

CALIFORNIA AMERICAN WATER COASTAL WATER PROJECT PEA EXECUTIVE SUMMARY

The Proponent's Environmental Assessment (PEA) has been prepared by California American Water Company (CAW) for submission to the California Public Utilities Commission (CPUC) as part of CAW's application for a Certificate of Public Convenience and Necessity (CPCN) to build, own, and operate the proposed project—known as the Coastal Water Project (CWP). The PEA is submitted pursuant to CPUC regulations for CEQA Compliance. The Project Application, Concept Design Report, and related materials have been submitted to the CPUC under separate cover. Additional Project information can be found at the project website www.coastalwaterproject.com.

The PEA contains an evaluation of the environmental effects of all of the components of the Proposed Project, which comprises a desalination plant; a desalinated water conveyance system, including a transmission main, terminal reservoir, and pump stations; and aquifer storage and recovery (ASR) facilities. The Project would be implemented by CAW to provide 11,730 acre-feet per year (AFY) of water for CAW to replace its Carmel Valley Aquifer withdrawals and 1,000 AFY presently being withdrawn from the overdrafted Seaside Groundwater Basin (Seaside Basin). The Project would respond directly to State Water Resources Control Board (SWRCB) Order 95-10's directive that CAW secure a water supply to replace 10,730 acre-feet per year of withdrawals from the Carmel River Aquifer. The Project is also consistent with the CPUC's previous "Plan B" alternative long-term water supply studies.

In addition, five alternative water supply approaches are evaluated.

- Alternative 1 –(Regional Alternative)
- Alternative 2 –(Oversized Pipeline Alternative)
- Alternative 3 –(Moss Landing Power Plant [MLPP] Horizontal Directionally Drilled [HDD] Intake Alternative)
- Alternative 4 –(North Marina Site Alternative)
- Alternative 5 –(No Project Alternative)

PROJECT OVERVIEW

In 1995, the State Water Resources Control Board issued an order (Order 95-10) requiring CAW to reduce its pumping in the Carmel River Aquifer by 10,730 AFY. Since 1995, many approaches to achieve a reduction of 10,730 AFY have been analyzed by CAW and other potential project sponsors. Several formal approaches were advanced, including proposals for a small desalination project, and a new larger dam on the Carmel River (first proposed by the Monterey Peninsula Water Management District's New Los Padres Dam Project and then by CAW's Carmel River Dam and Reservoir Project). There was considerable opposition by the public and the resource agencies to a new dam on the Carmel River.

In 1998, the CPUC began a process to develop what became known as “Plan B.” Plan B is meant to be an alternative to CAW's proposal to build a new dam on the Carmel River. After several years of studies by the CPUC and independent environmental and engineering experts, the CPUC published Plan B in July 2002.

Plan B included all of the essential features of the Project: (a) a desalination project at Moss Landing using the MLPP cooling water system for feedwater; (b) a water conveyance pipeline from Moss Landing to the CAW's Monterey Peninsula service territory; (c) ASR near Seaside; and (d) storage of Carmel River winter flows at the ASR site for recovery in the summer. At 10,730 AFY capacity, Plan B did not include a provision to replace some of the water pumped from the so-called Seaside Basin because the over pumping problem was not recognized at that time.

CAW adopted the Plan B concept in February 2003, when it formally applied to the CPUC to undertake the project, which became known at that time as the “Coastal Water Project” and which is now the Project proposed by this PEA.

Summary of Alternatives Screening

In addition to the many alternatives evaluated by the CPUC in the preparation of Plan B, numerous alternatives were considered in the preparation of this PEA.

Project, Proposed Project and Alternatives. In this PEA, CAW's preferred project is termed the “Proposed Project”, the term “Project” includes both the Proposed Project and Alternatives 1-4. Alternatives screened generally needed to satisfy all of the following screening criteria to be selected for analysis as an alternative to the Proposed Project:

- Meet or exceed the capacity requirements of Order 95-10 and reduce withdrawals in the Carmel Valley Aquifer;
- Cause no more adverse impacts on the physical environment than the Proposed Project;
- Address concerns of the U.S. Fish and Wildlife Service (USFWS) and the National Oceanographic and Atmospheric Administration (NOAA) Fisheries regarding Endangered Species Act (ESA) compliance;
- Utilize technologies or techniques that have been proven reliable enough to meet the water supply needs of more than 100,000 people;
- Be technically and environmentally feasible;
- Appear to be supported by the relevant communities and governmental agencies
- Appear to be capable of receiving the requisite approvals and permits from the relevant local, State, and Federal agencies;
- Protect CAW's customers by providing a reliable long-term water supply that would eliminate or substantially reduce the exposure to fines for alleged violations of the ESA or Order 95-10.

Purpose and Need

The primary purpose of the Project is to replace 10,730 AFY that CAW historically pumped from the Carmel Valley Aquifer to comply with Order 95-10. In addition, the Project would replace water presently pumped by CAW from the Seaside Basin (Basin) by 1,000 AFY and thereby reduce the overpumping in the Basin. Other purposes to be met by the Project include:

- Reduce the weather dependence of the Monterey Peninsula potable water supply from 100% today to less than 20% when the Project is completed. The Monterey Peninsula's coastal location makes it both highly vulnerable to frequent low rainfall and drought conditions.
- Complete the investment in a balanced water portfolio for CAW's service territory on the Monterey Peninsula, which already includes surface water supplies, groundwater supplies, recycling, conservation, and reclamation of water resources. A diverse portfolio will enable CAW to draw upon each element of the portfolio as necessary to meet the service requirements of its customers at the lowest overall cost.
- Reduce groundwater pumping from the Seaside Basin as part of an overall effort to achieve a sustainable level of water production from the Basin by all of the pumpers extracting water from the Basin.
- Reduce pumping from the Carmel Valley Aquifer, which will contribute to the environmental restoration of the Carmel River watershed.
- Locate, design, construct, and operate a desalination project in a manner that minimizes adverse environmental effects at all phases in the project's life cycle.
- Protect the local economy from adverse effects of an uncertain water supply, such as building moratoria and water rationing.
- Minimize rate increases for CAW's customers.

Summary of Alternatives

Five alternatives to the Proposed Project were analyzed in detail as part of preparation of this PEA:

Alternative 1 (Regional Alternative). The Regional Alternative would supply up to 20,272 AFY of water for both CAW and the neighboring communities. The exact ownership, governance, and size of the Regional Alternative would be determined by the participants. However, the Regional Alternative could satisfy Order 95-10, the Proposed Project's stated purpose and need, and also meet the water supply needs of some of the northern Monterey County communities. The roles and responsibilities of public and private entities in the financing, design, construction, and operation of the Regional Alternative have not yet been defined, but could entail CAW partnering with Monterey County or other participating public agencies. As discussed further below, the Proposed Project and Regional Alternative require essentially the same facilities, with slightly larger sizes and capacities for the Regional Alternative, depending on its ultimate configuration. The primary differences between potential impacts of the Regional Alternative, and the Proposed Project relate to brine disposal and an increased water supply. Refer to Section 3.4 (Regional CWP Option) for additional discussion.

Alternative 2 –(Over-sized Pipeline Alternative). This Alternative would have all of the same features as the Proposed Project, except that the raw source water, product water, and brine return pipelines are slightly larger. Instead of a 30-inch transmission pipe from the Moss Landing desalination facility to the CAW service territory on the Monterey Peninsula, this Alternative would have a 36-inch transmission pipe. In addition, the source water pipeline from

MLPP would be increased from 54 inches to 72 inches. Refer to Section 3.5 (Alternative 2 [Oversized Pipeline Alternative]) for additional discussion.

Alternative 3 –(MLPP HDD Intake Alternative). This Alternative would utilize Horizontal Directional Drilling (“HDD”) intake wells as feedwater supply for the desalination project located at Moss Landing. The HDD wells themselves would be located south of Moss Landing Harbor at the Salinas River State Beach parking lot facilities and the seawater would be transported to the Moss Landing desalination facility via a pipeline. Refer to Section 3.6 (Alternative 3 [MLPP HDD Intake Alternative]) for additional discussion.

Alternative 4 –(North Marina Site Alternative). The North Marina Site Alternative consists of locating the proposed seawater desalination facility in the City of Marina Sphere of Influence at Armstrong Ranch. This alternative could provide the necessary water supply to meet either the Proposed Project or the Regional Alternative water demands. The PEA includes a detailed evaluation of the North Marina Alternative Site, which includes HDD wells for source water intake and a brine disposal line to the MLPP outfall for brine discharge. This alternative also includes four power supply alternatives: the existing power grid, gas-fueled reciprocating engine generators, gas-fired turbine generators, and gas-fueled direct engine drives. Refer to Section 3.7 (Alternative 4 [North Marina Site Alternative]) for additional discussion.

Alternative 5 –(No Project Alternative). This PEA evaluates the potential effects, beneficial and adverse, associated with not implementing the Project, including effects on water supply, coastal communities, and the environment. The No Project Alternative comprises continuing to implement existing programs to conserve and recycle water. The No Project Alternative does not meet CAW’s basic project objective of satisfying the requirements of SWRCB Order 95-10, as it fails to provide a reliable drought-proof water supply for CAW customers. Refer to Section 3.8 (Alternative 5 [No Project Alternative]) for additional discussion.

Project Phasing

The Project would be built in a coordinated construction cycle that would simultaneously move the project forward in a timely manner and minimize any adverse impacts on the physical environment associated with the seasons of the year. In addition, some aspects of the Project (e.g., the ASR components) would be built at an accelerated rate because those components are easier to build and can achieve some of the Project benefits sooner. Since the ASR component of the Project could be implemented ahead of the desalination facility, the ASR could begin storage and recovery of water supplies before building the desalination facility and associated conveyance facilities.

Required Agreements, Permits, and Approvals

In addition to a CPCN from the CPUC, the Project would require many approvals and permits from local, state, and federal agencies. Table 1-1 (Key Local, State, and Federal Approvals Needed for the Project), below is a summary of the key local, state and federal permits that would be required to implement the Project.

Table 1-1: Key Local, State, and Federal Approvals Needed for the Project

Jurisdiction	Agency	Approvals or Permits Required
Local	Monterey County Department of Environmental Health	Well Permit
	Monterey Peninsula Water Management District (MPWMD)	Distribution system expansion
	Monterey County and Cities of Monterey, Del Rey Oaks, Seaside, Sand City, Carmel-by-the-Sea, Pacific Grove, and Marina	Encroachment and construction permits
State	California Coastal Commission (CCC)	Coastal Development Permit
	California Department of Fish and Game (CDFG)	Section 1600 Streambed Alteration Permit and Incidental Take permits
	California Department of Health Services (DOHS)	Public Water System Permit
	California Energy Commission (CEC)	Application For Certification (AFC) Amendment
	California Department of Transportation (CalTrans)	Encroachment Permit
	State Lands Commission	Lease/Encroachment Permit
	California Department of Parks and Recreation	Use/Encroachment Permit
	Regional Water Quality Control Board (RWQCB)	National Pollutant Discharge Elimination System (NPDES) Permit/401 Certification
Federal	U.S. Army Corps of Engineers (USACE)	Clean Water Act (CWA) Section 10 and 404 Permits
	U.S. Fish & Wildlife Service (USFWS) and National Oceanographic and Atmospheric Administration (NOAA) Fisheries	Endangered Species Act (ESA) Section 7 Consultation
	Base Reuse and Closure Office	License on Ford Order Reuse Authority (FORA)
	U.S. Environmental Protection Agency (EPA)	Underground Injection Control Program
	U.S. Coast Guard (USCG) and NOAA	Review of and comments on USACF and USFWS permits
	Monterey Bay National Marine Sanctuary (MBNMS)	Activities and discharges into waters and wetlands

The Project would yield positive impacts on the physical environment through the reduced pumping in the Carmel River Aquifer. The reduced pumping in the key dry months of the summer season would leave a substantial amount of water at critical times for fish, wildlife, and the riparian habitat.

Coastal Water Project Cost Summary

Estimated Nominal Capital Costs (@ 4% Annual Inflation on Construction)

	Total	2004/2005	2006	2007	2008
Construction					
Desalination Facilities	93,531,000	0	0	43,047,000	50,484,000
Desalinated Water Conveyance					
Pipelines	25,024,000	0	0	12,767,000	12,257,000
Terminal Reservoir and ASRPS	5,981,000	0	0	2,336,000	3,645,000
Segunda-ASR System	15,578,000	0	0	7,636,000	7,942,000
Pilot Plant - see note 1	2,585,000	1,516,000	1,069,000	0	0
Implementation Costs - see note 1	30,456,000	7,273,000	7,943,000	8,147,000	7,093,000
Contingencies - see note 1	15,935,000	287,000	503,000	7,500,000	7,645,000
Land - see note 1	2,000,000	0	1,000,000	1,000,000	0
Total	191,090,000	9,076,000	10,515,000	82,433,000	89,066,000

Estimated Annual Operations & Maintenance Costs

TOTAL Operation & Maintenance COSTS =	\$7,610,000
TOTAL Repair & Replacement COSTS =	\$1,450,000
TOTAL O&M W/ R&R COSTS =	\$9,060,000
TOTAL Operations Costs Avoided Through CWP =	\$2,688,453

Summary of California American Water Coastal Water Project Public Outreach and Information Program

Presentations:

- **CAW held over 50 public meetings on the CWP from June 2004 through July 2005**
- **Round One - June - July 2004**
 - ❖ Introduction
 - ❖ Project Approach

- **Round Two - August - November 2004**
 - ❖ Project Description
 - ❖ Project Costs

- **Round Three – March - April 2005**
 - ❖ Importance of Project
 - ❖ Status of Important Studies

- **Round Four – July 2005**
 - ❖ Overview & Results of PEA
 - ❖ Next Steps

Project Information:

- **Permit Coordination Center**
 - ❖ Joint Meetings with more than 20 agencies in July 2004 and January 2005
 - ❖ Field Tour with Coastal Agencies

- **Project E-mail address:** Info@coastalwaterproject.com
- **Project Library**
 - ❖ Open to Public
 - ❖ Located at UCMBEST Center at 3180 Imjin Rd., Marina
 - ❖ Phone: (831) 883-8187

- **Project Website:** www.coastalwaterproject.com
 - ❖ From July 2004 through July 2005 12,548 visitors and 151,969 hits have been counted on the Coastal Water Project's website
 - ❖ During July 2005, visitors spent a total of 129 hours, 39 minutes on the CWP website
 - ❖ The five most commonly downloaded files off of the CWP website were:
 - Seawater Desalination "White Paper" with 4966 hits
 - CWP Moss Landing Town Hall Presentation with 1775 hits
 - CWP Carmel by the Sea Town Hall Presentation with 1035 hits
 - Pacific Grove Town Hall Presentation with 693 hits
 - Project Description Summary of California American Water Coastal Water Project with 587 hits