



## **3.0 Project Description**



## **3.0 PROJECT DESCRIPTION**

### **3.1 PROJECT LOCATION AND SETTING**

Cambria is an unincorporated community located in the coastal region of central California, in the northwestern portion of San Luis Obispo County; refer to Exhibit 3-1 (Regional Vicinity Map). Cambria is located along Highway 1, approximately 35 miles north of San Luis Obispo and approximately four miles south of San Simeon. The primary transportation corridor that bisects Cambria is Highway 1, which traverses the community in a north-south orientation. Currently, Cambria has a population of approximately 6,300 permanent residents and receives over 20,000 visitors per year.

The Coastal Zone of San Luis Obispo County is divided into four planning areas. Cambria is located entirely within the boundaries of the North Coast Planning Area. Cambria's Urban Reserve Line (URL) (i.e., the urban portion of Cambria within the North Coast Planning Area) encompasses approximately 2,351 gross acres, with a net acreage of approximately 1,790 acres, not counting the land in the road rights of way and beach areas along the bay or ocean.

### **3.2 BACKGROUND AND HISTORY**

The Cambria Community Services District (CCSD) is an independent special district that provides water, wastewater, fire and other community services to its customers. The CCSD was initially formed in 1967 to provide sewer services to the community. In 1976, other small services districts in Cambria were consolidated under the CCSD. This facilitated the expansion of CCSD services to include water, wastewater, fire protection, lighting, refuse, and parks, recreation, and open space. A five-member board of directors elected by Cambria voters for four-year overlapping terms governs the CCSD.

The CCSD has developed a phased completion of its *Water Master Plan Update*, which consists of the following three reports prepared by Kennedy/Jenks Consultants:

- ◆ Final Task 3 Report: Potable Water Distribution System Analysis (July 2004) (Task 3 Report: Potable Water);
- ◆ Final Task 3 Report: Recycled Water Distribution System Master Plan (July 2004) (Task 3 Report: Recycled Water); and
- ◆ Final Task 4 Report: Assessment of Long Term Water Supply Alternatives (March 2004) (Task 4 Report).

The Task 3 Report: Potable Water focuses on the potable water distribution system and related improvements for fire fighting purposes. The Task 3 Report: Recycled Water developed a conceptual recycled water system for landscape irrigation. The Task 4 Report assessed various long-term supply alternatives. The following water discussion is based primarily on these reports.

To meet water demand, the CCSD operates 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. CCSD's water rights are subject to the





SOURCE: USGS San Luis Obispo (2002).

★ - Project Site

NOT TO SCALE



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PROGRAM ENVIRONMENTAL IMPACT REPORT  
CAMBRIA COMMUNITY SERVICES DISTRICT WATER MASTER PLAN

# Regional Vicinity Map

Exhibit 3-1





regulatory authority of the State Water Resources Control Board (SWRCB), and to a certain extent, conditions imposed under development permits issued by the California Coastal Commission (CCC). Although the CCSD has investigated the process for adjudicating the San Simeon groundwater basin, neither of the two aquifers has been adjudicated.

The current water rights diversion permits from the SWRCB allow CCSD to pump a maximum of 1,118 acre-feet (AF) of water during the wet season, and 630 AF of water during the dry season, from both the San Simeon and Santa Rosa Basins. However, the current CCC Development Permit limits the total annual diversion from both creeks to no more than 1,230 AF of water.

Additionally, the dry season date, duration, and beginning groundwater levels, limit the actual availability of groundwater from both basins. The *Baseline Water Supply Analysis* (Kennedy/Jenks Consultants, December 8, 2000) (Baseline Analysis) developed a system of models based on historical data that projected basin response to increased levels of water demand to determine the adequacy of the groundwater supply. From the model, it was determined that the current groundwater supply was not adequate to provide a 90 or 95 percent level of reliability for water demands greater than 10 percent of the 1999 demands (4,176 residential connections). Thus, the basins cannot reliably meet the increased demands of the waiting list and grandfathered connections (4,650 residential connections) without an additional water source.

The *Baseline Analysis* also determined approximately 286 AF of groundwater from the San Simeon Basin, and 201 AF from the Santa Rosa Basin would be available during the dry season. During completion of the *Baseline Analysis*, the CCSD's Santa Rosa well field was shut down due to a Methyl Tertiary Butyl Ether (MtBE) plume. The older Santa Rosa wells have remained shut down since, and a new well SR-4 was constructed further upstream. However, since then, SR-4 has only been used sparingly during the dry season due to potential impacts to listed species. Table 3-1 (Existing Supply Availability) summarizes the supply availability based on the SWRCB diversion permits issued to CCSD and the *Baseline Analysis*.

**Table 3-1  
Existing Supply Availability**

Supply Availability	San Simeon (AFY)	Santa Rosa (AFY)	Total (AFY)
Annual <sup>(a)</sup>	1,230	518	1,230 <sup>(c)</sup>
Dry Season <sup>(b)</sup>	286	201	286 <sup>(d)</sup>
Wet Season <sup>(b)</sup>	944	317	944 <sup>(e)</sup>
AFY = acre-feet per year			
Notes:			
(a) Maximum annual availability as restricted by the diversion permit.			
(b) From: Kennedy/Jenks Consultants, <i>Baseline Water Supply Analysis</i> , December 8, 2000.			
(c) 1,230 AF maximum annual amount allowed by CCC Development Permit.			
(d) The Santa Rosa supply is not expected to operate during the dry season and is expected to only operate as a supplemental source during the wet season. Thus it is not anticipated to increase the dry season supply availability.			
(e) Difference between Annual and Dry Season availability, (1230 – 286 = 944 AF).			
Source: Kennedy/Jenks Consultants, <i>Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives</i> , Table 2-2 (Estimate of Existing Supply Availability) March 2004.			



In addition to the CCC Development Permit annual maximum of 1,230 AF, the dry season operating practice from 2002 raises questions over the reliability of well SR-4 during the dry season due to potential habitat impacts. Because MtBE is still being remediated up gradient from wells SR-1 and SR-3, those wells cannot be relied upon for summertime production. Therefore, Table 3-1 assumes only the San Simeon Creek basin would be available during the dry season. Thus, a supplemental source is required to further augment the Santa Rosa supply during the summer months.

## **PROJECTED WATER DEMANDS**

The Task 4 Report includes an estimate of water needs based on current usage as well as four buildout development scenarios. The four scenarios include existing residential connections plus potential new connections, and consist of a maximum of 6,700 connections, a refined maximum of 5,700 connections, the CCC Development Permit maximum of 5,250 connections, and the previously referenced 4,650 (existing customers plus the existing CCSD wait list). In addition, the report identifies demands for quality of life increases of 10, 20, 30, and 50 percent higher than existing demands identified in the *Baseline Analysis*. The 50 percent increase was developed to address a July 24, 2003 CCSD Board of Directors' approval allowing 1,800 cubic feet (cf) per bi-monthly billing period for a residential household. Assuming either 1.66 or 2.21 residents per household and 90 gallons per capita per day (gpcd), the total annual future demand was projected for each scenario. These population densities are based on 2000 Census data utilizing a 75 percent and 100 percent occupancy rate, respectively. The projected water demands for each scenario and population density are summarized in Table 3-2 (Supply vs. Demand Projections [1.66 Persons/Dwelling Unit]), and Table 3-3 (Supply vs. Demand Projections [2.21 Persons/Dwelling Unit]). Based on the CCSD Board of Directors' earlier July 24, 2003 direction, and the historical occupancy rate for Cambria averaging 1.66 persons per residence, approximately 602 AF in supplemental water would be needed for 4,650 residences assuming a 50 percent quality of life increase over existing consumption.

## **EXISTING DISTRIBUTION SYSTEM**

Water is distributed into an existing network of eight pressure zones via the system of groundwater well pumps and three intermediary pumping stations. The Rodeo Grounds Road pumping station pumps water up to both the Stuart Street tanks and Leimert tank. The Stuart Street pump station pumps water up to the Fiscalini tank. The Leimert tank site has a booster pump station with hydro-pneumatic tanks and fire pumps for serving an upper Leimert subdivision area.

Except for the upper Leimert tract, the majority of CCSD's system is supplied through a gravity system. By use of pressure reducing stations, not all pressure zones have a dedicated storage tank. For example, a pressure reducing valve system allows use of the tank serving pressure Zone 2 (the Stuart Street tanks), to also supply lower pressure to Zone 5. Similar pressure reducing connections occur between Zones 3 and 4. Therefore, the Stuart Street tanks serve pressure Zones 2, 5, and 7, even though it is at a much higher elevation than needed for the lower pressure zones. A similar situation occurs between pressure Zones 6 and 8, allowing water pumped from the Leimert tank to flow into the lower Zone 6.

CCSD has six steel storage tanks serving its eight pressure zones. The total storage volume is 1,711,000 gallons, as indicated in Table 3-4 (Existing Storage Tanks).



**Table 3-2  
Supply vs. Demand Projections  
(1.66 Persons/Dwelling Unit)**

Supply/Demand	Scenario 1			Scenario 2			Scenario 3			Scenario 4		
	6,700 Residential Units			5,700 Residential Units			5,250 Residential Units			4,650 Residential Units		
	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	Annual
Max Day Demand (gpm) <sup>(a)</sup>	1,128	1,577	-	960	1,342	-	884	1,236	-	783	1,095	-
Average Day Demand (gpm) <sup>(b)</sup>	752	1,051	-	640	894	-	589	824	-	522	730	-
Baseline Demand (AF) <sup>(c)</sup>	600	853	1,454	511	726	1,237	471	669	1,139	417	592	1,009
Supply (AF) <sup>(d)</sup>	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)<sup>(e)</sup></b>	<b>344</b>	<b>-587</b>	<b>-224</b>	<b>433</b>	<b>-440</b>	<b>-7</b>	<b>473</b>	<b>-383</b>	<b>91</b>	<b>527</b>	<b>-306</b>	<b>221</b>
Demand with 10% Increase (AF)	661	939	1,599	562	799	1,361	518	736	1,253	458	652	1,110
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>283</b>	<b>-653</b>	<b>-369</b>	<b>382</b>	<b>-513</b>	<b>-131</b>	<b>426</b>	<b>-450</b>	<b>-23</b>	<b>486</b>	<b>-366</b>	<b>120</b>
Demand with 20% Increase (AF)	721	1,024	1,745	613	871	1,484	565	802	1,367	500	711	1,211
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>223</b>	<b>-738</b>	<b>-515</b>	<b>331</b>	<b>-585</b>	<b>-254</b>	<b>379</b>	<b>-516</b>	<b>-137</b>	<b>444</b>	<b>-425</b>	<b>19</b>
Demand with 50% Increase (AF)	901	1,280	2,181	766	1,089	1,855	706	1,003	1,709	625	888	1,514
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>43</b>	<b>-994</b>	<b>-951</b>	<b>178</b>	<b>-803</b>	<b>-625</b>	<b>238</b>	<b>-717</b>	<b>-479</b>	<b>319</b>	<b>-602</b>	<b>-284</b>
AF = acre-feet gpm = gallons per minute												
Notes: (a) From: Kennedy/Jenks Consultants, <i>Final Task 3 Report: Potable Water Distribution System Analysis</i> , March 2004. (b) Calculated by dividing the Max Day Demand by the Max Day Demand Factor of 1.5. (c) Conversion of gpm to AF. One-hundred Eight-One days were assumed for the winter season and 184 days for the summer season. (d) From Table 2-2. (e) Supply minus demand.												
Source: Kennedy/Jenks Consultants, <i>Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives</i> , Table 2-7 (Supply vs. Demand Projections (1.66 Persons/Dwelling Unit)), March 2004.												

## WATER SUPPLY ALTERNATIVES

The Task 4 Report completed a preliminary analysis that considered the reliability, barriers to implementation, costs, and advantages of a variety of potential new water sources. Potential water supply alternatives were compiled from 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 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. Based on this qualitative screening level evaluation of the potential new water sources, the following alternatives were recommended for more detailed evaluation and cost development:



**Table 3-3  
Supply vs. Demand Projections (2.21 Persons/Dwelling Unit)**

Supply/ Demand	Scenario 1			Scenario 2			Scenario 3			Scenario 4		
	6,700 Residential Units			5,700 Residential Units			5,250 Residential Units			4,650 Residential Units		
	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	Annual	Winter	Summer	Annual
Max Day Demand (gpm) <sup>(a)</sup>	1,403	1,962	-	1,194	1,669	-	1,100	1,538	-	974	1,362	-
Average Day Demand (gpm) <sup>(b)</sup>	936	1,308	-	796	1,113	-	733	1,025	-	649	908	-
Baseline Demand (AF) <sup>(c)</sup>	747	1,062	1,809	636	903	1,539	585	832	1,418	519	737	1,256
Supply (AF) <sup>(d)</sup>	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)<sup>(e)</sup></b>	<b>197</b>	<b>-776</b>	<b>-579</b>	<b>308</b>	<b>-617</b>	<b>-309</b>	<b>359</b>	<b>-546</b>	<b>-188</b>	<b>425</b>	<b>-451</b>	<b>-26</b>
Demand with 10% Increase (AF)	822	1,168	1,990	699	994	1,693	644	915	1,559	570	811	1,381
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>122</b>	<b>-882</b>	<b>-760</b>	<b>245</b>	<b>-708</b>	<b>-463</b>	<b>300</b>	<b>-629</b>	<b>-329</b>	<b>374</b>	<b>-525</b>	<b>-151</b>
Demand with 20% Increase (AF)	897	1,274	2,171	763	1,084	1,847	703	998	1,701	622	884	1,507
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>47</b>	<b>-988</b>	<b>-941</b>	<b>181</b>	<b>-798</b>	<b>-617</b>	<b>241</b>	<b>-712</b>	<b>-471</b>	<b>322</b>	<b>-598</b>	<b>-277</b>
Demand with 50% Increase (AF)	1,121	1,593	2,714	953	1,355	2,309	878	1,248	2,126	778	1,105	1,883
Supply (AF)	944	286	1,230	944	286	1,230	944	286	1,230	944	286	1,230
<b>Surplus (+) / Deficit (-) (AF)</b>	<b>-177</b>	<b>-1,307</b>	<b>-1,484</b>	<b>-9</b>	<b>-1,069</b>	<b>-1,079</b>	<b>66</b>	<b>-962</b>	<b>-896</b>	<b>166</b>	<b>-819</b>	<b>-653</b>
AF = acre-feet gpm = gallons per minute												
Notes: (a) From: Kennedy/Jenks Consultants, <i>Final Task 3 Report: Potable Water Distribution System Analysis</i> , March 2004. (b) Calculated by dividing the Max Day Demand by the Max Day Demand Factor of 1.5. (c) Conversion of gpm to AF. It is noted that 181 days were assumed for the winter season and 184 days for the summer season. (d) From Table 2-2. (e) Supply minus demand.												
Source: Kennedy/Jenks Consultants, <i>Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives</i> , Table 2-8 (Supply vs. Demand Projections (2.21 Persons/Dwelling Unit)), March 2004.												

- ◆ **Seawater Desalination.** The seawater desalination alternative would consist of constructing 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. Concentrated seawater from the RO process would be conveyed in a separate pipeline back to a subterranean system for disbursement back into the groundwater near its junction with seawater. Three desalination supply capacity alternatives were investigated with permeate flows of 300 gallons per minute (gpm), 600 gpm, and 900 gpm. To meet the CCSD Board of Directors' July 24, 2003 approval of 4,650 residential connections and an average residential demand of 18 ccf per bi-monthly billing period, a desalination facility would need to be sized for a 740 gpm permeate flow and operate approximately 183 days per year.



**Table 3-4  
Existing Storage Tanks**

Name of Facility	Number of Tanks	Floor Elevation	Pressure Zones Served	Volume Gallons	Total Volume Gallons
Fiscalini Tank	1	627	3, 4	320,000	320,000
Stuart Street Tanks	1 1	439 439	2, 5, 7	212,000 125,000	337,000
Pine Knolls Tanks <sup>1</sup>	1 1	285 285	1	467,000 467,000	934,000
Leimert Tank	1	323	6, 8	120,000	120,000
<b>Total Storage</b>					<b>1,711,000<sup>2</sup></b>
Notes					
<sup>1</sup> The recently constructed (2007) Pine Knolls water tanks have a combined capacity of 934,000 gallons, which replaced the original site tanks that had a combined capacity of 206,000 gallons.					
Source: Kennedy/Jenks Consultants, <i>Final Task 3 Report: Potable Water Distribution System Analysis</i> , Table 2-3 (Existing Storage Tanks), July 2004.					

- ◆ Nacimiento Water Supply. The Nacimiento water supply alternative would consist of pumping water from Lake Nacimiento where it would recharge the aquifer at Palmer Flats. It would then be extracted from Palmer Flats and pumped to the San Simeon well field to enter the distribution system. Two alternative pipeline routes and two pumping scenarios were investigated.
- ◆ Whale Rock Exchange. The Whale Rock exchange alternative would involve the exchange of water rights from Lake Nacimiento for water rights to Whale Rock Reservoir and would utilize the proposed regional Nacimiento pipeline. Two water supply capacities and pipeline routes were investigated for this alternative.
- ◆ Hard Rock Drilling. Hard rock drilling consists of developing groundwater supplies from fractured bedrock, which has typically not been explored for potential water supplies. Hard rock water supplies are acknowledged to be high-risk ventures where considerable capital investment must be made to develop supply.
- ◆ Recycled Water. This alternative would involve the use of recycled water to augment potable supplies by providing a non-potable source of water for irrigation at various locations within Cambria. It would require treatment upgrades to the wastewater facilities as well as a recycled water distribution system.
- ◆ Demand Management. Demand management would consist of continuing with existing conservation measures and implementing additional measures to reduce potable water use for landscaping.
- ◆ San Simeon Dam and Reservoir-Van Gordon Site. This alternative would consist of the construction of a dam and reservoir on the San Simeon basin near the Van Gordon tributary. The reservoir would store the remaining wet season groundwater entitlement





from both basins. The water would then be released into San Simeon Creek where it would recharge the groundwater basin during the dry season.

- ◆ Jack Creek Dam and Reservoir. This alternative would involve the construction of a dam and reservoir located on Jack Creek. The reservoir would collect runoff from the Dover Canyon watershed during the wet season. Releases would then be made during the dry season to Santa Rosa Creek for recharge of the groundwater basin.

Additional evaluation was performed for these alternatives, according to the following criteria:

- ◆ Water Supply Capabilities;
- ◆ Water Quality;
- ◆ Required Infrastructure;
- ◆ Reliability;
- ◆ Required Agreements/Institutional Issues;
- ◆ Environmental Issues; and
- ◆ Permitting/CEQA.

In order to evaluate the priority of the viable alternatives, a numerical matrix method was developed. Selection criteria were established and each criterion was weighed based on its relative importance. Table 3-5 (Summary of the Criterion Ranking Scale) summarizes the ranking scales for each criterion. The alternatives were ranked on a scale of one to five, with five being the most desirable and one the least, for each selection criterion.

**Table 3-5  
Summary of the Criterion Ranking Scale**

Criteria	1	2	3	4	5
Water Supply Capability (AFY)	< 600	600 – 750	750 – 850	850 – 1,000	> 1,000
Water Quality	Very Poor	Poor	Fair	Good	Excellent
Reliability	None	Little	Less than Sufficient	Sufficient	More than Sufficient
Required Agreements Institutional Issues	Very Difficult to Obtain	Difficult to Obtain	Obtainable	Relatively Easy to Obtain	None Required
Environmental Issues	Significant Impacts, Further Review Required	Significant, but Short-Term	Less than Significant, After Mitigation	No Significant Impacts	No Impacts
Permitting/CEQA	Very Difficult to Obtain	Difficult to Obtain	Obtainable	Relatively Easy to Obtain	None Required
Cost (Fixed/Variable)	Above/Above Average	Above/Below Average	Average/Average	Below/Above Average	Below/Below Average
Funding (reduction in capital cost)	None	25 Percent	50 Percent	75 Percent	100 Percent

AFY = acre-feet per year; CEQA = California Environmental Quality Act.

Source: Kennedy/Jenks Consultants, *Final Task 4 Report: Assessment of Long-Term Water Supply Alternatives*, Table ES-1 (Summary of the Criterion Ranking Scale), March 2004.



The weighting factors (all equal to 0.125) and ranking scores were multiplied for each alternative and summed to determine its overall score. Table 3-6 (Evaluation Matrix for Potential Water Supply Alternatives) provides the evaluation and rankings of the Alternatives. Based on the evaluation and the recommended goals, it was recommended in the Task 4 Report that CCSD's long-term water supply strategy consist of the following elements:

- ◆ Seawater Desalination;
- ◆ Recycled Water; and
- ◆ Water Demand Management.

These recommended alternatives, along with the proposed Potable Water Distribution System improvements, comprise the Water Master Plan (WMP) components evaluated in this EIR; refer to Section 3.3 (Project Characteristics) for a description of the Project components.

In addition to the numerical matrix method evaluation presented above, the potential water supply alternatives (excluding the recommended alternatives) are discussed in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6. More specifically, Section 6.0 (Alternatives to the Proposed Project) further discusses these alternatives and considers the comparative merits of each alternative. The analysis evaluates 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.

### **3.3 PROJECT CHARACTERISTICS**

The CCSD's long-term water supply strategy is proposed to consist of seawater desalination, recycled water and water demand management.

#### **SEAWATER DESALINATION**

In order to provide an additional water supply of up to 602 acre-feet during the dry season, the CCSD proposes to implement seawater desalination. Seawater desalination offers the most flexibility in operation and production, which would better suit CCSD's variable water supply needs. Furthermore, seawater desalination is a very reliable source particularly during 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 greatly reduce the salt loadings at the wastewater treatment plant. Furthermore, desalination would protect the area's creek and riparian habitats during dry periods by providing a water supply that is independent of weather conditions, upstream agricultural operations, and other factors that are beyond CCSD's control.

The seawater desalination element 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. Exhibit 3-2 (Conceptual Seawater Desalination Facilities) illustrates the conceptual seawater desalination system. Seawater concentrate from the RO process would be conveyed in a separate pipeline to a subterranean system for disbursement back into the groundwater near its junction with the seawater.



**Table 3-6  
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
<b>Seawater Desalination</b>									
RO-300 gpm	2	1 <sup>2</sup>	5	2	3	2	4	4	2.9
RO-600 gpm <sup>1</sup>	4	1 <sup>2</sup>	5	2	3	2	3	4	3.0
RO-900 gpm	5	1 <sup>2</sup>	5	2	3	2	3	3	3.0
NFRO-300 gpm	2	1 <sup>2</sup>	5	2	3	2	3	3	2.6
NFRO-600 gpm	4	1 <sup>2</sup>	5	2	3	2	1	3	2.6
<b>Lake Nacimiento</b>									
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
<b>Whale Rock Exchange</b>									
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
<b>Hard Rock Drilling</b>									
Hard Rock Drilling	2	3	4	3	1	3	4	1	2.6
Recycled Water <sup>1</sup>	1	1	5	4	3	3	5	3	3.1
Demand Management <sup>1</sup>	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
<b>Definition of Rank 1:</b>									
	<250 AFY	Very Poor	Not Reliable	Very Difficult	Significant	Very Difficult	Above Average	None Available	Poor
<b>Definition of Rank 5:</b>									
	>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 Alternatives. (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.									





**Legend**

- |  |  |
|--|--|
|  Highway Brine Discharge    |  State Park Pipeline Route  |
|  State Park Brine Discharge |  Directional Drilled Intake |
|  Highway Pipeline Route     |  Slant Drilled Intake       |

SOURCE: Kennedy/Jenks Consultants, March 2004.

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PROGRAM ENVIRONMENTAL IMPACT REPORT  
CAMBRIA COMMUNITY SERVICES DISTRICT WATER MASTER PLAN

# Conceptual Seawater Desalination Facilities





Although seawater desalination is one of three primary components of the *Water Master Plan*, the level of analysis under this Program EIR focuses on the Water Master Plan's ability to provide a reliable source of water for the community and the potential to cause growth-inducing effects. The Program EIR serves as the master environmental documentation in order to properly tier from the programmatic analysis (refer to *CEQA Guidelines* Section 15152). The project level study for the seawater desalination would provide the comprehensive construction and operations analysis. The study will also be subject to compliance with the *National Environmental Protection Act* (NEPA) Environmental Impact Statement (EIS) requirements due to anticipated federal funding. Thus, a joint EIR/EIS will be prepared specifically for the seawater desalination element. Consistent with NEPA requirements, the EIR/EIS will analyze various alternatives to the facility's location and operations.

The EIR/EIS shall include all elements of building and operating the desalination plant, including, but not limited to any physical operations involved in feasibility studies, and all piping connecting seawater intake and brine discharge to the desalination plant. Best available technology for power, including renewable power sources and state of the art filters shall be specified. The EIR/EIS shall also include a detailed plan for handling and disposal of hazardous materials resulting from the filtration process itself.

## **RECYCLED WATER SYSTEM**

This element would involve utilizing recycled water for irrigation purposes at various locations within Cambria. 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 underflow of the San Simeon Creek aquifer towards the sea. During the dry summer season, flows through the plant average approximately 650,000 gallons per day (gpd).

During the critical dry season, the CCSD wastewater department estimates that approximately 250,000 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 Task 3 Report: Recycled Water analysis to determine how much of the future recycled water use was existing versus new demands. 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. To further lower demands, the use of a proprietary Evaporative Control Systems® (ECS) irrigation system was also analyzed. The ECS system was recently installed at the new Cambria Elementary School.

The WWTP currently provides secondary treatment. Because the treated effluent from the WWTP would be used for unrestricted irrigation, the current level of secondary treatment would need to be upgraded to a disinfected tertiary level of treatment. This would involve compliance with the applicable requirements of Title 22, California Code of Regulations, Environmental



Health (Title 22). The list of potential municipal users for the tertiary treated wastewater and demand associated with its use is relatively small, totaling approximately 161 to 184 AFY.

A detailed analysis of the recycled water distribution system, including system improvements, pipes, pumps, and reservoirs is presented in Task 3 Report: Recycled Water.

Exhibit 3-3 (Recycled Water Distribution System) illustrates the proposed recycled water distribution system. Purple PVC (polyvinyl chloride) or ductile iron piping wrapped with purple polyethylene would be required to distribute the recycled water to the potential irrigation users.

The system consists of an advanced treatment process at the existing wastewater plant, two pumping stations, tank storage, and a hydro-pneumatic storage system. The advanced treatment process would include means to reduce salt concentrations to background levels to ensure no degradation to the groundwater would occur from percolation through irrigated areas. The storage tank site and hydro-pneumatic pumping station area is planned for a location behind the Santa Lucia Middle School gymnasium. The hydro-pneumatic pump station would provide recycled water to the existing Santa Lucia Middle School as well as a back-up supply to the new elementary school's ECS system. The storage tanks would provide supply to the lower pressure zone.

The potential recycled water users, their irrigable areas, and non-potable demands are presented in Table 3-7 (Potential Recycled Water Users and Demands).

## **WATER DEMAND MANAGEMENT**

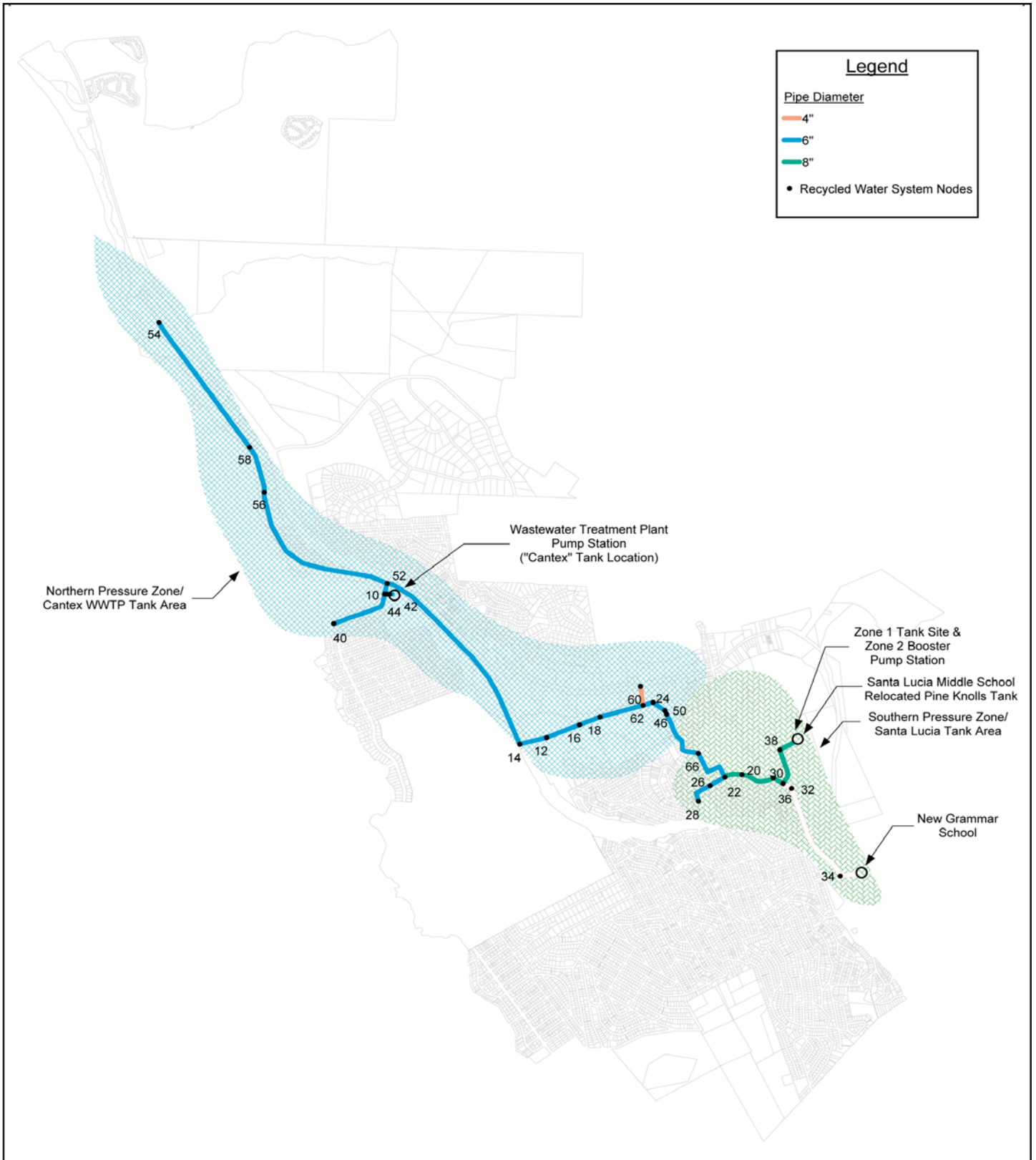
Demand management would consist of improvements to the current conservation program and regulations to reduce potable water use for landscaping. Although CCSD's current conservation practices have already reduced the average per capita potable water consumption below the state average, more efficient water demand management practices are proposed for further reduction in water consumption.

CCSD currently has a Water Conservation and Retrofit Program. Under the current Retrofit Program, construction of new homes and the resale of old homes require retrofitting the homes with specific fixtures. The number of homes that must be retrofitted is determined by a point system dependent upon the number of bathrooms and the size of the parcel of the new home.

To further reduce water consumption, a tiered water rate structure is utilized. During critically dry periods, the CCSD also invokes a water conservation surcharge.

Various restrictions have been placed on external use to prevent wasting of potable water. In 2000, CCSD revised their Water Conservation Program (Ordinance 3-2000) consisting of three stages of water use restrictions. Recent CCSD efforts to expand upon demand management practices have included the following:

- ◆ Addition of front-loading washers to the Retrofit Program, either as a required full retrofit fixture or credit as an additional unit. Front-loading washers have been found to use half the volume of top-loading washers.



SOURCE: Kennedy/Jenks Consultants, July 2004.

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**Recycled Water Distribution System**



**Table 3-7  
Potential Recycled Water Users and Demands**

Potential Recycled Water User	Total Acreage	Percent Irrigable <sup>1</sup>	Irrigable Acreage	Irrigation Demand	Demand w/ECS
<b>Likely Recycled Water Sites</b>					
<i>A. Existing Potable Water Irrigation Sites</i>					
Existing WWTP Site	12.51	6%	0.75	1.97	1.97
Mid State Bank	0.93	7%	0.07	0.17	0.17
Santa Rosa Catholic Church	2	20%	0.40	1.05	1.05
Tamson Drive Commercial Areas	9.5	5%	0.48	1.25	1.25
Cambria Grammar School (as CUSD Offices)	5.07	22%	1.12	2.93	2.93
Cambria Pines Lodge	23.4	35%	8.19	21.54	21.54
CCSD Fire Station	1.4	30%	0.42	1.10	1.10
Presbyterian Church	2.98	35%	1.04	2.74	2.74
Cambria Nursery	4.35	45%	1.96	5.15	5.15
Santa Lucia Middle School	10	40%	4.00	10.52	6.36
St. Paul's Episcopal Church	0.87	40%	0.35	0.92	0.92
<i>Subtotal</i>			18.76	49.35	45.19
<i>B. Future Recycled Water Irrigation Sites</i>					
CCSD Vacant Lot across from Vets Hall	1.45	15%	0.22	0.57	0.57
Future CCSD Community Park	26.03	50%	13.02	34.23	20.69
Main Street Landscaping	1.42	70%	0.99	2.61	2.61
Future Elementary School	12	35%	4.20	11.05	6.68
Future Vineyard Church Site	3.53	15%	0.53	1.39	1.39
<i>Subtotal</i>			18.96	49.85	31.95
<b>Subtotal of Likely Recycled Water Sites</b>			<b>37.72</b>	<b>99.21</b>	<b>77.14</b>
<b>Less Likely Recycled Water Sites</b>					
<i>C. Riparian Well Services</i>					
Shamel Park	2.04	85%	1.73	4.56	4.56
Coast Union High School	13.94	60%	8.36	22.00	22.00
<i>Subtotal</i>			10.10	26.56	26.56
<i>D. Low Priority Sites Due to Distance from Main Recycled Water Pipeline</i>					
Cambria Cemetery	12.18	90%	10.96	28.83	28.83
San Simeon Pines Motel	7.3	70%	5.11	13.44	13.44
San Simeon State Camp Grounds	25	25%	6.25	16.44	16.44
<i>Subtotal</i>			22.32	58.71	58.71
<b>Subtotal of Less Likely Recycled Water Sites</b>			<b>32.42</b>	<b>85.26</b>	<b>85.26</b>
<b>TOTAL OF LIKELY &amp; LESS LIKELY SITES</b>			<b>70.14</b>	<b>184.47</b>	<b>162.41</b>
Notes:					
1. Percent irrigable land was determined from land coverage estimates taken from aerial photos of the parcels.					
2. Total non-potable demand (AFY) calculated by multiplying the application rate (2.63 ft per year) by the irrigable acreage.					
3. Total non-potable demand (AFY) including the ECS system application rate (1.52 ft per year) for the Santa Lucia middle school, future elementary school, and future community park. An application rate of 2.63 ft per year was used for all other users.					

Meter replacement is part of the Retrofit Program. All residential meters with the CCSD have been replaced with new meters. Besides improved accuracy, the new meters have remote-read sensors and electronics that can signal potential leaks within a residence by sensing whether a zero-flow period did not occur during the day (which is typically expected late at night when there would normally be periods of no customer use). CCSD staff has also initiated a water loss-noticing program that notifies customers of continuous flows and potential water loss.





Future demand management measures may include greater emphasis on landscape irrigation. Such measures may include the addition of rain sensors to ensure irrigation systems shut-off during periods of rain. The installation of evapotranspiration (ET) controllers may also become part of future landscape irrigation efficiency improvement measures.

In 2005, the CCSD also became a signatory agency to the California Urban Water Conservation Council's memorandum of understanding (MOU) regarding urban water conservation in California. The State-wide MOU originated as a voluntary measure by water agencies to implement "best management practices" (BMP's) for water conservation. Further details on the CCSD's water conservation efforts can be found in its 2005 Urban Water Management Plan.

Water demand management would not have any water quality implications. It would simply allow available water to be used more efficiently. No significant additional infrastructure would be required for this alternative.

### **POTABLE WATER DISTRIBUTION SYSTEM IMPROVEMENTS**

The Task 3 Report: Potable Water addresses system improvements focused on improving fire-fighting capabilities. For example, fire flows for existing single-family residential areas are being increased from approximately 1,000 gpm to approximately 2,500 gpm, based on recommendations of the Cambria Fire Department. In addition, increases to tank storage volumes are also being recommended as part of the Task 3 Report: Potable Water distribution system analysis.

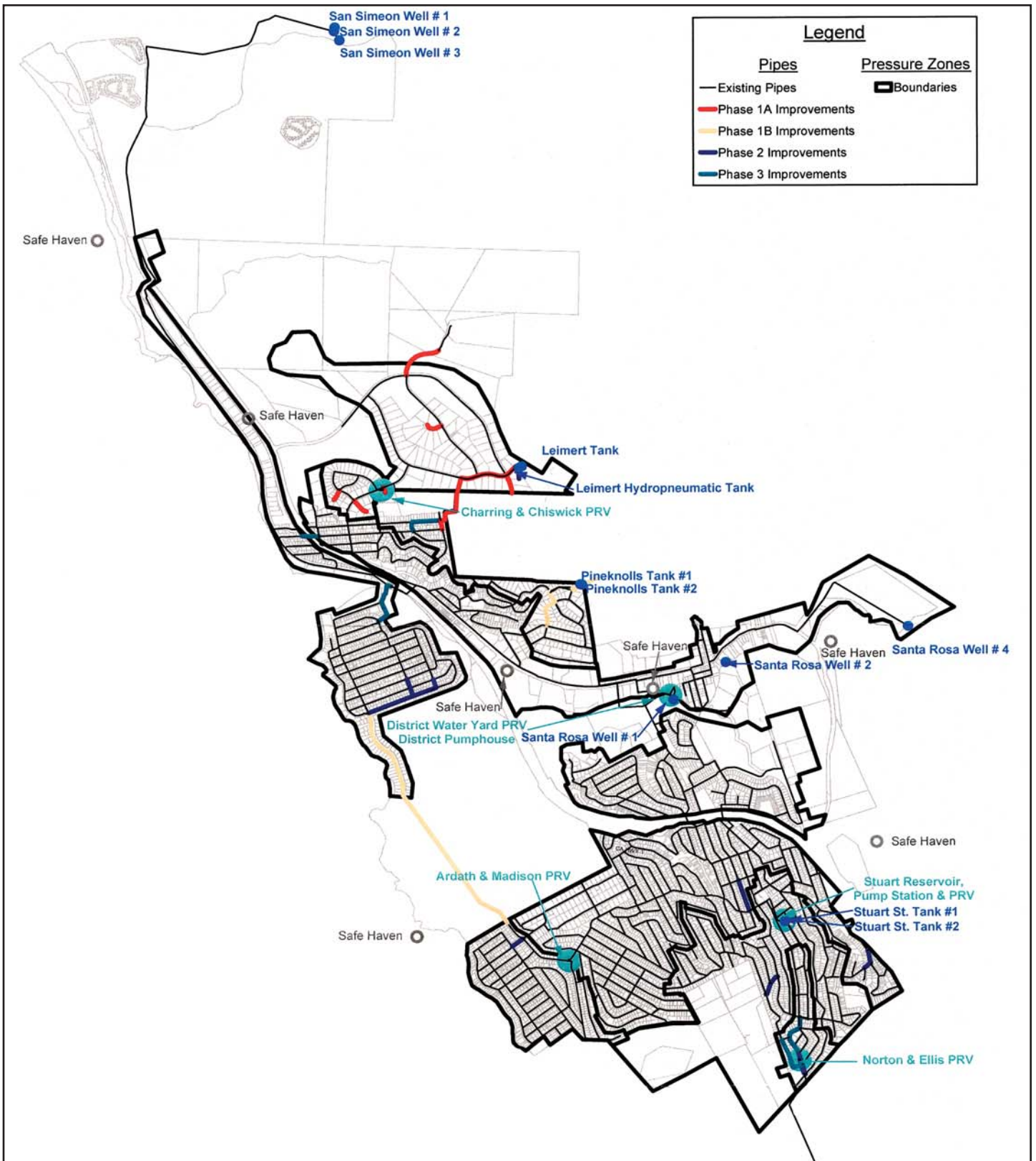
Three levels of priority projects have been developed for incorporating distribution system improvements as part of a long-term capital improvement plan; refer to Exhibit 3-4 (Potable Water Distribution System). To date, the CCSD has been completing the highest priority Level 1 projects, because they provide the greatest improvement to public safety. Priority Level 1 projects in various states of completion include: Pine Knolls Tank Replacement (completed); East-West Ranch Pipeline (completed); Leimert Fire Flow Improvements; and Supervisory Control and Data Acquisition (SCADA); refer to Exhibit 3-4 and Section 7 of the Task 3 Report: Potable Water. Separate project-specific CEQA Clearance documents (Initial Study/Mitigated Negative Declarations) have been prepared on the Pine Knolls Tank project and East-West Ranch Pipeline project. The remaining distribution system improvements projects are in various stages of planning or design.

### **BUILDOUT REDUCTION PROGRAM**

The Buildout Reduction Program (BRP) is integral to the mitigation program for the WMP. Due to the importance of the BRP, serving as mitigation for potential growth inducing impacts, the description of the BRP is presented in this subsection, and cross-referenced to the analysis in Section 5-13.

#### **Background**

Land use planning within the CCSD's service area is performed by San Luis Obispo County with oversight by the CCC. Cambria is addressed in the North Coast Area Plan (NCAP). The NCAP describes County land use policies for the North Coast Planning Area, including regulations that are also adopted as part of the Coastal Zone Land Use Ordinance and Local Coastal Program.



SOURCE: Kennedy/Jenks Consultants, July 2004.

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**Potable Water Distribution System**



The County Board of Supervisors approved the NCAP in 1988. As part of the County's efforts to update the 1988 NCAP, a Public Review Draft was completed and circulated for review in July 2004. In May 2005, the County developed the *Public Hearing Draft Revised Description Cambria and San Simeon Acres Community Plan of the North Coast Area Plan* (2005 NCAP Update) and Environmental Impact Report (EIR), which underwent review by the public and San Luis Obispo County Planning Commission. In April 2006, the County completed the *Cambria and San Simeon Acres Community Plans of the North Coast Area Plan Board of Supervisor's Approved Draft* (2006 NCAP Update). The 2006 NCAP Update combined provisions from the 1988 NCAP, previous draft plans, and recommendations from the CCC. On November 6, 2007, the County Board of Supervisors adopted the most recent update to the NCAP, the *North Coast Area Plan Cambria and San Simeon Acres Portions Updated* (2007 NCAP). The 2007 NCAP combines provisions from the 1988 NCAP, previous updates, and changes adopted by the CCC during their July 11, 2007 hearing and associated recommendations from the CCC June 21, 2007 and July 10, 2007 Staff Reports and Addendum. The proposed Water Master Plan Project is evaluated for consistency with the land use policies and regulations, as presented in the 2007 NCAP.

The CCC completed a periodic review of the County's Local Coastal Plan during 2001. As part of the earlier periodic review of the Local Coastal Program, the CCC adopted recommendations that were presented to the County in 2001. Included among these recommendations, was recommendation 2.16 calling for a reduction of the buildout potential in Cambria.

*Coastal Commission Recommendation 2.16 to the San Luis Obispo County Local Coastal Program: "The LCP needs to be amended to address long-term development potential in Cambria. The County should work to expand the TDC Program by identifying other sensitive areas that would benefit from transfer of potential development to more suitable locations. Expansion should include Special Project Area #2, as well as watershed areas, other scenic corridors and other small lot tracts in undeveloped areas that support significant coastal resources, particularly contiguous blocks of sensitive pine forest habitat. More aggressive policy options should be considered as well, including development of an Assessment District to retire lots, create open space and promote forest protection. Other mechanisms should be evaluated such as the ability to use mitigation fees or erosion control fees to address long-term buildout. Further attention could be focused on alternatives for reducing development potential on single and double lots and creating incentives for the minimum lot size of 7,000 square feet. As part of this process, the County should establish a task force charged with identifying management options and strategies for reducing buildout in Cambria by a specific deadline."*

The 2007 NCAP concludes that the theoretical buildout of Cambria would be approximately 6,130 dwelling units, presuming that public service constraints can be resolved and other resource protection requirements of the LCP can be met.<sup>1</sup> The 2007 NCAP further acknowledges that "the CCSD has begun efforts to reduce water demand and to secure a reliable water supply. During the CCSD's Board of Directors' July 24, 2003 meeting, action by the Board confirmed a maximum of 4,650 connections as the ultimate buildout of Cambria. This total was based on 3,812 existing connections at the end of 2002, 165 connections in process at

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<sup>1</sup> County of San Luis Obispo, *North Coast Area Plan Cambria and San Simeon Acres Portions Updated*, November 6, 2007, Page 2-7.



that time, and 670 future connections from the CCSD wait list.”<sup>2</sup> This value also approximates the number of dwelling units to be served by a desalination project, which was the subject of an advisory ballot approved in Cambria during August of 2000. In view of the CCC’s earlier recommendation to reduce buildout potential in Cambria, as well as the recent 2007 NCAP, the CCSD has developed a phased Buildout Reduction Program in parallel with its Water Master Plan efforts.

## **Program Purpose and Description**

To mitigate the potential for growth-inducing impacts of the proposed Water Master Plan (i.e., the increased water supply and availability), this EIR incorporates a Buildout Reduction Program, as the tool to cap the maximum number of potential water service connections within the CCSD service area to 4,650; refer to Appendix 14.3 (Report of Citizens’ Finance Committee on Buildout Reduction). To further mitigate the potential for growth-inducing impacts, all future development would be subject to continued compliance with the existing County and CCSD adopted growth management policies, which are discussed in detail in Section 5.13 (Population, Housing, and Growth).

As stated in the October 12, 2005 Preliminary Draft Buildout Reduction Report and subsequent May 16, 2006 Buildout Reduction Program report presented to the CCSD Board by the Citizens’ Buildout Reduction Finance Committee, and pursuant to the mitigation requirements contained in this EIR, the purpose of the Buildout Reduction Program is to ensure long-term demand for residential water connections in Cambria (primarily single-family homes) does not exceed 4,650 existing and new connections. In order to accomplish this, the CCSD would adopt a program to retire or reduce the potential number of residential building sites.<sup>3</sup> The overall goal of the Buildout Reduction Program is to retire and/or merge<sup>4</sup> enough potential building sites in Cambria so that the remaining number of suitable building sites roughly matches the 864 (total) additional outstanding residential water connection commitments that have been previously approved by the CCSD.<sup>5</sup> It would be a voluntary program with a projected 22-year timeframe. Funding would come from four suggested sources: an additional fee for new water connections, a water rate increase, an additional fee for remodels, and sale of some unallocated water connections that fall within the 4,650 existing and future residential connections cap. Local land trusts would sell three unallocated water connections a year over the projected 22-year life of the program, and use the proceeds to purchase and retire potential building sites. Lots would be retired with a deed restriction or conservation easement, after which most would be transferred to CCSD. Thus, when Cambria is built-out to that level, there would be only a few available building sites left, with little potential for future growth or development.

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<sup>2</sup> Ibid.

<sup>3</sup> For analysis purposes, a building site has a minimum 50-foot street frontage and a minimum 3,500-square foot site area. It can be composed of one lot or more and may have one APN or more. [A lot is a legal unit, which can be sold and taxed. An APN (Assessors Parcel Number) is used by the County for taxing purposes.]

<sup>4</sup> Lot retirement means to make a parcel permanently ineligible for a water connection using zoning restrictions and/or title restrictions, specifically, a conservation easement or a covenant not to build or seek water service. All lots acquired through this Program would be retired using strict legal restrictions to prohibit future building. Merging a lot means legally encompassing it with an adjacent lot or parcel, thus eliminating it from consideration as an individual legal entity.

<sup>5</sup> The proposed desalination plant would be sized for 4,650 residential water connections, making this the maximum number to be permitted in Cambria: 3,786 (existing connections) + 864 (approved additional connections) = 4,650.





The reduction in the number of building sites would be accomplished largely by attrition through existing lot retirement objectives and programs, lot mergers, and by acquiring lots and retiring them. Acquisition would be through donation or purchase, and would be voluntary. No property owner would be forced to sell their land for the purposes of this program. By reducing buildout potential in Cambria, a balance would be maintained between potential growth and the sustained availability of public services and infrastructure.

The incorporated Buildout Reduction Program seeks to support the long range planning goals identified for the North Coast Planning Area, while also maintaining Cambria's appeal by significantly limiting future environmental impacts. In summary, the CCSD must adopt all feasible and legally enforceable measures to mitigate potentially significant environmental impacts. In addition, other governmental agencies that have discretionary approvals for the Water Master Plan, within their authority, condition their approvals on the implementation of the mitigation measures identified in this EIR.

### **3.4 IMPLEMENTATION OF WATER MASTER PLAN ELEMENTS**

The main objective of the *Water Master Plan Study* process is to identify one, or a combination of, feasible long-term supply alternatives that would meet CCSD's objectives for water quantity, quality, and reliability. During November 2001, the CCSD Board of Directors declared a water shortage emergency. Since then, the area has been under a new connection moratorium and has had to rely primarily on an aggressive water conservation program and rate setting as a means for controlling demand.

### **3.5 PHASING**

The *Water Master Plan* proposes to implement the potable water distribution system improvements, recycled water, and seawater desalination programs concurrently. Funding availability and priorities assigned by the CCSD would play a key role in determining the overall completion time. Permitting by outside regulatory agencies would also influence Project timing. Completion of the proposed facilities is estimated to take eight to ten years.

#### **DEMAND MANAGEMENT**

Improved demand management activities would be implemented after approval of modifications to the CCSD Code. These modifications would focus on landscape irrigation measures and recommendations made by the California Urban Water Conservation Council.

#### **RECYCLED WATER**

Recycled water may be implemented into several phases, depending upon the findings of a pending geohydrological study to assess the quantity of treated wastewater effluent that may be diverted from a groundwater mound below the percolation ponds near the base of San Simeon Creek. Projects that convert the existing use of potable water for irrigation to non-potable recycled water use may fit into a "no net increase" in diversion category.



Such projects may be more readily permitted, and consequently be connected to the recycled water distribution system the earliest. New irrigation demands that result in a net increase in diversion from the aquifer system may have to await the outcome of further geohydrological study of the percolation pond and downstream lagoon interface in order to assess whether any impacts may occur to the lagoon habitat. Such additional demands may be further offset by the future use of desalination, which can reduce the amount of upstream diversion, while also adding to the amount of recharge at the percolation pond area. It is anticipated that both the wastewater treatment plant upgrades and backbone distribution system would need to be constructed concurrently in order to provide recycled water. The distribution system may also be phased to allow constructing the lower pressure zone system first. After funding is secured, the recycled water facilities would take approximately 2.5 to 3.5 years to complete.

## **SEAWATER DESALINATION**

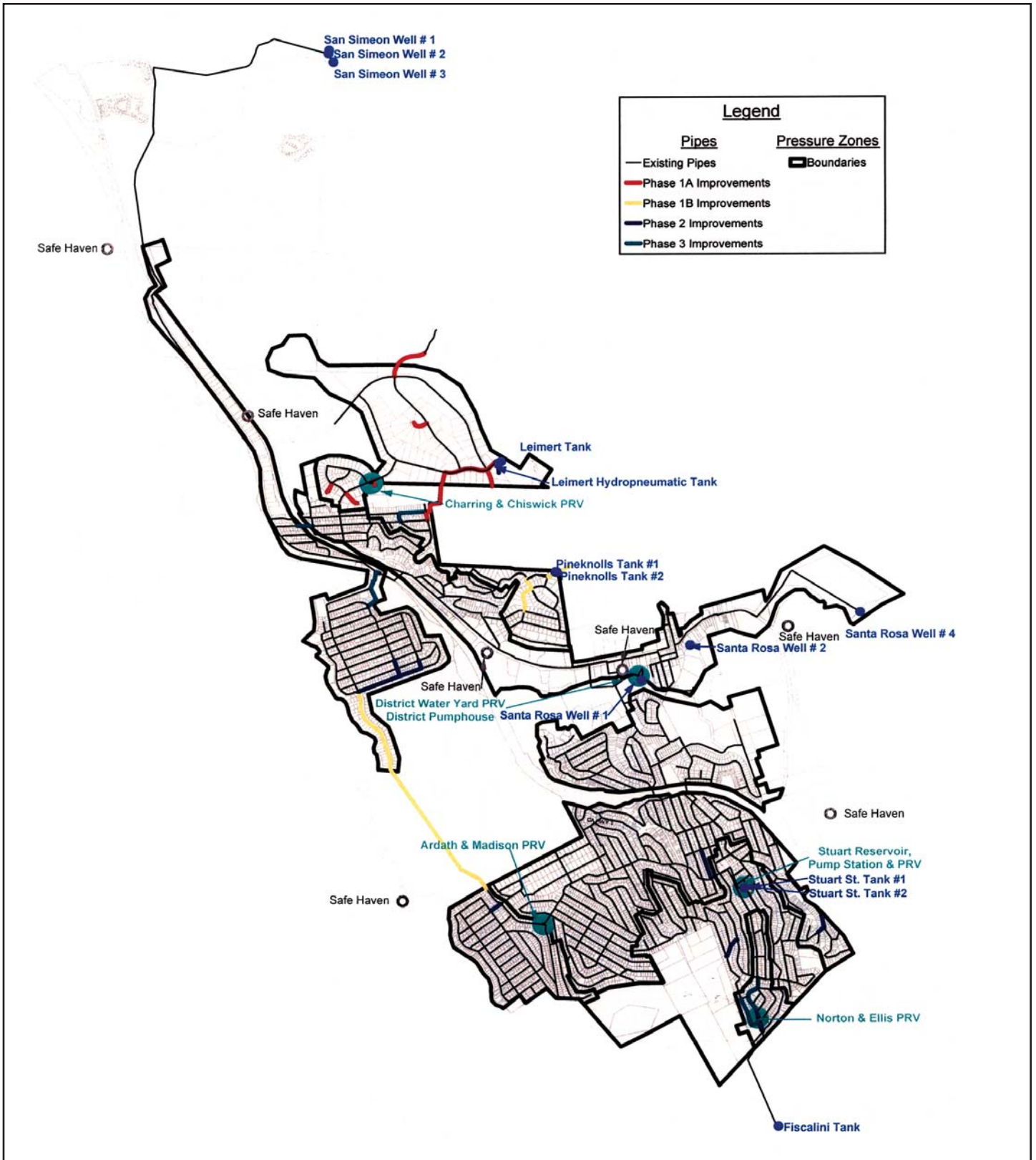
Seawater desalination is anticipated to take four to five years to complete. Coastal development permitting for construction of the facilities is anticipated to take one to three years. Construction would require an additional two years to complete. Construction of the facility may be divided into three separate projects: construction of the subterranean seawater intake and seawater concentrate return systems; connection of the pipelines; and construction of the desalination treatment facilities.

## **ONGOING – POTABLE WATER DISTRIBUTION SYSTEM**

The following distribution system improvement phases were developed to maximize fire-fighting capabilities:

- ◆ Phase 1A: Improvements that satisfy an immediate CCSD need and meet criteria for upgrading existing facilities to meet pressure and fireflow criteria.
- ◆ Phase 1B: Improvements that increase available fire flows, raise system residual pressures, reduce headloss (gaining energy), and augment the existing water grid system to add redundancy.
- ◆ Phase 2: Improvements that help convey largest available flows, by relieving bottlenecks to fire flows. An undersized pipeline connected to a transmission main would be an example, which would reduce flow from the tank and create large amounts of headloss, reducing pressures and limiting flows.
- ◆ Phase 3: Pipelines that are needed for smaller, area-specific, improvements.

Phase 1A, 1B, 2, and 3 piping alignments are illustrated on Exhibit 3-5 (Phased Improvement Piping). Thus far, the CCSD has completed Pine Knolls Water Tanks Replacement Project as well as the East-West ranch pipeline connector between the Lodge Hill and Seacrift Estates neighborhoods due to their being critically needed for fire safety. The CCSD is currently completing Initial Studies and Mitigated Negative Declarations for improvements to the Stuart Street tank facility as well as replacement of the Rodeo Grounds Pump Station due to their same need for improving fire safety.



SOURCE: Kennedy/Jenks Consultants, July 2004.

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 CAMBRIA COMMUNITY SERVICES DISTRICT WATER MASTER PLAN  
**Phased Improvement Piping**



### 3.6 AGREEMENTS, PERMITS, AND APPROVALS

The CCSD is the lead agency for the Project and has discretionary authority over the primary Project proposal. To implement this Project, the CCSD would need to obtain various agreements and permits/approvals, including, but not limited to those discussed below.

#### RECYCLED WATER

Agreements between CCSD and each of the potential recycled water users would be necessary. Table 3-8 (List of Required Permits for Recycled Water) provides a complete list of the required permits.

**Table 3-8  
List of Required Permits for Recycled Water**

Agency	Permit Description	Permit Jurisdiction
<b>Local Permits</b>		
County of SLO	Land Use Development Permit	Required for project development and grading activities.
County of SLO, Public Works	Encroachment Permits	Required for work within County road right-of-way.
<b>State Permits</b>		
State Water Resources Control Board	Approval	Required prior to incorporation of a recycled water system.
California Regional Water Quality Control Board	Storm Water NPDES	Required for construction activities and storm water discharge.
State Water Resources Control Board	Appropriative Water Rights Diversion Permit	May be required to allow alternate use of recycled water that is currently percolated into the San Simeon Creek aquifer.
California Regional Water Quality Control Board	Amend Current Waste Discharge Requirements (WDR)	Required for the proposed recycled water diversions.
California Department of Health Services	Title 22, Chapter 3, Division 4 of the California Code of Regulations	Required to ensure safe water quality.
California Department of Transportation	Encroachment Permit Transportation Permit	Required for work crossing highway; transportation of oversize loads.
CalOSHA	Trenching and Excavation Permit	Required for any projects with trenching/excavation greater than five feet deep.
<b>Federal Permits</b>		
U.S. Army Corps of Engineers	Section 404	Required for projects affecting wetlands, inland waters, lakes, rivers, etc.
U.S. Fish and Wildlife	Fish and Wildlife Coordination Act Section 10(a) Permit Endangered Species Act	Required for projects that involve stream crossings and conservation of endangered species.
State Historic Preservation Office	Section 106 Review	Required for projects potentially impacting a historic resource.
Source: Final Report, Assessment of Long-Term Water Supply Alternatives (June 2004).		



## POTABLE WATER DISTRIBUTION SYSTEM

No agreements with external entities would be necessary to implement the potable water distribution system improvements. Table 3-9 (List of Required Permits for Potable Water) provides a complete list of the required permits.

**Table 3-9**  
**List of Required Permits for Potable Water**

Agency	Permit Description	Permit Jurisdiction
<b>Local Permits</b>		
County of SLO	Land Use Development Permit	Required for project development and grading activities.
County of SLO, Public Works	Encroachment Permits	Required for work within County road right-of-way.
<b>State Permits</b>		
California Regional Water Quality Control Board	Storm Water NPDES	Required for construction activities and storm water discharge.
California Department of Transportation	Encroachment Permit Transportation Permit	Required for work crossing highway; transportation of oversize loads.
CalOSHA	Trenching and Excavation Permit	Required for any projects with trenching/excavation greater than five feet deep.
California Department of Health Services	Domestic Water Supply Permit/ Permit Amendment	Required for potable distribution system facilities, such as storage tanks.
<b>Federal Permits</b>		
U.S. Army Corps of Engineers	Section 404	Required for projects affecting wetlands, inland waters, lakes, rivers, etc.
U.S. Fish and Wildlife	Fish and Wildlife Coordination Act Section 10(a) Permit Endangered Species Act	Required for projects that involve stream crossings and conservation of endangered species.
State Historic Preservation Office	Section 106 Review	Required for projects potentially impacting a historic resource.
Source: Kennedy/Jenks Consultants, <i>Final Task 3 Report: Potable Water Distribution System Analysis</i> , July 2004.		

## DEMAND MANAGEMENT

No agreements with external entities would be necessary to implement the Demand Management component. However, certain modifications to the existing CCSD Code could be required. No permits or CEQA documentation would be required for this component.

## SEAWATER DESALINATION

Because this component involves construction within the San Simeon State Park and the ocean, there are a number of important agreements that must be obtained. San Luis Obispo County approval and CCC concurrence would be required for this component. The State Park pipeline route would require right-of-way agreements with the Department of Parks and Recreation for construction of the pipeline through the park. Also, right-of-way for the Highway





Route alternative would need to be obtained from CalTRANS. Table 3-10 (List of Required Permits for Seawater Desalination) provides a complete list of the required permits.

**Table 3-10  
List of Required Permits for Seawater Desalination**

Agency	Permit Description	Permit Jurisdiction
<b>Local Permits</b>		
County of SLO Building and Planning Department	Land Use Permit; Building and Grading Permits	Required for project development and grading activities.
County SLO Building and Planning Department	Coastal Development Permit	Required for on-shore development.
County of SLO, Public Works	Encroachment Permits	Required for work within County road right-of-way.
<b>State Permits</b>		
California Regional Water Quality Control Board	National Pollutant Discharge Elimination System Permit (NPDES)	Required for seawater concentrate return.
California Regional Water Quality Control Board	Storm Water NPDES	Required for construction activities; storm water discharge.
California Department of Transportation	Encroachment Permit Transportation Permit	Required for work crossing highway; transportation of oversize loads.
California Department of Health Services	Domestic Water Supply Permit	Required to ensure safe water quality.
California Department of Parks and Recreation	Special Use Permit, Land Lease for Pipelines	Required for encroachment on State Park land.
CalOSHA	Trenching and Excavation Permit	Any portion of project requiring trenching/excavation greater than 5 feet deep.
California Coastal Commission (CCC)	Coastal Development Permit <sup>1</sup>	Required for intake/discharge structures below the mean high-high tide elevation.
California State Lands Commission	Leases	Required for any buried facilities located within the State's submerged lands.
<b>Federal Permits</b>		
U.S. Army Corps of Engineers	Section 404	Required for improvements affecting wetlands, inland waters, lakes, rivers, etc.
U.S. Fish and Wildlife	Fish and Wildlife Coordination Act Section 10(a) Permit Endangered Species Act	Required for stream crossings and conservation of endangered species.
State Historic Preservation Office	Section 106 Review	Required for potential impacts to historic resources.
Monterey Bay National Marine Sanctuary	Authorization	Required for work within submerged lands of the sanctuary.
Note:		
<sup>1</sup> The Coastal Development Permit issued by the County may be appealed to the CCC.		
Source: Final Report, Assessment of Long-Term Water Supply Alternatives (June 2004).		