



## **5.12 WATER RESOURCES**

This section summarizes information on the water resources of Cambria, provides an evaluation of the potentially significant impacts on water resources, and recommends mitigation measures to avoid or lessen potential impacts, as necessary.

### **EXISTING CONDITIONS**

This section describes the regulatory setting and existing water supply conditions in Cambria. Existing conditions regarding water supply were identified through review and compilation of existing information included in the following documents:

- ◆ *Assessment of Long-Term Water Supply Alternatives Final Report*, March 2004;
- ◆ *Cambria and San Simeon Acres Community Plans of the North Coast Area Plan Draft EIR*, May 18, 2005;
- ◆ *2005 Resource Management System Annual Resource Summary Report*, December 20, 2005;
- ◆ *Cambria and San Simeon Acres Community Plans of the North Coast Area Plan Final EIR*, October 6, 2005;
- ◆ *Cambria Community Services District Urban Water Management Plan*, Adopted December 15, 2005; and
- ◆ North Coast Area Plan Cambria and San Simeon Acres Portions Updated (November 6, 2007).

### **REGULATORY SETTING**

#### **Drinking Water Regulations**

The Safe Drinking Water Act (SDWA) of 1974 (PL 93-523), as amended, is the primary Federal law that ensures drinking water quality. Under SDWA, the United States Environmental Protection Agency (USEPA) sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement these standards. In the State of California, the Department of Health Services (DHS) has primary enforcement responsibility (primacy) for the Federal drinking water regulations and guidelines, in addition to certain State regulations that are more stringent than Federal regulations.

For the purpose of this discussion, it is noted that the Cambria Community Services District's (CCSD) population is currently between 6,000 and 8,000 persons, with approximately 4,000 service connections, and as such is considered a medium-sized water system (i.e., serving 3,301 to 10,000 people).

Drinking water regulations in the U.S. and in California, have undergone significant revisions due to increasing contamination of water sources, improved analytical methods used in



monitoring water sources and more definitive knowledge of health risks associated with waterborne contaminants. The revisions are being driven by:

- ◆ Federally enacted SDWA Amendments of 1986 (PL 99-339) and 1996 (PL 104-182).
- ◆ Local concerns in the State of California, where the DHS has primacy in implementation of the SDWA and subsequent amendments.
- ◆ Regulatory negotiation process of health, environmental, and economic issues involving USEPA and other stakeholders.

This section presents Federal and State regulations covering current drinking water regulations governing the treatment requirements for utilization of the groundwater source as potable water; refer to Section 3.0 (Water Quality Requirements) of the Assessment of Long-Term Water Supply Alternatives Final Report for a discussion of proposed drinking water regulations. Drinking water regulation is extremely complex and is constantly under revision. Only those regulations that are most relevant to CCSD's water supply are discussed in detail. Generally, the following types of standards govern water quality in California:

- ◆ **Primary Maximum Contaminant Levels (MCLs):** Primary MCLs are established by USEPA as well as DHS for a number of chemical and radioactive contaminants found in drinking water. An MCL is the maximum permissible level of a contaminant in water that is delivered to any user of a public water system. They are enforceable standards. MCLs are set as close to Maximum Contaminant Level Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. Primary MCLs may be established by DHS as long as they are more stringent than those set by USEPA. Primary MCLs can be found in Title 22 California Code of Regulations (CCR) for inorganic chemicals, trihalomethanes, radioactivity and organic chemicals. Current primary MCLs are listed in Appendix A of the Assessment of Long-Term Water Supply Alternatives Final Report.
- ◆ **Secondary Maximum Contaminant Levels:** Secondary MCLs are established for a number of chemicals, characteristics, and constituents and address aesthetic qualities such as taste, odor, or appearance of drinking water. Secondary MCLs may be established by DHS as long as they are more stringent than those set by USEPA. Contaminants with primary MCLs may also have Secondary MCLs. Current Secondary MCLs and Secondary MCL ranges are presented in Appendix A of the Assessment of Long-Term Water Supply Alternatives Final Report.
- ◆ **Maximum Contaminant Level Goals:** MCLGs are set at or below the MCLs for specific contaminants. They are health effect-based goals for chemicals in drinking water, developed by USEPA. MCLGs provide one basis for revising MCLs, along with estimated cost and technological feasibility. Current MCLGs are presented in Appendix A of the Assessment of Long-Term Water Supply Alternatives Final Report.
- ◆ **Public Health Goals (PHGs):** State PHGs, similar to the federal MCLGs, are health effect-based goals for chemicals in drinking water, developed by the Office of Environmental Health Hazard Assessment (OEHHA). PHGs are only established for contaminants for which MCLs have or will be established. PHGs for noncarcinogenic



chemicals in drinking water are set at a concentration “at which no known or anticipated adverse health effects will occur, with an adequate margin of safety.” For carcinogens, PHGs are set at a concentration that “does not pose any significant risk to health.” PHGs provide a basis for revising MCLs, along with cost and technological feasibility. They are not enforceable standards. Current PHGs are presented in Appendix A of the Assessment of Long-Term Water Supply Alternatives Final Report.

- ◆ Action Levels (ALs): ALs are intended as guidance and are set for some emerging contaminants that are not otherwise regulated.

As a result of the 1996 SDWA Amendments, water purveyors are required to publish consumer confidence reports each year. These reports inform the public on the quality of the drinking water with respect to primary drinking water standards, secondary drinking water standards, any detection of coliform bacteria, lead and copper measurements, as well as sodium and hardness levels. CCSD’s latest Consumer Confidence Report is available on the CCSD website. Key rules that pertain to potable water supplies in CCSD involving the following the following constituents are discussed in the Assessment of Long-Term Water Supply Alternatives Final Report.

- ◆ Total Chromium;
- ◆ Lead and Copper;
- ◆ Total Coliform;
- ◆ Methyl Tert-Butyl Ether;
- ◆ Iron and Manganese;
- ◆ Total Dissolved Solids, Hardness, and Sodium; and
- ◆ Surface Water Treatment.

## **North Coast Area Plan (NCAP)**

### **COMBINING DESIGNATION OVERLAYS**

Combining Designations (CD) are special overlay land use categories applied in areas of San Luis Obispo County (County) with potentially hazardous conditions or significant natural resources. In these areas, more detailed project review is needed to avoid or minimize adverse environmental impacts, or effects of hazardous conditions on proposed projects. The following CDs relative to water resources have been applied in Cambria:

- CD     Public Facilities Combining Designations. The Land Use Element designates approximate locations of major proposed public facilities as Combining Designations. These include schools, parks, water and sewage treatment works, and other facilities necessary to serve the population proposed in the Plan. Full review of projects which might be proposed to implement these facilities is necessary, because a Combining Designation does not assume that a project will be found consistent with the Local Coastal Program and other environmental policies and regulations.....

### **PLANNING AREA STANDARDS**

The NCAP contains special “standards” for the North Coast Planning Area that are mandatory requirements for development, designed to handle identified problems in a particular rural area,



or to respond to concerns in an individual community. The criteria for application of the Planning Area standards are discussed in detail in Section 5.1 (Land Use and Planning). The NCAP standards are presented below according to the location in the planning area where they apply (i.e., Cambria Urban or Rural). The NCAP standards<sup>1</sup> regarding water resources that are relevant to the proposed Project are:

### Cambria Urban Area

#### *Community Wide (CW):*

CW-2 Reservation of Service Capacity. The Cambria Community Service District (CCSD) shall reserve available water and sewage treatment capacity for the following priority uses:

- A. Visitor-Serving Uses. To preserve and allow for continued growth of visitor-serving facilities, 20 percent of water and sewer capacity shall be reserved and maintained for visitor-serving and commercial uses.
- B. Affordable Housing - Program Required. The CCSD shall reserve sufficient water and sewer capacity to serve affordable housing. Prior to issuance of any further water will-serve letters, the District shall propose to the County a program to accommodate a limited number for affordable housing units each year. The program shall be consistent with definitions of affordable housing in the County Housing Element. The exact number shall be determined based on unmet housing needs, and availability of water.

CW-4 Limitation on Development.

- A. Water Service in Cambria. Until such time as may be otherwise authorized through a coastal development permit approving a major public works project involving new potable water sources for Cambria, new development not using CCSD connections or water service commitments existing as of November 15, 2001 (including those recognized as "pipeline projects" by the Coastal Commission on December 12, 2002 in coastal development permits A-3-SLO-02-050 and A-3-SLO-02-073, shall assure no adverse impacts to Santa Rosa and San Simeon Creeks;
- B. Water Conservation Requirements. Unless this requirement is otherwise modified through a Coastal Development Permit authorizing a major public works water supply project for Cambria, new development resulting in increased water use shall offset such increase through the retrofit of existing water fixtures within the CCSD's service area, or through other verifiable actions to reduce existing water use in the service area (e.g. the replacement of irrigated landscaping with xeriscaping). Accordingly, all coastal development permits authorizing such development shall be conditioned to require applicants to provide to the Planning Director (or the CCC Executive Director where applicable) for review and approval prior to construction,

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<sup>1</sup> It is noted that the sub-sections of the NCAP Standards that are not relevant to this issue area have been presented in summary form; refer to the 2007 NCAP for the text in its entirety.



written evidence of compliance with CCSD Ordinance 1-98, as approved by the CCSD Board of Directors on January 26, 1998, and modified on November 14, 2002, and as codified in CCSD Code Chapter 4.20 in 2004; however, no retrofit credits may be obtained by extinguishing agricultural water use, or funding leak detection programs. Such permits shall also be conditioned to require written confirmation from the CCSD that any in-lieu fees collected from the applicant have been used to implement projects that have reduced existing water use within the service area in an amount equal or greater to the anticipated water use of the project.

- C. Supplemental Water Supply Standards. Any major public works water supply project to support new development within the CCSD service area shall be subject to the following approval standards and findings:
1. Maximum Capacity. The maximum service capacity of the project will not induce growth inconsistent with the protection of coastal resources and public access and recreation opportunities.
  2. Creek Withdrawals. The project shall assure that CCSD water withdrawals from Santa Rosa and San Simeon Creeks will be sufficiently limited to protect: (1) adequate instream flows necessary to support sensitive species and other riparian/wetland habitats within the reach of the streams affected by CCSD pumping; (2) underlying groundwater aquifers; and (3) agricultural resources.
  3. Priority Uses. The project shall demonstrate that water capacity is available and allocations are reserved for Coastal Act priority uses.
  4. Fire Safety. The project shall demonstrate that water storage and delivery systems will be adequate to meet the fire safety and other public health and safety needs of new development supported by the project, consistent with the protection of other coastal resources.
  5. Other Public Service Capacities. The maximum level of development supported by the project shall not exceed that supported by other available public services, including wastewater treatment capacity and road capacity. The project shall not induce growth beyond that level necessary to maintain acceptable road Levels of Service and circulation to protect coastal access and recreation opportunities, and provide for public safety (e.g., fire evacuation).
  6. Water Supply Management Planning. The project shall demonstrate that it is an element (where economically and environmentally appropriate) of a balanced water supply portfolio that also includes other supply alternatives, including conservation and water recycling to the maximum extent practicable.
  7. Buildout Reduction. That reasonable progress is being made to implement a buildout reduction program within the boundaries of the CCSD.



- CW-5 Desalinization Plants. Desalinization plants constructed to serve development within the service boundaries of the CCSD shall only be permitted if owned and operated by the CCSD. Private desalinization plants are prohibited.
- CW-8 Cambria Community Services District Review. Prior to application acceptance, land use and building permit applications shall include a written verification of water and sewer service from the Cambria Community Services District. A water and sewer service condition compliance letter from the Cambria Community Services District shall be provided to the Department of Planning and Building prior to final building inspection.

## **Annual Resource Summary Report**

Resource information is compiled, evaluated, and presented annually for use by the County Board of Supervisors under the provisions of the Resource Management System (RMS) of the County General Plan, Framework For Planning. The current resource information is presented in the 2005 Annual Resource Summary Report.

### **RMS FRAMEWORK**

The RMS attempts to balance land development with the resources necessary to sustain such development. The first step in this process is to identify areas which possess the necessary physical resources to support growth. When a deficiency becomes apparent, three courses are possible to avoid jeopardizing public health or welfare; the resource capacity may be expanded, conservation measures may be introduced to extend the availability of unused capacity or development may be restricted or redirected to areas with remaining resource capacity. Hence, the RMS addresses development in terms of appropriate distribution, location, and timing rather than growth versus no-growth.

The RMS utilizes three alert levels (called levels of severity) to identify differing levels of resource deficiencies. Level I occurs when sufficient lead time exists either to expand the capacity of the resource, or to decrease the rate at which the resource is being depleted. Level II identifies the crucial point at which some moderation of the rate of resource use must occur to prevent exceeding the resource capacity. Finally, Level III occurs when the demand for the resource equals or exceeds its supply. Levels of severity for each RMS resource are determined by calculating the number of years until the remaining resource capacity would become exhausted, based on assumptions about population growth and the rate of resource consumption.

Specifically, the RMS water supply criteria are:

- ◆ Level of Severity I. When projected water demand over the next nine years equals or exceeds the estimated dependable supply.
- ◆ Level of Severity II. When projected water demand over the next seven years equals or exceeds the estimated dependable supply.
- ◆ Level of Severity III. When the existing water demand equals or exceeds the dependable supply.



The RMS water system criteria are:

- ◆ Level of Severity I. When the water delivery system is projected to be operating at design capacity within seven years.
- ◆ Level of Severity II. When the water delivery system is projected to reach design capacity within the next five years.
- ◆ Level of Severity III. When the water delivery system reaches its design capacity.

The RMS also lists a variety of steps which can be taken by the Board of Supervisors when it is determined that a resource has reached a particular level of severity. These are referred to as “Action Requirements,” and they may also be found in the Appendix of the Annual Summary Report.

It is important to make a distinction between “recommended” levels of severity and levels of severity that have been certified by the Board of Supervisors. All levels of severity are, initially, recommendations proposed by staff, based on information provided by members of the Resource Management Task Force and the various service providers. These recommended levels of severity should be taken as general indicators of declining resource availability. The “Action Requirements” are not invoked in response to recommended levels of severity. If the Board of Supervisors considers that a particular resource situation is not being dealt with adequately, or that a failure to act could result in serious consequences, it sets in motion the certification process, which ultimately results in implementation of the required “actions.” The certification process involves the completion of a resource capacity study (RCS), which investigates the resource issue in more detail than the preliminary analysis, which resulted in the “recommended” level of severity. The RCS is the subject of public hearings by the Planning Commission and the Board of Supervisors. If the Board of Supervisors certifies a level of severity, the action requirements appropriate for that level of severity, as determined by the Board, are implemented.

The 2005 Annual Resources Summary Report notes the following regarding water supply conditions in Cambria:

*The water supply for the Cambria area is vulnerable to drought because the groundwater basins provide the only supply of water during the dry season and because groundwater storage capacity is small relative to the demand for water.*

The Annual Resource Summary Report also concluded that the existing water demand in Cambria exceeds the dependable supply. Further, the existing water delivery system does not meet the fire flow and associated storage criteria established by the CCSD’s water master planning. has reached its design capacity. Therefore, the “recommended” levels of severity for both water supplies and water systems in Cambria, based on the findings of the Summary Report are Level III Severity.

Recommended Actions for Level III Severity:

1. Direct the Planning Department, in cooperation with the Cambria Community Services District, to prepare a Resource Capacity Study to be based on the findings



of the USGS study, the CCSD's Baseline Water Supply Analysis, and other information available from the CCSD.

2. Encourage continued implementation of water conservation measures in Cambria.
3. Review new proposed landscaping plans for inclusion of water-efficient design elements.
4. Encourage voluntary lot mergers and other actions to support the CCSD Buildout Reduction Program.
5. Encourage continuation of efforts to acquire alternative water supplies.
6. Facilitate and expedite, whenever possible, future permitting of CCSD water projects.

### **Urban Water Management Plan**

Assembly Bill 797 (the Urban Water Management Planning Act) mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water. To this end, the CCSD adopted the Cambria Community Services District Urban Water Management Plan (UWMP) on December 15, 2005. The UWMP corresponds to the guidelines developed by the California Department of Water Resources, as presented in the State Water Code. Refer to the Existing Setting discussion below for an overview of the available water sources, water use provisions, and buildout potential, as presented in the UWMP.

### **RELATIONSHIP BETWEEN GROUNDWATER AND WASTEWATER QUALITY**

The drinking water quality must be consistent throughout the system and all Primary and Secondary MCLs must be met. Also, water quality must meet or exceed the current quality in the system or customer complaints are likely to result. The water quality constituents that CCSD has the most difficulty addressing are hardness, iron and manganese. In addition to the drinking water quality issues, high concentrations of sodium, chloride, and TDS in the wastewater effluent have also raised concerns due to increasing levels of these constituents in downstream monitoring wells. The high hardness levels in the drinking water have resulted in an increased use of individual water softeners. Because individual softeners dispose of brine discharge directly to the wastewater system, high levels of sodium and chloride are found in the wastewater effluent and in the down-gradient monitoring wells.

### **EXISTING SETTING**

Potable water and wastewater treatment resources in Cambria are managed by the CCSD. To meet potable water demand, the CCSD relies solely upon wells that draw from local groundwater aquifers along the San Simeon and Santa Rosa Creeks. These aquifers are generally narrow and thin, and exhibit the characteristics of subterranean streams. Primarily, the San Simeon and Santa Rosa Creeks recharge the aquifers.





With CCSD pumping, groundwater levels generally exhibit a characteristic pattern of consistent high levels during the wet season, steady decline during the dry season, and rapid rise when the wet season resumes. Previous investigations have concluded that the beginning date and duration of stream-flow in the creeks are the most important factors in aquifer recharge. Pumping during the wet season does not appear to affect groundwater levels. Therefore, water supply availability in the dry season condition is currently the most important water supply issue for CCSD.

During periods of drought, there is insufficient creek flow to restore the groundwater levels in the aquifer and the groundwater level is drawn down closer to sea level to provide the community with water. During an extended period of drought, CCSD's water supply could be exhausted.

Kennedy Jenks Consultants conducted a detailed review of groundwater withdrawals by the CCSD from 1988 to 2002; refer to Table 5.12-1 (CCSD Water Production). In summary, the average annual withdrawal over this time period was 729 acre-feet per year. CCSD's total production varied, depending upon the winter rainfall amounts and timing of rainfall events. For years 2000 through 2005, the total production averaged 785 acre-feet per year.

**Table 5.12-1  
CCSD Water Production**

Year	San Simeon Basin (AF)			Santa Rosa Basin (AF)			Total (AF)		
	Wet	Dry <sup>1</sup>	Total	Wet	Dry	Total	Wet	Dry	Total
1988	283.0	282.6	565.6	70.5	183.4	253.9	353.5	466.0	819.51
1989	297.9	324.5	622.4	36.8	137.8	174.6	334.7	462.3	797.0
1990	252.1	205.1	457.2	62.2	144.4	206.6	314.3	349.5	663.8
1991	178.8	226.1	404.9	67.4	83.4	150.8	246.2	309.5	555.7
1992	265.7	276.6	542.3	26.7	108.7	135.4	292.4	385.3	677.7
1993	299.6	390.9	690.5	0.8	0.1	0.9	300.4	391.0	691.4
1994	240.4	297.6	538.0	41.1	83.0	124.1	281.5	380.6	662.1
1995	283.5	392.4	675.9	1.9	0.0	1.9	285.4	392.4	677.8
1996	293.2	424.8	718.0	0.18	0.12	0.3	293.3	425.0	718.3
1997	319.0	359.5	678.5	12.6	94.7	107.3	331.6	454.2	785.8
1998	294.5	412.8	707.3	0.08	0.12	0.2	294.6	412.9	707.5
1999	306.7	467.4	774.1	0.07	0.46	0.53	306.8	467.8	774.6
2000	345.8	453.0	798.8	0.0	0.0	0.0	345.8	453.0	798.8
2001	321.3	424.0	745.3	9.0	43.7	52.7	330.3	467.7	798.0
2002	343.1	384.6	727.8	7.3	74.4	81.7	350.4	459.0	809.5

Note:

1 Based on the assumption of a May 1 start date and an October 31 end date for the dry season. The actual dates will vary each year depending upon creek flows and rainfall patterns.

Source: CCSD, CCSD Water Operations Staff Report, December 2003.

The following State agency permits, which affect the quantity of groundwater that the CCSD can withdraw from the San Simeon and Santa Rosa Creek basins, further restrict Cambria.



- ◆ San Simeon Creek Basin. The State Water Resources Control Board (SWRCB) allows a maximum diversion of 1,230-acre feet/year, a maximum dry season diversion of 370 acre-feet and a maximum rate of diversion of five-acre feet/day. The California Coastal Commission (CCC) Coastal Development Permit also restricts groundwater to a maximum annual withdrawal of 1,230 acre-feet.
- ◆ Santa Rosa Creek Basin. The State Water Resources Control Board Maximum allows a maximum diversion of 518 acre feet/year, a maximum dry season diversion of 260 acre feet and a maximum rate of diversion of 5.3 acre feet/day. The California Coastal Commission Coastal Development Permit defines the Santa Rosa Creek dry period as between July 1 and November 20, and retains the 260-acre feet restriction between these dates.

From the San Simeon and Santa Rosa Basins combined, the current water rights diversion permits from the SWRCB allow CCSD to pump a maximum of 1,118 acre-feet during the wet season and 630 acre feet during the dry season. However, the current CCC Development permit limits the total annual diversion from both creeks to no more than 1,230 acre-feet. Additionally, the dry season start date duration and beginning groundwater levels limit the actual availability of groundwater from both basins.

The Baseline Water Supply Analysis (Kennedy Jenks Consultants, 2000) included a system of models based on historical data that projected basin response to increased levels of water demand in order to determine the adequacy of the groundwater supply. From the model, it was determined that the current groundwater supply was marginal to inadequate to provide a 90 percent level of reliability for water demands in the year 1999 (3,796 connections). It was also determined that current groundwater supply was inadequate to provide a 95 percent reliability level for the same water demand. Furthermore, it was determined that the basins are not adequate to provide a 90 to 95 percent level of reliability for water demands greater than 10 percent of the 1999 demands (4,176 connections). Thus, the basins cannot reliably meet the increased demands of the waiting list and grandfathered connections (4,650 residential connections) without an additional source of recharge.

As determined by past modeling within the 2000 Baseline Report, a total of 286 acre-feet of groundwater from the San Simeon Basin, and 201 acre-feet from the Santa Rosa Basin would be available during the dry season. However, since completion of the 2000 Baseline Report, the new well SR4 has been shut down periodically during the dry season to ensure its use was not impacting riparian habitat. To err on the conservative side with regard to habitat protection, advanced planning has assumed the production from the Santa Rosa aquifer will be zero during the dry season. This is further indicated in Table 3-1 (Existing Supply Availability), which shows the total acre-feet per year during the dry season as only being equal to the amount produced by the San Simeon aquifer.

Historically, the CCSD has used conservation as a means of extending its existing supplies. A plumbing retrofit program was initiated in 1988. Water conservation is promoted in local businesses and existing residences. Water-efficient fixtures are required on new construction and retrofitting of existing buildings is required in order to receive a connection permit. Additionally, rebates are provided to customers, and incentives are provided to businesses and homeowners. The CCSD has adopted several Ordinances, which assist in reducing the District's demand for water. Ordinance 3-2000 implemented water conservation program that includes three stages: Stage 1 sets a drought watch condition, Stage 2 a water shortage



condition, and Stage 3 a drought emergency. Additionally, Ordinance 4-2000 permanently prohibited the waste of water. Each of these ordinances has since been codified into the CCSD's Municipal Code.

In November 2001, the CCSD declared a Water Code 350 emergency that has remained in effect since. There has been no issuance of an intent-to-serve letter by the CCSD for future water connections, since the emergency was declared.

During 2005, the CCSD estimated that it had approximately 3,764 residential connections (typically single-family homes) and 222 commercial connections (primarily hotels, restaurants, schools, and local businesses). Approximately 25 percent of the CCSD's billed meter readings are charged to commercial accounts, with the remaining 75 percent billed to residential accounts.

## **SIGNIFICANCE CRITERIA**

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form. The Initial Study includes questions relating to water resources and facilities. The issues presented in the Initial Study Checklist have been utilized as thresholds for significance in this section. Accordingly, a project may create a significant environmental impact if it would:

- ◆ Violate any water quality standards or waste discharge requirements. (Refer to Section 5.9 (Hydrology and Water Quality) for a discussion of storm water quality standards and waste discharge requirements, and Section 5.10 (Public Health and Safety) for a discussion of recycled water quality standards).
- ◆ Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ◆ Cause substantial depletion of groundwater supplies or substantial interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- ◆ Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, temperature, dissolved oxygen, etc.).
- ◆ Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.).
- ◆ Change the quantity or movement of available surface or groundwater.
- ◆ Adversely affect community water service provider; refer to Section 7.0 (Effects Found Not to be Significant).
- ◆ Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Also, refer to Section 5.9 (Hydrology and Water Quality) for a discussion of storm water quality standards and waste discharge requirements, and Section 5.10 (Public Health and Safety) for a discussion of recycled water quality standards).



- ◆ Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ◆ Have insufficient water supplies available to serve the project from existing entitlements and resources, and new or expanded entitlement is needed.

## **IMPACTS AND MITIGATION MEASURES**

### **SURFACE AND GROUNDWATER SUPPLIES**

- ❖ **IMPLEMENTATION OF THE PROPOSED WATER MASTER PLAN IMPROVEMENTS WOULD AFFECT AVAILABLE SURFACE AND GROUNDWATER SUPPLIES. THE WATER MASTER PLAN PROJECT WOULD NOT CAUSE SUBSTANTIAL DEPLETION OF GROUNDWATER SUPPLIES OR SUBSTANTIAL INTERFERENCE WITH GROUNDWATER RECHARGE. IMPACTS ARE CONSIDERED LESS THAN SIGNIFICANT WITH ADHERENCE TO THE STATE AND SAN LUIS OBISPO COUNTY REGULATORY REQUIREMENTS.**

**Impact Analysis:** As discussed in Section 3.0 (Project Description), the CCSD was forced to shutdown its historic Santa Rosa supply wells (Wells SR-1 and SR-3) because Methyl tert-Butyl Ether (MtBE) was detected. Due to the lack of sufficient recharge during the drought periods and the influx of summer tourists, CCSD's water supply could be exhausted during an extended drought. Analysis determined that "the current groundwater supply was marginal to inadequate to provide a 90 percent level of reliability for water demand in the year 1999 (3,796 connections)." These conditions are further substantiated by the County's Annual Resource Summary Report, which 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, the CCSD master planning has included improvements to the distribution system and associated tank storage to allow for an increased fire flow. This increase is based on recommendations by the CCSD Fire Department, which are based on a long urban/wildland fire interface, high fuel loads, and relatively close proximity of adjacent structures. 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.

To provide the additional supply needed, the Water Master Plan (WMP) proposes to reduce overall potable water demand and increase supply availability during the dry season. Various alternatives were evaluated based on a ranking scale for specified criteria: water supply capability, water quality, reliability, required agreements/ institutional issues, environmental issues, permitting/CEQA, and cost and availability of funding. The recommended plan consists of a combination of long-term supply alternatives. More specifically, the CCSD's long-term water supply strategy consists of recycled water, water demand management, and seawater desalination. The WMP also proposes improvements to the existing potable water distribution system.



## Potable and Recycled Water Distribution Systems

Recycled Water System. This element would involve the use of recycled water to augment potable supplies by providing a non-potable source of water for irrigation purposes at various locations within Cambria. A detailed analysis of the recycled water distribution system is presented in the Final Task 3 Report: Recycled Water Distribution System Master Plan (July 2004).

The use of recycled water to meet non-potable demands would enable CCSD to reduce its potable water demand. CCSD operates a 1.0 million gallon per day (MGD) extended aeration wastewater treatment plant (WWTP), which provides treatment to wastewater from Cambria and the San Simeon State campgrounds. Currently, the treated wastewater effluent is percolated into the ground between the San Simeon well field and the Pacific Ocean to provide a “mound” of fresh water that slows the San Simeon Creek aquifer towards the sea. During the dry summer season, flows through the plant average approximately 650,000 gallons per day. During the critical dry season, the CCSD wastewater department estimates that approximately 250,000 gallons per day (gpd) is required for percolation into the ground between the well field and ocean to maintain its hydraulic mound operation. This would leave approximately 450,000 gpd available for irrigation and/or seasonal storage of recycled water. However, it is not known how much of the approximately 450,000 gpd provides flow into the nearby lagoon and riparian areas. Therefore, a no net increase approach was developed within the water analysis to determine how much of the future recycled water use was existing versus new demands.

The proposed recycled water system would involve adding tertiary treatment at the existing WWTP, distribution pipelines, storage reservoirs, and pump stations. To further lower demands, the use of a proprietary Evaporative Control Systems® (ECS) irrigation system is also described; refer to Section 3.0 (Project Description). In addition, future use of desalinated seawater for the potable water supply would increase the volume of effluent at the percolation ponds. These proposed improvements would enable the CCSD to divert a portion of the water that is currently percolated into the San Simeon Creek aquifer to various irrigation sites throughout Cambria. Existing demands would simply shift the use of water from the upstream potable well field to the downstream mound. Therefore, existing demands converted from potable to non-potable recycled water would have no net increase in the volume of water being diverted from the aquifer system. Of the potential uses, approximately 99 acre-feet were considered for possible service with highly treated wastewater effluent due to their proximity to a proposed distribution pipeline. Of the 99 acre-feet of likely irrigation sites identified, 50 acre-feet in new demands out of the District’s existing hydraulic mound area were identified. Of the 99 acre-feet of likely irrigation sites identified, 50 acre-feet in new demands out of the District’s existing hydraulic mound area were identified. From review of 2005 wastewater flows and water production during the summer irrigation period, approximately 75 percent of the water produced by the CCSD flowed through its WWTP. Assuming this same percentage is held in the future, approximately 75 percent of any new supply (i.e., new service connection demands after the current moratorium is lifted) would be added to the amount of treated WWTP effluent entering the percolation pond area. To be conservatively low, and projecting current residential demand levels onto new residential service connections, approximately 100 acre-feet of additional effluent would be added to the percolation pond area over the 22-year buildout period. This amount would more than offset the 50 acre-feet estimated for future recycled water demands.

As previously noted, Title 22 establishes the quality and/or treatment processes required for an effluent to be used for a specific non-potable application. The WWTP currently provides only secondary treatment. The WMP proposes to use the effluent for unrestricted irrigation.



Therefore, the WMP proposes to add disinfection and tertiary treatment to the existing WWTP to meet Title 22 requirements for production and use of recycled water. Implementation of the proposed recycled water system may require the following permits/approvals:

- ◆ CCSD's current WDR, which was issued by the RWQCB, would need to be amended for the proposed recycled water diversions.
- ◆ Prior to incorporation of a recycled water system, the CCSD must obtain approval from the SWRCB.
- ◆ Due to the potential impact of the percolated water on down-gradient stream flow, an appropriate water rights diversion permit may be required to allow alternate use of recycled water that is currently percolated into the San Simeon Creek aquifer. The diversion of recycled water may require further geohydrologic study to assess potential impacts. If the percolated flow creates artificial habitat through the lagoon area, a biologist would also need to assess this further.

Draft policy recommendations by the SWRCB have also proposed limiting future recycled water TDS to avoid potential impacts to existing groundwater aquifers. To address this concern, mitigation is recommended to reduce TDS in the recycled water through the use of nanofiltration (low pressure RO), as part of the treatment train being proposed at the wastewater treatment plant. In addition, the use of desalinated seawater as a potable water source would reduce the TDS concentration in the wastewater effluent below current levels. This occurs due to desalinated seawater being much lower in hardness and TDS concentration than the existing groundwater supplies.

Potable Water Distribution System. The potable water distribution system improvements are proposed to alleviate identified hydraulic deficiencies, as well as address current storage deficiencies identified by the District. Proposed improvements include:

- ◆ Distribution pipeline improvements to eliminate system bottlenecks;
- ◆ Additional key pipeline interconnections between pressure zones, including pressure reducing valve stations;
- ◆ Pipelines to eliminate system bottlenecks;
- ◆ A new charring road fire pump;
- ◆ Additional tank storage;
- ◆ Improvements at the Liemert and Fiscalini tanks to better resist seismic forces.
- ◆ Pump station improvements;
- ◆ Replacement of the Rodeo Grounds Pump Station;
- ◆ Large diameter hose truck;
- ◆ Replacement of the Rodeo Grounds Pump Station;
- ◆ Increase emergency generator capacity;
- ◆ Supervisory control and data acquisition (SCADA) system; and
- ◆ Water yard relocation.

### **Water Demand Management**

Demand management would consist of improvements to the current conservation program and regulations to reduce potable water use for landscaping. Although CCSD's current conservation practices have already reduced the average per capita potable water consumption below the



state average, more efficient water demand management practices are proposed for further reduction in water consumption.

### **Seawater Desalination**

In order to provide an additional water supply during extended drought periods and the dry season, CCSD proposes to implement seawater desalination. The use of seawater desalination would be independent of the existing groundwater aquifer. Seawater desalination offers flexibility in operation and production, and suits CCSD's variable water supply needs. Seawater desalination is a very reliable source, particularly during droughts and critically dry years when additional demand is needed most. Seawater desalination, as proposed, would also allow CCSD to provide a better quality of water to its customers and has the potential to significantly reduce the use of individual water softeners, which would reduce the salt loadings at the WWTP.

The seawater desalination component would consist of a subterranean seawater intake, pumping and pipeline facilities to transport the seawater to a desalination plant, a reverse osmosis (RO) desalination treatment process, a groundwater blending system, and pumping facilities to pump the treated water into the distribution system. Seawater concentrate from the RO process would be returned in a separate pipeline back to a subterranean discharge system for return into the groundwater and seawater near the ocean interface. Depending on the number of RO units chosen and the number of days of operation, this Project component could provide between 300 gallons per minute (gpm) (300 AFY/Dry Season) and 740 gpm (602 AFY/Dry Season) of RO permeate flow (product water) during the critical dry season.

The agreements, permits, and approvals required for implementation of the proposed seawater desalination system are outlined in Section 3.6 (Agreements, Permits, and Approvals) and summarized as follows:

- ◆ A National Pollutant Discharge Elimination System (NPDES) permit for the discharge of the seawater concentrate would be required from the Regional Water Quality Control Board (RWQCB).
- ◆ A Domestic Water permit for the RO permeate (or Groundwater Blend) would be required from the California Department of Health Services to ensure the treated water meets regulations as outlined in the Safe Drinking Water Act.
- ◆ County approval and California Coastal Commission concurrence would be required.

### **Conclusion**

The potential adverse effects of withdrawing groundwater in excess of the sustainable yield of the aquifer (i.e., excessive groundwater pumping) include the reduction in groundwater levels that may make the use of some wells temporarily infeasible or more expensive to operate, reduction in riparian flows that may reduce biological habitat, and reductions in groundwater levels that may allow increased seawater intrusion along the coast. All of these effects are related to the use of groundwater in excess of the available supply. Implementation of the proposed WMP would further protect existing groundwater supplies by not interfering with groundwater recharge, and would not significantly affect available surface or groundwater, based on the following factors:



- ◆ As discussed above, the existing demands converted from potable to non-potable recycled water would have no net increase in the volume of water being diverted from the aquifer system. Providing water service to future customers, of which approximately 75 percent would return to the WWTP, would further offset new recycled water demands. A minimum of approximately 100 acre-feet per year of additional recycled water would become available to offset the estimated 50 acre-feet per year in future recycled water demands over the buildout period.
- ◆ The WMP would provide an additional water supply that is independent of the existing groundwater aquifers, which would meet the existing needs of the community and attain the established reliability criterion goals. Groundwater diversions beyond those already permitted to the District would not be required.
- ◆ As part of the proposed WMP, a Buildout Reduction Program has been developed that would limit the number of existing and future residential connections in the community to 4,650 (a resultant population of approximately 7,719 persons, which includes approximately 6,400 existing residents). The WMP system capacity is sized to be commensurate with the planned level of development proposed in the Buildout Reduction Program.

Implementation of the proposed WMP would not substantially deplete surface or groundwater supplies and a less than significant impact is anticipated in this regard. The proposed improvements and processes would be subject to compliance with all relevant Federal, State, and County requirements, as presented in the Regulatory Setting discussion above, Section 5.9 (Hydrology and Water Quality), and Section 5.10 (Public Health and Safety). Also, implementation of the proposed improvements would require various permits/approvals from the regulatory agencies. The proposed WMP improvements and all future development in Cambria are subject to compliance with NCAP Standards established for the purpose of mitigating potential impacts on surface and groundwater supplies. More specifically, compliance with NCAP Standard CW-2 (Reservation of Service Capacity), Standard CW-4 (Limitation on Development), Standard CW-5 (Desalinization Plants), and Standard CW-8 (Cambria Community Services District Review) would be required. Additionally, the Project would be subject to compliance with Program 11 (Water Master Plan for Cambria), which requires the CCSD to commission an In-Stream Flow Management Study for Santa Rosa and San Simeon Creeks, in order to identify a sustainable amount of withdrawals, which would not significantly impact biological resources or agricultural activities. Following compliance with relevant Federal, State, and County regulatory requirements, and NCAP Program and Standards, potential impacts to surface or groundwater quantities are considered less than significant. A future project-specific EIR/EIS would be prepared to further determine the potential impacts to surface and groundwater supplies associated with the desalination facilities. Additionally, the EIR/EIR would analyze alternative desalination facility sites.

### **Mitigation Measures:**

- WR-1 The CCSD shall comply with all relevant Federal, State, and County requirements; refer also to Section 5.9 (Hydrology and Water Quality) and Section 5.10 (Public Health and Safety).
- WR-2 Unless otherwise permitted by future State regulatory policy amendments, to not exceed background aquifer concentrations, nanofiltration (low pressure reverse





osmosis) or other suitable means shall be implemented to reduce the TDS concentration of recycled water as part of the treatment train process.

WR-3 The CCSD shall comply with the following North Coast Area Plan Standards:

***Cambria Urban Area***

Public Service Program:

Program 11 (Water Master Plan for Cambria)

Community Wide (CW):

CW-2 (Reservation of Service Capacity)

CW-4 (Limitation on Development)

CW-5 (Desalinization Plants)

CW-8 (Cambria Community Services District Review)

Category Specific (CS):

The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

***Rural Area***

Category Specific (CS):

The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

**Level of Significance:** Less Than Significant With Mitigation Incorporated.

**POTABLE WATER QUALITY**

❖ **IMPLEMENTATION OF THE PROPOSED WATER MASTER PLAN IMPROVEMENTS WOULD NOT VIOLATE ANY POTABLE WATER QUALITY STANDARDS. A LESS THAN SIGNIFICANT IMPACT IS ANTICIPATED FOLLOWING COMPLIANCE WITH THE FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY FRAMEWORK.**

**Impact Analysis:**

**Potable and Recycled Water Distribution Systems**

To meet potable water demand, the CCSD relies upon wells that draw from local groundwater aquifers along the San Simeon and Santa Rosa Creeks. Under the proposed WMP, the CCSD would continue to utilize the existing wells, in addition to the proposed recycled water, water demand management, and seawater desalination components. The proposed potable water system improvements are related primarily to enhancing fire-fighting capabilities by increasing fire flows beyond current system capacities.

It is anticipated that the CCSD would continue to supply water of acceptable quality to Cambria. The CCSD currently provides regular testing and reporting of their water supply to ensure compliance with applicable water quality standards. The on-going monitoring and reporting functions, and appropriate responses by the CCSD with oversight by the California DHS, would reduce the potential for significant water quality problems in the potable water supply to less than significant levels.



Refer to Section 5.9 (Hydrology and Water Quality) for a discussion of storm water quality standards and waste discharge requirements, and Section 5.10 (Public Health and Safety) for a discussion of recycled water quality standards.

### **Water Demand Management**

This Project component involves improvements to the current conservation program and regulations. Violations of water quality standards or waste discharge requirements water would not occur.

### **Seawater Desalination**

For this component, the seawater must undergo pre- and post-treatment before it can be pumped into the distribution system. The pre- and post-treatment processes improve the system performance. The pretreatment steps may include filtration, a pH control system, filtration, and an anti-scalant. Each of these steps improves the overall water quality by improving the efficiency of the RO membrane. Post-treatment steps may include disinfection, blending, and carbon dioxide stripping. DHS requires the disinfection system for this alternative to provide at least 0.5-log Giardia removal and 2.0-log virus removal. In order to reach these removal levels, sodium hypochlorite, chlorine dioxide, or other suitable disinfecting agent, would be added to the RO permeate. Once this requirement is met, the product water could be used directly or blended with groundwater. Blending RO permeate with groundwater at a ratio of two RO permeate to one groundwater (2:1) would improve the quality of the RO permeate by reducing its corrosivity and improve the quality of the groundwater by reducing its hardness. Carbon dioxide stripping and the addition of caustic soda or a limestone filter would be used to increase the pH and further decrease the corrosivity of the blended water. The blending of RO with groundwater allows for CCSD to achieve its water quality objectives of providing a water supply lower in hardness, sodium, and chloride.

A Domestic Water Permit for the RO permeate (or Groundwater Blend) would be required. Also, the proposed desalination facility would be subject to compliance with drinking water regulations, as presented in the *Regulatory Setting* discussion. Following compliance with relevant Federal, State, and County regulatory requirements, implementation of the proposed desalination facility would not violate any water quality standards. A future project-specific EIR/EIS would be prepared to further determine the desalination facility's potential impacts associated with potable water quality. Additionally, the EIR/EIS would analyze alternative desalination facility sites.

### **Mitigation Measures:**

WR-4 The CCSD shall comply with all relevant Federal, State (DHS), and San Luis Obispo County requirements regarding potable water quality, including drinking water regulations governing the treatment requirements for utilization of the groundwater source as potable water and all Primary and Secondary MCLs.

**Level of Significance:** Less Than Significant With Mitigation Incorporated.



## **WATER TREATMENT FACILITIES**

- ❖ **THE WATER MASTER PLAN PROPOSES MODIFICATIONS TO THE EXISTING WASTEWATER TREATMENT PLANT AND CONSTRUCTION OF A NEW SEAWATER DESALINATION FACILITY. A LESS THAN SIGNIFICANT IMPACT IS ANTICIPATED FOLLOWING IMPLEMENTATION OF THE RECOMMENDED MITIGATION AND COMPLIANCE WITH THE REGULATORY FRAMEWORK.**

### **Impact Analysis:**

#### **Potable and Recycled Water Distribution Systems**

The WMP proposes the use of recycled water to diversify the water supply options for the CCSD. Title 22 establishes the quality and/or treatment processes required for an effluent to be used for a specific non-potable application. The WMP proposes modifications to the existing WWTP. More specifically, to meet Title 22 requirements for production and use of recycled water, the WMP proposes to add disinfection and tertiary treatment to the existing WWTP. The environmental effects from the proposed modifications to the existing WWTP are addressed throughout this EIR.

#### **Water Demand Management**

This Project component involves improvements to the current conservation program and regulations. Construction of new water treatment facilities or expansion of existing facilities are not proposed and no impact would occur in this regard.

#### **Seawater Desalination**

The WMP proposes construction of a new seawater desalination facility. This Project component consists of constructing a subterranean seawater intake, pumping and pipeline facilities to transport the seawater to a desalination plant, a RO desalination treatment process, a groundwater blending system, and pumping facilities to pump the treated water into the distribution system. Seawater concentrate from the RO process would be returned in a separate pipeline back to a subterranean discharge system for return into the groundwater and seawater near the ocean interface. The environmental effects from the proposed seawater desalination facility are addressed at a programmatic level throughout this EIR. A future project-specific EIR/EIS would be prepared for the seawater desalination system when project-specific information is available. The EIR/EIS would determine whether construction of the desalination facilities would cause significant environmental effects.

**Mitigation Measures:** Refer to the mitigation measures outlined in Section 8.0 (Inventory of Mitigation Measures).

**Level of Significance:** Less Than Significant With Mitigation Incorporated.

## **CUMULATIVE IMPACTS**

- ❖ **THE WATER MASTER PLAN PROJECT, COMBINED WITH FUTURE DEVELOPMENT IN THE NORTH COAST AREA, COULD RESULT IN IMPACTS TO WATER RESOURCES.**



**COMPLIANCE WITH FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY REQUIREMENTS ON A PROJECT-BY-PROJECT BASIS WOULD REDUCE CUMULATIVE IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.**

**Impact Analysis:** With 4,650 existing and future residential connections, and including a 50 percent quality of life increase, the annual water demand in Cambria would be approximately 1,514 acre-feet per year.<sup>2</sup> This would be beyond the current permitted groundwater supply of 1,230 acre-feet per year available to the CCSD. Shortage of available water in Cambria has been historically documented as a significant and unavoidable impact in Cambria, including the 2007 NCAP. However, as discussed above, the proposed Buildout Reduction Program would limit the number of existing and future residential connections in the community to 4,650. The WMP system capacity is sized to be commensurate with the planned level of development proposed in the Buildout Reduction Program. The water supplies made available through the proposed WMP would be less than the level needed to support development potentially allowable under the relevant planning documents. Therefore, implementation of the proposed WMP would not result in a cumulatively significant impact to surface or groundwater supplies. Compliance with the established regulatory framework, including the NCAP, would ensure that potential impacts to water resources from cumulative development are reduced to less than significant levels.

**Mitigation Measures:** No mitigation measures are recommended beyond compliance with Federal, State, and San Luis Obispo County regulatory requirements on a project-by-project basis.

**Level of Significance:** Less Than Significant Impact.

## **LEVEL OF SIGNIFICANCE AFTER MITIGATION**

No significant impacts related to surface and groundwater supplies, potable water quality, and water treatment facilities have been identified following compliance with the established Federal, State, and San Luis Obispo County regulatory framework.

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<sup>2</sup> Kennedy/Jenks Consultants, *Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives*, Table 2-7 (Demand With 50% Quality of Life Increase), March 2004.