



8. Inventory of Mitigation Measures

8. INVENTORY OF MITIGATION MEASURES

GEOLOGY, SOILS AND SEISMICITY

Soils - Desalination Plant and Transmission Facilities

- #1. All grading shall be carried out under the guidelines set forth in Chapter 70 of the Uniform Building Code, 1991 Edition.
- #2. According to Section 23.05.036 of the County Coastal Zone Land Use Ordinance, if project construction occurs during the period of October 15 through April 15, a Sedimentation and Erosion Control Plan shall be prepared and approved by the County Engineer.
- #3. In accordance with Section 23.05.036(d) of the County Coastal Zone Land Use Ordinance, the control of sedimentation and erosion shall include but is not limited to the following methods:
 - A) Slope Surface Stabilization:
 - Temporary mulching, seeding or other suitable stabilization measures approved by the County Engineer shall be used to protect exposed erodible areas during the construction period.
 - Earth or paved interceptors (berms) and diversions (sand bags) shall be installed at the top of cut or fill slopes where there is a potential for erosive surface runoff.
 - B) Erosion and sedimentation control devices: In order to prevent polluting sedimentation discharges, erosion and sediment control devices shall be installed as required by the County Engineer for all grading and filling. Control devices and measures that may be required include, but are not limited to energy absorbing structures or devices to reduce the velocity of runoff water.
 - C) Final Erosion Control Measures: Within 30 days after completion of grading, all surfaces disturbed by vegetation removal, grading, haul roads, and/or other construction activity that alters natural vegetative cover, are to be revegetated

to control erosion, unless covered with impervious or other improved surfaces authorized by approved plans. Erosion controls may include any combination of mechanical or vegetative measures.

- #4. The design of project facilities shall accommodate soil limitations including, but not limited to, shrink-swell potential.

Geology - Transmission Facilities

Bluff Stability

The control of sedimentation and erosion through the implementation of controls discussed in Mitigation Measure #3 will reduce potential impacts to bluff stability.

- #5. Pursuant to Section 23.04.118 of the Coastal Zone Land Use Ordinance, San Luis Obispo General Plan, revised November 2, 1993, the vertical caisson associated with the seawater intake system shall be set back a minimum of 50 feet from the edge of the bluff top.

Seismicity - Desalination Plant and Transmission Facilities

- #6. Due to the potential for ground shaking in a seismic event, the proposed project components shall comply with the standards set forth in the Uniform Building Code (UBC, 1991 Edition) to assure seismic safety to the satisfaction of the CCSD.

HYDROLOGY, DRAINAGE AND GROUNDWATER

Hydrology - Desalination Plant and Transmission Facilities

Due to the fact that the transmission facilities will be located within the existing fill material traversing Van Gordon Creek and will not modify the geometry of Van Gordon Creek no mitigation measures are recommended.

Drainage - Desalination Plant and Transmission Facilities

- #7. Sedimentation and erosion control measures shall be implemented during project construction in accordance with Section 23.05.036(d) of the County Coastal Zone

Land Use Ordinance. These measures include slope surface stabilization and erosion and sedimentation control devices.

- #8. If project construction occurs during the period from October 15 through April 15, a Sedimentation and Erosion Control Plan shall be prepared in accordance with Section 23.05.036 of the County Coastal Zone Lane Use Ordinance.
- #9. Prior to ~~issuance of building permits~~ **construction**, the CCSD shall submit to the County Engineering Department for review and approval a drainage plan showing the collection and control of all waters developed from the proposed Desalination Plant and transmission facilities.

Groundwater - Desalination Plant

Due to the fact that the CCSD would be required to adhere to applicable waste discharge permit procedures, mitigation measures are not recommended.

TERRESTRIAL BIOLOGICAL RESOURCES

Desalination Plant

- #10. The District shall install landscaping consisting of non-invasive ornamental trees and shrubs consistent with the area for the Desalination Plant site. These species should be similar to those found in adjacent communities in order to blend the site into the natural surroundings.
- #11. Prior to construction, a biologist shall determine whether the American badger is present on the Desalination Plant construction site. If an active burrow is found within the construction zone, in coordination with the California Department of Fish and Game, the burrow shall be excavated by hand during grading activities to ensure that no American badgers are buried or otherwise harmed by construction equipment. If an American badger is found, it should be allowed to escape to other tunnels it is likely to have outside the disturbance area.
- #12. Prior to construction, a qualified wildlife biologist shall search the Desalination Plant site and construction area for red-legged frogs and southwestern pond turtles to confirm that no individuals of these species occur on the site. If any individuals of these species are found they will be relocated to nearby habitat.

Transmission Facilities

- #13. Pipeline alignments which follow existing roadways shall be installed so as to deviate as little as possible from the road right-of-way. This will minimize the amount of adverse impacts on biotic resources of the area.
- #14. Soil removed for excavation of the pipeline alignments shall be replaced at the same location. Excavation operation shall adhere to County construction standards and specifications.
- #15. Any graded areas within or immediately adjacent to riparian areas shall be landscaped as soon after construction as feasible with appropriate native species. This activity will lessen the potential for erosion and siltation problems to occur. Grading and construction activities shall be carried out in such a manner that sediments and debris does not enter Van Gordon Creek.
- #16. If compact cobwebby thistle is removed as a result of the proposed project, the species shall be reestablished, in accordance with a standard mitigation plan measures to be prepared by CCSD determined by a qualified Botanist, in coordination with the CCSD and San Luis Obispo County, which is to include revegetation sites and ratios.

MARINE RESOURCES

Short-term Construction

- #17. A pre-construction marine biological survey was will be conducted to map the distribution and abundance of soft bottom, hard bottom and kelp beds and subtidal surfgrass habitat in the project area during early autumn (October, 1994). Habitats were will be mapped by using side-scan sonar methods, and ground-truthed by diver observations. Results of the investigations are provided in Appendix F (F-3 and F-4). The survey will provide a pre-construction quantitative assessment of the density distribution and size category of kelp plants and qualitatively assess the dominant marine life in the area (plants, invertebrates, fishes, seabirds and marine mammals). Observations will be were conducted along pre-determined transects and within established quadrants in the sand channel and kelp beds immediately up-coast and down-coast of the proposed discharge pipeline, and at selected up-coast and down-coast control areas. The number, size, morphology, and general state of health of

kelp ~~will be~~ ~~were~~ described, measured, and photographed during the pre-construction survey.

The results of the mapping survey will allow the location of the intake and outfall facility to be placed in areas where environmental impacts can be minimized. A Marine Biological Impact Reduction Plan (MBIRP) ~~will be prepared to describe the~~ ~~is presented in Appendix F-1 that describes~~ methods which the District will take to avoid, reduce and mitigate impacts to the marine environment during the construction and operation of the desalination facility. The MBIRP ~~will~~ ~~addresses~~ the following items:

1. ~~Beach~~ and Nearshore construction methods and schedules.
2. Construction equipment to be used ~~on the beach~~ and in the nearshore waters.
3. Locations of rocky intertidal areas, subtidal reefs and kelp beds.
4. Construction methods to avoid and minimize impacts to ~~intertidal and~~ subtidal resources (reefs, kelp beds and sea otters).
5. Construction period monitoring activities and reporting.
6. Pre-construction and post-construction monitoring survey plans and results of pre-construction field survey.
7. Restoration and compensation for losses if impacts to ~~rocky intertidal~~, kelp beds or reefs occur during construction.
8. Operational overview of the desalination facility.
9. Actions to be taken if salinity levels exceed the concentrations projected by the plume model.
10. Actions to be taken if monitoring data indicates a violation of the NPDES Permit.

The survey report and the MBIRP ~~will be~~ ~~are~~ included in the Final EIR document.

- #18. ~~A~~ Post-construction marine biological surveys will be conducted in ~~September~~ the ~~early fall period~~ for a ~~minimum~~ two years following construction to determine, if any, the amount of habitat disturbance and long-term impacts to marine flora and fauna as a result of construction activities. The post-construction survey will duplicate the diver observation program performed for the pre-construction survey. ~~plus any additional monitoring required by the NPDES Permit.~~ Salinity and turbidity monitoring will also be conducted along pre-determined transects using cable mounted sensors from a boat. Any loss of sensitive habitat (kelp beds and reefs) will be mitigated according to the recommendations provided in the MBIRP.
- #19. Pre-Construction current meter surveys ~~will be~~ ~~were~~ conducted to provide oceanographic information on local bottom current direction and velocities, and wave heights and periods. These data ~~will be~~ ~~were~~ collected over a three-month period between September and November, 1994. Data ~~will be~~ ~~was~~ collected with a single electromagnetic current meter on a fixed sea floor installation. Additionally, water column profile data ~~will be~~ ~~was~~ collected using an internally recording CTD (conductivity-temperature-depth) meter. ~~Ten to 12 profiles will be~~ ~~were~~ collected during ~~each of three~~ site visits to install the current meter, retrieve data, and to retrieve the current meter at the end of the three-month period. ~~The results of this survey are presented in Appendix F-2.~~
- #20. Dredging operations shall be conducted so that the turbidity levels meet State of California NPDES discharge requirements. Recommendations to reduce turbidity ~~will be~~ ~~are~~ included in the MBIRP (Appendix F-1).
- #21. Anchoring positions should not impinge upon kelp bed or reef habitat. In the event that these habitats are impacted, then the loss of habitat will be mitigated through methods identified in the MBIRP (Appendix F-1).
- #22. Work vessels shall transit through open-water habitat, and avoid kelp bed canopy whenever feasible.
- #23. Oil spill contingency plans shall be developed, and oil-spill response equipment shall be kept on site in the event of a spill of oil products from the work vessels.

Long-term Operations

#24. Laboratory and field monitoring shall be conducted in association with the operation of the Desalination Plant. Although *no significant* adverse impacts have been identified for resource groups, it will be important to insure that the beneficial uses of the receiving waters are protected for marine resources. The NPDES Permit Monitoring Requirements shall establish a long-term monitoring and testing program to verify beneficial uses are maintained. As a State agency empowered to protect water quality, following the Regional Water Quality Control Board's Monitoring Program shall insure no significant impacts to marine resources will occur. Therefore, the monitoring program and requirements developed during NPDES permitting process shall serve as the mitigation program for the long-term operation of the plant.

The following items are examples of monitoring programs imposed by the Regional Water Quality Control Board in other areas of the State. The long-term mitigation programs will include the following:

- There is a low potential for the desalination effluent plume to impinge on reef and kelp bed biological communities based upon preliminary far-field analysis of the discharge brine (Appendix B). While the magnitude and the potential environmental effects are believed to be less than significant, salinity monitoring field studies are the preferred method to verify or reject this hypothesis and will provide a warning that reefs and kelp beds may be affected.
- If the salinity or turbidity testing determines that the sensitive habitats are being impinged upon as identified in the pre-construction or post-construction surveys, both the reef and kelp bed habitats will be monitored by biologists according to procedures set forth in the MBIRP over summer to autumn periods for two years to determine if the species composition, abundance, and richness of the community is affected by the discharge of the desalination brine effluent. Similar observations will be conducted in the vicinity of the outfall pipe. The communities shall also be documented with the use of underwater video and/or underwater photo techniques.
- Benthic biological, sediment physical and/or chemical sampling be initiated as part of the California Regional Water Quality Control Board, Central

Coast Region Monitoring and Reporting Program for the operation of the Desalination Plant.

- As NPDES toxicity standards are developed by the RWOCB for the discharge of desalination brine for the Cambria facility should incorporate the results of these chronic effects bioassays providing the data reflects the marine resource conditions in the vicinity of the Cambria ocean outfall.

CULTURAL RESOURCES

- #25. Archaeological monitoring shall be conducted during Phase I of construction in archaeologically sensitive areas. Monitoring shall be conducted by a qualified archaeologist familiar with Chumash and San Luis Obispo County Prehistory and Archaeology. ~~certified archaeologist and include the involvement of members of the local Chumash community.~~ In the event that any buried archaeological materials, historic features, ovens or human remains are unearthed during construction, activity in the vicinity of the resource shall cease until they are evaluated and appropriate recommendations are made by the ~~certified~~ archaeologist and carried out for preservation of the site(s).
- #26. The final route shall be selected by carefully monitoring the vegetation and fill removal along the route tested. Should any concentrations of cultural materials be noted, construction shall be temporarily stopped and the corridor redesigned to the east or west to avoid materials.
- #27. A Data Recovery Program consisting of excavation of the upper 150 cm of soil (5 feet) within the caisson shall occur prior to drilling activities. Excavation activities shall be monitored by a qualified archaeologist familiar with Chumash and San Luis Obispo County Prehistory and Archaeology. ~~certified archaeologist.~~ A research design shall involve determining the antiquity, range of cultural activities, relationship to other parts of the site (SLO-383) and the vertical and horizontal patterning of cultural materials.
- #28. Road design shall be reviewed and approved by the project archaeologist to minimize impacts to cultural materials.
- #29. Should a retaining wall be required along the access road, a Data Recovery Program shall be developed, implemented and monitored by a qualified archaeologist familiar

with Chumash and San Luis Obispo County Prehistory and Archaeology certified archaeologist prior to grading permit issuance.

LAND USE AND RELEVANT PLANNING

Land Use - Desalination Plant and Transmission Facilities

As significant land use compatibility impacts would not occur, mitigation measures are not recommended. For mitigation measures relating to short- and long-term impacts for air quality, noise, recreation, aesthetics/light and glare, and transportation, please refer to the respective sections of this document.

Relevant Planning Policies

The CCSD would be required to adhere to applicable permit procedures and policies as identified above and in Section 3.5, AGREEMENTS, PERMITS, AND APPROVALS. Adherence to these policies and conditions identified during the permit process would reduce impacts to a less than significant level.

AESTHETICS/LIGHT AND GLARE

Short-Term Construction - Desalination Plant

#30. During grading operations, a representative from the CCSD shall monitor the construction area to ensure that construction equipment is kept within the established boundary of the construction area.

Short-Term Construction - Transmission Facilities

#31. Construction staging and storage areas shall be delineated on construction plans, and where possible, located in limited visibility areas on CCSD property.

Long-Term Operations - Desalination Plant

#32. Prior to grading activities, a detailed landscaping plan shall be developed by the CCSD for the Desalination Plant site. Non-invasive ornamental trees and shrubs consistent with the area shall be planted along the site's perimeter in order to soften visual impacts of parking and facility operation areas.

#33. The proposed structures shall be of a color and architectural style similar to rural structures.

#34. In accordance with Section 23.040.320 of the Coastal Land Use Ordinance, outdoor lighting shall be arranged so as not to direct light onto any street or abutting property. Low intensity light fixtures shall be designed and adjusted to direct light away from any road or street, campground area, ~~creeks~~, trail and/or dwelling outside the ownership of the CCSD.

Long-Term Operations - Transmission Facilities

#35. Mechanical and electrical control facilities for the pumps in the caisson, located on the bluff top, shall be installed near or below ground level.

NOISE

Short-Term Construction - Desalination Plant and Transmission Facilities

#36. ~~Prior to the issuance of grading permits~~ ~~construction~~, the contractors shall produce evidence acceptable to the CCSD, that:

- a. All construction vehicles or equipment, fixed or mobile, operated within 1,000 feet of a sensitive noise receptor shall be equipped with properly operating and maintained mufflers.
- b. ~~On-shore~~ construction hours shall be limited from 7 ~~8~~ a.m. to 7 p.m., Monday through Friday and shall not occur on weekends or holidays.
- c. All operations shall comply with applicable County Noise Standards.
- d. Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings and the State Park.

Notations in the above format, appropriately numbered and included with other notations on the front sheet of grading plans, will be considered as adequate evidence of compliance with this condition.

Long-Term Operations - Desalination Plant and Transmission Facilities

- #37. Internal Noise monitoring should be conducted during facility operation to evaluate actual operational noise levels, and determine mitigation required to comply with County thresholds and Cal OSHA regulations. Should interior noise levels be found to exceed Cal OSHA thresholds, a hearing conservation program for exposed facility workers should be developed and implemented per Cal OSHA requirements.
- #38. The containment structure and noise attenuation equipment associated with the project shall be designed and operated so that noise levels at the nearest property line shall not exceed the noise levels specified in the Noise Element of the County General Plan.

AIR QUALITY

Short-Term Construction

PM-10. Although no mitigation measures are required, the following APCD measures should be considered to further reduce the potential for construction impacts:

- #39. a. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (nonpotable) water should be used whenever possible.
- b. All dirt stock-pile areas should be sprayed daily as needed.
- c. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
- d. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast-germinating native grass seed and watered until vegetation is established.
- e. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute nettings, or other methods approved in advance by the APCD.

- f. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- g. Vehicle speed for all construction vehicles shall not exceed 25 mph on any unpaved surface at the construction site.

Long-term Operational Emissions

- #40. Use of catalytic converter with natural gas engines will significantly reduce NO_x emissions (a BACT measure).
- #41. The CCSD will consider additional RACT and BACT measures where feasible, including:
 - a. Use of Caterpillar pre-chamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of oxides of nitrogen (NO_x).
 - b. Injection timing retard of 2 degrees.
 - c. Electrify equipment where feasible.
 - d. Installation of high pressure injectors.
 - e. Maintain equipment in tune per manufacturer's specifications, except as otherwise required above.

Motor Vehicle Emissions

As significant impacts would not occur, no mitigation measures are recommended.

Consistency with Regional Plans and Policies

As significant impacts would not occur, no mitigation measures are recommended.

HUMAN HEALTH/RISK OF UPSET

Human Health

The CCSD would be required to adhere to applicable permit procedures and regulations identified above. Adherence to these conditions identified during the permit process would reduce impacts to a less than significant level, thus mitigation measures are not recommended.

TRANSPORTATION AND UTILITIES

Traffic - Short-Term Construction

- #42. Project construction along San Simeon Creek Road and beneath Highway 1 shall be prohibited on weekends and holidays recognized by the County of San Luis Obispo.
- #43. Construction-related impacts along San Simeon Creek Road and near Highway 1 (including prior to and during pipeline installation) shall be minimized by the placement of proper detour and directional signs. The San Simeon State Park access point shall be properly signed and bicyclists, pedestrians and vehicles directed by a flagman during truck/equipment travel in the vicinity. The location and size of the signs shall be approved by the County of San Luis Obispo and/or Caltrans CCSD prior to construction. This measure is subject to periodic field inspections by the County Engineer and daily compliance by the Construction Manager. At least one lane for traffic flow access along San Simeon Creek Road and Lone Palm Drive shall be maintained at all times. Complete access along Highway 1 shall be maintained at all times during project construction.
- #44. The limits of construction shall be clearly marked as would construction vehicle storage areas and vehicle turn-arounds. The Construction Manager shall ensure the daily compliance with this measure.

Traffic - Long-Term Operations

As significant impacts would not occur, mitigation measures are not recommended.

Utilities

Electrical Service

As significant impacts would not occur, mitigation measures are not recommended.

Gas Service

As significant impacts would not occur, mitigation measures are not recommended.

PUBLIC SERVICES

Fire

#45. The proposed Desalination Plant shall comply with the Uniform Fire Code (1991) edition where applicable. Specific areas of the UFC that apply to the proposed project include, Hazardous Materials, Fire Safety During Construction, Fire Extinguishing System, Fire Alarm System and Potable Fire Extinguisher.

#46. The proposed Desalination Plant shall comply with Public Resource Code 4290 and 4291 regarding Building Setbacks and Vegetation Clearance.

Parks and Recreation

For mitigation measures relating to short- and long-term impacts for air quality, noise, aesthetics/light and glare, and transportation, please refer to the respective sections of this document.

Police

#47. Prior to issuance of a building permit ~~construction~~, the applicant shall submit an Access Plan to the San Luis Obispo County Sheriff's Office Crime Prevention Unit. ~~Approval~~ Acceptance of the Access Plan shall indicate compliance with this measure.

Solid Waste

- #48. In order to reduce the amount of waste accumulated during the construction phase, recycling of appropriate materials shall occur to the satisfaction of the construction manager.