

APPENDIX L
Cal Water WSA
for the Original Project



CALIFORNIA WATER SERVICE COMPANY

2632 W. 237TH STREET • TORRANCE, CA 90505-5272
(310) 257-1400 • FAX (310) 325-4605

RANCHO DOMINGUEZ DISTRICT

April 13, 2007

Irell & Manella LLP
1800 Avenue of the Stars, Suite 900
Los Angeles, CA 90067-4276
Attn: Mr. Allan J. Abshez

Re: Water Supply Assessment, Ponte Vista Development Project

Dear Mr. Abshez:

I have enclosed the Water Supply Assessment (WSA) required by Senate Bill 610 for the Ponte Vista development project in the City of Los Angeles. California Water Service Company has been serving the site since 1970 and continues to serve the site through our Palos Verdes District with our service connection on South Western Avenue.

We have provided the WSA for your use and for the final Environmental Impact Report prepared for the City of Los Angeles. The WSA concludes that for the next 20 years, the Palos Verdes District will have more than adequate water supplies to meet projected demands associated with the proposed Ponte Vista development project and those of all existing customers and other anticipated future users.

Please contact me at (310) 257-1436 if you have any questions concerning the WSA or our ability to continue serving the project. We look forward to working with you.

Sincerely,

Terry S. Tamble
District Manager

cc: K. Hanson
J. Tootle

PONTE VISTA DEVELOPMENT PROJECT

LOS ANGELES, CALIFORNIA

SB610 WATER SUPPLY ASSESSMENT

APRIL 9, 2007

Prepared by:

Yarne & Associates, Inc.

For:

**California Water Service Company
2632 West 237th Street
Torrance, California 90505**

Introduction

California Water Service Company (Cal Water) has prepared a California SB 610 Water Supply Assessment (WSA) for the proposed Ponte Vista development project located in the southwestern portion of the City of Los Angeles. The Palos Verdes District of Cal Water currently provides water service to the Ponte Vista project area.

This Ponte Vista development project is not covered in Cal Water's Palos Verdes District 2005 Urban Water Management Plan (UWMP); therefore, its water requirements and how they would be met are addressed in this WSA. The Palos Verdes District UWMP document provides historic and forecasted water demand and supply data and analyses and can be referenced for more detailed information on those topics. Cal Water updates its Urban Water Management Plans every three years.

Senate Bill 610 (Chapter 643, Statutes of 2001) (SB 610) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and land use development decisions made by cities and counties. SB 610 requires detailed information regarding water supply availability be provided to local public agency decision-makers prior to approval of development projects that meet or exceed any of the following criteria:

1. A residential development of more than 500 dwelling units.
2. A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet.
3. A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A hotel or motel with more than 500 rooms.
5. An 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 square feet of floor area.
6. A mixed-used project that includes one or more of the projects specified above.
7. A project that would demand an amount of water equivalent to, or greater than the amount of water required by a 500 dwelling unit project.

Since the proposed Ponte Vista development project exceeds the first criteria, a SB 610 WSA is required. After a draft Tentative Map has been approved, a SB 221 Verification is required. Senate Bill 221 (Chapter 642, Statutes of 2001) (SB 221), which also amended state law, effective January 1, 2002 is a companion measure to SB 610 and is intended as a final check to insure adequacy of water supply before final project approval.

A SB 610 WSA must address the adequacy of the water supply to meet the estimated demands of the proposed PV development over the next 20 years in addition to those of Cal Water’s existing customers and other anticipated future users under normal, single dry year and multiple dry year conditions, and determine whether there is sufficient water supply to meet those needs. (Water Code §10911(a).) SB 610 and SB221 require that the information developed to address the adequacy of water supply question be included in the administrative record that serves as the evidentiary basis for an approval action by the local public agency.

Both state bills recognize local control and decision-making regarding the availability of water for projects and the approval of projects. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to the California Environmental Quality Act. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

Cal Water’s Palos Verdes District is located at the southwest corner of the Los Angeles coastal plain, approximately twenty miles from downtown Los Angeles. The service area is built upon the uplifted sedimentary rock formations situated between Long Beach and the beaches of Santa Monica Bay.

The service area covers approximately 26 square miles, encompassing all the area incorporated by the Cities of Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills Estates, and Rolling Hills. The water system serving these areas is bounded on the north by the Cities of Torrance and Lomita, on the east by San Pedro, a community within the City of Los Angeles, and on the west and south by the Pacific Ocean.

Estimate of the population serviced by Cal Water in the Palos Verdes District is based on overlaying the 2000 U.S. Census Tract Block data with the service area map (SAM), as shown in Figure 1. A summary of the census data for the Year 2000 is shown in Table 1. LandView 5 and MARPLOT[®] software were used to generate the data.

Table 1: Summary of Census 2000 Data			
	Census Tract Blocks	Population	Housing Units
Palos Verdes Service Area	628	68,113	26,504

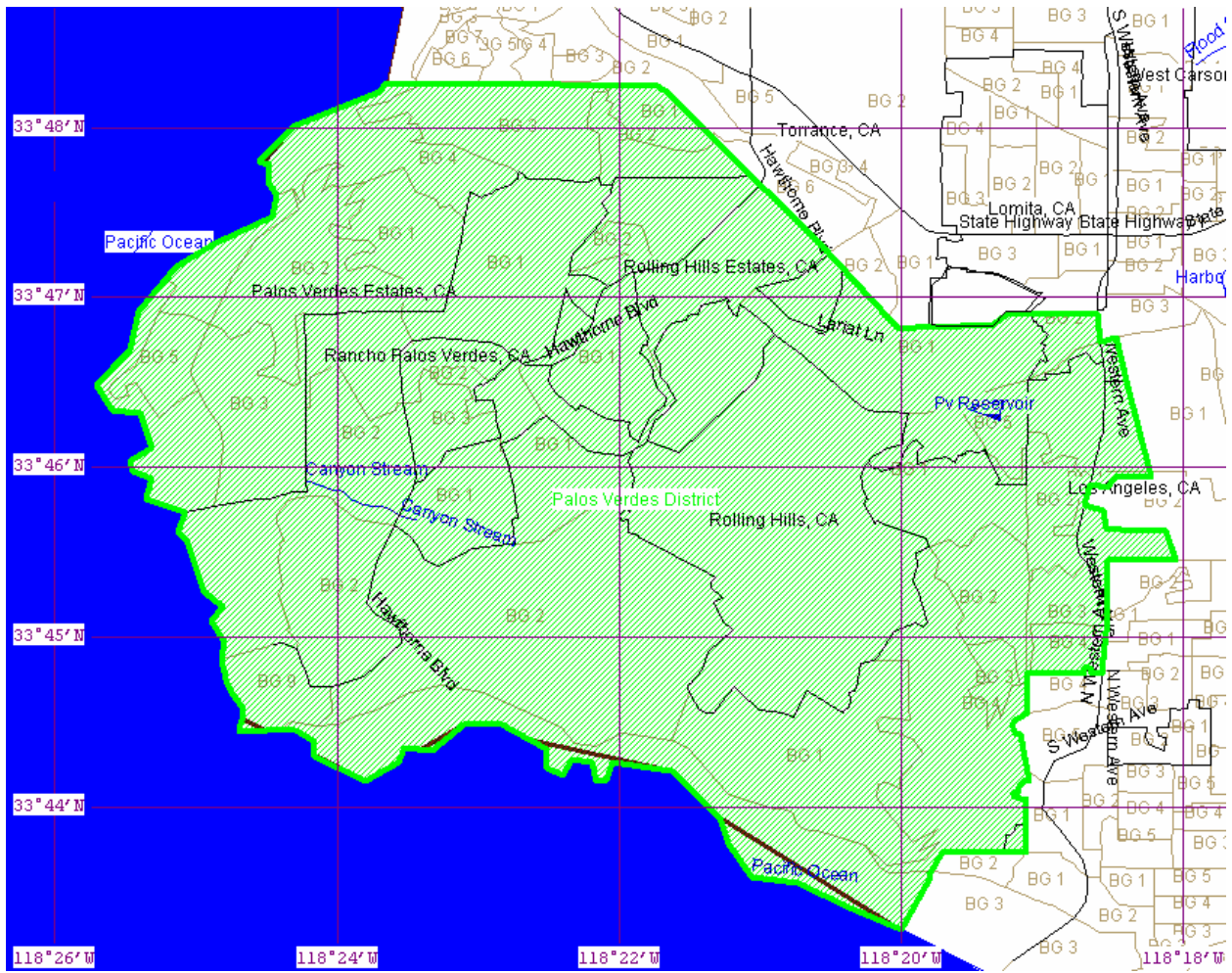
Known dwelling units for the district were 25,645 for single family and multifamily residences in Year 2000. Using the ratio of given population and the dwelling units yield a population density of 2.656 persons per residential dwelling unit (single family and multifamily dwelling units).

Based on the 2000 census and district service connection growth, California Water Service Company estimates the population in the Palos Verdes District was

approximately 68,620 at the end of Year 2004. Table 2 presents the current and projected population growth for the Palos Verdes District in five-year increments.

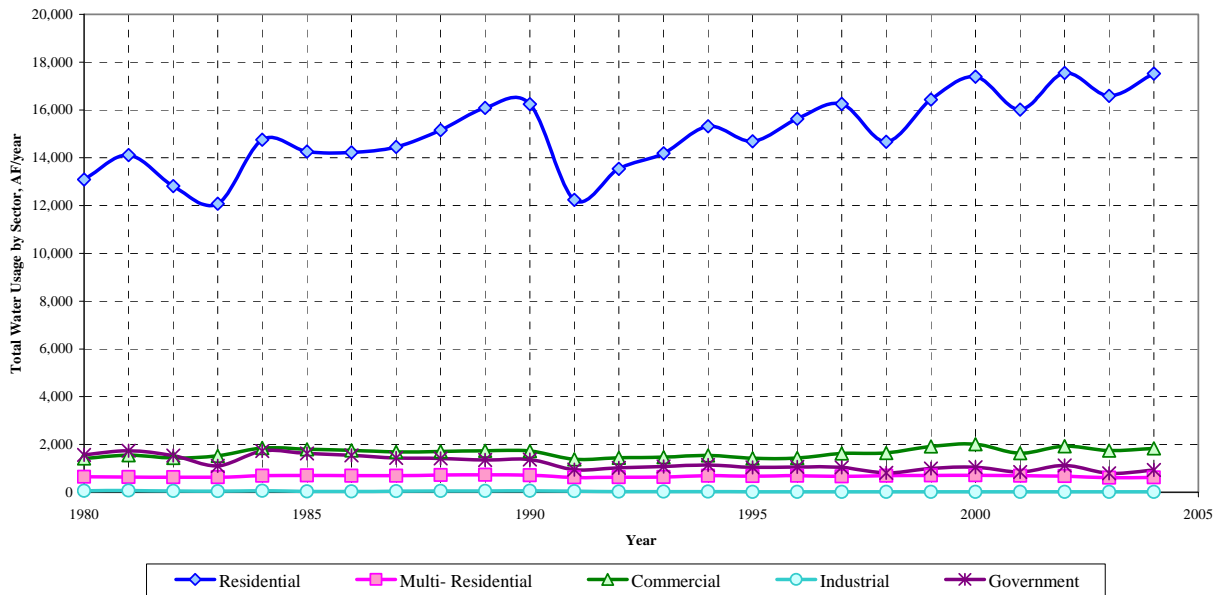
Table 2: Palos Verdes District Population Projections						
	2005	2010	2015	2020	2025	2030
Service Area Population	68,850	69,540	70,240	70,940	71,660	72,370

Figure 1: Palos Verdes District Service Area & US Census 2000 Tract Map



The demographic makeup of the District is mainly residential as illustrated in Figure 2. This sector has remained at a fairly constant growth since 1980. The remaining sectors have remained constant since 1980, but at a small fraction of the residential usage. Individual growth rates for each sector were used to project the future demand unless the individual growth rate was determined to be not representative, then the overall growth rate was used.

Figure 2: Palos Verdes District Water Usage by Sector



Cal Water designates customer classifications as follows:

- ◆ Single Family Residential
- ◆ Multifamily Residential
- ◆ Commercial
- ◆ Industrial
- ◆ Government
- ◆ Other

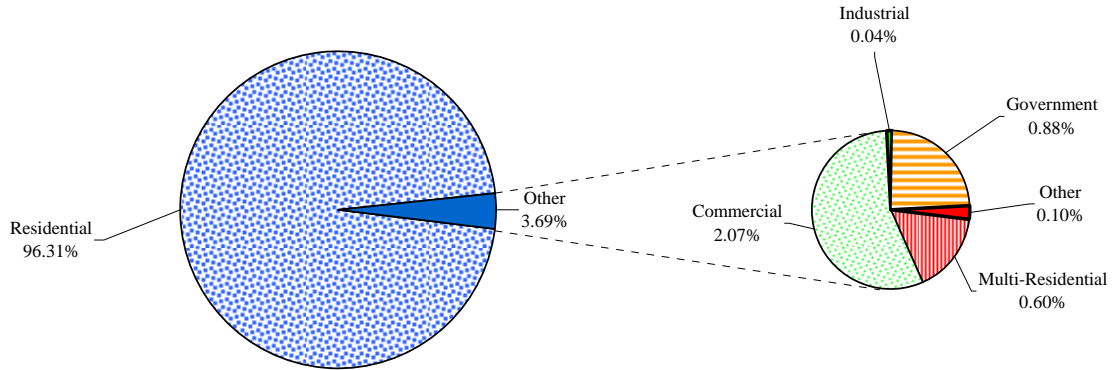
The residential sector of CWS water service customers includes permanent single and multifamily residents. Service for seasonal customers is not included.

Property development in the Palos Verdes District is comprised of large, exclusive, single-family homes situated on large suburban to rural lots. The Palos Verdes system is surrounded by communities served by city water departments and other water companies, except to the north where the district is adjacent to Cal Water’s Hermosa-Redondo District. There are very few significant parcels of property within the District that have not been developed in the past for some purpose, and as such, growth will be limited to redevelopment. Some of this redevelopment has or will take place as the construction of large-scale golf courses and resorts. These developments as known today have been considered in the review and acceptance of the service growth and demand scenarios.

The average annual services for calendar year 2004 were 23,768. Single-family residential services at 22,890 represent 96.31 percent of all services; multifamily residential at 143 represents 0.60 percent, and commercial at 491 represents 2.07 percent,

with all other service connection types comprising 1.0 percent. The distribution of services for 2004 is shown in Figure 3.

Figure 3: Palos Verdes District Distribution of Services (2004)

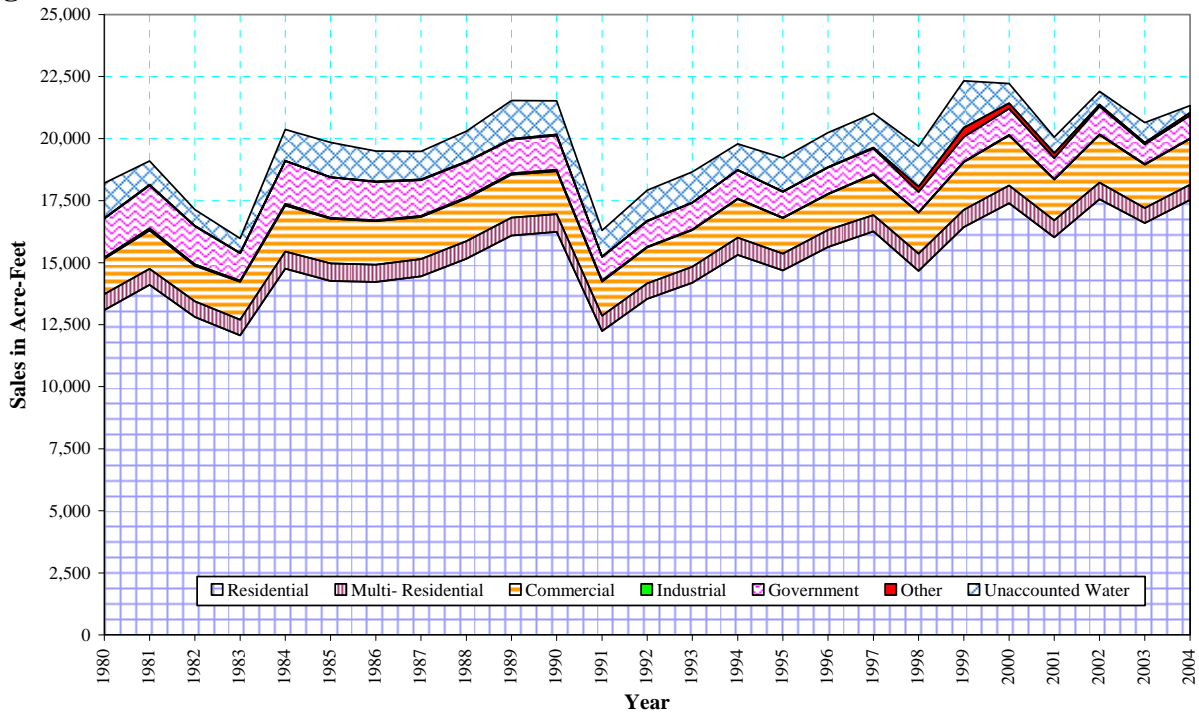


Historical and Current Water Demand

Demand per service is a function of historical sales and service data. Projected demand is the total projected services multiplied by demand per service. Historical sales values are illustrated in Figure 4.

Seven years prior to the drought response year of 1991, the combined demand per service for all services was fairly stable at an average of 290,000 gallons per service. With the conclusion of the drought, demand increased gradually, but remained below pre-drought levels. However, in 1999 demand per service peaked at an all-time high of 309,142 gallons, possibly because of a substantial increase in demand per service within the commercial customer class.

Figure 4: Palos Verdes District Historical Sales



Per Capita Water Demand

Based on 2004 year demand data, the per-capita water use in the district is summarized in Table 3.

Table 3: Palos Verdes District Per Capita Water Demand (2004)		
Units	All Users	Residential
Million Gallons	6,951.7	5,913.8
Estimated Population	68,620	68,620
Gallons/Person in Year	101,307	86,181
Gallons Per Capita Per Day	277.6	236.1
Gallons Per Capita Per Minute	0.193	0.164

For the purpose of projecting total system demand, the projected number of services for each customer class was multiplied by the demand per service for that category of use.

Three projection scenarios were used to develop a range of projected demand for the Palos Verdes District. The previously discussed service connection growth pattern was applied to three different sets of demand per service data. The starting point for each projection was the actual annual average number of services in 2001. The short-term average growth pattern was combined with the average demand per service value for each customer class to project the most probable demand values through the year 2030. The average growth scenario projects total demand for the year 2030 to be 20,107 AF

(without system losses). This represents the demand most likely to occur provided the 10% conservation goal established by the Company is achieved and maintained. This scenario is summarized in Table 4.

Table 4: Palos Verdes District Projected Water Demand

<u>Year</u>	<u>Acre-ft/Yr</u>
2005	19,204
2010	19,377
2015	19,599
2020	19,737
2025	19,925
2030	20,107

Following is a description of the proposed Ponte Vista development project, its projected water demands, and a description and assessment of the proposed water supply as to its adequacy to meet those demands in accordance with the requirements of SB 610.

Project Location and Description

The Ponte Vista development project, approximately 61.5 acres in area, is located at 26900 South Western Ave in the City of Los Angeles, approximately 2 miles from downtown San Pedro and 1.5 miles from the Port of Los Angeles. A location map from the Draft Environmental Impact Report for the project showing the location of site is attached. “Exhibit 1”

The US Navy formerly owned the site and in 1962 constructed 245 residential units, a community center (2,161 square feet) and retail space (3,454 square feet) to provide housing for personnel working at Navy facilities in Long Beach. The site was known as the U.S. Navy San Pedro housing complex. The Navy ceased using these facilities in the late 1990s.

The property was acquired by BDC Ponte Vista Partners LLC, who as a condition to their proposed development agreed to demolish existing facilities, which do not comply with City of Los Angeles building codes. The proposed Ponte Vista project site is bordered by Western Avenue (State Route 213) to the west, Fitness Drive and multi-family residential developments to the south, the US Navy Defense Fuel Support Point to the north and the future site of a new campus for Mary Star of the Sea High School to the east.

Proposed new facilities include:

- 2,300 multi-family dwelling units (townhouses and condominiums)
- 10,000 square feet retail space
- 11 acres of parks:
 - 6.0 acres with 2 little league baseball fields,
 - 2.5 acres with public swimming pool and community clubhouse
 - 0.5 acres for a senior community park

2 acres of a waterscape concourse (central water pool and adjacent walkways and recreational areas)

Ponte Vista Project Water Demand Forecast

Based on the proposed project build out, a population forecast was developed and is summarized in Table 5. It was assumed that the Palos Verdes District average persons/dwelling unit (both single family and multi-family dwelling units) is reasonable to use for the Ponte Vista project development.

<u>Dwelling Units</u>	<u>Persons/Unit</u>	<u>Persons</u>
2,300	2.656	6,110

Residential Water Demand Forecast:

Since the proposed residential units for the Ponte Vista development project are all townhouse and condominium units, whereas most of those in Palos Verdes District are large single family residential homes with large lots that are well landscaped and irrigated, the average daily residential per capita water use of 236.1 gallons/person/day is not considered appropriate for estimating residential demand for Ponte Vista. Smaller newer dwelling units with water saving fixtures (toilets, showers, washing machines) and conservation type landscaping will result in a significantly reduced residential per capita demand.

The American Water Works Association (www.AWWA.org) indicates that conservation measures (installation of more efficient water fixtures and regular checking for water leaks) results in a 30% reduction in internal residential water use. California Coastal Commission staff in a report titled “Sunridge Views Subdivision, A-3-MCO-04-054” cites various studies that lead them to conclude that water conservation retrofitting and other measures will result in a 40% reduction of indoor water use and use of xeriscaping will reduce outdoor use, which is principally irrigation of lawns and landscaping, by 40%.

The assumption is made for the Ponte Vista development project that multi-family dwelling units that incorporate conservation measures will result in an overall average per capita demand that is 60% of the average residential demand in the Palos Verdes District. Therefore, the Ponte Vista estimated average per capita consumption is: 0.6×236.1 gallons/person/day = 141.6 gallons/person/day.

Total Ponte Vista estimated residential annual average day demand at build out:
 $6,110$ persons \times 141.6 gallons/person/day = $865,180$ gallons/day or 970 acre-ft/yr.

Maximum Day demand is based on the peaking factor determined from water use records. The Palos Verdes District maximum day demand can be estimated by multiplying the Palos Verdes District's last 5 year average peaking factor of 1.98 times average annual day demand.

Since new residential services in the Ponte Vista development will have substantially less landscape area to be irrigated than the Palos Verdes District and water conservation measures will be incorporated into the design of the project, a peaking factor of 1.75 is used here to reflect an anticipated reduction in maximum day demand. (Note, the Palos Verdes District 10-year average peaking factor is 1.81.)

Therefore, Ponte Vista residential maximum day demand is estimated to be 1,514,000 gallons per day or 1.51 million gallons per day (mgd).

Retail Water Demand Forecast:

For another recent development project in Cal Water's nearby Dominguez District in Torrance, PCR Services Corporation (PCR), based on data derived by the County Sanitation Districts of Los Angeles (CCDLA), developed a table of estimated demand for various types of commercial activities.

Since there was good agreement between the estimate of residential water usage derived from Cal Water data and assumptions for the Dominguez District and those developed by PCR using CCDLA data, estimates of water demand for commercial activities developed by PCR using CCDLA factors for those activities are used for the Ponte Vista development project and are summarized in Table 6.

<u>Category</u>	<u>Average Use gallons/sq ft/day</u>
<u>Retail:</u>	
Shopping Center	0.358
Electronic Superstore	0.110
Home Improvement	0.110
Discount Club	0.110
Home Furnishing	0.110
Office Supp	0.110
Pet Supply	0.110
Supermarket	0.65
<u>Restaurants:</u>	
High turnover	1.100
Fast Food	1.100
Quality	1.100

Since no specific designation of retail activities was provided for the Ponte Vista development, it is assumed that there will be a mix with the weighting as follows:

85 % retail (0.2) + 15% restaurants (1.10) = 0.335 gallons/sq ft/day

Therefore, Ponte Vista average day retail water use is estimated to be:

10,000 sq ft x 0.335 gallons/sq ft/day = 3,350 gallons/day or 3.76 acre-ft/yr

Park Space and Recreational Facilities Water Demand

A total of 11.0 acres of park area is planned for the Ponte Vista development project. Cal Water has determined park irrigation usage in a variety of urban settings and has found that it can range widely depending on the nature of the area, irrigation practices, type of vegetation and landscape cover, percentage of area irrigated, location and whether or not conservation practices are being followed. Usage ranges from 2.0 acre-ft/acre/year to over 4.5 acre-ft/acre/year.

It is anticipated that water conserving irrigation practices will be followed; therefore, an average application rate of 3.3 acre-ft/acre/year (ft/yr) is selected for the Ponte Vista parks.

The estimated Ponte Vista park irrigation demand at build out:

11.0 acres x 3.3 acre-ft/acre/yr = 36.3 acre-feet/year x 325,851 gallons/acre-foot x 1/365 days/year = 32,400 gallons per day.

The community clubhouse is assumed to be the same as a multi-purpose recreation center which has a water use factor of 0.85 gallons/square foot/day according to previously cited CCDLA data used by PCR. While no square footage for the community clubhouse was provided, it is estimated here at 50 feet x 50 feet = 2,500 sq ft. (Existing one to be demolished is 2,161 square feet.)

Therefore, community clubhouse water demand is estimated as:

2,500 sq ft x 0.85 gallons/sq ft/day = 2,125 gallons/day = 2.4 acre-ft/yr

Swimming pool water use will be a combination of water used for filter cleaning, pool area cleaning and make up water for evaporation losses. Evapo-transpiration loss for this area is 39 inches/year. If it is assumed that evaporation accounts for 50% then it equals 19.5 inches/year or 1.625 ft/yr. If the pool is 65' x 30' or 1,950 sq ft, then total evaporative loss will be: 1,950 sq ft x 1.625 ft = 3,170 ft³/yr x 7.48 gallons/ft³ = 23,700 gallons/yr = 65 gallons/day. The City of Los Angeles estimates that filter cleaning uses 44 gallons/day and it is estimated here that washing the pool area will use 60 gallons/day. Therefore, total swimming pool water demand is estimated to be: 65 + 44 + 60 = 169 gallons/day = 0.19 acre-ft/yr

The surface area of water in the 2.0 acre "water concourse" is estimated to be 40% of the area or 0.80 acres or 34,848 sq ft. Using an evaporation loss of 1.625 ft/yr would result in an annual loss of 56,628 ft³/yr x 7.48 gallons/ft³ = 423,580 gallons/yr = 1,160

gallons/day. So water concourse pool water demand is estimated to be 1.3 acre-ft/yr.

Therefore, total park and recreational facilities water demand is estimated to be: 35,850 gallons/day or 40.2 acre-ft/yr

**Estimated Total Annual Average Day Demand at Build Out for Ponte Vista Development:
904,380 gallons/day or 0.904 mgd or 1,014 acre-ft/year**

Existing Water Use of Project Area

Cal Water has and continues to provide water service to the Ponte Vista project development area through an 8” meter and service line. A review of the past 6 years of water consumption records (2001 – 2006) indicates that there has been a significant reduction in usage. The highest water usage was in 2003, where average daily demand was 17,693 gallons/day. In 2005, it dropped to 6,691 gallons/day and in 2006 it is estimated to be about 2,300 gallons/day. The reduction in use correlates with the discontinuation and/or reduction in use of the facilities that currently occupy the project site.

For the purposes of this analysis, the prior higher water use by former occupants of existing facilities is subtracted from the estimated water use of the proposed new development facilities to determine a NET new water demand that needs to be supplied. Hence, the 17,693 gallons/day is subtracted from the projected new demand. Therefore:

**Estimated NET Total Annual Average Day Demand at Build Out for Ponte Vista Development:
886,687 gallons/day or 0.887 mgd or 994 acre-ft/year**

Water Supply Assessment

It is assumed that development of the Ponte Vista project will occur over an 8-year period with initial construction of new development occurring in 2008 and build-out completion by the end of 2015. If construction and use is linear with time, then average annual daily demand in five year forecast increments for the Ponte Vista development for the next 20 years is as shown in Table 7.

<u>Year</u>	<u>mgd</u>	<u>Acre-ft/year</u>
2007	0	0
2012	0.554	621
2017	0.887	994
2022	0.887	994
2027	0.887	994

For the Palos Verdes District, Cal Water’s forecasted annual average day demand is shown in Table 8:

<u>Year</u>	<u>mgd</u>	<u>Acre-ft/year</u>
2007	18.28	20,436
2012	18.46	20,629
2017	18.62	20,817
2022	18.80	21,015
2027	18.97	21,208

The estimated average day demand for 2012 is 18.46 mgd so the increase in average day demand from 2007 (5-year period) is 0.18 mgd. The estimated Ponte Vista demand in 2012 is 0.55 mgd, which is 305% (0.55/0.18) of the projected increase in forecasted water demand for that period. Therefore, the Palos Verdes District will have to increase its supply to accommodate the Ponte Vista development.

The estimated average day demand for 2017 is 18.62 mgd so the increase in average day demand from 2007 (10-year period) is 0.34 mgd. The estimated Ponte Vista demand in 2017 is 0.887 mgd or 260% (0.887/0.34) of the projected increase in District demand for that period. Again, the Palos Verdes District will have to increase its supply to accommodate the Ponte Vista development.

The combined projected forecast for the Palos Verdes District and the Ponte Vista development is shown in Table 9.

<u>Year</u>	<u>mgd</u>	<u>Acre-ft/year</u>
2007	18.28	20,436
2012	19.01	21,245
2017	19.50	21,803
2022	19.69	22,007
2027	19.86	22,261

Water Supply for Palos Verdes District

All water supplied to the Palos Verdes District is purchased water. There are no groundwater wells in the district service area. Water is purchased from West Basin Municipal Water District (WBMWD), the regional wholesaler. Projected water supplies for the District are summarized in Table 10.

Table 10: Projected Palos Verdes District Water Supplies**(Acre-Foot/Year)**

Source	2005	2011	2016	2021	2026	
West Basin Municipal Water District	20,363	20,569	20,733	21,361	21,553	
Supplier produced groundwater	-	-	-	-	-	
Supplier surface diversions	-	-	-	-	-	
Transfers in or out	-	-	-	-	-	
Exchanges In or out	-	-	-	-	-	
Recycled Water (projected)	0	484	968	1,000	1,000	
Desalination	-	-	-	-	-	
Total	20,363	21,053	21,701	22,361	22,553	

Purchased Water

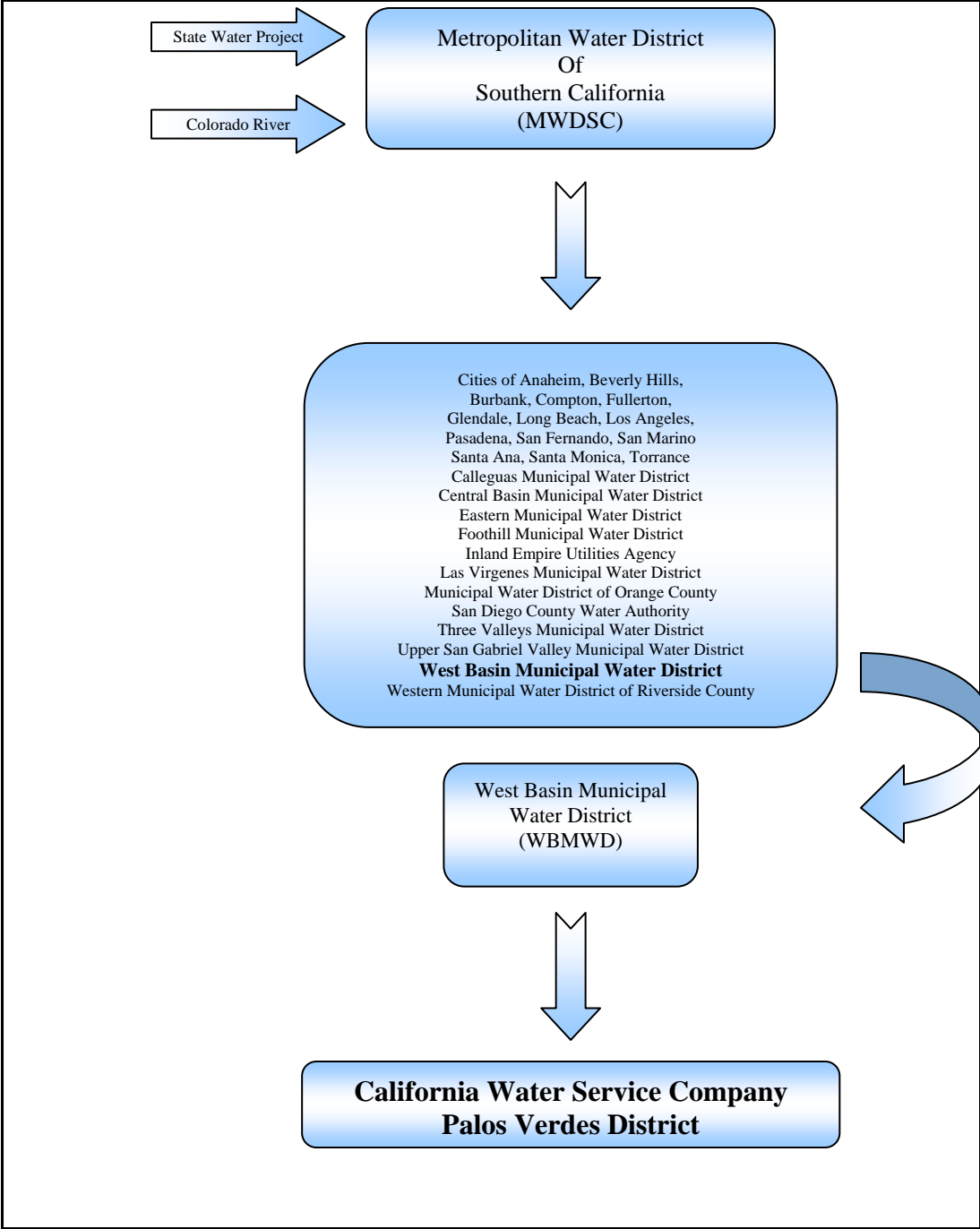
Metropolitan Water District of Southern California (MWDSC) supplies imported water to West Basin Municipal Water District (WBMWD), which has a supply agreement with Cal Water. Water purchased by Cal Water and supplied to the Palos Verdes District comes from either the Colorado River Aqueduct, which is owned by MWDSC, or through the California Aqueduct, a facility of the State Water Project, which is owned and operated by the California Department of Water Resources.

WBMWD is one of twenty-seven member agencies of MWDSC. WBMWD is a regional water wholesale agency and developer of local supplies. Delivery of imported water is made through four WBMWD service connections that transfer water from the MWDSC distribution feeder network to the District’s distribution system.

These four connections are located on two MWDSC distribution system feeders: the Second Lower Feeder and the Palos Verdes Feeder. The Palos Verdes District is completely reliant on these two feeders. There are no other MWDSC feeders that serve this area. MWDSC’s Palos Verdes Reservoir is located within the District at the terminus of the two feeders.

Figure 5 summarizes the water supply system and relationships.

Figure 5: Water Source for Palos Verdes District



MWDSC water service classifications and rate structure have changed and further change is anticipated in the future. Key to these changes is the establishment of Purchase Agreements for Imported Water provided to WBMWD. These agreements, which became effective January 1, 2003, have a term of five years and establish new concepts with respect to water sales within Metropolitan Water District's service area. The agreement sets a Base Allocation for each Purchaser, which is essentially their share of the supply Metropolitan Water District has made available to the WBMWD. The Base Allocation is based on that Purchaser's five-year average non-surplus purchases during fiscal years ending 1997 through 2001. Over the term of the agreement, the Purchaser commits to purchase at least 60% of the amount of the base allocation times five, which is known as the Purchase Commitment. If a purchaser does not purchase during the term of the agreement, the full Purchase Commitment, then the purchaser must pay for the balance at the average Tier 1 Supply Rate, initially set at \$73 per acre-foot.

A two-tier rate and annual allocation is another aspect of these agreements. The agreement sets a Tier 1 Annual Maximum at 90% of the Base Allocation. All water purchased in any year in an amount that is equal to or less than the Tier 1 Maximum will be purchased at the Tier 1 Rate, initially set at \$510 per acre-foot. Any amount of water purchase in excess of the Tier 1 Annual Maximum will be sold at the Tier 2 Rate, initially set at \$591 per acre-foot.

In the Imported Water Purchase agreement (Exhibit 2) between Cal Water with WBMWD, the Base, Tier Allocations, and Purchase Commitment are established as a combined allocation for all four Cal Water Los Angeles area Districts. Under this agreement, the Palos Verdes District shares the allocation with the other three Cal Water Districts. The agreement was initially adopted to be effective on January 1, 2003. A January 4, 2007 amendment adjusted Cal Water's Base Allocation effective December 1, 2006 to 74,790 acre-feet, the Tier 1 Annual Maximum is 67,311 acre-feet and the Purchase Commitment is 218,828 acre-feet. Cal Water has developed an allocation that distributes the Tier 1 Annual Maximum to each of its four districts, so that if the total Tier 1 Maximum is exceeded the applicable Tier 2 charges can be assessed to the appropriate district. The allocations are as follows:

Dominguez District:	21,540 Acre-ft/year
Hawthorne District:	4,712 Acre-ft/year
Hermosa-Redondo District:	16,155 Acre-ft/year
Palos Verdes District:	24,905 Acre-ft/year

Based on average demand projections for 2007, it is estimated that Palos Verdes will use 20,436 acre-feet of imported water from WBMWD, which will be accounted for under this Tier 1 annual maximum allocation.

As previously indicated delivery of imported water is made through four WBMWD service connections that transfer water from the Metropolitan WDSC distribution feeder network to the District's distribution system. The total rated capacity of these four service connections is 39,500 gallons per minute (gpm), which if operated at full capacity could

deliver 56.9 mgd. This rate of delivery is more than adequate to address even the largest projected 45.51 mgd maximum day demand for the year 2030.

Recycled Water

The Palos Verdes District currently does not receive recycled water from the regional wholesale water supply agency, WBMWD; however, WBMWD plans to extend service into the Palos Verdes service area in the near future. WBMWD acquires, controls, distributes, and sells recycled water to several Cal Water districts as well as cities and agencies in the greater Los Angeles area.

WBMWD has constructed what will ultimately be one of the largest water reuse projects in the United States. In their Phase I User Report, WBMWD identified over 105 economically feasible recycled water users with a combined estimated average annual demand of 19,100 AF. The recycled water use project, when fully implemented, has the potential to deliver nearly 70,000 AF/year of tertiary treated water. Following treatment at the Hyperion Water Treatment Plant owned by the city of Los Angeles and located near the Los Angeles airport, recycled water is used for injection at the seawater intrusion barriers, industrial operations and landscape irrigation.

Municipal wastewater is generated in the Palos Verdes service area by residential, commercial, and industrial sources. The quantity of wastewater generated is estimated to be 90 percent of residential water use in the Palos Verdes District. The Los Angeles County Sanitation Districts (LACSD) own, operate, and maintain the sewer system consisting of gravity sewers, pumping stations, and force mains which collect wastewater from residential, commercial, and industrial customers in the Palos Verdes service area. The collected wastewater is conveyed by trunk sewers and interceptors to LACSD's Joint Water Pollution Control Plant in Carson.

Potable and Recycled Water Demands

Table 11 is Cal Water's projected low, average (used in this WSA) and high demands that it has presented to WBMWD. (It does not include Ponte Vista development demands.) It is noted that the high demand (based on highest demands per customer classification) are well in excess of those projected for average demand growth plus net Ponte Vista demand. (See Table 9.) In 2025, the high demand is estimated at 25,513 acre-ft/yr or 3,319 acre-ft/yr more than the 2027 combined demand forecast for average growth plus net demand for the Ponte Vista development. This shows that Cal Water can anticipate obtaining more supply in the event that actual demands exceeds "normal" forecasted demands.

Table 11: Cal Water Palos Verdes Demand Projections To WBMWD (AFY)								
West Basin Municipal Water District	Demand		2010	2015	2020	2025	2030	
	Low	Imported		15,319	14,986	15,100	15,254	15,403
		Recycle		484	968	1,000	1,000	1,000
		Total		15,803	15,954	16,100	16,254	16,403
	Average	Imported		20,063	19,774	19,931	20,130	20,325
		Recycle		484	968	1,000	1,000	1,000
		Total		20,547	20,742	20,931	21,130	21,325
	High	Imported		24,335	24,082	24,275	24,513	24,745
		Recycle		484	968	1,000	1,000	1,000
		Total		24,819	25,050	25,275	25,513	25,745

Normal Year Supplies

The projected increase in demand for the Palos Verdes District and Ponte Vista from 2007 to 2027 will be met by increased purchases from WBMWD, consistent with the terms and conditions of the supply agreement between Cal Water and WBMWD.

Overall increase in purchases of potable supplies from WBMWD will be reduced by the amount of recycled water that WBMWD supplies to users in the District for non-potable purposes (irrigation and industrial).

Reliability of WBMWD Supply

The following is quoted from WBMWD’s 2005 UWMP document, page ES-7, Paragraph ES.7:

“MWD’s 2005 Regional UWMP demonstrated reliability of supply in all hydrologic conditions through the year 2030. In fact, their plan shows a surplus of supply in nearly all conditions. MWD planning initiatives to ensure water supply reliability include the Integrated Resources Plan, the Water Surplus and Drought Management Plan and their local resource investments. These initiatives provide a framework for MWD and its member agencies to manage their water resources to meet growing demands.”

In Chapter 4, Table 4-8 of WBMWD’s UWMP, forecasts of demand and supply are made for multiple dry year conditions from present to 2030. Total forecasted demand in 2030 is 227,816 Acre-ft/yr versus supply of 255,881 Acre-ft/yr or a surplus of 28,065 Acre-ft/yr is forecasted. The supply is allocated as follows (Acre-ft/yr): groundwater – 56,797, imported water – 135,334, recycled water – 43,750 and desalination – 20,000.

Single Dry Year Supplies

Based on the operational record of the district for the past 20 years, demand during a single dry year has increased by 15.2% over a normal year. Water demand increases appear to be due to increases in irrigation of lawns and landscaping and other uses that

are normally satisfied in part by precipitation. In light of Cal Water’s increased emphasis on demand management programs as described in the following section, it is projected here that demand might increase by 10% for a single dry year.

For the projected 2027 District plus Ponte Vista demand this would amount to an estimated demand of: $22,261 \times 1.10 = 24,487$ Acre-ft/yr which is 1,066 acre-ft/yr less than Cal Water’s projected high demand for 2025 without the Ponte Vista project (25,553 acre-ft/yr). The latter demand is fully capable of being met by WBMWD.

Multiple Dry Year Supplies

During a multiple dry year period, it is anticipated that demand will be lower than demand during a normal year as a result of increased actions by Cal Water to get customers to achieve greater levels of water conservation. As previously indicated, WBMWD does not forecast a reduction in supply, but Cal Water believes that during drought conditions, it is prudent to increase conservation. To that end, the following sections provide a summary of Cal Water’s program for demand management.

Cal Water Demand Management Plans and Programs

Cal Water has ongoing water demand management programs as part of its commitment to achieving more efficient uses of water and to specifically address drought conditions that might impact the quantity of supply that may be available. Cal Water actively promotes conservation through educational, informational, and customer assistance activities. Cal Water programs include distribution system water audits and leak detection, promotion of water efficient landscape guides, residential surveys, plumbing retrofits, high efficiency washing machine rebates, public education, school education and toilet retrofits.

In the Palos Verdes District, Cal Water has seven conservation programs that it is implementing at an annual cost of \$117,547 as shown in Table 12. Before implementing any conservation program, Cal Water must receive approval from the CPUC.

Program	2005	2006	2007
BMP 02 Plumbing Retrofit	\$8,340	\$8,340	\$8,340
BMP 05 Large Landscape (ET Controller)	\$31,000	\$31,000	\$31,000
BMP 06 High Efficiency Washing Machine Rebate	\$19,425	\$19,425	\$19,425
BMP 07 Public Information	\$11,549	\$11,549	\$11,549
BMP 08 School Education	\$11,000	\$11,000	\$11,000
BMP 09 CII Programs	\$9,288	\$9,288	\$9,288
BMP 14 Ultra Low-Flow Toilet Rebate Program	\$26,945	\$26,945	\$26,945
Total Per Year	\$117,547	\$117,547	\$117,547

Should supply reduction ever become a requirement, Cal Water has a four-stage rationing plan, which is described in its Urban Water Management Plan. The rationing plan includes both voluntary and mandatory water use restrictions and is summarized as follows:

Stage	Shortage	Demand Reduction Goal	Type of Program
1	5 – 10%	10%	Voluntary
2	10 – 20%	20%	Voluntary or Mandatory
3	20 – 35%	35%	Mandatory
4	35 – 50%	50%	Mandatory

A description of the actions to be taken by Cal Water follows:

Stage 1: On going public information campaign consisting of distribution of literature, speaking engagements, monthly bill inserts, and conservation messages printed in local newspapers. Educational programs in area schools are ongoing.

Stage 2: Cal Water aggressively continues public information and education program. Requests customers to reduce consumption voluntarily 10% to 20%. If decision is to go to mandatory program, requests CPUC approval first. Support passage of drought ordinances by government agencies.

Stage 3: Implement mandatory reductions upon receiving CPUC approval. Institute rationing programs through fixed allotments based on percentage cutbacks. Implement rate changes to penalize use over allotment. Maintain rigorous public information campaign explaining water shortage conditions. Implement water use restrictions such as those pertaining to lawn and landscape irrigation, banning the filling of pools and fountains, etc. Monitor production weekly for compliance with reductions. Installation of flow restriction devices on customers who consistently exceed their allocation.

Stage 4: Intensify all of the steps in Stage 3 and monitor production daily for compliance with necessary reductions.

With respect to demand and supply for multiple dry years, if Cal Water users were required to reduce to their use by 20% to 30+% for a second, third and fourth year, Cal Water believes this could be accomplished by progressive implementation of Stages 2 3 and 4 of its program.

Cal Water expects that demand during a multiple dry year period might be reduced by approximately 23% with respect to normal demand. That would result in the 2026 demand for Palos Verdes and the Ponte Vista development project dropping from 22,261 Acre-ft/yr to 17,141 Acre-ft/yr. The projected high demand for 2025, hence supply, is 25,553 Acre-ft/yr or 8,412 Acre-ft/yr greater than the estimated reduced demand. Hence, there appears to be no issue with respect to adequacy of supply.

Water Supply Projects

Cal Water will continue its annual main replacement program to upgrade and improve the distribution system of the Palos Verdes District. Another ongoing program is the replacement of pressure reducing valves (PRVs). The system’s numerous elevation changes require the maintenance of nearly 250 pressure reducing stations, mandating an

annual replacement program to ensure proper operational status of these devices. Cal Water is also investigating alternative routes for a new transmission main to improve supply reliability during emergencies.

Cal Water completed a hydraulic analysis and assessment of the Palos Verdes District's distribution and transmission systems reliability and redundancy in 2002. The analysis recommends construction an additional 11.1 million gallons of operational storage and a major upgrade of the distribution and transmission facilities to improve system strength.

One of the more important projects is construction of a second transmission main from the current delivery point of purchased MWD supplies to the highest elevations of the system where the majority of the storage is located. This project has been budgeted and construction is planned in 2008.

Cal Water will also be preparing a Water Supply and Facilities Master Plan (WSFMP) for the Palos Verdes District and concurrently similar plans for its Dominguez and Hermosa-Redondo Districts. These plans will concurrently assess demand forecasts for all three districts and will take into account the Ponte Vista project as well as all other known and anticipated developments that will affect water demand. The WSFMP documents will be finalized in early 2008.

Design, Construction and Operation of Ponte Vista Water Supply Facilities

Cal Water will provide BDC Ponte Vista Partners, LLC, who are responsible for the Ponte Vista development, with a will serve letter indicating its intention to provide water service. A complete water system includes a distribution system that complies with all Cal Water and California DHS design and performance criteria. As planning and design proceed further, Cal Water anticipates working closely BDC Ponte Vista Partners, LLC, its engineers, the City of Los Angeles, CA Dept of Health Services and any other agencies that may be involved with approval of required water supply facilities.

Cal Water will prepare design drawings and specifications for water system facilities that are in compliance with state and Cal Water's standards with respect to pipe sizes, valves, materials, etc. and connection to its existing system.

Cal Water's Palos Verdes District, supported by its engineering, water quality and customer service staff in its Rancho Dominguez District, will be responsible for providing ongoing operations and maintenance services of the water system.

Capital costs for design and construction of the water distribution facilities within the proposed development are the responsibility of the developer.

With respect to the Palos Verdes District, Cal Water has an ongoing capital improvement program to upgrade and improve the distribution system, replace facilities that have reached the end of their useful life and provide new facilities when required and justified. Cal Water's Palos Verdes District capital improvement program is separate from and will not include costs associated with design and construction of distribution system

improvements required for new development at the Ponte Vista site. However, upon transfer of ownership of Ponte Vista new water system facilities to Cal Water by the developer, the water system will be incorporated into Cal Water's capital improvement program.

SB 610 Section 10910 Paragraph (d)(2) requires identification of existing water supply entitlements, water rights, or water service contracts held by the public water system shall be demonstrated by providing information related to all of the following:

(A) Written contracts or proof of entitlement to an identified water supply.

A copy of the Agreement between Cal Water and WBMWD is attached. It is Appendix J in Cal Water's 2005 Palos Verdes District UWMP.

(B) Copies of a capital outlay program for financing the delivery of a water supply system that has been adopted by the public water system.

Capital costs for design and construction of the water distribution system are the responsibility of the developer. The developer will also be responsible for per lot assessment fees in accordance with California Public Utility Commission (CPUC) rules to cover the cost of the water supply.

Cal Water's Palos Verdes District capital improvement program is separate from and does not include any of the fore-mentioned costs associated with the design and construction of new water system facilities for PV projects. However, upon legal transfer of new water system facilities to Cal Water by the developer, the water system will be incorporated into Cal Water's capital improvement program.

Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

For distribution system improvements, the developer will be required to obtain the necessary building permits from the City of Los Angeles.

If a storage tank is required to adequately serve the proposed Ponte Vista development, Cal Water will be responsible for its design and construction and for obtaining a conditional use permit and building permit from the City of Los Angeles. The developer will be responsible for direct reimbursement of those costs to Cal Water.

Cal Water is highly experienced in preparing applications and obtaining the necessary permits that are needed in order to proceed with design, construction, startup and operation of water supply transmission and distribution facilities. Cal Water is familiar with approvals it must obtain from the City of Los Angeles and California Dept of Health Services.

Water Quality

The drinking water delivered to customers in the Palos Verdes District meets or surpasses all federal and state regulations.

Conclusion

Based on:

- ◆ The adequacy of existing and planned supplies from WBMWD and MWDSC
- ◆ Future Cal Water plans to construct additional transmission, storage and distribution system improvements in the Palos Verdes District,
- ◆ Historical experience demonstrating the adequacy of supply during single and multiple dry years in the Palos Verdes District to meet demands,
- ◆ In-place, ongoing conservation programs and best management practices for reducing demand during single and multiple dry years,
- ◆ Experience in obtaining reductions in customer use during drought years resulting from Cal Water implementing its water rationing program,

Cal Water concludes that for the next 20 years, the Palos Verdes District will have more than adequate water supplies to meet projected demands associated with the proposed Ponte Vista development project and those of all existing customers and other anticipated future users for normal, single dry year and multiple dry year conditions.

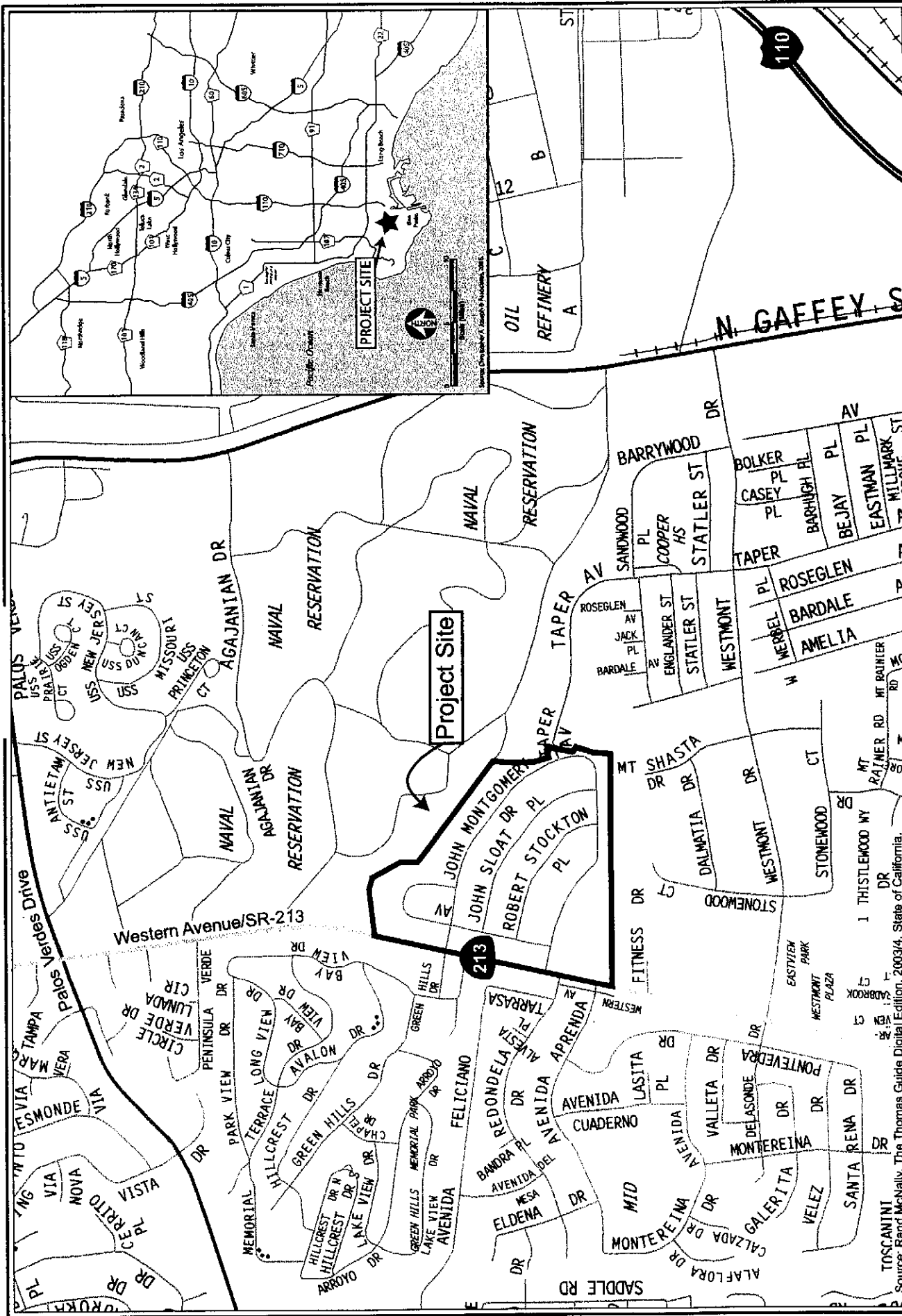
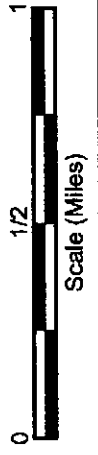


Figure II-1
Project Location and
Regional Vicinity Map



CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

TOSCANINI
Sources: Rand McNally, The Thomas Guide Digital Edition, 2003/4, State of California.

EXHIBIT 2

PURCHASE AGREEMENT FOR IMPORTED WATER TO BE PROVIDED BY WEST BASIN MUNICIPAL WATER DISTRICT FOR CUSTOMERS REGULATED BY THE CALIFORNIA PUBLIC UTILITIES COMMISSION

PURCHASER: California Water Service Co.

BASE ALLOCATION: 69,370 acre-feet

TIER 1 ANNUAL MAXIMUM (90% of Base Allocation): 62,433 acre-feet

PURCHASE COMMITMENT (60% of Base Allocation x 5): 208,110 acre-feet

TERM: 5 years

EFFECTIVE DATE: January 1, 2003

Definitions of capitalized terms used in this Purchase Agreement are provided in Exhibit 1.

COMMITMENTS

1. West Basin Municipal Water District (District) agrees to sell Imported Water to Purchaser up to the Tier 1 Annual Maximum amount at the then current Tier 1 Rate. Imported Water sold to Purchaser in an amount greater than the Tier 1 Annual Maximum shall be sold at the Tier 2 Rate. Imported Water that is not sold pursuant to this Purchase Agreement shall be sold at the Tier 2 Rate.
2. Purchaser agrees to purchase no less than the Purchase Commitment of Imported Water from District during the Term.
3. If Purchaser's actual Imported Water purchases during the Term are less than the Purchase Commitment, Purchaser agrees to pay District the undelivered balance of the Purchase Commitment at the average of the Tier 1 Supply Rate in effect during the Term. Purchaser agrees to pay such amount to District no later than six months after billing.
4. The rates applicable to Imported Water under this Purchase Agreement could change from time to time as determined by the District's Board of Directors. District is a municipal water district formed pursuant to the Municipal Water District Act of 1911, California Water Code section 71000 et seq, and is not subject to the jurisdiction of the California Public Utilities Commission. District establishes its water rates by resolution. The rates as of the effective date of this Purchase Agreement are shown in Exhibit 1.

AMENDMENTS AND RENEWALS

1. Not later than August 1 of each year during the Term, Purchaser may provide a written request to District to change the Base Allocation for the following calendar year. The process for making the change is described in Exhibit 2. District shall determine whether such request, and any similar requests from

other purchasers, can be accommodated. District shall notify Purchaser in writing no later than October 31 of that year as to its determination regarding the request. An adjustment to a Purchaser's base allocation will be reflected in an amendment to the Purchase Agreement, to be effective the first day of the calendar year following the request.

2. Not later than December 31, 2007, Purchaser may provide written notice to District of its determination to extend this Purchase Agreement.

WATER SERVICE

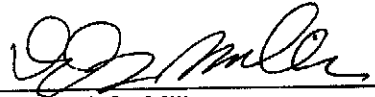
1. The Metropolitan Water District of Southern California (Metropolitan) supplies Imported Water sold by the District under this Purchase Agreement. Metropolitan shall use its reasonable best efforts to deliver water when needed by the Purchaser during the Term. There shall be no default by the District under this Purchase Agreement if Metropolitan fails to deliver water to the Purchaser.
2. Purchase Agreement does not convey any right or confer any entitlement to Purchaser to receive Imported Water through Metropolitan's distribution system.
3. Imported Water delivered to the Purchaser under this Purchase Agreement shall be subject to reduction in accordance with the policies and principles governing the allocation of water by Metropolitan to its member agencies. In the event Metropolitan's board determines to reduce, interrupt or suspend deliveries of Imported Water, any outstanding balance of the Purchase Commitment at the end of the Term shall be reduced by the reduction in Imported Water made available to the Purchaser under this Purchase Agreement.


MISCELLANEOUS

1. This Purchase Agreement will apply to and bind the successors and assigns of the Purchaser and District.
2. A breakdown of California Water Service Co. four districts in West Basin MWD service area is provided in Exhibit 3.
3. This Purchase Agreement shall at all times be subject to such changes or modifications by the Public Utilities Commission of the State of California as said Commission may, from time to time, direct in the exercise of its jurisdiction.
4. This Purchase Agreement is executed by the duly authorized officers of the West Basin Municipal Water District and California Water Service Company, to be effective January 1, 2003.

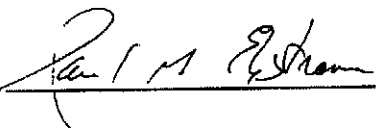
WEST BASIN MUNICIPAL
WATER DISTRICT

CALIFORNIA WATER SERVICE
COMPANY

By: 
Darryl G. Miller
General Manager

By: 

Title: Vice President

By: 

Title: Corporate Secretary

**THIRD AMENDMENT
TO
PURCHASE AGREEMENT FOR IMPORTED WATER TO BE PROVIDED BY
WEST BASIN MUNICIPAL WATER DISTRICT**

PURCHASER: California Water Service Co.

BASE ALLOCATION: 74,790 acre-feet

TIER 1 ANNUAL MAXIMUM (90% of Base Allocation): 67,311 acre-feet

PURCHASE COMMITMENT : 218,838 acre-feet

TERM: 5 years from January 1, 2003

EFFECTIVE DATE: December 1, 2006

THIS AMENDMENT TO THE PURCHASE AGREEMENT FOR IMPORTED WATER TO BE PROVIDED BY WEST BASIN MUNICIPAL WATER DISTRICT, dated as of December 1, 2006, is entered into on 1/4/07, ~~2006~~ between West Basin Municipal Water District and California Water Service Co.


It is mutually agreed that the following changes and additions are hereby made to the Agreement:

- A. Base Allocation is increased from 73,990 acre-feet to 74,790 acre-feet, as shown above under "BASE ALLOCATION"
- B. Tier 1 Annual Maximum is increased from 66,591 acre-feet to 67,311 acre-feet, as shown above under TIER 1 ANNUAL MAXIMUM (90% of Base Allocation)"
- C. Purchase Commitment is increased from 217,878 acre-feet to 218,838 acre-feet, as shown above under "PURCHASE COMMITMENT"
- D. Term is five (5) years from January 1, 2003, as shown above under "TERM" to clarify that the term of the original agreement has not changed.
- E. Effective date of the increases in Base Allocation, Tier 1 Annual Maximum and Purchase Commitment is December 1, 2006, as shown above under "EFFECTIVE DATE".

WEST BASIN MUNICIPAL
WATER DISTRICT

California Water Service Co.

By: 
Richard Nagel
General Manager

By: 
Title: DISTRICT MANAGER

Date: 1/9/07

Date: 12/26/06