

The logo for the Matilija Dam Ecosystem Restoration Project. It features a stylized icon of a dam with a pair of scissors cutting through it, positioned to the left of the text. The text reads "MATILIJA DAM" in large, bold, white capital letters, with "Ecosystem Restoration Project" in a smaller, orange font below it.

MATILIJA DAM
Ecosystem Restoration Project

The logo for Public Works Ventura County. It consists of the words "PUBLIC" and "WORKS" in bold, black capital letters, stacked vertically. A yellow horizontal bar with the words "VENTURA COUNTY" in black capital letters is positioned between the two words.

PUBLIC
VENTURA COUNTY
WORKS

Proposed Modified MDERP

Subsequent Environmental Impact Report

CEQA Scoping Period Information

DECEMBER 7, 2023

This presentation provides information regarding the California Environmental Quality Act, or CEQA, Scoping Period for the Matilija Dam Ecosystem Restoration Project.

AGENDA

- 1 Meeting Purpose
- 2 Background & History
- 3 Project Components
- 4 New Information
- 5 Supplemental Environment Impact Report (SEIR) Process
- 6 Questions & Comments

This presentation includes information about the purpose for today's meeting, some background and history on the Matilija Dam Ecosystem Restoration Project and reports completed so far, a brief explanation of the dam removal project, new information triggering the new CEQA studies, the process steps in the Supplemental Environmental Impact Report – called an SEIR for short, and then we will answer questions and receive comments.

Before Item 6, there will be a 10-minute break for you to fill out a form for your questions and comments. These will become part of the public record. I will read the questions and comments out loud and the project team will try to answer them, as appropriate. As I will explain in a minute- the Scoping phase of the CEQA process is to gather information and questions from the public, so we likely will not have all the answers today. There are additional ways to comment so if you think of something later you can still submit it.

Scoping Period Purpose

- 1** Inform the public about the proposed Modified Project (a proposed new method of dam removal) and the CEQA environmental review process.
- 2** Gather public input on the scope and content of the Subsequent Environmental Impact Report (SEIR), including potential environmental issues, mitigation, and alternatives to be analyzed.

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Scoping for the Modified Matilija Dam Ecosystem Restoration Project provides an opportunity for the public to give input on the scope and content of the Subsequent Environmental Impact Report, or SEIR. Input may include identifying specific environmental issues, mitigation measure ideas to reduce environmental impacts, and potential alternatives to project actions. You may also provide relevant information we should consider when conducting the environmental impact analyses.

Ventura River Watershed



Matilija Dam is located on Matilija Creek, approximately 16 miles north of the Pacific Ocean in western Ventura County, California.

Approximately one-half mile southeast of the Dam, Matilija Creek and North Fork Matilija Creek join to create the Ventura River, which has a drainage area of approximately 226 square miles.

The Los Padres National Forest surrounds the portions of the Modified Project area along Matilija Creek and Matilija Dam. Downstream of the Dam, the Ventura River flows south past the western edge of the City of Ojai, and through unincorporated communities within Ventura County. In its lower reaches, the Ventura River flows along the western edge of the City of Ventura until it reaches its estuary and the Pacific Ocean.

Matilija Dam

Built 1947



Pre-lake Matilija Creek Bed



Upper Ventura River, circa 1920

Matilija Dam was constructed in 1947 with the purpose of providing water supply and flood control for the Ojai Valley. Prior to dam construction, the Ventura River was known by fishermen for its annual run of southern steelhead trout.



Matilija Dam Issues

1965

A structural analysis of the dam was conducted because of concrete deterioration and abutment movement

1965 & 1978

The dam was notched to reduce structural strain

1967

Concrete alkali-aggregate reactivity caused dam cracking, compromising its structural safety (*ongoing issue*)

Currently

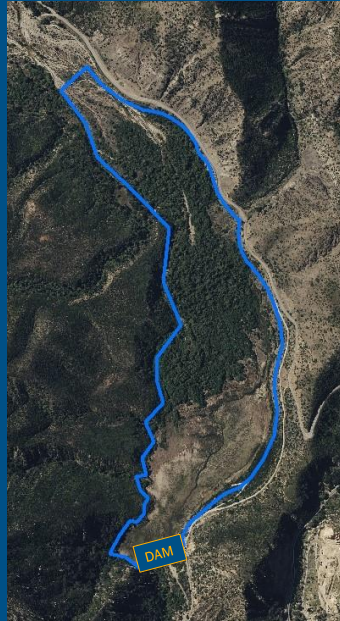
Currently risk-reduction measures must be implemented for dam safety (*e.g., maintaining reservoir at 7 feet below the spillway crest between March and December*)

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Matilija Dam has suffered from concrete deterioration and movement. It has been notched 2 times for safety. The dam will continue to deteriorate due to alkali-silica reaction degradation in the concrete and general age. Water is no longer impounded as a dam safety measure.

Where is the lake?

- 9- million cubic yards of sediment is trapped behind Matilija Dam
- Less than 2% of the initial reservoir capacity remains.



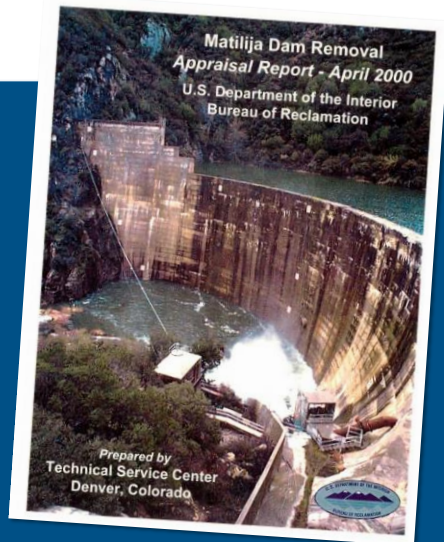
Approximate lake boundary outlined in blue on 2022 aerial photo

Since 1947, natural creek sediments have accumulated behind Matilija Dam, over time diminishing the reservoir capacity and altering the natural downstream sediment transport regime. On the photo on the right, the former lake/reservoir area is outlined in blue. An estimated 9 - million cubic yards of sediment is currently trapped behind the Dam, which is the equivalent of 1,406 football fields covered 3 feet deep with dirt and rock. The initial reservoir capacity was over 7,000 acre-feet of water. Today the reservoir capacity is less than 100 acre-feet, which is less than 2 percent of the original volume. (An acre-foot of water is the amount of water necessary to cover one acre of surface area to a depth of one foot, or about 325,850 gallons of water.)

1998 - 2000

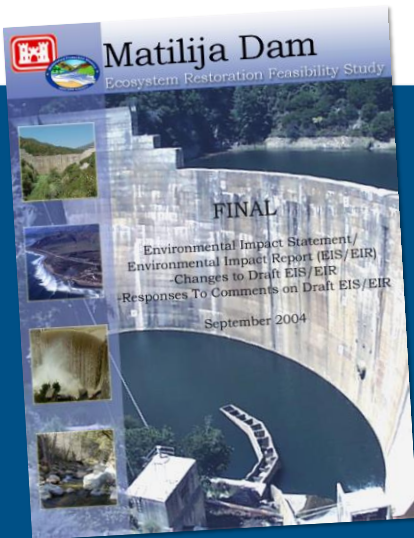
Appraisal Study

- In 1997, the southern California steelhead trout was federally listed as an endangered species.
- To restore habitat access for the southern California steelhead, the County Board of Supervisors directed the Ventura County Watershed Protection to study dam removal.



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In 1997, 50 years after Matilija Dam construction, steelhead fish were listed as endangered under the Federal Endangered Species Act. Since Matilija Dam blocks access to prime spawning habitat for the steelhead trout, the Ventura County Board of Supervisors directed the Flood Control District to study dam removal. We partnered with the U.S. Bureau of Reclamation to produce a Dam Removal Appraisal Report in the year 2000. The Flood Control District changed its name to Watershed Protection in 2003 and is part of the Ventura County Public Works Agency.



2004

Feasibility Study & EIS/EIR

- Partnered with U.S. Army Corps of Engineers to prepare a Feasibility Study and an EIS/EIR for the Matilija Dam Ecosystem Restoration Project.
- Over 40 government and non-governmental agencies and water purveyors participated in the environmental review process, as well as numerous members of the public.

Following the completion of the Appraisal Study, Watershed Protection partnered with the U.S. Army Corps of Engineers to prepare a feasibility study and a joint Environmental Impact Statement and Environmental Impact Report (EIS/EIR) for the Matilija Dam Ecosystem Restoration Project. The EIS/EIR was finalized in 2004.

The feasibility study considered 7 alternatives for dam removal, and the EIS/EIR evaluated the short-term and long-term impacts from the proposed project components and alternatives.

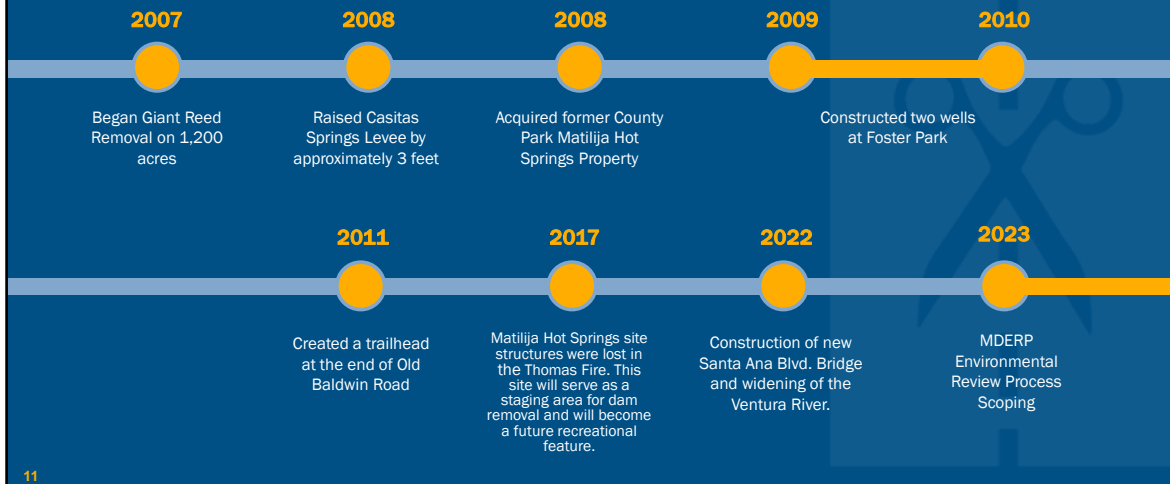
Over 40 government and non-governmental agencies and water purveyors participated in the environmental review process, as well as numerous members of the public. Most of these stakeholders, and many others, remain actively engaged in the project development process.



The preferred dam removal alternative identified in the 2004 EIS/EIR was Alternative 4b which included full dam removal with fine sediment relocation. The 2 million cubic yards of fine sediments- which are mostly silts and clays- would be removed using suction dredges and transported as a slurry to downstream disposal sites on the river floodplain. The remaining sediments would be stabilized in a manner that would allow natural erosion over time. Alternative 4b was approved by the Board of Supervisors of Watershed Protection as the approved project in 2004. Stakeholders raised concerns regarding the volume of water use for the slurry method. Additional studies in the following years led to the current proposed project method of controlled natural sediment transport.

The 2004 EIS/EIR identified and evaluated to varying degrees the multiple project components that comprise the Matilija Dam Ecosystem Restoration Project. These approved project components are identified on the map and include completed, in progress, and future components. Prior to dam removal, downstream project components need to be constructed to protect communities and infrastructure from sediment and heightened flood waters that would result from dam removal.

Project Component Progress



As indicated on the previous slide, Matilija Dam Ecosystem Restoration Project includes multiple components. Since the certification of the 2004 EIS/EIR, Watershed Protection has completed some of the project components.

The status of these completed projects are shown on this slide:

- 2007 initiation of giant reed removal on 1,200 acres which is ongoing;
- Raised Casitas Springs Levee by approximately 3 feet (2005 and 2007);
- Constructed two wells at Foster Park (2009);
- In 2008, Watershed Protection acquired the former County Park Matilija Hot Springs Property to serve as a staging area for dam removal, which will become a future recreational feature. The structures at the former County Park Hot Springs Property were lost in the Thomas Fire in 2017.
- Created a trailhead at the end of Old Baldwin Road which is an equestrian and handicap accessible trail (2011) with partner Ojai Valley Land Conservancy;
- Constructed the Santa Ana Boulevard Bridge Replacement and Ventura River widening project in 2022.



The Matilija Dam Ecosystem Restoration Project components yet to be completed include:

Replacing/modifying the culvert bridge at Camino Cielo (2026)

- Upgrading the levees in Oak View and Casitas Springs in 2027 and 2028 respectively
- Constructing flood protection at Meiners Oaks (2028)
- Modifying the Casitas Municipal Water District's Robles Diversion water supply facility (2028)
- Dam orifice construction and first phase sediment transport (2029)
- Dam removal

Each element will require compliance with the CEQA and necessary permitting prior to construction.

TO BE COMPLETED

Post Dam Removal



Habitat restoration would be accomplished by managed natural recruitment and non-native plant control.



Adaptive management would monitor and correct post dam removal river flow obstructions.



Infrastructure maintenance would occur as needed.

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After dam removal, habitat restoration would continue by managed natural recruitment of vegetation and animals, and non-native plant control.

Post-dam removal adaptive management would include monitoring and correcting observed river flow obstructions.

Infrastructure maintenance would occur as needed.

Steps in Project Planning Since 2004

- Since the 2004 EIS/EIR, sediment transport and hydrology models have greatly improved, and many dams across the country have been removed and studied.
- Between 2008 and 2016 this new information was applied to the Matilija Dam Ecosystem Restoration Project resulting in a new proposed method for dam removal (natural sediment transport rather than by slurry or machinery).
- Several other project components identified previously now have preliminary designs or are in the design phase

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Since the certification of the 2004 Environmental Impact Statement and Environmental Impact Report, Watershed Protection and the design team have applied new information about dam removal to the project. Sediment transport and hydrology models have greatly improved, and many dams across the country have been removed and studied.

Between 2008 and 2016, this new information was applied to the Matilija Dam Ecosystem Restoration Project, resulting in a new alternative developed for dam removal.

In June 2017, Watershed Protection received grant funding from California Department of Fish and Wildlife to implement the Matilija Dam Removal 65% Design Planning Project. The updated plan to remove Matilija Dam incorporates new information garnered from recent dam removal projects.

Watershed Protection has determined that preparation of a Subsequent EIR is warranted to evaluate the Modified dam removal Project component. Other components, such as levees, will also be undergoing supplemental environmental review under CEQA.

Purpose of SEIR & Reissued NOP

Watershed Protection is preparing a Subsequent EIR (SEIR) to analyze the proposed Modified Matilija Dam Ecosystem Restoration Project.

Purpose:

To evaluate the environmental effects from the revised method for Matilija Dam removal (Modified Project) and address alternatives.

Reissued Notice of Preparation (NOP):

Originally published in 2020.
Reissued in 2023 to address new information and capture new public and stakeholder comments.

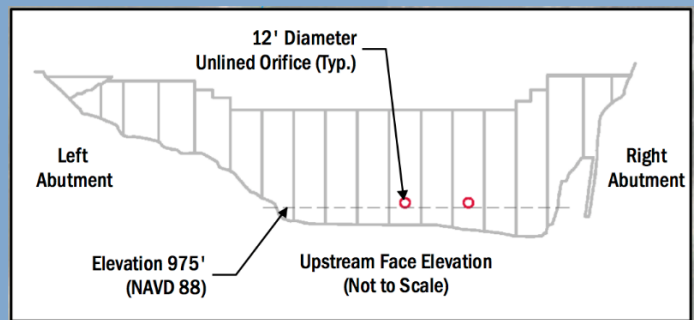
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The Subsequent EIR will provide a complete and objective analysis of the revised plan for dam removal.

On September 14, 2020, Watershed Protection issued a Notice of Preparation (NOP) to notify agencies and interested parties that as the Lead Agency, it was beginning preparation of a Subsequent Environmental Impact Report (SEIR) pursuant to CEQA due to new information of substantial importance and substantial changes in the Project since 2004. A Reissued NOP was issued in November of this year because new technical information pertaining to sedimentation and flooding that would be associated with the Matilija Dam Removal component of MDERP was obtained after September 14, 2020. This new information: 1) resulted in a delay in the preparation of the SEIR; 2) necessitated revisions to the MDERP components being considered as the proposed Project for the purposes of this SEIR, which will primarily focus on the Matilija Dam removal component; and 3) resulted in a modification to the specific environmental issues to be evaluated in the SEIR due to new environmental issue considerations currently mandated by CEQA.

SEIR Revised Dam Removal Method

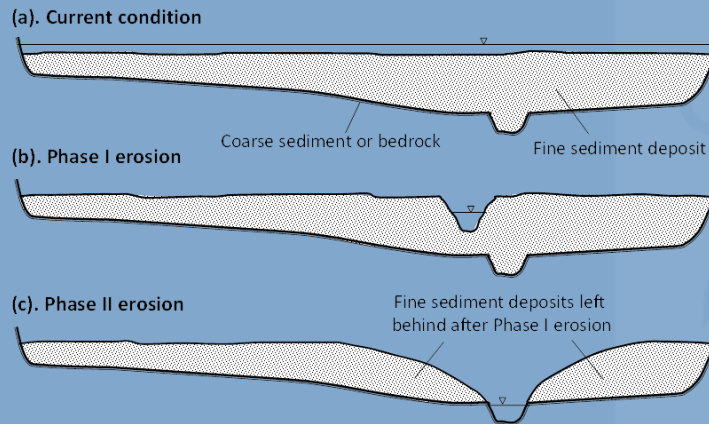
- Controlled Natural Sediment Transport
- Cost Effective
- Proven to Work



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After extensive studies, Project engineers have proposed a new alternative for dam removal relying on the natural sediment transport rather than moving and sequestering sediments by slurry or machinery. Two 12-foot diameter holes would be drilled near the dam base and opened in advance of a large storm event. This storm would be expected to transport some sediment from behind the dam downstream to the ocean. The holes would remain at least partially open while dam removal occurs.

New Matilija Creek Channel Forms in Lakebed

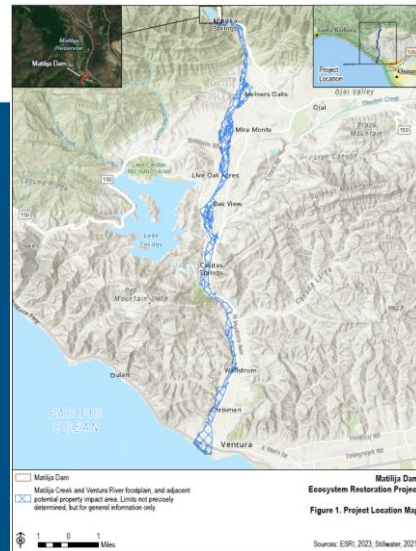


Once the holes are open, the sediment will travel downstream, and a new creek channel will form through the old lakebed as shown in these three diagrams. Not all trapped sediment will mobilize downstream.

Diagram A illustrates that the current lakebed condition does not have a well-defined creek channel. Diagram B shows Phase 1 erosion process of the initial head cutting of a creek channel shortly after the holes are open and the storm mobilizes some of the sediments. The last diagram, Diagram C, shows Phase 2 erosion when the Matilija Creek channel is near its pre-dam location and some of the lake sediments stay behind as new canyon slopes. Dam removal would occur after Phase I sediment transport and early Phase II sediment transport.

New Information

- Increased sedimentation within the floodplain caused by dam removal.
- Increased water surface elevations within the floodplain due to sediment release.
- Increased area prone to flooding during the 100-year event (1 percent annual chance flood).



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Matilija Dam captured sediment which caused the riverbeds downstream to erode. With dam removal, we expect both short and long term increases in sediment accumulation in the riverbeds. The initial flush of mostly fine material will occur by a large storm with a 4-year recurrence interval, which is a little larger than a typical annual storm and much smaller than a 100-year storm, also called the 1 percent annual chance flood. The storms we had this past winter were around a 40-year recurrence interval size for comparison.

Periodic erosion of larger sediments from behind the dam, combined with the naturally occurring sediment loads from Matilija Creek, are expected to raise the riverbed level of Matilija Creek and the Ventura River downstream of the dam. The upper Ventura River is expected to receive more sediment than the lower river. With the riverbed elevation rising, so in turn, will the flood water elevations rise.

Modeling studies are ongoing to refine the extent of the sediment impacts on the floodplains.

New Information

Short-term Impacts: exacerbated significant impacts to downstream sensitive habitats and species (e.g., steelhead, California red-legged frog, and western pond turtles) from initial sediment transport.

Long-term Benefits: southern steelhead and other species through habitat improvements and removal of the barrier to upstream spawning grounds assuming recruitment of species from unaffected tributaries.



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The new sediment transport and hydraulic studies (2022) indicate the extent of biological resource impacts is exacerbated over that identified in the 2004 EIS/EIR. The first flush of sediment is expected to result in a loss of aquatic wildlife downstream of the dam. These species are expected to rebound quickly such that long-term beneficial biological restoration impacts are still anticipated with restoration of natural conditions at the dam site and continued non-native plant removal.

New Information

Land use impacts would be associated with the sediment and flood water surface increases from the proposed

Modified Project:

- Impacts to structures
- Impacts to infrastructure
- Impacts to agricultural land



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Substantial amounts of downstream sediment deposition are expected to result from the Project. Downstream land uses would be directly impacted to varying degrees with the most substantial impacts occurring closer to the dam site and gradually decreasing downstream. Such effects would include impacts to structures, infrastructure and areas of Important Farmland (i.e., Prime Farmland, Unique Farmland, and Farmland of Local Importance) located downstream of Matilija Dam.

New Information

New elements of the CEQA checklist:

- Greenhouse gases
- Vehicle miles traveled (VMT)
- Tribal Cultural Resources
- Wildfire
- Forest Resources
- Energy

All CEQA checklist items will be addressed in the SEIR.



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Since preparation of the 2004 EIS/EIR the requirements of CEQA have been periodically updated. Additional environmental checklist items include: greenhouse gases, vehicle miles traveled, tribal cultural resources, wildfire, forest resources and energy. All of the CEQA-mandated environmental checklist issues will be analyzed in the Subsequent EIR.

CEQA Subjects to Address in SEIR

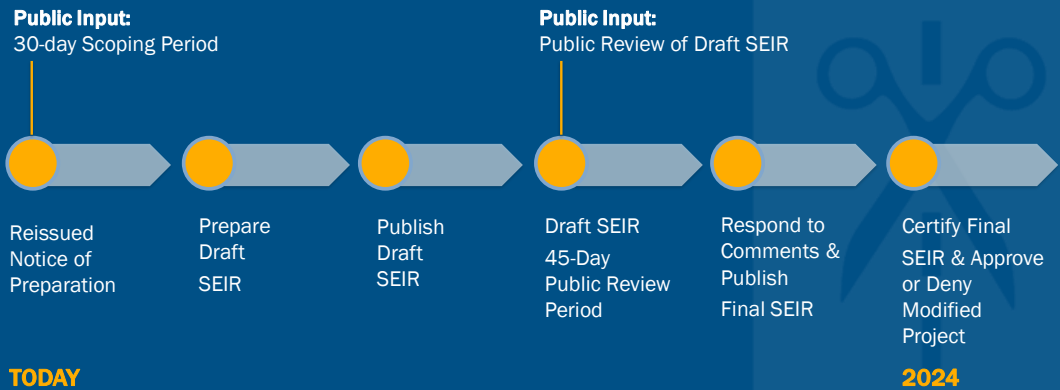
Partial list of CEQA checklist subjects:

| Resources | Hazards | Environment |
|------------------------------|------------------------------|--------------------------------|
| Air Quality | Fault Rupture | Coastal Beaches and Dunes |
| Agriculture | Ground Shaking | Scenic Views |
| Water Quality and Supply | Liquefaction | Recreation |
| Mineral | Tsunami | Transportation/Traffic |
| Paleontology | Seiche | Aviation/ Harbors |
| Biology | Flooding (FEMA and Non-FEMA) | Glare |
| Cultural | Erosion | Public Health/ Law Enforcement |
| Historic | Landslide/ Mudflow | Utilities |
| Tribal | Expansive Soils | Schools |
| Waste Treatment and Disposal | Hazardous Materials/ Waste | Housing |
| Greenhouse Gases & Energy | Fire Protection | Community Character |

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All of the CEQA-mandated environmental checklist issues will be analyzed in the Subsequent EIR.

Subsequent EIR Process



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This flow chart illustrates the environmental review process for a Subsequent EIR under CEQA. We are currently at the reinitiated first step of the process having reissued a Notice of Preparation to start the scoping process for the Subsequent EIR. This step includes conducting a scoping meeting to solicit input from affected agencies, the public, stakeholders, and other interested parties. All scoping comments received during the 30-day scoping period will be considered during preparation of the Draft Subsequent EIR analyses. A second opportunity for public input will be provided after publication of the Draft Subsequent EIR, with a public review period of 45 days, which will be Spring 2024. Comments on the Draft Subsequent EIR will be addressed in the Final Subsequent EIR with responses to comments and/or associated text revisions to the final document, late Fall 2024.

The last step in the Subsequent EIR process is for the Ventura County Public Works Agency Watershed Protection Board of Supervisors to certify the Final Subsequent EIR. Following certification of the CEQA document, the Board will determine whether to approve or deny the Project. If the Board decides not to approve the proposed Modified Project, the Subsequent EIR does not need to be but may be certified and the 2004 approval of Alternative 4b will remain in place.

Ways to Submit comments



Mail

Ventura County Public Works Agency - Watershed Protection

Attn: Matilija Dam Ecosystem
Restoration Project – Donna Hebert

800 S. Victoria Avenue #1600
Ventura, CA 93009



E-mail

MDERP@ventura.org

*Please include
"Comment" in the
subject line*

- ✓ Must be received or postmarked by December 20, 2023
- ✓ Please focus comments on the scope and content of the SEIR, including environmental concerns, mitigation, and/or alternatives
- ✓ All comments (including names/addresses) will become public information.

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Scoping comments may be sent by mail or e-mail to the addresses shown in this slide and included in the Reissued Notice of Preparation.

Comments must be received or postmarked **by December 20, 2023**. Please focus all comments on the scope and content of the Subsequent EIR, including environmental concerns, mitigation, and alternatives to project components.

All scoping comments, including names and addresses provided, will become public information.

| | | | | |
|---|---|--|----------------|--|
|  <p data-bbox="167 260 364 299">Matilija Dam 2000</p> |  <p data-bbox="764 260 1092 299">Potential Future: Dam Removed</p> | | | |
| <p data-bbox="167 801 385 830">For more information:</p> <table border="0"><tr><td data-bbox="167 840 451 879">Donna.Hebert@ventura.org</td><td data-bbox="473 840 647 879">(805) 477-1976</td><td data-bbox="691 801 1252 898">Ventura County Public Works Agency - Watershed Protection Attn: Donna Hebert 800 S. Victoria Avenue #1600, Ventura, CA 93009</td></tr></table> <p data-bbox="152 869 182 888">25</p> | | Donna.Hebert@ventura.org | (805) 477-1976 | Ventura County Public Works Agency - Watershed Protection Attn: Donna Hebert 800 S. Victoria Avenue #1600, Ventura, CA 93009 |
| Donna.Hebert@ventura.org | (805) 477-1976 | Ventura County Public Works Agency - Watershed Protection Attn: Donna Hebert 800 S. Victoria Avenue #1600, Ventura, CA 93009 | | |

For more information on the scoping process or the environmental review process, please contact Watershed Protection at the address, e-mail, or phone number provided in this slide.



Questions?

This is your opportunity to ask questions on the process.

Comments?

This is your opportunity to provide comments on the scope of the SEIR, specifically, those comments pertaining to environmental issues to be evaluated, mitigation measures to reduce environmental impacts, or potential alternatives to project actions.

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Your comments on the scope of the SEIR are welcome, specifically, those pertaining to environmental issues to be evaluated, mitigation measures to reduce environmental impacts, or potential alternatives to project actions.

Some example comments from the 2020 scoping:

- The SEIR should discuss the toxicity of the sediment behind the dam and the effects of contaminated sediment to downstream residents and wildlife.
- Sedimentation from dam removal may impact private wells and orchards and damage properties.
- Consider impacts to rare plants as well as the effects from invasive species.