



3. Project Location and Background Information

3. PROJECT LOCATION AND BACKGROUND INFORMATION

3.1 Project Location and Overview

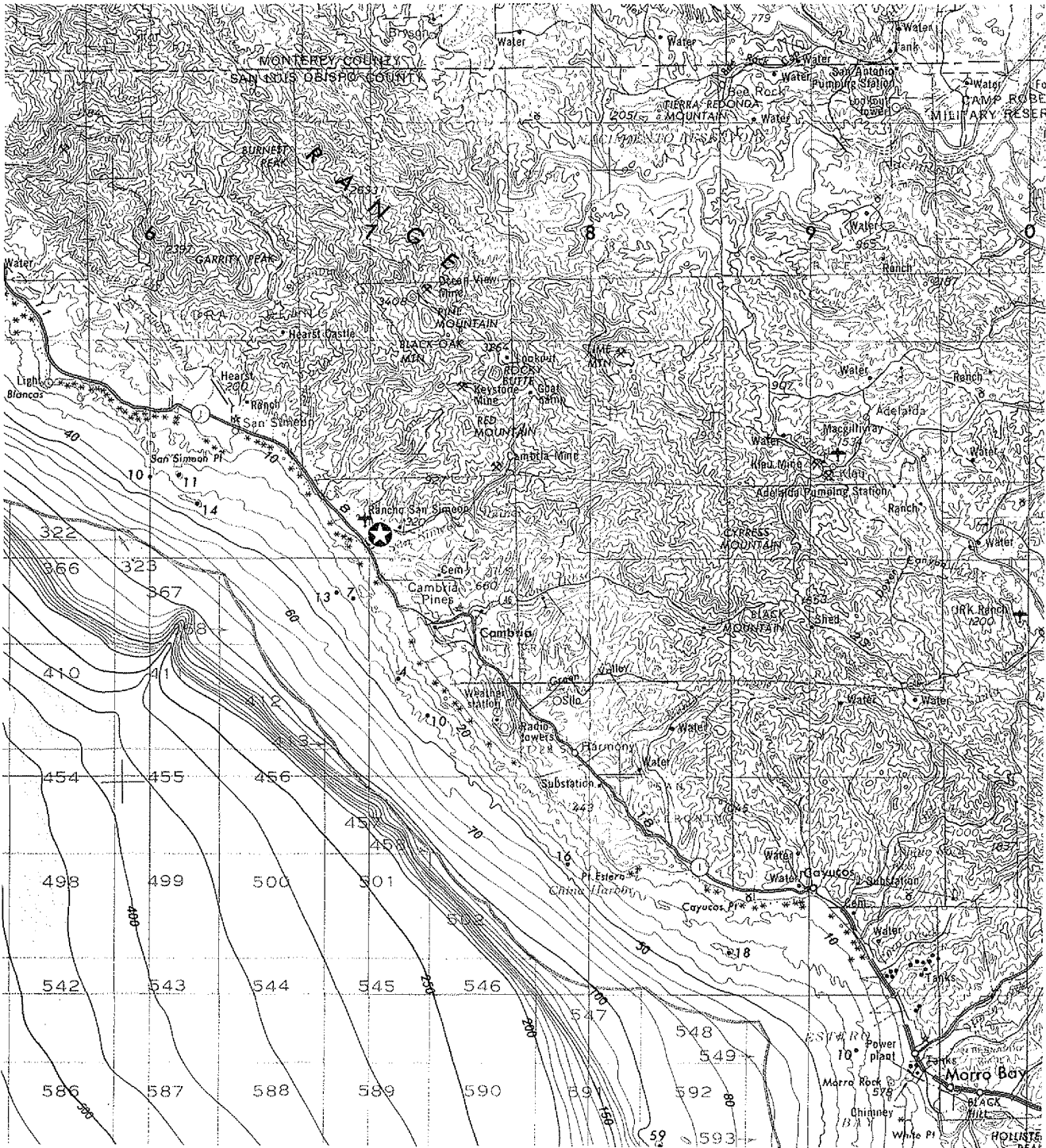
The proposed project site is located in the coastal region of Central California in the northwestern portion of San Luis Obispo County, within the community of Cambria (refer to Exhibit 1, REGIONAL VICINITY). Cambria is located approximately 35 miles northwest of the City of San Luis Obispo and 25 miles west of the City of Paso Robles. The proposed Desalination Plant is to be located in the vicinity of the CCSD's Effluent Disposal Ponds, San Simeon State Park and San Simeon State Beach.

The North San Simeon Route would withdraw water directly from the ocean using an intake piping system (refer to Exhibits 3 and 4 contained in Section 4). Water would be fed to a plant located on District property adjacent to the north side of the effluent disposal ponds. Brine reject water would be routed back to the ocean through a parallel pipeline and discharged into an ocean outfall. A surf zone discharge option is also under consideration by the District.

The intake discharge pipeline would be located along San Simeon Creek Road, and traverse a vacant parcel (013-051-0176) to the beach area. The parcel is in an area inaccessible to the public, north of the State Beach property. Locating intake and discharge pipes on private property allows the District increased flexibility to accommodate both technical and environmental considerations.

3.2 Current Uses of Desalination

Of the more than 7,500 desalination plants in operation worldwide, 60% are located in the Middle East. The world's largest plant in Saudi Arabia produces 240 million gallons per day (MGD) of desalted water. In contrast, 12% of the world's capacity is produced in the Americas, with most of the plants located in the Caribbean and Florida. To date, only a limited number of desalination plants have been built along the California coast, primarily because the cost of desalination is generally higher than the costs of other water supply alternatives available in California (e.g., water transfers and groundwater pumping). However, as drought conditions occur and concern over water availability increases, desalination projects are being proposed at numerous locations in the state. Table 1 outlines the status of desalination facilities in California as of October, 1993.



Source: USGS San Luis Obispo 250,000 Series Topography (1979)



Project Site



0 4 miles

CAMBRIA DESALINATION FACILITY Regional Vicinity Map

Table 1

COASTAL SEAWATER DESALINATION PLANTS IN CALIFORNIA

Plant	Purpose	Technology	Capacity**	Feedwater Source
Existing Plants				
Chevron Gaviota Oil and Gas Processing Plant	Processing Plant	Reverse Osmosis (RO)	410,723 gpd	Ocean
City of Morro Bay***	Domestic	RO	600,000 gpd	Seawater wells
City of Santa Barbara***	Domestic	RO	6,696,575 gpd	Ocean
DPR, Hearst San Simeon State Historical Monument****	Visitor Center Uses	RO	40,000 gpd	Ocean
Monterey Bay Aquarium****	Aquarium	RO	43,000 gpd	Ocean
SCE, Santa Catalina Island	Domestic	RO	132,000 gpd	Seawater wells
Offshore oil and gas platforms	Platform Uses	Both	2,000 to 34,000 gpd	Ocean
PG&E Diablo Canyon Power Plant	Power Plant	RO	576,000 gpd	Ocean
PG&E Morro Bay Power Plant	Power Plant	Distillation	430,000 gpd	Ocean
PG&E Moss Landing Power Plant	Power Plant	Distillation	475,000 gpd	Ocean
U.S. Navy, San Nicolas Island	Domestic	RO	24,000 gpd	Seawater wells
Proposed Projects				
Sand City, Proposed Sterling Hotel/Conference Center*****	Private Development	RO	17,858 gpd	Seawater Wells
Cambria Community Services District	Domestic	RO	1 MGD	Seawater wells
City of Buena Ventura	Domestic	RO (probable)	5 to 7 MGD	Seawater wells or Ocean
Marina Coast Water District	Domestic	RO	1 to 3.5 MGD 300,000 gpd	Seawater wells
Metropolitan Water District of Southern California	Domestic	Distillation	5 MGD	Ocean
San Diego County Water Authority	Domestic	RO	10 to 30 MGD	Ocean
U.S. Navy, N. Island Naval Air Stn. & 32nd St. Naval Stn., San Diego	Power plant	RO	700,000 gpd total	Seawater wells
East West Ranch	Private Development	Distillation	86,000 gpd	Ocean
City of Santa Cruz	Domestic	Not Determined	4 MGD	Seawater wells

Excerpts from Chapter 2 pp. 15-25
CROVRB, 9/93

Notes:

- * Shaded projects have been all or in part approved or conditionally approved by the California Coastal Commission.
- ** gpd = gallons per day; MGD = Million Gallons per Day
- *** Plant is permitted and constructed but is not operating.
- **** Plant is permitted and is under construction.
- ***** Plant was permitted but has not been constructed.

3.3 Background and History of Cambria's Proposed Facility

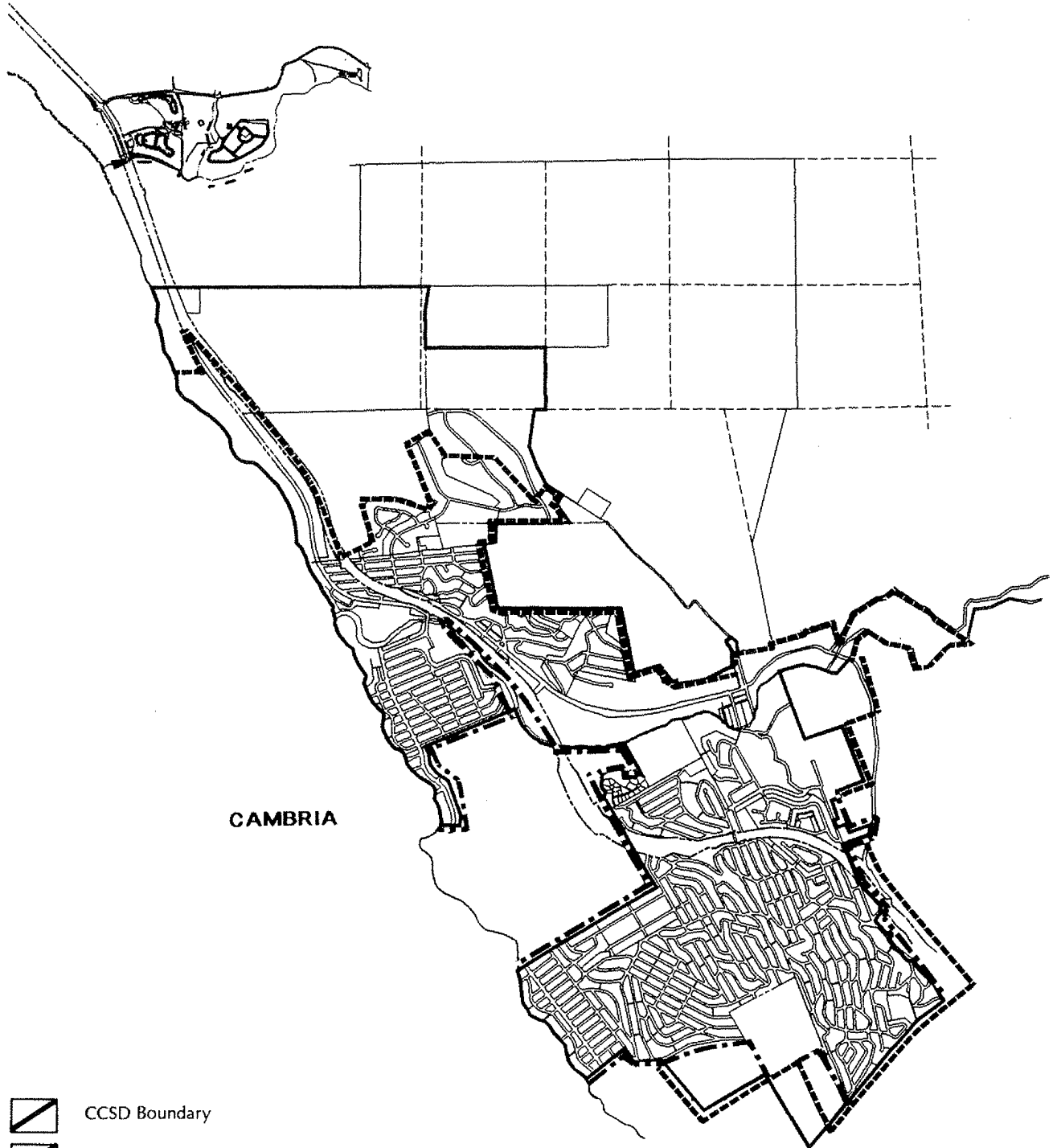
The CCSD provides both water and sewer service via a potable water treatment and delivery system and a wastewater collection, treatment and disposal system to a population of 5,382.¹ Primarily, service is provided to residential uses in addition to some commercial development located within the service area of the District. The Service Area boundary for the CCSD is shown in Exhibit 2, SERVICE AREA. The existing CCSD domestic water supply system includes five wells located in two separate well fields near San Simeon and Santa Rosa Creek. The CCSD is in the process of upgrading its wastewater treatment and disposal facilities to provide adequate capacity for projected flows. The CCSD's Wastewater Treatment Facility is an activated sludge wastewater treatment plant which provides secondary treatment. Treated wastewater, currently disposed of utilizing an effluent sprayfield operation, will be upgraded to include four percolation ponds which are to be constructed in the Fall, 1994.

Due to the severe drought conditions in the Cambria area over the past few years, the CCSD has experienced a water supply shortage and has been forced to implement water conservation measures. Customers of the CCSD were under a mandatory conservation program from early in the summer of 1990 through 1993. The conservation program resulted in reduced consumption of approximately 28 percent compared to 1989. This reduced consumption allowed the community's usage to remain within the limits of its dependable supply. However, if no conservation program had been in effect, consumption might have exceeded the dependable monthly supply. If development is allowed to continue at what might be called a "normal" rate, the community's existing capacity to endure a sustained drought may be exhausted.





In response to a level of severity III (level of severity in which existing water demand equals or exceeds the dependable supply), the County of San Luis Obispo has recommended that the CCSD continue to pursue development of additional water sources.² Thus, the CCSD has evaluated alternatives in addition to conservation measures to increase the safe yield of its water supply. Numerous reports have been prepared by the CCSD in recent years to evaluate necessary improvements to their water supply system and their wastewater treatment and disposal facilities. Eleven different In 1991, various water supply projects

¹ According to the U.S. Census, 1990.

² Annual Summary Report, 1993, prepared by the San Luis Obispo County Department of Planning and Building.



CAMBRIA

-  CCSD Boundary
-  Urban Service Line
-  Urban Reserve Line
-  Not to Scale

Source: North Coast Engineering

CAMBRIA DESALINATION FACILITY
Service Area

have been ~~were~~ considered and/or evaluated by the District. The principal domestic water supply projects that have been considered by the CCSD included the following projects:

Groundwater Recharge: Project involved recharging groundwater by discharging into the San Simeon Creek stream bed with reclaimed water extracted from the CCSD effluent disposal field. Reclaimed water would be treated through a reverse osmosis facility. The project included an environmental review in accordance with CEQA and a pilot facility was installed to establish technical parameters. A negotiation impasse with local landowners to recharge the basin resulted in the CCSD placing the project on hold for the immediate future.

Cambria Meadows Dam: This project consisted of a water diversion project into a 3,500 acre foot capacity reservoir in the vicinity of San Simeon Creek. The project was proposed as a part of the C.T. Ranch Land Development project. Community concerns, financial and environmental considerations rendered the Cambria Meadows Dam project infeasible.

Lake Nacimiento Pipeline: The proposal would deliver water from the Las Tablas arm of Lake Nacimiento to Palmer Flats and ultimately to the CCSD domestic wellfields via a 10-mile transmission pipeline. The project was determined to be costly and would need to overcome numerous environmental and engineering constraints in order to implement.

~~Additional projects which were reviewed in 1991 through 1992 and deemed infeasible at that particular time due to economic, environmental and feasibility considerations included; the Steiner Creek Dam and Reservoir, San Simeon Creek Wellfield Dam and Reservoir, Santa Rosa Creek Groundwater Wells, Stonebrook Ranch Dam and Reservoir, Arroyo Laguna/Arroyo de la Cruz/San Carpoforo Groundwater Wells, Tributary to Jack Creek, Dam and Reservoir, Catchment Basins along San Simeon Creek and Santa Rosa Creek, and the State water project.~~

In June of 1993, the CCSD Board of Directors directed staff to initiate review of potential opportunities to implement a desalination plant. A preliminary analysis of alternative configurations for a desalination plant was presented to the CCSD Board in November, 1993. In March, 1994, the CCSD Board of Directors' directed staff to commence the CEQA review process to analyze two separate intake and outfall methods which were to be reviewed as dual project options in the EIR. The CCSD and Project Team met with California State Parks and Recreation representatives to obtain permission to install test wells for one of the two options (Ranney Well Connector) on State Park property. This request was denied by State Parks, thus this project EIR presents the North Simeon Route

facilities as the proposed project. Alternatives previously considered including a Ranney well collector system on State Park property, facilities in the vicinity of Santa Rosa Creek and services for San Simeon are presented in Section 7 of this EIR.

3.4 Project Objectives

As part of the CCSD's long-term goal and legal responsibility of providing an adequate water supply to its service area, this project is being proposed to provide a reliable source for the District's domestic water supply. The groundwater supplies from the Santa Rosa and San Simeon groundwater basins are no longer adequate to meet existing demand under extreme drought conditions. As shown in Table 2, CCSD DOMESTIC WATER PRODUCTION, the average total domestic water production from 1987 to 1993 was approximately 711 ac-ft/yr. The maximum projected water demand for 2015 is 1,556 ac-ft/yr, which would exceed the available groundwater supply in most years (refer to Table 3, PROJECTED CCSD DOMESTIC WATER DEMAND). As a consequence, the CCSD is proposing this Desalination Plant Project to meet its future water supply needs.

Table 2

CCSD DOMESTIC WATER PRODUCTION

	Santa Rosa Basin (ac-ft/yr)	San Simeon Basin (ac-ft/yr)	Total (ac-ft/yr)
1975	483.4	--	483.4
1976	517.8	--	517.8
1977	330.0	--	330.0
1978	447.5	--	447.5
1979	36.2	-91.2 365.2	456.4
1980	--	473.1	473.1
1981	--	518.5	518.5
1982	--	510.6	510.6
1983	--	568.4	568.4
1984	113.8	558.6	672.4
1985	53.3	627.7	681.0
1986	91.1	649.5	740.6
1987	167.7	609.3	777.0
1988	253.9	565.6	819.5
1989	174.6	622.4	797.0
1990	206.7	457.1	663.8
1991	150.8	404.9	555.7
1992	134.4	542.3	677.6
1993	1.0	690.5	691.5

Source: Cambria Community Services District

Table 3

PROJECTED CCSD DOMESTIC WATER DEMAND

Year	WATER DEMAND (ac-ft/yr) ¹	
	Minimum ²	Maximum ³
1995	800 700	800
2000	845 745	989
2005	890 790	1,178
2010	935 835	1,367
2015	980 880	1,556

Source: John Carollo Engineers

¹ Based on a demand of 135 gallons/capita/day and two people per household.

² Based on issuance of 30 building permits per year.

³ Based on issuance of 125 building permits per year.

3.5 Required Permits, Approvals, or Authorizations for the Cambria Community Services District Desalination Project

Responsible Agency	Permit, Approval or Review	Potentially Applicable To
FEDERAL		
Army Corps of Engineers ¹ (COE)	Issue 404 Permit and Section 10 Permit	Activities in "navigable waters" of the US and/or construction, operation, or abandonment of facilities on land under federal jurisdiction, or actions requiring major federal action (e.g., permit approvals)
United States Fish and Wildlife Service (FWS)	Review 404 Permit and Draft NPDES Permit; Consult with RWQCB	Protecting endangered bird species and some marine mammals
United States Environmental Protection Agency	Review Draft NPDES Permit; Consult with RWQCB; and Special Use Permit (Marine Protection, Research and Sanctuaries Act Section 310)	Regulatory responsibility with regard to sewage outfalls and ocean dumping. Within State of California waters, EPA has delegated NPDES permitting to the State (of California) Water Resources Control Board (see discussion below).
Monterey Bay National Marine Sanctuary (MBNMS) National Oceanic and Atmospheric Administration (NOAA)	CEQA Review; Review/Authorize offshore pipeline excavation/installation (individual permit or conjunction with Coastal Commission), Review Draft NPDES Permit, forward conditions/requirements to RWQCB	NOAA works closely with the State to ensure Federal State cooperation and to effectively coordinate the Monterey Bay National Marine Sanctuary Program. MBNMS/NOAA works closely with state and federal agencies to ensure compliance with enforceable regulations of the MBNMS Program, including activities (Section 944.5 of the Title 15 of the Code of Federal Regulations) such as discharges to sanctuary waters and alterations to the sea bed
United State Coast Guard (USCG)	Coordinate with COE	Enforcing Federal laws in waters under U.S. jurisdiction
STATE		
California Coastal Commission	Issue Coastal Development Permit Consistency Determination ²	Seawater intake and discharge components located within the Coastal Zone Offshore intake and discharge components requiring federal approval
State Water Resources Control Board (SWRCB) - Regional Water Quality Control Board - Central Coast Region (RWQCB-CCR)	Issue NPDES Permit and Water Quality Certification (Clean Water Act Section 401)	Waste effluent discharge would require either a new or modified permit

Responsible Agency	Permit, Approval or Review	Potentially Applicable To
STATE (Continued)		
State Lands Commission	CEQA review and Land Lease for Area Below Mean High Tidal Line ³	Any offshore project component not on granted tidelands
California Occupational Safety and Health Administration (CalOSHA)	Issue Trenching and Excavation Permit	Any portion of project greater than five feet deep
California Department of Transportation (Caltrans)	Issue Transportation Permit	Transport of oversized loads
California Department of Transportation (Caltrans)	Issue Encroachment Permit	Any component of the project that encroaches on State highway rights-of-way
California Department of Fish and Game (CDFG)	CEQA Review, Review of Draft NPDES Permit, 1601 Permit not anticipated	Activities that would "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake ..."
California Environmental Protection Agency (Cal-EPA)	Review of Draft NPDES Permit	Cal-EPA is responsible for streamlining and coordinating the State's Environmental Programs
California Department of Parks and Recreation	Issue Special Use Permit, Land Lease for Pipelines	Any component of the project that encroaches on State Park land.
Department of Health Services, Office of Drinking Water	Amended Domestic Water Permit Comply with Surface Water Treatment Rule	Required to assess quality of delivered water, proposed treatment facilities, etc.
LOCAL		
Cambria Community Services District, Board of Directors	California Environmental Quality Act (CEQA) Compliance - EIR	Final EIR Certification
County of San Luis Obispo, Building & Planning Department	Issue Coastal Development Permit (assessment of consistency with Local Coastal Plan)	Onshore project components (decision appealable to California Coastal Commission)
County of San Luis Obispo, Building Department	Building and Grading Permits	Desalination Plant, site preparation, pipeline installation
County of San Luis Obispo, Public Works Department	Public Works Permits	Any facilities or improvements within the public right-of-way
San Luis Obispo County Department of Health	Hazardous Material Business Plan (AB2185, et all)	Hazardous and possibly acutely hazardous materials stored on-site at desalination plant and/or pump station/chemical treatment area

- 1 Other Federal Agencies which may provide comments to Army Corps of Engineers (ACOE) include US Fish and Wildlife Service, US Coast Guard, and NOAA-National Marine Fisheries Service.
- 2 The Coastal Commission can waive a Consistency Determination when a Coastal Development Permit is also required.
- 3 The State Lands Commission typically consults with the State Historic Preservation Officer (SHPO) regarding potential impacts to cultural resources (e.g., shipwrecks) in State waters. This review/consultation would occur as a part of the CEQA compliance process as well.