

6.14 WATER SUPPLY

INTRODUCTION

This section of the EIR describes water supply, including recycled water, which would serve the Regional University Specific Plan (RUSP). The existing water supplies are described, as well as the capacity to accommodate development of the RUSP area (Plan Area). As part of the analysis, this section assesses the expected water demand resulting from the proposed project, evaluates the effects of the project on existing and future water supplies and infrastructure, and recommends mitigation measures where appropriate.

Information from the Placer County General Plan and other environmental documents prepared for projects in the vicinity of the project were used to prepare this section, including the *De La Salle University and Community Specific Plan Water Supply Assessment (WSA)*, Placer County Water Agency (PCWA) (Appendix F); the *Western Placer County Groundwater Storage Study*, MWH, December 2005; *Integrated Water Resources Plan*, PCWA, August 2006; *Roseville Regional Wastewater Treatment Service Area Master Plan Draft EIR*, Environmental Science Associates and Montgomery Watson, May 1996; the *Placer Vineyards Specific Plan Revised Draft EIR*, Quad Knopf, March 2006; *Placer Vineyards Specific Plan Second Partially Recirculated Revised Draft EIR*, Quad Knopf, March 2007; and *West Roseville Specific Plan EIR*, EIP Associates, September 2003; as well as engineering studies done for the specific plan and other technical reports by the County, City of Roseville, and PCWA. A supplemental water supply background information report, prepared by PBS&J, is attached as Appendix G. PCWA staff also provided input on current and planned PCWA facilities.

Comments received in response to the NOP (see Appendix B) state concern about the use of groundwater, the availability of surface water, the phasing of water supply infrastructure, the degree to which groundwater would be relied as a primary source or as a back-up supply, and consistency with the Lincoln Groundwater Management Plan. The PCWA noted that the project site is key to the development of transmission infrastructure to meet the needs of its service area and would prefer that a planned integrated water system to provide surface water be constructed as opposed to an isolated groundwater system.

ENVIRONMENTAL SETTING

Existing Water Sources and Supplies

The Plan Area is within the service area of PCWA and PCWA would be the public water agency serving the project. The PCWA was created in 1957 to provide water resource planning and management services, irrigation water, drinking water, and hydroelectric power generation for customers in Placer County. The primary sources of water supply for the PCWA are surface water diversions from the American River, the Yuba River, and the Bear River, although the agency also has access to groundwater resources. During the 1960s, PCWA constructed the Middle Fork American River Project (MFP) to divert surface water for irrigation, domestic, commercial, recreational purposes, and electricity generation. Currently, PCWA provides treated drinking water for urban uses and rural domestic uses, as well as raw water deliveries for agricultural irrigation. PCWA's service area is further divided into five separate service zones. The proposed project is located in western Placer County, which is served through PCWA's Zones 1 and 5. According to the

WSA prepared on May 9, 2005, “the Project will need to request and be annexed to the Agency’s Zone 1 and detached from Zone 5 as a condition of service.”¹

PCWA has three sources of water available for use in Western Placer’s Zones 1 and 5. The Agency’s primary source of water in Zone 1 is a surface water supply contract with Pacific Gas and Electric (PG&E) for diversions from the Yuba and Bear Rivers for up to 100,400 acre-feet (ac-ft) per year (AFA). This water is delivered through PG&E’s Drum-Spaulding hydroelectric system. This source has relatively high drought reliability. PCWA anticipates nearly full contract deliveries during mild multiple-dry year scenarios, but cutbacks of up to 50 percent are possible during the most severe single dry year events. The term of this contract ends in 2013, but PCWA expects the contract to be renewed after the expiration of the present term.

The Agency’s second source of water comes from its surface water entitlements to diversions from the American River under permits 013855, 013856, 013857, 013858, 018380 and 020754, also known as PCWA’s MFP water rights. Under the terms of these entitlements, PCWA is limited to a maximum consumptive use of 120,000 AFA, even though the reservoirs on the MFP have a storage capacity of approximately 340,000 AFA. This water can be diverted at either Auburn or Folsom Reservoir. Based on the PCWA’s modeling efforts, PCWA anticipates a full supply under even the most severe dry-year scenarios.

The final source of water for the project area is the federal Central Valley Project (CVP) contract between PCWA and the United States Bureau of Reclamation (USBR). This contract allows for the use of up to 35,000 AFA, which can be taken at the Folsom Reservoir or other locations as mutually agreed by PCWA and USBR. The CVP water is subject to reduction during most dry year events. According to the CVP water shortage policy drafted in 2001, municipal and industrial use is subject to a maximum 25-percent cutback.²

According to the WSA for the project,³ the total amount of surface water available for use in the proposed project area, including PCWA’s Zones 1 and 5 is 255,400 AFA, as shown in Table 6.14-1. Out of that permanent supply, PCWA has contracted to deliver up to 55,000 AFA; 25,000 AFA to San Juan Water District for use within the Placer County portion of its service area and up to 30,000 AFA to serve the City of Roseville. Through December 15, 2005, PCWA committed approximately 113,563 AFA to meet the needs of its Zone 1 and 5 customers plus the 55,000 AFA committed to San Juan Water District and the City of Roseville. Subtracting these amounts from PCWA’s entitlements, there would be 86,837 AFA of additional surface water available in normal years for use in western Placer County to meet future water demands.

Diversion and Distribution Systems

PG&E water is diverted from the Yuba and Bear Rivers into PG&E storage reservoirs and then delivered to PCWA at various “buy points” along PG&E canals within Placer County where it is fully used. MFP water is diverted from the Middle Fork of the American River and its tributaries into MFP reservoirs. Surface waters are released and re-diverted at the American River Pump Station (ARPS) near Auburn, to serve PCWA’s retail service area, and from Folsom Reservoir to serve San Juan Water District and the City of Roseville.

1 Placer County Water Agency, De La Salle University and Community Specific Plan Water Supply Assessment, May 9, 2005, page 1.

2 Placer County Water Agency, *Integrated Water Resources Plan*, August 2006, page ES-6.

3 Placer County Water Agency, De La Salle University and Community Specific Plan Water Supply Assessment, May 9, 2005.

TABLE 6.14-1

SURFACE WATER SUPPLIES FOR PCWA ZONE 1 AND 5

Source	Acre-feet per year	Reductions	Entitlement
PG&E Yuba/Bear Project	100,400	subject to shutdown during emergency or maintenance	June 18, 1968 Water Supply Contract with PG&E amended by the "1995 Transfer Agreement between Pacific Gas and electric Company and Placer County Water Agency" dated march 20 1996. Terminates on May 1, 2013, should be renewable, subject to possible revisions in price
Middle Fork American River Project	120,000	subject to: 1) FERC limitations, 2) SWRCB requirements for water quality, such as minimum Delta Flows, 3) PG&E MFP Power Purchase Contract	PCWA and USBR 1970 Water Service Contract, based on SWRQB permits 13855,13856, 13857, 13858, 01830,and 020754
CVP Project	35,000	subject to CVP supplies, typically reduced by 25 percent in single dry and multiple years	Contract No. 14-06-200-5082A USA and PCWA, modified July 8, 1992.
Total	255,400		

Source: Western Placer County Water Supplies, PCWA legal counsel, March 1, 2000 and PBS&J, 2006.

The MFP supply has been limited since 1972 when the original ARPS was removed by USBR to make way for the construction of the Auburn Dam. When the dam project was scrapped, the USBR agreed to install temporary pumps to deliver a portion of PCWA's MFP water when requested to do so. USBR is currently constructing a new ARPS for PCWA at the original site. Upon completion in early 2008, PCWA will have year round access to 35,500 acre-feet of its MFP rights into its treated water service area. PCWA does not currently have facilities to deliver its 35,000 AFA CVP entitlement from the authorized point of diversion at Folsom Reservoir into its treated water service area.

The Sacramento River Water Reliability Study (SRWRS) is an ongoing effort to develop additional existing water supply entitlements. The SRWRS is a joint project between local purveyors, including: PCWA, the City of Roseville, the City of Sacramento and the Sacramento Suburban Water District, and the USBR. The SRWRS proposes to meet northern Sacramento and western Placer water supply needs through 2030 by constructing joint regional diversion and treatment facilities off of the Sacramento River north of the Sacramento International Airport. Under the proposed project PCWA proposes to divert and treat an additional 35,000 AFA of MFP or CVP water. The USBR is the federal lead agency under NEPA, and PCWA is the local lead agency under CEQA. The draft EIS/EIR is scheduled for release by the end of 2007.

PCWA also shares raw water canal capacity with Nevada Irrigation District (NID) and South Sutter Water District. Through interim purchase agreements, PCWA has obtained temporary water supplies from these agencies, purchasing a few thousand AFA in the recent past, but only to meet agricultural demands in the Auburn Ravine area. These are not permanent water supplies and not included in PCWA's supply totals.

Water Forum Agreement

An important component of water supplies within the Sacramento region is the Water Forum Agreement (WFA) (January, 2000). The WFA is an agreement between multiple stakeholders in the Sacramento metropolitan area and lower foothill regions. After seven years of meetings, sub-

committee negotiations, and small group operations, the Water Forum members established a working agreement that provides environmental safeguards and a reliable water supply for the region. The WFA's co-equal goals were to (1) provide a reliable and safe supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.⁴

From these co-equal goals, the Water Forum signatories determined seven major elements that must be implemented during the next 30 years if the agreement is to be successful. As a signatory of the WFA, PCWA is actively participating in all seven elements. The elements specific to reliability of water supplies include:

- Increased Surface Water Diversions;
- Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years, Water Conservation;
- Groundwater Management; and
- The Water Forum Successor Effort.

Groundwater Sources

The Plan Area is located in the 548-square mile North American Sub-basin (Sub-basin) which underlies portions of northern Sacramento County, south Sutter County and western Placer County as described by the Department of Water Resources. The Sub-basin's boundaries are the Bear River to the north, the Feather and Sacramento Rivers on the west, the American River on the south, and east to the foothill of the Sierra Nevada. The underlying geology or hydrostratigraphy of the basin consists of a variety of geologic formations that make up the water bearing units. There are two aquifer systems: an upper unconfined system consisting of the Victor, Fair Oaks, and Laguna Formations, and a lower, semi-confined system in the Mehrten Formation. These geologic formations are composed of lenses and layers of inter-bedded sand, silt, and clay with coarse-grained stream channel deposits.⁵ The groundwater contained in the upper aquifer system of the Victor, Fair Oaks, and Laguna Formations is of superior quality compared to that in the lower semi-confined system, mainly because the water in the Mehrten Formation is higher in iron and manganese in some locations, and can require more treatment. The upper unconfined system only requires chlorination treatment to be potable.

Groundwater quality from three agricultural wells on the project site was tested for Title 22 and radiological parameters. Sample results indicate that groundwater at the project site does not require treatment for arsenic. In other respects, the groundwater tested is suitable for potable use without treatment. Total dissolved solids (TDS) and hardness were at moderate levels. No volatile organic compounds (VOCs) were detected, and concentrations of metals other than iron and manganese were low or not detected. Nitrate concentrations were low, and pesticides and herbicides, which are concerns in agricultural areas, were not detected. Natural radiological parameters were measured at low levels or were not detected.⁶

4 Water Forum Agreement, 2000, page 29.

5 Sacramento Groundwater Authority, Groundwater Management Plan, 2003, page 7.

6 West Yost Associates, Sampling and Analysis of Existing Agricultural Wells for the Regional University Specific Plan, Southwestern Placer County, prepared for KT communities, January 20, 2006.

Subsurface groundwater levels in the area west of the City of Roseville have been relatively stable since the early 1980s.⁷ Prior to that time, the region had experienced several decades of declining groundwater levels, much of it associated with steadily increasing pumping to meet residential development growth in northern Sacramento County in combination with established agricultural uses in the basin. Based on a modeling of the North American Groundwater Sub-basin and the stable groundwater levels in the recent decade, the sustainable yield for ground water in the basin is estimated at 400,000 AFA.⁸

The WFA established policy for groundwater pumping in the Sacramento County portion of the North American Groundwater Sub-basin at 130,000 AFA, resulting in 175,000 AFA and 95,000 AFA for the Sutter and Placer County portions of the basin, respectively. Placer County groundwater pumping, primarily for agriculture, is currently estimated to be about 90,000 AFA.⁹

PCWA does not currently use significant amounts of groundwater to meet potable demand within the Western Area,¹⁰ although it plans on expanding groundwater production in the future as a backup supply in the event of emergency or planned outages or extended drought conditions. In order to ensure that there is no long-term effect of this increased groundwater production, PCWA has proposed a groundwater banking program making use of “in-lieu recharge”, whereby historic groundwater use is reduced during normal and wet water years and replaced with surface water deliveries.

PCWA plans to use groundwater to assist in supplying future demands for potable water during dry years in the western Placer County.¹¹ The dry year pumping of groundwater supports the WFA co-equal objectives of providing a reliable and safe water supply to the Sacramento-Placer-EI Dorado region, and preserving the environmental values of the lower American River. The WFA recommended a sustainable long-term annual groundwater yield for the three sub-basins.

Water Treatment, Distribution, and Storage

Water Treatment

PCWA owns and operates four water treatment plants (WTPs) in Zone 1: Bowman, Auburn, Foothill and Sunset. The Bowman and Auburn WTPs serve the eastern portions of Zone 1, specifically, the City of Auburn and vicinity. The Foothill and Sunset WTPs serve the western portion of Zone 1. The Foothill WTP is located east of Interstate 80 in Newcastle, south of Auburn. The Foothill WTP just completed an upgrade during the summer of 2005 that increased the plant’s capacity to 55 MGD (33,000 AFA under a normal municipal and industrial [M&I] demand pattern¹²). The Sunset WTP, located in Rocklin near Clover Valley Creek, has a treatment capacity of 8 MGD (4,800 AFA under a normal M&I demand pattern). The Foothill/Sunset combined system can treat approximately 63 MGD. According to the PCWA, maximum daily demand for treated water in 2005 was roughly 49 MGD.

7 PCWA, Western Placer County Groundwater Storage Study, prepared by MWH, Final Report, December 2005, page 3-4.

8 PCWA, Western Placer County Groundwater Storage Study, prepared by MWH, Final Report, December 2005, page 4-8.

9 PCWA, Western Placer County Groundwater Storage Study, prepared by MWH, Final Report, December 2005, page 4-8.

10 PCWA Urban Water Management Plan, December 2005, prepared by Brown and Caldwell, page 4-4.

11 PCWA Urban Water Management Plan, December 2005, prepared by Brown and Caldwell, page 4-8.

12 Based on need to serve peak demand, the annual delivery is assumed to be 53.6% of the pumping capacity.

PCWA is in the design phase for a new WTP in the Newcastle and Ophir area with a proposed capacity of 30 MGD and would be operational in 2011. At that point, PCWA's treated water capacity would be 93 MGD (104,000 AFA). In addition, PCWA is the local lead agency investigating an additional 35,000 AFA capacity (for PCWA service area) Sacramento River WTP near Elverta Road. With this new treatment plant operational, PCWA would have more than 90,800 AFA (normal M&I demand levels) available to meet the demands of its treated water service area.

Water Distribution

In the late 1800s, miners built an extensive water conveyance system to deliver surface water to mining operations; much of this system is still in use today throughout Placer County. When mining operations subsided, the reservoirs, canals, pipelines, and flumes were used to convey the water to new agricultural and industrial uses. The PCWA raw water conveyance system in use today consists of these same facilities and infrastructure.

The primary PG&E-owned conveyance facility through Zone 1 is the Bear River/Wise/South Canal system. PG&E supplies water in Placer County from this canal to the NID and PCWA. PCWA is able to take delivery of water from the Wise/South Canal at ten separate delivery points. The Boardman Canal is the main conveyance facility in the Zone 3 system. PCWA is also able to transfer a limited amount of water to Zone 1 from Zone 3; however, the contract only allows transfers during power plant maintenance periods.

Principal facilities to divert MFP water include the temporary American River Pump Station, the Auburn Tunnel, and the Auburn Tunnel pump station. PCWA has the ability to deliver MFP water to Zone 1 and Zone 5 from the American River. The temporary American River Pump Station has capacity to deliver approximately 13,500 AFA. The proposed American River Pump Station, scheduled for completion in the spring of 2008, would have capacity for 35,500 AFA. The Auburn Tunnel Pump Station lifts water from the Auburn Ravine Tunnel and discharges to the PG&E South Canal, which then can be used to supply the Foothill WTP. PCWA also plans to expand their transmission capacity to western Placer County, linking the proposed Ophir WTP with its existing Foothill and Sunset WTPs.

PCWA has an existing wheeling agreement with the City Roseville that allows for the transmission of water through the Roseville system at a peak flow rate of up to 10 MGD. The Plan Area could be served via an extension of existing pipelines at Fiddymont and Base Line Roads, as is stipulated in the wheeling agreement. However, the entire wheeling capacity would not be available to the RUSP project, since some of the capacity has already been committed to other projects served by PCWA west of Roseville. In January 2007 PCWA completed the construction of a pumping station and 10 million gallon tank in the Sunset Industrial Area (on Tinker Road) to enhance its ability to maximize its capacity under the wheeling agreement. Any new point of delivery from Roseville would require renegotiation of the wheeling agreement.

Water Storage

Water storage is required to meet water demand for periods when peak hour demand exceeds maximum daily supply rates, and to provide emergency fire flows. These high demand periods usually occur for four to six hours during hot summer days and for potentially longer periods during large fire events. Previously, PCWA had a treated water storage capacity of 30 million gallons distributed throughout the County. Construction of the Sunset Industrial Area Tank and Pump

Station, mentioned above, added 10 million gallons of storage and a dual pumping station for increased efficiency, effectively increasing PCWA's storage to 40 million gallons.

Projected PCWA Supply and Demand Comparison

The PCWA prepared a final Integrated Water Resources Plan (IWRP) on August 6, 2006. The IWRP contains projected water demand within the PCWA's service area for several land use scenarios based on land use plans and population projections, including the Placer Vineyards Blueprint Alternative.¹³ Total treated water demand in western Placer County (including PCWA, Roseville and San Juan) is projected to increase from approximately 64,000 AFA in 2004 to 235,066 AFA in 2030.¹⁴ This includes PCWA wholesale contracts to other water districts. The total water demand, including treated and raw water sales, is projected to increase from 143,853 AFA in 2005 to 310,066 AFA in 2030. Sales to Sacramento Suburban Water District (SSWD) would be curtailed during years when they would resort to groundwater pumping. Reduction of sales to SSWD would reduce the total demand by 29,000 AFA in 2030. A summary of the projected demand for western Placer County is included in Table 6.14-2.

	2000	2005	2010	2015	2020	2025	2030
Total Treated Water Demand¹	27,897	34,210	44,093	57,189	71,478	85,828	152,681
Raw Water	79,651	74,959	76,166	77,393	78,639	79,905	75,000
Sacramento Suburban Water District ²	10,019	18,000	25,000	29,000	29,000	29,000	29,000
City of Roseville ³	0	3,000	4,118	6,753	11,075	18,164	65,970
San Juan Water District ⁴	10,698	13,684	14,311	14,976	15,625	16,370	16,415
Sales to other agencies	20,717	34,684	43,429	50,729	55,700	63,534	82,385
Total Demand	128,265	143,853	163,688	185,311	205,817	229,267	310,066
Notes:							
1. Assume 16 percent unaccounted for water, except for year 2030 where PCWA's 2006 IWRP used 15.6 percent.							
2. Delivery to Sacramento Suburban Water District may be curtailed to meet demand for water within Placer County and no delivery will occur during dry years.							
3. City of Roseville has a contract with options for a total 30,000 ac-ft/year.							
4. San Juan Water District has a contract for a maximum of 29,000 ac-ft/year.							
5. From PCWA 2006 IWRP projection using the Placer Vineyards Blueprint Enhanced Buildout Scenario.							
Source: PCWA, 2005, UWMP, Tables 3-10 and 3-13 and PCWA, IWEP, August 2006, Table 9-5.							

The water demand from Table 6.14-2 is compared to the projected normal year, dry year, and multiple dry year supplies included in the IWRP and Water Supply Background Information (see Appendix G). Single dry year cut-backs are based on the 1977 curtailments and the multiple-year drought is based on the curtailments experienced in the 1987 to 1992 drought. The results of the supply and demand comparison are included in Tables 6.14-3, 6.14-4, and 6.14-5. Surface supply was reduced for years prior to 2015 due to infrastructure limitations for MFP and CVP entitlements. Upon completion of those two infrastructure projects, PCWA would be able to use all their entitlements. During dry years, sales to SSWD are eliminated.

- 13 On July 16, 2007, the Placer County Board of Supervisors approved the "Base Plan" version of the Placer Vineyards Specific Plan, finding that the Blueprint Alternative was infeasible, as defined by CEQA.
- 14 Placer County Water Agency, *Integrated Water Resources Plan*, August 2006.

TABLE 6.14-3

**PCWA WESTERN PLACER SUPPLY AND DEMAND COMPARISON DURING NORMAL YEARS
(AC-FT/YEAR)**

	2005	2010	2015	2020	2025	2030 ⁷
Total Supply	198,400	199,165	256,700	257,610	259,158	322,234
Surface Water ¹	198,400	198,400	255,400	255,400	255,400	297,700
Groundwater ²	0	0	0	0	0	0
Recycled Water ³	0	765	1,300	2,210	3,758	21,261
Total Demand	143,853	163,688	185,311	205,817	229,267	310,066
Treated ⁴	34,210	44,093	57,189	71,478	85,828	152,681
Raw ⁴	74,959	76,166	77,393	78,639	79,905	75,000
Sales ⁵	34,684	43,429	50,729	55,700	63,534	82,385
Difference⁶	54,547	35,477	71,389	51,793	29,891	12,168

Notes:

- Assumes that new MFP pump station and Sacramento River Diversion are completed in 2015. See surface water reliability in Table 2-2 in the Water Supply Background Information (Appendix G).
 - Groundwater only used to match demand.
 - Recycled Water Supply in Zone 1, except for City of Lincoln, UWMP 2005 Table 4-4.
 - Treated water demand projects Table 3-5 in the Water Supply Background Information.
 - Includes projected demand from contracts and not full contracted amount of 84,000 ac-ft/year.
 - Total Supply minus Total Demand.
 - Year 2030 figures for supply and demand are from PCWA's 2006 IWRP.
- Source: PBS&J, 2006. PCWA, UWMP, 2005, and PCWA, IWRP, 2006.

TABLE 6.14-4

**PCWA WESTERN PLACER SUPPLY AND DEMAND COMPARISON
DURING SINGLE DRY YEAR
(AC-FT/YEAR)**

	2005	2010	2015	2020	2025	2030 ⁷
Total Supply	196,450	197,215	197,750	198,660	200,267	265,224
Surface Water ¹	196,450	196,450	196,450	196,450	196,450	221,900
Groundwater ²	0	0	0	0	59	22,063
Recycled Water ³	0	765	1,300	2,210	3,758	21,261
Total Demand	125,853	138,688	156,311	176,817	200,267	264,485
Treated ⁴	34,210	44,093	57,189	71,478	85,828	148,100
Raw ⁴	74,959	76,166	77,393	78,639	79,905	34,000
Sales ⁵	16,684	18,429	21,729	26,700	34,534	82,385
Difference⁶	70,597	58,527	41,439	21,843	0	739

Notes:

- Surface water reductions based on cutbacks similar to 1977 drought.
 - Groundwater only used to match demand.
 - Recycled Water Supply in Zone 1, except for City of Lincoln, UWMP 2005 Table 4-4.
 - Treated water demand projects see Table 6.14-2.
 - Includes projected demand from contracts and not full contracted amount of 84,000 ac-ft/year.
 - Total Supply minus Total Demand.
 - Year 2030 figures for supply and demand are from PCWA's 2006 IWRP.
- Source: PBS&J, 2006. PCWA, UWMP, 2005, and PCWA, IWRP, 2006.

TABLE 6-14-5

**PCWA WESTERN PLACER SUPPLY AND DEMAND COMPARISON
FOR MULTIPLE DRY YEARS
(AC-FT/YEAR)**

	2005	2010	2015	2020	2025	2030 ⁷
Total Supply	198,400	199,165	222,851	223,761	225,309	291,049
Surface Water ¹	198,400	198,400	221,551	221,551	221,551	247,725
Groundwater ²	0	0	0	0	0	22,063
Recycled Water ³	0	765	1,300	2,210	3,758	21,261
Total Demand	125,853	138,688	156,311	176,817	200,267	290,066
Treated ⁴	34,210	44,093	57,189	71,478	85,828	152,681
Raw ⁴	74,959	76,166	77,393	78,639	79,905	55,000
Sales ⁵	16,684	18,429	21,729	26,700	34,534	82,385
Difference⁶	72,547	60,477	66,540	46,944	25,042	983

Notes:

- Assumes that new MFP pump station and Sacramento River Diversion are completed in 2015. See surface water reliability in TABLE 2-2 in the Water Supply Background Information. Surface water cutbacks are based on similar cutback experienced in 1987 to 1992.
- Groundwater only used to match demand.
- Recycled Water Supply in Zone 1, except for City of Lincoln, UWMP 2005 Table 4-4.
- Treated water demand projects see Table 6.14-2.
- Includes projected demand from contracts and not full contracted amount of 84,000 ac-ft/year.
- Total Supply minus Total Demand.
- Year 2030 figures for supply and demand are from PCWA's 2006 IWRP.

Source: PBS&J, 2006, PCWA, UWMP, 2005, and PCWA, IWRP, 2006.

The IWRP reports that supplies would be supplemented with up to 21,261 AFA of recycled water in 2030. Recycled water offsets groundwater pumping in 2030 for the single dry-year and multiple dry-year scenarios. This amount was assumed for all year type scenarios in the IWRP for 2030.

REGULATORY SETTING

Federal Regulations

U.S. Environmental Protection Agency (EPA)

The EPA established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for a total of 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may add additional constituents in the future.

State Regulations

The California Department of Health Services (DHS), State Water Resources Control Board (SWRCB), and the Department of Water Resources (DWR) would have input into the provision of water for the Plan Area. In compliance with State Water Code Sections 10910(a) and 10910(c)(1), the water supplier for the proposed project is required to prepare a WSA for the water service request as part of the CEQA EIR process. The SWRCB regulates the water quality functions of the state and manages the State's Water Code. State primary and secondary drinking water standards are promulgated in California Code of Regulations (CCR) Title 22 Sections 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

Water Rights and Entitlements

Since 1914, the SWRCB has administered and controls all water rights permits in California. Under this process, an application is filed and the SWRCB issues a permit for surface water diversion, including the approved POU for that water. California water law typically applies only to surface water resources, although according to the SWRCB, "California law also recognizes and protects rights to extract and use waters percolating beneath the surface of the land."¹⁵

Urban Water Management Planning Act

California Water Code Section 10610 et seq. requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFA, must prepare an Urban Water Management Plan (UWMP). The DWR provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. PCWA adopted an UWMP on December 15, 2005. The growth projections for western Placer County include the proposed project.

Senate Bill 610 - Water Supply Assessments

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amends the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as WSAs required under SB 610.

Water supply planning under SB 610 and SB 221 (see below) requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the Plan Area.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" if it meets any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 sf of floor space;
- A hotel or motel with more than 500 rooms;

15 State Water Resources Control Board, Statutory Water Rights Law, 1999.

- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a “Project” includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system. The proposed project is a mixed-use project that includes one or more of the qualifying elements and, therefore, qualifies as a “Project” under Section 10912 (a) of the Water Code. Thus, PCWA has prepared a WSA as required by these criteria under SB 610 (included in Appendix F).

Water Code Section 10910 (d)(1) states: “The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights or water service contracts.”

Section 10910 (d)(2) of the Water Code further defines requirements of WSAs, including: (A) documentation showing proof of water supply entitlements, water rights, or existing water service; (B) copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system; (C) copies of federal, state, or local permits for construction of necessary infrastructure associated with delivery of the water supply; and (D) copies of any necessary regulatory approvals that are required to convey or deliver the water supply.

Section 10911(a) provides that, if a public water system’s WSA concludes that currently available supplies are insufficient to supply a proposed project together with other planned growth and existing demands over a 20-year time horizon, the WSA shall set forth its plans for acquiring additional supplies. Required information may include: (1) the estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies; (2) all federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies; and (3) the estimated time frames within which the public water system expects to be able to acquire additional water supplies.

PCWA prepared a WSA for the proposed project in May 2005 (see Appendix F). Additional water supply background information has been prepared and is attached as Appendix G. The WSA and the background information conclude adequate water supplies are available and satisfy the documentation requirements of SB 610, CEQA 10583.5, and Water Code sections 10631, 10910, and 10912. The WSA requires that the project site be annexed into PCWA Zone1 service area.

Senate Bill 221- Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a “fail-safe” mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the

previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region.

Government Code section 66473.7(b)(1) states “The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.” In other words, as a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed project as part of the tentative map approval process. SB 221 verification would be required during the subdivision map process for the proposed project.

Drinking Water Quality

The California DHS is responsible for implementing the federal Safe Drinking Water Act of 1974 and its updates, as well as California statutes and regulations related to drinking water. As part of their efforts, the DHS inspects and provides regulatory oversight for public water systems within California. In addition, the Central Valley RWQCB has the responsibility for protecting the beneficial uses of the State’s waters, including groundwater, and these include municipal drinking water supply, as well as various other uses.

Public water system operators are required to regularly monitor their drinking water sources for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor and appearance, as well as cosmetic qualities. These are generally non-enforceable guidelines. However, in California, secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

The California Department of Toxic Substances (DTSC) is the primary agency charged with protecting groundwater resources through their Hazardous Waste Management Program and Site Mitigation Programs. A critical element of both programs is maintaining environmental quality and economic vitality through the protection of groundwater resources. This is accomplished through: hazardous waste facility permitting and design; oversight of hazardous waste handling; removal and disposal; oversight of remediation of hazardous cleanup of illegal drug labs; cleanup of abandoned hazardous waste sites; oversight of the closure of military bases; and pollution prevention.

Local Regulations

Water Forum Agreement

The WFA established the guiding principles for water management in the Sacramento area and adjacent foothill region. The collaborative effort represents business, agricultural, environmental, citizen, water management, and local government interests in Sacramento County, and water interests in Placer County and western El Dorado County. The agreement proposes the American River, the Sacramento River, and groundwater as sources of future water supply. The agreement provides a comprehensive package of linked actions that will achieve the two co-equal objectives: (1) to provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030, and (2) to preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River. From these co-equal goals, the Water Forum signatories determined seven major elements that must be implemented during the next thirty years if the agreement is to be successful. These seven major elements include:

1. Increased surface water diversions (as noted above, these would occur primarily on the American River);
2. Actions to meet customers' needs while reducing diversion impacts on the lower American in drier years. This element is to ensure that sufficient water supplies will be available to customers in dry years as well as wet years;
3. Support for an improved pattern of fishery flow releases from Folsom Reservoir. This element supports needed assurances for continued implementation of a pattern of water releases from Folsom Reservoir that more closely matches the needs of anadromous fish;
4. Lower American River Habitat Management Element. This element combined with elements #2 and #3 is included to mitigate the impacts of diversions on the Lower American River in a reasonable and feasible manner;
5. Water Conservation Element. This element incorporates various conservation measures to help meet both of the co-equal goals listed above;
6. Groundwater Management Element. Establishes a framework to protect groundwater resources in Sacramento County and to ensure these resources are used in a sustainable manner. Introduces the concept of "conjunctive use", which entails monitoring the amount of water withdrawn from the groundwater basin and the planned use of surface water in conjunction with groundwater; and
7. Water Forum Successor Effort. This element outlines the way WFA members oversee, monitor, and report on implementation of the WFA.

Placer County General Plan

The following goals and policies from the Placer County General Plan are applicable to the provision of water:

Policies

6.A.10.

The County shall protect groundwater resources from contamination and further overdraft by pursuing the following efforts:

- a) Identifying and controlling sources of potential contamination;
- b) Protecting important groundwater recharge areas;
- c) Encouraging the use of surface water to supply major municipal and industrial consumptive demands;
- d) Encouraging the use of treated wastewater for groundwater recharge; and
- e) Supporting major consumptive use of groundwater aquifer(s) in the western part of the County only where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area.

4.C.1.

The County shall require proponents of new development to demonstrate the availability of a long-term, reliable water supply. The County shall require written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy. Where the County will approve groundwater as the domestic water source, test wells, appropriate testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of suitable groundwater.

4.C.2.

The County shall approve new development based on the following guidelines for water supply:

- a) Urban and suburban development should rely on public water systems using surface supply.
- b) Rural communities should rely on public water systems. In cases where parcels are larger than those defined as suburban and no public water system exists or can be extended to the property, individual wells may be permitted.
- c) Agricultural areas should rely on public water systems where available, otherwise individual water wells are acceptable.

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- 4. Prior to consideration of such GPAs the following should have occurred or been demonstrated:
 - c. It has been positively demonstrated that adequate surface water, sewer capacity, and the necessary distribution and collection systems exist or can be built to serve the area proposed for development.

Placer County Water Agency

PCWA has responded to the County request for a WSA required by SB 610 and codified in California Water Code §10910 (g)(1). PCWA's WSA concluded there is sufficient water to serve the project and the other projected demands within the PCWA water system beyond the 20-year planning horizon. The WSA also stated the agency is opposed to developments in western Placer County relying entirely on groundwater.¹⁶ PCWA also has a "first-come, first-served" policy for new customers.

16 Placer County Water Agency, De La Salle University and Community Specific Plan Water Supply Assessment, May 9, 2005, page 4.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water use for the proposed project relative to the PCWA water service area and local groundwater sources. To determine potential impacts, water demands were estimated from demand projection calculations and quantitative evaluation of data relative to the proposed project, along with existing land uses, approved projects, and proposed development.

The sustainable use of groundwater is based on the assumption that groundwater levels are stabilized in the region¹⁷ and no-net increase in average annual groundwater withdrawal would result in no impact on groundwater levels or supplies.

California Supreme Court Ruling Analyses

On February 1, 2007, the California Supreme Court issued its decision in the matter of *Vineyard Area Citizens For Responsible Growth v. City of Rancho Cordova* (42 Cal.4th 412)(*Vineyards*), reversing the lower court's ruling in favor of the respondents. The decision enunciates four overarching principles with regard to the manner in which cities and counties should prepare water supply analyses when preparing environmental impact reports (EIRs) for large land use plans pursuant to the California Environmental Quality Act (CEQA). These principles are as follows:

1. An EIR may not simply assume that a water supply will be available. Decision makers must be presented with sufficient facts to evaluate the pros and cons of supplying the amount of water that will be needed for full build-out.
2. The water supply analysis cannot be limited to the first few years or first phases of development. To the extent reasonably possible, the EIR must include an assessment of the potential effects of producing the long-term water supply.
3. Although CEQA, consistent with Senate Bill 610 (Water Code, § 10910 et seq.), does not preclude the approval of major land use projects or plans absent a guaranteed water supply, the EIRs for such projects should nevertheless address how certain or "likely" such supplies are. The EIR must include a reasoned analysis of the circumstances affecting the likelihood of the water's availability.
4. Where there is some uncertainty regarding actual availability of the water supply, there must be some discussion of possible replacement sources or alternatives to use of the anticipated water, and the environmental consequences of those contingencies.

Related to "principle four" above, the Court held that where an EIR makes a sincere and reasoned attempt to analyze the water sources the project is likely to use, but acknowledges the remaining uncertainty, a measure for curtailing development may play a role in impact analysis. However, an alternative or mitigation measure to curtail development may not be substituted for the required analysis. Further the environmental effects of curtailing development, which may result in a partially built-out project, must also be analyzed.

17 PCWA, Western Placer County Groundwater Storage Study, prepared by MWH, Final Report, December 2005, page 3-4.

In response to the Court's decision, Placer County has undertaken a detailed review of the proposed project in order to ensure full compliance with the Court's ruling. The following analyses have been prepared in order to comply with the Court's ruling.

Supply and Demand Analysis

Because the manner in which potable water would be provided to projects in western Placer County continues to evolve, PCWA has several options or proposals to supplying surface water to the Plan Area.

The County's intent is to fully satisfy CEQA's informational purpose by including all of the available information known to the County about water supply, and to show the likelihood of water availability. The information below summarizes this available information used in the impact analysis.

Water Supply Description

Water demands for the project were estimated based on PCWA unit demand factors from the PCWA IWRP along with additional sources. As shown in Tables 6.14-6 and 6.14-7, the water demand for the proposed project is 3,220 AFA as calculated in the Water Supply Master Plan.¹⁸ Table 6.14-6 shows the potable water demand for the project is 2,448 AFA. Table 6.14-7 shows the estimated irrigation demand for public spaces that can be served by recycled water. The estimated irrigation demand is 772 AFA.

The potable water demand did not include demand for public landscape areas that is to be met with use of recycled water. Recycled water demand was assumed to be 772 AFA and this water should be available from the Pleasant Grove Wastewater Treatment Plant (PGWWTP). The recycled water supply would be limited to the daily wastewater flow to the PGWWTP. The water is treated for unrestricted reuse and sold by the City of Roseville. Since all recycled water would be used on public spaces, the County or some other public entity would purchase the recycled water and manage the distribution system. The peak demand for irrigation would exceed the daily supply of recycled water, resulting in a supplemental demand of 120 AFA above the recycled water supply.¹⁹ The supplemental irrigation water demand may be met with untreated groundwater or other supplemental water.

PCWA expects that demands for growth in their service area through 2030 can be met with existing entitlements and the development of the proposed Ophir WTP using water diverted from the American River through the soon to be completed ARPS, and a new Sacramento River diversion facility and treatment plant. The EIR for the Ophir WTP was certified by PCWA in 2005. The Sacramento River diversion, under the proposed project alternative, would entail constructing a joint diversion from the Sacramento River and treatment facilities to serve not only PCWA, but also the City of Sacramento, SSWD, and the City of Roseville. The diversion facility would consist of constructing a new diversion on the left bank of the Sacramento River, upstream of the mouth of the American River at approximately river mile 74.6. Water treatment, storage, and pumping facilities would connect to the west end of the existing Cooperative Transmission Pipeline/Northridge

18 The total water demand is the sum of the potable demand and irrigation demand. West Yost and Associates, Water Master Plan for the Regional University Specific Plan, prepared for KT Communities, revised December 7, 2006. Tables 3-3 and 3-4.

19 West Yost and Associates, Recycled Water Master Plan for the Regional University Specific Plan, prepared for KT Communities, revised December 7, 2006. Exhibit 3.

TABLE 6-14-6

BUILDOUT POTABLE WATER DEMAND

Land Use Type	Gross ^a Area, acres	Density	Units	Unit Demand ^b		Annual Demand afy	Avg. Day Demand, gpm
				gpd/unit	gpd/ac		
Community							
Low Density Residential (5 DU/ac)	68.8	5	DU/ac	703	—	271	168
Low Density Residential (6 DU/ac)	62.5	6	DU/ac	608	—	255	158
Medium Density Residential (9 DU/ac)	29.4	9	DU/ac	539	—	160	99
Medium Density Residential (11 DU/ac)	82.2	11	DU/ac	386	—	391	242
Medium Density Residential (12 DU/ac)	28.3	12	DU/ac	386	—	147	91
High Density Residential (18 DU/ac)	16.4	18	DU/ac	371	—	123	76
High Density Residential (22 DU/ac)	15.2	22	DU/ac	230	—	86	53
High Density Residential (24 DU/ac)	12.7	24	DU/ac	230	—	79	49
Community Commercial	22.2	—	—	—	2,759	55	34
Public (Includes Public Facilities & Fire Station)	9.1	—	—	—	3,219	26	16
Parks and Village Green ^c	40.1	—	—	—	0	0	0
School	31.0	—	—	—	3,379	23	15
Open Space ^d	63.8	—	—	—	0	0	0
ROW and Landscape Setback ^c	75.8	—	—	—	0	0	0
Subtotal	557.5					1,616	1,002
Regional University							
Faculty Housing	60.0	5.5	DU/ac	608	—	225	139
University Campus	356.5	—	—	—	—	—	—
Per Capita Demands ^e	—	6,800	Persons	69	—	526	326
High School ^{f, g}	40.0	—	—	—	3,379	30	19
Retirement Housing ^f	6 to 12	75	Units	608	—	51	32
Open Space ^d	183.5	—	—	—	—	—	—
Subtotal	600.0	—	—	—	—	832	516
Total	1,157.5	—	—	—	—	2,448	1,518

Notes:

a. Net to gross area ratios applied as follows:

Land uses with specified land use density (residential areas): 1

Commercial and public: 0.8

School: 0.2

Eighty percent of the total acreages of the commercial and public areas and schools were assumed to have a water requirement, consistent with the PCWA Draft Integrated Water Resources Plan Executive Summary (Brown and Caldwell, 2005). One-hundred percent of the water demand in commercial and public areas was assumed to be met using the potable water supply. Twenty-five percent of the total water use for schools was assumed to be indoor demand for potable water. Twenty-five percent of 0.8 is 0.2. The remainder of the water demand for schools was assumed to be for irrigation supply, which will be met using the recycled water distribution system.

b. University Campus per capita demand from University of California, Davis Draft Domestic Water Master Plan (WYA, 2000).

c. Included in public-area irrigation demands.

d. No irrigation requirement.

e. University Campus per capita demands include water demands for academic buildings, residential halls, administrative buildings, warehouse and maintenance buildings, performing arts venues, visual arts facilities, common areas and gathering spots, and athletic facilities, including a gym, 20,000-seat stadium, and aquatic center. Per capita demands from University of California, Davis, Draft Domestic Water Master Plan (WYA, 2000).

f. Acreage included in 356.5-acre University Campus

g. High School or similar land use.

Source: West Yost, Water Master Plan for the Regional University, updated December 7, 2006, Table 3-3.

TABLE 6-14-7

BUILDOUT PUBLIC IRRIGATION DEMANDS

Land Use Type	Gross Area, acres	Net: Gross Area Ratio	Net Area, Acres	Unit Demand ^b		Annual Demand afy	Avg. Day Demand, gpm
				gpd/unit	af/ac/yr		
Community							
Parks and Village Green	40.1	0.8	32	—	3.62	116	72
School	31.0	0.6	19	—	3.62	67	42
ROW and Landscape Setback	74.5	0.4	30	—	3.62	108	67
Subtotal	146.9	—	81	—	—	293	182
Regional University							
University Campus	356.5	0.3	108	—	3.62	392	243
High School	40.0	0.6	24	—	3.62	87	54
Subtotal	396.5	—	132	—	—	479	297
Total	543.4	—	213	—	—	772	479

Notes:

- a. Net to gross area ratios applied as follows:

Parks and Village Green: 0.8

Schools: 0.6

Rights-of-way (ROW) and landscape setbacks: 0.4

University Campus: 0.3

Eighty percent of the total acreages of the parks, schools and the Village Green were assumed to have a water requirement, consistent with the PCWA Draft Integrated Water Resources Plan Executive Summary (Brown and Caldwell, 2005). One-hundred percent of the water demand in the park and Village Green was assumed to be met using the potable water supply. Seventy-five percent of the total water use for the schools was assumed to be outdoor demand for irrigation water. Seventy-five percent of 0.8 is 0.6. The remainder of the water demand for the schools was assumed to be for indoor supply, which will be met using the potable water distribution system.

ROW and landscape setback acreages include streets, sidewalks and bike paths. Approximately 40 percent of the total area was assumed to have a turf irrigation requirement. If lower water use landscaping is used, a larger percentage of the ROW and landscape setback acreage can be irrigated.

- b. Approximately one-third of the core campus area at the University of California-Davis is irrigated. Approximately one-third of the total acreage of the Regional University was assumed to have a turf grass irrigation requirement. If lower water use landscaping is used, a larger percentage of the University acreage can be irrigated.

Source: West Yost, Water Master Plan for the Regional University, updated December 7, 2006, Table 3-4.

Transmission Pipeline in Antelope Road to serve SSWD, and an extension of that line would be built north to the service areas of the City of Roseville and PCWA. A separate transmission line would extend south to connect to Sacramento's existing distribution system. An EIR/EIS for the Sacramento River diversion project is currently in preparation, with the USBR acting as lead federal agency under NEPA and PCWA acting as lead agency under CEQA. A discussion of the probable effects of the proposed Sacramento River Diversion is included in Appendix H of this Draft EIR.

If the project is served from the proposed Sacramento River Diversion, total project demand of 3,220 AFA would represent nine percent of the 35,000 AF total PCWA diversion capacity. This amount would be reduced by approximately 650 AFA of recycled water and could be offset by 120 AFA of other supplemental water to meet the irrigation demand. If the irrigation requirement is met with a combination of groundwater and recycled water, the proposed project demand would represent less than seven percent of the Sacramento River Diversion capacity.

PCWA's PG&E and CVP entitlements are subject to significant reductions in the driest years. PCWA anticipates the need for groundwater to supplement its surface water supplies under those conditions. The proposed project would be built with groundwater capacity to serve the entire project, which would allow for the project to be served with groundwater when surface reductions occur in dry years.

General Plan Policy 4.C.2.a states "Urban and suburban development should rely on public water systems using surface supply." The RUSP proposes to connect to surface water at project

commencement, but could be served by groundwater in dry years, if determined to be necessary by PCWA, until such time that PCWA facilities are in place. The project meets General Plan policies 6.A.10.e, by supporting groundwater in the western part of the County only upon demonstrating that it does not exceed the safe yield, and 6.A.10.c, by “encouraging the use of surface water to supply major municipal and industrial consumptive demands.”

Groundwater Impacts

The proposed site has been farmed with rice, which requires irrigation, and with winter cereal crops not requiring irrigation. A water balance prepared by West Yost and Associates is included in the Water Supply Background Information (Appendix G). The water balance shows a historical net groundwater pumping of 2,440 AFA based on 600 acres of rice requiring 3,000 AFA of irrigation water (the methods used to irrigate rice resulted in 560 AFA of groundwater recharge). Drainage of the agricultural fields ranged from 1.0 to 1.5 acre-feet per acre.²⁰ Analysis of the historic groundwater withdrawals includes the conservative assumption of 1.0 ac-ft per acre of drainage from the irrigated rice fields and an assumption of approximately 0.93 ac-ft per acre of recharge from the irrigation drainage. Table 6.14-8 shows the change in net groundwater withdrawal and that there is a net decrease in average annual groundwater pumping when total project demand is served by groundwater and recycled water.

	Full Buildout Master Plan Demand
Historic Net Groundwater Withdrawal ^a	2,440
Total RUSP Demand	3,220
RUSP Buildout Potable Demand ^b	2,450
Non-potable Public Space Irrigation ^c	770
Available Recycled Water for Public Space Irrigation ^d	650
RUSP Groundwater Withdrawal ^e	2,570
Residential and Commercial Irrigation Demand ^f	730
Recharge by Irrigation ^g	150
Proposed Net Groundwater Withdrawal ^h	2,420
Change in Groundwater Withdrawal ⁱ	-20
Notes:	
a. WYA. Water Master Plan for Regional University Specific Plan. December 2006. Appendix A.	
b. Table 6.14-6.	
c. Table 6.14-7.	
d. West Yost and Associates, Recycled Water Master Plan for the Regional University Specific Plan, prepared for KT Communities, revised December 7, 2006. Exhibit 3.	
e. Total Demand minus Recycled Water Supply.	
f. Based on 40 percent of total residential demand (1817 AFA x 40%).	
g. 10 percent of total irrigation.	
h. RUSP groundwater withdrawal minus recharge from irrigation.	
i. Difference between proposed withdrawal and historic withdrawal.	
Source: PBS&J, 2006.	

20 West Yost and Associates, Water Master Plan for the Regional University Specific Plan, prepared for KT Communities, revised December 7, 2006. Appendix A.

Standards of Significance

Based on Appendix G of the CEQA Guidelines, Placer County has determined that a significant environmental impact could occur if the proposed Specific Plan would:

- result in insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed;
- require or result in the construction of new water treatment facilities or expansion of existing facilities, which could cause significant environmental effects;
- substantially deplete groundwater supplies;
- be inconsistent with the goals and policies of the *Placer County General Plan*; or
- be inconsistent with the applicable terms of the WFA.

Project-Specific Impacts and Mitigation Measures

6.14-1 The water demand resulting from the proposed project could result in insufficient entitlements to surface water or exceed sustainable yield of groundwater supplies.

Current surface water entitlements for western Placer County are 255,400 AFA, with dry year reductions to 196,450 AFA. In 2004, the PCWA used 112,768 ac-ft to meet the needs of Zone 1 and Zone 5 customers, and delivered 18,443 ac-ft to other agencies, for a total demand of 131,211 ac-ft. The resulting surplus in surface water supply is over 65,000 AFA during dry years. The addition of the proposed project demand of 3,220 AFA would not exceed PCWA entitlements, even during dry years.

As discussed previously in the Supply and Demand Analysis above, the proposed project would result in a total demand of 3,220 AFA, but when factoring in the use of recycled water, the proposed project water demand would be 2,420 AFA. Initially, surface water could come from existing unallocated treatment capacity in the proposed Foothill/Sunset/Ophir system and a connection to an existing pipeline at Fiddymont Road and Base Line Road. The pipeline would extend west along Base Line Road and then north along the proposed Watt Avenue extension to the southwest corner of the Plan Area.

Prior to the completion of the buildout of the Project, it is likely that PCWA will need to expand its treatment plant capacity and possibly supplement its wheeling capacity through Roseville because of concurrent development of other proposed projects in western Placer County. The next increment of expanded treatment capacity is expected to be the Ophir WTP. The construction of new transmission lines connecting PCWA's existing transmission system in the Sunset Industrial area, installed in the extension of Pleasant Grove Boulevard, to the Project may be required if the wheeling capacity is exceeded prior to the completion of the Sacramento River Diversion.

The Sacramento River Diversion project would include connection to the west end of the pipeline in Base Line Road, which feeds the Project, and would allow PCWA to reduce that amount of water that must be wheeled through Roseville. If the Sacramento River Diversion project is approved and completed before the wheeling capacity through Roseville is exceeded, no additional offsite pipelines would be required to serve the buildout of the Project.

If, at some stage in the development of the Project, infrastructure to supply surface water to the project is not completed on time, water could be supplied from groundwater, at the discretion of

PCWA until planned facilities are completed. The displacement of historic groundwater pumping for rice cultivation would result in a net reduction in groundwater withdrawal of 2,440 AFA, compared to a projected development buildout demand of 3,220 AFA in a basin with an existing demand of 90,000 AFA and a sustainable yield of 95,000 AFA.²¹ Therefore, the interim use of groundwater to serve a portion of the Project, if necessary, would have a *less-than-significant impact* on the groundwater resources.

Because recycled water would be used and there are sufficient PCWA surface water entitlements to serve the project even during dry years, there would be no net increase in groundwater withdrawal under any water supply scenario. Thus, the water demand associated with the proposed project would not exceed current surface water entitlements or exceed current groundwater withdrawal. However, while PCWA is proposing to use the new Sacramento River diversion, PCWA must still undergo the CEQA/NEPA and Endangered Species Act processes in order to complete the Sacramento River diversion. In addition, the timing of surface and recycled water delivery to the project site is uncertain. Therefore, this would be considered a *potentially significant impact*.

Mitigation Measure

Compliance with the following mitigation measures would ensure the project demand does not exceed current infrastructure and that sufficient water would be available to serve the proposed project, reducing the impact to a ***less-than-significant level***.

- 6.14-1 a) *Prior to approval of any small lot tentative subdivision map for a proposed residential project of more than 500 dwelling units, the County shall comply with Government Code section 66473.7. Prior to approval of any small lot tentative subdivision map for a proposed residential project of 500 or fewer units, the County need not comply with section 66473.7, or formally consult with PCWA or other public water system, but shall nevertheless make a factual showing or impose conditions similar to those required by section 66473.7 in order to ensure an adequate water supply for development authorized by the map. Prior to recordation of any final subdivision map, or prior to County approval of any similar project-specific discretionary approval or entitlement required for non-residential uses, the applicant shall demonstrate the availability of a long-term, reliable water supply from a public water system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary nonresidential approval or entitlement. Such a demonstration shall consist of a written certification from the water service provider that either existing sources are available or that needed improvements will be in place prior to occupancy.*
- b) *The Specific Plan proponents shall, prior to the approval and recordation of the first small lot final subdivision map, prepare and submit a water conservation plan for review and approval by the Placer County Planning Department and PCWA. The plan shall identify specific measures that shall be implemented as part of the Specific Plan, supported by documentation of the estimated water savings to be anticipated through implementation of the conservation measures.*
- c) *Prior to approval of any small lot tentative subdivision map or similar project level discretionary approval for land uses that do not require a tentative subdivision map,*

21 PCWA, *Western Placer County Groundwater Storage Study*, prepared by MWH, Final Report, December 2005, page 4-8.

the Placer County Water Agency (PCWA) shall perform an analysis of the remaining wheeling capacity in the City of Roseville's system. This analysis shall consider all of the previously committed demand to Morgan Creek, Placer Vineyards, Regional University or other projects within southwest Placer County that rely on water conveyed through City of Roseville facilities and/or pursuant to the wheeling agreement between the City of Roseville and PCWA, as amended from time to time. The analysis shall be submitted to both the County and the City of Roseville. The County shall confirm with PCWA that uncommitted capacity remains to wheel the required amount of PCWA-supplied water to the Specific Plan area prior to approval of discretionary actions. In the event sufficient uncommitted capacity does not exist, the County shall not grant the proposed tentative subdivision map or other project level discretionary approval until the County determines that a water supply not dependent on water from PCWA that is wheeled through the Roseville system becomes available for the area at issue.

- d) *Prior to approval of any small lot tentative subdivision map or similar project level discretionary approval for land uses that do not require a tentative subdivision map, the PCWA shall show that total RUSP groundwater withdrawal will be limited to less than 2,440 AFA for the entire Plan Area.*

6.14-2 The water demand resulting from the proposed project could result in the construction or expansion of existing facilities, which could cause significant environmental effects.

The initial surface water supply would be provided through PCWA's Foothill/Sunset Water Treatment Plant system until the long-term water supply system is completed. The proposed project includes three options for connecting to surface water supplies. The primary option would include connecting to an existing pipeline at Fiddymont Road and Base Line Road. The pipeline would extend west along Base Line Road and then north along the proposed Watt Avenue extension to the southwest corner of the Plan Area. The physical impacts of constructing this infrastructure are assumed as part of this project and are evaluated throughout this EIR.

The proposed project includes two other options to connect to the City of Roseville system, within the West Roseville Specific Plan area, which is yet to be constructed. The corridors for these connections are shown in Figure 2-9 in Chapter 2, Project Description. For any of these options, treated surface water could be delivered through the City of Roseville's system via a cooperative agreement between PCWA and the City of Roseville. However, the wheeling agreement between PCWA and the City of Roseville does not allow for connections other than at Fiddymont and Base Line Roads. If these other connection points are pursued, prior to amending the wheeling agreement, the City would likely require that the project applicant evaluate the potential for impacts on the City of Roseville system, including low pressure and water quality impacts.

PCWA's long-term water supply plan consists of a pipeline extending west along Base Line Road, south to Elverta Road, and then west finally connecting to the Sacramento River. Upon completion of the Sacramento Diversion project, water supplies from this source would ultimately serve the proposed project. However, connection to the Sacramento River diversion is not required specifically to serve the proposed project, but would be needed to serve the cumulative anticipated growth in western Placer County. The proposed project's contribution to the cumulative impact of this water supply is discussed in Impact 6.14-4.

The groundwater supply would be provided by on-site wells and pipelines internal to the project. The proposed project would include construction of off-site pipelines to connect to existing surface water supplies and the onsite construction of groundwater wells and treatment systems, distribution systems, and storage tanks to supply water to the proposed project. The physical impacts of constructing this infrastructure are assumed as part of this project and are evaluated throughout this EIR. No off-site infrastructure would be required for use of groundwater.

At this time it would be speculative to identify the level of significance of potential environmental impacts on the City of Roseville's system. The impacts associated with construction of required infrastructure, including the pipeline from Base Line and Fiddymont Roads, are addressed in this EIR. The current wheeling agreement between PCWA and the City of Roseville allows the connection at Base Line and Fiddymont Roads. As a result, the environmental impacts of the infrastructure to meet project water demands would be ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context for surface water supply is the buildout of western Placer County, which could be served by PCWA. For PCWA to access their full CVP entitlements, an additional diversion structure would be required and the Sacramento Diversion project would be required for surface water delivery in the cumulative context. The cumulative context for groundwater is the Placer County portion of the North American Groundwater Sub-basin. To meet the *Vineyards* case standards for analysis of water supplies in the cumulative context, the following available information known to PCWA and Placer County about water supply and the likelihood of water availability are provided below.

Surface Water Supply

The initial surface water supply is to be provided from unused and unallocated PG&E and/or MFP water supply entitlements and Foothill/Sunset system diversion, treatment plant and transmission capacity. It would then be delivered into the City of Roseville's potable water system in the vicinity of Industrial Avenue in exchange for equal delivery back into PCWA's system at the intersection of Base Line and Fiddymont Roads.

The effects of diversions at the American River Pump Station were previously analyzed in the *American River Pump Station Project Final EIS/EIR, 2002*. There are no relevant mitigation measures appearing in the *American River Pump Station Project Final EIS/EIR* that would warrant being carried forward in this EIR, as no mitigation measures from the *American River Pump Station Project Final EIS/EIR* would need to be carried out by Placer County. Although an analysis was performed for a Folsom Reservoir diversion (secondary initial surface water supply) as discussed below, the following information discloses the effects of a 6,000 AFA withdrawal from the American River system for the PVSP project, because the proposed project could also be served by the same PCWA's portfolio of water. Further, the effects of withdrawal from the American River system occur where flows in the Lower American River below Folsom Dam are of the greatest environmental concern. The cumulative condition includes PCWA's diversion of up to 35,500 AFA Middle Fork water from the American River Pump Station, which includes 10 MGD to be transmitted through the Roseville-owned pipeline.

The City of Roseville pipeline and the wheeling agreement for delivery of water by PCWA through the pipeline are in place and this source of supply could be delivered to the project immediately upon the construction by the Placer Vineyards Specific Plan of a pipeline extending approximately ½ mile in Base Line Road to the Placer Vineyards Specific Plan site at Watt Avenue, then north for approximately three miles to the proposed project site. Despite likely competition for this finite supply, it is assumed that the supply from this source would be relied on through 2012 and into 2013 during project development and that the connection would be constructed with the initial Backbone Infrastructure, which must be substantially completed prior to the issuance of any building permits. Construction within the Placer Vineyards Specific Plan area is now projected to begin in 2009, with an anticipated long-term water supply from the Sacramento River becoming available approximately 2016.

There is a 10 MGD flow rate limitation on PCWA water deliveries through the Roseville-owned system. PCWA anticipates the use of local storage to meet peak hour demands, thus the 10 mgd wheeling capacity is anticipated to be able to deliver approximately 6,000 AFA and serve approximately 8,700 equivalent dwelling units (EDUs). Based on July 2006 peak day flow rate,²² PCWA estimates that approximately 3.4 mgd (3,000 EDUs) out of the 10 mgd capacity is already in use to serve the existing developments west of Roseville, such as Morgan Creek. This leaves approximately 6.6 mgd (5,700 EDU) of remaining unused and unallocated wheeling capacity available for additional development west of Roseville, including the Placer Vineyards Project and the proposed Regional University Project. Table 6.14-8 provides an assumed buildout for the service area, based on actual approved and pending projects, and shows water commitments rather than actual demand. Actual demand would likely be less and would occur 18 to 24 months after water is committed (i.e., the difference in time between commitment and water delivery).

Some of the projects have received tentative map approval and are the most likely to proceed. As noted above, the Placer Vineyards Specific Plan (PVSP) received approval from the Placer County Board of Supervisors on July 16, 2007. As illustrated on Table 6.14-8, based on the most current information, and assuming competition from other projects, the proposed project's initial surface water supply would be reasonably certain and adequate for the first four to five years of projected development.

PCWA is currently designing a method to increase water treatment capacity at its Foothill Water Treatment Plant. By increasing the filtration rate from 5 GPM to 6 GPM, the existing 15 MGD component (the existing plant was constructed in 3 separate phases or components) of the plant is capable of treating an additional 3 MGD. This would increase the Foothill Water Treatment Plant capacity to 58 MGD and allow a concurrent increase in treated water deliveries. This additional treatment rate was previously tested and approved by the State of California Department of Health Services during the last phase of expansion. To continue to deliver the increased capacity now that the latest phase is complete, PCWA needs to construct 400-500 linear feet of transmission piping within the existing footprint of the Foothill Water Treatment Plant. The pipeline construction is expected to be complete in 2008.

22 Placer County, *Placer Vineyards Specific Plan Second Partially Recirculated Revised Draft EIR*, March 2007.

Secondary Surface Water Supply

The proposed project identified a secondary initial surface water supply, consisting of 6,000 AFA of the 29,000 AF of PCWA Middle Fork American River water currently contracted to SSWD, which could be provided. The supply would be diverted from Folsom Lake, treated at Sidney N. Peterson Water Treatment Plant (San Juan Water District) and conveyed via the Cooperative Transmission Pipeline that currently ends near Antelope and Walegra roads.

A multi-party agreement between the developers of the PVSP, PCWA, Placer County, San Juan Water District, SSWD, and California American Water Company is needed to provide for treatment and conveyance capacity for San Juan Water District's WTP and the Cooperative Transmission Pipeline to be shared with PVSP. This water, which is currently provided by PCWA to SSWD, is subject to suspension of delivery in dry years under the WFA and PCWA's water rights and would therefore have to be supplemented in dry years to be sufficient to meet the needs of PVSP beyond the capacity of the wheeling agreement.

Under terms of the Water Forum Agreement (WFA), SSWD water is available to be diverted at Folsom Lake for a 10- to 12-year period under certain hydrologic conditions. Restrictions to this diversion occur for the period 2001 through 2010, or 2012 if extended by agreement of all parties signatory to the WFA, when unimpaired inflow into Folsom Lake is less than 950,000 AF. Unimpaired inflow is projected to be in excess of 950,000 AFA in 85 percent of the years. In 15 percent of the years, water would not be available. After 2010 the threshold for diversion is increased to 1,600,000 AFA of unimpaired inflow to Folsom Reservoir.

In those years in which the minimum threshold to divert American River water is not achieved, PCWA could exchange its rights to divert water through the ARPS at Auburn for an equivalent diversion from Folsom to continue supplying demands in the PVSP. Modeling has confirmed these upstream releases can occur in all years without reducing available water below acceptable levels in the reservoirs, due to anticipated replenishment from rainfall in subsequent years. Another method to supplement SSWD deliveries to the PVSP in dry years would be through the use of groundwater.

The purpose of the PCWA contracted water to SSWD is principally for groundwater stabilization in the North Sacramento-western Placer County portion of the groundwater basin. The contract provides for the availability of 29,000 AFA. Most recently, SSWD has been utilizing approximately 19,000 AFA on an average annual basis completely from groundwater. This means that when American River surface water is available in average and wetter years, it will be diverted, treated and piped into the SSWD's system and delivered to their customers in place of pumping groundwater. This "conjunctive use" of surface water and groundwater works because SSWD has complete redundancy to supply their demands with groundwater. Since SSWD is able to eliminate the use of groundwater in 65 percent to 85 percent of the years, the resultant "in-lieu" groundwater recharge is expected to raise groundwater levels in the future. Using a portion of this banked groundwater supply to meet PVSP dry year needs would only partially reduce the benefits of normal and wet year deliveries.

It is anticipated that utilization of American River water would occur over a number of years. SSWD has begun to introduce a portion of this contracted surface water to reduce dependence on groundwater. In subsequent years, additional surface water will be used. Not all the contracted American River surface water will be used in the groundwater replacement program over the early years of implementation. Thus, use of a portion of the anticipated 29,000 AF of surface water in normal and wet years will not diminish near-term benefits available to the groundwater basin.

SSWD planned facilities and obtained contracts for 29,000 AFA of surface water. As noted above, this volume exceeds the demand of SSWD (both currently and projected). SSWD anticipated that other water districts would be interested in purchasing this surface water to operate a conjunctive system. Purveyors that were anticipated to use the additional surface water included the Arcade Water District (now part of SSWD) and California American Water Company. However, neither has developed the conveyance facilities to use the water. Thus, SSWD surface water is available for other uses until these districts develop conveyance systems, without reducing benefits to the groundwater basin.

This 6,000 AFA American River diversion at Folsom was modeled and evaluated for effects on water resources, biological resources, cultural resources, and recreational resources resulting from the withdrawal and included in Appendix H. This supply would be an alternative to diverting the water at Auburn and constructing new transmission capacity to circumvent the wheeling capacity limitations in the event the long-term or buildout supply options described below did not become available before the available wheeling capacity was exhausted. This water supply from Folsom would be in addition to the supply wheeled through Roseville, rather than a replacement supply and is reflected on Table 6.14-8.

Although multi-party agreements would be necessary for diversion and treatment of the water at the San Juan Water District's Sidney N. Peterson WTP, this source could provide an additional supply that would extend available water west of Roseville through approximately 2020 (Table 6.14-8). This would provide a water supply well beyond the 2016 target for availability of the long-term or buildout water supply.

Long-Term or Buildout Surface Water Supply from the Sacramento River

An 11,500 AFA long-term or buildout water supply from the Sacramento River is to be furnished by PCWA consisting of CVP contract water, or MFP water rights water exchanged with the United States Bureau of Reclamation (Reclamation) for releases down the American River from PCWA storage facilities on tributaries of the American River.

This is the proposed permanent or buildout water supply. PCWA is authorized through a contract with Reclamation to take 35,000 AFA of CVP contract water at Folsom Reservoir or other places that are agreed to by the affected parties. PCWA is currently pursuing a 35,000 AFA diversion at the Sacramento River in accordance with the Water Forum Agreement, of which the 2,440 AFA for RUSP is a portion. PCWA's full proposed 35,000 AFA diversion was modeled and evaluated for the Placer Vineyards Specific Plan project. Based on that analysis, the effects on water resources, biological resources, cultural resources, and recreational resources resulting from the withdrawal for the proposed project would be less than significant, as described in Appendix H. The description and evaluation of this supply include a pipeline from the Sacramento River to Base Line Road south of the project site planned for construction by approximately 2016.

A separate EIR/EIS is currently in process for the water diversion project and an initial alternatives analysis has now been completed (*Sacramento River Water Reliability Study Initial Alternatives Report*). The Draft EIR/EIS is currently projected for public release in mid 2008.

PCWA and the County believe that there is a reasonable certainty that the 35,000 AFA long-term or buildout water supply from the Sacramento River will become available to serve future projects, including the proposed project. Although the Sacramento River diversion project faces regulatory

hurdles, the County's confidence in the availability of this supply is based on the factors discussed below, all of which favor development of the Sacramento River diversion project.

First, as noted above, PCWA has Middle Fork American River water rights and 35,000 AFA of CVP contract water to back up the 2,400 AFA buildout water supply for the proposed project, in addition to the 11,500 AFA required to the PVSP project. Thus, the Sacramento River diversion entitlement is not analogous to the uncertain State Water Project (SWP) "entitlements" – a term no longer used - - that the appellate courts have said included substantial amounts of "paper water." (See *Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal. App. 4th 892, see also *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal. App. 4th 715).

Second, quite notably, the Sacramento River diversion project has the support of both the Water Forum Agreement signatories and, it appears, the U.S. Congress. The WFA represents a regional consensus that water purveyors, such as PCWA, with unexercised water rights on the American River could reduce the environmental impacts of their future diversions based on those rights if they agreed instead to pursue diversions of like amounts of water from the Sacramento River. Because of local environmentalist support for this approach, the Sacramento River supply is less likely to encounter environmental opposition than would supplies taken from the American River. Thus, on page 14 of the Introduction and Summary of the WFA (January 2000), "expansion of Sacramento River diversion and treatment facilities" is listed as one of the major water supply projects that will receive Water Forum support upon signing the WFA, which has long since occurred. The project is also contemplated by federal legislation known as Public Law 106-554, Appendix D, Division B, Section 103 (April 24, 2000). Subdivision (a) of Section 103 provides:

The Secretary of the Interior shall conduct a feasibility study for a Sacramento River, California, diversion project that is consistent with the Water Forum Agreement among the members of the Sacramento, California, Water Forum dated April 24, 2000, and that considers –

1. consolidation of several of the Natomas Central Mutual Water Company's diversions;
2. upgrading fish screens at the consolidated diversion;
3. the diversion of 35,000 acre-feet of water by the Placer County Water Agency;
4. the diversion of 29,000 acre-feet of water for delivery to the Northridge Water District;
5. the potential to accommodate other diversions of water from the Sacramento River, subject to additional negotiations and agreement among the Water Forum signatories and potentially affected parties upstream on the Sacramento River; and
6. an inter-tie between the diversions referred to in paragraphs (3), (4), and (5) with the Northridge Water District's pipeline that delivers water from the American River.

Third, for reasons suggested above in discussing the WFA, the Sacramento River diversion project is relatively benign from an environmental perspective. Essentially, the project would take water from the Sacramento River rather than the American River, thereby avoiding potential adverse environmental impacts on the American River, which, with its lower flows, is much more environmentally sensitive than the Sacramento River.

The County recognizes that there are regulatory hurdles that the Sacramento River diversion project must overcome before it can come to fruition. First, the project must complete the environmental review processes under both CEQA (with PCWA as lead agency) and the National Environmental Policy Act (NEPA) (with Reclamation as the federal lead agency). Among the approvals the project will need are (i) an exchange agreement between PCWA and Reclamation, (ii) an application from

Reclamation to the State Water Resources Control Board for an additional point of “redirection” at the SRWRS site, and (iii) actions by PCWA and Reclamation amending their water delivery contract to provide for delivery at the site. The project must also obtain a “Section 404” wetlands fill permit under the Clean Water Act from the United States Army Corps of Engineers (USACE). As the federal lead agency, Reclamation is obligated under Section 7 of the federal Endangered Species Act to consult with both the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries to determine whether the direct or indirect effects of the project could jeopardize the continued existence of any federally listed endangered or threatened species or cause the destruction or adverse modification of the designated critical habitat of any such species. Given the ecological pressures on both aquatic and terrestrial species from continuing population growth and agricultural activities in California, there is always the chance that these environmental processes and Endangered Species Act (ESA) requirements could lead to delays, which could postpone the proposed project and other projects from receiving long-term, or build-out, water supply. Further, although it is not anticipated, there is always the chance that alternatives other than PCWA’s entire 35,000 AFA could be approved, in which case the proposed project and other projects relying on the Sacramento River diversion project may receive less than has been identified.

The local agencies participating in the Sacramento River diversion project, namely, the City of Sacramento, PCWA, the City of Roseville, and SSWD intend to try to minimize the indirect effects of the water supply on federally listed terrestrial species by agreeing that they will not undertake to provide new water service from SRWRS Project facilities to any new projects unless such new development can demonstrate that it is in compliance with the ESA. Under such a self-imposed limitation, the partners in the Sacramento River diversion project would not provide water to any developer who cannot prove “ESA compliance” in connection with its development plans.

Finally, virtually all water supplies in California that have yet to be perfected suffer from some uncertainty due to combination of evolving environmental factors. One such factor is possible future species listings under the ESA and its State analogue, the California Endangered Species Act (CESA), which could affect both CVP and SWP operations, as well as the timing and extent of other water diversions throughout California.

Consistent with the obligation under the California Supreme Court’s *Vineyard* decision to address possible sources of uncertainty for anticipated water supplies, the County notes several principles of California water law that create some amount of uncertainty for virtually any post-1914 surface water supply based on appropriative water rights, regardless of how firm the underlying appropriative water rights may be. Taken together, these principles provide that water supplies can, in effect, be reallocated over time, from human uses to environmental uses, from relatively inefficient or wasteful human uses to more efficient and less wasteful human uses, from agricultural uses to municipal and industrial uses, and from Southern to Northern California. Notably, some of these principles could ultimately favor the urban customers of a Northern California supplier such as PCWA.

First, the California Constitution and the Water Code prohibit wasteful or unreasonable use of water. (See Cal. Const., art. X, § 2; see also Water Code § 100.) The California Constitution, Article X, Section 2, provides: “[T]he general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use . . . of water be prevented. . . .” Case law has interpreted this provision as follows: “What may be a reasonable beneficial use, where water is present in excess of needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time.” (See *Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.* (1935) 3 Cal.2d 489, 547.)

A second, and related, principle is that the limited availability of water for use in California means that those water resources that are available must be applied to the maximum beneficial use of which they are capable. (See Water Code § 100; see also 23 C.C.R. §§ 659-672.) As with the constitutional provisions discussed immediately above, the statutes and regulations embodying this latter principle recognize that societal notions of efficiency and beneficial use evolve over time, as the State's increasing population requires all water users to use their water supplies more wisely.

Third, there are watershed of origin and county of origin priorities (see, e.g., Water Code §§1215.6, 1216). These priorities were put in place primarily to assure Northern California and rural interests that the CVP and SWP, by sending water southward from the Delta, would not foreclose the eventual use of water by the Northern and rural entities as their demands for such water increased over time. The legal basis for the watershed and county of origin priorities derives from specific statutes or through conditions and reservations attached to appropriative rights issued by the State Water Resources Control Board (SWRCB). For example, in 1927, pursuant to statute, the State of California sought and obtained permits that reserve large amounts of water from watersheds such as the American River watershed for eventual assignment to water users within such watersheds.

Fourth, provisions of the California Water Code provide that in times of water shortage, municipal and industrial water users should have priority over agricultural users (see Water Code §106 et seq.). Although there is little case law on the subject, Water Code section 106.5 is thought to express the policy that municipalities are exempt from the due diligence requirement generally applicable to perfecting an appropriative right. Coupled with the interim appropriation permits issued pursuant to Water Code sections 1203 and 1462, it is argued that the exemption strikes a balance between the needs of municipalities to secure a reliable water supply and the constitutionally mandated requirement that water be placed for beneficial use to the maximum extent feasible. (Cal. Const., art. X, § 2.) Another policy consideration at work here is the pragmatic notion that, while agricultural lands can be temporarily fallowed during drought conditions, houses and businesses cannot be similarly deprived of the minimum amounts of water needed for public health and safety purposes related to domestic water usage.

A final legal principle with the potential to require periodic adjustments of water allocations between human and environmental purposes is the public trust doctrine, which has historically been defined in relationship to the federal and state governments' sovereign ownership of navigable waters, tidelands, and submerged lands of navigable waters. In the early 1980s, the California Supreme Court adopted an expanded interpretation of trust uses and held that state sovereign ownership was not limited to the traditional triad (commerce, navigation, and fishing), but is rather an evolving legal doctrine designed to accommodate the public's needs as they change over time, so that the State Water Resources Control Board, in administering post-1914 appropriative water rights, must now account for environmental considerations (See *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 434-445).

Although details of the Sacramento River diversion project are still uncertain, based on the Court's decision, the County has decided to excerpt and summarize information regarding the diversion structure, treatment plant, and storage facilities from the *Sacramento River Water Reliability Study Initial Alternatives Report* in the following paragraphs.

The four primary alternatives currently under consideration in the *Sacramento River Water Reliability Study* (SRWRS) are the Elverta Diversion Alternative, the Joint SRWRS-American River Basin Fish Screen and Habitat Improvement Project (ABFSHIP) Elverta Diversion Alternative, the American River Pump Station-Elverta Diversion Alternative, which is discussed below under "Alternative Long-

Term or Buildout Water Supply From the American River,” and the American River Pump Station-Joint Sacramento-ABFSHIP Elverta Diversion Alternative. The differing scenarios were analyzed in the *Sacramento River Water Reliability Study Initial Alternatives Report (Report) Final Version*, dated March 2005. For purposes of the analysis contained herein, the differences between the two SRWRS EIR/EIS alternatives that include the ABFSHIP component, and the two that do not, are not material. These two alternatives with the ABFSHIP component assume that the proponents of the SRWRS would build a combined facility with the Natomas Mutual Water Company, which is pursuing upgrades to its own existing diversion from the Sacramento River, located at Elkhorn. For purposes of the analysis herein, the key issue with respect to each alternative is where PCWA would be taking its water: from either the Sacramento River or the American River. In ascertaining the impacts of PCWA’s diversion, it does not matter whether the proponents of the SRWRS do or do not join forces with Natomas Mutual in building a single, combined facility. The same amounts of water would be drawn from the Sacramento and/or American Rivers regardless of whether the SRWRS proponents and Natomas Mutual build a combined facility.

According to the Report, the Elverta Diversion Alternative includes the construction of a joint diversion for PCWA, SSWD, and the Cities of Sacramento and Roseville. It will pump water from the Sacramento River to be treated at a proposed Elverta Water Treatment Facility. Under this alternative, new diversion facilities would be constructed near the existing Natomas Mutual Water Company’s Elkhorn Diversion. Additionally, the water treatment facility, storage, and pumping facilities would be located near the river with transmission lines connecting to the existing Cooperative Transmission Pipeline/Northridge Transmission Pipeline in Antelope, which serves the SSWD, as well as extend north with service to Roseville and PCWA. The Sacramento connection would be separate with connection south of the distribution system. The connection to PCWA is shown on Figure 2-9.

The Elverta Diversion Alternative would construct a water treatment facility on approximately 90 to 100 acres, located approximately one mile east of the Sacramento River pump station on Elverta Road. According to the Report, the water treatment facility would “comprise conventional treatment processes, including a grit basin, flocculation/sedimentation basins, filters, clear tank, clearwell, backwash water basin, electrical building, chemical building, operations building, solids handling area, and storm water detention/habitat conservation program area.” In order to accommodate future drinking water regulations, space has been reserved for an advanced oxidation process.

The pipeline associated with this alternative is proposed to traverse along Elverta Road approximately 5.5 miles before turning north along Sorrento Road/Pleasant Grove Road. After approximately 2.5 miles the pipeline will turn east along Riego Road/Base Line Road. The final connection to the project site would be along Base Line Road to Watt Avenue north. This is the pipeline identified as “PCWA Sacramento River Pipeline” shown on Figure 2-9.

The following is a more detailed description of all of the various project components that are relevant to water supply in western Placer County. Please note that treatment plant capacity assumes treatment required by PCWA as well as other participants in the SRWRS:

- Constructing a new 235 MGD (365 cubic feet per second (cfs)) in-river pier-type surface water intake (Elverta intake structure) with fish screens on the Sacramento River at river mile (RM) 74.6 in Sacramento County.
- Realigning approximately 0.3 miles of the Garden Highway near the new Elverta intake structure.

- Constructing a new 235 MGD Water Treatment Plant near the new Elverta intake facility on a site approximately 90 to 100 acres in size on the north side of Elverta Road.
- Constructing approximately 1 to 4 miles of new underground twin 78-inch raw water pipelines from the new Elverta intake structure to the new Water Treatment Plant.
- Constructing approximately 27 to 30 miles of new underground treated water pipelines from the Water Treatment Plant to connection points within existing water distribution systems:
 - 2.5 to 5.5 miles of 72-inch pipeline under or adjacent to Elverta Road, west of the East Drainage Canal in Sacramento County.
 - 5.7 to 8.7 miles of 96-inch pipeline along Elverta Road and the East Main Drainage Canal in Sacramento County.
 - 1.5 miles of 72-inch pipe on Sorrento Road in Sacramento County.
 - 1 mile of 72-inch pipe on Pleasant Grove Road in Placer County.
 - Approximately 3 miles of 72-inch pipeline under or adjacent to Base Line Road in Placer County.
 - Approximately 3.3 miles of 30-inch pipeline under Walegra Road in Placer and Sacramento counties.
 - Approximately 6.3 miles of 60-inch pipeline under Fiddymont Road in Placer County.

Long-Term or Buildout Surface Water Supply Supplemental Analysis

According to the preliminary findings of the Report, implementation of the Elverta Diversion Alternative could result in the following environmental effects. As noted above, an EIR/EIS is in process for this project that will substantially elaborate on the analysis contained in the Report summarized below. However, this information, which is based on the extensive analysis included in the PVSP EIR, is provided in the spirit of disclosing the reasonably foreseeable future activities related to the project and the known environmental implications of those actions. It should also be noted, however, that, in addition to the supplemental analysis below, Appendix H of this EIR includes discussion of off-site infrastructure impacts in each topical area:

Biological Resources. The California Native Plant Society (CNPS) and the California Natural Diversity Databases (CNDDDB) were queried to identify all State and federally listed species that could occur within the area of study. Table D-3 of the Report lists all identified Special-Status species that may occur within the study area, and is reprinted below.

The Report identified potentially significant terrestrial species impacts due to habitat loss through the fragmentation and elimination of wildlife habitat. Additionally, impacts to vernal pools could result from treated water pipelines traversing wetland habitat that has the potential to impact fairy shrimp and California tiger salamander, which are federally threatened species.

There would be impacts directly associated with diversion of water from the Sacramento River through pumping and conveyance of water through associated pipelines to the water treatment facility. According to the Report, there will be long-term operational impacts on fisheries and riparian habitat. Specifically, water flows and temperature could be altered in a way that would result in alterations to anadromous fish spawning and rearing. Aquatic habitat availability may increase or decrease depending on temperature fluctuations and flow rates in the area of the pumping station. Flow rates and temperature fluctuations could decrease reproductive activities as well as impacts to maturation of cold water fisheries, such as anadromous species.

Hydrology/Water Quality. The Report recommended additional analysis to identify any potential effects. Potential impacts could include a reduction in downstream dilution of pollutants. Potential water quality issues, however, are considered to be relatively minor, due in part to the relatively lower water quality of the Sacramento River in comparison to that of the water in the Lower American River. Additional analysis would identify the potential for operations to violate any federal, state or local water quality guidelines or standards.

Recreation. The pump station would protrude directly into the Sacramento River resulting in restrictions to recreation in the vicinity of the diversion. Implementation of this alternative would result in potential impacts to the quality of recreation.

Land Use. Implementation of the proposed alternative may require coordination with the Sacramento International Airport to resolve potential conflicts with the current Airport Land Use Plan. According to the Report, there would be no other conflicts with existing or planned land uses in the area. Although not discussed in the Report, the alternative would also permanently remove approximately 100 acres of agricultural land from production for water treatment and storage facilities. Operation of the water treatment facility would also entail operation of machinery and equipment that could have visual and noise effects. In addition, various chemicals would be used and waste materials produced that could prove hazardous. However, all such activities would be carried out in strict adherence with established regulations for their use, storage, and disposal. The 100 acre site is currently rural in character, zoned AG-80 (Agricultural, 80 acre minimum parcel size) by Sacramento County, and removed from any developed areas that could be exposed to any of the effects of the proposed facility.

Long-Term or Buildout Surface Water Supply Regulatory Environment

The following information concerning the regulatory environment for the long-term or buildout surface water supply from the Sacramento River is excerpted from PCWA's Sacramento River Water Reliability Study Engineering Report, November 2006. Although an EIR/EIS is currently in process that will elaborate on the regulatory environment for the project, the information in the following paragraphs is currently the best information available to the County and is provided to disclose in a preliminary manner the steps necessary to bring the water supply on line by 2016.

As part of the preliminary design phase of the work, consultation would be initiated with numerous permitting agencies to begin discussion of project-specific conditions and design criteria that would need to be included in the design of ultimate facilities in order to obtain permits from these agencies. These contacts would not result in permits, but rather would identify the conditions and requirements for permit applications to be submitted as part of the final design when more detailed engineering design is available. This would include coordination with the following agencies:

- USACE (Section 404/10 Permit)
- Department of Health Services (DHS) (Water Supply Permit)
- California Department of Transportation (Encroachment Permit)
- The Reclamation Board (Encroachment Permit)
- Central Valley Regional Water Quality Control Board (CVRWQCB) (National Pollutant Discharge Elimination System (NPDES) Permit)
- Sacramento and Placer Counties (Encroachment Permits)

- Cities of Sacramento and Roseville (Encroachment Permits)

In addition to these consultations, several other permits and consultations would be completed or obtained during this phase of work, including the following:

- United States Coast Guard (USCG) (Aid to Navigation)
- Federal Aviation Administration (FAA)/Sacramento County Airport Service (Form 7460-1)
- Union Pacific Railroad (UPRR) (Encroachment Permit)
- (Cal-OSHA) (Gas Classifications)
- SAFCA (Flood Impact Consult)
- Reclamation District 1000 (Flood Impact Consult)
- County Sanitation District 1 (CSD-1)/Sacramento County Department of Water Resources (Sewer/Storm Drain Connection)
- Sacramento County (General Use and Building Permits) (to the extent required by law)

As part of the final design, permit applications would be prepared for the agencies that were only consulted during the enhanced engineering analysis. This would include coordination with the following:

- USACE (Section 404/10 Permit)
- DHS (Water Supply Permit)
- California Department of Transportation (Encroachment Permit)
- The Reclamation Board (Encroachment Permit)
- CVRWQCB (NPDES Permit)
- Sacramento and Placer Counties (Encroachment Permits)
- Cities of Sacramento and Roseville (Encroachment Permits)

In addition to the permits above, several other permits and consultations would be ready to be completed or obtained during the final design, including the following:

- California Department of Fish and Game (CDFG) (Streambed Alteration Agreement)
- California State Lands Commission (Letter for Avoid Land Use Lease)
- CVRWQCB (Section 401 Water Quality Certification)
- SWRCB (Notice of Intent (NOI) for Stormwater and Low Threat Discharges)
- SWRCB (Approval of application from Reclamation for point of diversion)
- Sacramento Metropolitan Air Quality Control District (Generator Permit)
- Placer County Air Pollution Control District (PCACD) (Generator Permit)
- Sacramento County (Tree Removal Permit)
- Placer County (Tree Removal Permit)

Backup Groundwater Supply

PCWA plans to develop a backup groundwater supply within the portion of its service area that overlies the groundwater basin (generally west of State Highway 65) that would be sufficient to provide a redundant water source equal to at least 25 percent of the required water supply on a maximum daily demand basis. This contingency is based on the Reclamation's ability to exercise a maximum dry year reduction in CVP municipal water supply of 25 percent and dry year limitations on PG&E deliveries. Impacts related to use of groundwater as a redundant water source are addressed above under Impact 6.14-1.

Alternative Long-Term or Buildout Surface Water Supply from the American River

This alternative long-term or buildout surface water supply consists of expanding the capacity of the ARPS and increasing the diversion from the American River at this location from 35,500 AFA to 70,500 AFA, of which RUSP would receive approximately 2,420 AFA. This alternative to meet PCWA's future demands is currently being analyzed in the SRWRS EIS/EIR. Consistent with the WFA, any increase in diversion from the American River would require PCWA to determine that it is not feasible to implement the Sacramento River diversion.

Because water to be withdrawn at the new American River Pump Station would not be considered CVP water (i.e., it does not come from federally stored water such as water behind Folsom Dam), the withdrawal of the additional 35,000 AFA at this location would require a water supply exchange with other agencies currently withdrawing water at Folsom Dam. PCWA currently contracts up to 84,000 AF of MFP water to three entities that withdraw the contracted water at Folsom Dam. The three entities are the San Juan Water District (up to 25,000 AF), City of Roseville (up to 30,000 AF), and SSWD (up to 29,000 AF). It has been proposed that PCWA would exchange 35,000 AF of the contracted Middle Fork water for CVP supply, thus allowing CVP water to be withdrawn at Folsom Dam and MFP water to be withdrawn at the American River Pump Station. However, CVP water is still subject to the Reclamation's ability to exercise a maximum dry year reduction in supply of 25 percent, which would require PCWA to provide additional assurances to prospective CVP water recipients, using MFP water as the assured supply backup.

A full 35,000 AFA additional diversion from the American River was modeled and evaluated for the PVSP project, including effects on water resources, biological resources, cultural resources, and recreational resources resulting from the withdrawal from the American River system. Comparative impacts of the RUSP project, based on the analysis for the PVSP project, are included in Appendix H of this Draft EIR. No analysis of a diversion structure, pumps, or water treatment facilities was provided.

Alternative Infrastructure to Deliver an Alternative Long-Term or Buildout Surface Water Supply

An alternative approach was devised in the PVSP EIR to delivering a long-term or buildout water supply. The proposal would eliminate the limitation or "bottleneck" created by the 10 MGD Roseville-owned pipeline limitation described above under the immediate or initial water supply and would permit delivery of larger quantities of water to PVSP and RUSP area by way of new PCWA-owned pipelines. The immediate source for the supply would be PCWA's unused American River MFP water to be diverted at PCWA's new permanent American River Pump Station. This is the same water entitlement as the initial surface water supply discussed above; however, it would not be constrained by existing infrastructure such as the Roseville pipeline limitation, or prior or pending

agreements with other water suppliers, as in the case of the secondary initial surface water supply. Its delivery would be fully within the control of PCWA and would be limited in amount only by competition from other projects in western Placer County (e.g., the proposed Placer Ranch Specific Plan, and proposed projects within the proposed expansion of the City of Lincoln). However, as shown on Table 6.14-9 this supply would be inadequate to serve projected buildout of western Placer County and in the long run would require supplementation with water from the Sacramento River diversion, or in the case of the Alternative Long-term water supply, from the American River. In the event PCWA's American River Pump Station became the source of the supplemental water, a pipeline would be constructed to extend the existing transmission system from the Sunset Industrial area around the north and west end of Roseville to the proposed Project.

As shown on Table 6.14-9, beginning in 2013, approximately 43.3 MGD would be available from the Sunset, Foothill, and Ophir Water Treatment Plants from PCWA sources for delivery to western Placer County, which would be sufficient to supply projected development through 2018 (or approximately 35,000 equivalent dwelling units). The Sacramento River Water Treatment Plant (Long-Term or Buildout Water Supply) is projected to be operational in 2016, which would supply adequate water through the full buildout projection. Actual demand would likely be less and would occur 18 to 24 months after water is committed (i.e., the difference in time between commitment and water delivery).

6.14-3 The proposed project, in combination with other development projects in western Placer County, could result in cumulative impacts from curtailment of development due to shortfalls in water supplies.

Consistent with direction provided by the Court in the *Vineyard* decision, the County has used available information to describe probable sources of water and to disclose the reasonably foreseeable impacts of supplying water to the proposed project. The County has also identified alternative sources of water supply, in the short-term as well as the long-term. Notwithstanding some uncertainty, as described in this section, there is a reasonable likelihood that the project's water supply will be available and adequate for project buildout. As shown on Table 6.14-8, an immediate supply is available for at least the first four to five years of activity. A secondary supply has also been identified that would extend the initial supply through approximately 2020. A long-term supply has been identified that is being actively pursued in accordance with the WFA. The known probable effects of this supply, as well as the initial supplies, have been fully evaluated in other sections of this EIR and Appendix H. Finally, alternative supplies have been identified that could eliminate infrastructure limitations on the initial supply, permitting it to be used for a longer period of time, and two American River long-term alternative options have been identified in the event problems develop with the preferred long-term supply option.

Although there is a very low likelihood that curtailment of the initial supply or long-term or buildout supply would occur, because uncertainties remain, and consistent with Court's direction, this analysis includes consideration of the potential environmental effects of water supply curtailment. As noted above, the likelihood of permanent curtailment occurring is remote. Once developed, barring a major shift in climate or policy or the future application of the California water law principles described earlier in a manner significantly more restrictive than presently applied, it is assumed that the water supply would continue to flow to PCWA without interruption, consistent with its contract with Reclamation and PCWA's MFP water rights. Should any type of curtailment occur relative to the sources listed above, PCWA has approved of reliance on the other sources of water supplies already guaranteed and through other pipeline routes shown in Figure 2-9. In addition, the proposed project could install and use groundwater until surface water supplies were provided to the Plan

TABLE 6.14-9

ASSUMED DEVELOPMENT BUILDOUT WITHIN CONCEPTUAL PCWA WHEELING AGREEMENT SERVICE AREA

EDUs

WATER SUPPLY DEMAND AT WATER CONNECTION CHARGE PAYMENT (FACILITIES AGREEMENT EXECUTION)¹

Project Name	ID #	Status	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	BUILD OUT	TOTAL
Dry Creek/West Placer Community Plan	A			100	100	100	100	100	100	100	100												800
Winding Creek Subdivision	B	Tent. Map	11																				11
Brookwood Subdivision	C	Tent. Map	16																				16
Silver Creek Subdivision	D	Tent. Map	80																				80
Morgan Place Subdivision	E	Tent. Map	91																				91
Curry Creek Community Plan	F									500	500	250	250	250	250	300	300	300	300	300	300	12450	16200
Brady Estates Subdivision	G	CEQA ⁴		10																			10
American Vineyards Subdivision	H	CEQA		161																			161
Whisper Creek Subdivision	I	CEQA		104																			104
Riolo Vineyard Specific Plan	J	CEQA		100	250	250	205																805
Placer Vineyards Specific Plan	K	CEQA			500	1000	500	500	500	500	500	500	500	500	500	500	450	450	450	450	450	5382	14132
Regional University Specific Plan	L	CEQA			300	700	400	400	400	400	400	300	300	300	300	187							4387
Residential EDU - Subtotal			198	475	1550	1850	1205	1000	1000	1500	1500	1050	1050	1050	1050	937	750	750	750	750	750	17632	36797
Non- Residential EDU - Subtotal			24	57	186	222	145	120	120	180	180	126	126	126	126	112	90	90	90	90	90	2116	4416
EDU Total			222	532	1736	2072	1350	1120	1120	1680	1680	1176	1176	1176	1176	1049	840	840	840	840	840	19748	41213
Peak Day Water Demand (MGD) ^{1,2}			0.26	0.61	1.48	2.64	1.55	1.29	1.29	1.93	1.93	1.35	1.35	1.35	1.35	1.21	0.97	0.97	0.97	0.97	0.97	22.97	47.39
Cumulative Peak Day Water Demand (MGD)			0.26	0.87	2.35	4.99	6.54	7.83	9.12	11.05	12.98	14.33	15.69	17.04	18.39	19.60	20.56	21.53	22.49	23.46	24.43	47.39	47.39
Peak Day Water Delivery (MGD) ³			0.27	0.49	0.71	1.09	1.61	1.46	1.29	1.48	1.61	1.55	1.48	1.48	1.35	1.35	1.22	1.08	0.97	0.97	0.97	25.16	
Cumulative Peak Day Water Delivery (MGD)			0.27	0.76	1.48	2.57	4.18	5.64	6.93	8.41	10.02	11.56	13.04	14.53	15.88	17.23	18.45	19.53	20.5	21.46	22.43	47.59	47.59

Notes:
 1. Water Supply Demand Created When PCWA Facilities Agreement Is Executed And Water Connection Charges Are Paid. Facilities Agreement Is Required To Be Executed Prior To Infrastructure Construction.
 2. Peak Day Water Demand Is Calculated Based On EDU Buildout Projection Above.
 3. Water Delivery Occurs After Construction Of Backbone Infrastructure, Subdivision Infrastructure, House Construction And Occupancy. Water "Delivery" Follows Water "Demand" By Approximately 18 To 24 Months.
 4. "CEQA" denotes that a project has merely been proposed, and not approved, and is still undergoing environmental review pursuant to CEQA.
 Available Flow Capacity in Roseville Pipe - 8.15 MGD (Based on 07/21/06 Peak Day Flow of 1.85 MGD).
 Available Flow Capacity if Secondary Initial Surface Water Supply (San Juan Water District - 6000 AFA -10.7 MGD) is utilized - 18.32 MGD.
 Source: Placer County, *Placer Vineyards Specific Plan Second Partially Recirculated Revised Draft EIR*, March 2007.

Area. Therefore, the proposed project's contribution to cumulative environmental impacts from curtailment would not be considerable and would be ***less than significant***.

Mitigation Measure

None required.

6.14-4 The water demand resulting from the proposed project, in combination with other development served by PCWA, could result in insufficient entitlements to surface water and exceed sustainable yield of groundwater supplies.

The analysis contained in the most recent UWMP, summarized in Tables 6.14-2 through Table 6.14-4 and 6.14-10, shows sufficient water entitlements to serve western Placer County at buildout. The cumulative demands during normal years can be met solely with surface water. Conjunctive use of groundwater and recycled water is required to supplement dry year curtailment of surface water supplies. Nearly 20,000 AFA of groundwater and 6,400 AFA of recycled water would be required to meet dry year demands in 2030.

Estimates for historical net groundwater withdrawal in the project site are 2,440 AFA. Upon connection to surface water, the proposed project would represent an in-lieu recharge of 2,440 AFA. After nine years, enough recharge would occur to supply the entire surface water shortfall for western Placer County during a single dry year.

Current groundwater pumping is estimated at 90,000 AFA which is near the sustainable yield of the basin estimated at 95,000 AFA. There is no current policy or management plan to limit groundwater pumping to current levels beyond General Plan policies encouraging surface water use for new developments. The General Plan policies do not act to control individual well permits or manage regional groundwater pumping. If future developments are allowed to use groundwater in excess of current groundwater withdrawal, groundwater levels would likely decline. Ultimately, if groundwater levels continued to decrease from cumulative pumping, impacts on water quality and elevated energy consumption for pumping may occur. As a result, the cumulative impact on the groundwater basin would be *potentially significant*.

However, as stated above, PCWA has sufficient water entitlements to serve western Placer County at buildout. The proposed project would result in no net increase in groundwater withdrawal if groundwater and recycled water are relied upon for the water supply for the proposed project. The proposed project's incremental contribution to impacts on groundwater supplies would not be cumulatively considerable and therefore, ***less than significant***.

Mitigation Measure

None required.

6.14-5 The water demand resulting from the proposed project, in combination with other development, may result in the construction or expansion of existing facilities.

Buildout of western Placer County would require completion of numerous PCWA-planned infrastructure projects. Several projects, such as the Sacramento River Diversion project, have not completed environmental review and are required to serve western Placer County at buildout. Current surface water supply entitlements provide PCWA with 255,400 AFA during normal years.

TABLE 6.14-10

ASSUMED DEVELOPMENT BUILDOUT WESTERN PLACER COUNTY

EDUs

WATER SUPPLY DEMAND AT WATER CONNECTION CHARGE PAYMENT (FACILITIES AGREEMENT EXECUTION)¹

Project	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL
Dry Creek / West Placer Community Plan		100	100	100	100	100	100	100	100											800
Winding Creek Subdivision	11																			11
Brookwood Subdivision	16																			16
Silver Creek Subdivision	80																			80
Morgan Place Subdivision	91																			91
Curry Creek Community Plan								500	500	250	250	250	250	250	300	300	300	300	300	3750
Brady Estates Subdivision		10																		10
American Vineyards Subdivision		161																		161
Whisper Creek Subdivision		104																		104
Riolo Vineyard Specific Plan		100	250	250	205															805
Placer Vineyards Specific Plan			500	1000	500	500	500	500	500	500	500	500	500	500	450	450	450	450	450	8750
Regional University Specific Plan			300	700	400	400	400	400	400	300	300	300	300	187						4387
Lincoln							4000				4000				4000					16000
Loomis / Granite Bay (excluding Bickford Ranch)	50	50	50	50	50	50	50	50	50											450
Loomis / Granite Bay - Bickford Ranch	90	400	400	200	200	200	200	100	100											1890
Rocklin (excluding Whitney Ranch)	50	150	508	50	50	50	50	50	50											1008
Rocklin - Whitney Ranch	50	50	500	500	300	300	300	300	300	200	200	200	200	200	100	100	100	100	100	4100
Sunset Industrial (excluding Placer Ranch)	50	50	50	50	50	50	50	50	50											450
Sunset Industrial - Placer Ranch			200	600	400	400	400	400	400	400	400	400	400	400	300	300	300	300	300	6300
Residential EDU - Subtotal	488	1175	2858	3500	2255	2050	6050	2450	2450	1650	5650	1650	1650	1537	5150	1150	1150	1150	5150	49163
Non-Residential EDU	59	141	343	420	271	246	726	294	294	198	678	198	198	184	618	138	138	138	618	5900
Total EDU	547	1316	3201	3920	2526	2296	6776	2744	2744	1848	6328	1848	1848	1721	5768	1288	1288	1288	5768	55063
Peak Day Demand (MGD) ^{1,2}	0.6	1.5	3.7	4.5	2.9	2.6	7.8	3.2	3.2	2.1	7.3	2.1	2.1	2.0	6.6	1.5	1.5	1.5	6.6	63.3
Cumulative Peak Day Water Demand (MGD)	0.6	2.1	5.8	10.3	13.2	15.9	23.7	26.8	30.0	32.1	39.4	41.5	43.6	45.6	52.2	53.7	55.2	56.7	63.3	63.3
Peak Day Water Delivery (MGD) ³	1.6	2.1	2.6	3.1	3.8	3.6	4.1	4.1	4.3	3.8	3.7	3.5	3.4	3.4	3.2	3.0	2.8	2.8	2.8	61.5
Cumulative Peak Day Water Delivery (MGD)	1.6	3.7	6.3	9.4	13.2	16.8	20.8	25.0	29.2	33.0	36.7	40.2	43.6	47.0	50.2	53.2	56.0	58.7	61.5	61.5
Treatment Facility	Available	Capacity		Total Treatment Facility Capacity		Maximum Day Flow		Remaining Physical Flow Capacity (Delivery)³			Reserved Unrealized Capacity⁴			Remaining Flow Capacity (Demand)¹						
Foothill / Sunset Water Treatment Plant	2006	63 MGD		63.0 MGD		52.7 MGD		10.3 MGD			7.3 MGD			3.0 MGD						
Foothill / Sunset Water Treatment Plant	2008	3 MGD		66.0 MGD				13.3 MGD						6.0 MGD						
Foothill II / Ophir Water Treatment Plant	2011	30 MGD		96.0 MGD				43.3 MGD						36.0 MGD						
Sacramento River Water Treatment Plant	2016	65 MGD		161.0 MGD				108.3 MGD						101.0 MGD						
Average Annual Water Demand (AFA) ¹	352	848	2062	2525	1627	1479	4364	1767	1767	1190	4076	1190	1190	1109	3715	830	830	830	3715	
Cumulative Average Annual Water Demand (AFA)	352	1200	3261	5786	7413	8892	13256	15023	16791	17981	22057	23247	24437	25546	29261	30091	30920	31750	35465	
Average Annual Water Delivery (AFA) ³	911	1176	1446	1731	2128	2005	2272	2314	2381	2121	2056	1984	1912	1912	1767	1686	1551	1551	1551	
Cumulative Average Annual Water Delivery (AFA)	911	2087	3533	5265	7393	9398	11670	13985	16365	18486	20542	22526	24437	26349	28116	29802	31353	32904	34455	
Surface Water Deliver Source	Available	Surface Water Supply		Total Surface Water Supply		Water Supplied		Remaining Physical Supply (Delivery)³			Reserved Unrealized Capacity³			Remaining Supply (Demand)³						
PG & E - Yuba/Bear River System	2006	35,000 AFA																		
Middle Fork American River System	2007	35,500 AFA		70,500 AFA		29,858 AFA		40,642 AFA			4,088 AFA			36,554 AFA						
Sacramento River Diversion	2016	35,000 AFA		105,500 AFA				75,642 AFA						71,554 AFA						

Notes:
 1. Water supply demand created when PCWA Facilities Agreement is executed and water connection charges are paid. Facilities Agreement is required to be executed prior to infrastructure construction.
 2. Peak day water demand is calculated based on EDU buildout projection shown above.
 3. Water delivery occurs after construction of Backbone Infrastructure, Subdivision Infrastructure, House Construction and Occupancy. Water "Delivery" follows Water "Demand" by approximately 18 To 24 Months.
 4. Reserved, Unrealized Capacity represents the difference between Water Demand and Water Delivery.
 Source: Placer County, *Placer Vineyards Specific Plan Second Partially Recirculated Revised Draft EIR*, March 2007.

Infrastructure limitations for the diversion of the CVP entitlement reduce the normal year supply by 35,000 AFA for total useable entitlement of 220,400 AFA. Projected buildout demand for normal years is 250,500 AFA, requiring nearly all of the surface water entitlements. If diversion facilities for the CVP contract are not built, then cumulative normal year demand could not be met. The proposed project's potable water demand at buildout would represent approximately seven percent of the Sacramento diversion. The PVSP EIR²³ evaluated the cumulative contribution to impacts of the new Sacramento River diversion on the CVP and State Water Projects and that discussion is summarized in Appendix H. As discussed in the Placer Vineyard Revised DEIR, the diversion of the 35,000 AFA CVP entitlement had no impact on flood control, potentially significant impact on hydropower, significant impact on Delta water quality, and significant impact on water supply reliability. The Placer Vineyards Revised Draft EIR found that the Placer Vineyards Specific Plan's incremental contribution to these impacts would not be cumulatively considerable. The proposed project's potable water demand at buildout (2,440 AFA) would represent approximately 21 percent of that of the Placer Vineyards Specific Plan (11,500 AFA). Therefore, the proposed project's incremental contribution to the cumulative impacts of the Sacramento River diversion would also not be cumulatively considerable and would be considered *less than significant*.

Prior to the completion of the diversion facilities for the CVP entitlements discussed above, water could be supplied to the proposed project via a wheeling agreement between PCWA and the City of Roseville, which is limited to a peak flow of 10 MGD. Other projects are planning to rely on this line capacity in addition to the proposed project's build-out peak demand of 7.43 MGD.²⁴ In the event these known projects were to rely solely on this supply, the 10 MGD stated in the agreement between PCWA and the City of Roseville would be greatly exceeded. This is considered a significant cumulative impact. The proposed project would demand 75 percent of the supplies available in the wheeling agreement and, therefore, the proposed project's incremental contribution to the demand on supplies available under the wheeling agreement is *cumulatively considerable*.

Mitigation Measure

Compliance with the following mitigation measures would ensure the cumulative demand does not exceed current infrastructure to provide the available water supplies; therefore, mitigating the impact to a ***less-than-significant level***.

6.14-5 *Implement Mitigation Measure 6.14-1.*

23 Placer County, *Placer Vineyards Specific Plan Revised DEIR*, March 2006.

24 West Yost and Associates, *Water Master Plan for the Regional University Specific Plan*, prepared for KT Communities, revised December 7, 2006. Table 3-3.