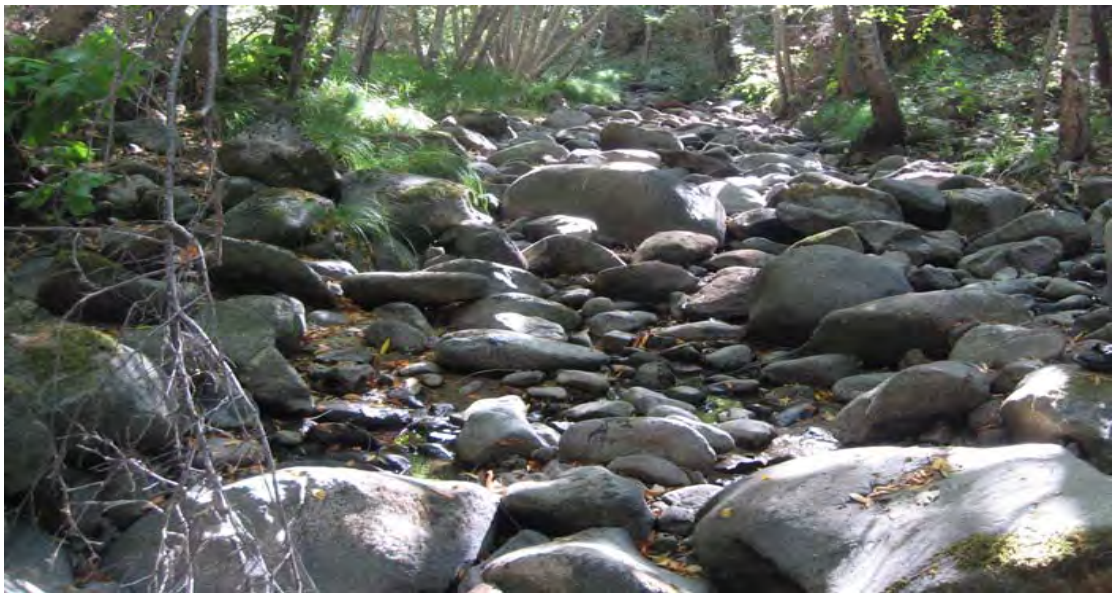
San Clemente Dam Seismic Safety Project



Draft Supplement to the EIR, No. 2
Old Carmel River Dam Removal

SCH # 2005091148

Prepared for:

California State Coastal Conservancy

California American Water

URS Corporation
1333 Broadway, Suite 800
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NOTICE OF AVAILABILITY

Draft Supplement No. 2 to the San Clemente Dam Seismic Safety Project Final Environmental Impact Report/Environmental Impact Statement (Removal of Old Carmel River Dam)

California State Clearinghouse No: 2005091148

Lead Agency: State Coastal Conservancy (SCC)

CEQA Responsible and Trustee Agencies: California Department of Fish and Game (CDFG), California Public Utilities Commission, Monterey Peninsula Water Management District, Central Coast Regional Water Quality Control Board

Project Sponsor/Proponent: California American Water Company (CAW)

Project Title: San Clemente Dam Seismic Safety Project

Project Location: The project is located in an unincorporated area of Monterey County, California, at the confluence of the Carmel River (River Mile 18.5) and San Clemente Creek, approximately 15 miles southeast of the City of Carmel-by-the-Sea and 3.7 miles southeast of Carmel Valley Village.

Project Purpose and Objectives: The purposes and objectives for the project are to meet current standards for withstanding a Maximum Credible Earthquake and Probable Maximum Flood at San Clemente Dam, provide fish passage at the dam, maintain a point of diversion to support existing water supply facilities, water rights and services, and minimize financial impacts to California-American Water rate payers.

Abstract: California American Water Company proposes to remove San Clemente Dam and reroute the Carmel River, as described in Alternative 3 of the 2008 Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS). This project was revised and potential new impacts and mitigation measures were described in the April 2012 Supplement to the EIR (April 2012 SEIR).

This Draft Supplement No. 2 to the Final EIR (DSEIR No. 2) has been prepared to describe a further refinement to the project, the removal of OCRD, analyze potential impacts associated with the change to the project, and propose mitigation for those impacts. The project refinement described in DSEIR No.2 would consist of removing OCRD entirely and restoring the Carmel River in the vicinity of the dam to a natural state. The 2008 Final EIR/EIS and the April 2012 SEIR analyzed leaving OCRD in place, but cutting a 19 foot wide by 9 foot deep notch in the dam. As with the Proposed Project described in the 2008 Final EIR/EIS and the revised Project described in the April 2012 SEIR, the project with the refinement described in this DSEIR No. 2 will meet the stated purpose and objectives by improving fish passage in the Carmel River.

Date of Implementation: The component of the San Clemente Dam Seismic Safety Project will be implemented after certification of the SEIR No. 2 and project approval. The project will be completed within approximately five years, including environmental review, permitting, design, infrastructure improvements, and all aspects of construction or demolition. Removal of OCRD would occur near the end of the construction schedule.

List of possible permits, approvals, and licenses: See the 2008 Final EIR/EIS Chapter 1.5 "Overview of Permit Approval and Consultation Requirements, San Clemente Dam Seismic Safety Project" for information.

Draft SEIR Public Review Period: Start Date: June 14, 2012 End Date: July 29, 2012

Location of Background Information: You may access the DSEIR No.2 and find more information about the project the SCC website at: https://sanclementedamremoval.org.

Copies of DSEIR No. 2 are also available for public review at the following locations:

California-American Water Company Monterey Division 511 Forest Lodge Road Suite 100 Pacific Grove, California 93950	City of Monterey Library 625 Pacific Street Monterey, California 93940
Monterey Peninsula Water Management District 5 Harris Court, Building G Monterey, California 93940	City of Carmel-by-the-Sea, Harrison Library Ocean Avenue/Lincoln Avenue City of Carmel-by-the-Sea, California 93921

To submit comments on this Draft SEIR No. 2, request additional copies, or for additional information, please contact:

Trish Chapman
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1330 Broadway, 13th Floor
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ABBREVIATIONS AND ACRONYMS

BMPs	Best Management Practices
CAW	California American Water
CDFG	California Department of Fish and Game
CEQA	California Environment Quality Act
cfs	cubic feet per second
CRLF	California red-legged frog
CTS	California tiger salamander
dBA	decibels on the A-weighted scale
DSOD	Division of Safety of Dams
DWR	(California) Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
MBUAPCD	Monterey Bay Unified Air Pollution Control District
NEPA	National Environmental Policy Act
NGVD29	National Geodetic Vertical Datum
NRHP	National Register of Historic Places
OCRD	Old Carmel River Dam
OHWM	Ordinary High Water Mark
per. com.	Personal communication
SCC	State Coastal Conservancy
SCD	San Clemente Dam
SCDHD	San Clemente Dam Historic District
SEIR	Supplemental Environmental Impact Report
SPCC Plan	Spill Prevention Containment and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

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1. INTRODUCTION

1.1 BACKGROUND

The Old Carmel River Dam (OCRD) is located about 1,800 feet downstream of San Clemente Dam (SCD) on a bend of the Carmel River. OCRD is a masonry dam that was built in 1883 by Pacific Improvement Company to divert water for commercial use. The dam is approximately 160 feet long and approximately 4 feet wide at the crest. There is a private bridge crossing partially incorporated into OCRD. The OCRD bridge is located slightly upstream of the spillway (crest of the dam) with the piers partially supported by the dam and partially supported by the alluvium upstream of the dam; the south abutment is partially supported by the dam and south hill slope.

The California Department of Water Resources (DWR) and the U.S. Army Corps of Engineers (USACE) prepared a Final Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) under the California Environmental Quality Act (CEQA) of 1970, and the National Environmental Policy Act (NEPA) of 1969 for the San Clemente Dam Seismic Safety Project. This EIR/EIS analyzed the potential impacts of four project alternatives, plus a no-project alternative. Each of the project alternatives included constructing a notch in OCRD, with the exception of the no-project alternative. On December 31, 2007, DWR certified the Final EIR in accordance with CEQA Guidelines section 15090. On March 14, 2011 DWR filed a Notice of Determination for the Project in compliance with section 21108 of the Public Resources Code approving the Carmel River Reroute and San Clemente Dam Removal Project, as described in Alternative 3 of the 2008 Final EIR/EIS (DWR 2008) (hereinafter referred to as "the project" or "Alternative 3").

Since that time, California American Water (CAW), the project proponent, identified several necessary changes to the project. DWR, as the lead agency, evaluated the proposed changes, and prepared an SEIR. This SEIR addressed changes to the project, including a new access route, excavation of additional sediment from San Clemente Creek (based on revised engineering calculations), proposed night work under certain circumstances, and revised impacts based on the latest engineering design. The SEIR was released for public review on April 27, 2012.

To improve fish passage and restore the Carmel River to a more natural state, CAW also proposes to remove OCRD, including the bridge entirely rather than notch this dam as described and analyzed in the 2008 Final EIR/EIS (DWR 2008). DWR did not address removal of OCRD and the bridge in the April 2012 SEIR. The State Coastal Conservancy (SCC) will consider providing funding to the proposed project, including the removal of OCRD and the bridge. Accordingly, this SEIR No.2 is being prepared by SCC specifically to address impacts related to removal of OCRD as part of the project. For purposes of this Draft SEIR No. 2, OCRD and the OCRD bridge will be collectively referred to as OCRD unless otherwise specified.

1.2 PURPOSE OF THE SEIR NO. 2

CEQA requires preparation of an EIR when there is substantial evidence that a project may have a significant impact on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the public with an objective and informational document that fully discloses the potential environmental impacts of a proposed project. The EIR process is specifically designed to facilitate the objective evaluation of potentially significant direct, indirect, and cumulative impacts of a proposed project, as well as to identify potentially feasible mitigation measures that reduce or avoid a project's significant impacts. In addition, CEQA specifically requires that an EIR identify those adverse impacts determined to be significant after mitigation.

According to the CEQA Guidelines, an SEIR is required when "substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects" (Section 15162), and "[o]nly minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation" (Section 15163(a)(2)). This SEIR No. 2 has been prepared to evaluate environmental impacts resulting from the proposal to remove OCRD, which is not addressed in the Final San Clemente Dam Seismic Safety Project EIR/EIS or the April 2012 SEIR.

Section 15163 (b) of the CEQA Guidelines states that "the supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised." The regulations also require an SEIR to be given the same kind of notice and public review as would be given to a draft EIR, but the regulations do not require recirculation of the previous EIR.

On May 19, 2011, SCC approved providing up to $4.5 million to the proposed project . As part of this action, SCC made findings based on the 2008 Final EIR/EIS (DWR 2008) and adopted a statement of overriding considerations. When SCC decides whether to approve additional funding for the Project, it must consider the previous 2008 Final EIR/EIS (DWR 2008) as revised by April 2012 SEIR (DWR 2012), and this SEIR No. 2.

1.3 CHANGES SINCE THE 2008 FINAL EIR/EIS AND APRIL 2012 SUPPLEMENT TO THE EIR

As described above, the only change since certification of the 2008 Final EIR/EIS and release of the April 2012 SEIR is the complete removal of OCRD rather than notching as described in the previous environmental documents.

1.4 RELATED ENVIRONMENTAL DOCUMENTS

This SEIR No. 2 builds upon the 2008 Final EIR/EIS and the April 2012 SEIR (DWR 2008, 2012). This document addresses only new or modified environmental impacts associated with the removal of OCRD as described in Chapters 3 and 4 of this

document. The 2008 Final EIR/EIS and the April 2012 SEIR are available at https://sanclementedam.water.ca.gov.

1.5 STATEMENT OF OBJECTIVES

The main goal of the project refinement is to provide increased fish passage and restore the Carmel River to a more natural state. This goal is consistent with the goals and objectives stated in the 2008 Final EIR/EIS (DWR 2008) which were:

- Protect public safety.
- Provide fish passage at San Clemente Dam.
- Maintain a CAW point of diversion on the Carmel River to support existing water supply facilities, water rights, and services.
- Minimize financial impacts to CAW rate payers.

1.6 TERMINOLOGY USED IN THIS SEIR

This SEIR uses the following terminology consistent with CEQA Guidelines to denote the significance of potential environmental impacts.

A “less than significant” impact or an impact that is “not significant” would cause no substantial adverse changes in the environment; no mitigation is needed.

A “significant” impact could or would cause substantial physical changes in the environment. Mitigation is recommended to reduce the impact to a less-than-significant level.

A “significant and unavoidable” impact is one that could or would cause a substantial adverse change in the environment that cannot be avoided if the project is implemented. Mitigation may be recommended, but would not reduce the impact to a less-than-significant level.

Impacts for each resource or issue are analyzed and evaluated based on the following factors:

- Extent — considers whether the impact would be local or regional in nature;
- Duration — considers whether the impact is short-term (typically construction-related) or long-term (typically described in terms of years);
- Type — considers whether the impact would be beneficial or adverse. In this document, impacts are considered adverse unless specifically noted as beneficial.

1.7 SEIR NO. 2 ORGANIZATION

Chapter 1, Introduction describes the purpose and use of this SEIR, provides a brief overview of the project refinement analyzed herein, and outlines the organization of this document.

Chapter 2, Summary, provides a summary of the significant impacts for each resource significantly affected by OCRD removal.

Chapter 3, Project Description, provides a description of the proposed change, including planning and construction.

Chapter 4, presents the environmental setting, consequences and recommended mitigation measures. It is organized topically, following the major categories of potential environmental impact associated with the proposed project change. Only topical areas that require new discussion beyond what was already addressed in the 2008 Final EIR/EIS (DWR 2008) and the April, 2012 SEIR (DWR 2012) are included.

Chapter 5, Other Impact Considerations addresses the relationship of the Project-related impacts to the greater environment for such issues as secondary impacts, cumulative impacts, short-term impact versus long-term benefits, growth inducement, etc.

Chapter 6, List of Preparers identifies those who prepared this SEIR No. 2 and those who conducted the technical impact analyses reported in this document and provides a list of literature cited.

1.8 SEIR REVIEW PROCESS

During the public review period, comments on environmental issues raised in this SEIR No. 2 should be sent to the SCC at the following address:

Trish Chapman
California State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612-2530

Upon completion of the public review period, a final SEIR No. 2 will be prepared to include any comments received on this draft SEIR No. 2 during the public review period as well as any responses to those comments. This would also include any revisions to the SEIR No. 2, if any, that are necessary to address issues raised in the comments.

Prior to approval of the project, SCC will consider whether to certify that the SEIR No. 2 has been completed in compliance with CEQA, that SCC has reviewed and considered the information in the SEIR, and that this SEIR reflects the independent judgment of SCC.

2. SUMMARY

2.1 PROPOSED PROJECT REFINEMENT: OLD CARMEL RIVER DAM REMOVAL

Removal of OCRD is proposed for incorporation into Alternative 3, the Carmel River Reroute and San Clemente Dam Removal Project ("the project" or "Alternative 3") as described and analyzed in the 2008 Final EIR/EIS as modified in the April 2012 SEIR. Since the decision to remove OCRD instead of notching constitutes a modification of the project as analyzed in previous documents, this additional supplement describes and analyzes those aspects of the project that pertain to OCRD removal.

2.2 PROJECT DESCRIPTION SUMMARY

The removal of OCRD would likely proceed after all other construction-related activities are complete. Following removal of San Clemente Dam and stockpiling of accumulated sediment behind San Clemente Dam, OCRD and its associated fish ladder would be demolished to their bedrock foundation using hoe-ram breaking or similar techniques performed by an excavator with a hydraulic hammer attachment. Most of the masonry, rubble, and other dam materials would be placed on the Sediment Disposal Area upstream of SCD. Metal, asphalt, and any hazardous materials would be removed and disposed of offsite.

The northern half of OCRD would be demolished down to bedrock without disturbing the flow through the existing low flow channel along the southern portion of the streambed. Next, the flow in the Carmel River would be diverted to the north side of the channel so that the southern half of the dam can be demolished and removed. The alluvial materials remaining instream would be graded to provide fish passage and re-create a more natural streambed. As part of this process, a short period of pumped flow diversion and associated fish rescue measures may be required to allow equipment access.

Once San Clemente Dam is removed, CAW would no longer need bridge access across the Carmel River at OCRD; in addition, there are plans, under a separate project to construct a new bridge near the Sleepy Hollow ford location at the intersection of the Low Road and the High Road. Thus, the bridge and its associated structural components, including the concrete block retaining wall at the right abutment that supports the outer portion of the existing access road, would be completely removed and disposed of offsite at an approved disposal facility.

2.3 SUMMARY OF IMPACTS AND MITIGATION

Removing OCRD rather than notching it would not result in any new potentially significant or significant, unavoidable impacts. The project would increase two impacts identified in the 2008 Final EIR/EIS as significant and unavoidable. Table 2-1 and the discussion following it are provided to summarize the impacts and mitigation measures

that are associated with OCRD removal and that are fully described in Chapter 4. If a general resource category or a particular impact is not discussed, it is because it does not apply either to OCRD removal or to the dam safety project as a whole.

Table 2-1: Impacts and Mitigation Matrix for OCRD Removal Portion of Alternative 3

ENVIRONMENTAL RESOURCES & ISSUES	OCRD REMOVAL
GEOLOGY & SOILS	
No resources in this category are affected by OCRD removal	No impact
HYDROLOGY & WATER RESOURCES	
WR-5a: Changes in Channel Bed Geometry *Additional sediment passing to the lower river would aggrade the river channel and its cross-section*	**Impact**: short-term less than significant; long-term beneficial **Mitigation**: none required
WR-6a: Changes to the 100-year Floodplain *Increased sediment loading would alter the bed of the Carmel River and influence the 100-year flood elevation*	**Impact**: long-term, less than significant **Mitigation**: none required
WATER QUALITY	
WQ-12a: Removal of OCRD *Disturbance of streambeds, increased turbidity, potential for accidental release of toxic materials*	**Impact**: short-term, less than significant with mitigation **Mitigation**: erosion control measures, spill containment measures, and water quality monitoring methods specified in the Stormwater Pollution Prevention Plan (SWPPP)
FISHERIES	
FI-14a: Removal of OCRD *Short-term loss of rearing habitat from construction; long-term improvement of fish passage*	**Impact**: short-term, less than significant with mitigation; long-term, beneficial **Mitigation**: fish rescue and relocation plan, water quality protection plan in SWPPP, stream channel restoration and removal of passage barrier (OCRD)
VEGETATION AND WILDLIFE	
VE-3a: Loss of Native Vegetation *Clearing vegetation for construction*	**Impact**: long-term, less than significant with mitigation **Mitigation**: Implement Botanical Management Plan, replanting removed riparian trees at a 3:1 ratio
WI-4a: Removal of OCRD *Effects on CRLF spawning habitat and other herpetofauna*	**Impact**: short-term, less than significant with mitigation; long-term beneficial **Mitigation**: site habitat assessment, preconstruction surveys, protection measures from 2008 Final EIR/EIS and April 2012 SEIR, agency consultation
WETLANDS	
WET-1a: Permanent Loss of Wetlands and Other Waters of U.S. *Permanent change in area of jurisdictional non-wetland waters of the U.S. near OCRD*	**Impact**: long-term beneficial, no impact **Mitigation**: No OCRD-specific mitigation is required; The overall project will restore more than 3,000 feet of Carmel River and San Clemente Creek and improve fish passage access to 25 miles of upstream habitat.
WET-2a: Short-term Disturbance of Wetlands and Other Waters of U.S. *Short-term filling of non-wetland waters of the U.S.*	**Impact**: short-term, less than significant with mitigation **Mitigation**: No OCRD-specific mitigation is required; The overall project will restore more than 3,000 feet of Carmel River and San Clemente Creek and improve fish passage access to 25 miles of upstream habitat.

Table 2-1: Impacts and Mitigation Matrix for OCRD Removal Portion of Alternative 3

ENVIRONMENTAL RESOURCES & ISSUES	OCRD REMOVAL
AIR QUALITY AND GREENHOUSE GASES	
AQ-1a: OCRD Site Activities	**Impact**: significant, unavoidable, short-term (when considered with other activities for Alternative 3 described in the April 2012 SEIR) **Mitigation**: BMPs - practical and cost-effective NO_X controls, PM_{10} controls such as watering
GHG-1a: OCRD Site Activities	**Impact**: less than significant **Mitigation**: none required
NOISE	
NO-1a: Construction Noise during Removal of OCRD *Noise from construction equipment and activity*	**Impact**: short-term, significant, unavoidable **Mitigation**: use of quiet-design construction equipment, mufflers, enclosures; eliminating unnecessary idling; equipment maintenance and lubrication; timing restrictions for equipment and vehicle use; speed limits for vehicles
TRAFFIC AND CIRCULATION	
TC-9: Removal of OCRD Bridge *Effect of project on access*	**Impact**: long-term, less than significant **Mitigation**: none required, though alternate access route is likely to be constructed as part of another project
CULTURAL RESOURCES	
Issue CR-1a: Ground Disturbance *Disturbance to archaeological sites*	**Impact**: no impact **Mitigation**: none required
CR-2a: Damage to Historic Structures from Construction-related Vibration *Construction-related vibration and removal of additional structures than discussed in original EIR/EIS*	**Impact**: short-term, less than significant **Mitigation**: none required
CR-3a: Accumulated Dirt/Unintended Damage *Construction/demolition-related accumulation of dirt*	**Impact**: short-term, less than significant **Mitigation**: none required
CR-4a: Demolition or Alteration to Historic Properties *Demolition of OCRD, its associated fish ladder, and other contributors to the San Clemente Dam Historic District (SCDHD)*	**Impact**: long-term, significant, unavoidable **Mitigation**: recordation of resources (HABS/HAER), interpretive displays, educational program, prepare National Register of Historic Places (NRHP(Nomination Form for Historic District, complete Historic Preservation Management Plan, Memorandum of Agreement, photographic documentation
CR-5a: Alteration of Surrounding Environment *Alter character of setting for SCDHD*	**Impact**: long-term, less than significant **Mitigation**: none required
CR-6: Introduction of Visual Obstructions *Loss of visual integrity for SCDHD*	**Impact**: long-term, less than significant **Mitigation**: none required
AESTHETICS	
No resources in this category are affected by OCRD removal	No impact
RECREATION	
No resources in this category are affected by OCRD removal	No impact

Table 2-1: Impacts and Mitigation Matrix for OCRD Removal Portion of Alternative 3

ENVIRONMENTAL RESOURCES & ISSUES	OCRD REMOVAL
LAND USE	
No resources in this category are affected by OCRD removal	No impact
OTHER CEQA CONSIDERATIONS (cumulative impacts, growth inducement, etc.)	
No resources in this category are affected by OCRD removal	No impact

3. DESCRIPTION OF THE PROPOSED PROJECT REFINEMENT

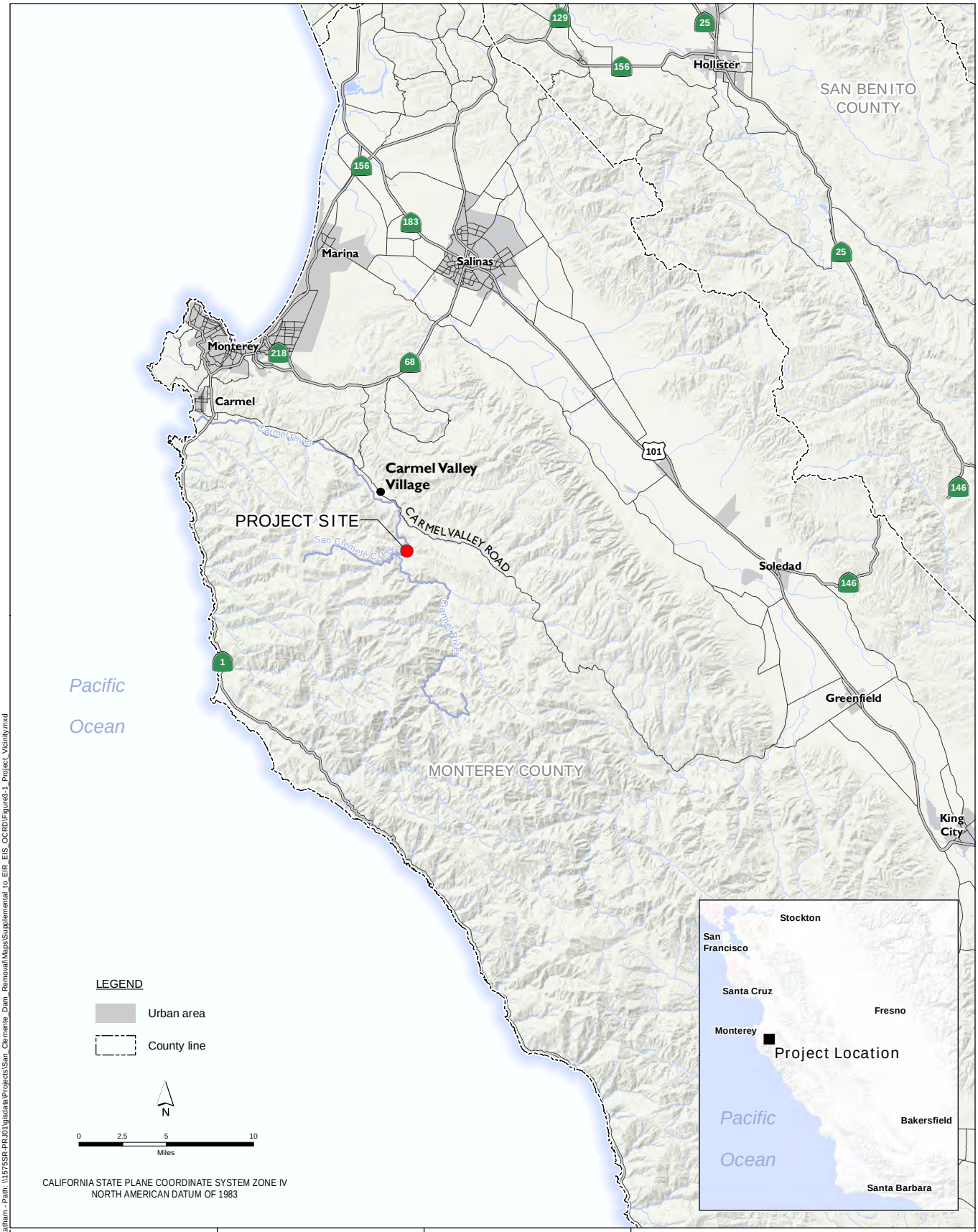
CAW proposes to remove OCRD as part of the proposed San Clemente Dam Seismic Safety Project – Alternative 3 ("the project" or "Alternative 3")). This project was described and analyzed in the 2008 Final EIR/EIS (DWR 2008), which included. partial removal of OCRD by creating a 19 foot wide by 9 foot deep notch in the dam.

The project is located in the upper reaches of the Carmel River in an unincorporated portion of the Monterey County, approximately 15 miles southeast of the city of Carmel-by-the-Sea and 3.6 miles southeast of Carmel Valley Village (Figure 3-1). OCRD and most of the surrounding land is owned by CAW. Land adjacent to OCRD is largely undeveloped, consisting of steep slopes covered with dense chaparral and oak woodland.

3.1 EXISTING OCRD

OCRD is located about 1,800 feet downstream of SCD on a bend of the Carmel River (Figure 3-2). OCRD is a masonry dam that was built in 1883 by Pacific Improvement Company to divert water for commercial use. The dam is approximately 160 feet long and approximately 4 feet wide at the crest. The dam has a maximum height of approximately 32 feet, with a dam crest and spillway elevation of 443 feet (National Geodetic Vertical Datum [NGVD] 29), and appears to be founded on bedrock. Geotechnical borings indicate that bedrock is located at elevations ranging from 413 to 417 feet (Woodward Clyde 1997). A fish ladder is located to the north side of the dam at a downstream invert of 434 feet. A sluiceway opening approximately 4 feet wide by 15 feet high, located to the right side of OCRD (looking downstream), acts as a permanently open low water outlet. The sluiceway has an invert elevation of about 432 feet. A plunge pool is located immediately downstream of OCRD with an estimated bottom elevation of 419 feet.

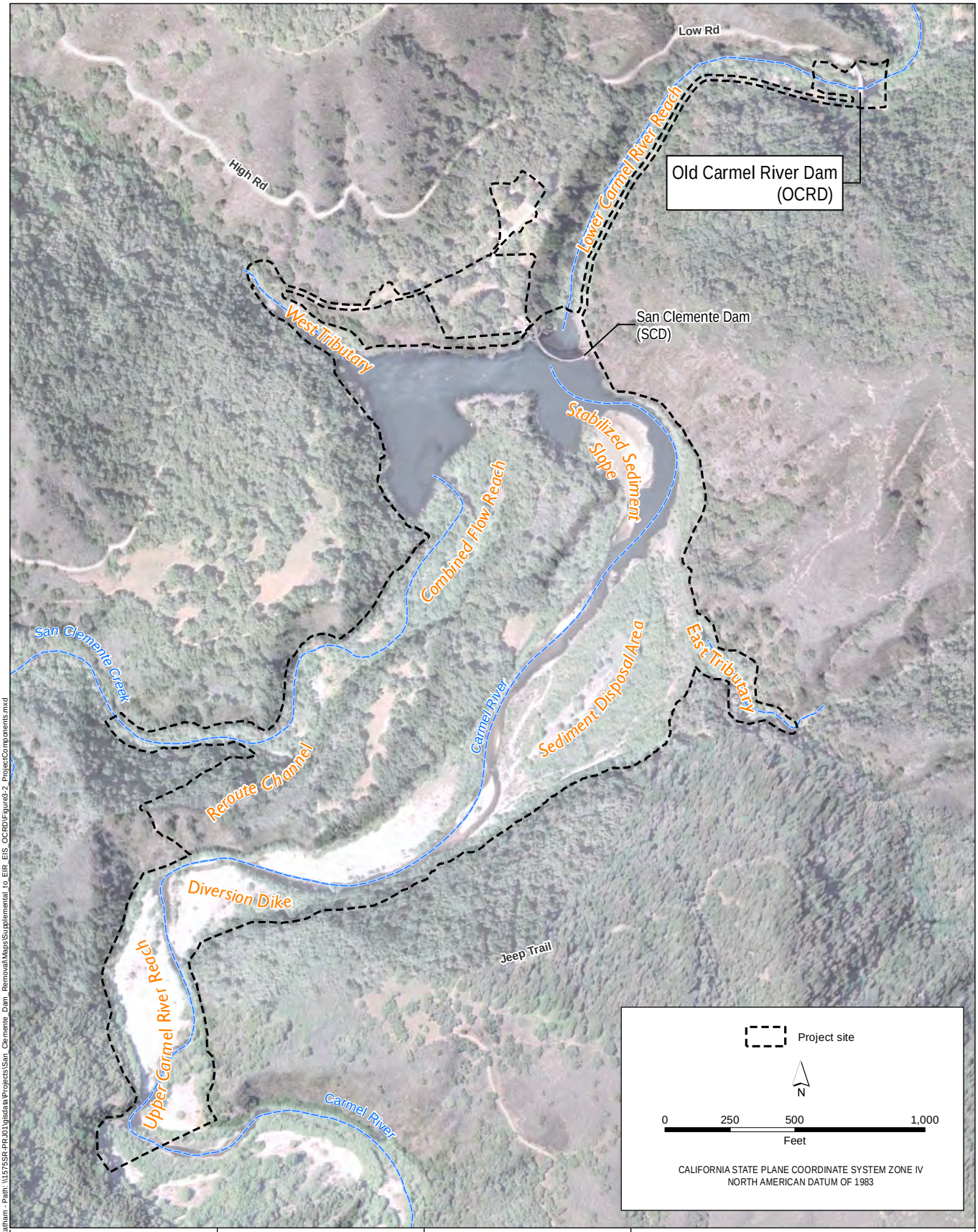
The OCRD bridge is located slightly upstream of the spillway (crest of the dam) with the piers partially supported by the dam and partially supported by the alluvium upstream of the dam; the south abutment is partially supported by the dam and south hill slope. The bridge is approximately 175 feet long, consists of a single lane, and is part of the low access road, one of two access roads to the top of SCD. The bridge was constructed later than the dam, presumably between 1919 and 1921, during the construction of SCD. The bridge consists of 5 span steel girders with laminated 2x4 timber deck covered with 2-inch thick asphalt. The top of the bridge is approximately 17 feet higher than the dam crest.



CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE IV
NORTH AMERICAN DATUM OF 1983

	CARMEL RIVER REROUTE AND SAN CLEMENTE DAM REMOVAL MONTEREY COUNTY, CA	DATE OF PREPARATION: 11/14/2011 DATE OF SUBMISSION: 11/30/2011 URS PROJECT NO. 26818107	**FIGURE 3-1** PROJECT VICINITY

URS Oakland CA - C. Statham - Path: \\1575SR-PRJ01\gisdata\Projects\San_Clemente_Dam_Removal\Maps\Supplemental_to_EIR_EIS_OCRD\Figure3-1_Project_Vicinity.mxd



URS Oakland CA - C. Statham - Path: \\1575SR-PRJ01\gisdata\Projects\San_Clemente_Dam_Removal\Maps\Supplemental_to_EIR_EIS_OCRD\Figure3-2_ProjectComponents.mxd

	CARMEL RIVER REROUTE AND SAN CLEMENTE DAM REMOVAL MONTEREY COUNTY, CA	DATE OF PREPARATION: 11/14/2011 DATE OF SUBMISSION: 11/30/2011 URS PROJECT NO. 26818107	**FIGURE 3-2** PROJECT COMPONENTS

The bridge foundation consists of two intermediate piers (16 feet x 3.5 feet wide) and one abutment on the south side of the bridge. The piers are masonry faced concrete structures and rest partially on the alluvium in the riverbed upstream of the dam and partially on the top of the dam at elevation 443 feet. Both piers are located within the active portion of the existing channel and have approximately 1-foot-thick concrete aprons around the base to reduce the potential for scour. The abutment is likely founded on bedrock and is also located within the existing channel (Woodward Clyde 1997).

3.2 OCRD REMOVAL

OCRD would be demolished to its bedrock foundation. Dam removal would occur after SCD is removed near the end of the fourth construction season of the overall project or during a partial fifth construction. OCRD removal would occur in late summer or early fall when flows in the Carmel River are low.

The masonry dam, bridge piers, and concrete block wall would be demolished, using hoe-ram breaking or similar techniques. The concrete fish ladder associated with the dam would be demolished in its entirety using techniques similar to those used for dam demolition. The masonry, concrete rubble and interior dam cobbles/boulders would be demolished and broken up using a hoe-ram, and a large volume of this material (down to approximately elevation 432 feet) would be removed from the OCRD site and placed as erosion protection on slopes associated with the Sediment Disposal Area (Figure 3-2). Metal, asphalt and other miscellaneous bridge materials would be disposed of at an approved offsite facility. After the removal of the dam, remaining alluvial materials would be graded to provide fish passage, and re-create a more natural streambed and river cross section.

To accomplish this, the dam removal would involve demolishing the dam in two sections sequentially (phase 1 and phase 2), while temporarily diverting the active Carmel River channel within the existing river bed away from each section as demolition proceeds. The first section of OCRD to be removed (phase 1) would be the section that is the farthest away from the existing low flow channel. Work would occur outside of the active channel, in the dry section of streambed, to minimize impacts to fish and water quality. It is not expected that engineered diversion facilities (e.g., sheet piles, coffer dams, etc.) would be necessary to contain the river flow in its current low flow channel (around the initial demolition work area); however, they may be used if needed.

From this dry portion of streambed, the sediment and alluvium immediately upstream of the dam would be removed and stockpiled outside of the active flow area (for future placement in the plunge pool on the downstream side of the dam). The bench that would result from this excavation would then be used as access for demolishing the masonry dam to the level of the bench using an excavator with a hydraulic hammer attachment. Toward the end of phase 1 demolition, a phase 2 low flow diversion channel will be constructed (preferably using bed material to form a berm) within the a

section of the streambed (phase 1 demolition area), to facilitate river water diversion for phase 2 OCRD demolition. This phase 2 low flow diversion channel would remain isolated from the river flow until it is need for river diversion.

Once the first section of OCRD is removed, block nets will be placed across the channel upstream of the construction area to prevent steelhead from entering the site. The stream channel will then be re-routed into the phase 2 low flow diversion channel, and the original low flow channel would be blocked off. As the active channel is re-routed, fish rescue and relocation would occur in areas of isolated standing water in the original channel. The second section of dam would then be removed using similar techniques described above for the phase 1 demolition, again outside of the active flow area. After the removal of the dam, remaining alluvial materials would be graded to provide fish passage, and re-create a more natural streambed. If needed, temporary platforms, fencing, walls, or similar devices would be installed to prevent construction debris from entering the flowing water of Carmel River.

The broken-up masonry dam would be removed from the sediment and alluvium down to the existing channel grade using an excavator. The buried portion of the rubble will be left in place as alluvium with the exception that a 20-foot wide section in the center of the dam would be removed down to bedrock and restored to existing channel grade using the deposited sediment materials. This will allow the channel to deform or incise in the future, so the remaining rubble will not become a fish passage barrier.

Once San Clemente Dam is removed, CAW would no longer need bridge access across the Carmel River at OCRD; in addition, there are plans, under a separate project to construct a new bridge near the Sleepy Hollow ford location at the intersection of the Low Road and the High Road. Thus, the bridge and its associated structural components (piers, deck, beams, and railings) would be completely removed and disposed of offsite at an approved disposal facility. It is assumed that long-term vehicular access past this point and to SCD plunge pool area would not be required. Therefore, the concrete block retaining wall at the right abutment that supports the outer portion of the existing access road would no longer be needed and would be removed.

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4. ENVIRONMENTAL SETTING, CONSEQUENCES & MITIGATION MEASURES

4.1 ENVIRONMENTAL SETTING

The environmental setting has not changed since release of the April 2012 SEIR. This section includes a limited discussion of the environmental setting in the vicinity of OCRD. For a full description of the existing conditions, refer to the 2008 Final EIR/EIS and the April 2012 SEIR. These documents are available at https://sanclementedam.water.ca.gov.

The portion of the Carmel River from SCD to the Tularcitos Creek confluence runs through a steep-sided, rocky canyon and has no tributaries. Flows through and downstream of this reach are not affected by SCD, which no longer has the capacity to significantly alter flows. The river is bordered by a thin strip of riparian vegetation including alders, sycamore, willow, and cottonwood trees. The substrate within the channel consists of cobble and boulders and provides habitat for steelhead rearing and migration but not for spawning. The channel within this reach is mostly devoid of gravel and sand which is retained within the SCD Reservoir.

The hydrology of the Carmel River has been modified in the project vicinity for over a century. The construction of OCRD in 1883 provided the first municipal water supply to Monterey County and represents the first major alteration of the Carmel River. It was built to create a water diversion point that was used before the creation of SCD. OCRD, approximately 1,800 feet downstream from SCD, is a 32 foot high and approximately 160 foot wide structure. It has an estimated volume of 1,530 cubic yards and appears to be founded on bedrock.

4.1.1 EXISTING CONDITIONS FOR LOWER CARMEL RIVER (NEAR PLUNGE POOL ROAD AND OCRD)

The “Lower Carmel River” portion of the project footprint extends from the plunge pool below and downstream of SCD, runs parallel to the Plunge Pool Road, and reaches the downstream project limit just past OCRD. The presence of SCD has altered the hydrology and prevented the natural transport of sediment and sand from the Upper Carmel River and San Clemente Creek to those portions of the Carmel River below it. As a consequence, there has been a substantial deposition of sediment in the Upper Carmel River and a comparative lack deposition in the Lower Carmel River, downstream from SCD. Nevertheless, healthy riparian vegetation exists along the corridor of Plunge Pool Road and the bed and bank are more natural (e.g., contain more cobble and less sand) than the Upper Carmel River.

4.1.2 EXISTING CONDITIONS FOR FISH PASSAGE

During high flow periods when the sluiceway cannot pass the total flow, the small impoundment behind OCRD fills until water spills over the four-foot wide crest. During these periods of high flow, the movement of upstream migrants may be impeded, as velocities through the sluiceway may become impassable and leaping fish may not be able to clear the dam crest. During moderate flows of about 800 to 900 cubic feet per second (cfs), migration may be delayed when steelhead jump the dam instead of swimming through the sluiceway. Steelhead that successfully jump the dam are met with a high velocity flow at the dam crest and can be swept downstream.

4.1.3 EXISTING CONDITIONS FOR VEGETATION

The Carmel River in the vicinity of OCRD supports a number of vegetation types. Central Coast Cottonwood-Sycamore Riparian Forest community composes the bulk of the vegetation found in the immediate vicinity of OCRD and the Carmel River just upstream and downstream of it. The dominant species are large trees, including black cottonwood (*Populus balsamifera ssp. trichocarpa*), California sycamore (*Platanus racemosa*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), and white alder (*Alnus rhombifolia*).

4.1.4 EXISTING CONDITIONS FOR WILDLIFE HABITAT

Below SCD, the area of the SCD Plunge Pool and the OCRD Plunge Pool provides a healthy riparian area for California red-legged frog (CRLF) adult and juvenile migration and refuge, but likely does not provide suitable CRLF breeding habitat. While sediment deposition is less prevalent in this area than above SCD and the bed and bank contain cobble and less sand, this area is narrow and contains little to no area for the river to create off-channel habitats or backwater areas with slow-moving water suitable for CRLF reproduction.

Within the project footprint, no suitable aestivation habitat for California tiger salamander (CTS) occurs, and the only suitable aestivation and breeding habitat is located far from OCRD along the ridgetop immediately to the west of Cachagua Road.

4.2 IMPACTS AND MITIGATION

This section describes impacts and mitigation associated with the removal of OCRD. Where needed for clarification, existing condition text is provided. CEQA significance criteria have also not changed since release of the 2008 Final EIR/EIS and the April 2012 SEIR, and are not repeated here.

Only resources and issue areas potentially affected by the OCRD removal are discussed. These include:

- Hydrology and Water Resources
- Water Quality

- Fisheries
- Vegetation and Wildlife
- Wetlands
- Air Quality and Greenhouse Gas
- Noise
- Traffic and Circulation
- Cultural Resources

There would be no impacts to the following resource areas:

- Geology and Soils
- Aesthetics
- Recreation
- Land Use
- Other Environmental Effects (such as population and housing)
- Other CEQA Considerations including Cumulative Impacts and Growth Inducement

For consistency with the previous documents, the impact numbering here follows the numbering used in the 2008 Final EIR and April 2012 SEIR with "a" added to distinguish them from the impact discussions in the previous documents.

4.2.1 HYDROLOGY AND WATER RESOURCES

This section describes the potential impacts of OCRD Removal on hydrologic and sediment transport conditions in the Carmel River.

WR-5a: Changes in Channel Bed Geometry

Additional sediment passing the dam to the lower river would aggrade or degrade the river channel or change the channel cross section
Determination: ***less than significant, long-term beneficial***

IMPACT

OCRD has little to no storage capacity, and therefore, no flood peak attenuation is currently associated with the structure.

It is estimated that there is approximately 6,000 cubic yards (3.7 acre feet) of alluvium deposited upstream of OCRD. After OCRD is removed, it is likely that up to 700 cubic yards of this material would deposit in the near term in the existing plunge pool downstream of OCRD. The remaining alluvium would be transported downstream over time. A portion of the deposited sediment would also move downstream if OCRD were notched rather than removed; however, the 2008 Final EIR/EIS did not estimate the

incremental sediment loading that would occur as a result of notching OCRD. The EIR/EIS concluded that the overall increase in downstream sediment as a result of the project, which included notching OCRD, would not be significant and would not require mitigation.

Based on a review of the rates of sedimentation in San Clemente Reservoir during chronic loading years, an average annual chronic loading rate of 16.5 acre-feet per year was developed (MEI 2003) for the SCD watershed. As OCRD is located only 1,800 feet downstream, and there are no major tributaries contributing sediment between SCD and OCRD, this loading rate is applicable to the location of OCRD as well.

Sediment transport modeling completed for the project with removal of OCRD suggests that the stored material behind OCRD would be transported from its current location some distance downstream primarily within the first year after OCRD is removed. Removal of both dams will result in bed elevation increases in the channel; variable increases of 1-2 feet will occur within first 1500 feet downstream of the OCRD location, while the increase is generally less than a foot further downstream. The most significant deposition occurs in pools due to an artifact of the 1D sediment transport model[1]. Flooding after this first year of sediment transport would show a reduction in flood elevations upstream of the OCRD location due to removal of the dam and the backwater condition it creates. Downstream of the OCRD location, flood increases (from existing conditions) would be equal to or, more likely, less than the bed elevation increases (approximately 1-2 feet) extending for the same 1,500 linear feet downstream. There are no residences or facilities within this area, so there is not a significant impact. Sediment transport modeling for conditions downstream of the project site indicate that removal of both SCD and OCRD would not result in a substantial increase in downstream sediment transport relative to conditions with the dam in place. Therefore, the relative increase in sediment transport with removal of OCRD rather than notching would not be significant and would not require mitigation.

Furthermore, the median size class of material stored behind OCRD is large cobbles (203 millimeter), and the minimum counted size class was coarse gravel (64 millimeter). This material is desired bed material in the river channel because it provides better habitat for fish and aquatic invertebrates than fine sediment. Removal of OCRD restores the ability of the river to move this sediment downstream from OCRD, thereby providing a beneficial effect.

MITIGATION

No mitigation required.

[1] This is an inherent limitation of 1-dimensional modeling because local scour processes (such plunge-pool scour) and two-dimensional or three-dimensional effects (such as recirculation that occurs in pools) are not resolved. Therefore, natural pools, such as the one approximately 300 feet downstream of OCRD, are modeled as quickly filling in with sediment.

Issue WR-6a: Changes to the 100-year Floodplain

The increased sediment loading would alter the bed of the Carmel River and influence the 100-year flood elevation
Determination: ***less than significant, long-term***

IMPACT

Since OCRD constricts and impedes flow in the vicinity of the dam (resulting in a backwater), removal of OCRD will reduce flood elevations (for peak flows ranging from a 5-year to 100-year return frequency) immediately upstream of the dam. Hydraulic modeling shows that significant reduction in flood elevations (reduction of 1 foot or more) extend approximately 700 feet upstream (for all events shown), and approximately 100 feet downstream for the 25, 50, and 100-year events (Figure 4-1). Since the effect on flood elevations is a reduction of those elevations, the impact to flooding is less than significant and beneficial in the long term.

MITIGATION

No mitigation required.

4.2.2 WATER QUALITY

This section describes the potential impacts of OCRD Removal on water quality conditions in the Carmel River.

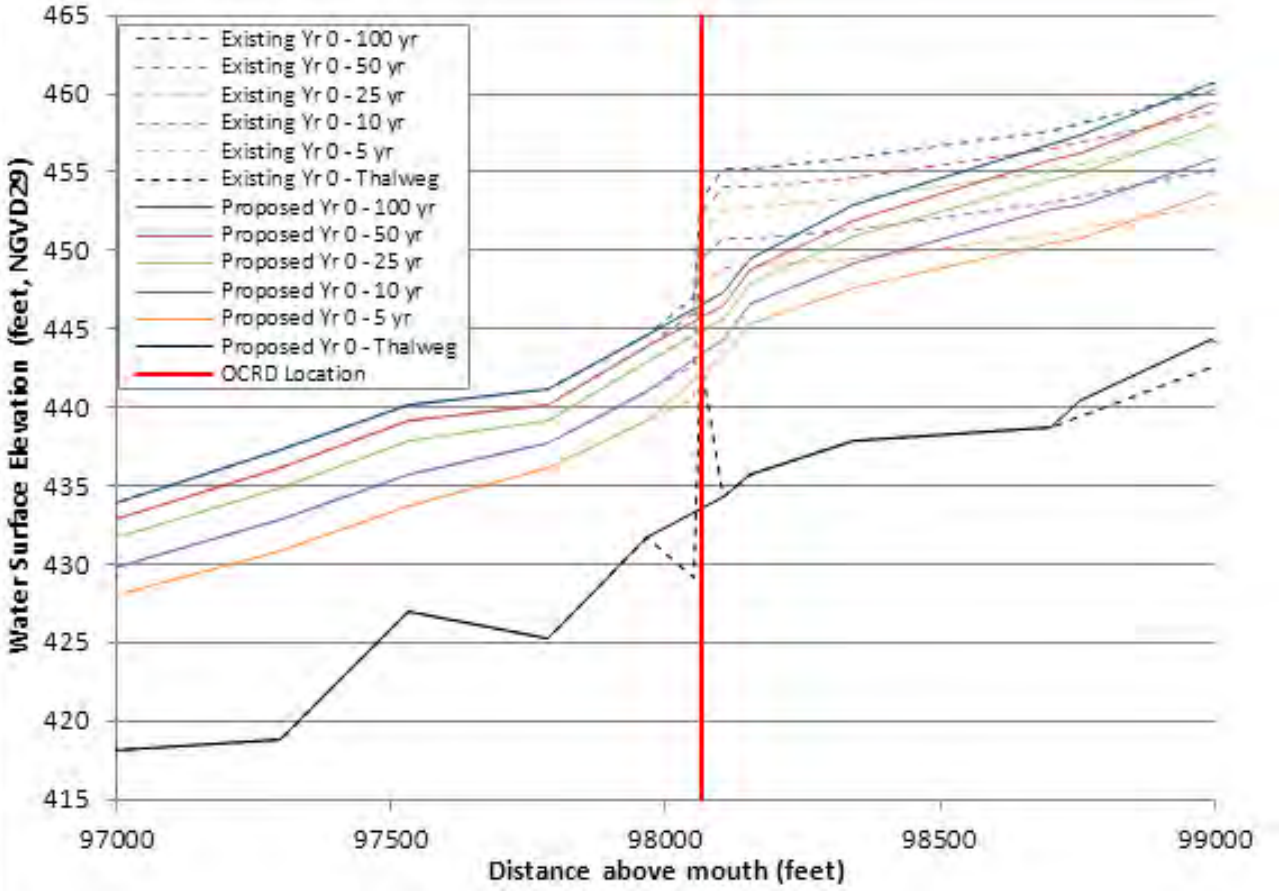
Issues WQ-12a: Potential to Exceed Water Quality Standards During OCRD Removal

Disturbance of streambeds, increased turbidity, potential for accidental release of toxic materials
Determination: **less than significant with mitigation, short-term**

IMPACT

OCRD removal would involve construction activities that require the use of machinery, equipment and workers in the streambed or vicinity of a stream and/or the removal of vegetation in the vicinity of the Carmel River. These activities and associated impacts are similar to those proposed for OCRD notching, as addressed in the 2008 Final EIR/EIS. Removal of OCRD is expected to take up to 6 weeks, compared to 2-3 weeks for notching.

All demolition work would be done outside the active stream channel during the late summer/early fall months when flow in the Carmel River is low (on the order of 10 cfs or less). A stream diversion would be required to route flow around the work area as described in Section 3. The stream diversion would be constructed as needed by temporarily routing water around the work area through a pipe, while creating a berm from existing bed material to direct water around the active work area. Diverting the stream could result in a temporary increase in turbidity that would likely extend less than one mile downstream and persist for less than one day.



	CARMEL RIVER REROUTE AND SAN CLEMENTE DAM REMOVAL MONTEREY COUNTY, CA	DATE OF PREPARATION: 11/14/2011 DATE OF SUBMISSION: 11/30/2011 URS PROJECT NO. 26818107	**FIGURE 4-1** WATER SURFACE PROFILES AT OCRD

Instream and near-stream construction activities and/or vegetation removal may cause disturbance of streambed substrate, erosion of the streambank and soils of the stream margins, and/or the deposition of rock debris in and near the stream, resulting in increased stream turbidity at and downstream of the construction site. Though work would be done outside of the active flow in the river, the release or deposition of concrete particles to surface waters during OCRD removal could violate water quality standards or impact aquatic resources.

Accidental leaks and spills of chemicals or fluids (including petroleum-based products) from equipment and machinery or demolition debris in the construction area could release potentially toxic substances directly to surface water, or to soil areas within the margins of the river channel. This would potentially violate water quality standards or impact aquatic resources.

MITIGATION

Potential water quality impacts would be mitigated to a less than significant level through the same mitigation measures identified for Notching of OCRD, Issue WQ-12 in the 2008 Final EIR/EIS. In addition, Stream margins would be revegetated with native species as designated in the Botanical Resources Management Plan (2008 Final EIR/EIS, Appendix U) when construction is completed.

4.2.3 FISHERIES

Removal of OCRD would result in a short term loss of juvenile steelhead rearing habitat in the vicinity of the dam as well as changes in water quality that may affect fish.

Issue FI-14a: Removal of OCRD

Short-term loss of rearing habitat, Improvement of fish passage
Determination: ***short-term, less than significant with mitigation; long-term, beneficial***

OCRD would be removed after SCD demolition is completed. The masonry dam, bridge piers, concrete block wall, and concrete fish ladder would be demolished as described in Chapter 3. It is estimated that notching OCRD would take approximately 2-3 weeks, while complete removal under this proposed project refinement would take approximately 6 weeks.

Fish will have the opportunity to move from the affected area and a fish rescue and relocation plan would be implemented. During the season that OCRD removal would occur, steelhead captured from the upstream work at SCD and reservoir would be released well downstream of OCRD. This would minimize the number of steelhead in the river at OCRD. Steelhead remaining in the river would be allowed to move downstream and avoid the immediate area of construction disturbance.

IMPACT

Installation and removal of water diversion may cause brief increases in turbidity downstream of the construction due to disturbance of the bottom during removal of the dam. Steelhead in the immediate downstream area may be briefly exposed to this turbidity which may cause them to relocate further downstream to avoid turbid waters (Waters 1995).

Steelhead moving through the diverted channel may be temporarily exposed to underwater sound from demolition activities. Demolition of OCRD would require the use of jackhammers or hoe rams, which can generate intense sound that could be transmitted into nearby waters and may impact fish. The sound energy transmitted to steelhead habitat would be below the levels that potentially cause injury, but may affect behavior. The sound produced may cause temporary behavioral responses such as rapid bursts in swimming speed or other erratic swimming patterns.

Impacts to fish would be minimal due to minimal disruption in the river channel accomplished by isolating the creek flow from the work, the short duration of turbidity events during dewatering, and because juvenile steelhead migrating downstream would be moved to river sites well below OCRD for the summer period preceding dam removal.

Removal of OCRD would result in a less than significant, short-term impact, with mitigation. The removal of this fish passage barrier along with the channel improvements to provide increased spawning and migration habitat will provide long-term benefit to steelhead and other fish species.

MITIGATION

A fish rescue and relocation plan will be provided to and approved by the appropriate resource agencies before the diversion system is installed. Fish rescues would be undertaken to relocate fish from isolated waters during dewatering, and captured fish would be relocated to suitable locations as designated in the relocation plan. Fish would be rescued primarily with the use of block nets, seines and dip nets. Backpack electrofishing units would be used if bottom topography makes the use of nets ineffective. Electrofishing would follow guidelines established by NMFS (2000).

Once OCRD is removed, the river channel at the dam site and the surrounding area will be restored. The removal of this fish passage barrier along with the channel improvements to provide increased spawning and migration habitat will serve as a long-term benefit to steelhead and other fish species.

4.2.4 VEGETATION AND WILDLIFE

Removal of OCRD could potentially affect the following impact issues related to vegetation and wildlife resources:

- VE-3a: Loss of other native vegetation
- WI-4a: Effects on spawning habitat and herpetofauna

Issue VE-3a: Loss of Native Vegetation

Loss of native vegetation
Determination: **less than significant with mitigation, long-term**

IMPACT

Removal of OCRD is expected to result in disturbance to native vegetation, including trees and riparian habitat near the dam. The vegetation community near OCRD is mapped in the 2008 Final EIR/EIS as Central Coast Cottonwood-Sycamore Riparian Forest. Approximately 0.6 acre of this vegetation cover type would be disturbed around OCRD as a result of activities for removal the dam. This would be a significant, but mitigable impact. Although work at the site would be temporary and restoration of the riparian habitat would be done, this is considered a long-term impact due to the time it will take for habitat to return to a mature state.

MITIGATION

Mitigation measures would be the same as identified for Alternative 3, Issue VE-3 in the 2008 Final EIR/EIS, and with those mitigation measures, this impact would be less than significant.

ISSUE WI-4a: Effects on Spawning Habitat and Herpetofauna from Removal of Old Carmel River Dam

Effects on spawning habitat and herpetofauna
Determination: ***less than significant with mitigation, short-term; long-term beneficial***

IMPACT

Instream work during the removal of OCRD could temporarily disturb CRLF summer habitat, and could possibly affect steelhead spawning habitat downstream of the dam. It could also affect western pond turtle, two-striped garter snake, foothill yellow-legged frog, and Coast Range newt habitat or individuals. However, foothill yellow-legged frog has not been documented in this location. OCRD does not contain suitable habitat for California tiger salamander, (breeding ponds or upland aestivation habitat) and they are not expected to be impacted by the removal of OCRD.

Sedimentation, elevated turbidity, and habitat disturbance from construction in the immediate vicinity of OCRD would be the most likely causes of impacts. These impacts would be similar to those for notching OCRD (See Issue WI-4: Notching OCRD in the 2008 Final EIR/EIS) though would occur over a longer period of time while the dam is removed completely. Notching of OCRD was expected to take approximately 2-3 weeks, while complete removal would take approximately 6 weeks. This is a potentially significant short-term impact.

MITIGATION

Mitigation measures would be the same as identified for notching the dam (Issue WI-4) in the 2008 Final EIR/EIS. No additional mitigation is necessary. With mitigation, this impact would be less than significant.

4.2.5 WETLANDS

The following impact issues have been defined for Wetland resources:

- WET-1a: Permanent Loss of Wetlands and Other Waters of the U.S. (permanent loss of jurisdictional waters of the U.S.)
- WET-2a: Short-term Disturbance of Wetlands and Other Waters of the U.S. (short-term filling of fringe wetlands)

Issue WET-1a: Permanent Loss of Wetlands and Other Waters of the U.S.

Permanent loss of jurisdictional waters of the U.S.
Determination: ***no impact, long-term beneficial***

IMPACT

Removal of OCRD would not impact wetlands as no wetland habitat is present at this site. Removal of OCRD would result in permanent increase of approximately 0.05 acre of Other Waters of the U.S. in the Carmel River through the removal of fill created by the dam structure and recontouring the Carmel River at this location to a more natural state.

MITIGATION

No specific mitigation is required for OCRD removal as removal of this dam would not result in a permanent loss of wetlands or Other Waters of the U.S.

Issue WET-2a: Short-term Disturbance of Wetlands and Other Waters of the U.S.

Short-term filling of non-wetland waters of the U.S.
Determination: ***Less than significant with mitigation, short-term***

IMPACT

There are no wetland resources near OCRD. Potential impacts to Other Waters of the U.S. from the removal of OCRD include temporary diversion of Carmel River and temporary disturbance of other waters during removal of OCRD. Removal of OCRD would temporarily impact 0.4 acre of Other Waters of the U.S.

MITIGATION

No additional mitigation is required for temporary disturbance to Other Waters during removal of OCRD. Restoration proposed as part of Alternative 3, as summarized in WET-1a above, would serve to mitigate impacts from removal of OCRD.

4.2.6 AIR QUALITY

This section describes the potential impacts of the removal of OCRD on the Air Quality in the Project Area. The environmental setting for air quality has not changed since release of the April 2012 SEIR. Please refer to that document for a complete description of existing air quality conditions in the project area.

Issue AQ-1a: OCRD Site Activities

Short-term emissions from construction equipment
Determination: **significant, unavoidable, short-term (when considered with other activities for Alternative 3 described in the April 2012 SEIR)**

IMPACT

Construction activities would generate temporary emissions from diesel-powered equipment. Removal of OCRD would have no operational impacts because it would not create any new air pollutant sources nor generate new employee vehicle trips. Removal of OCRD by itself would not have significant air quality impacts. However, the construction activities associates with OCRD removal, in conjunction with the other construction activities for Alternative 3 described in the April 2012 SEIR, would affect regional and local air quality during construction.

Tables 4-1 and 4-2 show estimated aggregated maximum emissions in pounds per day and tons per year that would occur due to OCRD removal along with other construction activities for Alternative 3 as described in the April 2012 SEIR. Emissions on an annual basis for OCRD removal are negligible and too small to report.

Table 4-1: Estimated Temporary Daily Construction Emissions — OCRD Removal with other Alternative 3 Activities

Location	NO_X	SO_X	CO	PM_{10}	ROC	PM_{10F}
	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
CEQA Level of Significance	137	150	550	82	137	82
OCRD Removal	**21**	**0**	**12**	**1**	**1**	**0**
Other construction Activities associated with Alternative 3 (addressed in April 2012 SEIR)	757	0	702	38	86	1570
Total with OCRD Removal	778	0	714	39	87	1570

Table 4-2: Estimated Temporary Daily Construction Emissions — OCRD Removal with other Alternative 3 Activities

Location	NO_X	SO_X	CO	PM_{10}	ROC	PM_{10F}
	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr
OCRD Removal	**0**	**0**	**0**	**0**	**0**	**0**
Other construction Activities associated with Alternative 3 (addressed in April 2012 SEIR)	75	0	88	4	10	109
Total with OCRD Removal	**75**	**0**	**88**	**4**	**10**	**109**

Table 4-1 shows that estimated daily emissions from fuel combustion for OCRD demolition activities alone would not exceed the CEQA level of significance for NO_X, but will contribute to the overall emissions for the project. When considered with other project activities, the threshold would be exceeded for the project. Although construction for the overall project would exceed the CEQA threshold for NO_X, dispersion modeling performed in the previous environmental documents showed that maximum estimated NO_X impacts would be below state and federal ambient air quality standards (338 µg/m^3 hourly and 100 µg/m^3 annually, respectively). The impact is still considered significant and unavoidable with or without OCRD removal.

MITIGATION

Mitigation measures were identified for Alternative 3 in the 2008 Final EIR/EIS and the April 2012 SEIR and would be implemented for OCRD removal as part of the overall project. These mitigation measures will not reduce the air quality impacts to less than significant, and no additional mitigation measures are available to reduce this impact to less than significant.

4.2.7 GREENHOUSE GAS

This section describes the potential impacts of the removal of OCRD on the Greenhouse Gases (GHG) in the Project Area.

Issue GHG-1: OCRD Site Activities

GHG emissions from construction equipment
Determination: **less than significant**

Table 4-3 presents the total construction GHG emission rates associated with OCRD removal as well as all other construction activities for Alternative 3. Emissions were calculated using the same methods used in the April 2012 SEIR. Off-road equipment emissions from for OCRD removal were estimated using the California Air Resources Board OFFROAD 2011 model. The emissions factors were obtained for construction and mining off-road equipment in 2012 for Monterey County. All construction related activities were assumed to take place in the worst case year of 2012 because the 2012 emission factors in OFFROAD 2011 would be more conservative than emission factors

in subsequent years when the model assumes that new regulations would reduce GHG emissions in later years. OCRD removal would actually occur in the fourth or fifth construction years.

Table 4-3: Estimated Construction GHG Emissions - OCRD Removal with other Alternative 3 Activities

Activity	CO_2	CO_2
	Tons Total	Metric tons Total
OCRD Removal	**37**	**34**
Other construction Activities associated with Alternative 3 (addressed in April 2012 SEIR)	8826	8006
Total Construction GHG Emissions with OCRD Removal	**8863**	**8040**

The project construction GHG emissions were compared to the significance thresholds described in the April 2012 SEIR to determine the significance of the impacts.

A. Consistency or potential for conflict with plans to reduce greenhouse gas emissions.

The proposed project with OCRD removal would not conflict with the Monterey County General Plan or Carmel Valley Area plan GHG reduction policies, such as VMT reduction, or MBUAPCD regulations for GHGs. In addition, wherever feasible and practicable, the contractor would be consistent with and implement the AB32 GHG reduction measures such as the use of low carbon fuels, construction recycling and reuse, and the proper use and maintenance of off-road construction equipment. In addition, this project would not impede the state's ability to achieve GHG emissions reductions outlined in AB32.

B. Relative amounts of greenhouse gas emissions

Construction of Alternative 3 with OCRD removal would emit GHG emissions of approximately 8040 metric tons of CO_2e (carbon dioxide equivalent) during the construction phase of the project and there would be no ongoing emissions of GHGs after the completion of the project. The one-time emission of approximately 8040 metric tons of CO_2e total for this project is well below the level of annual emissions (25,000 metric tons) established by the US Environmental Protection Agency and California Air Resources Board for mandatory report of GHG emissions (74 FR 56260 and Cal. Code of Regs. Title 17, Div. 3 Chapt.1, subchapt. 10, article 2). Relative to this reporting threshold, emissions associated with this project will be minor. In addition, no national, statewide or air basin/ air district thresholds of significance have been established for discrete, non-recurring GHG emissions.

C. Potential to Contribute to a Lower Carbon Future and Energy Efficiency

This project with OCRD removal does not contribute to lowering GHG emissions or improving energy efficiency in the future. However, it will not require any ongoing use of energy or emission of GHGs. Therefore, the project with this refinement is neutral with respect to this criteria.

Discussion of other Significance Criteria

The review of criteria A, B, and C indicates that the proposed project would not conflict with the state goals of AB 32 or any regional plan to reduce or mitigate GHG, would result in relatively limited emissions of GHG in comparison to the levels of emissions that might be considered significant and would be considered neutral with respect to contributing to a lower carbon and energy efficient future. The emissions of GHG from this alternative would not be considered a cumulatively considerable contribution to a significant impact and are therefore considered less than significant.

MITIGATION

No mitigation required.

4.2.8 NOISE

Potential noise impacts associated with the removal of OCRD would only occur during construction. They would be intermittent and would not involve continuous noise sources.

Issue NO-1a: Construction Noise During Removal of OCRD

Noise from construction equipment and activity
Determination: **significant, unavoidable, short-term**

IMPACT

OCRD would be demolished to its bedrock foundation rather than notched. Noise impacts during OCRD removal would be similar to those during notching because demolition techniques would be similar. Notching would take approximately 2-3 weeks while complete removal would take up to 6 weeks.

Removal of OCRD would likely be conducted near the end of the San Clemente Dam Seismic Safety Project schedule, after most other construction-related activities are complete. The major noise-generating construction equipment that would likely be used during the removal of OCRD includes excavators, a wheel loader, a crane, a pair of hoe-rams, a pair of concrete saws, a pickup truck and an off-highway truck. Construction activities would only be conducted during daytime hours when existing ambient noise levels are higher (compared with nighttime ambient levels). The southern extent of the Sleepy Hollow residential community is located approximately 5,000 feet north of OCRD with steep terrain between. Construction noise levels associated with the removal of OCRD were modeled using the Cadna/A® model and are anticipated to be less than 25 dBA Leq at the southern extent of the Sleepy Hollow community. This noise level is slightly lower than existing daytime ambient noise levels in the community

of Sleepy Hollow (see Table 4.8-2 in the Final EIR [DWR 2008]). Noise levels due to construction activities will likely not be audible at any noise-sensitive receptors in the Sleepy Hollow community. Thus, removal of OCRD will not increase the noise impact of the project.

MITIGATION

Mitigation measures would be the same as identified for notching the dam (Alternative 3, Issue NO-1 and NO-2) in the 2008 Final EIR/EIS. These mitigation measures will not reduce this impact to less than significant; no additional mitigation measures are available to reduce this impact to less than significant. .

4.2.9 TRAFFIC AND CIRCULATION

The regional and local roadways that serve the project site and existing traffic operating conditions are described in the 2008 Final EIR/EIS (DWR 2008) and updated the April 2012 SEIR. Removal of OCRD would not affect traffic and circulation on local roadways differently from what has been addressed in the April 2012 SEIR. No new impacts have been identified for Traffic and Circulation on local roadways including Carmel Valley Road, Tassajara Road, and San Clemente Drive through Sleepy Hollow from removal of OCRD (versus notching); however, removal of the bridge crossing at OCRD has been identified as a potential impact not previously addressed.

Issue TC-9: Removal of OCRD Bridge

Effect of project on access
Determination: ***less than significant***

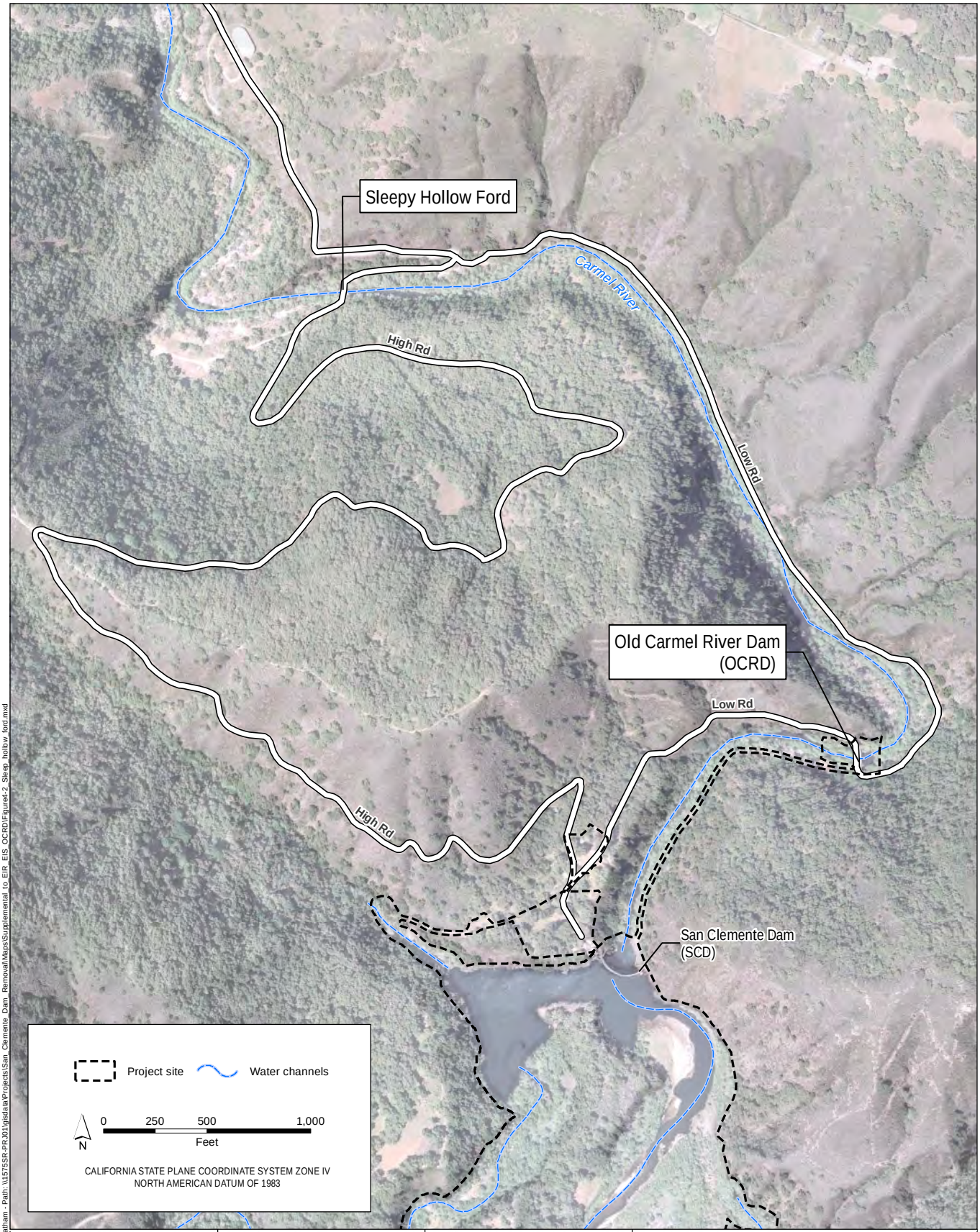
IMPACT

Removal of OCRD would include removal of the bridge that has been constructed on top of OCRD. This bridge currently provides access to SCD via the Low Road. No regular access to the SCD site via the Low Road would be needed after SCD is removed. The Low Road is not designated as an official emergency access route (pers. com Miles Schuler, Division Chief, Monterey County Regional Fire District, 3/2012).

The property owner to the southwest of SCD owns an easement over the Low Road on CAW property for ingress to and egress from their property. However, the easement is not the primary access to the southwest property owner's residence and the easement is used only occasionally (pers. com. Michael Dormody, property owner, 2/2012). CAW is in the process of negotiating with the landowner over the effect of the bridge removal on the easement. The only potential environmental effect of these negotiations is the possibility of relocating the landowner's easement to the High Road. This road includes an Arizona crossing in the Sleepy Hollow ford (Figure 4-2), and thus can only be used when flows in the Carmel River are low (approximately May through October).

CAW and the Department of Fish and Game are currently planning to construct a bridge over the Sleepy Hollow ford in order to improve fish passage and gain all-year access to the Monterey Peninsula Water Management District's Sleepy Hollow fish rearing facility.

This new access is proposed to be constructed by 2014. If the bridge is constructed, the southwest property owner would be able to use that road year-round as replacement for the Low Road access. Given the infrequent use of the Low Road and that this road is not specifically designated as emergency access by local fire officials, relocating the property owner's easement to the High Road would not have a significant effect on the environment.



URS Oakland CA - C. Statham - Path: \\1575SR-PRJ01\gisdata\Projects\San_Clemente_Dam_Removal\Maps\Supplemental_to_EIR_EIS_OCRD\Figure4-2_Sleep_holtw_ford.mxd

	CARMEL RIVER REROUTE AND SAN CLEMENTE DAM REMOVAL MONTEREY COUNTY, CA	DATE OF PREPARATION: 11/14/2011 DATE OF SUBMISSION: 11/30/2011 URS PROJECT NO. 26818107	**FIGURE 4-2** SLEEPY HOLLOW FORD LOCATION

4.2.10 CULTURAL RESOURCES

OCRD is eligible for the National Register of Historic Places ("NRHP") as a contributing resource to the SCD Historic District (SCDHD), dating to the primary period of significance. It is also individually eligible for the NRHP under Criteria A and C. It is eligible under Criterion C as a good example of gravity load masonry dam constructed during the period when dams were transitioning to concrete arch dams. It is associated with the events that have made a significant contribution to the economic development of the Monterey Division thereby making it eligible for the NRHP under Criterion A. It is also eligible for the California Register of Historic Places under Criteria 1 and 3. A number of other historic period structures were inventoried during preparation of the 2008 Final EIR/EIS and the April 2012 SEIR. Table 4-4 (taken from the April 2012 SEIR) includes a list of the inventoried historic period structures (and their recommended eligibility status) associated with the project and the alternatives within the APE. For a complete description of these resources, refer to the 2008 Final EIR/EIS and the April 2012 SEIR.

Table 4-4: Inventoried Historical Structures

Field Site Number	Resource Name (Previously identified site number)	Historical Significance	Relevant NRHP/CRHR Criteria or Reason for Omission
HR-1	Chemical Building near Filtration Plant	HD* Contributing Resource	NRHP Criterion A CRHR Criterion 1
HR-2	Dam Keeper's House 2	HD Contributing Resource	NRHP Criterion A CRHR Criterion 1
HR-3	Filtration Plant	Non-Compatible Non-Contributing	Lack of integrity
HR-4	Old Carmel River Dam & Fish Ladder CA-MNT-1249H	HD Contributing Resource & Individually Eligible	NRHP Criteria A and C CRHR Criteria 1 and 3
HR-5	Dam Keeper's House 1 CA-MNT-1248H	Contributing Resource HD	NRHP Criterion A CRHR Criterion 1
HR-6	Chemical Building near reservoir	HD Contributing Resource	NRHP Criterion A CRHR Criterion 1
HR-7	SCD & Fish Ladder CA-MNT-1248H	HD Contributing Resource & Individually Eligible	NRHP Criteria A and C CRHP Criteria 1 and 3
HR-8	Stone Cabin CA-MNT-812	Individually Eligible Resource	NRHP Criterion C CRHR Criterion 3
HR-9	SCD Historic District	Eligible	NRHP Criterion A CRHR Criterion 1
HR-10	Monterey County Bridge #529 (Caltrans #44C0121)	Ineligible	General lack of significance

The issues potentially affecting historic properties regarding removal of OCRD include the following:

- CR-1a: Ground Disturbance (disturbance to archaeological sites)
- CR-2a: Damage to Historic Structures from Construction-related vibration (construction related vibration)

- CR-3a: Accumulated Dirt/Unintended Damage (construction/demolition-related accumulation of dirt)
- CR-4a: Demolition or Alteration to the Historic Properties (alterations to OCRD and associated fish ladder and to SCD)
- CR-5a: Alteration to the Setting of Surrounding Environment (alter character of setting for SCD Historic District)
- CR-6a: Introduction of Visual Obstructions (loss of visual integrity for SCD Historic District)

Issue CR-1a: Ground Disturbance

Disturbance to archaeological sites
Determination: ***no impact***

IMPACT

No archaeological resources have been identified within the vicinity of OCRD. Furthermore, the setting of OCRD, in an active stream channel surrounded by steep rocky slopes, makes it very unlikely that any unanticipated archaeological resources are present. As such, no archaeological resources would be impacted by the removal of OCRD.

MITIGATION

No mitigation required.

Issue CR-2a: Damage to Historic Structures from Construction-related Vibration

Construction-related vibration
Determination: ***less than significant, short-term***

IMPACT

Because Alternative 3 as described in the 2008 Final EIR/EIS and the April 2012 SEIR includes the removal of the San Clemente Dam and Fish Ladder (HR-7), the construction-related vibration resulting from removal of OCRD would not impact San Clemente Dam and Fish Ladder (HR-7). The remaining contributors to the historic district, i.e., Filtration Plant Chemical Building (HR-1), Dam Keepers Cottage 2 (HR-2), Dam Keepers Cottage 1 (HR-5), and the SCD Chemical Building (HR-6) would no longer be contributing elements to the SCDHD because the demolition of SCD would cause the SCDHD as a whole to lose its ability to convey significance and the SCDHD would therefore no longer be eligible for listing in the National Register of Historic Places (NRHP). As such, removal of OCRD would not have any construction-related vibration impacts on the SCDHD or any of its contributors as the district would no longer remain. Impacts and mitigation related to the demolition of contributing elements of the SCDHD are addressed in Issue CR-4.

MITIGATION

No mitigation required.

Issue CR-3a: Accumulated Dirt/Unintended Damage

Construction/demolition-related accumulation of dirt
Determination: ***less than significant, short-term***

IMPACT

Because Alternative 3 as described in the 2008 Final EIR/EIS and the April 2012 SEIR, includes the removal of the San Clemente Dam and Fish Ladder (HR-7), any accumulated dirt/unintended damage resulting from the removal of OCRD would not impact San Clemente Dam and Fish Ladder (HR-7). The remaining contributors to the historic district, i.e., Filtration Plant Chemical Building (HR-1), Dam Keepers Cottage 2 (HR-2), Dam Keepers Cottage 1 (HR-5), and the SCD Chemical Building (HR-6) would no longer be contributing elements to the SCDHD because the demolition of SCD would cause the district as a whole to lose its ability to convey significance and would therefore no longer be eligible for listing in the NRHP. As such, removal of OCRD would not have any accumulated dirt/unintended damage impacts on the district or any of its contributors as the district would no longer remain. Impacts and mitigation related to the demolition of contributing elements of the SCDHD are addressed in Issue CR-4.

MITIGATION

No mitigation required.

Issue CR-4a: Demolition or Alteration of Historic Properties

Demolition of OCRD
Determination: ***significant, unavoidable, long-term***

IMPACT

Alternative 3 will be revised to include complete removal of OCRD and Associated Fish Ladder (HR-4) rather than notching of OCRD. The 2008 Final EIR/EIS identified the notching of OCRD as a significant and unavoidable impact to HR-4, which is an NRHP-eligible resource. Removal of OCRD would substantially increase this already significant impact on the historic resource. This would remain significant and unavoidable long-term impact.

MITIGATION

Mitigation measures would be the same as identified for notching the OCRD (Issue CR-4) in the 2008 Final EIR/EIS. . However, this mitigation would not reduce the impact to a less than significant level. There are no feasible mitigation measures for reducing the impact to a less than significant level.

Issue CR-5a: Alteration of Surrounding Environment

Alter character of setting for San Clemente Dam Historic District
Determination: ***less than significant, long-term***

IMPACT

As discussed in the 2008 Final EIR/EIS, the removal of SCD and its associated fish ladder (HR-7) would cause the SCDHD as a whole to lose its ability to convey significance and, as such, would not retain NRHP eligibility. The setting of the historic district would not be further altered by OCRD removal as the district would no longer remain after removal of SCD. No individually eligible resources, other than SCD and OCRD, are present within the SCDHD and, as such, there would be no additional impacts.

MITIGATION

No mitigation required.

Issue CR-6a: Introduction of Visual Obstructions

Loss of visual integrity for San Clemente Dam Historic District
Determination: ***less than significant, long-term***

IMPACT

As discussed in the 2008 Final EIR/EIS, the removal of SCD and its associated fish ladder (HR-7) would cause the SCDHD as a whole to lose its ability to convey significance and, as such, would not retain NRHP eligibility. The visual integrity of the historic district would not be further altered by OCRD removal as the district would no longer remain after removal of SCD. No individually eligible resources, other than SCD and OCRD, are present within the SCDHD and, as such, there would be no additional impacts.

MITIGATION

No mitigation required.

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5. CEQA CONSIDERATIONS

CEQA requires analysis of significant irreversible changes. These include significant and unavoidable adverse impacts; cumulative impacts; irreversible and irretrievable commitment of resources; relationships between short-term uses and long-term productivity; and growth-inducing impacts. NEPA also requires analysis of natural or depletable resources. These are described in the following sections.

5.1 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Unavoidable significant adverse impacts are those effects that would significantly affect either natural systems or other community resources, and cannot be mitigated to less than significant. Many of the potentially significant impacts associated with revising the San Clemente Dam Seismic Safety Project to include removal, rather than notching, of OCRD, as identified in this SEIR No. 2 can be reduced to less than significant levels by mitigation measures specified in this document, the 2008 Final EIR/EIS and the April 2012 SEIR. There are three significant and unavoidable impacts of the project that are addressed in this SEIR No. 2, two of which are short-term and associated with construction. The other is a permanent loss of a historic structure. These three impacts occur as a result of the project regardless of whether OCRD is notched or removed. The significant, unavoidable impacts are summarized below by environmental resource area.

AQ-1a: OCRD Site Activities: Removal of OCRD will slightly increase the significant and unavoidable impact of the project on air quality. Alternative 3 of the San Clemente Dam Seismic Safety Project will increase NO_x emissions as detailed in the 2008 Final EIR/EIS, the April 2012 SEIR, and this draft SEIR No. 2. Although the emissions related to removal of OCRD are below the mass emissions significance threshold, the emissions for the project overall are above this threshold. The 2008 Final EIR/EIS indicates that there may be an incremental significant, unavoidable impact on ambient air quality in distant residential areas or at the SCD. The nearest residential receptors are located far enough from the SCD site (3,900 to 5,300 meters) that only a limited amount of dispersed NO_x would be transported by wind due to diffusion. Mitigation measures include practical and cost-effective NO_x controls for diesel vehicles and equipment, such as Viscon, and use, where possible, of state-certified construction equipment.

Estimated emissions of fugitive dust (PM_{10F}) for the project, including the removal of OCRD, could potentially exceed the PM_{10} threshold of 82 lb/day by an amount that would be significant; thus requiring mitigation in order to minimize ambient air impacts. This would primarily be due to travel on unpaved roads. There are several feasible mitigation measures that address the many sources of PM_{10} during the construction phase of a project (e.g., grading, wind erosion, entrained dust). Common measures include watering, chemical stabilization, or reducing surface wind speeds with windbreaks.

These air quality impacts of the project are short-term. However, even with implementation of feasible mitigation measures, NO_x and PM_{10F} emissions would not be reduced below the mass emissions significance threshold and would be significant and unavoidable. Revising the project to include removal of OCRD will increase this significant impact slightly but otherwise will not affect the conclusion that the project will have a significant and unavoidable impact on air quality.

NO-1a: Construction Noise during Removal of OCRD: The removal of OCRD will generate noise but will not increase or decrease the significant and unavoidable noise impact of the project. The noise from construction equipment and activities related to removing OCRD is obviously limited to the construction period. Construction would only occur during daytime, and several requirements to reduce and limit noise (e.g., use of quiet-design construction equipment, mufflers, and enclosures; eliminating unnecessary idling; requiring equipment maintenance and lubrication) would be implemented to mitigate these impacts.

CR-4a: Demolition or Alteration of Historic Properties: The removal of OCRD, rather than notching will increase the impact of the project on historic properties. The demolition and removal of OCRD and its associated fish ladder constitutes a permanent effect. The proposed mitigation for this loss includes recordation of resources (HABS/HAER), photographic documentation, development of interpretive displays or an educational program, preparing an NRHP Nomination Form for Historic District, or completing a Historic Preservation Management Plan.

5.2 CUMULATIVE IMPACTS

Cumulative impacts may result from individually minor but collectively significant effects of several projects over a period of time. Cumulative effects may occur when the incremental impacts of a Proponent's Proposed Project, added to those of other closely related past, present, and reasonably foreseeable probable future projects, become environmentally important.

Under CEQA, "cumulative impacts" refers to two or more environmental effects that, when combined, are "considerable" or which compound or increase other environmental impacts. CEQA requires either (1) a list of past, present, and reasonably foreseeable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency ("list approach"); or (2) a summary of projects contained in an adopted general plan or related planning document that is designed to evaluate regional or area-wide conditions ("plan approach"). The 2008 Final EIR/EIS used the list approach.

During preparation of the April 2012 SEIR the list was reviewed and updated using the Monterey County Planning Department 2009, 2010, and 2011 lists of approved planning projects to determine if new, reasonably foreseeable projects could potentially result in new cumulative impacts. None were identified. The Monterey County lists were reviewed again for this draft SEIR No. 2. No new projects were identified that could, in

combination with the San Clemente Dam Seismic Safety Project, including removal of OCRD, result in new cumulatively considerable impacts not already addressed in the 2008 Final EIR/EIS.

5.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

No resources would be irreversibly or irretrievably committed or used as part of OCRD removal.

5.4 RELATIONSHIPS BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

There are no impacts related to the relationships between short-term uses and long-term productivity of the Carmel River or its surroundings near OCRD. The proposed project would restore the river to a more natural state without changing downstream flood protection.

5.5 GROWTH-INDUCING IMPACTS

Neither the proposed San Clemente Seismic Safety Project nor the component of it that would remove OCRD would induce growth.

5.6 NATURAL OR DEPLETABLE RESOURCES

There are no issues associated with natural or depletable resources involved in the removal of OCRD.

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6. LISTS AND REFERENCES

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6.3 REFERENCES

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