



6.0 Alternatives to the Proposed Project



6.0 ALTERNATIVES TO THE PROPOSED PROJECT

The *Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives* (Kennedy/Jenks Consultants, March 2004) analyzed water supply needs for build-out scenarios of 4,650, 5,250, 5,700, and 6,700 existing and future residential dwelling units. Following a July 24, 2003 presentation of earlier draft report materials, the CCSD Board passed a motion calling for an analysis of 4,650 existing and future residential connections, with an allowance for up to 1,800 cubic feet (cf) per bi-monthly billing period per residential connection. Based on this earlier Board direction, as well as earlier modeling of the basin supply by Kennedy/Jenks Consultants,¹ the volume of supplemental water needed by the CCSD during the dry season was determined to be approximately 602 acre feet (AF). This value is based on a total summer season demand of 888 AF with 286 AF being provided from the San Simeon aquifer. The 286 AF per summer dry season supply was a conservatively low value from the earlier *Baseline Water Supply Analysis* (Kennedy-Jenks Consultants, December 8, 2000), and assumed no water was available from the Santa Rosa aquifer during a critically dry period.²

A preliminary analysis was performed to consider the reliability, barriers to implementation, costs, and advantages of a variety of potential new water sources. Potential water supply alternatives were compiled from discussions with CCSD staff, as well as a collection of studies conducted over the last twenty years identifying and evaluating potential sources of additional potable water for CCSD. Sources of future supply addressed in the Task 4 Report include seawater desalination, local and imported surface water, groundwater, hard rock drilling, recycled water, and seasonal storage. Two types of seasonal storage options were investigated: those that would be used for groundwater recharge and those that would involve direct use. The following alternatives were evaluated during this preliminary analysis phase:

Potential Water Supply Alternatives

- ◆ Seawater Desalination;
- ◆ Surface Water from Lake Nacimiento;
- ◆ Whale Rock Exchange;
- ◆ Additional Santa Rosa Creek Groundwater Wells;
- ◆ Arroyo De La Cruz Groundwater Wells;
- ◆ Hard Rock Drilling;
- ◆ Recycled Water;
- ◆ Water Demand Management;
- ◆ Basin Management;

Seasonal Storage and Conjunctive Use Alternatives

Seasonal Storage for Groundwater Recharge

- ◆ Cambria Meadows Alternative;
- ◆ San Simeon Dam and Reservoir;
 - Upper San Simeon Site (San Simeon Creek Dam-1);
 - Van Gordon Site (San Simeon Creek Dam-2);

¹ Kennedy-Jenks Consultants, *Baseline Water Supply Analysis*, December 8, 2000.

² Based on its existing SWRCB diversion permits, the CCSD is limited to 370 AF from the San Simeon aquifer and 260 AF from the Santa Rosa Aquifer during the dry season.



- State-Proposed Site (San Simeon Creek Dam-3);
- ◆ Steiner Creek Dam;
 - Lower Steiner Creek – A;
 - Lower Steiner Creek – B;
 - Upper Steiner Creek;
 - San Simeon Basin Option;
- ◆ Stonebrook Ranch Dam;
- ◆ Jack Creek Dam;
- ◆ Subterranean Dam in the San Simeon Basin;

Seasonal Storage for Direct Use

- ◆ Santa Rosa Creek Dam;
- ◆ Perry Creek Dam;

Potential Conjunctive Use Opportunities

- ◆ Hard Rock Drilling/Groundwater Storage;
- ◆ Seasonal Storage of Recycled Water; and
- ◆ Centralized Water Softening at the Proposed Seawater Desalination facility.

Several of these potential new water supply alternatives were eliminated based upon a qualitative screening level analysis due to the following factors, among others:

- ◆ Difficulty in negotiations for water rights transfer, obtaining right-of-way;
- ◆ Potentially significant environmental impacts;
- ◆ Potential habitat needs;
- ◆ Lengthy/costly adjudication process
- ◆ Lengthy legal process;
- ◆ Significant level of uncertainties;
- ◆ Potential costs;
- ◆ Controversy from community;
- ◆ Significant health risks; and
- ◆ Public opposition.

The alternatives recommended for further evaluation and cost development included the following:

- ◆ Seawater Desalination;
- ◆ Nacimiento Water Supply;
- ◆ Whale Rock Exchange;
- ◆ Hard Rock Drilling;
- ◆ Recycled Water;
- ◆ Demand Management;
- ◆ San Simeon Dam and Reservoir - Van Gordon Site; and
- ◆ Jack Creek Dam and Reservoir.

The long-term water supply alternatives recommended for further detailed study were evaluated according to the following criteria:



- ◆ Water Supply Capabilities. Ranked from < 600 acre feet per year (AFY) to 1,000 AFY;
- ◆ Water Quality.³ Ranked from Very Poor to Excellent;
- ◆ Reliability. Ranked from None to More Than Sufficient;
- ◆ Required Agreements/Institutional Issues. Ranked from Very Difficult to None Required;
- ◆ Environmental Issues. Ranked from Significant to None;
- ◆ Permitting/CEQA. Ranked from Very Difficult to None Required;
- ◆ Cost. Ranked as a combination of annual and variable costs from Above Average to Below Average; and
- ◆ Funding. Ranked from None to Fully Funded.

Table 6-1 (*Evaluation Matrix for Potential Water Supply Alternatives*) presents the evaluation of each of the alternatives recommended for further study, based on the assumption that each criterion has equal weight. Alternatives with a score of 2.9 or higher were considered viable options for CCSD. Based on the evaluation and identified goals, it was recommended that CCSD continue Water Demand Management, incorporate Recycled Water to reduce potable water demand, and implement Seawater Desalination as a supplemental source during critically dry years. These recommended water supply alternatives became the basic elements of the Water Master Plan (WMP) and the Project Description for this EIR.

In accordance with *CEQA Guidelines* Section 15126.6, the following discussion describes a range of reasonable Alternatives to the proposed Project, which could feasibly attain most of the basic objectives of the proposed Project but would avoid or substantially lessen significant effects of the proposed Project. The following discussion addresses the water supply alternatives that were recommended for further evaluation, but were not included as recommended elements of CCSD's long-term water supply strategy (i.e., Water Master Plan). Additionally, a "No Project" Alternative is studied.

Throughout the following analysis, impacts of the alternatives are analyzed for each of the issue areas examined in Section 5.0 of this EIR. In this manner, each alternative can be compared to the proposed Project on an issue-by-issue basis. The evaluation considers the comparative merits of each Alternative. The analysis focuses on Alternatives capable of eliminating significant environmental effects or reducing them to less than significant levels, even if these Alternatives would impede, to some degree, the attainment of the Project objectives.

6.1 "NO PROJECT" ALTERNATIVE

The No Project/No Development Alternative assumes that CCSD's existing water distribution, storage, and treatment facilities would remain in their current condition. With this Alternative, the proposed Water Master Plan (WMP) would not be adopted. CCSD's long-term water supply strategy, which consists of potable and recycled water distribution system improvements, water demand management, and seawater desalination (i.e., the proposed WMP elements) would not be adopted.

As discussed in Section 3.0 (Project Description), CCSD's water supply could be exhausted during an extended drought, due to the lack of sufficient recharge during the drought periods and the influx of summer tourists. Analysis determined that "the current groundwater supply was marginal to inadequate to provide a 90 percent level of reliability for water demand in the

³ Based on source water quality and the relative difficulty in subsequent treatment.



**Table 6-1
Evaluation Matrix for Potential Water Supply Alternatives**

Alternatives	Supply Capabilities	Water Quality	Reliability	Required Agreements	Environmental Issues	Permitting/ CEQA	Cost Combination	Funding Availability	Total
Weight Factor	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	1
Seawater Desalination									
RO-300 gpm	2	1 ²	5	2	3	2	4	4	2.9
RO-600 gpm ¹	4	1 ²	5	2	3	2	3	4	3.0
RO-900 gpm	5	1 ²	5	2	3	2	3	3	3.0
NFRO-300 gpm	2	1 ²	5	2	3	2	3	3	2.6
NFRO-600 gpm	4	1 ²	5	2	3	2	1	3	2.6
Lake Nacimiento									
Town Creek-1 ps, vt pumps	5	4	2	2	2	3	2	1	2.6
Franklin Creek-1 ps, vt pumps	5	4	2	2	2	3	2	1	2.6
Town Creek-3 ps, pd pumps	5	4	2	2	2	3	2	1	2.6
Franklin Creek-3 ps, pd pumps	5	4	2	2	2	3	2	1	2.6
Whale Rock Exchange									
700 AFY	5	3	2	1	3	4	4	1	2.9
1,000 AFY	5	3	2	1	3	4	1	1	2.5
Hard Rock Drilling									
Hard Rock Drilling	2	3	4	3	1	3	4	1	2.6
Recycled Water ¹	1	1	5	4	3	3	5	3	3.1
Demand Management ¹	1	5	2	3	5	5	5	4	3.8
San Simeon Dam-Van Gordon	4	2	1	2	2	3	5	2	2.6
Jack Creek Dam	5	2	2	1	1	3	5	2	2.6
Definition of Rank 1:									
Definition of Rank 1:	<250 AFY	Very Poor	Not Reliable	Very Difficult	Significant	Very Difficult	Above Average	None Available	Poor
Definition of Rank 5:									
Definition of Rank 5:	>550 AFY	Excellent	Very Reliable	None Needed	None	None Needed	Below Average	Fully Funded	Excellent
AFY = acre-feet per year ps = pump station pd = positive displacement gpm = gallons per minute vt = vertical turbine									
Notes: (1) Recommended Project component. (2) The poor water quality rating for seawater desalination was questioned during the July 15, 2004 Public Scoping meeting. This is because the poor water quality designation is based on the source water, which was used for comparison purposes. Following treatment, desalinated water would have an excellent ranking due its lower hardness and total dissolved solids (TDS) concentration when compared to existing groundwater sources. An excellent water quality ranking would increase the total score by 0.5 for each of the seawater desalination alternatives shown. A lower TDS concentration in the potable water supply would also improve the quality of recycled water. Therefore, with a desalinated seawater potable supply, the water quality shown for recycled water would likely increase from a 1 ranking to either a 2 or 3 ranking.									
Source: Kennedy/Jenks Consultants, <i>Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives</i> , Table 8-37 (Evaluation Matrix For Potential Water Supply Alternatives), March 2004.									



year 1999 (3,796 connections).” Additionally, the County’s Annual Resource Summary Report recommended a Level of Severity III for both the CCSD’s water supply and water distribution system. The Level III alert level regarding water supply is indicative of a condition when the existing water demand meets or exceeds the dependable supply. The Level III alert level regarding the water distribution system is indicative of a condition when the water delivery system reaches its design capacity. Although the water distribution system is capable of meeting its past design capacity, the CCSD has subsequently established fire flow and associated fire storage requirements that exceed the earlier system design criteria. Therefore, improvements to the distribution system and associated tank storage are necessary in order to allow for an increased fire flow. From a comparison of CCSD’s available supply and projected demand, the long-term supplemental dry season water requirement is between 602 and 994 acre feet per year (AFY), including a 50 percent quality of life increase over existing consumption.

With this Alternative, it is assumed none of the WMP’s proposed improvements would be implemented. The recycled water system would not be improved; therefore, recycled water would not be used to augment potable supplies and a non-potable source of water would not be available for irrigation purposes. The potable water distribution system improvements would not be made; therefore, the identified hydraulic and storage deficiencies would not be alleviated. The water demand management improvements to the current conservation program and regulations, in order to reduce potable water use for landscaping would not be implemented. Seawater desalination would not be implemented.

Overall, the volume of supplemental water needed by the CCSD during the dry season (i.e., 602 AF) would not be supplied. The CCSD’s water shortage emergency and new connection moratorium would remain in effect. Cambria would have to continue to rely primarily on CCSD’s aggressive water conservation program and rate setting as a means for controlling demand.

ENVIRONMENTAL REVIEW

Land Use

No WMP improvements would be constructed; therefore, no discretionary review would be required by San Luis Obispo County (County). As with the proposed Project, this Alternative would result in a less than significant impact regarding consistency with County General Plan (i.e., North Coast Area Plan (NCAP)) and Coastal Zone Land Use Ordinance (CZLUO) policies and standards.

Aesthetics

Grading and construction activities associated with the proposed WMP improvements would not occur; therefore, the existing visual character/quality of the construction sites and their surroundings would not be temporarily altered. Long-term alterations to the visual character/quality of the sites and their surroundings would not occur, since no WMP improvements would be constructed.

The potential for impacts to a scenic vista/resource, including those along Highway 1, would not occur with this Alternative, since no WMP improvements would be implemented. No new sources of light and glare potentially impacting views would be constructed.



Traffic and Circulation

No construction traffic would be generated by this Alternative. Access and circulation at the construction sites would not be temporarily disrupted, since no construction activity would occur. No long-term operational traffic would be generated by this Alternative. Similar to the proposed Project, this Alternative would result in less than significant impacts regarding construction and operational traffic.

Air Quality

Air quality impacts from short-term emissions during site preparation and construction, long-term mobile and area source emissions from Project operations would not occur with this Alternative, since no WMP facilities would be constructed.

Noise

Noise impacts due to grading and construction of the WMP improvements would not occur with this Alternative; therefore, persons would not be exposed to temporary/periodic increases in ambient noise levels. Additionally, operations and maintenance activities associated with the proposed WMP improvements would not occur; therefore, persons would not be exposed to permanent increases in ambient noise levels.

Biological Resources

It is assumed the proposed WMP improvements would not be constructed with this Alternative; therefore, no short- or long-term impacts to sensitive plant and wildlife species would occur. Potential impacts to a riparian habitat or other sensitive natural community, wetlands, or other jurisdictional waters of the U.S. would not occur.

With this Alternative, implementation of the proposed WMP improvements would not occur; therefore, potential interferences with established wildlife corridors or conflicts with the provisions of the Cambria Forest Management Plan would not occur. However, without a supplemental source of potable water, less protection of the riparian habitat may also occur, particularly during drought periods. Therefore, the Project's beneficial impacts towards protecting the riparian habitat would not occur under the No Project Alternative.

Cultural Resources

The potential for an adverse change in the significance of an archaeological, historical, or paleontological resource would not occur with this Alternative, since no WMP improvements would be constructed. Similar to the proposed Project, it is not anticipated that unknown locations of human remains would be disturbed with this Alternative.

Geology and Soils

With this Alternative, people/structures would not be exposed to potential risks involving fault rupture, strong seismic ground shaking, ground failure/liquefaction, landslides, or tsunamis, since no WMP improvements would be constructed. Soil erosion/sedimentation impacts from



the proposed WMP improvements would not occur, since no WMP facilities would be constructed.

Hydrology and Water Quality

Grading, excavation, and construction activities associated with the proposed WMP improvements would not occur with this Alternative; therefore, water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas would not occur. With this Alternative, the existing drainage pattern or the rate/amount of surface runoff at the development sites would not be altered, since no WMP facilities would be constructed. No WMP improvements would be constructed with this Alternative; therefore, no long-term impacts to the quality of storm water and urban runoff would occur. The desalination facility would not be constructed with this Alternative; therefore, the quality of ocean water would not be impacted.

No WMP improvements would be constructed with this Alternative; therefore, people/structures would not be exposed to risk involving flooding.

Public Health and Safety

Implementation of the proposed WMP improvements would not occur with this Alternative; therefore, potential hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, or conditions involving accidental release of hazardous materials would not occur.

Similar to the proposed Project, this Alternative would not create a risk to the public from exposure to recycled water, or impair implementation of or physically interfere with the County Local Hazard Mitigation Plan.

Implementation of this Alternative, similar to the proposed Project, would not expose people or structures to a significant risk involving wildland fires. Cambria was identified as one of the County's communities at risk of wildland fires. With this Alternative, the increased availability and reliability of water resulting from the proposed WMP would not occur; therefore, the Project's beneficial impact associated with wildland fires would not occur.

Public Services and Utilities

Similar to the proposed WMP improvements, this Alternative would not directly increase the demand for fire and police protection services, and recreational facilities, or increase student, wastewater, and solid waste generation. The increase in residential connections resulting from the proposed Project would not occur with this Alternative; therefore, increases in the demand for fire and police protection services, and recreational facilities, and increases in student, wastewater, and solid waste generation would not occur.

With this Alternative, the increased availability and reliability of water resulting from the proposed WMP would not occur; therefore, the Project's beneficial impact to fire protection by increasing available fire flows and fire storage would not occur.



The proposed seawater desalination facility would not be constructed; therefore, the temporary construction-related impacts to the State campgrounds and shoreline access would not occur with this Alternative.

Water Resources

The proposed WMP would not be implemented with this Alternative; therefore, the availability of surface and groundwater supplies would not be impacted. Similar to the proposed Project, potable water quality standards would not be violated with this Alternative. Potential impacts associated with groundwater supplies or groundwater recharge would not occur with this Alternative. The WMP's proposed modifications to the existing wastewater treatment plant and construction of a new seawater desalination facility would not occur with this Alternative.

With this Alternative, none of the WMP's proposed improvements would be implemented. The recycled water system would not be improved; therefore, recycled water would not be used to augment potable supplies and a non-potable source of water would not be available for irrigation purposes. The potable water distribution system improvements would not be made; therefore, the identified hydraulic and storage deficiencies would not be alleviated. The water demand management improvements to the current conservation program and regulations, in order to reduce potable water use for landscaping would not be implemented. Seawater desalination would not be implemented; therefore, additional water supplies during extended drought periods and the dry season would not be provided. The CCSD's water shortage emergency and new connection moratorium would remain in effect. Cambria would have to continue to rely primarily on CCSD's aggressive water conservation program and rate setting as a means for controlling demand.

Population, Housing, and Growth

With this Alternative, additional water supplies would not be provided, thus, the existing constraint to development (i.e., insufficient water supply) in Cambria would not be removed. The rate of growth in Cambria would not be affected, since the current moratorium would remain in effect. As with the proposed Project, this Alternative would not result in an unregulated amount of growth. Continued implementation of the existing County and CCSD adopted growth management policies would be required.

ABILITY TO MEET PROJECT OBJECTIVES

With the No Project Alternative, the WMP's objectives for water quantity, quality, and reliability would not be met, since the proposed WMP improvements would not be implemented. The volume of supplemental water needed by the CCSD during the dry season (i.e., 602 AF) would not be supplied. Based on the projected future water demand, this Alternative would not be sufficient to meet total and dry season demands for 4,650 total connections with a 50 percent quality of life increase.

6.2 "SURFACE WATER FROM LAKE NACIMIENTO" ALTERNATIVE

To date, there are at least two basic options for CCSD to obtain Nacimiento water: (1) use of an independent CCSD Nacimiento pipeline; and (2) use of the County's regional Nacimiento



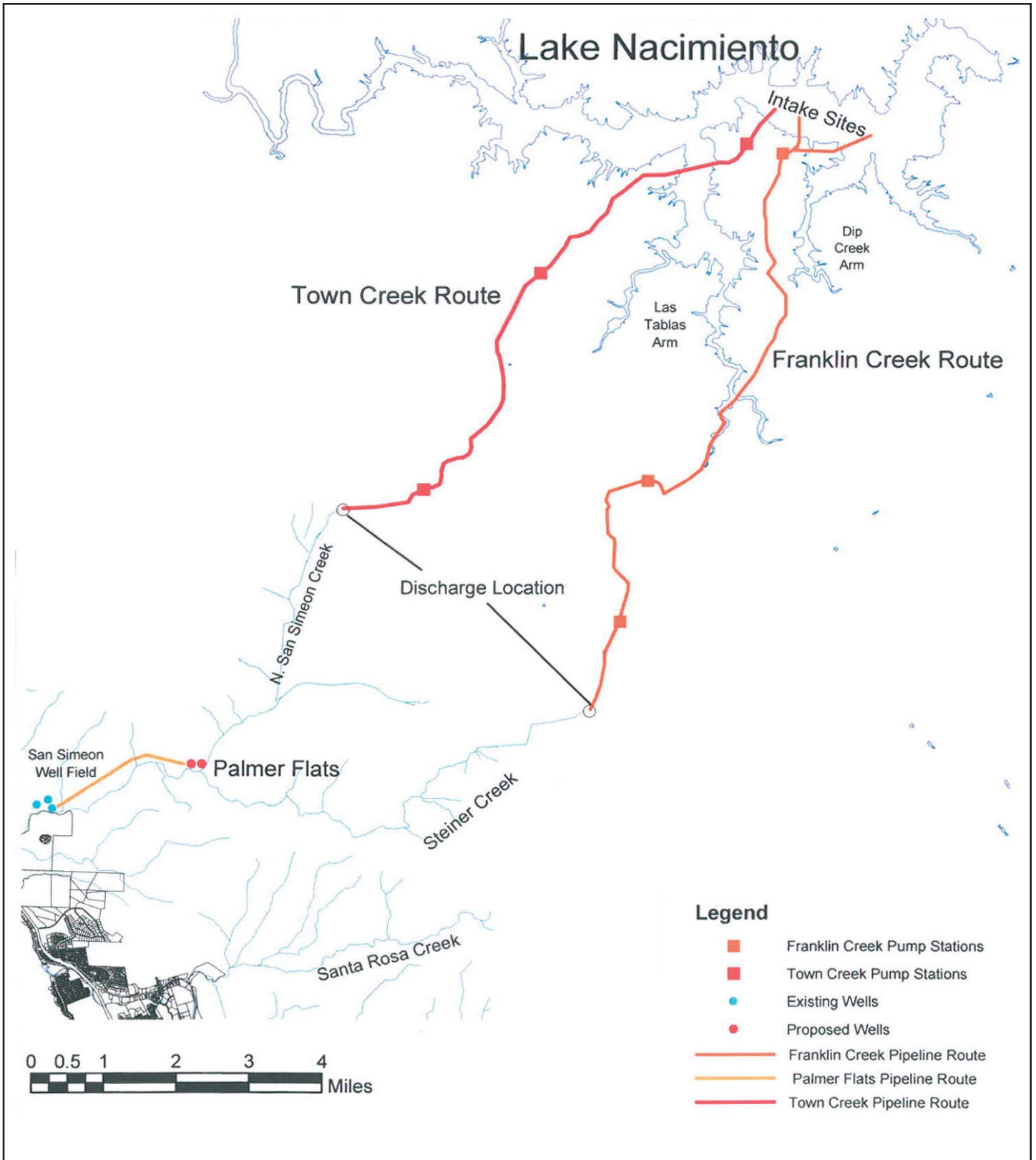
pipeline and an independent CCSD pipeline from the regional system. The first option, the Surface Water From Lake Nacimiento Alternative, is illustrated on Exhibit 6-1 (Surface Water From Lake Nacimiento Alternative) and discussed below. The second option, the Whale Rock Exchange Alternative, is illustrated on Exhibit 6-2 (Whale Rock Exchange Alternative) and discussed in Section 6.3 (Whale Rock Exchange Alternative).

The Surface Water From Lake Nacimiento Alternative would involve the use of surface water from Lake Nacimiento. The surrounding watershed provides the source of water to the lake. Although the Nacimiento Reservoir is located within San Luis Obispo County (County), the dam and reservoir project was completed by Monterey County in 1957 as a means to recharge groundwater basins in the Salinas Valley. The Monterey County Water Resources Agency (MCWRA) controls operation of the reservoir and has annual rights to approximately 180,000 AF of stored water. The County has retained an annual right to approximately 17,500 AF of water within the reservoir. However, outside of the communities adjacent to the reservoir (e.g., Heritage Ranch), little of the 17,500 AF has been used within the County.

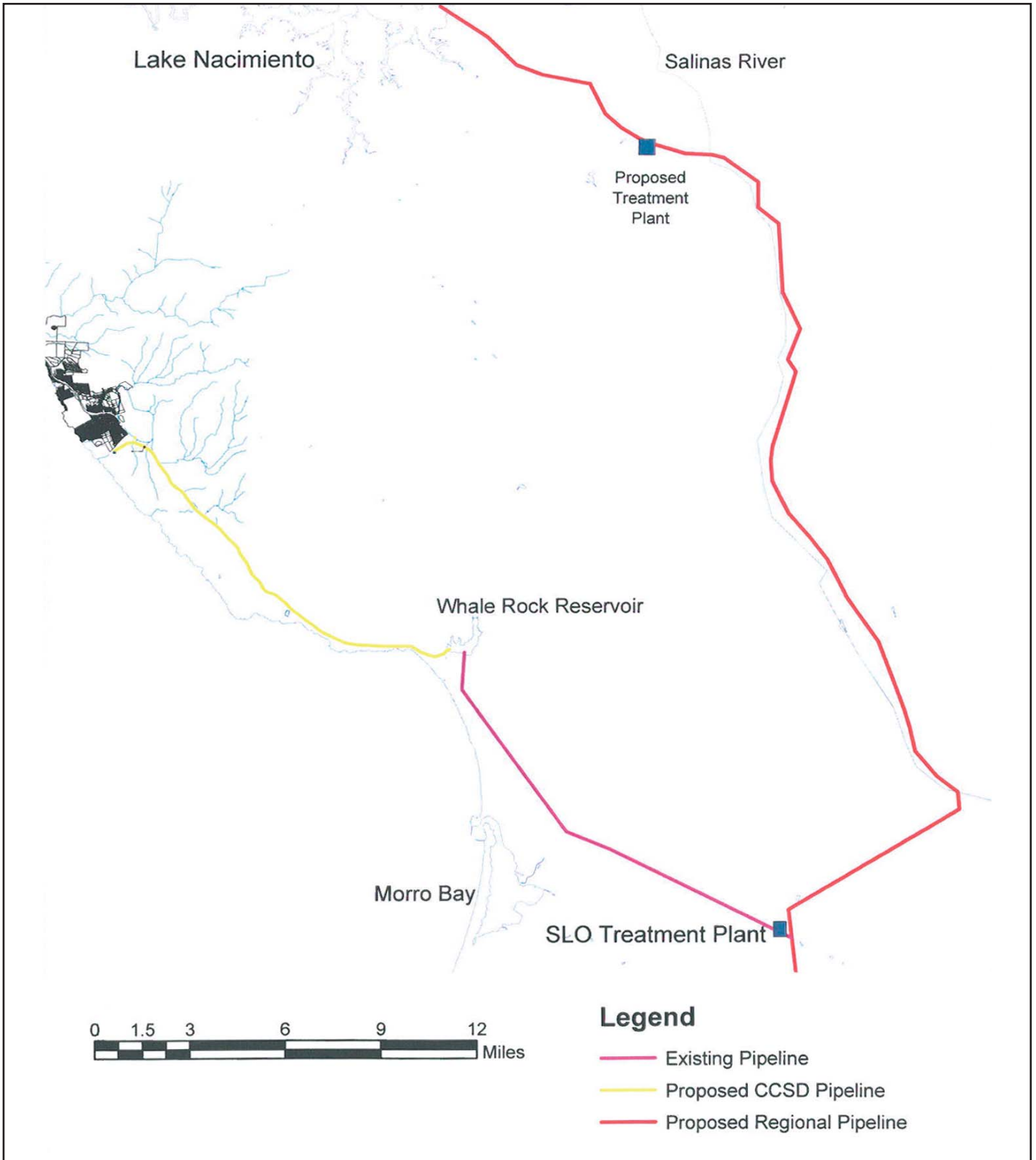
There are two projects in various stages of planning and completion associated with Lake Nacimiento: the Nacimiento Water Project (refer to Section 6.3); and the Salinas Valley Water Project. The Salinas Valley Water Project (SVWP) is proposed to prevent seawater intrusion into the Salinas groundwater basin. Re-operation of the lake and spillway modifications is proposed as part of the SVWP. The Monterey County Water Resources Agency is the lead agency for the SVWP.

The Surface Water From Lake Nacimiento Alternative would involve an independent CCSD Nacimiento pipeline project that would pump water from Lake Nacimiento over the Santa Lucia mountain range. Once over the ridgeline, water would be discharged into one of the drainage basins supplying water to CCSD. Screening of numerous pipeline options resulted in a Town Creek Alignment and a Franklin Creek Alignment; refer to Exhibit 6-1. The Town Creek Alignment discharge would enter the upper reach of San Simeon Creek after being pumped approximately 1,900 feet in elevation from Nacimiento Reservoir. The Franklin Creek Alignment discharge would enter the upper reach of Steiner Creek after being pumped from Nacimiento Reservoir. After discharge to a creek, the water would be pumped from Palmer Flats by two new extraction wells and the proposed Palmer Flats pipeline route, to the production facility at the San Simeon well field, where it would enter the distribution system.

Regardless of which pipeline option or intake location that would be selected, the following facilities would be required at the intake site: HDPE pipe extending to the lake bottom, including some submarine pipeline through the Las Tablas arm; an intake screen; fish screens and strainers with backwash to a small drying bed; a closed 30,000 gallon holding tank; and three booster pump stations. In order to provide vehicular access, new roads leading to the facility would be constructed. The pipeline routes would require eight to ten miles of steel pipe with welded joints and construction of access roads. Energy dissipaters and erosion control facilities would be required at the point of release into the creek. This would involve concrete and riprap. At Palmer Flats, two new extraction wells with 175 horsepower pumps would be required and 2.7 miles of ten-inch PVC pipe would be required to carry the water to the San Simeon well field located downstream. The extracted groundwater would enter the distribution system at this location. An additional well may be required if dewatering of the wastewater percolation pond is necessary to prevent intrusion into the well field.



SOURCE: Kennedy/Jenks Consultants, Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives; March 2004.



SOURCE: Kennedy/Jenks Consultants, Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives; March 2004.



It is noted the re-operation element of the proposed SVWP could lower the Lake Nacimiento reservoir water level further than what had been assumed in the CCSD *Preliminary Analysis, Long Term Water Supply Project, Pre-Final Design – Phase 1 Report* (Penfield and Smith, 1993). Therefore, further evaluation would be necessary in order to assess the impact of the proposed SVWP and intake sites identified for this Alternative.

ENVIRONMENTAL REVIEW

Since this Alternative would replace the desalination facility proposed by the WMP, the potential impacts from this Alternative are compared to the desalination facility. This Alternative assumes the impacts associated with the potable and recycled water distribution Project components would still occur.

Land Use

As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding consistency with land use and planning policies and standards.

Aesthetics

This Alternative involves construction of underground pipelines and small mechanical equipment (pumping facilities). Short-term construction-related visual impacts may be greater under this Alternative, as a result of approximately eight- to ten-miles of distribution pipeline, when compared to approximately two miles for the desalination facility. Long-term visual impacts are anticipated to be less compared to development of the desalination facility, which proposes a facility in a rural open space area.

Traffic and Circulation

The short-term interruptions to access along Highway 1 and San Simeon Creek Road, which are anticipated to occur with the proposed desalination facility, would not occur with this Alternative. Coastal access would not be temporarily impeded, since this Alternative does not propose facilities (i.e., subterranean intake vault and disbursement system) on the beach. This Alternative would generate nominal long-term increases in traffic volumes, since the pipeline and pump station would generate only infrequent trips for maintenance.

Air Quality

Short-term construction emissions may be greater with this Alternative due to the development of approximately eight to ten miles of transmission pipeline, compared to approximately one to two miles for the seawater desalination facility. Long-term air emissions may be equal to or slightly less than seawater desalination, since the elevation pumping head with this alternative nears the pressures used in the desalination reverse osmosis process.

Noise

The length of the transmission pipeline for this Alternative would be greater than required for the proposed seawater desalination facility. However, short-term noise impacts from construction-



related activities are anticipated to be less than the proposed Project, since the Town Creek, Franklin Creek, and Palmer Flats pipeline alignments would not be located adjacent to noise sensitive receptors (e.g., the State campgrounds). Long-term stationary noise impacts may be less with this Alternative, since only underground wells and pumping facilities would be required when compared to the desalination facility.

Biological Resources

The following is a summary of the potential impacts to biological resources, which may occur with this Alternative:

- ◆ The concentrations of mercury and the warm water temperature found in Lake Nacimiento water would be transferred into San Simeon Creek/Steiner Creek, potentially impacting reptile and amphibian species of special concern (i.e., the Red-Legged Frog, Yellowed-Legged Frog, Coast Range Newt, Two-Striped Garter Snake, and Southwestern Pond Turtle). Mercury could directly impact the Red-Legged Frog and Southwestern Pond Turtle, as well as the Golden Eagle and Prairie Falcons, who feed on fish in the area. Other species of special concern that could be impacted by this Alternative include the Monarch Butterfly, Golden Eagle, Prairie Falcon, and the federally-threatened Steelhead Trout. The potential to impact native species from the introduction of warmer water may also occur under this Alternative.
- ◆ Potential impacts to the marine environment would be avoided with this Alternative, since the seawater intake and seawater concentrate return systems proposed by the Project would not be constructed.
- ◆ With this Alternative, short-term construction-related impacts to the four sensitive habitat areas (Monterey Pine Forest, Non-Native Grassland, Riparian Habitat, and Wetlands) located in Cambria, and habitats along the Town Creek/Franklin Creek routes, could be greater due to the increased area that would be disturbed (i.e., the length of the transmission pipeline would be greater for this Alternative than required for the seawater desalination facility). This Alternative may result in potential conflicts with the Cambria Forest Management Plan.
- ◆ This Alternative would require compliance with the regulatory process (i.e., CDFG Stream/Lake Alteration Agreement, ACOE Section 404, USFWS Section 10(a) Permit and Section 23.07.172 of the CZLUO (Wetlands), regarding development adjacent to wetlands,
- ◆ This Alternative is not anticipated to result in short-term construction-related impacts to wildlife corridors, since it does not propose construction of pipeline facilities along Van Gordon or San Simeon Creeks.

More detailed biological studies are needed to determine the extent of potential impacts.

Cultural Resources

This Alternative would result in a greater potential for impacts to paleontological and archaeological resources, as a greater amount of land area would be disturbed during



construction (approximately eight to ten miles of transmission pipeline, as compared to approximately one to two miles for the proposed desalination facility). However, this Alternative would avoid potential impacts to three historical sites located in proximity to the proposed desalination facility (a Prehistoric village and historic ranch [SLO-221]; a Prehistoric village and historic rancho [SLO-1373]; and a Prehistoric village and camp [SLO-383]). More detailed cultural studies are needed to determine the extent of potential impacts.

Geology and Soils

As with the proposed Project, this Alternative would be susceptible to seismic impacts and therefore subject to compliance with the County's Building and Construction Ordinance and Section 23.07.080 of the CZLUO. This Alternative may result in greater geology and soil impacts, as it would traverse a greater amount of land area (approximately eight to ten miles of pipeline, as compared to approximately one to two miles for the desalination pipelines) that could be susceptible to adverse geologic conditions.

This Alternative would also be less likely to be subject to inundation from a tsunami when compared to desalination. However, a tsunami also has the potential of causing saltwater intrusion into the potable aquifers, which would then require desalination.

Hydrology and Water Quality

As with the proposed Project, compliance with the National Pollutant Discharge Elimination System (NPDES) regulatory provisions, the County's Storm Water Pollution Prevention Plan (SWPPP), Coastal Zone Land Use Ordinance (CZLUO) guidelines and standards, and implementation of Best Management Practices (BMPs), would be required to reduce construction-related hydrology and water quality impacts to a less than significant level. An NPDES permit would be necessary for the discharge/recharge at Palmer Flats as required by the Regional Water Quality Control Board (RWQCB). Additionally, a construction NPDES permit would be required. BMPs such as erosion control and dust control, would be required during construction. This Alternative would avoid potential impacts where the proposed seawater and seawater concentrate return discharge pipelines may cross or be located within the Van Gordon Creek and San Simeon Creek drainage courses and floodplain boundaries. Potential impacts associated with the seawater concentrate from the RO process would also not occur under this Alternative.

Public Health and Safety

When compared to the desalination facility Project component, this Alternative would not be subject to pre- and post-treatment processes that would require compliance with County Environmental Health Department (EHD) regulations for the storage and reporting of hazardous materials pursuant to State and Federal requirements. In addition, this Alternative would not require temporary lane closures or detours at Highway 1 and San Simeon Creek Road. Even though this Alternative would require pipelines through areas susceptible to wildland fires, the pipelines would be located underground and therefore, similar to the proposed Project, is not anticipated to result in impacts in this regard. This Alternative would have similar impacts to the proposed Project in regards to recycled water/wastewater treatment plant.



A United States Army Corps of Engineers (USACE) Section 10 Permit would be required, as a result of the intake structure, which could create a potential navigational hazard for boaters at Lake Nacimiento. For the main channel intake sites, the historic low lake elevation (670 feet) falls below the safe elevation (685 feet) (the elevation required to maintain the 10-foot pool), creating a potential hazard. Warning buoys surrounding the intake area are permit-required as a safety precaution. The safe elevation for the Dip Creek site however does not fall below the historic low and thus minimizes the potential navigational hazard. A permit would still be required. Warning buoys would still be used as a precautionary measure.

Public Services and Utilities

This Alternative is not anticipated to result in impacts to recreational facilities, since it would not involve construction along Highway 1 or temporarily impede access to the coast or San Simeon Creek State Park campsites. Impacts regarding fire protection, police protection, and solid waste may be less with this Alternative, since it proposes development of two new wells and a pumping facility, compared to development of a desalination facility. Utility operations could increase, beyond the amount estimated based solely on supply and demand, due to the potential creation of artificial habitat and the corresponding need to maintain such habitat when supply is not needed.

Water Resources

CCSD has an allocation of 2,000 AFY of water from Lake Nacimiento. However, this Alternative would only provide 900 AFY during the dry season. In addition, with the 0.5 cubic feet per second (cfs) loss due to the riparian environment in San Simeon Creek, only approximately 730 AFY of the 900 AFY would be available for CCSD use. Comparatively, the proposed desalination facility could provide between 300 and 820 AFY of reverse osmosis permeate (product water) during the critical dry season, depending on the number of RO units chosen and the number of days of operation.

This Alternative would utilize groundwater under the direct influence of surface water requiring disinfection. Disinfection would occur by the addition of sodium hypochlorite at the wellhead, and therefore, water quality at Palmer Flats would need to be monitored and meet the same water quality standards as the current groundwater source.

In addition, although current percolation rates for the wastewater percolation ponds are very high, the introduction of Lake Nacimiento water could cause a potential problem. An increase in potable water demands in the future may result in an increase in the volume of wastewater requiring treatment. Thus, periodic pumping of percolated effluent may be required to prevent intrusion of the effluent into the existing groundwater supply.

Population, Housing, and Growth

Similar to the proposed Project, implementation of this Alternative would provide additional water supplies, removing what was previously a constraint to development in Cambria. By removing this constraint, the rate of growth in Cambria could be affected. However, as with the proposed Project, this Alternative is not anticipated to result in an unregulated amount of growth, following implementation of the proposed Buildout Reduction Program (BRP), and continued implementation of the existing County and CCSD adopted growth management policies. Based on an analysis of the existing growth restraints and the proposed BRP, this



Alternative would result in less than significant growth inducing impacts, similar to the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

CCSD has an allocation of 2,000 AFY of water from Lake Nacimiento. This Alternative was originally designed for 1,200 AFY during the dry season (approximately May 1 through October 31) with the option for extended pumping for the full allocation. However, with a 2.5 cfs flow rate, only 900 AFY would be pumped from Nacimiento during the dry season. With the 0.5 cfs loss due to the riparian environment in San Simeon Creek, only about 730 AFY of the 900 AFY would be available for CCSD use. Based on the projected future water demand, this Alternative would be sufficient to meet total and dry season demands for 4,650 total connections with a 50 percent quality of life increase.

Regarding the reliability of this Alternative, analysis concluded it probable that water supply from Lake Nacimiento may be limited during the same period when the CCSD would require it most (i.e., critically dry water years). According to Table ES.1 of the NWP Final EIR (*Tentative Nacimiento Water Project Allocations*), CCSD's allocation of 2,000 AFY is not included in the 13,575 AF allocated to water purveyors. As a result, Surface Water From Lake Nacimiento Alternative involves an independent CCSD Nacimiento pipeline project that would pump water from Lake Nacimiento over the Santa Lucia mountain range.

6.3 "WHALE ROCK EXCHANGE" ALTERNATIVE

As previously noted, the Whale Rock Exchange Alternative illustrated on Exhibit 6-2 is one option for CCSD to obtain Nacimiento water. This Alternative involves use of the County's regional Nacimiento pipeline (Nacimiento Water Project) and an independent CCSD pipeline. The Whale Rock Exchange Alternative would involve an exchange of Lake Nacimiento water for water from Whale Rock Reservoir. The source of the Whale Rock water is run-off from Santa Rita and Cottontail Creeks that is captured by the Whale Rock Dam.

During the early to mid-1990s, the County developed a regional pipeline concept that would serve Paso Robles, Templeton, Atascadero, the City of San Luis Obispo, as well as the County. The County completed the Final Environmental Impact Report for the Nacimiento Water Project (NWP) in December 2003 and is in the process of constructing the project. The main objective of the proposed NWP is to provide a reliable supplemental water source for a variety of uses within the County by supplementing the local ground and surface water supplies with a new surface water source. The San Luis Obispo County Flood Control and Water Conservation District has a 17,500 AFY entitlement from Lake Nacimiento. Of this 17,500 AFY, 16,200 AFY of water is slated for the NWP to augment the existing water supplies in various communities within the County. The remaining 1,300 AFY is being reserved for local lakeside use. Fifteen (15) purveyors submitted their requests for Lake Nacimiento water.

The San Luis Obispo County Flood Control and Water Conservation District (FCWCD) has 17,500 AFY entitlement from Lake Nacimiento. The Final Environmental Impact Report (FEIR) adopted by the FCWCD's Board on January 6, 2004, identified 16,200 AFY of the water for distribution throughout the County, and the remaining 1,300 AFY held in the reservoir for lakeside users. In 2004, the FCWCD performed an analysis of the lakeside use potential around the lake, and changed the 1,300 AFY to 1,750 AFY. The remaining 15,750 AFY is the capacity of the Nacimiento Water Project.



When the FEIR was completed, fifteen (15) purveyors had submitted requests for Lake Nacimiento water totaling 13,575 AFY; the remaining 2,625 AFY was designated as FCWCD-Owned contingency capacity. As of February 21, 2008, six of those purveyors are contract project participants with allocations totaling 9,655 AFY. The FCWCD's Reserve Water as of this date is 6,095 AFY. The pipeline is being constructed to accommodate the delivery of the Reserve Water (6,095 AFY) to any point between the lake and Paso Robles, then the pipeline diameter is reduced to deliver a pro-rated share of water at the delivery points along the pipeline where water is delivered to the project's participants. At the end of the pipeline, at the City of San Luis Obispo, the capacity of Reserve Water Delivery is 2,123 AFY.

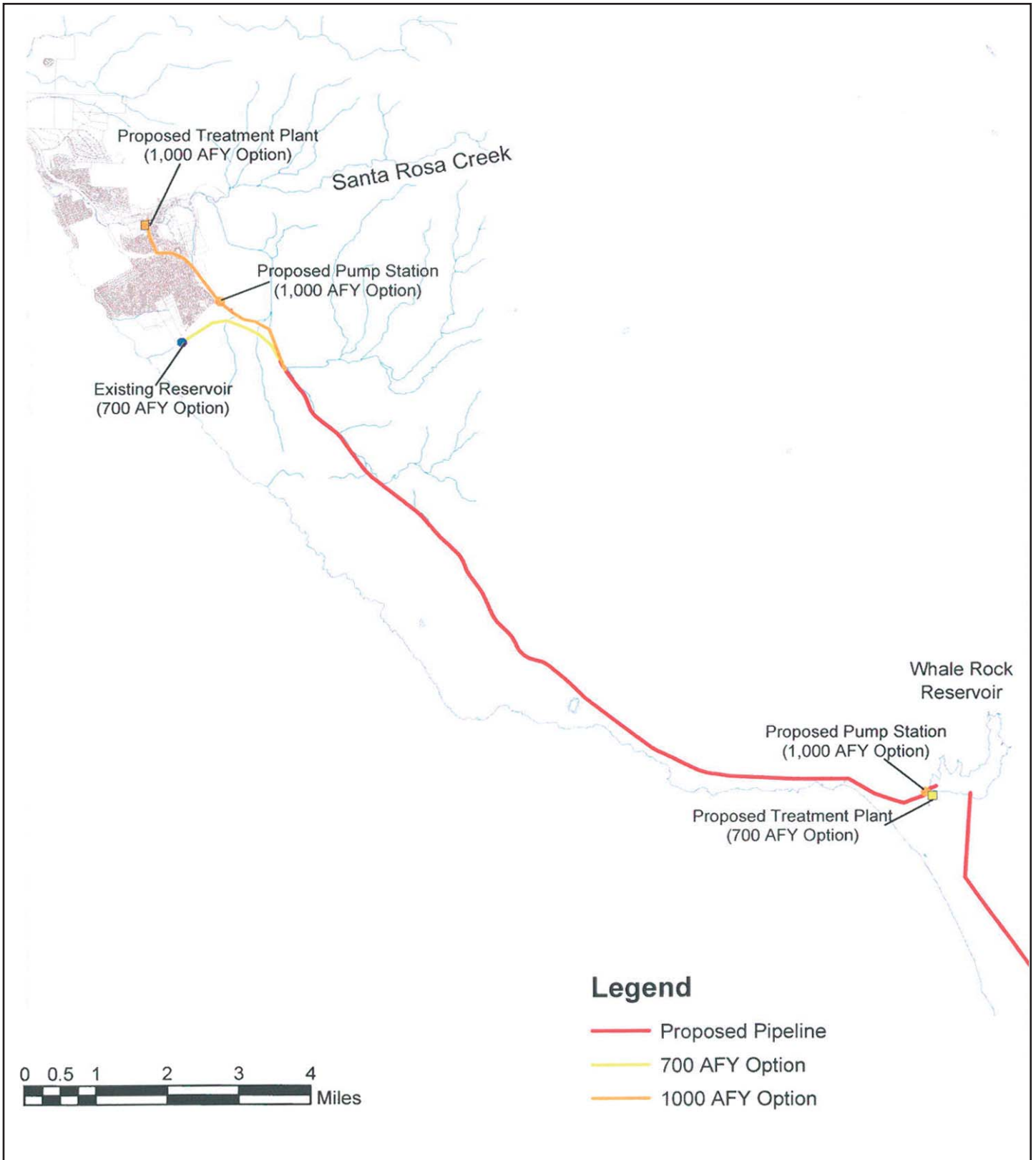
The regional Nacimiento transmission pipeline (NWP) would be used to transport water from Lake Nacimiento to the City of San Luis Obispo Treatment Plant; refer to Exhibit 6-2. The NWP includes construction of the water intake at Lake Nacimiento, water storage tanks, pump stations, and a 64-mile water transmission pipeline. The pipeline route would begin at an intake near the Nacimiento Dam and would continue in a southeastern direction. After crossing the Salinas River, it would turn south and parallel the river to Atascadero. From there, it would re-cross the Salinas River and head southwest through the Cuesta Tunnel to the City of San Luis Obispo Water Treatment Plant. Using the existing Chorro Valley pipeline, the water would be transported from the San Luis Obispo Treatment Plant through Cayucos to the Whale Rock Reservoir.

Exhibit 6-3 (Whale Rock Pipeline Routes) illustrates the proposed pipeline route and the structures required from the Whale Rock Reservoir to CCSD. As illustrated on Exhibit 6-3, infrastructure required to convey the water from Whale Rock Reservoir to CCSD is dependent upon which supply option is chosen. Two exchange capacities have been evaluated in previous studies, either 700 AFY or 1,000 AFY. For the 1,000 AFY option, 15.3 miles of 16-inch pipeline, two pump stations, and a treatment plant would be required. The treatment plant could be located in Cambria or Alternatively could be located elsewhere if other coastal communities are included in the exchange. The treatment plant would be designed for a 3.8 MGD flow rate and would have a 2.2 MG storage tank. The pipeline would follow Highway 1, outside of CALTRANS right-of-way, for a majority of the route. A significant amount of pavement replacement would be required and right-of-way would need to be obtained. For the 700 AFY option, 13.1 miles of eight-inch pipeline, one pump station, and a smaller treatment plant would be required. At least 0.25-acre of land would be required for the treatment plant and pump station. The pipeline would follow the same route as for the 1,000 AFY option.

Water exchanges would need to occur with the City of San Luis Obispo, the County of San Luis Obispo, and the three water purveyors supplying Cayucos. In addition, agreements may also be required with entities currently receiving Whale Rock Reservoir water, including the State of California Men's Colony and California Polytechnic State University.

ENVIRONMENTAL REVIEW

Since this Alternative would replace the desalination facility proposed by the WMP, the potential impacts from this Alternative are compared to the desalination facility. This Alternative assumes the impacts associated with the potable and recycled water distribution Project components would still occur. Further, the overall environmental issues associated with the NWP are not addressed in this discussion. These have been identified and evaluated in the Nacimiento Water Project Final EIR (December 2003) prepared for the County (State Clearinghouse No. 2001061022).



SOURCE: Kennedy/Jenks Consultants, Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives; March 2004.



Land Use

As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding consistency with land use and planning policies and standards.

Aesthetics

Short-term construction-related visual impacts may be greater under this Alternative as a result of approximately 13.1- to 15.3-miles of pipeline, when compared to approximately one to two miles for the desalination facility. The long-term visual impacts associated with the water treatment plant and two pumps proposed with this Alternative, would be similar to the desalination facility, since similar improvements would be constructed. Similar to the proposed desalination facility, the water treatment plant proposed under this Alternative can be located such that it would be shielded from view of Highway 1 and can be designed architecturally to blend in with its surroundings. As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding visual resources.

Traffic and Circulation

With this Alternative, the pipeline construction from Whale Rock to CCSD would involve extensive pavement replacement along Highway 1. Therefore, the short-term interruptions to traffic access along Highway 1 that are anticipated to occur with the proposed desalination facility would also occur with this Alternative. However, coastal access would not be temporarily impeded, because this Alternative does not propose facilities below the beach that would require boring machines in nearby parking lots or similar areas. Similar to the proposed Project, the trip generation associated with the new treatment plant employees is not anticipated to cause a significant increase in traffic or to exceed an established LOS standard. Also, this Alternative would generate nominal long-term increases in traffic volumes associated with the pipeline and pump stations, since only infrequent trips for maintenance would be required.

Air Quality

Short-term construction emissions may be greater with this Alternative due to the development of approximately 13 to 15 miles of transmission pipeline, compared to approximately two miles for the seawater desalination facility. Long-term air emissions would be similar to the emissions anticipated from the desalination facility, since a new water treatment plant and new mechanical equipment (pumping facilities) would be associated with this Alternative.

Noise

For this Alternative, short-term noise impacts from construction-related activities may be greater due to the increased area that would be subjected to construction activity (i.e., the length of the transmission pipeline would be greater for this Alternative than required for the seawater desalination facility). Long-term stationary noise impacts could potentially be greater, depending on the size and location of the proposed treatment plant and pumping facilities, and proximity to noise-sensitive uses.



Biological Resources

The following is a summary of the potential impacts to biological resources, which may occur with this Alternative:

- ◆ This Alternative would also result in significant biological impacts associated with the pipeline route and locations of the pump stations and treatment facility that would traverse sensitive habitat areas. Of particular concern are the Tidewater Goby, Red-Legged Frogs, Southwestern Pond Turtle, and steelhead fisheries, which have been identified in creeks that the pipeline would need to cross. Similar to the proposed Project, special care would need to be taken during construction to minimize the impact to these habitats and revegetation would also likely be required as a mitigation measure.
- ◆ This Alternative is not anticipated to result in potential impacts to the marine environment since the seawater intake and seawater concentrate return systems proposed by the Project would not be constructed.
- ◆ This Alternative may result in greater impacts to the four sensitive habitat areas (Monterey Pine Forest, Non-Native Grassland, Riparian Habitat, and Wetlands) located in Cambria, due to the development of approximately 13 to 15 miles of pipeline and therefore may conflict with the Cambria Forest Management Plan.
- ◆ Similar to the proposed Project, this Alternative would also require compliance with the regulatory process (i.e., CDFG Agreement and 401 Certification) and Section 23.07.172 of the CZLUO (Wetlands), since the proposed pipeline would traverse Green Valley and Perry Creeks.

More detailed biological studies are needed to determine the extent of potential impacts.

Cultural Resources

This Alternative would result in greater potential impacts to paleontological and archaeological resources, as a greater amount of land area would be disturbed during construction (approximately 13 to 15 miles of pipeline, as compared to approximately two miles for the desalination pipelines). However, this Alternative would avoid potential impacts to three historical sites located in proximity to the desalination facility. More detailed cultural studies are needed to determine the extent of potential impacts.

Geology and Soils

As with the proposed Project, this Alternative would be susceptible to seismic impacts and therefore be subject to compliance with the County's Building and Construction Ordinance and Section 23.07.080 of the CZLUO. This Alternative may result in greater geology and soil impacts, as it would traverse a greater amount of land area (approximately 13 to 15 miles of pipeline, as compared to approximately two miles for the desalination pipelines) that could be susceptible to adverse geologic conditions.



Hydrology and Water Quality

As with the proposed Project, compliance with the NPDES regulatory provisions, the County's SWPPP, CZLUO guidelines and standards, and implementation of BMPs, would be required to reduce construction-related hydrology and water quality impacts to a less than significant level. Additionally, a construction NPDES permit would be required. BMPs such as erosion control and dust control would be required during construction. However, this Alternative would avoid potential impacts where the proposed seawater and seawater concentrate return pipelines cross or would be located within the Van Gordon Creek drainage courses and floodplain boundaries. Impacts associated with the seawater concentrate from the RO process would also not occur under this Alternative.

Public Health and Safety

The water from the Whale Rock Reservoir would require filtration and disinfection in accordance with the Safe Drinking Water Act. Thus, the water treatment plant associated with this Alternative would involve treatment processes that require compliance with County EHD regulations regarding storage and reporting of hazardous materials pursuant to State and Federal requirements. In addition, this Alternative may require temporary lane closures or detours along Highway 1.

Public Services and Utilities

This Alternative may result in impacts to recreational facilities, since it would involve construction within the Highway 1 right-of-way, but it would not temporarily impede access to the coast or San Simeon Creek State Park campsites. Impacts regarding fire protection, police protection, wastewater, and solid waste would be similar to the proposed Project, since similar facilities would be developed under this Alternative.

Water Resources

Source water for Whale Rock Reservoir is the natural runoff from Cottontail and Santa Rita Creeks. The addition of Lake Nacimiento water to the Whale Rock Reservoir is not expected to adversely affect the water quality in the Reservoir because it is very likely the Lake Nacimiento water would be treated prior to entry into the Reservoir. The water from the Whale Rock Reservoir would require filtration and disinfection in accordance with the Safe Drinking Water Act.

Based on CCSD's allocation to water from Lake Nacimiento a maximum of 1,200 AFY is available for the exchange. The original evaluation of this Alternative allowed for an exchange of 1,000 AFY; however, the 1991 report lowered the supply capacity to 700 AFY.

Population, Housing, and Growth

Similar to the proposed Project, implementation of this Alternative would provide additional water supplies, removing what was previously a constraint to development in Cambria. By removing this constraint, the rate of growth in Cambria could be affected. However, as with the proposed Project, this Alternative is not anticipated to result in an unregulated amount of growth, following implementation of the proposed BRP, and continued implementation of the existing County and CCSD adopted growth management policies. Based on an analysis of the



existing growth restraints and the proposed BRP, this Alternative would result in less than significant growth inducing impacts, similar to the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

Based on future total and dry season demand, the 1,000 AFY option would provide sufficient supplemental water supply if used in conjunction with the existing groundwater sources to meet the projected water demands, with a 50 percent quality of life increase. The 700 AFY option would also be sufficient to meet CCSD's projected water supply requirements.

The Whale Rock Reservoir Alternative, from a hydrologic perspective, is considered a reliable source. Although the recharge of the Reservoir is rainfall dependent, safe yields have been established to protect the availability. Because this Alternative involves an exchange of water rights, reliability may be affected by water levels at Lake Nacimiento. Accordingly, the supply available during the dry season may be restricted when water levels at Lake Nacimiento drop.

6.4 "HARD ROCK DRILLING" ALTERNATIVE

Hard Rock Drilling would involve development of groundwater supplies from fractured bedrock, which has typically not been explored for potential water supplies. Typically, developing groundwater supplies from fractured bedrock consists of three phases of development. Phase 1 involves reviewing the subsurface geology, evaluating yield, identifying potential locations for exploration, acquiring permits for test bores, and drilling test bores to predict actual production capacity. Phase 2 includes test pumping and evaluating water quality of test bores to predict actual production capacity. Phase 3 includes drilling of production wells and delivery of water to the customer's distribution system.

In June 1993, several wells were drilled, however, the location did not appear to have sufficient potential to provide a viable source of groundwater and exploration activities were stopped. Before exploration activities ceased, an area near a sandstone ridge was found to yield 100 to 200 gallons per minute (gpm). Therefore, this Alternative would involve pursuing a new hard rock drilling location by exploring the four-square mile area 0.5-mile north of Santa Rosa Creek westward to the coast. Further, Phase 1 testing would be required to explore this region in more detail.

This Alternative would require construction of a new pipeline connecting the new well with the existing CCSD distribution system. A treatment plant may also be necessary depending upon the groundwater quality.

ENVIRONMENTAL REVIEW

This Alternative would replace the seawater desalination facility portion of the CCSD WMP. Therefore, this Alternative would have the same impacts associated with the potable and recycled water distribution project.

Land Use

As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding consistency with land use and planning policies and standards.



Aesthetics

Short-term construction-related visual impacts may be greater under this Alternative as a result of an approximately four-square mile study area subject to test boring, and a new pipeline of unknown length, when compared to approximately one to two miles for the desalination facility pipeline. The long-term visual impacts associated with the water treatment plant, which may be required with this Alternative, would be similar to the desalination facility, since similar improvements would be constructed. As with the proposed desalination facility, the water treatment plant proposed under this Alternative can be located such that it would be shielded from view of Highway 1 and can be designed architecturally to blend in with its surroundings.

Traffic and Circulation

The short-term interruptions to traffic access along Highway 1 and San Simeon Creek Road, which are anticipated to occur with the proposed desalination facility, would not occur with this Alternative. Coastal access would not be temporarily impeded, since this Alternative does not propose facilities under the beach. Similar to the proposed Project, the trip generation associated with the new treatment plant employees is not anticipated to cause a significant increase in traffic or to exceed an established LOS standard. Also, this Alternative would generate nominal long-term increases in traffic volumes associated with the pipeline, since only infrequent trips for maintenance would be required.

Air Quality

This Alternative would generate short-term construction emissions as a result of drilling activities throughout a four-square mile area, which would include exhaust emissions from drilling equipment. Short-term emissions would also occur due to the development of a transmission pipeline of unknown length. Thus, this Alternative would result in greater short-term emissions, as compared to the seawater desalination facility. Long-term air emissions would be similar to the emissions anticipated from the desalination facility, since a new water treatment plant may be associated with this Alternative.

Noise

With this Alternative, short-term noise impacts from construction-related activities may be greater due to the increased area that would be subjected to construction activity (i.e., drilling activities throughout a four-square mile area and a new transmission pipeline of unknown length, as compared to a two-mile pipeline for the seawater desalination facility). Long-term stationary noise impacts could potentially be greater, depending on the size and location of the proposed treatment plant, and proximity to noise-sensitive uses.

Biological Resources

The following is a summary of the potential impacts to biological resources, which may occur with this Alternative:

- ◆ This Alternative would also result in significant biological impacts associated with the pipeline route and locations of the pump stations and treatment facility that would traverse sensitive habitat areas. Of particular concern are the impacts to the habitats of



the Red-Legged Frog and Southwestern Pond Turtle, which have been identified in the Cambria area. When possible, areas where these habitats are found should be avoided. Mitigation measures would most likely include revegetation.

- ◆ The study area is located within the Monterey Pines area and thus impacts to the Pines as a result of the hard rock mining would need to be evaluated. It may be possible to reduce the impact to the Pines with the use of sufficient surface casings. This Alternative may conflict with the Cambria Forest Management Plan.
- ◆ This Alternative is not anticipated to result in impacts to the marine environment, since the seawater intake and seawater concentrate return systems proposed by the Project would not be constructed.
- ◆ This Alternative may result in greater impacts to the four sensitive habitat areas located in Cambria, due to the development of a distribution pipeline of unknown length and alignment.
- ◆ This Alternative would require compliance with the regulatory process (i.e., CDFG, etc.).

More detailed biological studies are needed to determine the extent of potential impacts.

Cultural Resources

This Alternative would result in greater potential impacts to paleontological and archaeological resources, as a greater amount of land area would be disturbed during construction (drilling activities throughout a four-square mile area and a new transmission pipeline of unknown length, as compared to approximately two miles for the desalination pipelines). However, this Alternative would avoid potential impacts to three historical sites located in proximity to the desalination facility. More detailed cultural studies are needed to determine the extent of potential impacts.

Geology and Soils

As with the proposed Project, this Alternative would be susceptible to seismic impacts and therefore be subject to compliance with the County's Building and Construction Ordinance and Section 23.07.080 of the CZLUO. This Alternative would result in similar geology and soil impacts as the proposed desalination facility, since it would involve a new water treatment facility and pipeline that could be susceptible to adverse geologic conditions.

Hydrology and Water Quality

As with the proposed Project, compliance with the NPDES regulatory provisions, the County's SWPPP, CZLUO guidelines and standards, and implementation of BMPs, would be required to reduce construction-related hydrology and water quality impacts to a less than significant level. Additionally, a construction NPDES permit would be required. BMPs such as erosion control and dust control would be required during construction. However, this Alternative would avoid potential impacts where the proposed seawater and seawater concentrate return pipelines cross or would be located within the Van Gordon Creek and San Simeon Creek drainage courses and



floodplain boundaries. Impacts associated with the seawater concentrate from the RO process would also not occur under this Alternative.

Public Health and Safety

Depending on the groundwater quality, a water treatment plant may be required to provide filtration and disinfection in accordance with the Safe Drinking Water Act. Thus, the water treatment plant associated with this Alternative would involve treatment processes that require compliance with County EHD regulations regarding storage and reporting of hazardous materials pursuant to State and Federal requirements. This Alternative would not require temporary lane closures or detours at Highway 1 and San Simeon Creek Road. Even though this Alternative would require pipelines through areas susceptible to wildland fires, the pipelines would be located underground and therefore, similar to the proposed Project, is not anticipated to result in impacts in this regard.

Public Services and Utilities

This Alternative is not anticipated to result in impacts to recreational facilities, since it would not involve construction within the Highway 1 right-of-way, and would not temporarily impede access to the coast or San Simeon Creek State Park campsites. Impacts regarding fire protection, police protection, wastewater, and solid waste would be similar to the proposed Project, since similar facilities would be developed under this Alternative.

Water Resources

Although a borehole drilled within this new area was estimated to yield 100 to 200 gpm (162 AFY to 324 AFY), a more accurate assessment of the overall supply would be available upon completion of Phase I. This Alternative is insufficient to meet the projected dry season water demands of the CCSD with the 50 percent quality of life increase.

Water quality reports from the previous studies indicated poor water quality at the CT Ranch boreholes. However, a more detailed assessment of the water quality at the new site would be available after completion of Phase I. It is anticipated that treatment would be required; the water quality is considered fair.

ABILITY TO MEET PROJECT OBJECTIVES

This Alternative is insufficient to meet the projected dry season water demands of the CCSD with the 50 percent quality of life increase.

Typically, the drilling company evaluates the water supply for long-term reliability. They perform a yield analysis and do not mine aquifers beyond the expected recharge rate. During the pump testing that occurs in Phase II, the drilling company staff observes nearby springs and wells to evaluate the impacts of pumping on overall water levels. Thus, the reliability of this Alternative is unknown until further phases of the hard rock drilling project are complete.



6.5 “VAN GORDON DAM AND RESERVOIR” ALTERNATIVE (SAN SIMEON CREEK DAM-2)

Previous studies have evaluated three different dam and reservoir alternatives located on San Simeon Creek: San Simeon Creek Dam 1 (Upper San Simeon Site); San Simeon Creek Dam 2 (Van Gordon Site); and San Simeon Creek Dam 3 (State-Proposed Site). The locations of the three dam alternatives are illustrated on Exhibit 6-4 (Seasonal Storage Alternatives). All three dam alternatives would involve releases to San Simeon Creek and extraction at the existing well field. Of the three alternatives proposed, the Van Gordon site showed the most potential as a future water supply alternative. The Van Gordon dam site is located on the east tributary of the Van Gordon Creek tributary. Specifically, the site is located along upper San Simeon Creek, upstream of the confluence with Steiner Creek.

This Alternative would involve the construction of a dam and reservoir for the collection of storm water from the watershed. The earth-filled dam would be 123 feet high, with a crest length of 800 feet. The approximately 40-acre reservoir would have an expected depth of 55 feet, a storage capacity of 2,000 AFY, and a safe yield of 500 AFY. A straight chute in the right abutment of the dam would provide spillway into Van Gordon Creek. Approximately 30 feet of bottom excavation would be required for the dam, which would have a spillway capacity of approximately 3,000 cfs and five feet of gross freeboard.

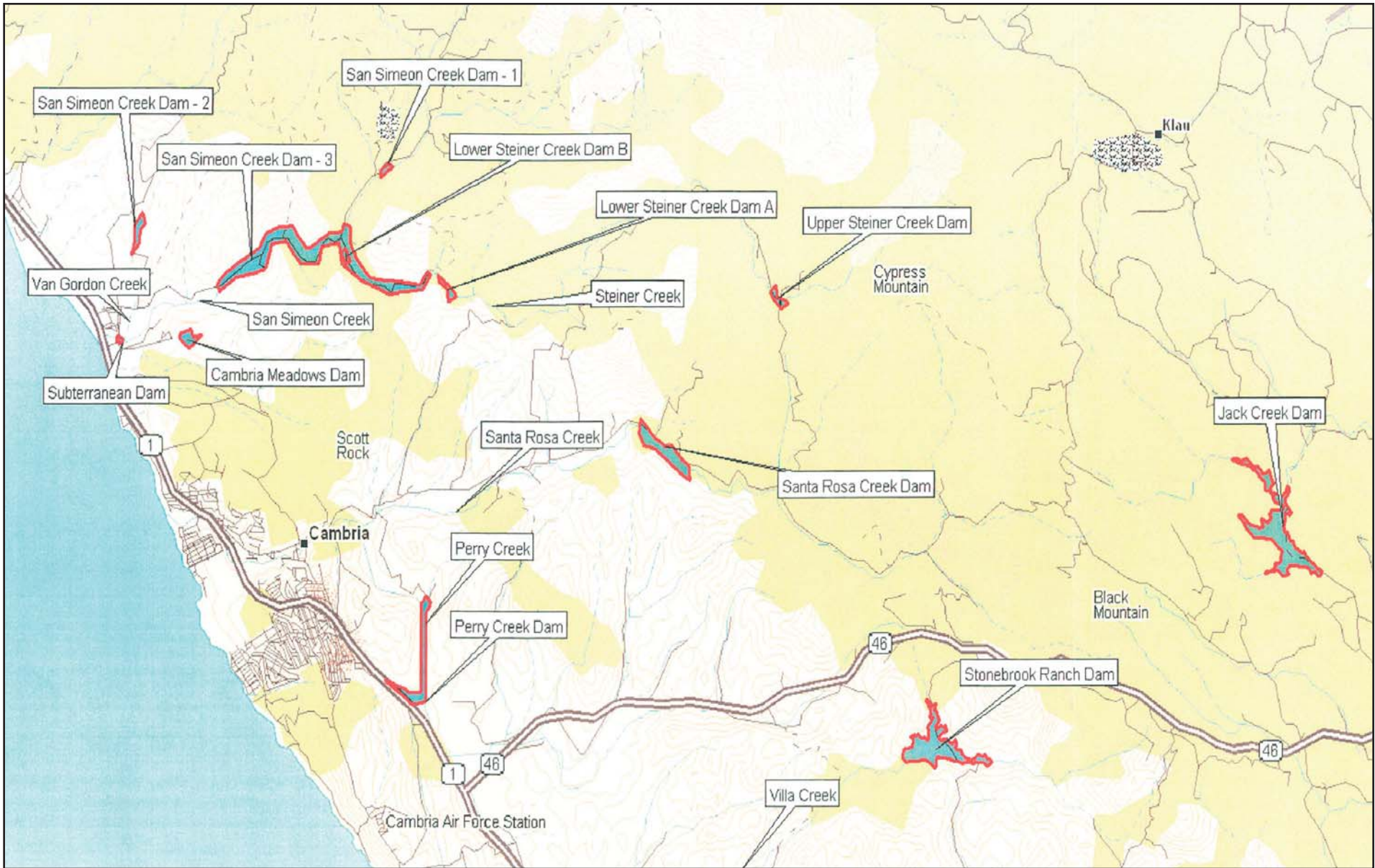
An 880 gpm pump station and eight-inch pipeline would be required to convey excess groundwater from the San Simeon well field to the reservoir during the wet season. One-hundred horsepower would be required to overcome the 165 feet of head and 150 feet of friction losses. Releases from the dam would back-flow through the pipeline to the well field at San Simeon Creek. From there, a valve system would route the water past the well field to an additional eight-inch pipeline, which would convey the water to the recharge point in San Simeon Creek. Total pipeline length would be 6,000 feet. Santa Rosa groundwater would be conveyed to the San Simeon well field through CCSD's existing distribution system and then to the reservoir in the same manner as San Simeon groundwater.

The reservoir would be filled with the remaining wet season entitlement from the San Simeon and Santa Rosa groundwater basins. This supply would be achieved by constant pumping of the San Simeon and Santa Rosa wells during the wet season. The amount not needed to meet immediate demands would be pumped to the reservoir for storage. The water would be released into Van Gordon Creek during the dry season, where it would recharge the aquifer. The reservoir would have a storage capacity of 2,000 AFY and a safe yield of 500 AFY. After transit losses and upstream pumping, only 250 AFY would be available for CCSD use. This Alternative would have limited reliability and require the relocation of one house and 2.5 miles of San Simeon Creek Road.

Permitting, design, construction, and startup of the dam and reservoir proposed under this Alternative are likely to require approximately three years.

ENVIRONMENTAL REVIEW

Since the Van Gordon Site Alternative would replace the desalination facility proposed by the WMP, the potential impacts from this Alternative are compared to the desalination facility. This Alternative assumes the impacts associated with the potable and recycled water distribution Project components would still occur.



SOURCE: Kennedy/Jenks Consultants, Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives; March 2004.

NOT TO SCALE



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PROGRAM ENVIRONMENTAL IMPACT REPORT
CAMBRIA COMMUNITY SERVICES DISTRICT WATER MASTER PLAN

Seasonal Storage Alternatives

Exhibit 6-4



Land Use

As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding consistency with land use and planning policies and standards. As required for all activities involving dams or reservoirs, approval of plans would be required from the Department of Water Resources, Division of Safety of Dams for this Alternative.

Aesthetics

Short-term construction-related visual impacts may be greater under this Alternative, as a result of a minimum 40-acre area of disturbance, as compared to the relatively limited area of disturbance for the desalination building site and pipeline. Also, construction activities would introduce a considerable amount of heavy equipment and associated vehicles into the viewshed of the construction area. This Alternative would introduce a significantly larger element (i.e., a 123-foot high dam), as well as a new element (40-acre reservoir) into the viewshed; thus, the long-term visual impacts may be greater.

Traffic and Circulation

The short-term interruptions to traffic access along Highway 1 and San Simeon Creek Road, which are anticipated to occur with the proposed desalination facility, would not occur with this Alternative. Coastal access would not be temporarily impeded, since this Alternative does not propose facilities under the beach. However, the construction phase of this Alternative would result construction truck trips and vehicular trips by on-site workers over an extended time frame (approximately three years). Thus, this Alternative would generate a significantly greater amount of construction-related traffic. Approximately 2.5 miles of San Simeon Creek Road would be relocated with this Alternative.

This Alternative would generate nominal long-term increases in traffic volumes, since the dam, pipeline, and pump station would generate only infrequent trips for maintenance.

Air Quality

Short-term construction emissions would be significantly greater with this Alternative, than with the desalination facility, due to 30 feet of bottom excavation and construction of a 123-foot high dam. The construction phase of this Alternative would result in increases in air emissions due to heavy machinery, increased truck trips, and increased vehicular trips by on-site workers over an extended time frame. Long-term air emissions may be less, since only minor mechanical equipment (pumping facilities) would be associated with this Alternative, as opposed to the desalination facility.

Noise

The short-term noise impacts from construction-related activities associated with this Alternative are anticipated to be greater than the proposed Project. The primary noise generating activities would involve excavation, grading, and scraping for construction of the 123-foot high dam. The degree of short-term noise impact would be dependant upon the proximity to noise sensitive receptors and the construction vehicle routes. Long-term stationary noise impacts may be less



with this Alternative, since only pumping facilities would be required compared to the desalination facility.

Biological Resources

Potentially significant biological resource impacts could occur with this Alternative. The following is a summary of the potential impacts to biological resources, which may occur with this Alternative:

- ◆ The reservoir site consists of approximately 40 acres of non-native grasses used for grazing, approximately 3,500 feet of intermittent stream channel, and a band of willows, all of which would be lost as a result of the reservoir.
- ◆ Construction-related impacts to aquatic species, including impacts to organisms and habitat from increased suspended sediment and turbidity during construction, and disruption of movement of species, would occur during the extended construction period required for the dam project.
- ◆ Operation-related impacts may include disruption of fish movement by dam project operation and changes in water temperatures. Water temperature can increase within dams during the summer months, which can impact native species when the water is released to the creeks. Most notably, the young-of-the-year steelhead that populate portions of the creeks during the summer could be impacted from the release of warmer water. Also, year-round release of water could alter the natural selection process and allow non-native species to propagate.
- ◆ Potential impacts to water and salinity levels in the lagoon.
- ◆ Although, the Southwestern Pond Turtle and Red Legged Frog were not found in the area during previous biological resource surveys, further focused study is necessary to determine the impacts to the downstream lagoons, which support several threatened and endangered species including Red Legged Frog, Southwestern Pond Turtle, and Tidewater Goby.
- ◆ Potential impacts to the marine environment would be avoided with this Alternative, since the seawater intake and seawater concentrate return systems proposed by the Project would not be constructed.
- ◆ This Alternative would require compliance with the regulatory process (i.e., CDFG Stream/Lake Alteration Agreement, ACOE Section 404, USFWS Section 10(a) Permit, and Section 23.07.172 of the CZLUO (Wetlands).
- ◆ This Alternative may result in impacts to wildlife corridors, since it proposes construction of pipeline facilities along Van Gordon or San Simeon Creeks.

More detailed biological studies are needed to determine the extent of potential impacts.

Cultural Resources

The potential for impacts to paleontological and archaeological resources may be greater with this Alternative, as a greater amount of land area would be disturbed during construction. Further, Native American Indian archaeological sites are known to be near the proposed



location of the right abutment. This Alternative would avoid potential impacts to the three historical sites located in proximity to the proposed desalination facility. More detailed cultural studies are needed to determine the extent of potential impacts.

Geology and Soils

The proposed dam site is located in a geologically stable environment and thus is considered structurally reliable. As with the proposed Project, this Alternative would be susceptible to seismic impacts and therefore subject to compliance with the County's Building and Construction Ordinance and Section 23.07.080 of the CZLUO. Overall, this Alternative may result in greater geology and soil impacts, as it would involve a significantly larger structure (123-foot high dam) that could be susceptible to adverse geologic conditions, as compared to the proposed desalination facilities and pipelines.

Hydrology and Water Quality

This Alternative may require a temporary diversion of the course of San Simeon Creek to facilitate construction of the dam. Also, operation of the dam could impact erosion or siltation. Further analysis is required to determine the overall changes in hydrology resulting from this Alternative.

As with the proposed Project, compliance with the NPDES regulatory provisions, the County's SWPPP, CZLUO guidelines and standards, and implementation of BMPs, would be required to reduce construction-related hydrology and water quality impacts to a less than significant level. An NPDES permit would be necessary for the discharge/recharge at San Simeon Creek as required by the RWQCB. Additionally, a construction NPDES permit would be required. BMPs such as erosion control and dust control would be required during construction.

An alteration to the existing diversion permit at San Simeon Creek from SWRCB would be required for the increased dry season pumping. Similarly, an alteration to the existing diversion permit at Santa Rosa Creek would be required for the diversion to the reservoir site. Adjustments must also be made for the right to store the water from both basins at the reservoir site. The revised permits should address any changes in the maximum rate of diversion, maximum annual diversion, and maximum dry season diversions.

This Alternative would avoid potential impacts where the proposed seawater and seawater concentrate return pipelines cross or would be located within the Van Gordon Creek and San Simeon Creek drainage courses and floodplain boundaries. Potential impacts associated with the seawater concentrate from the RO process would also not occur under this Alternative.

Public Health and Safety

The proposed dam site is located in geological stable environment and thus is considered structurally reliable. Further, construction of the proposed dam would be subject to compliance with the County's Building and Construction Ordinance. Further analysis is required to determine the potential inundation areas and public safety impacts associated with the dam proposed by this Alternative.

This Alternative would not be subject to pre- and post-treatment processes that would require compliance with County Environmental Health Department (EHD) regulations regarding storage



and reporting of hazardous materials pursuant to State and Federal requirements. In addition, this Alternative would not require temporary lane closures or detours at Highway 1 and San Simeon Creek Road.

Public Services and Utilities

This Alternative is not anticipated to result in impacts to recreational facilities, since it would not involve construction along Highway 1 or temporarily impede access to the coast or San Simeon Creek State Park campsites. Similar to the proposed Project, impacts regarding fire protection, police protection, and solid waste would not be significant with this Alternative.

Water Resources

This Alternative would utilize the same existing water sources, but would involve mixing water from the two groundwater basins. Although a difference in water quality between the two basins exists, the Santa Rosa water would have already been treated for iron and manganese and thus should not compromise the water quality at the San Simeon well field.

This Alternative is expected to store 700 AF from the San Simeon Basin and Santa Rosa Basin. However, in the future when wet season demand increases, only 200 AF from both basins would be available for storage. The reservoir would be designed to store up to 1,000 AF, to allow for additional supply from unused portions from previous years when demands are low.

Population, Housing, and Growth

Similar to the proposed Project, implementation of this Alternative would provide additional water supplies, removing what was previously a constraint to development in Cambria. By removing this constraint, the rate of growth in Cambria could be affected. However, as with the proposed Project, this Alternative is not anticipated to result in an unregulated amount of growth, following implementation of the proposed BRP, and continued implementation of the existing County and CCSD adopted growth management policies. Based on an analysis of the existing growth restraints and the proposed BRP, this Alternative would result in less than significant growth inducing impacts, similar to the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

The Van Gordon Dam is considered more reliable than the other proposed dams because it is not dependent upon collection of run-off and rainfall. The groundwater sources utilized in this Alternative have already been established to ensure future availability, increasing the reliability. However, this Alternative is still restricted by available wet season supply. Therefore, if the basin is not fully recharged, a limited amount would be available for storage. Accordingly, supply from this Alternative would be limited when demand is highest (i.e., critically dry water years).

This Alternative is expected to store 1,000 AF and is expected to provide 700 AF per year from the San Simeon Basin and Santa Rosa Basin. This supply would be achieved by constant pumping of the San Simeon and Santa Rosa wells during the wet season. The amount not needed would be pumped into the reservoir for storage. Approximately 500 AF per year would be available for storage assuming current demands; however, with a projected wet season demand increase, about 200 to 300 AF from both basins would be available for storage. This amount would not be sufficient to meet projected water demand for the CCSD during the dry



season, particularly when losses from evaporation, evapotranspiration, and siltation are also considered. It is noted that the intensified pumping of the San Simeon groundwater wells may draw down the aquifer impacting the reliability of this Alternative.

6.6 "JACK CREEK DAM AND RESERVOIR" ALTERNATIVE

This Alternative consists of the construction of a 95-foot high on-stream dam located on Jack Creek in Dover Canyon; refer to Exhibit 6-4 (Seasonal Storage Alternatives). The reservoir, with a storage capacity of 4,705 AF, would collect run-off from the Dover Canyon watershed during the wet season. The watershed has an average run-off of 1,655 AFY. Releases would be made during the dry season, and would need to be pumped over the divide, which separates Dover Canyon and Santa Rosa Creek. All flow of Dover Canyon during the dry season would be released to Jack Creek and therefore to Santa Rosa Creek, for recharge of the groundwater basin.

This Alternative would require construction of a dam, reservoir, pump station, pipeline, two new extraction wells, and a treatment facility. An earth filled dam approximately 95 feet high with a crest length of 700 feet would need to be constructed. Approximately 15 feet of bottom excavation would also be required. The dam is expected to have a spillway capacity of 12,500 cfs and ten feet of gross freeboard. The reservoir depth is expected to be 80 feet. Minimal slope stabilization would be required at the dam site. A 567 gpm pump station would be required to pump the release over the divide and into Santa Rosa Creek. With 1,000-foot elevation and 189-foot line losses, a total of 225 hp would be required. It is anticipated that the pump station would operate 300 days per year. The pipeline route would consist of 17,000 feet of eight-inch pipeline from the reservoir site over the divide to the release point at Santa Rosa Creek. Construction of the pipeline route is expected to be difficult, due to the steep terrain through landslide sensitive area. Two new extraction wells in the Santa Rosa Basin would be required to pump the increased supply. A filtration and chlorination treatment plant would also be required.

ENVIRONMENTAL REVIEW

Since the Jack Creek Dam Alternative would replace the desalination facility proposed by the WMP, the potential impacts from this Alternative are compared to the desalination facility. This Alternative assumes the impacts associated with the potable and recycled water distribution Project components would still occur.

Land Use

As with the proposed Project, this Alternative would be subject to compliance with the County and State regulatory framework, and would result in a less than significant impact regarding consistency with land use and planning policies and standards. Approval of plans would be required from the Department of Water Resources Division of Safety of Dams for this Alternative.

Aesthetics

Compared to the proposed desalination facility, short-term construction-related visual impacts may be greater under this Alternative, as a result of a minimum 160-acre area of disturbance for



the dam and reservoir, as well as a pipeline, extraction wells, and new treatment facility. Also, construction activities would introduce a considerable amount of heavy equipment and associated vehicles into the viewshed of the construction area. This Alternative would introduce a significantly larger element (i.e., a 95-foot high dam), as well as new elements (approximately 160-acre reservoir, pump station, and water treatment facility) into the viewshed; thus, the long-term visual impacts may be greater.

Traffic and Circulation

The construction phase of this Alternative would result construction truck trips and vehicular trips by on-site workers over an extended time frame (approximately three years) here. Thus, this Alternative would generate a significantly greater amount of construction-related traffic. The short-term interruptions to traffic access along Highway 1 and San Simeon Creek Road, which are anticipated to occur with the proposed desalination facility, would not occur with this Alternative. Coastal access would not be temporarily impeded, since this Alternative does not propose facilities under the beach.

The trip generation associated with the new treatment plant employees is not anticipated to cause a significant increase in traffic or to exceed an established LOS standard. Also, the dam, pipeline, and pump station would generate only infrequent trips for maintenance.

Air Quality

Short-term construction emissions would be significantly greater with this Alternative, than with the desalination facility, due to 15 feet of bottom excavation, construction of a 95-foot high dam, and new water treatment plant. The construction phase of this Alternative would result in increases in air emissions due to heavy machinery, increased truck trips, and increased vehicular trips by on-site workers over an extended time frame. Long-term air emissions would be similar to the emissions anticipated from the desalination facility, since a new water treatment plant and new mechanical equipment (pumping facilities) would be associated with this Alternative.

Noise

The short-term noise impacts from construction-related activities associated with this Alternative are anticipated to be greater than the proposed Project. The primary noise generating activities would involve excavation, grading, and scraping for construction of the 95-foot high dam. The degree of short-term noise impact would be dependant upon the proximity to noise sensitive receptors and the construction vehicle routes. Long-term stationary noise impacts could potentially be greater, depending on the size and location of the proposed treatment plant, wells, and pumping facilities, and proximity to noise-sensitive uses.

Biological Resources

Potentially significant biological resource impacts could occur with this Alternative. The following is a summary of the potential impacts to biological resources, which may occur with this Alternative:

- ◆ Approximately 160 acres of coast live oak, chaparral, and non-native grasses would be lost as a result of the dam and reservoir. These losses are considered significant and replacement of habitat would be a required mitigation measure.



- ◆ Approximately 16,500 feet of stream channel at the reservoir site would be lost.
- ◆ Construction-related impacts to aquatic species, including impacts to organisms and habitat from increased suspended sediment and turbidity during construction, and disruption of movement of species, would occur during the extended construction period required for the dam project.
- ◆ Operation-related impacts may include disruption of fish movement by dam project operation and changes in water temperatures. Water temperature can increase within dams during the summer months, which can impact native species when the water is released to the creeks. Most notably, the young-of-the-year steelhead that populate portions of the creeks during the summer could be impacted from the release of warmer water. Also, year-round release of water could alter the natural selection process and allow non-native species to propagate.
- ◆ Although, species of special concern were not found at the dam site during previous biological resource surveys, they are known to exist downstream of the proposed dam site. The regulated releases, as required during the dry season, would minimize impacts to these sensitive species. Special releases may also be required to minimize impacts to fish migration.
- ◆ No species of special concern were found along the pipeline route, but a more detailed biological study should be conducted after the route has been finalized. Short-term impacts with mitigation measures available, such as revegetation, are expected for the pipeline route.
- ◆ Impacts to the marine environment would be avoided with this Alternative, since the seawater intake and seawater concentrate return systems proposed by the Project would not be constructed.
- ◆ This Alternative would require compliance with the regulatory process (i.e., CDFG Stream/Lake Alteration Agreement, ACOE Section 404, USFWS Section 10(a) Permit, and Section 23.07.172 of the CZLUO (Wetlands).
- ◆ This Alternative may result in impacts to wildlife corridors, since it proposes construction of pipeline facilities along Jack and Santa Rosa Creeks.

More detailed biological studies are needed to determine the extent of potential impacts.

Cultural Resources

The potential for impacts to paleontological and archaeological resources may be greater with this Alternative, as a greater amount of land area would be disturbed during construction. This Alternative would avoid potential impacts to the three historical sites located in proximity to the proposed desalination facility. More detailed cultural studies are needed to determine the extent of potential impacts.

Geology and Soils

The proposed dam site is located in a geologically stable environment and thus is considered structurally reliable. As with the proposed Project, this Alternative would be susceptible to seismic impacts and therefore subject to compliance with the County's Building and



Construction Ordinance and Section 23.07.080 of the CZLUO. Overall, this Alternative may result in greater geology and soil impacts, as it would involve a significantly larger structure (95-foot high dam) and several new structures (pump stations, wells, and water treatment plant) that could be susceptible to adverse geologic conditions, as compared to the proposed desalination facilities and pipelines.

Hydrology and Water Quality

The source of water for the Alternative is run-off from the Dover Canyon watershed, which has an area of five square miles and an average rainfall of 31 inches. Dover Canyon watershed is part of the Salinas River Watershed.

This Alternative may require a temporary diversion of the course of Jack Creek to facilitate construction of the dam. Also, operation of the dam could impact erosion or siltation. Further analysis is required to determine the overall changes in hydrology resulting from this Alternative.

As with the proposed Project, compliance with the NPDES regulatory provisions, the County's SWPPP, CZLUO guidelines and standards, and implementation of BMPs, would be required to reduce construction-related hydrology and water quality impacts to a less than significant level. An NPDES permit would be necessary for the discharge/recharge at San Simeon Creek as required by the RWQCB. Additionally, a construction NPDES permit would be required. BMPs such as erosion control and dust control would be required during construction.

Because Dover Canyon is part of the Salinas River Watershed, which has been over appropriated, all natural flow from Dover Canyon must be released to Jack Creek during the dry season. An alteration to the existing diversion permit at Santa Rosa Creek from SWRCB would be required for the diversion to the reservoir and increased dry season pumping. Adjustments must also be made for the right to store the water at the reservoir site. The revised permits should address any changes in the maximum rate of diversion, maximum annual diversion, and maximum dry season diversions.

This Alternative would avoid potential impacts where the proposed seawater and seawater concentrate return pipelines cross or would be located within the Van Gordon Creek and San Simeon Creek drainage courses and floodplain boundaries. Potential impacts associated with the seawater concentrate from the RO process would also not occur under this Alternative.

Public Health and Safety

The proposed dam site is located in geological stable environment and thus is considered structurally reliable. Further, construction of the proposed dam would be subject to compliance with the County's Building and Construction Ordinance. Further analysis is required to determine the potential inundation areas and public safety impacts associated with the dam proposed by this Alternative.

The addition of a packaged filtration and chlorination plant would be required to meet water treatment requirements associated with this Alternative. Thus, the water treatment plant associated with this Alternative would involve treatment processes that require compliance with County EHD regulations regarding storage and reporting of hazardous materials pursuant to State and Federal requirements.



Public Services and Utilities

This Alternative is not anticipated to result in impacts to recreational facilities, since it would not involve construction along Highway 1 or temporarily impede access to the coast or San Simeon Creek State Park campsites. Similar to the proposed Project, impacts regarding fire protection, police protection, and solid waste would not be significant with this Alternative.

Water Resources

Because this Alternative utilizes groundwater from the Santa Rosa Basin, treatment for iron and manganese, as well as disinfection, in accordance with the Safe Drinking Water Act, would be required. The addition of a filtration and chlorination plant would be required to meet treatment requirements.

This Alternative is expected to store 700 AF from the San Simeon Basin and Santa Rosa Basin. However, in the future when wet season demand increases, only 200 AF from both basins would be available for storage. The reservoir would be designed to store up to 1,000 AF, to allow for additional supply from unused portions from previous years when demands are low.

Population, Housing, and Growth

Similar to the proposed Project, implementation of this Alternative would provide additional water supplies, removing what was previously a constraint to development in Cambria. By removing this constraint, the rate of growth in Cambria could be affected. However, as with the proposed Project, this Alternative is not anticipated to result in an unregulated amount of growth, following implementation of the proposed BRP, and continued implementation of the existing County and CCSD adopted growth management policies. Based on an analysis of the existing growth restraints and the proposed BRP, this Alternative would result in less than significant growth inducing impacts, similar to the proposed Project.

ABILITY TO MEET PROJECT OBJECTIVES

This Alternative was designed to supply 700 AFY, which is considered sufficient to meet future total and dry season demand for the CCSD, with the 50 percent quality of life increase, when used in conjunction with the existing groundwater sources. As discussed above, all flow from Dover Canyon during the dry season would be released to Jack Creek and therefore to Santa Rosa Creek, increasing the supply reliability.