

# Ventura County Watershed Protection District



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May 23, 2017

Board of Supervisors  
Ventura County Watershed Protection District  
800 South Victoria Avenue  
Ventura, CA 93009

**Subject: Approval of, and Authorization for, the Acceptance of \$3,300,504 in California Department of Fish and Wildlife (CDFW) Restoration Grant Funding for the Matilija Dam Removal 65% Design Planning Project; Authorization for the Ventura County Watershed Protection District (District) Director to Execute the Grant Agreement; and Authorization for the Chair of the Board to Sign the Resolution Accepting the Grant. Supervisorial District 1, District Zone 1**

**Recommendations:**

1. Approve and authorize the acceptance of \$3,300,504 in CDFW Restoration Grant funding for the Matilija Dam Removal 65% Design Planning Project.
2. Authorize the District Director to execute the grant agreement. (Exhibit 1)
3. Authorize the Chair of the Board to sign the resolution accepting the grant.

**Fiscal/Mandates Impact:**

Mandatory:	No
Source of Funding:	CDFW Restoration Grant
Funding Match Required:	\$83,726 in District Zone 1 Funds
Impact on Other Departments:	None

<u>Summary of Revenues &amp; Costs:</u>	<u>FY 2016-17</u>	<u>FY 2017-18 through 2020-21</u>
Revenue:	\$ 0	\$ 3,300,504
Costs:		
Direct	\$ 0	\$ 3,358,359
Indirect/Agency Dept.	\$ 0	\$ 24,531
Indirect/County CAP	\$ 0	\$ 1,340
Total Costs	\$ 0	\$ 3,384,230

Net District Costs	\$	0	\$	83,726
Recovered Indirect Costs	\$	0	\$	0

**Current FY Budget Projections**

<b>Current FY 2016-17 Budget Projection for Watershed Protection Zone 1 Unit 4211</b>				
	<b>Adopted Budget</b>	<b>Adjusted Budget</b>	<b>Projected Budget</b>	<b>Estimated Savings/(Deficit)</b>
<b>Appropriations</b>	\$1,912,900	\$2,025,878	\$778,400	\$1,247,478
<b>Revenue</b>	\$2,790,400	\$2,790,400	\$2,238,900	\$(551,500)
<b>Net Cost</b>	(\$877,500)	(\$764,522)	(\$1,460,500)	\$695,978

Appropriations and revenue will be included in the FY2017-18 through FY2020-21 budgets as appropriate.

**Discussion:**

During the spring of 2016, CDFW announced the opening of the application period for the Fiscal Year 2016-17 Cycle of the Proposition 1 Restoration Grant Program. On December 20, 2016, CDFW informed the District that our proposal for the Matilija Dam Removal 65% Design Planning Project had been selected for funding for the full amount requested of \$3,300,504. In order to execute the grant agreement, CDFW has requested that the District provide several documents, including the authorizing resolution from your Board confirming its approval of the acceptance of the grant.

The grant project will focus on advancing the Matilija Dam removal project from its current conceptual design, completed in 2016, with a California Coastal Conservancy grant, through a feasibility study to 65 percent design.

Cost share provided by the District will consist of overhead costs above that allowed under the Restoration Grant Program and will amount to \$83,726, or approximately 2.5% of the grant. All other project costs will be reimbursed by the grant.

**Project Update:**

The Matilija Dam, constructed in 1947 by the District, was designed to provide water supply and flood protection for downstream communities. Since its construction, Matilija Dam has experienced a condition called alkali-silica reactivity which causes a reduction of strength in concrete properties over time. To address concerns from the California Division of Safety of Dams (DSOD), the dam was notched twice, in 1965 and 1977. The Matilija Dam originally impounded 7000 acre-feet of water, however with the notches and an estimated 8 million cubic yards of sediment trapped behind the dam, less than 500 acre-feet of storage remains.

Although a structural evaluation completed by URS in 2013 concluded that the “deterioration of the concrete strength and stiffness is not expected to significantly affect the safety of the dam over the next 10 to 25 years,” DSOD continues to be concerned about the safety of Matilija Dam.

In 1999, based on your Board’s direction, the District began work with a coalition of federal, state, and local agencies, environmental organizations, and the public to determine how to remove Matilija Dam with the primary goals of ecosystem restoration, including reconnecting steelhead trout to its historic spawning habitat upstream of the dam, and allowing sand and other sediment to be transported to Ventura County coastal beaches. In October 2000, the United States Bureau of Reclamation completed an Appraisal Report, which was followed by a District dam removal demonstration project, and a visit by the then Secretary of the Interior, Bruce Babbitt. In November 2000, the United States Army Corps of Engineers (USACE) completed a Reconnaissance Report that showed federal interest for the project.

Because the USACE had the greatest potential to receive federal appropriations for a project of this size, in June 2001, the District entered into an agreement with the USACE to begin work on the Matilija Dam Ecosystem Restoration Project (MDERP) Feasibility Report and an Environmental Impact Report/Statement (EIR/EIS). The Feasibility Report and EIR/EIS were completed on an aggressive schedule in September 2004. Due to an extensive stakeholder process there were no challenges to the EIR/EIS by any of the concerned parties.

Project elements for the estimated \$124 million project included: dam removal and coarse sediment stabilization upstream of the dam, Camino Cielo bridge modification, Meiners Oaks levee protection, Robles Diversion high flow bypass, slurry of 2 million cubic yards of fine sediment to disposal sites near Baldwin Road, Live Oak levee protection, Santa Ana bridge modification, Casitas Springs levee protection, Foster Park wells, and Robles desilting basin. The project also included the removal of *Arundo donax* from within the main stem of Ventura River up to the headwaters of Matilija Canyon, recreation features between Baldwin Road to the dam reservoir area, and real estate acquisitions.

In July 2005, the District and USACE entered into an agreement for the Design of the Matilija Dam Ecosystem Restoration Project. In November 2007, Congress authorized the MDERP in the Water Resources Development Act (WRDA) of 2007 for \$144.5 million. The overall project cost would be split 65 percent to 35 percent between the USACE and VCWPD, respectively. The USACE appropriated \$4.2 million for project design between FY05 and FY09. No federal funding has been appropriated for the project since FY09.

The District, with cost shared grant funding or USACE funding, has completed or partially completed the following project components: Camino Cielo bridge modification (concept design), Meiners Oaks levee protection (90% USACE design), Robles Diversion high flow bypass (90% USACE design), Live Oak levee protection (90% USACE design), Santa Ana bridge modification (100% design), Casitas Springs levee protection (partial completion of



needed improvements; planning and design required for remaining improvements), Foster Park wells (well drilling and development, Phase 2 100% design), *Arundo donax* (removal upstream of Baldwin Road), recreation (completion of California River Parkways Trailhead at Baldwin Road), and real estate (acquisition of Matilija Hot Springs). Approximately \$29.7 million has been spent on the Matilija Dam project since 1999, with contributions of \$16 million from the State, \$7.3 million from USACE, \$7.0 million from the District, and \$0.7M from private non-profit organizations.

In 2008, cost estimates for handling the fine sediment stored behind the dam doubled from estimates during the Feasibility Study. In response, USACE developed additional sediment handling alternatives. The project stakeholders (Design Oversight Group or DOG) rejected all of USACE developed alternatives primarily due to concerns with soil cement bank protection in Matilija Canyon and the placement of slurried fine sediment outside of the active channel, and requested that additional studies be completed to reduce costs while at the same time meeting the original goals of the project. This effort was kicked off by the formation of the Fine Sediment Study Group in September 2010, and the completion of a final report in August of 2011. A Technical Advisory Group was formed in October 2011 to develop proposed scopes of work for these recommended studies which were finalized in December 2012. A consultant team comprised of AECOM and Stillwater Sciences was selected in June 2013, and they completed these studies between February 2014 and March 2016 under a District contract paid for with a grant from the California Coastal Conservancy.

On March 17, 2016, the DOG met and chose Dam Removal Concept 2A (DRC-2A), which consists of boring two 12-foot orifices near the base of the dam. Prior to a flushing storm event (about a 4-year flood), the 12-foot orifices would be charged with explosives to release the remaining concrete on the upstream side of the dam and the fine sediment behind the dam would be flushed downstream to the ocean. Note that DSOD, a reviewing agency, has stated concerns with this concept.

DRC-2A is similar to alternatives evaluated during the Feasibility Study in that it allows all of the fine and coarse sediment to be naturally transported in an uncontrolled manner to the ocean. This alternative, while suggested, was not pursued in depth during the USACE Feasibility Study due to stakeholder concerns. These concerns included anticipated unmitigable impacts to Casitas Municipal Water District's Robles Diversion, and skepticism regarding this approach due to the potential environmental impacts, described by some at the time as being total biological annihilation.

During the AECOM/Stillwater study, it was estimated that the post dam removal impact from fine sediment on the Robles Diversion, a major concern for water suppliers, would last a few days to a few weeks. Casitas Municipal Water District agrees that DRC-2A should be ranked the highest of the concept alternatives studied by AECOM/Stillwater and it will have the shortest impact on Robles Diversion. Environmental stakeholders now support natural transport of sediment aligned with this concept due to results from the AECOM/Stillwater study and recent dam removal projects at Elwha and Giles Canyon

Dams (Elwha River) in Washington State (2012), Condit Dam (White Salmon River), in Washington State (2011), Marmot Dam on Sandy River in Oregon (2007), and proposed Klamath River system dam removal projects.

While the MDERP is still congressionally authorized (WRDA 2007), USACE priorities changed (levee certifications, etc.), staff believes that the probability of congress appropriating money for this project has diminished.

Staff believes that there are now opportunities to secure private funding, with cooperation of others, most notably the water purveyors and the environmental groups, provided a project can be developed that is broadly supported by the stakeholder community.

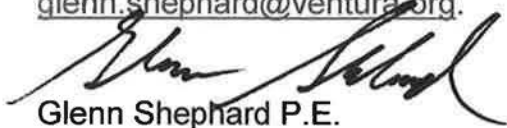
A Matilija Funding Sub-Committee (Sub-Committee) has been established with representatives from the District and stakeholders (including agency representatives, non-governmental organizations, and Patagonia). The Sub-Committee, with grant funding from the Resources Legacy Fund and Hewlett Foundation's Open Rivers Fund, developed a project funding plan (see Exhibit 2). The funding plan is non-binding, and conceptually outlines funding for accomplishing the project.

This funding plan accounts for all project components, including dam removal and downstream infrastructure improvements contained in the federally authorized project, except for: slurry of 2 million cubic yards of fine sediment to disposal sites near Baldwin Road, completion of Foster Park Wells (due to reduced fine sediment impacts, the completion of the wells is accounted for under the adaptive management budget, should they be needed), additional *Arundo donax* eradication, and additional recreational features downstream of the dam.

Your Board previously authorized the grant application whose acceptance is before you today. The work plan developed for this grant can be accomplished with or without USACE federal appropriations.

This item has been reviewed by the County Executive Office, County Counsel, and the Auditor-Controller's Office.

If there are any questions regarding this item, please contact me at (805) 654-2040 or at [glenn.shephard@ventura.org](mailto:glenn.shephard@ventura.org).



Glenn Shephard P.E.

#### Attachments

Resolution of Acceptance

Exhibit 1 – Grant Agreement

Exhibit 2 – Matilija Dam Removal and Ecosystem Restoration Project Funding Plan