning project" that will engage the watershed community, tribal interests, and stakeholders regarding the potential for enhanced outdoor recreation and access following Matilija Dam removal, and the associated implications for sustainable watershed stewardship. Initial consultations with local Chumash leaders are already underway, and a broader public engagement effort will take shape starting early in 2023.

4. Project benefits will be sustainable or resilient over the project lifespan.

The proposed project is being developed specifically to ensure that infrastructure is resilient to climate change impacts and to allow the natural systems of the Ventura River to adapt to a changing planet. Changes in precipitation and sediment flow regimes are already present in the watershed and design alternatives will be considered over a range of modeled climate impacts.

5. Project delivers multiple benefits and significant positive impact.

The project is necessary to continue development of multiple component parts of the MDERP in a manner that allows the broader project to remain on schedule. MDERP will provide the multiple benefits of fish passage, returning natural sediment flows to the river and sustaining beaches, and restoring important natural resources. The proposed project was developed specifically to ensure that hydraulic and sediment transport modeling is capturing a full range of potential outcomes.

6. Project planned with meaningful community engagement and broad community support.

The MDERP is a multiple-decade project that has involved community engagement throughout its development and has included significant project refinement as a result of community input. Currently, the grantee makes use of multiple committees to further the project, including twice yearly presentations to a broad stakeholder group at meetings of the Ventura River Watershed

Council. The proposed project has been developed out of that process and enjoys broad support (see Exhibit 3).

PROJECT FINANCING

Coastal Conservancy	\$358,000
California Department of Fish and Wildlife	\$5,000,000
Project Total	\$5,358,000

Conservancy funds are anticipated to come from Fiscal Year 2022/23 appropriation from the General Fund to the Conservancy for the purpose of climate resilience (The Budget Act of 2022, SB 154). These funds are available as described in Section 52 of Chapter 258 of the Statutes of 2021 (SB 155, 2021), which sets forth a detailed description of the purposes of the climate resilience funds. The proposed project is consistent with this funding source because it will plan for removal of an obsolete dam and associated downstream infrastructure, which will improve fish passage. In addition, the proposed project will ensure that the broader MDERP is constructed in a way that provides resilient habitat and infrastructure with respect to future climate changes.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

The proposed project will be undertaken pursuant to Chapter 3 of the Conservancy’s enabling legislation (Public Resource Code Section 31111), and Chapter 5.5, integrated coastal and marine resources protection (Public Resources Code Section 31220).

Section 31111 permits the Conservancy to award grants to public agencies and non-profit organizations for funding and undertaking plans and feasibility studies. Consistent with this section, the proposed project is a grant to the County of Ventura for planning associated with the MDERP.

Section 31220 directs the Conservancy to provide grants for coastal watershed and coastal and marine habitat water quality, sediment management, and living marine resources protection and restoration projects. Pursuant to Sections 31220(b)(2), (3) and (6), the Conservancy is authorized to award a grant for a project that protects or restores fish and wildlife habitat within coastal and marine waters and coastal watersheds, that reduces threats to coastal and marine fish and wildlife, and that restores coastal wetlands, riparian areas, floodplains, and other sensitive watershed lands, that drain to sensitive coastal or marine areas. The proposed project will prepare the pre-implementation studies, designs, and environmental documentation necessary to implement the MDERP, which will restore fish habitat, reduce threats to coastal and marine fish and wildlife, and restore coastal riparian areas. Staff consulted with the State Water Resources Control Board, which confirmed that the project is consistent with Chapter 3 (commencing with Section 30915) (Clean Beaches Program) of Division 20.4 of the Public Resources Code (Watershed, Clean Beaches, and Water Quality Act).

Consistent with Chapter 5.5., Section 31220(c) the proposed project includes completion of modeling that will be used as an evaluation component and is consistent with regional, local, or State watershed management and water quality plans or programs, as described in the “Consistency with Local Watershed Management Plan/State Water Quality Control Plan” section, below.

CONSISTENCY WITH CONSERVANCY’S [2023-2027 STRATEGIC PLAN](#) GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 3.2.1** of the Conservancy’s 2023-2027 Strategic Plan, the proposed project provides necessary studies to complete a plan to enhance a coastal watershed and improve fish passage.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/STATE WATER QUALITY CONTROL PLAN:

The proposed project will further several objectives of the Ventura County Integrated Regional Water Management Plan. Section 5.2.3 of the plan, “Ecosystem Protection and Restoration Strategies,” includes the following:

- Protect and enhance native ecosystem diversity; and
- Protect existing habitats from degradation.

The proposed project will complete technical studies needed to implement the MDERP, which will protect ecosystem diversity and protect existing habitats from degradation in the Ventura River Watershed.

CEQA COMPLIANCE:

The proposed project is statutorily and categorically exempt from the California Environmental Quality Act pursuant to 14 Cal. Code Regs. Sections 15262 and 15306, respectively. Section 15262 provides that feasibility and planning studies for possible future actions that have not yet been approved or funded are exempt from the requirement to prepare an environmental document although environmental factors must be considered. Section 15306 provides a categorical exemption for basic data collection and resource evaluation activities that do not result in serious disturbance to an environmental resource. The proposed project qualifies for these exemptions because it consists of planning, environmental evaluation, and information collection for a potential subsequent project, which has not yet been approved or funded.

Upon approval of the project, Conservancy staff will file a Notice of Exemption.