

**APPENDIX Y**  
**WATER SUPPLY ASSESSMENT**

# **WATER SUPPLY ASSESSMENT**

**FOR THE  
DESERT QUARTZITE SOLAR PROJECT**

**RIVERSIDE COUNTY, CALIFORNIA**

**PURCHASE ORDER 4800019091**

*Prepared for:*

**Desert Quartzite, LLC**

135 Main Street, 6<sup>th</sup> Floor  
San Francisco, California 94105

*Prepared by:*

**URS** *(an AECOM company)*

130 Robin Hill Road, Suite 100  
Santa Barbara, California 93117  
(805) 692-0600 ◆ Fax: (805) 964-0259

Job No. 60486157

June 2016

**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

---

**TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Page</u></b>
<b>1.0 INTRODUCTION.....</b>	<b>1-1</b>
<b>2.0 PROJECT DESCRIPTION .....</b>	<b>2-1</b>
2.1 PROJECT OVERVIEW .....	2-1
2.2 WATER REQUIREMENTS .....	2-1
<b>3.0 PROJECT WATER SUPPLY SOURCES .....</b>	<b>3-1</b>
3.1 INTRODUCTION .....	3-1
3.2 GROUNDWATER RESOURCES .....	3-1
3.2.1 Description of the Palo Verde Mesa Groundwater Basin .....	3-1
3.2.2 Regional Hydrogeologic Setting .....	3-2
3.2.3 Groundwater Levels and Flow .....	3-3
3.2.4 Groundwater Quality .....	3-4
3.2.5 Groundwater Budget .....	3-4
3.2.6 Groundwater Modeling .....	3-6
3.2.7 Groundwater Rights and Management Plans .....	3-9
3.2.8 Palo Verde Groundwater Basin Overdraft Assessment .....	3-10
3.3 PALO VERDE IRRIGATION DISTRICT (SURFACE WATER).....	3-12
<b>4.0 WATER SUPPLY PLANNING UNDER SENATE BILL 610.....</b>	<b>4-1</b>
4.1 SUMMARY .....	4-1
4.2 PROJECT AND NON-PROJECT WATER DEMANDS .....	4-4
4.2.1 Project Demands (Groundwater) .....	4-4
4.2.2 Project Demands (Surface Water) .....	4-4
<b>5.0 CONCLUSIONS .....</b>	<b>5-1</b>
5.1 WATER SUPPLY BASIS .....	5-1
5.2 ON-SITE GROUNDWATER SUPPLY .....	5-1
5.3 PVID SURFACE WATER .....	5-2
<b>6.0 REFERENCES.....</b>	<b>6-1</b>

# WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT

---

## **Tables**

## **Page**

Table 3-1	Summary Palo Verde Valley Water Balance, Palo Verde Groundwater Model .....	3-7
Table 3-2	Cumulative Assessment of Proposed Energy Project Groundwater Use, Palo Verde Mesa, Riverside County, California (Desert Quartzite 700 AFY Construction Scenario).....	3-13
Table 3-3	Cumulative Assessment of Proposed Energy Project Groundwater Use, Palo Verde Mesa, Riverside County, California (Desert Quartzite 450 AFY Construction Scenario).....	3-16
Table 4-1	Twenty-year Comparison of Groundwater Basin Inflows and Outflows with Construction of Desert Quartzite and Other Proposed Energy Projects....	4-5

## **Figures**

Figure 1	Regional Vicinity Map
Figure 2	Groundwater Basins and Wells in the Project Vicinity
Figure 3a	Regional Geologic Map
Figure 3b	Regional Geologic Map Legend
Figure 4	Bottom Elevation Map for Palo Verde Mesa and Valley Groundwater Basins
Figure 5	Groundwater Flow in the Palo Verde Mesa and Valley
Figure 6a	Representative Predicted Drawdown for 700 AFY Construction Scenario (Private Well) – End of Construction and Operation
Figure 6b	Representative Predicted Drawdown for 700 AFY Construction Scenario (Private Well) – End of Construction and Operation
Figure 7	Cumulative Energy Projects Map

## **Appendices**

Appendix A	DWR Guidebook for Implementation of Senate Bill 610 and Senate Bill 221
Appendix B	Palo Verde Valley Water Balance
Appendix C	Palo Verde Irrigation District Water Supply Letter



## **SECTION 1.0 INTRODUCTION**

Senate Bill 610 (SB 610) became effective on January 1, 2002, amending the California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies, and ensuring that land use decisions for certain large development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a Water Supply Assessment (WSA) for a project that is subject to the California Environmental Quality Act (CEQA) and meets certain requirements, each of which is discussed in detail in Section 4.0 of this WSA.

When a WSA is required per SB 610, it must examine the availability of an identified water supply under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection, accounting for the projected water demand of the proposed project in addition to other existing and planned future uses of the identified water supply, including agricultural and manufacturing uses.

The County of Riverside (as Lead Agency under CEQA) has determined that a WSA shall be prepared to provide full disclosure of potential water resources impacts. Therefore, this WSA for the proposed Desert Quartzite Solar Project has been prepared in compliance with the California Water Code as amended by SB 610. The steps followed to ensure compliance of this WSA with the California Water Code are described in Appendix A (DWR Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 [DWR 2003]).

## **SECTION 2.0 PROJECT DESCRIPTION**

### **2.1 PROJECT OVERVIEW**

Desert Quartzite, LLC (Applicant) proposes to develop and construct a 300-megawatt (MW) alternating current photovoltaic solar facility known as the Desert Quartzite Solar Project (Project). The overall Project includes the solar generation facility, an on-site substation, and the generation-tie (gen-tie) line. The proposed Project is located in eastern Riverside County approximately 2.75 miles southwest of the City of Blythe, California.

The proposed solar facility and the approximately 3-mile-long, 230-kilovolt (kV) gen-tie line interconnection to the existing Southern California Edison (SCE) Colorado River Substation (CRSS) are located primarily on lands administered by the U.S. Department of the Interior, Bureau of Land Management (BLM) (BLM CACA# 04937; 5,115 acres). The Project site also includes 160 acres of private land (APN 879-110-001) subject to the County of Riverside jurisdiction. The overall Project site encompasses approximately 5,275 acres. The proposed solar facility would be constructed within an approximately 3,714-acre fenced portion of the overall Project site. The gen-tie line study corridor encompasses approximately 445 acres of BLM lands within the overall Project site. A regional vicinity map of the proposed Project (i.e., including BLM and privately-owned lands) is presented on Figure 1.

Site access will be via Interstate 10 (I-10) at the State Route (SR)-78 to SR-78 (south)/Neighbours Boulevard to 16<sup>th</sup> Avenue/Seeley Avenue (west). Project construction is currently anticipated to start in 2017.

### **2.2 WATER REQUIREMENTS**

The construction period for the Project is estimated to vary from 25 to 48 months. Assuming a 25-month construction period, water usage for construction is estimated at 1,400 acre-feet (AF) maximum (i.e., approximately 700 acre-feet per year [AFY] on average). Assuming a 48-month construction period, water usage for construction is estimated at 1,800 AF maximum (i.e., 450 AFY on average). For reference, there are 325,851 gallons per acre foot of water. During construction, water will be needed primarily for dust control and soil compaction, with small quantities used for sanitary and other purposes. It is currently estimated that up to approximately 1.5 million gallons per day of water may be needed during the construction phase of the Project. The operational phase of the Project is expected to require up to 38 AFY of water. Of this volume, approximately 20 AFY would be used for process water, fire protection, dust control, vegetation management, and at the operations and maintenance (O&M) building, and 18 AFY would be used for up to two annual panel washings. Over the planned 30-year life of the Project, approximately 1,140 AF of water would be utilized for operational needs.

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

Total water usage for construction and operation of the Project is estimated to range from 2,540 to 2,940 AF for the 25-month and 48-month construction scenarios, respectively, including 30 years of operation.

The water supply sources considered in this WSA are based on the Project Plan of Development (POD) prepared for the BLM (May 23, 2014, as amended) for CACA #049397, the Conditional Use Permit application package submitted to the Riverside County Planning Department (February 25, 2015) for Assessor's Parcel Number 879-110-001, and an assessment of potentially feasible water supply sources capable of meeting the Project's water needs. The primary water sources evaluated in this WSA consist of groundwater via installation of on-site groundwater wells, and/or surface water supplied from the Palo Verde Irrigation District (PVID).

If one or more groundwater wells are installed on the portion of the Project site under BLM jurisdiction, they would require BLM approvals and compliance with conditions to be stipulated by the BLM to protect the environment, including biological and cultural resources. If one or more groundwater wells are installed on the portion of the Project site under Riverside County jurisdiction, they would require County approvals and compliance with conditions to be stipulated by the County. In addition, installation of groundwater wells anywhere on the Project site would require compliance with applicable Riverside County ordinances and reporting requirements. The Project is currently being evaluated in a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) being prepared by the BLM and Riverside County to comply with the National Environmental Policy Act and the California Environmental Quality Act, respectively.

## **SECTION 3.0 PROJECT WATER SUPPLY SOURCES**

### **3.1 INTRODUCTION**

As discussed in Section 2.2, the primary water sources evaluated in this WSA consist of groundwater via installation of on-site groundwater wells, and/or surface water supplied from the Palo Verde Irrigation District (PVID). Data and assessments for both of these supply sources follow.

### **3.2 GROUNDWATER RESOURCES**

#### **3.2.1 Description of the Palo Verde Mesa Groundwater Basin**

The Project site is located on the Palo Verde Mesa in the northwestern Colorado Desert, which is part of the greater Colorado Desert Geomorphic Province. This Province is characterized by isolated mountain ranges separated by broad alluvial-filled basins of Cenozoic-age sedimentary and volcanic materials overlying older rocks. The Palo Verde Mesa is bounded by non-water-bearing rocks of the Big Maria and Little Maria Mountains on the north, the McCoy and Mule Mountains on the west, the Palo Verde Mountains to the south, and the Palo Verde Valley on the east (refer to Figure 2). Surface water drains from the surrounding mountains toward the Colorado River.

East of the Project eastern site boundary, a break in the slope forms the boundary between the Palo Verde Mesa and the Palo Verde Valley, which is 80 to 130 feet below the mesa. In this region, the Palo Verde Valley is roughly equivalent to the recent historic floodplain of the Colorado River (CEC 2010). Regionally, the ground surface slopes gently downward in a southeast direction at a gradient of less than 1 percent (CEC 2010).

The groundwater basin upon which the Project is located is the Palo Verde Mesa Groundwater Basin (PVMGB). Groundwater in the basin is found in alluvial deposits of Quarternary age. Such alluvium generally consists of lenticular beds of sand, gravel, silt, and clay, except near the mountains where it consists primarily of coarse-grained angular rock detritus (DWR 2004a) (refer to Figures 3a and 3b).

The PVMGB covers about 226,000 acres (353 square miles) and abuts the Chuckwalla Valley Groundwater Basin (CVBG) on the west. The California Department of Water Resources (DWR) (2004a) estimates that there is 6,840,000 AF of water storage capacity in the PVMGB. The city of Blythe is on the eastern edge of Palo Verde Mesa.

Figure 4 presents a generalized interpretation of the distribution and thickness of the Colorado River sediments, inclusive of the younger and older alluvium within the Palo Verde Mesa and Valley (AECOM 2011). The map was developed from the interpretation of boring

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

logs and the east-west and north-south cross-sections contained in early investigations by the U.S. Geological Survey (USGS) and additional lithologic data gathered from the investigation of the Palo Verde Mesa by other renewable energy projects (AECOM 2011). The bottom elevation map shows these sediments are an elongate deposit coincident with the north-south axis of the Colorado River and are the deepest along the central axis of the valley, thinning in the direction of the mesa and toward the bedrock outcrops. The younger alluvium is only found in the floodplain and thins south in the direction of Cibola toward the southern gap in the Palo Verde Valley.

The groundwater below the Project site occurs under apparently semi-confined to unconfined conditions in the older alluvium at a depth of approximately 140 to 150 feet below ground surface (bgs). Along the mesa, there is a convergence of flow as water traveling out of McCoy Wash and from the Chuckwalla Valley flowing southeast and east, respectively, interact with water on the flood plain flowing south parallel to the Colorado River (refer to Figure 5). This convergence of flow is supported by water quality data showing distinct differences in the sources of groundwater below the mesa and below the floodplain. According to historical measurements, water levels have remained generally stable on the mesa following a period of agricultural development that ended in 1980 (AECOM 2011).

### **3.2.2 Regional Hydrogeologic Setting**

The Project is located within the Colorado River Hydrologic Region, which is subdivided into 28 groundwater basins. The Project overlies the PVMGB (DWR Basin Number 7-39), which encompasses an area of about 353 square miles (approximately 226,000 acres) (refer to Figure 2), and is east of the CVGB (DWR Basin Number 7-5) and directly west of the Palo Verde Valley Groundwater Basin (PVVGB) (DWR Basin Number 7-38). The PVVGB underlies the Colorado River and surrounding areas, and functions as the river's historic flood plain. The PVVGB is tributary to the lower Colorado River, and is part of the Colorado River aquifer. The PVMGB contains higher ground surface levels that are outside of the Colorado River's historic flood plain. The location of the boundary between the PVMGB and the PVVGB does not include a barrier to groundwater flow (DWR 1979, 2003). The total storage capacity of the PVMGB is estimated to be 6.84 million AF; however, the volume of groundwater in storage is unknown (DWR 2004a). Subsurface outflow from the PVMGB to PVVGB is estimated to be 9,500 AFY (Owen-Joyce 1984).

The PVID drains located at the foot of the Palo Verde Mesa form a discharge boundary, and a groundwater mound exists within the PVVGB between the Colorado River and the PVMGB as a result of many decades of applied irrigation water that forms a groundwater divide.

The Colorado River, which is the boundary between Arizona and California, is located about 8 to 10 miles east of the Project site. The Colorado River has an average flow of

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

approximately 10,000 cubic feet per second (cfs) (USGS 2011). PVID is the senior water rights holder in California on the lower Colorado River and is allocated sufficient Colorado River water to irrigate 104,500 acres of agricultural land in the Palo Verde Valley, and additional acreage on the Palo Verde Mesa. Irrigation water diversions to meet this need have historically averaged 950,000 AFY, but in more recent years have ranged from approximately 650,000 to 950,000 AFY as a result of implementation of a water transfer program between PVID and the Metropolitan Water District of Southern California (MWD) (Smith 2005; PVID 2004). Water is diverted by PVID at the Palo Verde Diversion Dam near the northern end of the Palo Verde Valley and distributed by a series of canals totaling over 244 miles in length (Worley-Parsons 2011). It is unclear whether the outflow estimate of Owen-Joyce accounts for these features, as the PVID drains would appear to present barriers to the subsurface inflow of groundwater from the PVMGB into the PVVGB Surface and groundwater from the Palo Verde Valley drain to the Colorado River near the southern margin of the PVVGB (DWR 2004b).

### **3.2.3 Groundwater Levels and Flow**

The Palo Verde Mesa is characterized by the nearly level morphology of the mesa and gently to moderately sloping alluvial fans. Fluvial erosion and deposition are the major geomorphic processes in the immediate area. As shown on Figures 3a and 3b, the predominant geologic units on the Project site are alluvium, ranging from the Pleistocene (2.6 million years ago [Ma] to 11,700 years before present [BP]) to Holocene (11,700 BP to present) ages. The alluvial deposits compose the shallow floodplain aquifer, and are the principal source of groundwater in the PVMGB (Owen-Joyce 1984). The alluvium is composed of sand, silt, and clay with lenses of gravel, and ranges in thickness from 160 to 600 feet. Most wells in the PVMGB are screened in the coarser grained deposits and have moderate to high yields (Metzger 1973).

Four inactive suspect water supply wells have been identified on the Project site, consisting of one well located on the northeast corner of the privately-owned parcel (APN 879-110-001) and three suspect wells on BLM land (refer to Figures 2 through 4 showing the locations of these inactive wells). These wells are classified herein as “suspect” water supply wells based on the appearance of the exposed metal casings, however, these are not active wells and are incapable of producing water in their current condition. In addition, no evidence has been found that would indicate that these wells have been utilized to supply water in the past.

Groundwater monitoring records are available, to a limited extent, for two of the on-site, inactive suspect water supply wells located on the BLM-administered lands. Groundwater levels were monitored primarily during the 1960s, and depth to groundwater averaged from 134 to 139 feet-bgs. It should be noted that groundwater depths and levels are influenced by variations in topography and soil and rock types as well as seasonal variations in

precipitation, irrigation practices, and groundwater pumping all of which can result in fluctuations.

USGS groundwater measurements collected during the year 2000 provided the most complete areal data set for the PVMGB. As shown on Figure 5, the data suggest that groundwater flows in a southeasterly direction to the north of the Project site and that the groundwater flow direction changes to a southwesterly direction at the Project site roughly parallel to the Palo Verde Valley trend.

### **3.2.4 Groundwater Quality**

In general, groundwater quality in the PVMGB is calcium-sodium chloride or calcium-sodium sulfate in character, and is impaired by arsenic, selenium, fluoride, chloride, boron, sulfate, and total dissolved solids (TDS) content (DWR 2004a). These constituents are consistently observed and reported in the environmental review documents prepared for nearby projects. DWR (1979) reports total dissolved solids (TDS) content of shallow groundwater in the basin ranges from 730 to 3,100 milligrams per liter (mg/L); however, water from one deep well in the southwest portion of the basin had a TDS content of 4,500 mg/L (Metzger 1973). Data from nearby projects show that TDS and sulfate concentrations were generally higher with increasing distance from the Colorado River, with the highest concentrations occurring in the area of McCoy Wash and the gap between the PVMGB and the CVGB. Fluoride, chloride, and boron concentrations were generally lower in the eastern portions of the PVMGB (closer to the Colorado River) and increased westward. The much higher TDS concentrations below the Palo Verde Mesa reflect recharge of high TDS water to the PVMGB from percolation along the mountain front and underflow from the Rice and Chuckwalla valleys (AECOM 2012).

No groundwater quality data are available for the Project site. Based on water quality characteristics reported for nearby projects, groundwater below the Project site may not meet drinking water quality primary or secondary standards for domestic supply without treatment, and would likely contain elevated levels of TDS and high concentrations of fluoride, chloride, boron, and sulfate. Site-specific groundwater sampling and testing would be required to assess water quality and possible limitations on uses and/or treatment requirements.

### **3.2.5 Groundwater Budget**

#### **3.2.5.1 Overview**

The Project site is located on the Palo Verde Mesa which overlies the PVMGB (DWR Basin No. 7-39). Groundwater in the Palo Verde Mesa area provides a source of water for domestic, industrial, and agricultural water supply. Natural groundwater recharge to the PVMGB includes recharge from percolation of runoff from surrounding mountains,

## WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT

---

percolation of precipitation, and subsurface inflow from the CVGB (DWR 2004a). Estimates of subsurface inflow to the PVMGB from the CVGB vary by source and include estimates of 400 AFY (DWR 2004a) to 1,000 AFY (AECOM 2011). Other sources of recharge to the basin include agricultural return flow. The PVMGB is bounded upgradient by the CVGB (DWR Basin No. 7-5) and downgradient by the PVVGB (DWR Basin No. 7-38). Brief overviews of these two adjoining basins follow.

**Chuckwalla Valley (7-5).** This groundwater basin underlies the Chuckwalla Valley in northern Riverside County. The basin is bounded by consolidated rocks of the Chuckwalla, Little Chuckwalla, and Mule Mountains on the south, of the Eagle Mountains on the west, and of the Mule and McCoy Mountains on the east. Rocks of the Coxcomb, Granite, Palen, and Little Maria Mountains bound the valley on the north and extend ridges into the valley. The smaller intervening valleys are contiguous with and tributary to the main part of Chuckwalla Valley (DWR 1963). There are no perennial streams in the Chuckwalla Valley. Palen, Ford, and several smaller dry lakes are found in topographic low-points. Average annual precipitation in the basin ranges to four inches (DWR 2004c). The CVGB is recharged by subsurface inflow from the Pinto Valley and Cadiz Valley groundwater basins, and by percolation of runoff from the surrounding mountains and of precipitation to the valley floor (DWR 2004c).

**Palo Verde Valley (7-38).** The PVVGB is located in the southeastern part of California along the state border with Arizona. The eastern boundary of the basin is the Colorado River, which also defines the state border. The Palo Verde Dam and the Big Maria Mountains bound the basin on the north. The Palo Verde Mesa abuts the western boundary and the Palo Verde Mountains bound the southern part of the basin. Surface and groundwater drain to the Colorado River (DWR 2004b). According to DWR, the PVVGB encompasses 128,000 acres (200 square miles) and has a total basin storage capacity estimated at 4,960,000 AF (DWR 2004b). The principal water bearing units in the PVVGB are alluvium, the Bouse Formation, and a fanglomerate deposit (Metzger 1973).

The significant recharge from the Colorado River underflow is the primary mechanism for recharge to the PVVGB along with infiltration of precipitation (mountain front recharge). To a lesser extent, inflow from the CVGB via the PVMGB and irrigation return water provide inputs to overall basin recharge. The actual discharge from the PVMGB is not known. According to Owens-Joyce (1984), groundwater levels in the PVVGB have tended to remain relatively stable.

### **3.2.5.2 Groundwater Balance – Palo Verde Valley**

In order to develop a numerical groundwater model to assess potential effects on groundwater levels from groundwater withdrawals, it is necessary to establish a water balance for the area of the model domain. In this case, the model domain is the entire



## WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT

---

geographic area of the Palo Verde Valley, which for the purposes of the model encompasses the PVMGB (DWR Basin No. 7-39) and the PVVGB (DWR Basin No. 7-38) aquifers in entirety. A water balance is an account of all the groundwater recharge and discharge elements within a groundwater basin. The groundwater balance accounting utilized for the Desert Quartzite Solar Project groundwater modelling is essentially the same as utilized as part of the groundwater modeling effort conducted for the development of the McCoy Solar Energy Project (MSEP), which in turn was developed from prior investigations and the USGS. For a detailed discussion of the groundwater balance evaluation, the reader is referred to the numerical groundwater modeling report prepared for the MSEP (AECOM 2011). A general discussion of this accounting of groundwater balance for the Palo Verde Valley is summarized herein.

In the development of the water balance, the relative stability of the groundwater levels since the mid- to late-1980s is significant. This relative stability is a reflection of the management of the diverted water from the Colorado River through its application for irrigation and return of groundwater through the PVID drains. As water levels have fluctuated only a few feet and locally in response to irrigation, this would indicate a balance between inflow and outflow of groundwater within the Palo Verde Valley. As such, the groundwater balance was evaluated to achieve unity in the difference between the estimates of inflow and outflow. In preparation of the MSEP numerical groundwater modeling analysis and evaluation of the balance of inflow and outflow of groundwater through the Palo Verde Valley was evaluated and a tabulation of these parameters was prepared as part of the report (AECOM 2011). The complete Palo Verde Valley Water Balance from the MSEP is presented in Appendix B of this report. A summary of the MSEP Palo Verde Valley Water Balance is presented in Table 3-1, below. As depicted in Table 3-1, a water balance of approximately 426,600 AFY is estimated from a balance of the recharge and discharge elements (i.e., estimated average inflow and outflow of 426,600 AF).

### 3.2.6 Groundwater Modeling

#### 3.2.6.1 Introduction

In order to provide an indication of the potential effects of on-site groundwater pumping at the Project site, numerical groundwater modeling was performed. The groundwater modeling is based on the assumption that the Project's water demand would be met solely by pumping on-site groundwater (i.e., versus surface water supplied by PVID). The results of the numerical groundwater modeling performed for this Project are summarized herein. Refer to the full report – *Proposed Groundwater Use – Numerical Groundwater Modeling Report for the Desert Quartzite Solar Project* (URS 2016) for more information.

The groundwater model utilized for the analysis was first developed by the USGS (Lieke 2008) and then updated with Project-specific site information and modeling for subsequent

solar development projects such as the Blythe Solar Power Project (BSPP) and then the McCoy Solar Energy Project (MSEP). For detailed discussion of the development of the groundwater model utilized in this numerical analysis, the reader is referred to the USGS report (Lieke 2008) on development of the groundwater model, as well as the numerical groundwater monitoring reports prepared for the BSPP and MSEP (AECOM 2010, 2011). The groundwater model developed and utilized for evaluating groundwater use for the previously permitted and approved BSPP, and then the MSEP, was utilized for evaluating potential impacts of groundwater use for the construction and operational phases of this Project. The Palo Verde Groundwater Model prepared for the BSPP was submitted for review on October 15, 2010, under the CEC SOIL&WATER Condition 16 requirement, and was accepted with minor comments by the California Energy Commission (CEC) and BLM on December 17, 2010. The model was constructed as a single-layer (two dimensional) numerical groundwater flow model in MODFLOW2000 (Groundwater Modeling System [GMS] platform) (AECOM 2010). The model domain encompassed the entire Palo Verde Valley, inclusive of the mesa and floodplain, and the base of the model was established at the bottom of the younger and older Colorado River alluvium, as these are the productive aquifers in the valley. A variety of boundary conditions were employed to simulate inflow and outflow of water from the model following the basin water balance. The Colorado River formed the eastern boundary of the model and was simulated using depth profiles provided by the U.S. Bureau of Reclamation (USBR) along selected locations of the river reach through the Palo Verde Valley. The river bottom elevation was linearly interpolated from these data for all river cells along the eastern boundary of the model domain. As part of the calibration of the Palo Verde Valley model in previous modeling efforts performed by others, the hydraulic conductivity distribution was initially homogeneous and additional hydraulic conductivity zones were added as necessary to match the observed water levels and changes in hydraulic gradient in the floodplain and on the mesa. For the purposes of the numerical modeling performed to date for this Project, no additional calibration has been conducted pending availability of site-specific aquifer test data.

The goals of the numerical modeling were to simulate the proposed Project pumping using possible on-site well locations (see Figures 2 through 4) to assess the pumping influence on water levels in adjacent water supply wells, assess the impacts to groundwater basin storage, and to assess the potential for impacting groundwater levels in the PVID drains located in the floodplain that recharge the Colorado river aquifer. The Palo Verde Groundwater Model was used to assess the Project-only effects of groundwater pumping necessary for the construction and operation of the Desert Quartzite Solar Project.

V:\Projects\60410825\_28907514 FSE Desert Quartzite POD Support\600 DLVR\601 - URS Prepared\2014 Tech Studies\SR 610 WSA April 2016\Report\DO SR 610 WSA\_6-23-16.docx

**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

**TABLE 3-1  
SUMMARY PALO VERDE VALLEY WATER BALANCE  
PALO VERDE GROUNDWATER MODEL<sup>1,2,3</sup>**

<b>Recharge (inflow)<sup>4</sup></b>	<b>Volume (AFY)</b>
Underflow from Chuckwalla Valley	1,000
Underflow from Parker Valley	3,500
Percolation	
Agriculture return – mesa	3,500
Agriculture return – valley	67,000
POTW return	750
Mountain front	5,000
Irrigation canal leakage (less evaporation)	120,000
River discharge to groundwater (losing condition)	225,850
Bedrock	0
<b>Total inflow</b>	<b>426,600</b>
<b>Discharge (outflow)</b>	<b>Volume (AFY)</b>
Underflow out of the Palo Verde and Cibola Valley Aquifer	0
Groundwater pumping	
Agriculture – mesa	3,600
Municipal and domestic	7,500
Unmeasured return (gaining condition)	50,000
Consumptive use (native vegetation)	8,500
Groundwater discharge	357,000
<b>Total (outflow)</b>	<b>426,600</b>
<b>Water balance (inflow-outflow)</b>	<b>0</b>

<sup>1</sup> Note: The Palo Verde Valley as defined in the Palo Verde Groundwater Model encompasses both the PVMBG and the PVVGB,

<sup>2</sup> Sources: (1) Assessment of Proposed Groundwater Use, Results of Numerical Groundwater Modeling, McCoy Solar Energy Project, Palo Verde Mesa, Riverside County, California (AECOM 2011); (2) Numerical Groundwater Flow Model of the Palo Verde Valley and Palo Verde Mesa (CEC Soil and Water Condition 16): Blythe Solar Power Project (09-AFC-6C), Riverside County, California (AECOM 2010).

<sup>3</sup> Note: the data presented in this table is a summary excerpt from a portion of Table 1 in Appendix B of this report which presents the complete Palo Verde Valley Water Balance, Palo Verde Groundwater Model, McCoy Solar Energy Project. Refer to Table 1 in Appendix B and the source documents for more information including the various references used to develop the water balance as well as the basis for individual inflow/outflow estimates.

<sup>4</sup> Precipitation recharge onto the Palo Verde Mesa floor is assumed to be negligible. It is assumed that all water transpires or evaporates and that no return to groundwater occurs from direct precipitation.

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

AF construction water demand scenario (plus 30 years of operation at 38 AFY) with pumping at the well on the private parcel. Figure 6b presents calculated drawdown contours based on the 48-month, 1,800 AF construction water demand scenario (plus 30 years of operation at 38 AFY) with pumping at the well on the private parcel. Refer to the groundwater modeling report (URS 2016) for more information. The following conclusions are drawn from the modeling results for all scenarios and pumping locations considered:

- Based on the results of the numerical groundwater simulations performed, the proposed Project pumping would not significantly impact adjacent water supply wells or the groundwater basin storage.
- The drawdown outside the Project site boundary was not predicted to exceed one foot at any of the existing identified off-site well locations, including the well immediately north of the Project site, for any of the four on-site well locations evaluated.
- The model predicted the radius of influence would not extend off the Palo Verde Mesa for pumping associated at the Private Parcel Well location. All other well locations had only approximately 0.01 foot of drawdown at the western edge of the valley either at the end of construction or at the end of operation, which is an insignificant amount of drawdown.
- Model predicted drawdowns for all of the well scenarios indicate that there would not be any significant impact (less than 0.01 feet) to the PVID drains, and therefore would not impact recharge to the Colorado River.

### **3.2.7 Groundwater Rights and Management Plans**

The proposed Project is located in unincorporated Riverside County. There is no public water system with the distribution facilities and/or capacity to serve the Project, nor is there a groundwater basin management plan or Urban Water Management Plan (UWMP) (City of Blythe 2011) covering the Project area. Furthermore, groundwater in the PVMGB and the PVVGB is not adjudicated.

The Colorado River Compact divided the Colorado River Hydrologic Basin into the Upper Basin and the Lower Basin. The division point is Lees Ferry, a point in the mainstem of the Colorado River about 30 river miles south of the Utah-Arizona boundary, just downstream of Glen Canyon Dam. The Lower Colorado River Basin includes those parts of the states of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River system below Lees Ferry, and all parts of these States that are not part of the river's drainage system but may benefit from water diverted from the system below Lees Ferry (USBR 2016).

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

Users within the Lower Colorado River Basin, which includes the Project site, can divert tributary flow before it reaches the Colorado River (Consolidated Decree of the United States Supreme Court in *Arizona v. California*, 1964 [547 U.S. 150]).

The Colorado River Board of California, which is comprised of members from PVID, Imperial Irrigation District, Coachella Valley Water District, Metropolitan Water District of Southern California, the City of Los Angeles Department of Water and Power, and the San Diego County Water Authority, is responsible for applying for water on behalf of entities in California seeking Colorado River water entitlements. To administer this water, the USBR entered into a contract with the City of Needles, California, to monitor and act as a contracting agent for entities the USBR determines are eligible for this water.

### **3.2.8 Palo Verde Groundwater Basin Overdraft Assessment**

#### **3.2.8.1 Basin Capacity Assessment**

DWR (2004) estimates the total groundwater storage capacity in the PVMGB is 6,840,000 AF. Natural recharge in the PVMGB is estimated to be 800 AFY according to the DWR (2004a) with recharge by underflow from Chuckwalla Valley estimated to be about 400 (DWR 2004a) to 1,000 (AECOM 2011) AFY depending on the source. Inflow and outflow estimates for the PVMGB vary substantially by source.

An important element in assessing the potential impacts of Project groundwater withdrawals is to establish a water balance. A water balance is an account of all the groundwater recharge and discharge elements within a defined groundwater basin area. A water balance was developed for the Palo Verde Valley (AECOM 2011) which, as defined, encompasses both the PVMGB and the PVVGB. The water balance is based on numerous sources of information including the following:

- Results from prior investigations and stream flow data for the Colorado River
- Stream flow data for the Colorado River
- An update using recent PVID diversion and return data
- An estimate of discharge from recent groundwater pumping estimates for municipal, industrial, and agricultural supply

Significant components to the assessment of recharge and discharge within the Palo Verde Valley are the diversion and return of water for the PVID and the gain or loss of water from the Colorado River. These water volumes are several orders of magnitude more than mountain front recharge, underflow, or discharge from groundwater pumping.

In the development of the water balance, significant consideration is given to the relative stability of the groundwater levels since the mid- to late-1980s. This relative stability is a

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

reflection of the management of the diverted water from the Colorado River through its application for irrigation and return of groundwater through the PVID drains. As water levels have fluctuated only a few feet in response to irrigation, this would indicate a balance between inflow and outflow of groundwater within Palo Verde Valley. As such, the groundwater balance was evaluated to achieve unity in the difference between estimates of inflow and outflow. The balance of these components that relate directly to the groundwater system in the Palo Verde Valley is summarized in Table 3-1. As shown in the table, a water balance of 426,600 AF is estimated from a balance of recharge and discharge elements. Refer to Table 1 in Appendix B for more information, including a summary of water balance estimates reported by others.

### **3.2.8.2 Basin Cumulative Groundwater Withdrawal Assessment**

As part of the environmental review for the Desert Quartzite Solar Project, a cumulative groundwater withdrawal assessment was undertaken to evaluate the effects from groundwater withdrawal by multiple proposed renewable and other energy projects within the PVMGB area. A search for proposed projects was undertaken to identify projected pumping schedules and rates using the following resources:

- BLM. 2015a. Approved Renewable Energy Projects, Solar Projects on BLM Public Lands. Last update August 24, 2015.
- BLM. 2015b. California Desert BLM District Office, Renewable Energy Projects and Utility Corridors Map. Last update June 3, 2015.
- BLM. 2015c. Pending Renewable Energy Applications, Applications Undergoing Environmental Review. Last update October 1, 2015.
- California Energy Commission. 2016. Status of all Projects. Data accessed March 28, 2016.
- California Public Utilities Commission. 2016. Energy. Data accessed March 28, 2016.
- Ludwig. 2016. BLM District Hydrologist. Personal communication. April.
- Russell. 2016. Riverside County Planner. Personal communication. April.

In addition to the Desert Quartzite Solar Project, six renewable energy or other energy projects were identified on the Palo Verde Mesa (refer to Figure 7) with a combined annual operational phase groundwater requirement of about 3,131 AF. The Desert Quartzite Solar Project annual operational water demand of 38 AFY represents about 1.2 percent of the total combined cumulative proposed energy project annual operational groundwater use. The total Desert Quartzite Solar Project maximum estimated combined water demand for construction (1,800 AF for 48-month scenario) and operation (1,140 AF) of 2,940 AF over approximately 34 years represents less than 0.1 percent of the 6,840,000 AF of estimated groundwater

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

storage capacity in the PVMGB. Inclusive of both construction and operational water requirements from 2016 through 2050, the combined cumulative total groundwater use from all of these projects is estimated to be about 109,000 AF (note: the proposed Sonoran Energy Project [natural gas-fired] accounts for 96,120 AF [88%] of this total). This represents less than 2 percent of the 6,840,000 AF of estimated groundwater storage capacity in the PVMGB. The results of the research showing the proposed water use and pumping schedule for each of the proposed projects are summarized in Tables 3-2 and 3-3. Tables 3-2 and 3-3 address the Desert Quartzite Solar Project 700 AFY (25-month) and 450 AFY (48-month) construction scenarios plus the 30-year operational phase (38 AFY) for the cumulative energy project assessments, respectively. Under both construction scenarios considered for the Desert Quartzite Solar Project, the Project-specific contribution and the cumulative energy project withdrawals from the underlying groundwater basin are negligible relative to the storage capacity of the PVMGB.

### **3.3 PALO VERDE IRRIGATION DISTRICT (SURFACE WATER)**

The PVID water supply is derived from its Colorado River contract. The PVID holds the Priority 1 rights to California's share of Colorado River water, and a shared portion of the Priority 3 rights, and their rights are not quantified by volume. Rather, the PVID's water use is defined by the irrigation water needed to serve a total of 104,500 acres in the Palo Verde Valley, and an additional 16,000 acres on the Palo Verde Mesa. The City of Blythe is within the PVID boundary and is using the PVID water rights to Colorado River water. Surface water from the Colorado River, through the PVID, is the primary source of water for agriculture in the area. In 2010, the PVID supplied about 270,000 AF of water for agricultural use (USBR 2011), wherein PVID's service area includes a portion of the PVMGB.

PVID is overseen by the U.S. Bureau of Reclamation (USBR), and the District's right to use water from the Colorado River in California dates from 1877 when Thomas Blythe started making water filings to develop land in the Palo Verde Valley, and was reinforced by the California agencies that signed the August 18, 1931 Seven Party apportionment agreement. PVID does not hold a "water right" as that term is commonly used. Instead, PVID is a party to a 1933 Water Delivery Contract with the United States, and has Priority 1 and Priority 3 water rights from the Colorado River. PVID Priority 1 rights are first rights and are delivered by gravity flow in the Valley and then returned to the river downstream (Henning 2000). Priority 3 water rights are rights that are shared with Imperial Irrigation District and the Coachella Valley Water District (Henning 2000) and apply to a total of 16,000 acres in the PVID on the Mesa (PVID 2004). Economic factors govern the amount of acreage in agricultural production at any one time; therefore, the actual amount of acreage receiving irrigation water from PVID varies. Approximately 2,500 acres were receiving irrigation water from PVID on the Mesa in the year 2000 (Henning 2000). Since PVID's contract does

TABLE 3-2  
CUMULATIVE ASSESSMENT OF PROPOSED ENERGY PROJECT GROUNDWATER USE,  
PALO VERDE MESA, RIVERSIDE COUNTY, CALIFORNIA  
(DESERT QUARTZITE 700 AFY CONSTRUCTION SCENARIO)

WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT

[illegible]



TABLE 3-2  
CUMULATIVE ASSESSMENT OF PROPOSED ENERGY PROJECT GROUNDWATER USE,  
PALO VERDE MESA, RIVERSIDE COUNTY, CALIFORNIA  
(DESERT QUARTZITE 700 AFY CONSTRUCTION SCENARIO)

WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT

[illegible]

TABLE 3-2  
CUMULATIVE ASSESSMENT OF PROPOSED ENERGY PROJECT GROUNDWATER USE,  
PALO VERDE MESA, RIVERSIDE COUNTY, CALIFORNIA  
(DESERT QUARTZITE 450 AFY CONSTRUCTION SCENARIO)

NOTES

- <sup>1</sup> Project updates were provided through research of the following:  
Bureau of Land Management (BLM), California, 2015 (last update August 24, 2015). Approved Renewable Energy Projects, Solar Projects on BLM Public Lands. Accessed at: [http://www.blm.gov/ca/st/en/prog/energy/approved\\_projects](http://www.blm.gov/ca/st/en/prog/energy/approved_projects).  
BLM, 2015 (last update October 1, 2015). Pending Renewable Energy Applications, Applications Undergoing Environmental Review. Accessed at: <http://www.blm.gov/ca/st/en/prog/energy/pendingapps.html>.  
BLM, 2015 (last update June 3, 2015). California Desert BLM District Offices, Renewable Energy Projects and Utility Corridors Map. California Desert District.  
California Energy Commission, 2016. Status of all Projects. Accessed March 28, 2016 at: [http://www.energy.ca.gov/siting\\_cases/all\\_projects.html](http://www.energy.ca.gov/siting_cases/all_projects.html).  
California Public Utilities Commission, 2016. Energy. Accessed March 28, 2016 at: <http://www.cpuc.ca.gov/PUC/energy/>.  
Ludwig, 2016. BLM District Hydrologist. Personal communication with R. Ray (URS). April 4.
- <sup>2</sup> Sum of renewable project water use by year based on current information through the references cited above through April 4, 2016.
- <sup>3</sup> Cumulative change is a sum adding the prior years water use to the current water year for each year beginning in 2016 and ending in 2050.
- <sup>4</sup> Estimated change in the regional water level following the equation shown below (Fetter 1988). Negative values indicate a decline in water levels. It is important to note that this analysis does not take into account recharge to the groundwater basin (i.e., conservative).

DEFINITIONS

- AFY      acre feet per year.  
AF        acre feet – (325,851 gallons).  
BLM      Bureau of Land Management.  
CEC      California Energy Commission.  
LLC      Limited Liability Corporation.  
MW       Megawatts.  
POD      Plan of Development.  
PVID     Palo Verde Irrigation District.  
–          Not applicable.

ESTIMATE OF BASIN-WIDE WATER LEVEL CHANGE

- $V = A \cdot S \cdot dh$               V – volume of water released or taken into storage (acre-feet).  
   A – area of the aquifer (acres).  
   S – aquifer storage coefficient.  
   dh – change in water level (inches).

WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT

[illegible]

TABLE 3-3  
CUMULATIVE ASSESSMENT OF PROPOSED ENERGY PROJECT GROUNDWATER USE,  
PALO VERDE MESA, RIVERSIDE COUNTY, CALIFORNIA  
(DESERT QUARTZITE 450 AFY CONSTRUCTION SCENARIO)

WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT

[illegible]

TABLE 3-3  
CUMULATIVE ASSESSMENT OF PROPOSED ENERGY PROJECT GROUNDWATER USE,  
PALO VERDE MESA, RIVERSIDE COUNTY, CALIFORNIA  
(DESERT QUARTZITE 450 AFY CONSTRUCTION SCENARIO)

NOTES

- <sup>1</sup> Project updates were provided through research of the following:  
Bureau of Land Management (BLM), California, 2015 (last update August 24, 2015). Approved Renewable Energy Projects, Solar Projects on BLM Public Lands. Accessed at: [http://www.blm.gov/ca/st/en/prog/energy/approved\\_projects](http://www.blm.gov/ca/st/en/prog/energy/approved_projects).  
BLM, 2015 (last update October 1, 2015). Pending Renewable Energy Applications, Applications Undergoing Environmental Review. Accessed at: <http://www.blm.gov/ca/st/en/prog/energy/pendingapps.html>.  
BLM, 2015 (last update June 3, 2015). California Desert BLM District Offices, Renewable Energy Projects and Utility Corridors Map. California Desert District.  
California Energy Commission, 2016. Status of all Projects. Accessed March 28, 2016 at: [http://www.energy.ca.gov/siting\\_cases/all\\_projects.html](http://www.energy.ca.gov/siting_cases/all_projects.html).  
California Public Utilities Commission, 2016. Energy. Accessed March 28, 2016 at: <http://www.cpuc.ca.gov/PUC/energy/>.  
Ludwig, 2016. BLM District Hydrologist. Personal communication with R. Ray (URS). April 4.
- <sup>2</sup> Sum of renewable project water use by year based on current information through the references cited above through April 4, 2016.
- <sup>3</sup> Cumulative change is a sum adding the prior years water use to the current water year for each year beginning in 2016 and ending in 2050.
- <sup>4</sup> Estimated change in the regional water level following the equation shown below (Fetter 1988). Negative values indicate a decline in water levels. It is important to note that this analysis does not take into account recharge to the groundwater basin (i.e., conservative).

DEFINITIONS

- AFY      acre feet per year.  
AF        acre feet – (325,851 gallons).  
BLM      Bureau of Land Management.  
CEC      California Energy Commission.  
LLC      Limited Liability Corporation.  
MW       Megawatts.  
POD      Plan of Development.  
PVID     Palo Verde Irrigation District.  
–          Not applicable.

ESTIMATE OF BASIN-WIDE WATER LEVEL CHANGE

- $V = A \cdot S \cdot dh$               V – volume of water released or taken into storage (acre-feet).  
   A – area of the aquifer (acres).  
   S – aquifer storage coefficient.  
   dh – change in water level (inches).

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

not specifically pertain to groundwater, PVID has no obligation to restrict or regulate non-agricultural wells, including those wells operated by the City of Blythe.

Other legislation, contracts, compacts, and court rulings known collectively as the “Law of the River” confirm the rights of various states and agencies, including PVID, to the waters of the Colorado River.

The majority of the Project site is located within the PVID service boundaries. Based on discussions in February, 2016 with the PVID Assistant Manager, Mr. Richard Gilmore, PVID may supply water to areas within PVID’s service boundary for beneficial uses, including supplies required for the Project (Gilmore 2015). PVID’s closest sources of water for the Project to access via truck would be a pump station located along Neighbours Boulevard, just north of West 11<sup>th</sup> Street, where water trucks may be loaded. Alternatively, PVID operates canals to the east of the Project site. For this latter option, the Project would likely be required to build infrastructure to obtain and convey water from a canal. The details and logistics for accessing PVID’s water supply have not yet been developed.

PVID’s ability and willingness to provide surface water to meet the Project’s construction and operational water supply needs are indicated in a Water Supply letter presented in Appendix C.

## **SECTION 4.0 WATER SUPPLY PLANNING UNDER SENATE BILL 610**

### **4.1 SUMMARY**

SB 610 became effective in January 2002 and amended the California Water Code by requiring a WSA to be completed for certain projects subject to CEQA, as discussed below in Sections 4.2 and 4.3. California Water Code, as amended by SB 610, requires that when a WSA is required it must address the following questions:

- Is there a public water system that will service the proposed project;
- Is there a current UWMP that accounts for the project demand;
- Is groundwater a component of the supplies for the project; and
- Are there sufficient supplies to serve the project over the next twenty years?

The primary question to be answered in a WSA is:

*Will the total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to existing and planned future uses of the identified water supplies, including agricultural and manufacturing uses?*

The following sections address the SB 610 WSA questions as they relate to the proposed Project.

#### **Is the proposed Project subject to CEQA?**

California Water Code Section 10910(a) states that any city or county that determines that a project, as defined in Section 10912, is subject to CEQA, which applies to projects requiring an issuance of a permit by a public agency, projects undertaken by a public agency, or projects funded by a public agency.

The proposed Project requires issuance of permits by Riverside County and is, therefore, subject to CEQA. An EIR is in progress.

#### **Is the proposed project a “Project” under SB 610?**

California Water Code Section 10912(a) states that any proposed action that meets the definition of “Project” under SB 610 is required to prepare a WSA to demonstrate whether sufficient water supplies are available to meet requirements of the proposed project under normal and drought conditions. SB 610 defines a “Project” as any one of six different development types with certain water use requirements, as specified in the Water Code

## WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT

---

revised by SB 610. Each identified development type and associated water requirement are addressed below. Any mixed-use project that incorporates one of the six development types described below is also defined as a “Project” under SB 610.

### *Residential Development*

A proposed residential development of more than 500 dwelling units is defined as a “Project” under SB 610.

The proposed Project is not a residential development.

### *Shopping Center or Business Establishment*

A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space is defined as a “Project” under SB 610.

The proposed Project is not a shopping center or residential development.

### *Commercial Office Building*

A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space is defined as a “Project” under SB 610.

The proposed Project is not a commercial office building.

### *Hotel or Motel*

A proposed hotel or motel, or both, having more than 500 rooms is defined as a “Project” under SB 610.

The proposed Project is not a hotel or motel.

### *Industrial, Manufacturing, or Processing Plant or Industrial Park*

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 square feet of floor area, is defined as a “Project” under SB 610. Additionally, PV solar and wind energy projects are exempt from preparation of a WSA if they are less than 75 acres in size.

Based on the definition of “Project” as presented above, the proposed solar Project is both larger than 40 acres and meets the intent of the definition, and is greater than 75 acres and would not qualify for a SB 267 exemption. Consequently, the County of



## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

Riverside, as the CEQA Lead Agency for the proposed Project, has directed that a WSA for the proposed Project be prepared.

### *Equivalent Water Use*

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 is defined as a “Project” under SB 610. Assuming that an average household of 3.5 people requires 1.2 AFY (AVEK 2008), a 500-dwelling-unit project would require approximately 600 AFY.

As described in Section 2.2 (Water Requirements), the proposed Project would require approximately 2,540 to 2,940 AF of non-potable water for the 25-month and 48-month construction scenarios, respectively, including 30 years of operation. This equates to an average annual use of approximately 79 to 87 AFY over the combined 32- to 34-year construction/operations period.

### **Is there a public water system that will service the proposed project?**

No; the Project would not be served by a public water system or using public water system connections. The proposed Project would use either on-site groundwater resources via installation of new on-site wells, PVID supplied water (via Project access to existing water infrastructure that currently delivers irrigation water from the PVID), and/or a combination thereof. Potable water needs would be minimal and would be met through deliveries of bottled water to the site.

### **Is there a current UWMP that accounts for the project demand?**

No; the City of Blythe, California has a UWMP, but this plan is not applicable to the Project since the Project site lies well outside the city limits.

### **Is groundwater a component of the supplies for the project?**

Yes; groundwater is a proposed component of the supplies for the Project. In addition, the Project may use water supplied by the PVID water system. Groundwater would be pumped via on-site wells extending into the PVMGB below the site.

### **Are there sufficient supplies to serve the project over the next twenty years?**

Yes; as demonstrated through the data and discussions provided in this section, sufficient water supplies are expected to be available to serve the Project over a 20-year future projection, including with consideration of average-year, single-dry year, and multiple-dry year (drought) conditions.

## **4.2 PROJECT AND NON-PROJECT WATER DEMANDS**

Water demands of the proposed Project assuming the Project would utilize on-site groundwater resources or PVID surface water are summarized in the following sections along with information on other proposed energy projects to characterize water supply availability.

### **4.2.1 Project Demands (Groundwater)**

This groundwater analysis considers the construction and operational phase groundwater demand assuming that the Project's water supply needs would be met solely from on-site groundwater well(s). The pre-project estimated inflows and outflows for the Palo Verde Valley (in accordance with the Palo Verde Groundwater Model) are compared to the proposed Project use and other proposed energy projects that propose to use groundwater from the PVMGB for a 20-year period. A more detailed water balance is presented in Table 3-1 (and Table 1 in Appendix B). Refer to Tables 3-2 and 3-3 for a more detailed summary of cumulative water demand for the proposed Project and other proposed energy projects that would utilize groundwater supplies from the PVMGB.

The recharge (inflow) component of the groundwater basin balance presented in Table 4-1 would not be affected by consideration of normal/dry year/extended dry years since the water balance already assumes that groundwater recharge associated with precipitation that falls on the Palo Verde Mesa and Valley floors is negligible. The inflow variables considered in the water balance used for numerical groundwater modeling purposes are not affected by consideration of drought conditions such as those the Project area is currently experiencing. There is ample groundwater supply to reliably meet the Project's water demand with minimal impact on the PVMGB as indicated by the current groundwater basin balance for the PVMGB and the PVVGB, the Project's minimal demand compared to the basin storage, and the numerical groundwater modeling results for the Project.

### **4.2.2 Project Demands (Surface Water)**

This surface water analysis assumes that the Project's water supply needs would be met solely from surface water supplied by the PVID versus on-site groundwater wells. PVID's ability and willingness to provide surface water to meet the Project's construction and operational water supply needs are indicated in a Water Supply letter presented in Appendix C. This letter indicates that PVID is capable and willing to supply the Project's water needs from its existing allocations for the Palo Verde Mesa during the construction phase and over the 30-year life of the Project, and that the PVID's water supply and other customers would not be negatively impacted. PVID has indicated that their surface water supply is not subject to curtailment or rationing due to drought conditions. Given the relatively insignificant quantity of water required to meet the Project's construction and operational water needs

**TABLE 4-1**  
**TWENTY-YEAR COMPARISON OF GROUNDWATER BASIN**  
**INFLOWS AND OUTFLOWS**  
**WITH CONSTRUCTION OF DESERT QUARTZITE**  
**AND OTHER PROPOSED ENERGY PROJECTS**

1 Groundwater inflow-outflow prior to start of Desert Quartzite Solar Project.

2 The groundwater basin balance numbers presented are for the Palo Verde Valley as defined in Table 3-1 for the groundwater

3 model which encompasses both the PVMGB and the PVVGB.

4 Refer to Table 3-2 for basis.

5 The water demand numbers presented for the Desert Quartzite Solar Project are for the 25-month construction scenario.

6 For reference purposes, the Palo Verde Mesa Groundwater Basin is estimated to have a basin storage capacity of 6,840,000

AF.

7 The Sonoran Energy Project (natural gas; formerly Blythe Energy Project II) accounts for 3,000 AFY of the listed demand

8 beginning in 2018. The Sonoran Energy Project includes mitigation (PVID canal lining) that is not accounted for in this table.

Other proposed energy projects that plan to use surface water supplied from the PVID include the Blythe Mesa Solar Project and the Palo Verde Mesa Solar Project. In addition, the Crimson Solar Project may pursue use of trucked-in water (Ludwig 2016); however, no publically available plans or details are available regarding the source of trucked-in water. For the purposes of this analysis, the Crimson Solar Project is assumed to use groundwater extracted from the PVMGB and the groundwater analyses presented in this report account for the Crimson Solar Project.

The Blythe Mesa Solar Project proposes to use 1,354 AF of surface water (451 AFY) over the planned 3-year construction period followed by limited groundwater extraction and potable demand during the operational phase (Power Engineers 2013). The surface water is to be provided by the PVID and the potable water is to be supplied by Riverside County Community

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

Community Service Area #122. The project would involve fallowing a substantial acreage of irrigated agricultural land with water savings well in excess of the Project's water needs. Operational phase groundwater needs are estimated at less than 1 AFY and are accounted for in the groundwater analyses included in this report.

The proposed Palo Verde Mesa Solar Project is assumed to involve a 3-year construction phase utilizing 500 AFY of surface water followed by a water use of 302 AFY for the operational phase (Power Engineers 2012). All water is to be provided by the PVID and no groundwater would be utilized. The project would involve conversion of agricultural land that has historically been irrigated with about 3,403 AFY that will no longer occur once the project is implemented (i.e., will result in a net reduction in water use). Based on information provided by the Riverside County Planning Department (Brady 2016), it is assumed that construction would begin in 2017.

The Blythe Mesa Solar Project and the Palo Verde Mesa Solar Project would both involve fallowing substantial acreages of agricultural land on the solar sites and are expected to result in reduced water usage relative to the historical water use on the project sites. Therefore, these projects would not be expected to contribute to cumulative water demand on the Palo Verde Mesa.

## **SECTION 5.0 CONCLUSIONS**

### **5.1 WATER SUPPLY BASIS**

The Desert Quartzite Solar Project proposes to use a total of approximately 2,540 - 2,940 AF of water over the term of construction (1,400 AF over 25 months or 1,800 AF over 48 months) and operation (38 AFY for 30 years or 1,140 AF). The Project proposes to obtain the needed water supply either from development of on-site groundwater resources and/or via purchase of surface water from the PVID. In order to perform a worst-case assessment, it is currently assumed for the purposes of this WSA that the entire amount of water would be secured by one or the other source – i.e., not combined source. However, the Project may utilize both sources, as appropriate, for a combined total of 2,540 - 2,940 AF. As discussed in the following sections, Project use of either water supply source would be expected to be more than sufficient to meet the Project water demand, reliable for the life of the Project, and to have negligible effects on groundwater and/or surface water supplies in the Project region.

### **5.2 ON-SITE GROUNDWATER SUPPLY**

The Project's maximum total construction and operation water needs (2,940 AF for 48-month construction scenario and 30 years of operation) are approximately 0.04 percent of the groundwater storage capacity (6.84 million AF) reported by the DWR for the PVMGB, which includes the Project site and is the proposed groundwater supply source.

Based on the numerical groundwater modeling performed for the Project, pumping from on-site wells would not significantly impact adjacent water supply wells or the groundwater basin storage in the Palo Verde Valley (inclusive of the PVMGB and the PVVGB). The relatively low steady-state pumping volumes over the 32- to 34-year period (e.g., average of approximately 434 gpm over the 25-month construction period [700 AFY] or approximately 279 gpm over the alternate 48-month construction period [450 AFY], and 23.5 gpm over the 30-year operational period [38 AFY]) are small compared to the rate at which the Palo Verde Valley (inclusive of the PVMGB and the PVVGB) is recharged (estimated at 426,000 AFY or 263,928 gpm).

The results of the numerical groundwater simulations (URS 2016) indicate that the proposed Project pumping would not significantly impact nearby water supply wells or the groundwater basin storage. As discussed in Section 3.2.6, the drawdown associated with the on-site groundwater well(s) was not predicted to exceed one foot at any off-site well locations. The low pumping volume combined with the fact that the closest PVID irrigation drains are at least one mile from the eastern Project site boundary (and several miles farther from the currently envisioned on-site well location[s]) would render the influence from the Project pumping on the PVID drains and associated groundwater recharge insignificant.

## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

Given its fractional contribution to the total extractions from the PVMGB, the Project does not represent a cumulatively considerable contribution to the water resource impacts on the basin.

The water balance developed for the Palo Verde Groundwater Model (AECOM 2010, 2011) and utilized for the numerical groundwater modeling performed for the proposed Desert Quartzite Solar Project is not influenced by consideration of variations in annual precipitation (i.e., normal, single dry, and multiple dry years) as the model assumes that precipitation recharge onto the Palo Verde Mesa floor is negligible and that there is no return to groundwater from direct precipitation.

### **5.3 PVID SURFACE WATER**

Based on the Water Supply letter provided by PVID (refer to Appendix C) and the information presented in this report, PVID's surface water supply is sufficient to meet the non-potable requirements of the proposed Project for both the construction and operational phases, including consideration of extended drought conditions such as the area is currently experiencing. The Project's water supply requirements represent a very small fraction of PVID's available and secure allocation for the Palo Verde Mesa.

This Water Supply Assessment was prepared in compliance with the requirements of the California Water Code, as amended by Senate Bill 610.

**SECTION 6.0  
REFERENCES**

- AECOM. 2012. McCoy Solar Energy Project (Final/Draft) Proposed Plan Amendment and Environmental Impact Statement. December.
2011. Assessment of Proposed Groundwater Use, Results of Numerical Groundwater Modeling, McCoy Solar Energy Project, Palo Verde Mesa, Riverside County, California. August.
2010. Numerical Groundwater Flow Model of the Palo Verde Valley and Palo Verde Mesa (Soil and Water Condition 16): Blythe Solar Power Project (09-AFC-6C), Riverside County, California.
- Brady, R. 2016. Planner, Riverside County Planning Department. Personal communication with R. Ray (URS). March 30.
- Bureau of Land Management (BLM). 2015a. Approved Renewable Energy Projects, Solar Projects on BLM Public Lands. Last update August 24, 2015.
- 2015b. California Desert BLM District Office, Renewable Energy Projects and Utility Corridors Map. Last update June 3, 2015.
- 2015c. Pending Renewable Energy Applications, Applications Undergoing Environmental Review. Last update October 1, 2015.
- California Department of Water Resources (DWR). 2004a. Palo Verde Mesa Groundwater Basin. Bulletin 118. <http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/7-39.pdf>.
- 2004b. Palo Verde Valley Groundwater Basin. Bulletin 118. <http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/7-38.pdf>.
- 2004c. Chuckwalla Valley Groundwater Basin. Bulletin 118. [http://www.water.ca.gov/pubs/groundwater/bulletin\\_118/basindescriptions/7-5.pdf](http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/7-5.pdf).
2003. Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2011. October 8.
1979. Bulletin 91-24, Sources of Powerplant Cooling Water in the Desert Area of Southern California – Reconnaissance Study.
1963. Data on Water Wells and Springs in the Chuckwalla Valley Area, Riverside County, California. Bulletin No. 91-7.

**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

**TABLE 3-1  
SUMMARY PALO VERDE VALLEY WATER BALANCE  
PALO VERDE GROUNDWATER MODEL<sup>1,2,3</sup>**

<b>Recharge (inflow)<sup>4</sup></b>	<b>Volume (AFY)</b>
Underflow from Chuckwalla Valley	1,000
Underflow from Parker Valley	3,500
Percolation	
Agriculture return – mesa	3,500
Agriculture return – valley	67,000
POTW return	750
Mountain front	5,000
Irrigation canal leakage (less evaporation)	120,000
River discharge to groundwater (losing condition)	225,850
Bedrock	0
<b>Total inflow</b>	<b>426,600</b>
<b>Discharge (outflow)</b>	<b>Volume (AFY)</b>
Underflow out of the Palo Verde and Cibola Valley Aquifer	0
Groundwater pumping	
Agriculture – mesa	3,600
Municipal and domestic	7,500
Unmeasured return (gaining condition)	50,000
Consumptive use (native vegetation)	8,500
Groundwater discharge	357,000
<b>Total (outflow)</b>	<b>426,600</b>
<b>Water balance (inflow-outflow)</b>	<b>0</b>

<sup>1</sup> Note: The Palo Verde Valley as defined in the Palo Verde Groundwater Model encompasses both the PVMBG and the PVVGB,

<sup>2</sup> Sources: (1) Assessment of Proposed Groundwater Use, Results of Numerical Groundwater Modeling, McCoy Solar Energy Project, Palo Verde Mesa, Riverside County, California (AECOM 2011); (2) Numerical Groundwater Flow Model of the Palo Verde Valley and Palo Verde Mesa (CEC Soil and Water Condition 16): Blythe Solar Power Project (09-AFC-6C), Riverside County, California (AECOM 2010).

<sup>3</sup> Note: the data presented in this table is a summary excerpt from a portion of Table 1 in Appendix B of this report which presents the complete Palo Verde Valley Water Balance, Palo Verde Groundwater Model, McCoy Solar Energy Project. Refer to Table 1 in Appendix B and the source documents for more information including the various references used to develop the water balance as well as the basis for individual inflow/outflow estimates.

<sup>4</sup> Precipitation recharge onto the Palo Verde Mesa floor is assumed to be negligible. It is assumed that all water transpires or evaporates and that no return to groundwater occurs from direct precipitation.



## **WATER SUPPLY ASSESSMENT DESERT QUARTZITE SOLAR PROJECT**

---

URS. 2016. Proposed Groundwater Use – Numerical Groundwater Modeling for the Desert Quartzite Solar Project. Prepared for Desert Quartzite, LLC.

U.S. Bureau of Reclamation (USBR). 2016. Website accessed June 17, 2016.  
<http://www.usbr.gov/lc/hooverdam/faqs/riverfaq.html>

2011. Colorado River Accounting and Water Use Report: Arizona, California, and Nevada.

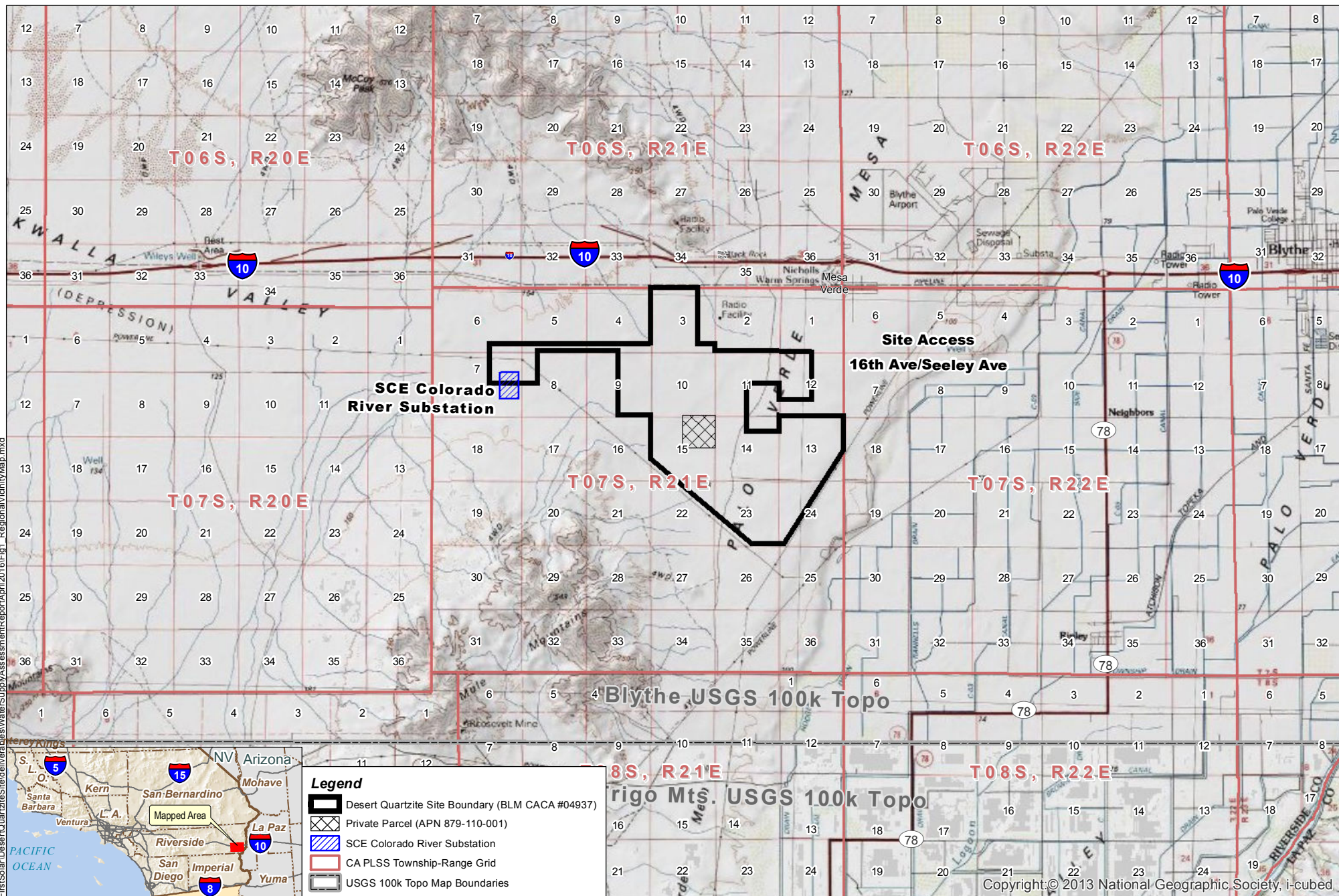
U.S. Geological Survey (USGS). 2011. National Water Information System (NWIS). Groundwater Levels for California, Riverside County.

Worley-Parsons. 2011. Assessment of Existing Groundwater Conditions Report for the Rio Mesa Solar Electric Generating Facility, Riverside County, California. September.

**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

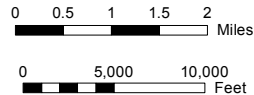
---

**FIGURES**



**Desert Quartzite Solar Project  
Riverside County, CA**

**URS Corporation**



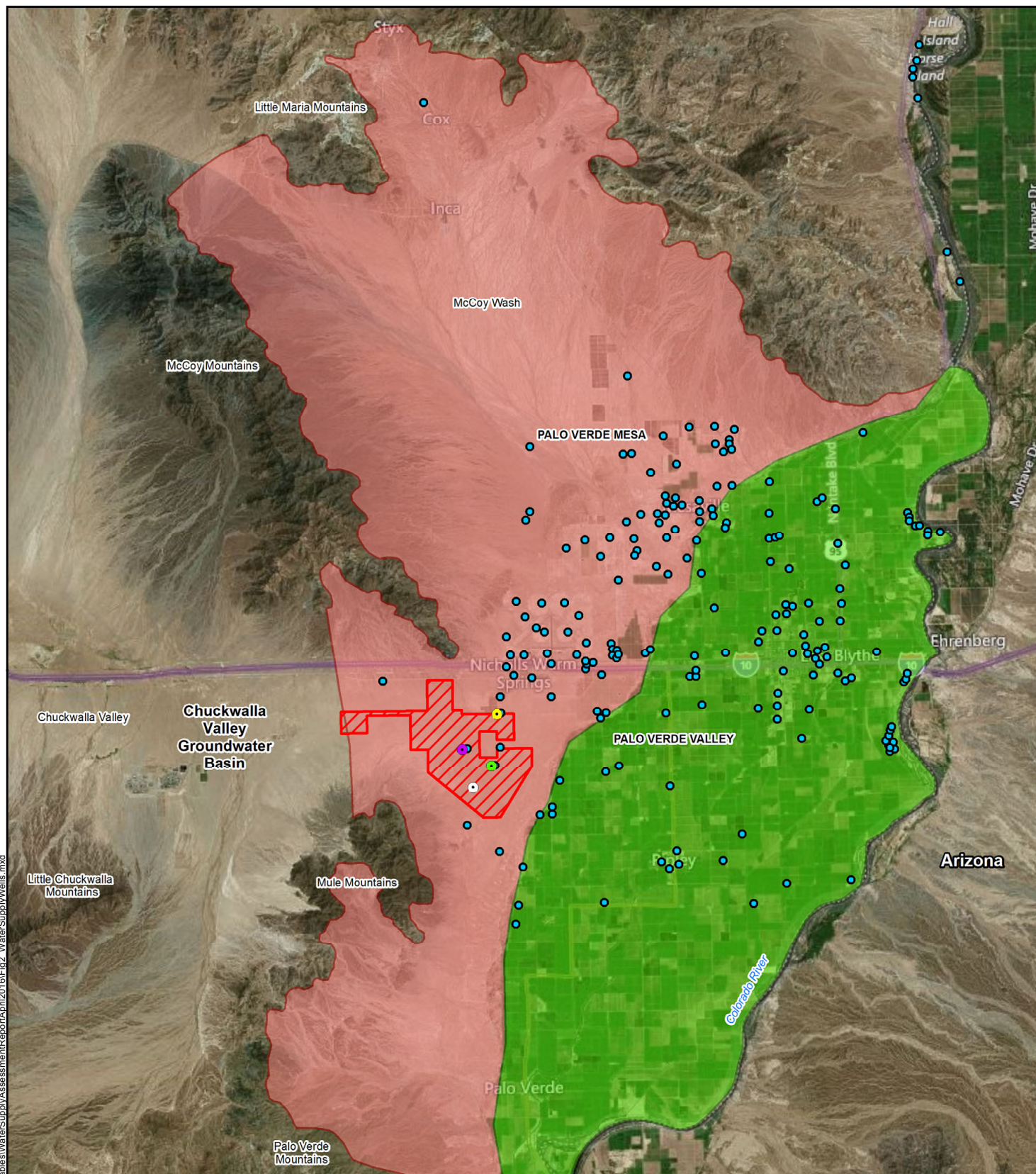
**Source:** [1] Bing Maps Aerial Imagery Web Mapping Service - (c) 2010 Microsoft Corporation and its data supplier (Image Date: 3/13/2011), [2] California Geospatial Information Library PLS, [3] ESRI StreetMap USA (2007).

**Figure 1. Regional Vicinity Map**

2016



V:\Projects\GIS\_Proj\FirstSolar\DesertQuartzite\Site\deliverables\WaterSupply\Assessment\Report\April2016\Fig2\_WaterSupplyWells.mxd



**Legend**

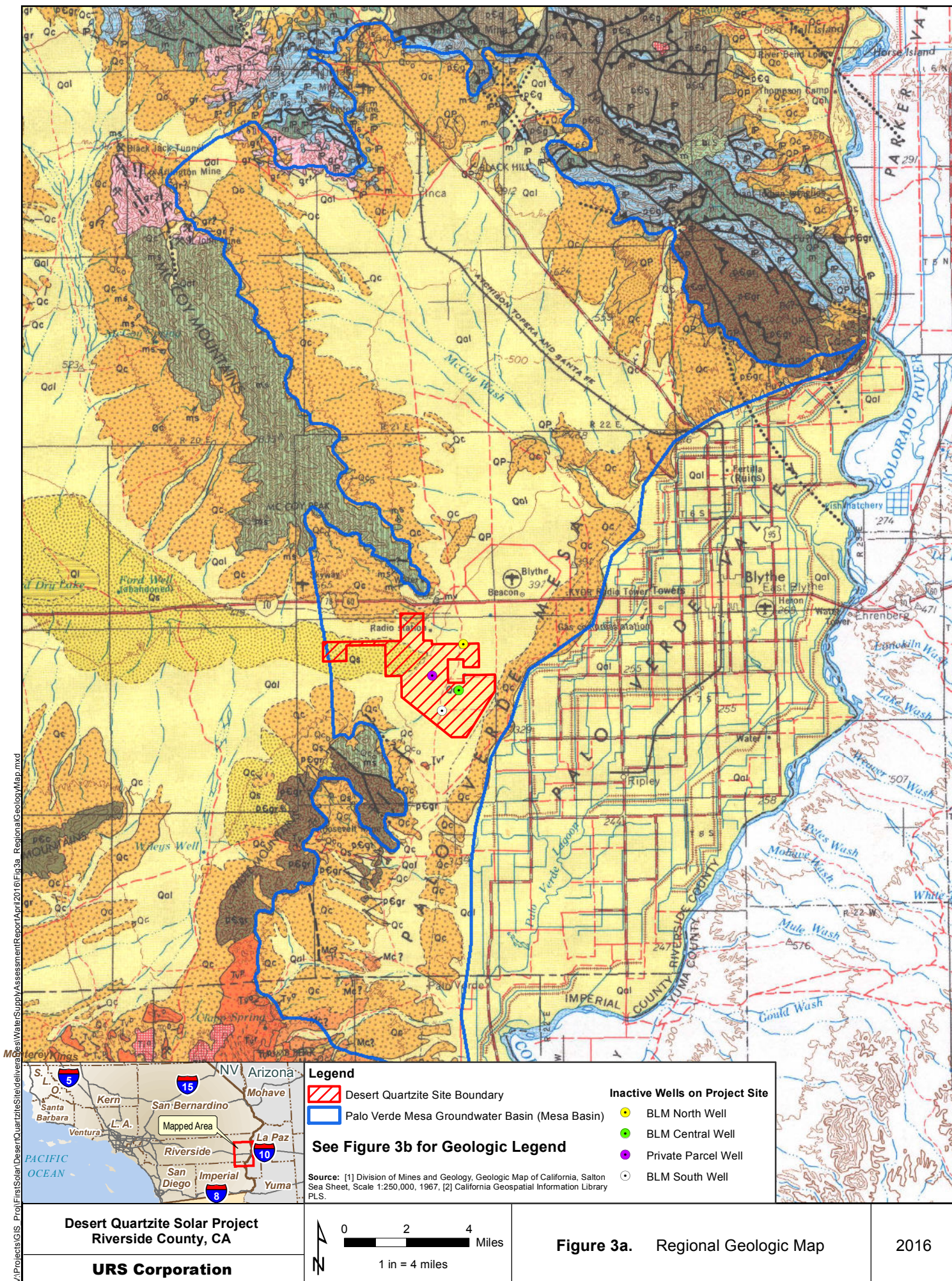
- Well in USGS NWIS Database
- Desert Quartzite Site Boundary
- Palo Verde Mesa Groundwater Basin (Mesa Basin)
- Palo Verde Valley Groundwater Basin (Valley Basin)

**Inactive Wells on Project Site**

- BLM North Well
- BLM Central Well
- Private Parcel Well
- BLM South Well

**Source:** [1] Bing Maps Aerial Imagery Service - (c) 2010 Microsoft Corporation, accessed 01/2016, [2] California Geospatial Information Library PLS, [3] USGS NWIS.



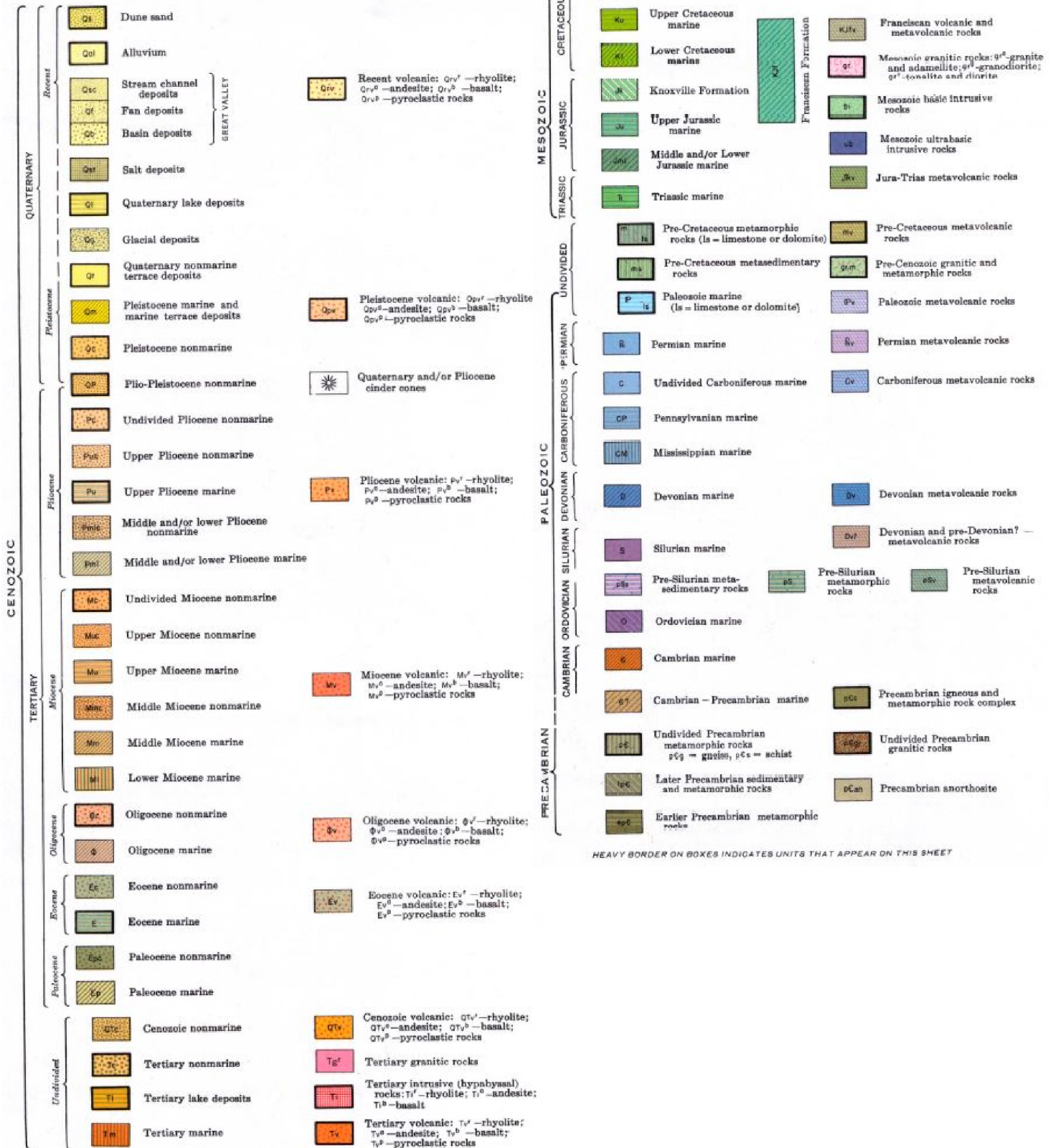




# EXPLANATION

## SEDIMENTARY AND METASEDIMENTARY ROCKS

## IGNEOUS AND META-IGNEOUS ROCKS



HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET

Desert Quartzite Solar Project  
Riverside County, CA

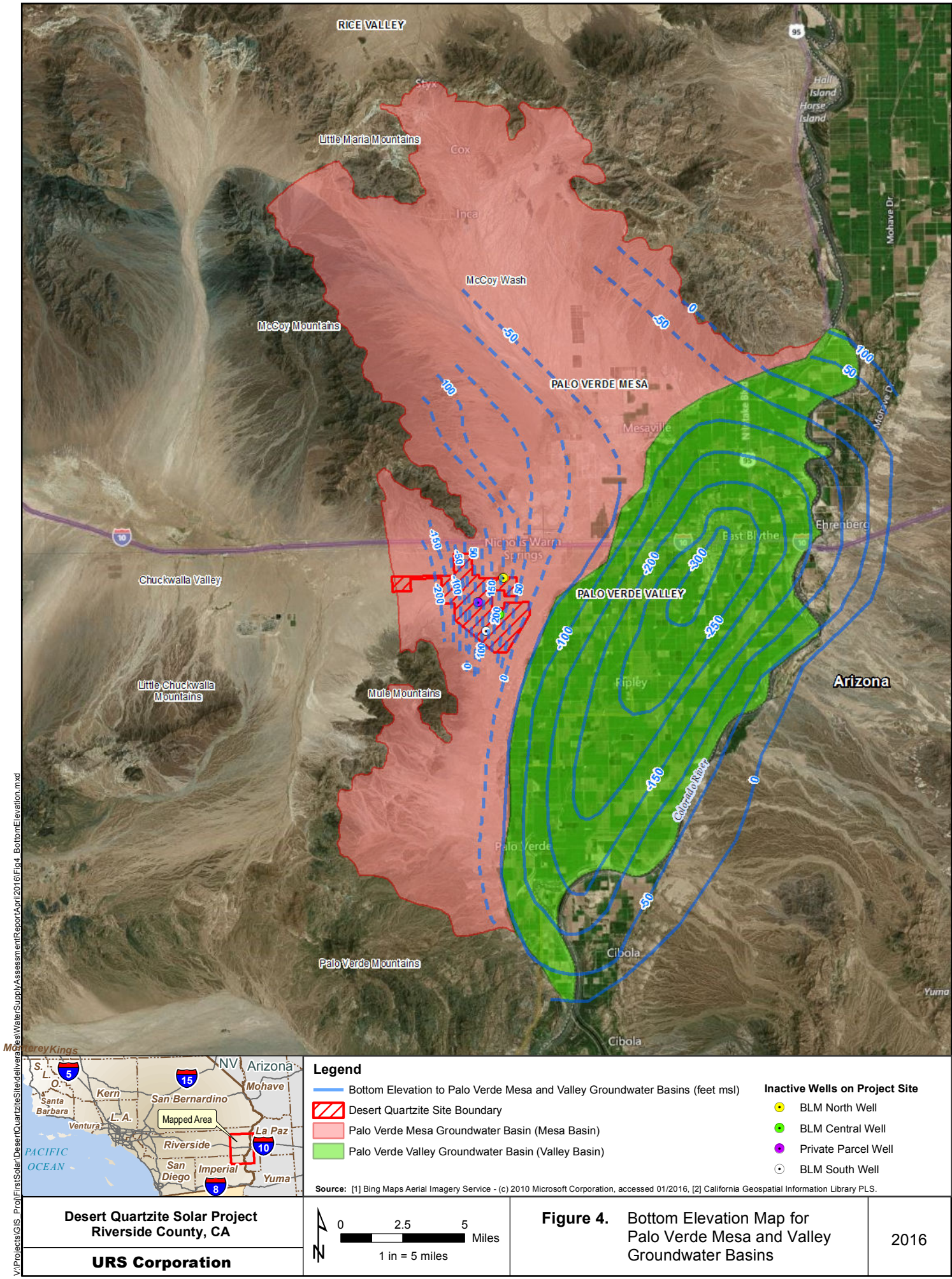
URS Corporation

Source: [1] Division of Mines and Geology,  
Geologic Map of California, Salton Sea  
Sheet, Scale 1:250,000, 1967.

Figure 3b. Regional Geologic Map Legend

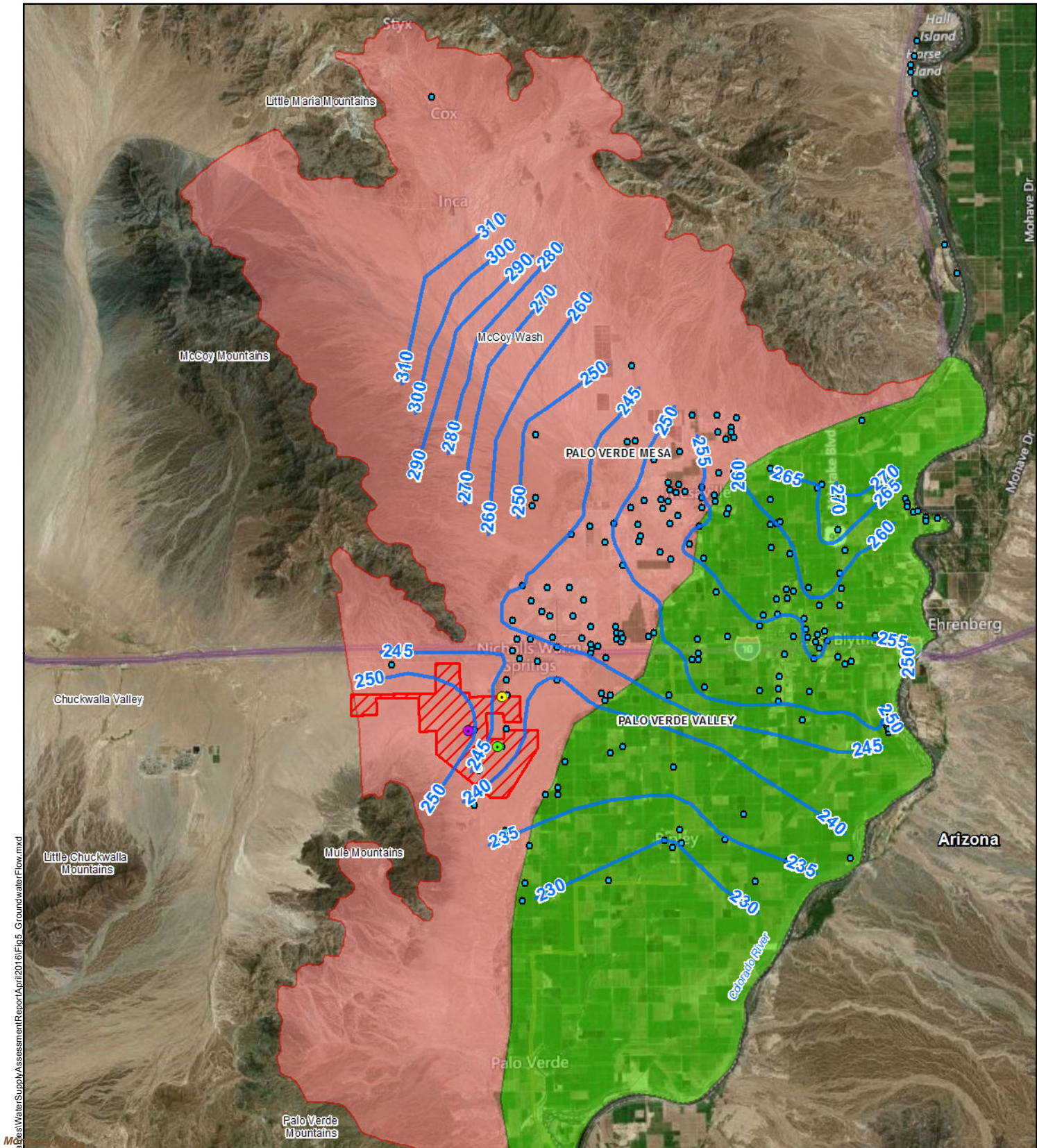
2016





V:\Projects\GIS\Proj1\SolarDesertQuartzite\Site\delivered\MapArea\WaterSupplyAssessmentReport\April2016\Fig4\_BottomElevation.mxd





V:\Projects\GIS\Proj\FirstSolar\DesertQuartzite\Sites\delivered\Basis\WaterSupply\Assessment\Report\April2016\Fig5\_GroundwaterFlow.mxd

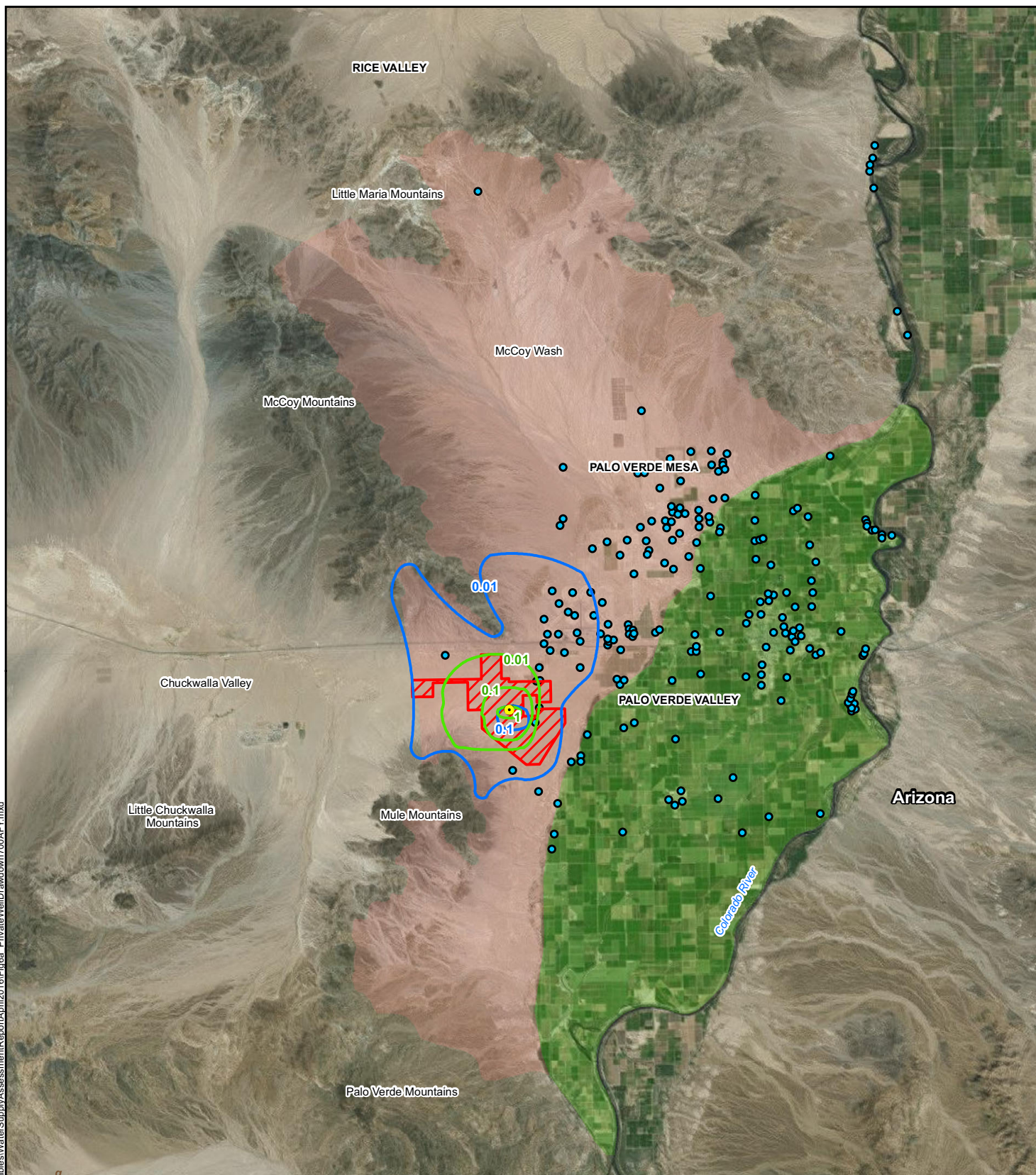


<b>Legend</b>		<b>Inactive Wells on Project Site</b>	
	Contour of Groundwater Elevation (ft, msl) (Average 1980-2008)		BLM North Well
	Desert Quartzite Site Boundary		BLM Central Well
	Well in USGS NWIS Database		Private Parcel Well
	Palo Verde Mesa Groundwater Basin (Mesa Basin)		BLM South Well
	Palo Verde Valley Groundwater Basin (Valley Basin)		

**Source:** [1] Bing Maps Aerial Imagery Service (c) 2010 Microsoft Corporation, accessed 01/2016, [2] California Geospatial Information Library PLS, [3] USGS NWIS.



V:\Projects\GIS\_Proj\FirstSolar\DesertQuartzite\Sites\Deliverables\WaterSupply\Assessment\Report\April2016\Fig6a PrivateWellDrawdown700AFY.mxd



#### Legend

- Private Parcel Well
- Predicted Drawdown (feet) - End of Construction
- Predicted Drawdown (feet) - End of Operation
- Desert Quartzite Site Boundary
- Palo Verde Mesa Groundwater Basin (Mesa Basin)
- Palo Verde Valley Groundwater Basin (Valley Basin)
- Well in USGS NWIS Database

Source: [1] World Imagery Map Service by esri, 6/15/2016, NAIP 2014-05-16; [2] USGS NWIS.

Desert Quartzite Solar Project  
Riverside County, CA

URS Corporation



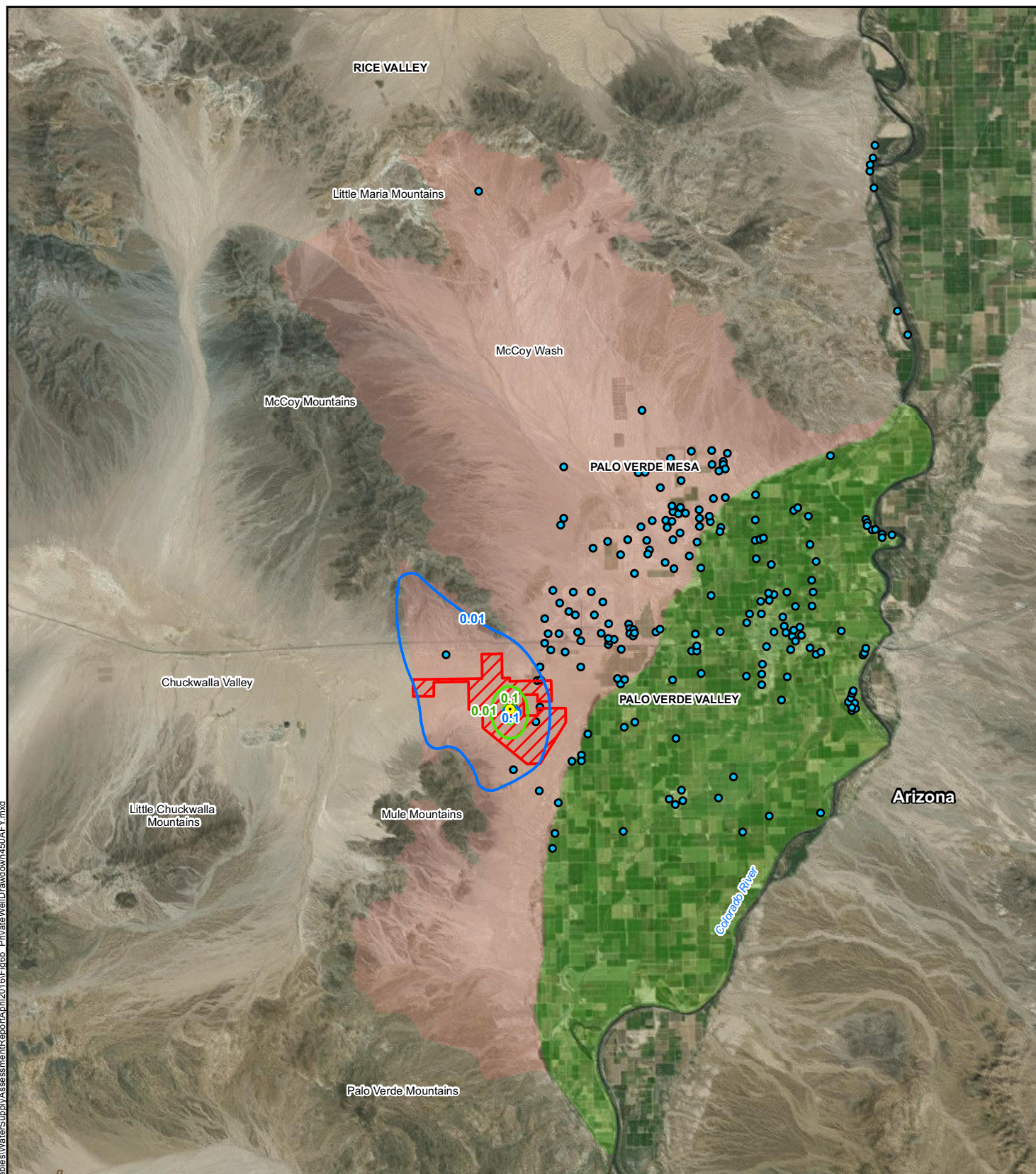
0 2.5 5  
Miles  
1 in = 5 miles

**Figure 6a.** Representative Predicted Drawdown for 700 AFY Construction Scenario (Private Well) – End of Construction and Operation

2016



V:\Projects\GIS\Proj\FirstSolar\DesertQuartzite\Site\deliverables\WaterSupply\Assessment\Report\April2016\Fig6b\_PrivateWellDrawdown450AFY.mxd



#### Legend

- Private Parcel Well
- Predicted Drawdown (feet) - End of Construction
- Predicted Drawdown (feet) - End of Operation
- Desert Quartzite Site Boundary
- Palo Verde Mesa Groundwater Basin (Mesa Basin)
- Palo Verde Valley Groundwater Basin (Valley Basin)
- Well in USGS NWIS Database

Source: [1] World Imagery Map Service by esri, 6/15/2016, NAIP 2014-05-16; [2] USGS NWIS.

Desert Quartzite Solar Project  
Riverside County, CA

URS Corporation

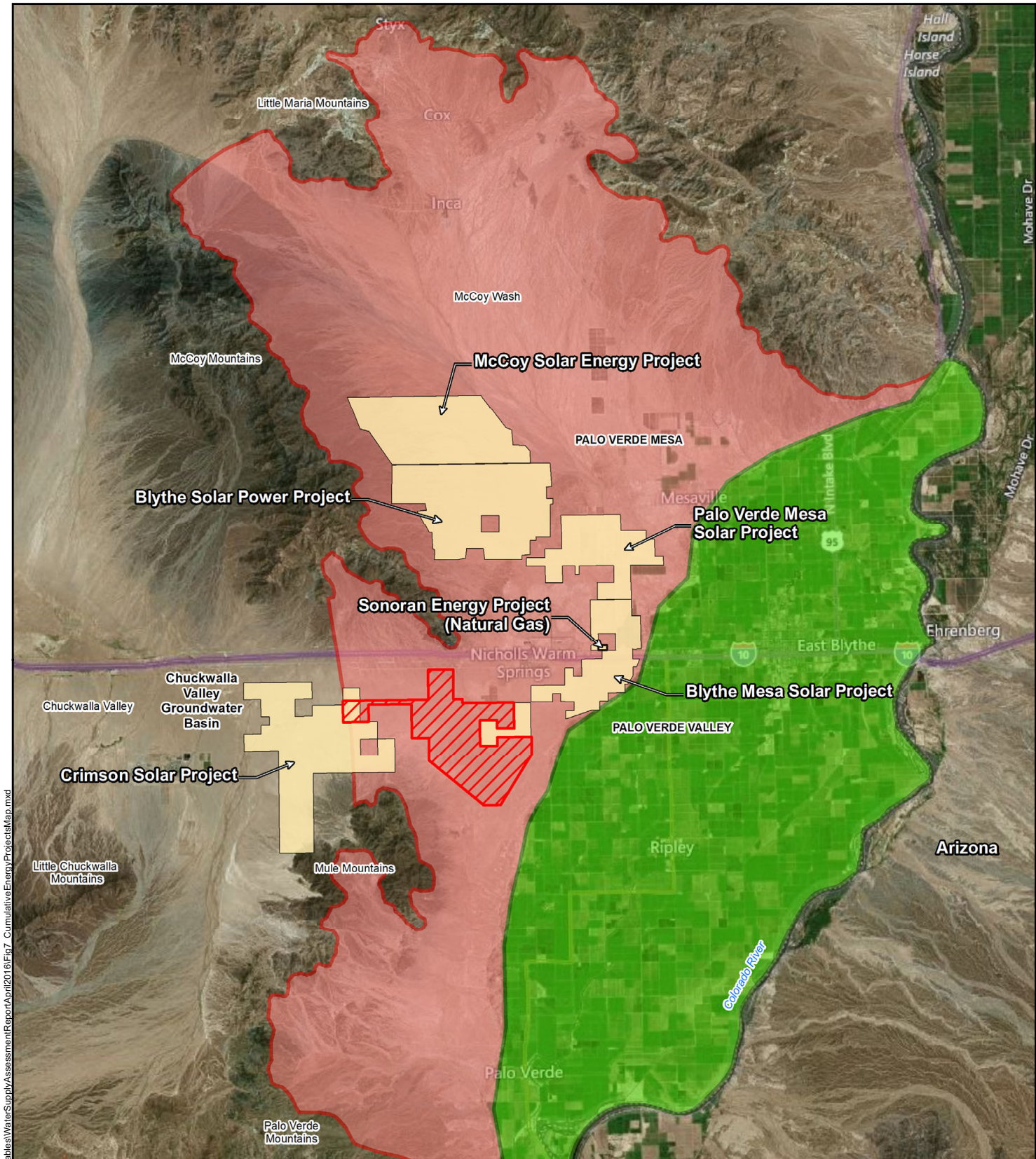


0 2.5 5 Miles  
1 in = 5 miles

**Figure 6b.** Representative Predicted Drawdown for 450 AFY Construction Scenario (Private Well) – End of Construction and Operation

2016





V:\Projects\GIS\_Proj\FirstSolar\DesertQuartzite\Site\Deliverables\WaterSupply\Assessment\Report\April2016\Fig7\_CumulativeEnergyProjectsMap.mxd

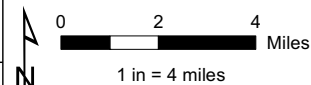
#### Legend

- Desert Quartzite Site Boundary
- Proposed or Under Construction Cumulative Energy Project
- Palo Verde Mesa Groundwater Basin (Mesa Basin)
- Palo Verde Valley Groundwater Basin (Valley Basin)

**Source:** [1] Bing Maps Aerial Hybrid accessed April, 2016, [2] California Geospatial Information Library PLS, [3] BLM Renewable Energy Project Applications, 3/17/2016, [4] CEC, Sonoran Energy Project (2002-AFC-01, as amended).

**Desert Quartzite Solar Project  
Riverside County, CA**

**URS Corporation**



**Figure 7. Cumulative Energy Projects Map**

2016

**APPENDIX A  
DWR GUIDEBOOK FOR IMPLEMENTATION OF  
SENATE BILL 610 AND SENATE BILL 221**

This appendix presents the guidebook prepared by the California Department of Water Resources (DWR) for implementation of Senate Bills 610 and 221. This guidebook was followed in the preparation of the water supply assessment for the Desert Quartzite Solar Project, as applicable.

# Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001

to assist water suppliers, cities, and counties  
in integrating water and land use planning

Prepared by the California Department of Water Resources

Note: the Department of Water Resources has no regulatory, permitting or any other approval authority concerning water assessments or verifications of sufficient water supply. This Guidebook is provided only as an assistance tool for land-use agencies and public water systems affected by the legal requirement to prepare water assessments and verifications of sufficient water supply. The information provided in this guidebook is not all-inclusive and is not required to be used. In case of any conflict between suggestions contained in the guidebook, and any applicable laws, those laws shall have precedence.

The California Department of Water Resources (<http://www.dwr.water.ca.gov/>) provides assistance to water agencies in implementing the Urban Water Management Planning Act, which is one of the statutes amended by **SB 610**. The Urban Water Management Plan and Urban Water Shortage Contingency Analysis, are also referenced in **SB 221**. As part of its assistance responsibility, DWR has prepared this guidance to assist water suppliers to prepare the water assessments and the written verification of water supply availability required by **SB 610** and **SB 221** respectively.

This material was circulated for comment among all interested parties. Groups that indicated their interest in reviewing materials included:

- Association of California Water Agencies
- Building Industry Legal Defense Foundation
- California Building Industry Association
- California Business Properties Association
- California Chapter American Planning Association
- California Department of Real Estate
- California State Association of Counties
- California State Attorney General's Office
- California Urban Water Agencies
- Castaic Lake Water Agency
- East Bay Municipal Utility District
- Governor's Office of Planning & Research
- League of California Cities
- Local Government Commission
- Metropolitan Water District of Southern California
- San Diego County Water Authority
- U.S. Bureau of Reclamation

The Department of Water Resources (DWR) plans to revise the guidebook periodically to include new information.

GOVERNOR DAVIS'S MESSAGE UPON SIGNING SB 610 AND SB 221

To the Members of the California Legislature:

I am signing **SB 221** and **SB 610** to advance water supply planning efforts in the State of California. Together, these bills provide an important and necessary foundation for developing comprehensive water policies to prepare California to meet our future water needs.

Most notably, these bills will coordinate local water supply and land use decisions to help provide California's cities, farms and rural communities with adequate water supplies. Additionally, these bills increase requirements and incentives for urban water suppliers to prepare and adopt comprehensive management plans on a timely basis.

While these bills take a significant step toward managing the demand side of California's water equation, more needs to be done to address the need for additional supplies and improved infrastructure.

California's ability to meet its demand for water is further hampered by low rainfall during the past year. It is now necessary to address our water supply and storage needs to ensure that water is not California's next crisis and guarantee our place in the world economy.

Toward that end, I renew my commitment to develop a package of water supply actions to provide reliable and affordable water for California's citizens and the environment. This is why I have recently pledged my support for funding of CALFED programs and activities in the FY 2002 Energy and Water Appropriations bill currently before Congress. Specifically, I re-emphasize the need to aggressively pursue infrastructure projects throughout California including immediate progress on in-Delta storage, expanded Central Valley Project storage in Lake Shasta, expanded storage in Los Vaqueros and Sites reservoirs, additional storage in the upper San Joaquin River watershed, and continued investment in projects that conjunctively use surface and groundwater supplies. Where appropriate, I am directing the Department of Water Resources to assist local water supply agencies to advance these and other important local projects. I am also directing the Department to identify additional modifications to the Urban Water Management Planning Act to ensure adequate local supply and conservation planning.

Sincerely,

GRAY DAVIS

Governor of California

October 8, 2003

## Table of Contents

Introduction.....	iii
Guidebook structure .....	iv
Visual representation of guidebook structure.....	v
SB 610 flow chart.....	vi
SB 610 flow chart notes .....	vii
SB 221 flow chart.....	viii
SB 221 flow chart notes .....	ix
Section 1 Does <b>SB 610</b> or <b>SB 221</b> apply to the proposed development? .....	2
<b><u>SB 610</u></b>	
Section 2 Who will prepare the <b>SB 610</b> assessment? .....	4
Section 3 Has an assessment already been prepared that includes this project? .....	6
Section 4 Is there a current Urban Water Management Plan?.....	8
Section 5 What information should be included in an assessment?.....	10
Step One: Documenting wholesale water supplies .....	12
Step Two: Documenting supply.....	14
If groundwater is a source.....	16
If the assessment relies on water supplies never before used.....	18
Step Three: Documenting project demand (Project Demand Analysis) .....	20
Definitions .....	22
Detailing existing and planned future uses .....	24
Step Four: Documenting dry-year(s) supply .....	26
Documenting dry year(s) supply for water suppliers with multiple sources .....	28
Step Five: Documenting dry-year(s) demand.....	30
Section 6 Is the projected water supply sufficient or insufficient for the proposed project? .....	32
Section 7 If the projected supply is determined to be insufficient .....	34
Section 8 Final <b>SB 610</b> assessment actions by lead agency .....	38
<b><u>SB 221</u></b>	
Section 9 Does <b>SB 221</b> apply to this subdivision? .....	40
Section 10 Is the subdivision exempt from <b>SB 221</b> ?.....	42
Section 11 Who will prepare the <b>SB 221</b> verification of sufficient water supply? .....	44
Section 12 Has a verification already been prepared for this subdivision? .....	46
Section 13 What information should be included in a verification? .....	48
Step One: Documenting supply .....	50
If groundwater is a source.....	54
If verification relies on projected water supplies not currently available .....	60
Step Two: Documenting demand.....	64
Definitions .....	66
Detailing existing and planned future uses .....	68
Step Three: Documenting dry-year(s) supply.....	70
Step Four: Documenting dry-year(s) demand .....	72
Section 14 Determining if the projected water supply is sufficient for the subdivision .....	74
Section 15 If the projected supply is determined to be insufficient .....	76
Section 16 Final <b>SB 221</b> verification actions by agency .....	78
Section 17 Special circumstances.....	80
Appendix A Chapter 643, Statutes of 2001 (Senate Bill 610).....	A-1
Appendix B Chapter 642, Statutes of 2001 (Senate Bill No. 221).....	B-1
Appendix C Urban Water Management Plan 2003 .....	C-1
Appendix D Other Resources .....	D-1



STATE OF CALIFORNIA

**Gray Davis, Governor**

THE RESOURCES AGENCY

**Mary D. Nichols, Secretary for Resources**

DEPARTMENT OF WATER RESOURCES

**Michael J. Spear, Interim Director**

**L. Lucinda Chipponeri**  
Deputy Director

**Stephen W. Verigin**  
Acting Chief Deputy Director

**Peggy Bernardy**  
Chief Counsel

**Jonas Minton**  
Deputy Director

**Vernon T. Glover**  
Deputy Director

**Peter Garriss**  
Deputy Director

**Prepared under the supervision of**  
**Marsha Prillwitz, Chief**  
Office of Water Use Efficiency

**Prepared by**  
**David Todd**  
**Supervising Land and Water Use Analyst**  
Office of Water Use Efficiency

**Editorial review, graphics, and report production**

**Brenda Main**  
Supervisor of Technical Publications

**Marilee Talley**  
Research Writer

**Nikki Blomquist**  
Research Writer

**Alice Dyer**  
Research Writer

**Additional Support**

**Linda Cooper**  
Executive Assistant

**Pat Separovich**  
Executive Assistant

**Guyla McCurry**  
Office Assistant

# ACKNOWLEDGEMENTS

This guidebook was prepared with major assistance from the following public spirited individuals who contributed their time, dedication, experience, and perseverance to this project.

Linda Adams, Legislative Affairs Secretary, Governor's Office  
Dave Anderson, Assistant Chief Counsel, Chief Counsel Office, Department of Water Resources Chief Counsel Office  
DeAnn Baker, Legislative Representative, California State Association of Counties Legislative Services  
Naser Bateni, former Chief, Division of Planning and Local Assistance, Department of Water Resources  
Peggy Bernardy, Chief Counsel, Chief Counsel Office, Department of Water Resources  
Lucile Billingsley, Water Conservation Team Leader, Mid-Pacific Region, Bureau of Reclamation, U.S. Department of the Interior  
Karen Buckner, Executive Assistant, Department of Water Resources  
Grace Chan, Section Manager, Metropolitan Water District of Southern California Resource Planning & Development  
Lucinda Chipponeri, Assistant Director for Legislation, Department of Water Resources  
Judy Corbett, Executive Director, Local Government Commission  
Mary Lou Cotton, Assistant to the General Manager, Castaic Lake Water District  
Mary Ann Dickinson, Executive Director, California Urban Water Conservation Council  
Glenn Farrel, Legislative Representative, Legislative Affairs Office, East Bay Municipal Utility District  
Larry Farwell, Consultant  
Dana Frieauf, Principal Water Resources Specialist, San Diego County Water Authority  
Natasha Hagaman, former Legislative Analyst, Association of California Water Agencies  
Steve Hall, Executive Director, Association of California Water Agencies  
Scott Harvey, Executive Director of California Association of Local Agency Formation Commission Organizations  
Carl Hauge, Supervising Engineering Geologist, Division of Planning and Local Assistance, Department of Water Resources  
Dan Hentschke, General Counsel, San Diego County Water Authority  
Bill Higgins, Staff Attorney, League of California Cities  
Katie Shulte Juong, Project Manager, California Urban Water Conservation Council  
Randy Kanouse, Special Assistant to the General Manager, Legislative Affairs Office, East Bay Municipal Utility District  
Karen Keene, Legislative Representative, Agriculture and Natural Resources Federal Legislative Coordinator, California State Association of Counties  
Katherine Kelly, Chief, Bay-Delta Office, Department of Water Resources  
Luana Kiger, former Chief, Office of Water Use Efficiency, Department of Water Resources  
John Kramer, former Staff Counsel III, Chief Counsel Office, Department of Water Resources  
Debra Man, Vice President of the Department of Water Transfers and Exchanges, Metropolitan Water District of Southern California  
Sue McClurg, Program Director, Water Education Foundation  
Jerry Meral, former Executive Director, Planning and Conservation League  
Clifford Moriyama, Senior Vice President of Governmental Affairs, California Business Properties Association  
Aaron Naldoza, former Legislative Representative, Carpi & Clay  
Pankaj Parekh, Assistant Director/Manager of Water Quality Compliance, Water Quality and Operations, Los Angeles Department of Water and Power  
Sam Perrotti, former Assistant Commissioner, Subdivisions, Department of Real Estate  
Walt Pettit, former Executive Director, California Urban Water Agencies  
Marsha Prillwitz, Chief, Office of Water Use Efficiency, Department of Water Resources  
Tim Ramirez, Assistant Secretary, Water and Policy and Science, Resources Agency  
Dirk Reed, Program Manager, Metropolitan Water District of Southern California  
Terry Roberts, State Clearinghouse Director, Governor's Office of Planning and Research  
Christine Sproul, Deputy Attorney General, Department of Justice\*  
Jan Stevens, Special Counsel to the California Attorney General, Department of Justice\*

Joanne Struebing, Water Rights Specialist, Mid-Pacific Region, Bureau of Reclamation, U.S. Department of the Interior

Rita Schmidt-Sudman, Executive Director, Water Education Foundation

David Smith, General Counsel, Vice President Government Affairs, Building Industry Legal Defense Foundation

Warren Teitz, Resource Specialist, Metropolitan Water District of Southern California Resource Analysis Unit

Chris Tooker, Commissioner, Sacramento Local Agency Formation Commission

Jolena Voorhis, Senior Legislative Analyst, California State Association of Counties Legislative Services

Carl Werder, Project Manager for Battle Creek Salmon and Steelhead Restoration Project, Mid-Pacific Region, Bureau of Reclamation, U.S. Department of the Interior

Brian White, Legislative Advocate, Governmental Affairs Department, California Building Industry Association

\* Ms. Sproul and Mr. Stevens participated in the focus group in response to the Department's request and for the purpose of providing information. Their participation does not represent legal advice from the Attorney General in his separate role as counsel to the Department; nor does the Attorney General's Office necessarily advocate any of the recommendations discussed by the focus group.

## Introduction

Senate Bills 610 (Chapter 643, Statutes of 2001) and Senate Bill 221 (Chapter 642, Statutes of 2001) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures 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.

If coordinated and comprehensive water supply planning is underway at the time that the **SB 610**-water assessment is prepared, compliance with **SB 221** will be greatly facilitated. **SB 221** is intended as a ‘fail safe’ mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should – before construction begins.

Not every project that is subject to the requirements of **SB 610** would also require the mandatory water verification of **SB 221** (e.g. if there is no subdivision map approval). Conversely, not every project that is subject to the requirements of **SB 221** would also require the environmental document to contain an **SB 610** water supply assessment. Projects approved before January 1, 2002 were not subject to the requirements of **SB 610** or **SB 221**; however, some projects may have been subject to the requirement to prepare a water supply assessment as set forth in Senate Bill 901 of 1995 (Chapter 881, Statutes of 1995).

A foundational document for compliance with both **SB 610** and **SB 221** is the Urban Water Management Plan (UWMP). Both of these statutes repeatedly identify the UWMP as a planning document that, if properly prepared, can be used by a water supplier to meet the standards set forth in both statutes. Thorough and complete UWMPs will allow water suppliers to use UWMPs as a foundation to fulfill the specific requirements of these two statutes. Cities, counties, water districts, property owners, and developers will all be able to utilize this document when planning for and proposing new projects.

UWMPs serve as important source documents for cities and counties as they update their General Plan. Conversely General Plans are source documents as water suppliers update their UWMPs. These planning documents are linked and their accuracy and usefulness are interdependent. It is crucial that cities /counties and water suppliers work closely when developing and updating these planning documents.

### Special Recommendations

Because water suppliers face statutory time limits within which to provide water supply information, it is recommended that they check with planning staff from the cities and counties that the suppliers serve to see if the planning staff plan to process project permits requiring either water supply assessments or verifications of sufficient water supply.

It is also recommended that city and county planning staff immediately identify water suppliers serving their land-use planning area and determine the availability of water supply information to facilitate timely compliance with **SB 610** and **SB 221**.

Both **SB 610** and **SB 221** suggest that UWMPs may be a good source of information for developing water assessments and verifications. Therefore, it is recommended that each water supplier review its adopted UWMP to determine if the supply and demand analysis meets the requirements of these two laws, including the substantial evidence required by **SB 221**.

## Guidebook Structure

The guidebook is designed to provide step-by-step suggestions for completing an **SB 610** water assessment and an **SB 221** verification of sufficient water supply. It includes commonly accepted definitions and examples of various supply and demand scenarios.

The organization of the guidebook roughly follows the flow charts (see pages iii to vii) that reflect the procedural steps that would need to be undertaken to comply with **SB 610** and **SB 221**.

The guidebook can be printed from a PDF document or viewed on a computer screen. It is recommended that the guidebook be printed and placed in a three-ring binder so the reader can see two pages at once. The layout of the guidebook allows the user to read through the preparation directions on the right-hand page and view the related citations from the statute on the left-hand page.

Throughout the guidebook the term:

- Agency is used to refer to city and county governments for SB221.
- Lead agency is used to refer to city and county governments for **SB 610**.
- Water supplier is used to refer to water agencies, water districts, and other water providers.
- UWMP is used to refer to an Urban Water Management Plan
- Assessment is used to refer to an **SB 610** Water Supply Assessment
- Verification is used to refer to an **SB 221** Verification of Sufficient Water Supply

*Italicized* text indicates the actual wording of the identified law or statute.

Text surrounded by a border signifies information deserving special attention.

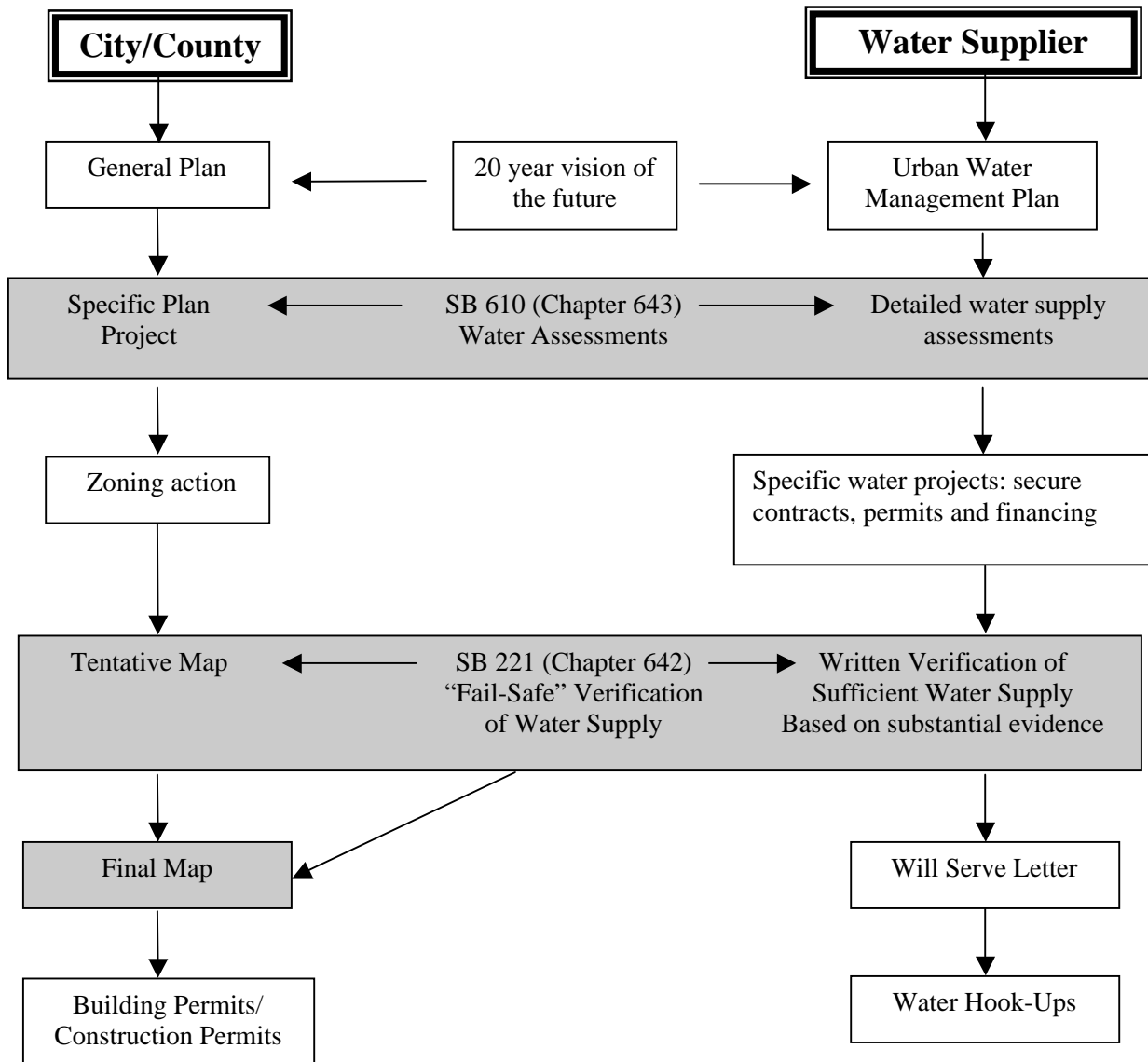
The full texts of **SB 221** and **SB 610** are included as attachments to this document and are available at the web site as either PDF or Microsoft Word documents

Frequently asked questions and responses are located on the Department of Water Resources, Office of Water Use Efficiency web site at: <http://www.owue/>

Please provide your suggestions for modifications to these planning tools so that this process continues to improve California's water management and planning capabilities. For assistance and to provide suggestions, please contact the Department of Water Resources, Office of Water Use Efficiency at [dtodd@water.ca.gov](mailto:dtodd@water.ca.gov).

## Two laws that integrate land use and water planning

The following chart illustrates the relationship between a local land use agency and a water supplier in their planning processes. The General Plan, prepared by a City or County Planning Department, and the Urban Water Management Plan prepared by a Water Supplier are the critical source documents used to substantiate the information required by **SB 610** and **SB 221** at the local level.



For additional information on either the *California Environmental Quality Act* or General Plan Guidelines, please refer to the publications available from the Governor's Office of Planning and Research at: [www.opr.ca.gov](http://www.opr.ca.gov).

For information and guidance related to the *Urban Water Management Planning Act*, please refer to the Department of Water Resources, Office of Water Use Efficiency available at: <http://www.owue/>.

## SB 610 Flowchart

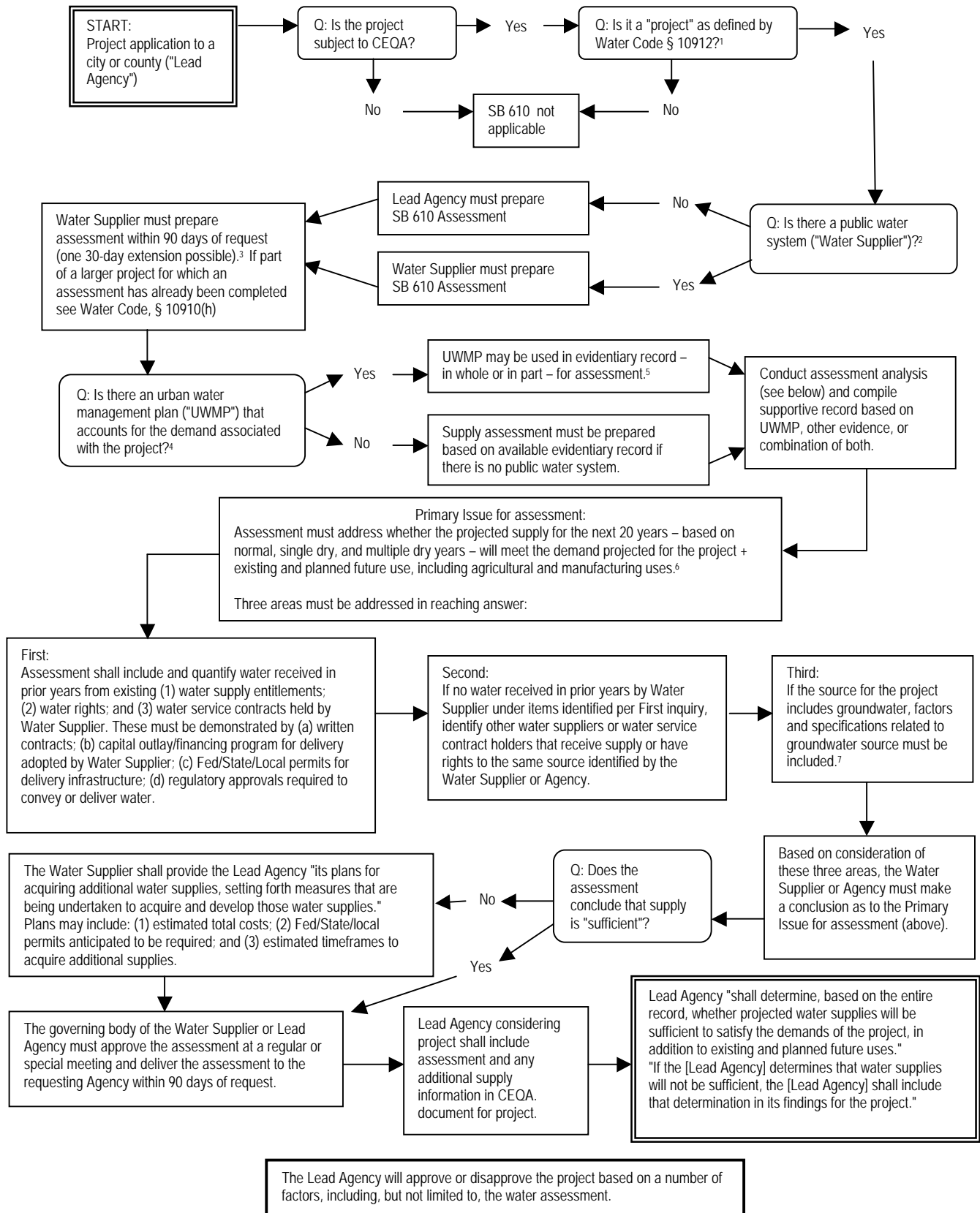


Chart Courtesy of the  
The Building Industry Legal Defense  
Foundation

**Footnote 1:**

California Water Code section 10912.

For the purposes of this part, the following terms have the following meanings:

- (a) "Project" means any of the following:
  - (1) A proposed residential development of more than 500 dwelling units.
  - (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
  - (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
  - (4) A proposed hotel or motel, or both, having more than 500 rooms.
  - (5) 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 square feet of floor area.
  - (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
  - (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.
- (b) If a public water system has fewer than 5,000 service connections, then "project" means 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 the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

**Footnote 2:**

California Water Code section 10912.

(c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:

- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.
- (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.
- (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption. It also means a system that will become a public water supplier if the project puts it over 3,000 service connections.

**Footnote 3:**

California Water Code section 10910, subdivision (g)(1).

**Footnote 4:**

The requirement for and contents of an urban water management plan are provided in California Water Code section 10631, as amended by SB 610 in 2001.

**Footnote 5:**

California Water Code section 10910, subdivision (c)(2) provides that the UWMP may be used, but it may or may not provide all of the information needed.

**Footnote 6:**

See California Water Code section 10910, subdivisions (c)(3) & (4); see also Government Code section 66473.7, subdivision (a)(2) [SB 221]

**Footnote 7:**

California Water Code section 10910, subdivision (f):

- (f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water assessment:
  - (1) A review of any information contained in urban water management plan relevant to the identified water supply for proposed project.
  - (2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.
  - (3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
  - (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
  - (5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.



## SB 221 Flowchart

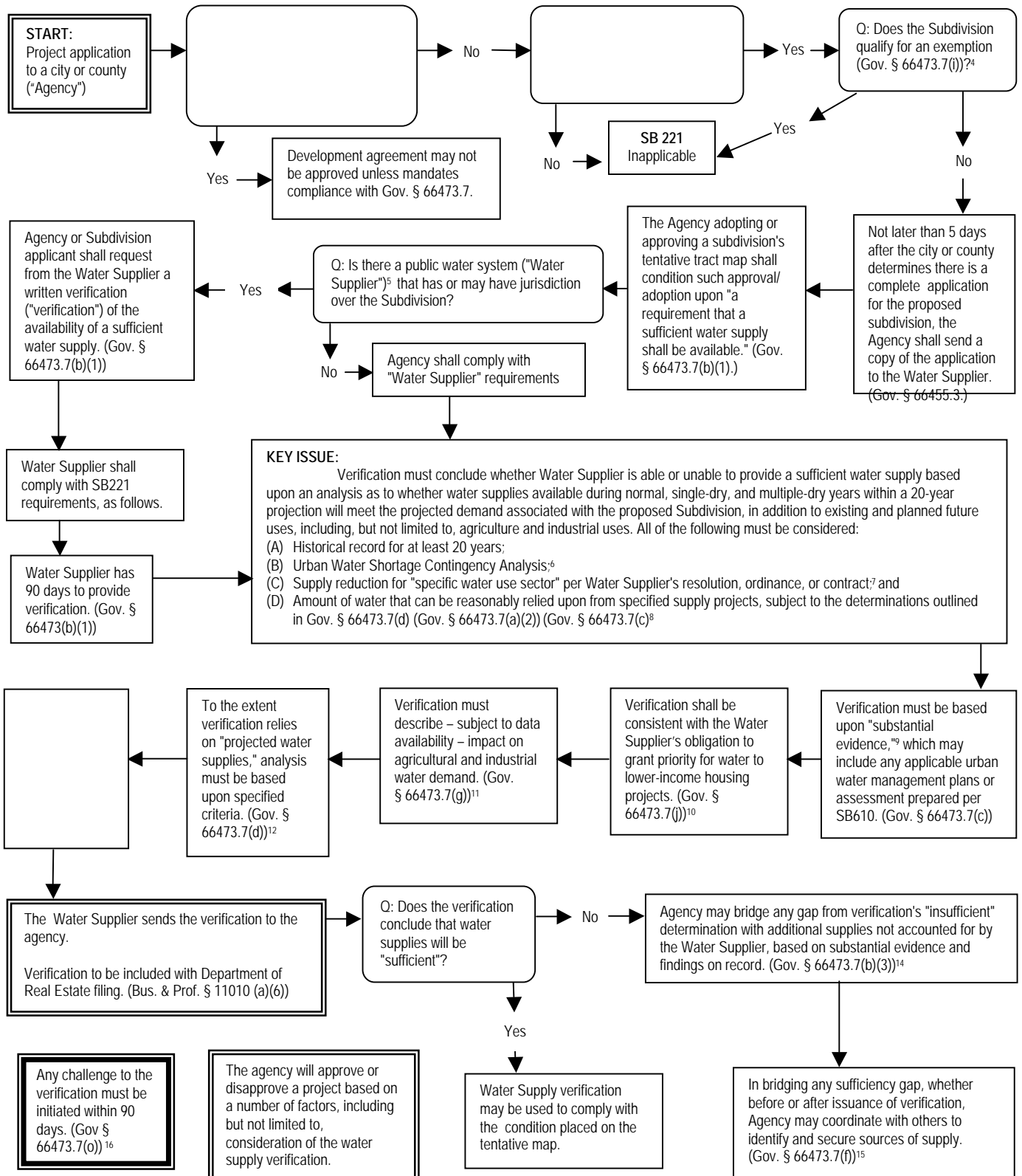


Chart Courtesy of the  
The Building Industry Legal Defense Foundation

## Notes for SB 221 Flowchart

**Footnote 1:** Gov. Code § 65867.5

**Footnote 2:** "Subdivision" is defined as follows per Government Code § 66473.7(a)(1): " 'Subdivision' means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, 'subdivision' means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections." See Government Code § 65867.5(c). (development agreements)

**Footnote 3:** See note 2.

**Footnote 4:** Gov. Code § 66473.7(i) provides an exemption for "infill" or "low-income or very-low-income" housing subdivisions as follows: "This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households."

**Footnote 5:** " 'Public water system' means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision." (Gov. Code § 66473.7(a)(3).) There may be one water supplier for a given project. For example there may be different providers for potable water versus reclaimed water versus groundwater.

**Footnote 6:** The Urban Water Shortage Contingency Analysis may be prepared pursuant to Water Code § 10632.

**Footnote 7:** Supply reduction resolution, ordinance, or contract may not conflict with Water Code § 354.

**Footnote 8:** Specifically, "The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)." (Gov. Code § 66473.7(a)(2)(D).) Subdivision (d) addresses evidentiary requirements for "projected" water supplies, and these requirements are listed in note 13.

**Footnote 9:** "The applicable public water system's written verification of its ability or inability to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision as required by subdivision (b) shall be supported by substantial evidence. The substantial evidence may include, but is not limited to, any of the following:

- (1) The public water system's most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.
- (2) A water assessment that was completed pursuant to Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.
- (3) Other information relating to the sufficiency of the water supply that contains analytical information that is substantially similar to the assessment required by Section 10635 of the Water Code." (Gov. Code § 66473.7(c).)

**Footnote 10:** "The determinations made pursuant to this section shall be consistent with the obligation of a public water system to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households, pursuant to Section 65589.7." (Gov. Code § 66473.7(j).)

**Footnote 11:** "The written verification prepared under this section shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the

same sources of water. To the extent that those reasonably foreseeable impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91-190) for the proposed subdivision, the public water system may utilize that information in preparing the written verification." (Gov. Code § 66473.7(g).)

**Footnote 12:** "When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:

- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.
- (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision." (Gov. Code § 66473.7(d).)

**Footnote 13:** "Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights." (Gov. Code § 66473.7(h).)

**Footnote 14:** "If the written verification provided by the applicable public water system indicates that the public water system is unable to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision, then the local agency may make a finding, after consideration of the written verification by the applicable public water system, that additional water supplies not accounted for by the public water system are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence." (Gov. Code. § 66473.7(b)(3).)

**Footnote 15:** "In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision." (Gov. Code § 66473.7(f).)

**Footnote 16:** "Any action challenging the sufficiency of the public water system's written verification of a sufficient water supply shall be governed by Section 66499.37." (Gov. § 66473.7(o).) Government Section 66499.37 states: "Any action or proceeding to attack, review, set aside, void or annul the decision of an advisory agency, appeal board or legislative body concerning a subdivision, or of any of the proceedings, acts or determinations taken, done or made prior to such decision, or to determine the reasonableness, legality or validity of any condition attached thereto, shall not be maintained by any person unless such action or proceeding is commenced and service of summons effected within 90 days after the date of such decision. Thereafter all persons are barred from any such action or proceeding or any defense of invalidity or unreasonableness of such decision or of such proceedings, acts or determinations. Any such proceeding shall take precedence over all matters of the calendar of the court except criminal.

## **Main Section**

## **Section 1 - Code citations development?**

## **Does SB 610 or SB 221 apply to the proposed**

SB 610

### **Water Code section 10910**

*(a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act Division 13 (commencing with Section 21000) of the Public Resources Code, under Section 21080 of the Public Resources Code shall comply with this part.*

### **Water Code section 10912**

*For the purposes of this part, the following terms have the following meanings:*

*(a) "Project" means any of the following:*

- (1) A proposed residential development of more than 500 dwelling units.*
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.*
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.*
- (4) A proposed hotel or motel, or both, having more than 500 rooms.*
- (5) 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 square feet of floor area.*
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.*
- (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.*

*(b) If a public water system has fewer than 5,000 service connections, then "project" means 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 the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.*

SB 221

### **Government Code section 65867.5**

*(c) A development agreement that includes a subdivision, as defined in section 66473.7, shall not be approved unless the agreement provides that any tentative map prepared for the subdivision will comply with the provisions of section 66473.7.*

### **Government Code section 66473.7**

*(a) For the purposes of this section, the following definitions apply:*

- (1) "Subdivision" means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.*

*(b) (1) 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.*

*(i) This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.*

## Section 1 Does SB 610 or SB 221 apply to the proposed development?

**Lead Agency (City or County) receives project application or complete application for a proposed subdivision.**

Is the project subject to SB 610?

**1-1** Is the project subject to CEQA? Water Code § 10910(a) Yes No

**If no**, see **SB 221** question 1-3, below

**If yes**, continue

**1-2** Is it a “project” as defined by Water Code § 10912(a) or (b)? Yes No

**If yes**, to comply with **SB 610** go to **Section 2, page 4** (**SB 221** may also apply – see below)

**If no**, see **SB 221** question 1-3 below

**Note:** In determining whether a project would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project, it is generally acknowledged that one acre-foot of water can serve two to three households on an annual basis; therefore, one dwelling unit typically consumes .3 to .5 acre-feet of water per year, depending upon several factors, including the regional climate. An agency should contact its local water supplier to obtain its advice on the annual water demand for a development within the local community in order to determine whether the water demand for the development under consideration is equivalent to the water demand of a 500 dwelling unit project. Water Code § 10912 (a)(7)

While Water Code § 10912(a) provides that a “project” may include a residential development of 500 or more dwelling units, Water Code § 10912(b) provides a “sliding scale” for determining the size of a project to which **SB 610** would apply, below 500 dwelling units. Since Section 10912(b) provides that a “project” is a proposed development that would increase the number of service connections for a public water system (which currently has fewer than 5,000 service connections) by 10 percent or more, a “project” could be as few as 300 dwelling units. For example, a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10% if it were required to serve a proposed residential development of 300 units, thus making the 300-unit development a “project” under **SB 610**. Similarly, for water utilities that have more than 3,000 service connections, but fewer than 5,000 service connections, the “10 percent test” in Water Code § 10912(b) would apply in determining whether a proposed development is a “project” under **SB 610**.

Is the project subject to SB 221?

**1-3** Does the tentative map include a “subdivision” as defined by Government Code § 66473.7(a)(1)?

Yes No

**If yes**, continue, go to **Section 9, Page 40**

**If no**, stop

**Note:** Government Code § 66473.7(a) provides that a “subdivision” consists of 500 or more dwelling units in order to be subject to **SB 221**, except that for a public water system that has fewer than 5,000 service connections, Government Code § 66473.7(a) provides a “sliding scale” for determining the number of dwelling units that would constitute a “subdivision,” below 500 dwelling units. Because Government Code § 66473.7(a) provides that a “subdivision” for a public water system with fewer than 5,000 service connections is a proposed development that would increase the number of service connections for a public water system by 10 percent or more, a “subdivision” could be as few as 300 dwelling units. For example a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10 percent if it were required to serve a proposed residential development of 300 units, thus making the 300-unit development a “subdivision” under **SB 221**. Similarly, for water utilities that have more than 3,000 service connections, but fewer than 5,000 service connections, the “10% test” in Government Code § 66473.7(a) would apply in determining whether a proposed development is a “subdivision” under **SB 221**.

**If neither SB 610 nor SB 221 applies, Stop – no further action required by SB 610 or SB 221**

Note: Special Provisions apply for San Diego County agencies and water suppliers. See Section 17, page 80 for more information. Government Code § 66473.7(k)

## Section 2 - Code citations

## Who will prepare the SB 610 assessment?

### Water Code section 10910

*(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.*

### Water Code section 10912

*(c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:*

- (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.*
- (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.*
- (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.*

### Water Code section 10910

- (c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).*
- (2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*

### Water Code section 10910

- (g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.*
- (2) Prior to the expiration of the 90 day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.*
- (3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water assessment.*

## Section 2 Who will prepare the SB 610 assessment?

**2-1** Is there a public water system (“water supplier”) for the project? Water Code § 10910(b)

Yes

No

A public water system that currently has fewer than 3,000, but would have 3,000 or more service connections as a result of providing water to the proposed project is required to prepare an assessment (Water Code § 10910(b), 10912((b), 10912(c)). Close attention will need to be paid to the number of existing service connections and the number of proposed service connections as a result of serving the proposed development, as well as the percentage increase in the number of service connections, in order to determine whether the water utility is a “public water system” and whether the proposed development is a “project” under **SB 610**. For example, a water utility with fewer than 3,000 service connections may become a “public water system” as a result of supplying water to the proposed development. In other words, a water utility with 2,700 existing service connections would become a “public water system” if it were to serve a proposed development of 400 dwelling units, and an increase in the number of service connections by 400 would also represent a greater than 10% increase in service connections for the water utility, thus making the proposed development subject to an **SB 610** water supply assessment by the water utility.

A public water system is defined in the Water Code as a system that has 3,000 or more service connections and provides piped water to the public for human consumption. Water Code § 10912(c)

**SB 610** (Water Code § 10912(c)) defines “public water system” as a water utility with 3,000 or more service connections. In addition, **SB 610** requires the city or county to identify the water system that is, or may become as a result of supplying water to the project, a public water system (Water Code § 10910(b)). This provision suggests that a water utility with fewer than 3,000 service connections currently could become a “public water system” if the number of service connections associated with the new development would increase the number of service connections served by the water utility to more than 3,000.

**If no**, the lead agency must prepare an **SB 610** assessment. Water Code § 10910(b) – **go to Section 3, page 6**  
If the lead agency is unable to identify a water supplier (public water system as defined in **SB 610**), the lead agency is responsible for compliance with the requirements of **SB 610**. Prior to preparing the assessment, the lead agency is required to consult with the following:

- Any entity serving domestic water supplies whose service area includes the project site
- The Local Agency Formation Commission
- Any public water system adjacent to the project site

Even though a water supplier may not be a “public water system” or become a “public water system” as a result of serving the proposed project, it will still be involved, in a consultation role, in the preparation of the assessment. Similarly, even though the water supplier’s service area may not include the project site, as long as its service area is adjacent to the project site, it will still be involved, in a consultation role, in the preparation of the assessment.

**If yes**, lead agency shall request each water supplier to determine whether the projected water demand associated with the proposed project was accounted for in the most recently adopted Urban Water Management Plan. If not, or if the water supplier has no Urban Water Management Plan, the lead agency shall request the water supplier to prepare an **SB 610** assessment. Water Code § 10910(c)

**Go to Section 3, page 6**

The water supplier must prepare the assessment within 90 days of request. The water supplier may request the lead agency to grant one 30-day extension. Water Code § 10910(g)

- a) The statute does not specify a time limit on the preparation of an assessment by the lead agency, if the lead agency is undertaking the assessment because there is no identified water supplier.
- b) If the assessment is not received from the water supplier within the prescribed 90-day period, and any requested time extension, the lead agency may seek legal relief. Water Code § 10910(g)(1)(2)(3)

### **Section 3 - Code citations**

### **Has an assessment already been prepared that includes this project?**

#### **Water Code section 10910**

*(h) Notwithstanding any other provision of this part, if a project has been the subject of a water assessment that complies with the requirements of this part, no additional water assessment shall be required for subsequent projects that were part of a larger project for which a water assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:*

- (1) Changes in the project that result in a substantial increase in water demand for the project.*
- (2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.*
- (3) Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.*



### **Section 3 Has an assessment already been prepared that includes this project?**

**3-1** Has this project already been the subject of an assessment? Water Code § 10910(h) Yes No

**If no**, water supplier or lead agency must prepare **SB 610** assessment. Water Code § 10910(b)  
**go to Section 4, page 8**

**If yes**, and ALL of the five factors listed below apply:

- the preparer of the assessment determines that it complies with the requirements of **SB 610**
- the assessment determined that sufficient water was available for the project
- there has been no change to the project that would result in a substantial increase in demand
- there has been no change in the circumstances or conditions which substantially affect the ability of the water supplier to provide a sufficient supply of water for the project
- no new information which might affect the assessment has becomes available

then, no additional assessment is required for this project for which the original assessment was prepared.

### **Assessment is complete – Stop**

Note: The completed assessment is ready for inclusion in the environmental documentation for the project.
---

Otherwise, if any of the five factors do not apply, then an assessment is required.

**Continue, go to Section 4, page 8**

The preparer of the verification or the assessment may be a water supplier, city or county. Wherever the term “water supplier” appears, the term “preparer” of the verification or assessment also applies.
---

**Water Code section 10910**

- (c) (1) *The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).*
- (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
- (3) *If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*
- (4) *If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

## Section 4 Is there a current Urban Water Management Plan?

**4-1** Is there an adopted urban water management plan (UWMP)? Water Code § 10910(c)

Yes

No

**If no**, assessment must be prepared based on available information. Water Code § 10910(c)(3)

Read following note and **go to Section 5, page 10**

If the water supplier will prepare the **SB 610** assessment (Water Code § 10910(c)(3), without the benefit of a UWMP, the assessment shall include a determination as to whether the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

If the lead agency will prepare the **SB 610** assessment (Water Code § 10910(c)(4), the assessment shall include a discussion as to whether the total projected water supplies, determined to be available during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

**If yes**, continue

**4-2** Is the projected water demand for the project accounted for in the most recent UWMP?

Water Code § 10910(c)(2)

Yes

No

**If yes**, information from the UWMP related to the projected water demand for the project may also be used for carrying out Section 5, Steps 1 and 2, and Section 7, as outlined in this guidance manual.

**Go to Section 5, page 10**

**If no**, assessment must be prepared based on either information contained within the UWMP and/or information available from other sources and reports. Water Code § 10910(c)(3)

**Go to Section 5, page 10**

## Section 5 - Code citations

## What information should be included in an assessment?

### Water Code section 10910

- (c) (2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
- (3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*
- (4) If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*
- (d)(1) 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.*
- (2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*
  - (A) Written contracts or other proof of entitlement to an identified water supply.*
  - (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) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
  - (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*
- (e) If no water has been 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, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water assessments.*

## Section 5 What information should be included in an assessment?

This section is written as if the water supplier is preparing the water assessment. If a lead agency is preparing the assessment, the same approach is used but the water supplies are those identified by the lead agency as available to meet the project's water demands. (Examples will be provided of how a lead agency assessment will differ from a water supplier assessment.)

The question to be answered is:

Will the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses?

If the water demand for the proposed project was accounted for in the most recently adopted UWMP, information from the UWMP related to the projected water demand for the project may also be used for carrying out Section 5, Steps 1 and 2, and Section 7, as outlined in this guidance manual. Water Code § 10910(c)(2)

The Urban Water Management Planning Act (Water Code § 10631 – see Appendix C) requires the supplier to document water supplies available during normal, single dry, and multiple dry water years during a 20-year projection and the existing and projected future water demand during a 20-year projection. The Act requires that the projected supplies and demands be presented in 5-year increments for the 20-year projection.

If the water demand for the proposed project was **NOT** accounted for in the most recently adopted UWMP,

- The water supplier must prepare an assessment that includes a discussion of whether the total projected water supplies determined to be available for the project during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses.
- A city or county, if not able to identify a public water system that may supply water for the project, must prepare an assessment that includes a discussion of whether the total projected water supplies determined to be available for the project during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses. Water Code § 10910 subdivisions (b) and (c)(3) and (4)

Supplies from all sources, including wholesaler supplies, require documentation. This documentation includes identifying and quantifying water rights, contracts, and/or entitlements to the supply; associated capital outlay programs; federal, state and local permits for constructing infrastructure for conveying the supply; and any necessary regulatory approvals required for conveyance.

## Section 5 - Code Citations

### Step One: Documenting wholesale water supplies

#### Water Code section 10910

- (d)(1) *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.*
- (2) *An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*
- (A) Written contracts or other proof of entitlement to an identified water supply.*
  - (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) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
  - (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*
- (e) *If no water has been 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, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water assessments.*

## Section 5

### Step One: Documenting wholesale water supplies

This section describes the documentation necessary for wholesale water supplies in **SB 610** water assessments.

Many retail water suppliers in California receive supplies from one or more water wholesalers. Under **SB 610**, retail water suppliers are responsible for providing the water assessment to the local agencies. In most cases, the retail water supplier will have better information on the supply availability and system constraints for a particular development project.

Under the requirements of Water Code § 10910 (d), retail water suppliers must document wholesale supplies by:

- 1) Describing the quantities of water received from each wholesaler in prior years.
- 2) Identifying any existing entitlements, water rights, and water service contracts held by the retail water supplier for the wholesale supply.
- 3) Providing written contracts or other proof of entitlements, water rights and service contracts for the wholesaler's supplies; copies of relevant capital outlay programs; federal, state and local permits for construction of necessary infrastructure associated with delivering the wholesale supplies, if any, and; regulatory approvals required in order to convey or deliver the wholesale supply.

If the retail water supplier has not received water supplies from the wholesaler in prior years, then Water Code § 10910 (e), Section 5, Step 2, page 16, may apply.

The retail water supplier should coordinate with the wholesaler in assembling the information necessary to meet the provisions for documenting wholesale supplies. Wholesalers may take varying roles in assisting retail agencies. One possible role is for the wholesaler to fully document its own supplies and demands for the wholesale supplies relied upon in the assessment. In some cases the wholesale supplier's most recent UWMP and related documents may provide valuable information in assembling the information required for the water assessment. Whatever the level of assistance, information provided by a wholesaler will only form one part of the retail water supplier's overall supply assessment.

In situations where one wholesaler sells water to another wholesaler, (sometimes referred to as a "sub-wholesaler"), the retail water supplier should coordinate gathering the necessary information on its wholesale supply with the sub-wholesaler. This may include gathering documentation from both wholesalers' Urban Water Management Plans and/or supplemental reports.

Documentation for groundwater supply is discussed below, see Section 5, Step 2. page 18.

## **Section 5 - Code Citations**

### **Step Two: Documenting supply**

See previous Code citations page



## Section 5

### Step Two: Documenting supply

Identify and quantify the existing and planned sources of water available to the water supplier in 5-year increments for the 20-year projection. For each identified supply detail the quantity available and whether it is a:

- (1) water supply entitlement
- (2) water right
- (3) water service contract

If any of the listed water sources have never have been used by the water supplier, demonstrate that the source is available by identifying other water suppliers or contract holders that receive and have rights, entitlements, or contracts to the same source. In addition, provide detailed information relating to the following:

- (a) written contracts or other proof of entitlement to the source
- (b) capital outlay/financing program for delivery adopted by the water supplier
- (c) federal/state/local permits for delivery infrastructure
- (d) regulatory approvals required to convey or deliver water

Sample Table 1 is an example of how supply source information might be summarized. It will be important to provide a detailed description of each source.

**Table 1 Annual amount under each right, entitlement, and/or contract**

Supply	AFY	Entitlement	Right	Contract	Ever used
Local Surface	9,300	X			Yes
Wholesaler 1	No limit			X	Yes
Wholesaler 2	4,900			X	No
Groundwater	2,300		X		Yes

Sample Table 2 is an example of how an assessment might summarize the past, current and projected deliveries from each supply source. It is important to develop realistic delivery projections. The entitlement, right or contract amount might overstate or understate the quantity of water that can actually be delivered during normal years. For instance, a contract may be for 5,000 acre feet per year but an additional 2,000 acre feet per year may be available until 2015 due to other contractors not needing full deliveries until that time.

**Table 2 Quantify water received in normal year – actual and projected (not maximum possible)**

Water Supply Sources	1980	1985	1990	1995	2000	2005	2010	2015	2020
Wholesaler (identify)									
Wholesaler (identify)									
Groundwater									
Local surface water									
Transfers									
Exchanges (in or out)									
Reclaimed Water									
Other (identify)									
<b>Total</b>									

## **Section 5 - Code citations**

### **Step Two: Documenting supply**

#### **If groundwater is a source**

##### **Water Code section 10910**

*(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water assessment:*

- (1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*
- (2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.*
- (3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
- (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
- (5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.*

## Section 5

### Step Two: Documenting Supply If groundwater is a source

If the water sources that will serve the project include groundwater, specific groundwater information must be included in the assessment. Amendments to the Urban Water Management Planning Act (Water Code § 10631 effective January 1, 2002) specify the data necessary to document available groundwater supplies. Water Code § 10631 and Water Code § 10910, effective January 1, 2002, require similar information, Water Code § 10910 limits the groundwater discussion to the basin or basins that will serve the proposed project. Groundwater information provided in response to Water Code § 10631 will generally also meet the groundwater requirements contained in Water Code § 10910 if the same basin(s) is (are) addressed. Water Code § 10631 adds a further requirement: "A detailed description and analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the urban water supplier." In addition, a parallel reference to the "sufficiency analysis" is also found in Water Code § 10910(f)(5): "An analysis of the sufficiency of the groundwater from the basin...to meet the projected water demand associated with the proposed project." It is recognized that many suppliers updated their UWMPs before January 1, 2002. Therefore, the plans may not include the groundwater information needed for the assessment. Suppliers can update the UWMP to include the groundwater information, or prepare a separate groundwater assessment for the water supply assessment that could also be a basis for a subsequent update to the UWMP.

Groundwater details (for the basin or basins which will provide water for the proposed project) required to be included in the UWMP include:

- (a) Specify if a groundwater management plan or any other specific authorization for groundwater management for the basin has been adopted and how it affects the water supplier's use of the basin.
- (b) The description of the groundwater basin may be excerpted from the groundwater management plan, from DWR Bulletin 118, California's Ground Water, or from some other document that has been published and that discusses the basin boundaries, type of rock that constitutes the aquifer, variability of the aquifer material, and total groundwater in storage (average specific yield times the volume of the aquifer).
- (c) In an adjudicated basin the amount of water the urban supplier has the legal right to pump should be enumerated in the court decision - attach a copy of the order or decree.
- (d) The Department of Water Resources has projected estimates of overdraft, or "water shortage," based on projected amounts of water supply and demand (basin management), at the hydrologic region level in Bulletin 160, California Water Plan Update. Estimates at the basin or subbasin level will be projected for some basins in Bulletin 118. If the basin has not been evaluated by DWR, data that indicate groundwater level trends over a period of time should be collected and evaluated.
- (e) If the evaluation indicates an overdraft due to existing groundwater extraction, or projected increases in groundwater extraction, describe actions and/or program designed to eliminate the long term overdraft condition .
- (f) If water supplier wells are plotted on a map, or are available from a geographic information system, the amount of water extracted by the water supplier for the past five years can be obtained from the Department of Health Services, Office of Drinking Water and Environmental Management. A useful DHS website is:  
<http://www.dhs.ca.gov/ps/ddwem/technical/dwp.dwpindex.htm>.
- (g) Description and analysis of the amount and location of groundwater pumped by the water supplier for the past five years. Include information on proposed pumping locations and quantities. . The description and analysis is to be based on information that is reasonably available, including, but not limited to, historic use records from DWR, and from other sources.
- (h) Analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the water supplier.

**SB 610** (Water Code § 10910(f)(5)) requires the water supplier to make a determination of the sufficiency of the groundwater from the basin to be used to supply the proposed project. If a determination that includes the proposed project was included in the Urban Water Management Plan, and that information is included in the assessment, no further data is required.

## **Section 5 - Code citations**

### **Step Two: Documenting supply**

#### **If the assessment relies on water supplies never before used**

##### **Water Code section 10910**

*(e) If no water has been 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, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water assessments.*

## **Section 5**

### **Step Two: Documenting supply**

#### **If the assessment relies on water supplies never before used**

If a water supplier, city or county identified existing water supply entitlements, rights, or contracts under which no water has been received in prior years, as a source of water supply for the proposed project in its assessment, it will need to identify other public water systems or water service contractors that receive a water supply, have existing entitlements, water rights, or water service contracts to the same source of water.

## Section 5 - Code citations

### Step Three: Documenting project demand (Project Demand Analysis)

#### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
- (3) *If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

#### Water Code section 10631 (Urban Water Management Plan Requirements)

- (a) *Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*
- (e) (1) *Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:*
- (A) *Single-family residential.*
  - (B) *Multifamily.*
  - (C) *Commercial.*
  - (D) *Industrial.*
  - (E) *Institutional and governmental.*
  - (F) *Landscape.*
  - (G) *Sales to other agencies.*
  - (H) *Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.*
  - (I) *Agricultural.*
- (2) *The water use projections shall be in the same five-year increments described in subdivision (a).*

## Section 5

### Step Three: Documenting project demand (Project Demand Analysis)

**SB 610** requires that an assessment document the water demand for existing uses, planned future uses and the proposed development.

Note:

If the proposed development was included as part of the projected water demand of the current Urban Water Management Plan, the water demand for the proposed development does not need to be separately analyzed as long as water demand for the purpose of the project has remained substantially the same.

The law (Water Code § 10910(c)(2)) states that if the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the water supplier may incorporate the requested information from the urban water management plan in preparing the assessment. The Urban Water Management Planning Act (Water Code § 10631) clearly specifies the data necessary to document the existing and projected future water demand during a -twenty year projection. The code requires that the projected demands be presented in five-year increments for the twenty year projection.

## **Section 5 - Code citations**

### **Step Three: Documenting project demand (Project Demand Analysis)**

#### **Definitions**

None



## Section 5

### Step Three: Documenting project demand (Project Demand Analysis)

#### Definitions

The following definitions of existing uses, planned future uses, proposed project use and agricultural and industrial uses are provided for your consideration only. Both **SB 610** and **SB 221** emphasize local control and decision-making and the information provided in this guidebook is not intended to infringe upon the planning discretion of the water supplier or lead agency.

Existing uses – demand related to current customers, and system uses/losses, during normal years (uses during single dry and multiple dry years will be discussed in Section 5, Step 4). Usually this projection will take account of historic use (during non-dry) years as well as any recent changes in demand characteristics, i.e., changes in per capita use, percentage of use by customer type, demographic variability, etc.).

Planned future uses – the lead agency, as the land-use agency, has information on planned development. Regular communication between the water supplier and lead agency will be essential to ensuring an accurate determination of sufficiency of water supply for future demand.

Planned future uses may include:

- projects that are expected to be completed during the same time frame as the proposed project. These include all new demands ranging from an individual single-family home to large-scale developments.
- proposed developments that have a reserved (or entitlement to) future water supply and are considered to be moving towards construction. Proposed projects that are included in a general or specific plan need not be included if the lead agency determines that they are not likely to begin construction during the period under consideration.
- projects which are not subject to local planning regulation – for example, US military installations, University of California, reservation lands of federally recognized Indian tribes, or lands held in trust for those tribes, etc.

Neither **SB 610**, nor **SB 221** defines planned future uses. However, it would be a reasonable interpretation that planned future uses are those that would be undertaken within the same time frame as the project under consideration. Each preparer of an assessment will determine what planned future uses it will include in the demand calculation to ensure that it is not identifying the same increment of water for more than one future use.

## Section 5 - Code citations

### Step Three: Documenting project demand (Project Demand Analysis) Detailing existing and planned future uses

#### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
- (3) *If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

#### Water Code section 10631

- (a) *Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*
- (e) (1) *Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:*
- (A) *Single-family residential.*
  - (B) *Multifamily.*
  - (C) *Commercial.*
  - (D) *Industrial.*
  - (E) *Institutional and governmental.*
  - (F) *Landscape.*
  - (G) *Sales to other agencies.*
  - (H) *Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.*
  - (I) *Agricultural.*
- (2) *The water use projections shall be in the same five-year increments described in subdivision (a).*

## Section 5

### Step Three: Documenting project demand (Project Demand Analysis) Detailing existing and planned future uses

A variety of demographic factors may affect water use. The Urban Water Management Planning Act lists several demographic factors to be detailed including current and projected population, climate, density, and the mix of customer types. The assessment may detail water use per identified water use sector as reported in the Urban Water Management Planning Act. The sectors are single-family residential, multifamily, commercial, industrial, institutional and governmental, landscape, sales to other agencies, agricultural and other (saline water intrusion barriers, groundwater recharge, conjunctive use, etc.). Showing the past, current and projected water use by sector is an effective way to show growth patterns. This allows a water supplier to more accurately predict future demand.

The following tables are provided as an example of how to present this type of data. These tables allow the required five-year increments for the 20-year projection to be clearly presented.

#### Population projections

Year	2000	2005	2010	2015	2020
Population					

#### Climate data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
avg precip													
avg temp													
ETO													

#### Water-use Sectors – use in acre-feet\* per year, actual and projected

Customer type	1990	1995	2000	2005	2010	2015	2020
Single Family							
Multifamily							
Commercial							
Industrial							
Institutional / gov.							
Landscape Irrigation							
Wholesale							
Agricultural							
Other (specify)							
<b>TOTAL</b>							

\*1 AF = 325,851 gallons/year (often demand in new projects is figured in gallons).

Tables with **bold** column headings represent information required by SB 610.

#### Water-use Sectors – number of connections, actual and projected (Not required by SB 610)

Customer type	1990	1995	2000	2005	2010	2015	2020
Single Family							
Multifamily							
Commercial							
Industrial							
Institutional / gov.							
Landscape Irrigation							
Wholesale							
Agricultural							
Other (specify)							
<b>TOTAL</b>							

## Section 5 - Code citations

### Step Four: Documenting dry year(s) supply

#### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*

*If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

## **Section 5**

### **Step Four: Documenting dry year(s) supply**

## Section 5 - Code citations

### Step Four: Documenting dry year(s) supply

#### Documenting dry year(s) supply for water suppliers with multiple sources

##### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*

*If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

##### Water Code section 10631 (Urban Water Management Plan requirements)

- (c) *Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*

- (1) An average water year.*
- (2) A single dry water year.*
- (3) Multiple dry water years.*

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*

Note: Water Code section 10632 requires that the Urban Water Management Plan include a water shortage contingency analysis.

##### Water Code section 10632 (Urban Water Management Plan requirements)

*10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier: (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage. (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply. (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster. (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning. (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply. (f) Penalties or charges for excessive use, where applicable. (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments. (h) A draft water shortage contingency resolution or ordinance. (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*

## Section 5

### Step Four: Documenting dry(s) year supply

#### Documenting dry year(s) supply for water suppliers with multiple sources

Single dry and multiple dry years are usually based on historic records from the watersheds that determine the water conditions to a particular supply. The information is often presented as a probability of exceedance or probability of occurrence, as discussed in the example below. Many water suppliers have multiple sources. One way to show how the total supply would be affected is to document how each individual supply will be affected by single dry and multiple dry years.

#### Example

Probability based estimates for Drake Reservoir supplies have been estimated in a similar manner as those for wholesaler supplies. The Drake Reservoir estimates are based on historical District supplies and the County's Big River Model. This model uses hydrologic data for the period of 1917 through 1993 to estimate reservoir water levels and system yields to the Drake Reservoir member agencies. Based on a review of this data, the District can expect to receive a supply of 9,321 acre feet per year during wet and normal years. During dry years (10 percent probability of occurrence) the Drake Reservoir supply is estimated to be 9,200 acre feet per year. During critical dry years (3 percent probability of occurrence) Drake Reservoir supplies are estimated to be 7,000 acre feet per year. The combined effects of Wholesaler and Drake Reservoir cutbacks on District water supplies are summarized below.

Percent Likelihood	Wet Year 30%	Normal Year 60%	Dry Year 10%	Critical Drought Year 3%
Demand (AFY)	15,000	16,000	17,000	17,000
Supply				
Groundwater	1,500	2,100	3,100	2,300
Drake Reservoir	9,421	9,421	9,200	7,000
West Water Project	<u>4,500</u>	<u>4,500</u>	<u>2,500</u>	<u>1,700</u>
Total	15,421	16,021	14,800	11,000

#### Projected supply (AF) available by source for single-dry and multiple-dry years

Source	Normal	Single Dry	Multiple - 2	Multiple - 3	Multiple - 4
Local Surface	9,300				
Wholesaler 1	NA				
Wholesaler 2	4,900				
Groundwater	1,100	2,300	2,300		
TOTAL					

## Section 5 - Code citations

### Step Five: Documenting dry year(s) demand

#### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*

*If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

#### Water Code section 10631 (Urban Water Management Plan requirements)

- (c) *Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*

- (1) An average water year.*
- (2) A single dry water year.*
- (3) Multiple dry water years.*

*For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*

Note: Water Code section 10632 requires that the Urban Water Management Plan include a water shortage contingency analysis.

#### Water Code section 10632 (Urban Water Management Plan requirements)

*10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier: (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage. (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply. (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster. (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning. (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply. (f) Penalties or charges for excessive use, where applicable. (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments. (h) A draft water shortage contingency resolution or ordinance. (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*



## Section 5

### Step Five: Documenting dry year(s) demand

Water use patterns change during dry years. Document expected changes to water demand by sector.

#### Water-use Sectors – use in acre-feet per year, projected

Customer type	Normal	Single dry	Multiple - 2	Multiple - 3
Single Family				
Multifamily				
Commercial				
Industrial				
Institutional / gov.				
Landscape Irrigation				
Wholesale				
Agricultural				
Other (specify)				
TOTAL				

## Section 6 - Code citations

## Is the projected water supply sufficient or insufficient for the proposed project?

### Water Code section 10910

- (c) (2) *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*
- (3) *If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.*

## Section 6 Is the projected water supply sufficient or insufficient for the proposed project?

Compare current and projected supply and demand for normal, single dry and multiple dry years. Water suppliers may want to make this comparison with and without the proposed project demand so that the impact of the project is clearly articulated. The tables provide examples of format.

### Comparison of current supply and demand for normal, single dry and multiple dry years

Current Supply & Demand	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Supply total					
Demand total					
Demand total (including proposed project)					
Difference					
Difference (including proposed project)					

### Comparison of 20 year projection of supply and demand for normal, single dry and multiple dry years

2025 Supply & Demand	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Supply total					
Demand total					
Demand total (including proposed project)					
Difference					
Difference (including proposed project)					

Water Supply and Demand Comparison table presents a comparison of the District's potable and raw water supplies and demands.

### Normal Year by source – current and projected water supply and demand comparison (acre feet per year)

Water Demands	2000	2005	2010	2015	2020
Potable Water	13,040	13,680	14,310	14,930	15,540
Raw Water	810	810	810	810	810
Reclaimed Reduction	0	0	-100	-200	-280
Total	13,850	14,490	15,020	15,540	16,070
Total (including proposed project)					
Water Supply					
Drake Reservoir	9,421	9,421	9,421	9,421	9,421
West Water Project	4,500	4,500	4,500	4,500	4,500
Wells	0	2,300	2,300	2,300	2,300
Total	13,921	16,221	16,221	16,221	16,221
Surplus or (Deficiency)	71	1,731	1,201	681	151
Surplus or (Deficiency) (including proposed project)					

## Section 7 - Code citations

## If the projected supply is determined to be insufficient

### Water Code section 10910

*(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.*

### Water Code section 10911

*(a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:*

- (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.*
- (3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.*

## Section 7 If the projected supply is determined to be insufficient

7-1 Does the assessment conclude that supply is “sufficient”? Yes No

If yes, water supplier governing body must approve assessment and deliver to lead agency  
Water Code § 10910(g)(1) – go to **Section 8, page 38**

The governing body of the water supplier must approve the assessment at a regular or special meeting and deliver the assessment to the requesting lead agency within 90 days of request.

If no, water supplier must include in its assessment its plan to acquire additional water supplies, and the water supplier governing body must approve the assessment and deliver it to the lead agency within 90 days of the request. Water Code § 10911(a)

**continue**

The water supplier must provide the lead agency “its plans for acquiring additional water supplies, setting forth measures that are being undertaken to acquire and develop those water supplies.” Plans may include (1) estimated total costs; (2) federal/state/local permits anticipated to be required; and (3) estimated timeframes to acquire additional supplies.

Note: Water Code § 10911(a) dealing with a water supplier’s plans to acquire additional supplies, calls for planning information which is similar to the information which must be provided in the assessment for existing supplies. (See Water Code § 10910(d)(2).) However, actions for acquiring new supplies, which are reflected in such plans, may or may not have progressed to the point of detailed planning or to the point at which compliance with CEQA would be required. The water supplier should indicate the status or stage of development of the actions identified in the plans it provides. Identification of a potential future action in such plans does not by itself indicate that a decision to approve, or to proceed with, the action has been made. If projected supplies are included in the water supply assessment and will be relied upon for a subdivision which will be subject to the provisions of **SB 221**, those projected supplies must also meet the requirements of Gov. Code § 6647.7(d). See discussion at Section 13, Step 1, page 55.

Lead agency, go to **Section 8, page 38**

Water supplier, **Stop** – **SB 610** responsibilities are complete

### Example of “Plans for Acquiring Additional Water Supplies”

#### Gravel Creek Groundwater Storage Project

##### SOURCE OF SUPPLY

The Gravel Creek Groundwater Storage Project (Gravel Creek Project) is planned to supply up to 500 acre-feet annually during normal and up to 1,500 acre-feet dry year conditions. During wet and/or surplus years, Bayside would replenish the groundwater with Drake Reservoir spill water and, if necessary, water purchases from outside the County.

##### EXPECTED SUPPLY CAPABILITY

It is estimated that the Gravel Creek aquifer can hold up to 20,000 acre-feet of additional water. This water could be extracted during normal and dry year conditions at a rate between 500 and 1,500 acre-feet per year.

**Section 7 - Code citations  
(continued)**

**If the projected supply is determined to be insufficient**

See previous Code citations page

## **Section 7 If the projected supply is determined to be insufficient (continued)**

### **RATIONALE FOR EXPECTED SUPPLY**

As a part of the Bayside supply strategy, the Gravel Creek Project could be used to meet normal year demands and to provide a dry-year buffer to meet demands when other supplies are reduced.

**Program Facilities:** The Gravel Creek Project would consist of four new injection wells and six new production wells.

**Historical Record:** Bayside's Board of Directors implemented the Gravel Creek Project in April 1999.

**Written Contracts or Other Proof:** The Gravel Creek Project has been implemented as a component of Bayside's Supply Reliability Plan. The following Actions have occurred:

- 1998 Memorandum of Understanding (MOU) between Bayside and the U. S. Bureau of Reclamation (USBR). This MOU describes the agreement by USBR to provide Bayside with up to 2,000 acre-feet annually of surplus spill water from Drake Reservoir
- April 1999 Board of Directors Adoption of the CEQA Document (Mitigated Negative Declaration) for the Gravel Creek Project at their regularly scheduled Board of Directors meeting
- June 2000 Board of Directors approved the Gravel Creek Project and appropriated an additional \$1.35 million for land acquisition, design, water quality monitoring, additional aquifer testing and other tasks. The Board authorized storage of up to 20,000 acre-feet of water, to begin in 2002

**Financing:** The capital cost of the Gravel Creek Project is estimated to be \$2.7 million. This budget is included in Bayside's ten-year capital budget and would be financed through a combination of bonds and water sales revenue.

**Federal, State and Local Permits for Construction:** Bayside has applied for the appropriate federal, state and local permits for construction and operation of the project. For example, Bayside is currently conducting long-term water quality baseline monitoring in support of a possible Source Water Permit application from the Department of Health Services. One injection and one production well were completed in accordance with New Albion County permitting procedures. These are examples of permits that might be needed, but for each project a determination needs to be made as to what permits are required for the particular proposal.

**Water Code section 10911**

*(b) The city or county shall include the water assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.*

*(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.*



## **Section 8    Final SB 610 assessment actions by lead agency**

The lead agency shall review the water supplier assessment of supply and must decide whether additional water supply information is needed for its consideration of the proposed project.

The lead agency must include the water supply assessment in the Negative Declaration or Draft Environmental Impact Report (environmental document) prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code. The lead agency may include in the environmental documentation the lead agency's evaluation of the assessment, additional supply information and any related documents.

If the lead agency decides that the water supply is insufficient, or the assessment from the water supplier concludes that the water supply for the proposed project is insufficient, the lead agency may still approve the project but it must include that determination, based on the entire record, in the findings for the project. It must include substantial evidence in the record to support its approval of the project.

The lead agency "shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses." The lead agency will approve or disapprove a project based on a number of factors, including but not limited to the water supply assessment.

Reminder: Environmental Impact Reports and Negative Declarations that contain a water supply assessment pursuant to § 110911(b) of the Water Code must also be sent to the State Clearinghouse in the Governor's Office of Planning and Research at: P.O. Box 3044, Sacramento, CA 95812-3044 pursuant to California Code of Regulations § 15205 and 15206.

## **Section 9 - Code citations**

## **Does SB 221 apply to this subdivision?**

### **Government Code section 65867.5**

*(a) A development agreement is a legislative act that shall be approved by ordinance and is subject to referendum.*

*(b) A development agreement shall not be approved unless the legislative body finds that the provisions of the agreement are consistent with the general plan and any applicable specific plan.*

*(c) A development agreement that includes a subdivision, as defined in Section 66473.7, shall not be approved unless the agreement provides that any tentative map prepared for the subdivision will comply with the provisions of Section 66473.7.*

### **Government Code section 66473.7**

*(a) For the purposes of this Section, the following definitions apply:*

- (1) "Subdivision" means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.*

### **Government Code section 66473.7.**

*(i) This Section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.*

## Section 9 Does SB 221 apply to this subdivision?

### Agency Action

#### Agency receives a project application for a residential development

##### Is the project subject to SB 221?

**9-1** Is there a development agreement for the project that includes a “subdivision” as defined in Government Code § 66473.7 (a)(1) Yes ☐ No ☐

**If yes**, the development agreement shall not be approved unless the agreement provides that any tentative map prepared for the subdivision will comply with the provisions of Government Code § 66473.7, **continue**

**If no**, **continue**

**9-2** Does the project include a “subdivision” as defined by Government Code § 66473.7(a)(1)? Yes ☐ No ☐

**If no**, **stop** - **SB 221** does not apply.

**If yes**, **continue**

Note: Government Code § 66473.7(a)(3), **SB 221** defines “public water system” as the water supplier that is, **or may become as a result of servicing the subdivision included in the tentative map**, a public water system as defined in Water Code section 10912. A water utility with fewer than 3,000 service connections currently would become a “public water system” if the number of service connections associated with the new subdivision would increase the number of service connections served by the water utility to more than 3,000.

Note: Government Code § 66473.7(a) provides that a “subdivision” consisting of 500 or more dwelling units is subject to **SB 221**, except that for a public water system that has fewer than 5,000 service connections, Government Code § 66473.7(a) provides a “sliding scale” for determining the number of dwelling units below 500 that would constitute a “subdivision,” subject to **SB 221**. Because Government Code § 66473.7(a) provides that a “subdivision” for a public water system with fewer than 5,000 service connections is a proposed development that would increase the number of service connections for a public water system by 10% or more, a “subdivision” could be as few as 300 dwelling units. For example a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10% if it were required to serve a proposed residential development of 300 units, thus making the 300-unit development a “subdivision” under **SB 221**. Similarly, for water utilities that have more than 3,000 service connections, but fewer than 5,000 service connections, the “10% test” in Government Code § 66473.7(a) would apply in determining whether a proposed development is a “subdivision” under **SB 221**.

The agency adopting or approving subdivision’s tentative tract map shall condition such approval/adoption upon “a requirement that a sufficient water supply shall be available.” Government Code § 66473.7(b)(1)

## **Section 10 - Code citations      Is the subdivision exempt from SB 221?**

### **Government Code section 66473.7**

*(i) This Section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.*

## Section 10 Is the subdivision exempt from SB 221?

### Agency Action

**10-1** Is the project in an urbanized area or exclusively for low-income households? Yes No

**If no**, carefully review the text of subsection (i) and consult with the local land use planning agency. Government Code, § 66473.7(i)

**If no, go to Section 11, page 44**

**If yes**, substantiate, **continue**

**10-2** Is the residential project exempt from **SB 221** because it is within an urbanized area and has been previously developed for urban uses? Government Code § 66473.7(i) Yes No

or

**10-3** Is the project proposed for a site where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses? Government Code § 66473.7(i) Yes No

**SB 221** emphasizes local decision-making regarding these two definitions.

#### Urbanized area and urban uses

1. The determination as to whether a project would qualify for the exemption will depend on how the agency defines “urbanized area” and “urban uses.” Public Resources Code § 21071 contains a definition of “urbanized areas” which the local agencies may choose to use in determining whether or not a project is in an “urbanized area”. Water suppliers should contact their local agency to determine how the terms “urbanized area” and “urban uses” are defined within the local community.

#### Very low and low-income households

2. Local governments define very low and low-income households in their general plan, specifically in the locally adopted Housing Element. The definition of very low and low income households is usually based on definitions established by the U.S. Department of Housing and Urban Development (HUD) and California Health and Safety Code § 50079.5, §50105, and §50093. Please see the California Department of Housing and Community Development (HCD) website for more details (<http://www.hcd.ca.gov/>). If the entire project falls under the categories as defined by HUD and HCD, then the proposed subdivision is exempt from **SB 221**. (Public Resources Code § 71080.14(b); See also Public Resources Code § 21080.10(c)(3) and § 21080.7(b)(2).)

**If yes**, document that the exemption criteria are met and **stop** - no further action required by **SB 221**

**If no**, the agency shall not approve any final map prepared for the subdivision until the agency governing body has received a written verification that satisfies the condition regarding a sufficient water supply that was placed on the tentative map.

**Continue**

To complete a **SB 221** verification **continue to Section 11, page 44**

## **Section 11 - Code citations**

## **Who will prepare the SB 221 verification of sufficient water supply?**

### **Government Code section 66473.7**

*(a) (3) “Public water system” means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision.*

### **Water Code section 10912**

*(c) “Public water system” means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following: (1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system. (2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system. (3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.*

### **Government Code section 66455.3.**

*Not later than five days after a city or county has determined that a tentative map application for a proposed subdivision, as defined in Section 66473.7, is complete pursuant to Section 65943, the local agency shall send a copy of the application to any water supplier that is, or may become, a public water system, as defined in Section 10912 of the Water Code, that may supply water for the subdivision.*

### **Government Code section 66473.7**

- (b) (1) 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.*
- (2) If the public water system fails to deliver the written verification as required by this section, the local agency or any other interested party may seek a writ of mandamus to compel the public water system to comply.*
- (4) If the written verification is not provided by the public water system, notwithstanding the local agency or other interested party securing a writ of mandamus to compel compliance with this section, then the local agency may make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.*
- (e) If there is no public water system, the local agency shall make a written finding of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) and identify the mechanism for providing water to the subdivision.*

## Section 11 Who will prepare the SB 221 verification of sufficient water supply?

### Agency Action

**11-1** Is there a water supplier that has or may have jurisdiction over the subdivision? Yes No

A water supplier that currently has fewer than 3,000 connections, but would have 3,000 or more connections as a result of providing water to the proposed project, is required to prepare a verification (Water Code § 10912(b), 10912(c)). Additionally, a water utility with fewer than 3,000 service connections may become a “public water system” as a result of supplying water to the proposed development (Government Code § 66473.7(a)(3)). For example, a water utility with 2,700 existing service connections would become a “public water system” if it were to serve a proposed development of 400 dwelling units, and an increase in the number of service connections by 400 would also represent a greater than 10% increase in service connections for the water utility, thus making the proposed development subject to an **SB 221** written verification by the water utility. Close attention will need to be paid to the number of existing service connections and the number of proposed service connections as a result of serving the proposed development, as well as the percentage increase in the number of service connections, in order to determine whether the water utility is a “public water system” and whether the proposed development is a “subdivision” under **SB 221**.

**If yes, read the following section and go to Section 12, page 46**

Not later than 5 days after receipt of a complete application for a proposed subdivision, the agency shall send a copy of the application to the water supplier or any water supplier that may become a “public water system” that may supply water for the subdivision. (Government Code § 66455.3). This notification does not constitute a request for verification but is meant to provide the water supplier with an early warning that a request for verification is imminent.

Starting on the day that the water supplier receives the request for verification from the lead agency or the project proponent, the water supplier has 90 days to provide the written verification to the agency. Government Code § 66473.7(a)(3) The verification shall comply with **SB 221** requirements.

If the water supplier does not provide the verification to the agency within 90 days of the request, the agency may seek a writ of mandamus to compel the water supplier to prepare and provide verification. (Government Code § 66473(b)(4)). It is recommended that the water supplier and agency communicate regularly during the 90-day preparation period so that the agency can assist the water supplier in case of difficulty.

If the water supplier does not provide the verification within 90 days, the agency may complete a verification that meets the requirements of the law. Government Code § 66473(b)(4)

**If no, agency must prepare SB 221 verification. Government Code § 66473(e) – go to Section 13, page 48**

Note: If the agency prepares the written verification, even if there is an existing water supplier, whose service area includes the proposed subdivision, because this supplier is unable or fails to do so, the agency must comply with all of the requirements of **SB 221**.

**Section 12 - Code citations      Has a verification already been prepared for this subdivision?**

**Government Code section 66473.7**

*(c) The applicable public water system's written verification of its ability or inability to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision as required by subdivision (b) shall be supported by substantial evidence. The substantial evidence may include, but is not limited to, any of the following:*

- (1) The public water system's most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.*
- (2) A water assessment that was completed pursuant to Part 2. 10 (commencing with Section 10910) of Division 6 of the Water Code.*
- (3) Other information relating to the sufficiency of the water supply that contains analytical information that is substantially similar to the assessment required by Section 10635 of the Water Code.*

Government Code § 66473.7(l): Nothing in this section shall preclude the legislative body of a city or county, or the advisory agency, at the request of the applicant from making the determinations required in this section earlier than required pursuant to subdivision (a). Note: The correct cross reference should be <b>subdivision (b) instead of subdivision (a)</b>
---



## Section 12 Has a verification already been prepared for this subdivision?

The law does not preclude the preparation of a verification of sufficient water supply at an earlier point in time. Government Code § 66473.7(l) The verification document must be prepared prior to the adoption of the final subdivision map.

The verification can use data from the most recently adopted Urban Water Management Plan and/or an **SB 610** assessment if the water demand for the proposed project was accounted for in these documents.

**12-1** Is there an urban water management plan (UWMP)? (Government Code § 66473.7)

Yes

No

**If yes**, the written verification of a sufficient water supply may use the Urban Water Management Plan and provide more information where necessary. **Continue**

**If no**, the written verification must be based on other information which provides substantial evidence which provides substantial evidence supporting the conclusions in the verification.

**SB 221** suggests that an Urban Water Management Plan (Gov. Code § 66473.7(c)) may be a good source of information for developing a verification. Therefore, it is recommended that each water supplier review its most recently adopted UWMP to determine if the supply and demand analysis will provide the substantial evidence to satisfy **SB 221**. The written verification must be supported by substantial evidence. That information can come from a variety of sources including an Urban Water Management Plan.

**SB 221** also suggests that an **SB 610** assessment may be a good source of information for developing verification. The water supplier should determine if any recently prepared **SB 610** assessments relating to the specific subdivision contain supply and demand analyses that meet the substantial evidence required by **SB 221**.

**Water supplier or agency, continue, go to Section 13, page 48**

## **Section 13 - Code citations      What information should be included in a verification?**

### **Government Code section 66473.7**

- (a) (2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*
- (f) In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision.*

## Section 13 What information should be included in a verification?

This section is written ‘as if’ the water supplier is preparing the verification. If an agency is preparing the verification, the same approach is used but the water supplies are those identified by the Agency as available to meet the subdivision’s water demands. (Examples will be provided of how Agency verification will differ from water supplier verification.)

Verification must demonstrate supply sufficiency by showing that water supplies available during normal, single dry, and multiple dry years within a 20-year projection will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agriculture and industrial uses. All of the following must be considered:

- Historical records for at least 20 years;
- Urban Water Shortage Contingency Analysis prepared for Urban Water Management Plan,
- Supply reduction for “specific water use sector” per water supplier’s resolution, ordinance, or contract, and
- Amount of water expected from specified supply projects. (Government Code § 66473.7(a)(2)(A-D).)

Verification must be based upon “substantial evidence,” possibly including relevant portions of an Urban Water Management Plan or **SB 610** assessment. Government Code § 66473.7(c)

The Urban Water Management Planning Act (Water Code § 10631 – see Appendix C) requires the supplier to document water supplies available during normal, single dry, and multiple dry water years during a 20-year projection and the existing and projected future water demand during a 20-year projection. The Act requires that the projected supplies and demands be presented in five-year increments for the 20-year projection.

If the water demand for the proposed subdivision was accounted for in the most recently adopted urban water management plan; the water supplier may incorporate information from the UWMP into the verification. (Government Code § 66473.3)

If the water demand for the proposed subdivision was accounted for in a **SB 610** assessment, the water supplier may incorporate information from the UWMP into the verification. (Government Code § 66473.3)

The next section contains sample tables and data to demonstrate one method to present the required data.

Supplies from all sources including wholesaler’s supplies, require documentation. This documentation includes identifying: water rights and/or contracts to the supply, associated capital outlay programs; federal, state and local permits for constructing infrastructure for conveying the supply, and; any necessary regulatory approvals required for conveyance.

Provisions for documenting groundwater are discussed below.

**Continue, go to Section 13, Step 1, page 50**

## Section 13 - Code citations

### Step One: Documenting supply

#### Government Code section 66473.7

- (a ) (2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*
- (d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:*
- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.*
  - (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.*
  - (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.*
  - (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.*

## Section 13

### Step One: Documenting supply

Documentation of annual historical deliveries should be provided for the previous 20 years. It would be useful to document deliveries from each supply source. Projected deliveries by source can be provided on a yearly basis or, similar to the UWMP, for years ending in 0 and 5. Projected deliveries should not be based on contract amount, maximum diversions, maximum groundwater extractions or other theoretical quantities but on projected availability and demand balanced with source utilization criteria (i.e., limiting groundwater extractions during wet or normal years to provide additional supply during dry years). For instance, a contract may be for 5,000 acre feet per year but an additional 2,000 acre feet per year may be available until 2015, due to other contractors not needing full deliveries until that time. This supply could be provided by another source after that time, but it would be necessary to document it by providing:

- (1) Written contracts or other proof of valid rights to the identified water supply that identifies the terms and conditions under which the water will be available to serve the proposed subdivision.
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.
- (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.

When the water supplier is relying on a landowner's rights to extract groundwater, the water supplier will also need to show (1) that the landowner's land overlies the particular groundwater basin, and (2) the landowner's rights to extract groundwater have been, or will be, provided or made available to the water supplier so that it can rely on them to serve the particular subdivision. This will usually be a factor only in an adjudicated basin or in basins where groundwater management plans have been adopted.

Note that Government Code § 66473.7 (g) requires the verification to contain a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. Agricultural and industrial businesses not using the public water supply may be using groundwater. However, it is important to note that this provision may have broader applicability than groundwater uses. For example, an agricultural user with riparian rights may be using the same surface water source as the water supplier. Each water supplier will need to evaluate the application of this provision given its own water supply situation. This provision requires the verification to review published records maintained by federal and state agencies and public records of local agencies to determine if the water use for the proposed subdivision will have negative impacts on agricultural and industrial users within the public water system's service area who are using the same source of water. To the extent that any reasonably foreseeable adverse impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91- 190) relevant to the proposed subdivision, the public water system may utilize that information in preparing the written verification.

Table 13a and 13b are examples of how verification might summarize the past, current and projected deliveries from each source. The text of the verification should specify whether any of the listed sources are projected sources not currently available.

## **Section 13 - Code citations**

### **Step One: Documenting supply (continued)**

See previous Code citations page

## Section 13

### Step One: Documenting supply (continued)

**Table 13a** Actual supply received (acre feet per year)

<b>Water Supply Sources</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
Wholesaler (identify)					
Wholesaler (identify)					
Groundwater					
Local surface water					
Transfers					
Exchanges (in or out)					
Reclaimed Water					
Other (identify)					
<b>Total</b>					

**Table 13b** Projected deliveries to meet projected demand (not maximum possible)

<b>Water Supply Sources</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>
Wholesaler (identify)					
Wholesaler (identify)					
Groundwater					
Local surface water					
Transfers					
Exchanges (in or out)					
Reclaimed Water					
Other (identify)					
<b>Total</b>					

Tables with bold column headings represent information required by SB 221.

If the water supplier has, or projects, future use of any of the listed supplies - conjunctive use, reclaimed water, water conservation, water transfers, CALFED sources, Colorado River tentative agreements, etc. – the verification should document those supplies as outlined in Government Code § 66473.7(d).

## **Section 13- Code citations**

### **Step One: Documenting supply**

#### **If groundwater is a source**

##### **Government Code section 66473.7**

*(g) The written verification prepared under this section shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. To the extent that those reasonably foreseeable impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91- 190) for the proposed subdivision, the public water system may utilize that information in preparing the written verification.*

*(h) Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights.*

##### **Water Code section 10631**

*(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*

- (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with section 10750), or any other specific authorization for groundwater management.*
- (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.*

*For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.*

- (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
- (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*



## Section 13

### Step One: Documenting supply If groundwater is a source

When a water supply for a proposed subdivision includes groundwater, the water supplier is required to evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. When the water supplier is relying on a landowner's rights to extract groundwater, the water supplier will need to show that (1) the landowner has a right to extract the groundwater, and (2) it will be available to the supplier to serve the subdivision.

Note that Government Code § 66473.7 (g) requires the verification to contain a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. Agricultural and industrial businesses not using the public water supply may be using groundwater. However, it is important to note that this provision may have broader applicability than groundwater uses. For example, an agricultural user with riparian rights may be using the same surface water source as the water supplier. Each water supplier will need to evaluate the application of this provision given its own water supply situation. This provision requires the verification to review published records maintained by federal and state agencies and public records of local agencies to determine if the water use for the proposed subdivision will have negative impacts on agricultural and industrial users within the public water system's service area who are using the same source of water. To the extent that any reasonably foreseeable adverse impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91- 190) relevant to the proposed subdivision, the public water system may utilize that information in preparing the written verification.

The verification must include a determination of the water supplier's ability to provide a sufficient water supply for the proposed subdivision and this can be based on substantial evidence from an UWMP, an **SB 610** assessment (Water Code § 10910), or other substantially similar evidence that would be provided to meet the requirements of the Urban Water Management Planning Act (Water Code § 10631-10635). Thus, if the water sources that will serve the project include groundwater, specific groundwater information must be included in the verification.

As amended in 2001 by the enactment of **SB 610**, the Urban Water Management Planning Act (Water Code § 10631) specifies the data generally necessary to document available groundwater supplies for proposed subdivisions subject to **SB 221** Government Code § 66473.7(h) limits the groundwater evaluation to the basin or basins that will serve the proposed subdivision. Information contained in the UWMP regarding groundwater may be useful to comply with this evaluation requirement. (See discussion at page 19)

Groundwater details required to be included in any UWMP adopted after January 1, 2002 include:

- a) Specify if a groundwater management plan or other specific authorization for groundwater management for the basin has been adopted and how it affects the water supplier's use of the basin.
- b) The description of the groundwater basin may be excerpted from the groundwater management plan, from DWR Bulletin 118, California's Ground Water, or from some other document that has been published and that discusses the basin boundaries, type of rock that constitutes the aquifer, variability of the aquifer material, and total groundwater in storage (average specific yield times the volume of the aquifer).
- c) In an adjudicated basin the amount of water the urban supplier has the legal right to pump should be enumerated in the court decision - attach a copy of the order or decree.
- d) The Department of Water Resources has projected estimates of overdraft, or "water shortage," based on projected amounts of water supply and demand (basin management), at the hydrologic region level in Bulletin 160, California Water Plan Update. Estimates at the basin or sub-basin level will be projected for some basins in Bulletin 118. If the basin has not been evaluated by DWR, data that indicate groundwater level trends over a period of time should be collected and evaluated.

## **Section 13 - Code citations**

### **Step One: Documenting supply**

#### **If groundwater is a source (continued)**

##### **Water Code section 10631**

*(h) Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights.*

## Section 13

### Step One: Documenting supply

#### If groundwater is a source (continued)

- e) If the evaluation indicates an overdraft due to existing groundwater extraction, or projected increases in groundwater extraction, describe actions and/or program designed to mitigate such impacts.
- f) If water supplier wells are plotted on a map, or are available from a geographic information system, the amount of water extracted by the water supplier for the past five years can be obtained from the Department of Health Services, Office of Drinking Water and Environmental Management. A useful DHS website is: <http://www.dhs.cahwnet.gov/ps/ddwem/dwsap/DWSAPindex.htm>
- g) Description and analysis of the amount and location of groundwater pumped by the water supplier for the past five years. Include information on proposed pumping locations and quantities. The description and analysis is to be based on information that is reasonably available, including, but not limited to, historic use records from DWR, and from other sources.
- h) Description and analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the water supplier.

**Below is a hypothetical example of how this could be addressed:**

#### Project Description

The Gravel Creek Project includes an office park and a 650 dwelling unit residential development. Estimated use of groundwater to serve the proposed subdivision will be 500 acre-feet per year. The project proponent has identified the American Water District as the water supplier for the proposed subdivision.

#### Condition of Basin

The proposed subdivision immediately overlies a groundwater basin that is part of an active conjunctive use program by the American water District. The basin is not currently adjudicated. Historical use of the basin has left it 20 feet below its historical average. The average water level has continued to fall over the past 5 years. Extractions from this basin have exceeded safe yield on average over the past 20 years. A basin management plan was established in 2000. The basin management plan describes several programs to reverse the historic overuse of the groundwater basin including voluntary reporting of use by agriculture and industry and an ongoing conjunctive use program implemented by the American Water District.

The attached Urban Water Management Plan by the American Water District provides current and past pumping rates and volumes for all well fields managed by the District, as well as information concerning the importation of surface water supplies as part of the conjunctive use program.

Overlying property owners and current appropriative rights holders are already using water equal to the safe yield of the basin. Any new development, to secure and demonstrate a right as an appropriator, would be required to secure an imported water supply. The imported water supply could then be banked in the basin and be used by the new development.

#### Proposed Water Supply

Estimated use of groundwater to serve the proposed subdivision will be 500 acre-feet per year. Expansion of existing Well Field A or establishment of a new well field is under evaluation within the Project EIR. The American Water District will be utilizing its existing water service contract to import an additional 700 acre-feet per year of surface water, which will be banked in the groundwater basin as part of the District's ongoing conjunctive use program.

## **Section 13 - Code citations**

### **Step One: Documenting supply**

#### **If groundwater is a source (continued)**

See previous Code citations page

## **Section 13**

### **Step One: Documenting supply**

#### **If groundwater is a source (continued)**

##### Evaluation of water right condition

The American Water District has been using the groundwater basin as a source of water supply to serve its existing customers, and intends to store an additional 700 acre-feet per year of surface water in the groundwater basin as part of its ongoing conjunctive use program. The proposed water demand for the subdivision would be 500 acre-feet of year, resulting in extractions from the groundwater basin, which would result in a net benefit to the groundwater basin of approximately 200 acre-feet per year. The American Water District would appear to have sufficient right to extract the necessary 500 acre-feet per year of water to serve the proposed subdivision, based on the parameters of the existing basin management program, the nature of the existing conjunctive use program implemented by American Water District, and the proposed importation of sufficient quantities of surface water to serve the proposed subdivision without decreasing availability of water supply for its existing customers.

## **Section 13 - Code citations**

### **Step One: Documenting supply**

#### **If verification relies on projected water supplies not currently available**

##### **Government Code section 66473.7**

*(d) When the written Verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:*

- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.*
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.*
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.*
- (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.*

## Section 13

### Step One: Documenting supply

#### If verification relies on projected water supplies not currently available

If the verification relies on water supplies that are not currently available to the water supplier the verification must substantiate that those supplies will be available when the water is needed.

For instance, if a water supplier plans to establish a long-term water transfer agreement but the agreement has not been completed, the following data is necessary to establish that the water will actually be available when the subdivision is completed

- The water supplier should indicate if it has a written contract that identifies the terms and conditions under which the water will be available to serve the proposed subdivision, i.e., the amount of water to be transferred per year, any exceptions, etc.

Note: This provision of **SB 221** is different than that in **SB 610** for “written contracts”. The duty to provide substantial evidence involves more than simply showing a contract; it requires identification of terms and conditions related to providing service to the proposed subdivision

- If the transfer will require a new or expanded delivery system, the water supplier should indicate if it has formally adopted a capital outlay program for financing the construction.
- The water supplier should indicate if it is securing all applicable federal, state and local permits required to secure and deliver the new water supply.
- The water supplier should indicate if any regulatory approvals are being secured.

If a water supplier receives water from a wholesale water agency, the water supplier will need information and documentation from the wholesaler to satisfy the requirements of **SB 221**.

**Below is a hypothetical example of how this could be addressed:**

#### Kanouse Canal Lining Project

##### Source of supply

The Kanouse Canal Lining Project can provide an annual supply that is delivered to Gotham’s service area in the Verde River Aqueduct. In 1988, Public Law 100-675 authorized the Secretary of the Interior to concrete line the Kanouse Canal. The Kanouse Canal Lining Project consists of lining 33 miles of the Kanouse Canal.. The law also authorized the Secretary to enter into a construction or funding agreement with the Kanouse Irrigation District.

##### Expected supply capacity

The Kanouse Canal Lining Project is expected to yield 76,000 acre-feet per year of supply to Gotham’s service area via the Verde River Aqueduct other than when surplus Verde River water is available for California’s use when KID elects to use such water and such use does not adversely affect Gotham. Gotham would receive 20,500 acre-feet per year from the Kanouse Canal Lining Project for up to 75 years. The water supply that would be available to Gotham is presented below:

Estimated Water Supplies Available for Gotham’s Use Under the Kanouse Lining Project (AFY)

Year	Multiple dry years (1990-1992)	Single dry year (1977 Hydrology)	Average year	Wet year (1985 Hydrology)
2005	20,500	20,500	20,500	20,500
2010	76,700	76,700	76,700	76,700
2015	76,700	76,700	76,700	76,700
2020	76,700	76,700	76,700	76,700

\*--Represents expected supply capability for the resource program.

## **Section 13 - Code citations**

### **Step One: Documenting supply**

**If verification relies on projected water supplies not currently available  
(continued)**

See previous Code citations page



## **Section 13**

### **Step One: Documenting supply**

#### **If verification relies on projected water supplies not currently available (continued)**

##### **Rationale for expected supply**

**Implementation Status:** A Request for Proposal for professional consulting services in the design of canals, project management support and environmental documentation services is scheduled to be issued in February 2003 for the Kanouse Canal Lining Project.

**Written Contracts:** The following actions have been taken to proceed toward project implementation.

- 1988, Public Law 100-675. Authorized the Department of the Interior to reduce seepage from the existing earthen Kanouse Canal.
- 2002 KID – City of Gotham Transfer Agreement Authorized
- 2001, California Department of Water Resources-Gotham Funding Agreement. Reimburse Gotham for project work necessary to construct the lining of the Kanouse Canal in an amount not to exceed \$73 million.

**Financing:** The construction of the Kanouse Canal is included in Gotham's long range financial plan and capital investment plan. Gotham would initially fund these projects. Up to \$200 million of the costs of constructing the projects would be reimbursed by the state of California in accordance with the executed funding agreements.

##### **Federal, state and local Permits for Construction:**

- April 2000. The Bureau of Reclamation released the Final EIS/EIR for the Kanouse Canal Lining Project.

## Section 13 - Code citations

### Step Two: Documenting demand

#### Government Code section 66473.7

- (a) (2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*

## Section 13

### Step Two: Documenting Demand

**SB 221** requires that the verification document the projected 20-year water demand for existing uses, planned future uses and the proposed development, as well as for agricultural, industrial and any other uses the water supplier can identify.

Water suppliers may need to consider the variability of agricultural water use. To document agricultural water use, water suppliers could also consult with the county agricultural commissioner to identify trends in irrigated acreage. To document industrial demand, a water supplier could consult with city and county planners, as well as any economic development agencies.

Note: If the proposed subdivision was included as part of the projected water demand in the current Urban Water Management Plan, the water demand component of the verification may draw from that existing analysis.

Demand during single dry and multiple dry years varies from demand during normal or wet years. Section 13, Step 4 discusses how the verification might deal with this variance.

## Section 13 - Code citations

### Step Two: Documenting demand

#### Definitions

##### Government Code section 66473.7

(a) *For the purposes of this section, the following definitions apply:*

- (1) *“Subdivision” means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, “subdivision” means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections.*
- (2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
  - (A) *The availability of water supplies over a historical record of at least 20 years.*
  - (B) *The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) *The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) *The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d).*
- (3) *“Public water system” means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision.*

## Section 13

### Step Two: Documenting demand

#### Definitions

The following definitions of existing uses, planned future uses, proposed project use and agricultural and industrial uses are provided for your consideration only. Both **SB 610** and **SB 221** emphasize local decision making and the information provided in these serves to provide examples. Local agencies may have adopted other definitions and should be consulted.

Existing uses – demand related to current customers, and system uses/losses, during normal years (uses during single dry and multiple dry years will be discussed in Section 5, Step four ). Usually this projection will take account of historical use (during non-dry) years as well as any recent changes in demand characteristics, i.e., changes in per capita use, percentage of use by customer type, demographic variability, etc.).

Planned future uses – the agency, as the land-use agency, has information on planned development. Regular communication between the water supplier and agency will be essential to ensuring an accurate determination of sufficiency of water supply for future demand.

Planned future uses may include:

- projects that are expected to be completed during the same time frame as the proposed project. These include all new demands ranging from an individual single-family home to large-scale developments.
- proposed developments that have a reserved (or entitlement to) future water supply and are considered to be moving towards construction. Proposed projects that are included in a general or specific plan need not be included if the agency determines that they are not likely to begin construction during the period under consideration.
- projects which are not subject to local planning regulation – for example, US military installations, University of California, etc.

Neither **SB 610** nor **SB 221** defines planned future uses. However, it would be a reasonable interpretation that planned future uses are those that would be undertaken within the same time frame as the project under consideration. Each preparer of an assessment will determine what planned future uses it will include in the demand calculation to insure that it is not identifying the same increment of water for more than one future use.

## Section 13 - Code citations

### Step Two: Documenting Demand

#### Detailing existing and planned future uses

##### Government Code section 66473.7

- (a )(2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*

## Section 13

### Step Two: Documenting demand

#### Detailing existing and planned future uses

##### Water-use Sectors – use in acre-feet per year, actual and projected

Customer type	1990	1995	2000	2005	2010	2015	2020
Single Family							
Multifamily							
Commercial							
Industrial							
Institutional / gov.							
Landscape Irrigation							
Wholesale							
Agricultural							
Other (specify)							
TOTAL							

##### Water-use Sectors – number of connections, actual and projected (Not required by **SB 221**)

Customer type	1990	1995	2000	2005	2010	2015	2020
Single Family							
Multifamily							
Commercial							
Industrial							
Institutional / gov.							
Landscape Irrigation							
Wholesale							
Agricultural							
Other (specify)							
TOTAL							

## Section 13 - Code citations

### Step Three: Documenting dry-year(s) supply

#### Government Code section 66473.7

- (a)(2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*



## Section 13

### Step Three: Documenting dry-year(s) supply

“The description of “Sufficient water supply” should provide a clear picture of a public water system’s current supply condition under normal, single dry and multiple dry years including any shortfall compared to demand. The definition of “sufficient water supply” allows latitude for water suppliers to use local discretion and planning scenarios when determining necessary supply and demand.

In developing supply projections, water agencies should take into account the latest urban water shortage contingency analysis done pursuant to water code section 10632. This analysis should include an estimate of the minimum water supply available during each of the next three years based on the driest three-year historical sequence for the agency’s water supplies. Different sources of water supplies will have different historical dry year sequences and different yields during multiple year drought conditions based on hydrology, available storage, contract entitlements, water right characteristics, etc. In some cases there is not a direct correlation between hydrology and available water supply (e.g., groundwater, recycled water, water transfers, conservation, desalination). Alternative methodologies can be developed for these supplies that would provide an estimate of reasonably available water supplies.

This provision is not intended to preclude projected water supplies that can be reasonably relied upon, so long as there is substantial evidence put on the record that demonstrates that the projected water supplies will likely be available by the time the housing units are ready for construction. The statute does not require that water needed for new development must already be stored and available for delivery, in order for a local agency to approve a final subdivision map. The statute allows for the water supply to be in the planning phase, as long as a demonstration can be made that substantial progress is being made to bring the water supply on-line by the time the subdivision is ready for construction. Therefore, specific projects emerging from long-range planning regarding conjunctive use; reclaimed water; water conservation; water transfers; and federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, can be cited within the written verification as long as the projected water supplies meet the test provided in Section 66473.7(d).

#### Example

Probability based estimates for Drake Reservoir supplies have been statistically calculated based on the County’s Big River Model. This model uses hydrologic data for the period of 1917 through 1993 to estimate Drake reservoir inflow and water levels and projected deliveries to member agencies. Based on a review of this data, the District can expect to receive a full contractual supply of 9,300 acre feet per year during wet and normal years. During dry years (10 percent probability of occurrence) the Drake Reservoir District deliveries are estimated to be 8,400 acre feet per year. During critical dry years (5 percent probability of occurrence) Drake Reservoir District deliveries are estimated to be 4,200 acre feet per year. The combined effects of wholesaler and Drake Reservoir cutbacks on District water supplies are summarized in Table 5-3.

Percent Likelihood	Wet Year 25%	Normal Year 60%	Dry Year 10%	Critical Drought Year 5%
Demand (AFY)	16,900	15,000	15,500	14,000
Supply Groundwater	0	1,500	2,500	3,300
Drake Reservoir	9,400	9,300	8,400	4,200
West Water Project	<u>7,500</u>	<u>4,500</u>	<u>2,500</u>	<u>1,700</u>
Total	16,900	15,300	13,900	9,200

#### Projected acre feet per year available by source for single dry and multiple dry years

Source	Normal	Single-Dry	Multi-dry 1	Multi-dry 2	Multi-dry 3
Local Surface	9,300	9,300	9,300	8,400	4,200
WWP	4,500	1,700	1,700	2,500	3,200
Groundwater	1,500	2,500	2,500	3,300	3,300
Water bank		1,000	1,000	300	2,500
<b>TOTAL</b>	15,300	14,500	14,500	14,500	13,200

## Section 13 - Code citations

### Step Four: Documenting dry-year(s) demand

#### Government Code section 66473.7

- (a) (2) “Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:
- (A) The availability of water supplies over a historical record of at least 20 years.
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)

#### Water Code section 10632 (Urban Water Management Plan requirements)

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier: (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage. (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply. (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster. (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning. (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply. (f) Penalties or charges for excessive use, where applicable. (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments. (h) A draft water shortage contingency resolution or ordinance. (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

## Section 13

### Step Four: Documenting dry-year(s) demand

Water use patterns change during dry years. One way to analyze this is to document expected changes to water demand by sector. Calculating the demand component of a 'sufficient water supply', a water agency may take into account those planned reductions in water deliveries contemplated by that agency's water rationing program, if the water agency has one, for responding to water supply shortages associated with droughts. In other words, in determining a 'sufficient water supply', a water agency is not required to plan to provide its customers 100 % of what they delivered during a 'normal' water supply year. Rather, for the purposes of calculating whether or not the water agency is able to take on additional customers without putting existing customers at risk, a water agency may estimate the reductions in supply that customers can endure during future droughts, without experiencing unnecessary hardships or costs. Water agencies may already have in place policies, ordinances, or contracts stipulating drought year supply allocations by water use sector. To the extent these are consistent with water code section 354 they should be considered when determining sufficient water supply.

The urban water shortage contingency analysis also requires the water supplier to have a plan for catastrophic interruptions of water supplies authorizing reductions of up to 50%. While disaster response planning is important, it is entirely different from long-term water supply planning to accommodate growth. Levels of reduction approaching 50% may be necessary for catastrophe planning, but are entirely inappropriate for long-term water supply planning. This level of reduction, for long-term water supply planning, would not provide protection to the water supply needs of existing users.

Factors that can change water use patterns during dry years include educational efforts and rationing policies established in water shortage contingency plans. An urban water shortage contingency analysis can have both voluntary and mandatory rationing during water supply shortages to help control consumption. Rationing requirements should be reasonably achievable for customers to encourage reductions in consumption. A typical rationing sequence would begin with voluntary rationing. In the second or third year of an extended drought, mandatory rationing might be expected. The 50% rationing limit described in Water Code Section 10632, while achievable over a relatively short time period, should be reserved for disaster planning rather than drought planning as it would put many customers under duress and may hinder the goal of consumption reduction over an extended drought period. **SB 221** is designed to protect existing customers' water needs while accommodating future development within the means of the water provider.

#### Water-use Sectors – use in acre-feet per year, projected

Customer type	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Single Family					
Multifamily					
Commercial					
Industrial					
Institutional / gov.					
Landscape Irrigation					
Wholesale					
Agricultural					
TOTAL					

#### Planned water-use reductions by sector – percentage target reduction

Customer type	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Single Family					
Multifamily					
Commercial					
Industrial					
Institutional / gov.					
Landscape Irrigation					
Wholesale					
Agricultural					
TOTAL					

## Section 14 - Code citations

## Determining if the projected water supply is sufficient for the subdivision

### Government Code section 66473.7

- (a) (2) *“Sufficient water supply” means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining “sufficient water supply,” all of the following factors shall be considered:*
- (A) The availability of water supplies over a historical record of at least 20 years.*
  - (B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.*
  - (C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.*
  - (D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d)*

## Section 14 Determining if the projected water supply is sufficient for the subdivision

Compare current and projected supply and demand for normal, single dry and multiple dry years. Water suppliers may want to make this comparison with and without the proposed subdivision demand so that the impact of the project is clearly calculated. The tables provide examples of format.

### Water Supply and Demand Comparison (acre feet per year) during normal years with proposed subdivision

Water Demands	2000	2005	2010	2015	2020
Potable Water	13,040	13,980	14,610	15,230	15,840
Reclaimed Reduction*	0	0	100	200	280
Total	13,040	13,980	14,710	15,430	16,120
Water Supply					
Drake Reservoir	9,300	9,300	9,300	9,300	9,300
West Water Project	4,500	4,500	4,500	4,500	4,500
Wells	0	300	1000	1800	2500
Total	13,800	14,100	14,800	15,600	16,300
Surplus or Deficit	760	120	90	170	180

\*Potable water not used due to use of reclaimed water.

### Water Supply and Demand Comparison (AFY) during normal years without proposed subdivision

Water Demands	2000	2005	2010	2015	2020
Potable Water	13,040	13,680	14,310	14,930	15,540
Reclaimed Reduction	0	0	100	200	280
Total	13,040	13,680	14,410	15,130	15,820
Water Supply					
Total	13,800	14,100	14,800	15,600	16,300
Surplus or Deficit	760	420	390	470	480

### Water Supply and Demand Comparison (AFY) during single and multiple dry years with proposed subdivision

2025 Supply & Demand	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Supply totals					
Demand totals					
Difference					

### Water Supply and Demand Comparison (AFY) during single and multiple dry years without proposed subdivision

2025 Supply & Demand	Normal	Single dry	Multiple 2	Multiple 3	Multiple 4
Supply totals					
Demand totals					
Difference					

## **Section 15 - Code citations      If the projected supply is determined to be insufficient**

### **Government Code section 66473.7**

- (b) (3) If the written verification provided by the applicable public water system indicates that the public water system is unable to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision, then the local agency may make a finding, after consideration of the written verification by the applicable public water system, that additional water supplies not accounted for by the public water system are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.*
- (d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:*
- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.*
  - (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.*
  - (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.*
  - (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.*
- (f) In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision.*

## **Section 15 If the projected supply is determined to be insufficient**

### **Agency Action**

If the written verification provided by the water supplier, or by the agency, indicates that the water supply is insufficient to meet the projected demand associated with the proposed subdivision, then the agency may make a finding, after consideration of the written verification, that additional water supplies not accounted for in the verification are, or will be, available prior to completion of the subdivision that will meet the demands of the subdivision. This finding must be made on the record and supported by substantial evidence. Generally, if an agency identifies a supply that was not accounted for in the verification it will be a supply that is not currently available or not currently being used. In this situation, the substantial evidence supporting the finding should comply with Government Code 66473.7(d).

That means that the agency would have to provide information relating to:

- (1) Written contracts or other proof of valid rights to the identified water supply which identify the terms and conditions under which the water will be available to serve the proposed subdivision.
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.
- (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.

### **Project Applicants, Local Agencies and Public Water Suppliers Working Together to Secure Additional Water Supplies**

Section 66473.7 (f) creates the potential for a unique partnership between water suppliers, project applicants and local agencies. The intent of the statute is to encourage close cooperation in acquiring additional water supplies. Although the statute specifically authorizes a local agency to identify and acquire the projected water supplies under several specified circumstances, the statute also clearly states that the water agency will have the final say on the suitability of any such water supplies for delivery. In order for a local agency to successfully secure needed supplies, it is imperative that local agencies, project applicants, and water suppliers work in collaboration, maintaining close communication during the planning process. To this end, any of these agencies are empowered to negotiate for water supplies. Issues to consider include water quality, delivery logistics, cost, and reliability over different water year types.

## Section 16 - Code citations      Final SB 221 verification actions by agency

### Government Code section 66473.7

- (b) (1) *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.*
- (2) *If the public water system fails to deliver the written verification as required by this section, the local agency or any other interested party may seek a writ of mandamus to compel the public water system to comply.*
- (4) *If the written verification is not provided by the public water system, notwithstanding the local agency or other interested party securing a writ of mandamus to compel compliance with this section, then the local agency may make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.*
- (e) *If there is no public water system, the local agency shall make a written finding of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) and identify the mechanism for providing water to the subdivision.*
- (j) *The determinations made pursuant to this section shall be consistent with the obligation of a public water system to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households,* pursuant to Section 65589.7.



## Section 16 Final SB 221 verification actions by agency

A written verification, supported by substantial evidence, must be provided before a final subdivision map may be approved. This verification may be requested by the local agency or by the applicant at the discretion of the local agency. It must show that there is sufficient water to meet the water demands of the proposed subdivision and existing and planned future uses for the next 20 years.

A verification may be requested at any time and an applicant may wish to secure and include it when a tentative subdivision map is submitted for approval to the city or county decision making body.

If the verification determines the water supply is sufficient, use of the water for the proposed subdivision must be determined to be consistent with the obligation of the water supplier to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households, pursuant to Government Code § 65589.7.

If the verification finds that the water supplier will be unable to provide a sufficient water supply, and the local agency is unable to find that sufficient additional supplies will be available prior to the completion of the subdivision, then the tentative map condition will not be met and the subdivision cannot receive final approval.

Although the water supply verification required by Government Code § 66473.7(b)(1) may be requested at any time, it may be advisable to seek it before a tentative map application is completed. The project proponent should know the parameters of available water supplies before committing to a project of a specific size and configuration.

Any challenge to the verification must be initiated within 90 days of the agency action.
--

<p>Summary:</p>
-----------------

- |   |
|---|
| <ol style="list-style-type: none"><li>1. The Subdivision Map Act now requires local governments to impose on all tentative subdivision maps which are subject to the provisions of <b>SB 221</b> the condition that there be sufficient water for the project, along with existing and planned uses.</li><li>2. This condition is met by a verification showing the specific items listed in the Government Code, depending on whether or not new water supplies will be required.</li><li>3. The verification must in any event be supported by substantial evidence.</li><li>4. A final map may not be filed if the condition has not been met.</li></ol> |
|---|

## **Section 17 - Code citations      Special circumstances**

### **SB 610**

#### **Water Code section 10915**

*The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:*

- (a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.*
- (b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.*
- (c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.*
- (d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.*
- (e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.*
- (f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.*
- (g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water assessment that is prepared pursuant to Section 10910.*

### **SB 221**

#### **Government Code section 66473.7**

*(k) The County of San Diego shall be deemed to comply with this section if the Office of Planning and Research determines that all of the following conditions have been met:*

- (1) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C as approved by the voters of the County of San Diego in November 1988, which required the development of a regional growth management plan and directed the establishment of a regional planning and growth management review board.*
- (2) Each public water system, as defined in Section 10912 of the Water Code, within the County of San Diego has adopted an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) of the Water Code.*
- (3) The approval or conditional approval of tentative maps for subdivisions, as defined in this section, by the County of San Diego and the cities within the county requires written communications to be made by the public water system to the city or county, in a format and with content that is substantially similar to the requirements contained in this section, with regard to the availability of a sufficient water supply, or the reliance on projected water supplies to provide a sufficient water supply, for a proposed subdivision.*

## **Section 17 Special circumstances**

Lead agencies and water suppliers within the County of San Diego are deemed to comply with **SB 610** if the Governor's Office of Planning and Research determines that certain conditions have been met. If such a determination is made, lead agencies and water suppliers within the County of San Diego must still include information that accomplishes the same purposes as a water assessment prepared pursuant to Water Code § 10910. Until such a determination is made, agencies and water suppliers within the County of San Diego are subject to all statutory requirements.

Agencies and water suppliers within the County of San Diego are deemed to comply with **SB 221** if the Governor's Office of Planning and Research determines that conditions have been met. If such a determination is made, agencies and water suppliers within the County of San Diego must still provide written communications to be made by the public water system to the city or county, in a format and with content that is substantially similar to the requirements contained in Government Code § 66473.7, with regard to the availability of a sufficient water supply, or the reliance on projected water supplies to provide a sufficient water supply, for a proposed subdivision. Until such a determination is made, agencies and water suppliers within the County of San Diego are subject to all statutory requirements.

# **Appendix A**

## **Chapter 643, Statutes of 2001 (Senate Bill 610)**

# Chapter 643, Statutes of 2001 (Senate Bill 610)

An act to amend Section 21151.9 of the Public Resources Code, and to amend Sections 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal Section 10913 of, and to add and repeal Section 10657 of, the Water Code, relating to water. Approved by Governor October 9, 2001. Filed with Secretary of State October 9, 2001.

The people of the State of California do enact as follows:

**SECTION 1. (a) The Legislature finds and declares all of the following:**

(1) The length and severity of droughts in California cannot be predicted with any accuracy.

(2) There are various factors that affect the ability to ensure that adequate water supplies are available to meet all of California's water demands, now and in the future.

(3) Because of these factors, it is not possible to guarantee a permanent water supply for all water users in California in the amounts requested.

(4) Therefore, it is critical that California's water agencies carefully assess the reliability of their water supply and delivery systems.

(5) Furthermore, California's overall water delivery system has become less reliable over the last 20 years because demand for water has continued to grow while new supplies have not been developed in amounts sufficient to meet the increased demand.

(6) There are a variety of measures for developing new water supplies including water reclamation, water conservation, conjunctive use, water transfers, seawater desalination, and surface water and groundwater storage.

(7) With increasing frequency, California's water agencies are required to impose water rationing on their residential and business customers during this state's frequent and severe periods of drought.

(8) The identification and development of water supplies needed during multiple-year droughts is vital to California's business climate, as well as to the health of the agricultural industry, environment, rural communities, and residents who continue to face the possibility of severe water cutbacks during water shortage periods.

(9) A recent study indicates that the water supply and land use planning linkage, established by Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code, has not been implemented in a manner that ensures the appropriate level of communication between water agencies and planning agencies, and this act is intended to remedy that deficiency in communication.

(b) It is the intent of the Legislature to strengthen the process pursuant to which local agencies determine the adequacy of existing and planned future water supplies to meet existing and planned future demands on those water supplies.

**SEC. 2. Section 21151.9 of the Public Resources Code is amended to read:**

21151.9. Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division, it shall comply with Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

**SEC. 3. Section 10631 of the Water Code is amended to read:**

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be

based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (1) An average water year.
- (2) A single dry water year.
- (3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
- (I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a). (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.
- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of such savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and non-economic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase

in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the “Memorandum of Understanding Regarding Urban Water Conservation in California,” dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

**SEC. 3.5. Section 10631 of the Water Code is amended to read:**

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier’s water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years. For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.



(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
- (I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.
- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 4. Section 10656 of the Water Code is amended to read:

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

**SEC. 4.3. Section 10657 is added to the Water Code, to read:**

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

**SEC. 4.5. Section 10910 of the Water Code is amended to read:**

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) 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.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

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

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

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been 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, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.

**SEC. 5. Section 10911 of the Water Code is amended to read:**

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(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.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

**SEC. 6. Section 10912 of the Water Code is amended to read:**

10912. For the purposes of this part, the following terms have the following meanings:

(a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) 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 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(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.

(b) If a public water system has fewer than 5,000 service connections, then “project” means 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 the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

(c) “Public water system” means a system for the provision of piped water to the public for human consumption that has 3000 or more service connections. A public water system includes all of the following:

(1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.

(2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.

(3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

**SEC. 7. Section 10913 of the Water Code is repealed.**

**SEC. 8. Section 10915 of the Water Code is amended to read:**

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association’s most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

**SEC. 9.**

Section 3.5 of this bill incorporates amendments to Section 10631 of the Water Code proposed by both this bill and AB 901. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2002, (2) each bill amends Section 10631 of the Water Code, and (3) this bill is enacted after AB 901, in which case Section 3 of this bill shall not become operative.

**SEC. 10.**

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

## **Appendix B**

### **Chapter 642, Statutes of 2001 (Senate Bill No. 221)**



# Chapter 642, Statutes of 2001 (Senate Bill No. 221)

An act to amend Section 11010 of the Business and Professions Code, and to amend Section 65867.5 of, and to add Sections 66455.3 and 66473.7 to, the Government Code, relating to land use. Approved by Governor October 9, 2001. Filed with Secretary of State October 9, 2001.

The people of the State of California do enact as follows:

## **SECTION 1. Section 11010 of the Business and Professions Code is amended to read:**

11010. (a) Except as otherwise provided pursuant to subdivision (c) or elsewhere in this chapter, any person who intends to offer subdivided lands within this state for sale or lease shall file with the Department of Real Estate an application for a public report consisting of a notice of intention and a completed questionnaire on a form prepared by the department.

(b) The notice of intention shall contain the following information about the subdivided lands and the proposed offering:

- (1) The name and address of the owner.
- (2) The name and address of the subdivider.
- (3) The legal description and area of lands.
- (4) A true statement of the condition of the title to the land, particularly including all encumbrances thereon.
- (5) A true statement of the terms and conditions on which it is intended to dispose of the land, together with copies of any contracts intended to be used.
- (6) A true statement of the provisions, if any, that have been made for public utilities in the proposed subdivision, including water, electricity, gas, telephone, and sewerage facilities. For subdivided lands that were subject to the imposition of a condition pursuant to subdivision (b) of Section 66473.7 of the Government Code, the true statement of the provisions made for water shall be satisfied by submitting a copy of the written verification of the available water supply obtained pursuant to Section 66473.7 of the Government Code.
- (7) A true statement of the use or uses for which the proposed subdivision will be offered.
- (8) A true statement of the provisions, if any, limiting the use or occupancy of the parcels in the subdivision.
- (9) A true statement of the amount of indebtedness that is a lien upon the subdivision or any part thereof, and that was incurred to pay for the construction of any onsite or offsite improvement, or any community or recreational facility.
- (10) A true statement or reasonable estimate, if applicable, of the amount of any indebtedness which has been or is proposed to be incurred by an existing or proposed special district, entity, taxing area, assessment district, or community facilities district within the boundaries of which, the subdivision, or any part thereof, is located, and that is to pay for the construction or installation of any improvement or to furnish community or recreational facilities to that subdivision, and which amounts are to be obtained by ad valorem tax or assessment, or by a special assessment or tax upon the subdivision, or any part thereof.
- (11) (A) As to each school district serving the subdivision, a statement from the appropriate district that indicates the location of each high school, junior high school, and elementary school serving the subdivision, or documentation that a statement to that effect has been requested from the appropriate school district.
- (B) In the event that, as of the date the notice of intention and application for issuance of a public report are otherwise deemed to be qualitatively and substantially complete pursuant to Section 11010.2, the statement described in subparagraph (A) has not been provided by any school district serving the subdivision, the person who filed the notice

of intention and application for issuance of a public report immediately shall provide the department with the name, address, and telephone number of that district.

(12) The location of all existing airports, and of all proposed airports shown on the general plan of any city or county, located within two statute miles of the subdivision.

(13) A true statement, if applicable, referencing any soils or geologic report or soils and geologic reports that have been prepared specifically for the subdivision.

(14) A true statement of whether or not fill is used, or is proposed to be used in the subdivision and a statement giving the name and the location of the public agency where information concerning soil conditions in the subdivision is available.

(15) Any other information that the owner, his or her agent, or the subdivider may desire to present.

(c) The commissioner may, by regulation, or on the basis of the particular circumstances of a proposed offering, waive the requirement of the submission of a completed questionnaire if the commissioner determines that prospective purchasers or lessees of the subdivision interests to be offered will be adequately protected through the issuance of a public report based solely upon information contained in the notice of intention.

**SEC. 2. Section 65867.5 of the Government Code is amended to read:**

65867. 5. (a) A development agreement is a legislative act that shall be approved by ordinance and is subject to referendum.

(b) A development agreement shall not be approved unless the legislative body finds that the provisions of the agreement are consistent with the general plan and any applicable specific plan.

(c) A development agreement that includes a subdivision, as defined in Section 66473.7, shall not be approved unless the agreement provides that any tentative map prepared for the subdivision will comply with the provisions of Section 66473.7.

**SEC. 3. Section 66455.3 is added to the Government Code, to read:**

66455. 3. Not later than five days after a city or county has determined that a tentative map application for a proposed subdivision, as defined in Section 66473.7, is complete pursuant to Section 65943, the local agency shall send a copy of the application to any water supplier that is, or may become, a public water system, as defined in Section 10912 of the Water Code, that may supply water for the subdivision.

**SEC. 4. Section 66473.7 is added to the Government Code, to read:**

66473. 7. (a) For the purposes of this section, the following definitions apply:

(1) "Subdivision" means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.

(2) "Sufficient water supply" means the total water supplies available during normal, single-dry, and multiple-dry years within a 20- year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining "sufficient water supply," all of the following factors shall be considered:

(A) The availability of water supplies over a historical record of at least 20 years.

(B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.

(C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.

(D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d).

(3) “Public water system” means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision.

(b) (1) 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.

(2) If the public water system fails to deliver the written verification as required by this section, the local agency or any other interested party may seek a writ of mandamus to compel the public water system to comply.

(3) If the written verification provided by the applicable public water system indicates that the public water system is unable to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision, then the local agency may make a finding, after consideration of the written verification by the applicable public water system, that additional water supplies not accounted for by the public water system are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(4) If the written verification is not provided by the public water system, notwithstanding the local agency or other interested party securing a writ of mandamus to compel compliance with this section, then the local agency may make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(c) The applicable public water system’s written verification of its ability or inability to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision as required by subdivision (b) shall be supported by substantial evidence. The substantial evidence may include, but is not limited to, any of the following:

(1) The public water system’s most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.

(2) A water supply assessment that was completed pursuant to Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

(3) Other information relating to the sufficiency of the water supply that contains analytical information that is substantially similar to the assessment required by Section 10635 of the Water Code.

(d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:

- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.
- (4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.
- (e) If there is no public water system, the local agency shall make a written finding of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) and identify the mechanism for providing water to the subdivision.
- (f) In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision.
- (g) The written verification prepared under this section shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. To the extent that those reasonably foreseeable impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91- 190) for the proposed subdivision, the public water system may utilize that information in preparing the written verification.
- (h) Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights.
- (i) This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.
- (j) The determinations made pursuant to this section shall be consistent with the obligation of a public water system to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households, pursuant to Section 65589.7.
- (k) The County of San Diego shall be deemed to comply with this section if the Office of Planning and Research determines that all of the following conditions have been met:
- (1) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C as approved

by the voters of the County of San Diego in November 1988, which required the development of a regional growth management plan and directed the establishment of a regional planning and growth management review board.

(2) Each public water system, as defined in Section 10912 of the Water Code, within the County of San Diego has adopted an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) of the Water Code.

(3) The approval or conditional approval of tentative maps for subdivisions, as defined in this section, by the County of San Diego and the cities within the county requires written communications to be made by the public water system to the city or county, in a format and with content that is substantially similar to the requirements contained in this section, with regard to the availability of a sufficient water supply, or the reliance on projected water supplies to provide a sufficient water supply, for a proposed subdivision.

(l) Nothing in this section shall preclude the legislative body of a city or county, or the designated advisory agency, at the request of the applicant, from making the determinations required in this section earlier than required pursuant to subdivision (a).

(m) Nothing in this section shall be construed to create a right or entitlement to water service or any specific level of water service.

(n) Nothing in this section is intended to change existing law concerning a public water system's obligation to provide water service to its existing customers or to any potential future customers.

(o) Any action challenging the sufficiency of the public water system's written verification of a sufficient water supply shall be governed by Section 66499.37.

#### **SEC. 5.**

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

## **Appendix C**

### **Urban Water Management Plan – sample groundwater section**

**Established:** AB 797, Klehs, 1983

**Amended:** AB 2661, Klehs, 1990

AB 11X, Filante, 1991

AB 1869, Speier, 1991

AB 892, Frazee, 1993

SB 1017, McCorquodale, 1994

AB 2853, Cortese, 1994

AB 1845, Cortese, 1995

SB 1011, Polanco, 1995

AB 2552, Bates, 2000

SB 553, Kelley, 2000

SB 610, Costa, 2001

AB 901, Daucher, 2001

SB 672, Machado, 2001

SB 1348, Brulte, 2002

SB 1384 Costa, 2002

SB 1518 Torlakson, 2002

## **CALIFORNIA WATER CODE DIVISION 6**

### **PART 2.6. URBAN WATER MANAGEMENT PLANNING**

#### **CHAPTER 1. GENERAL DECLARATION AND POLICY**

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
- (b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

## **CHAPTER 2. DEFINITIONS**

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

## **CHAPTER 3. URBAN WATER MANAGEMENT PLANS**

### **Article 1. General Provisions**

10620.

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d)

(1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.



- (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

- (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.
- (b) Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

## **Article 2. Contents of Plans**

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
  - (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
  - (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.
  - (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
  - (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
  - (1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e)

(1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Water survey programs for single-family residential and multifamily residential customers.

(B) Residential plumbing retrofit.

(C) System water audits, leak detection, and repair.

(D) Metering with commodity rates for all new connections and retrofit of existing connections.

(E) Large landscape conservation programs and incentives.

(F) High-efficiency washing machine rebate programs.

(G) Public information programs.

(H) School education programs.

(I) Conservation programs for commercial, industrial, and institutional accounts.

(J) Wholesale agency programs.

(K) Conservation pricing.

(L) Water conservation coordinator.

(M) Water waste prohibition.

(N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
- (2) Include a cost-benefit analysis, identifying total benefits and total costs.
- (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
- (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).
- (j) Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
- (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f) Penalties or charges for excessive use, where applicable.
- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
- (h) A draft water shortage contingency resolution or ordinance.
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

## **Article 2.5 Water Service Reliability**

10635.

- (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
- (b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

### **Article 3. Adoption and Implementation of Plans**

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644.

(a) An urban water supplier shall file with the department and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

### **CHAPTER 4. MISCELLANEOUS PROVISIONS**

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

10657.

(a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

# **Appendix D**

## **Other Resources**

- California Environmental Quality Act - <http://ceres.ca.gov/ceqa/>
- Governor's Office of Planning and Research Planning, Zoning and Development Laws 2000 - <http://www.opr.ca.gov/publications/PublicationsIndex.shtml#pubs-P>
- California Land Use Planning Information Network - <http://ceres.ca.gov/planning/>
- The Governor's Office of Planning and Research - <http://www.opr.ca.gov/>
- US Bureau of Reclamation Lower Colorado Regional Office - <http://www.usbr.gov/lc/region/>
- US Bureau of Reclamation Mid-Pacific Region - <http://www.usbr.gov/mp/>
- California Department of Water Resources-Bay Delta Office State Water Project Delivery Reliability Report - <http://swpdelivery.water.ca.gov/>
- Metropolitan Water District of Southern California - <http://www.mwdh2o.com/>
- California Department of Water Resources Division of Planning and Local Assistance-Groundwater Management in California - <http://www.dpla.water.ca.gov/cgi-bin/supply/gw/management/hq/main.pl>
- Governor's Office of Planning and Research General Plan Guidelines - <http://www.opr.ca.gov/>



**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

---

**APPENDIX B  
PALO VERDE VALLEY WATER BALANCE**

This appendix presents the Palo Verde Valley Water Balance, Palo Verde Groundwater Model as presented in the McCoy Solar Energy Project Water Supply Assessment (AECOM 2011).

TABLE 1  
PALO VERDE VALLEY WATER BALANCE  
PALO VERDE GRONDWATER MODEL  
McCOY SOLAR ENERGY PROJECT  
RIVERSIDE COUNTY, CALIFORINA

RECHARGE AND DISCHARGE			BASIS FOR ESTIMATE	WATER BALANCE ESTIMATES REPORTED BY OTHERS (acre feet per year)		
RECHARGE (INFLOW)	%	acre-feet per year	BASIS FOR ESTIMATE	Metzger, and others, 1973 USGS Professional Paper 486-G <sup>1</sup>	Owen-Joyce, 1984 USGS 84-4236 <sup>2</sup>	Owen-Joyce, 1984 USGS 87-4078 <sup>3</sup>
UNDERFLOW from the CHUCKWALLA	0.23%	1,000	Estimate after WorleyParsons (2010). Response to Cure, Water Resources Data Request 1-9, Application for Certification - Genesis Solar Power Project (09-AFC-8), April 2010.	400	400	-
UNDERFLOW from PARKER VALLEY	0.82%	3,500	Underflow calculated using transmissivity of 26,000 ft 2/d (from Leake, 2008), gradient of 0.0003 ft/ft, a 19,000-foot width, and 600 -foot depth (from Metzger et al, 1973) for the saturated section.	3,000	-	-
PERCOLATION <sup>3</sup>  AGRICULTURE RETURN - MESA	0.82%	3,500	There are a total of approximately 2,683 acres of irrigated agricultural land on the Mesa (PVID February 2010). Of the 2,683 acres, approximately 1,862 acres are irrigated with surface water from PVID and the remaining 724 acres are irrigated with groundwater. Agricultural return on the Mesa was calculated for the 2,683 acres using the DWR Water Use Estimates (2001) for water use (4.5 - 5.85 acre-feet/acre) and crop efficiency (70%-75%). The return was the difference between the total applied water less the consumptive use as derived by the efficiency estimates.	-	9,500	9,500
AGRICULTURE RETURN - VALLEY	15.71%	67,000	The estimate is based on the average of PVID diversions to the Valley (1993-2008) (743,000 acre-feet) less the average total spill return (136,000 acre-feet) over the same period, less the seepage (125,000) and evaporation loss (5,000) and less average consumptive use estimates for the PVID (420,000) since 1993.	0	0	0
POTW RETURN	0.18%	750	Estimate of return from the Blythe POTW based on information provided on the daily flow to evaporation/percolation ponds (City of Blythe website), an assumption that the total pond area is about 120 acres (estimate derived from photo review) and an annual evaporation rate of 71 inches.	-	-	-
MOUNTAIN FRONT	1.17	5,000	Estimate derived using the average annual Isohyetal contours shown on Figure 6 from Hely and Peck (1964), wherein the average annual precipitation was overlayed onto the topography of the Palo Verde Valley to provide an estimate of total precipitation in acre-feet for the Basin under an assumption that 5% of the total estimate from precipitation would return as deep percolation to the 2,000 2,000 groundwater basin.	2,000	2,000	
IRRIGATION CANAL LEAKAGE (LESS EVAPORATION)	28.13%	120,000	After Bookman Edmondson (1976) and Owen-Joyce (1984), 125,000 aly (Canal Leakage) - 5,000 (Evaporation).	-	120,000	120,000
RIVER DISCHARGE TO GROUNDWATER (LOSING CONDITION)	52.94%	225,850	Estimate based on the difference between the measured values of total discharge less the estimate of agricultural return and canal leakage (inflow). The estimate was made under the assumption that groundwater levels have not changed significantly and as such there must be a balance between inflow and outflow in the Palo Verde Valley.	361,000	3,100	-
BEDROCK	0.60%	0	Although recharge from the bedrock is possible there is insufficient well data to determine flux into the Valley or Mesa Groundwater Basins.	-	-	-
TOTAL (INFLOW)	-	426,600	-	366,400	135,00	129,500
DISCHARGE (OUTFLOW)	%	acre-feet per year	BASIS FOR ESTIMATE	Metzger, and others, 1973 USGS Professional Paper 486-G <sup>1</sup>	Owen-Joyce, 1984 USGS 84-4236 <sup>2</sup>	Owen-Joyce, 1984 USGS 87-4078 <sup>3</sup>
UNDERFLOW OUT of the PALO VERDE and CIBOLA VALLEY AQUIFER	-	0	After Metzger et al (1973).	-	-	-
GROUNDWATER PUMPING  AGRICULTURE - MESA	0.84%	3,600	To determine agricultural diversions on the PV Mesa, the "Estimated Water Use" values from DWR (2001) were applied to a total of 724 acres of agricultural land that uses groundwater for irrigation. There are approximately 364 acres of agricultural land inside the PVID boundary that use private wells and approximately 360 acres of agricultural land outside of the PVID boundaries that use ---groundwater for irrigation.	-	-	-
MUNICIPAL and DOMESTIC	1.76%	7,500	Within the City Limits as per the Department of Public Works Department, the City of Blythe pumps the Mesa Ranch Well #3 for domestic use (230 aly) and PVC Well #2 for municipal use at the Palo Verde College (260 AFY). Main System (3700 AFY) and Mesa Well #2 for the Golf Course (560 AFY). The County of Riverside operates one well (Airport Well #7) at the Blythe Airport that serves the Mesa Verde Community (47 aly). This estimate also includes pumping for the Blythe Energy Plant I (3,300 aly). It does not include pumping for BEP II as this well is not yet in operation. Information after City of Blythe Department of Public Works, Kevin Nelson, February 2010.	-	2,000 (1981)	-
UNMEASURED RETURN (GAINING CONDITION)	11.72%	50,000	Average unmeasured return after the USBR, Lower Colorado River Accounting and Water Use Report - Arizona, California, and Nevada - Calendar Year 2003-2009.	-	23,900	2,500-31,700
CONSUMPTIVE USE - NATIVE VEGETATION	1.99%	8,500	Estimate derived from distribution of riparian vegetation within the PVID area (Figure 3-5 "Land Cover Types in Reach 4", Lower Colorado River Multi-Species Conservation Plan: CDFG 2081-2005-008-06.), and the estimate of consumptive use and evaporation loss as provided for these areas and summarized in Table-1 "Agricultural and Riparian Vegetation ET, and Evaporation by Water User, Lower Colorado River, Hoover Dam to Mexico", Lower Colorado River Accounting System, Evapotranspiration Calculations, 2003-2009.	136,000	-	-
GROUNDWATER DISCHARGE	83.68%	357,000	Average Outfall Drain Return for 1993-2008.	-	419,500	-
TOTAL (OUTFLOW)	-	426,600	-	-86,000	-	-
WATER BALANCE	-	0	-	-	-	-

NOTES

1. The consumptive use non-native vegetation estimate provided by Metzger and others includes areas outside the Palo Verde Valley.

2. Owen-Joyce (1984) estimated the inflow to the Palo Verde Mesa (Mesa Basin) at 9,500 aly and correspondingly estimated the outflow to the Palo Verde Valley (Valley Basin) at 4,700 aly.

3. Precipitation recharge onto the Palo Verde Mesa floor assumed to be negligible. It is assumed that all water transpires or evaporates as it falls onto the valley floor. There is no return to the groundwater from direct precipitation.

**WATER SUPPLY ASSESSMENT  
DESERT QUARTZITE SOLAR PROJECT**

---

**APPENDIX C  
PALO VERDE IRRIGATION DISTRICT  
WATER SUPPLY LETTER**



## **PALO VERDE IRRIGATION DISTRICT**

**180 WEST 14<sup>TH</sup> AVENUE**

**BLYTHE, CA 92225**

**Phone: 760-922-3144**

**Fax: 760-922-8294** [pvid.org](http://pvid.org)

March 1, 2016

Mr. James Cook  
First Solar  
135 Main Street, 6<sup>th</sup> Floor  
San Francisco, CA 94105

**Subject: Water Supply for Desert Quartzite Solar Project on the Palo Verde Mesa in  
Riverside County, California**

Dear Mr. Cook:

This letter is to advise you that the Palo Verde Irrigation District (PVID) is willing and able to provide water to meet the construction and operational water supply needs of the proposed Desert Quartzite Solar Project (DQSP) within PVID's service boundary. As we understand your service requirements, the DQSP is currently expected to require approximately 1,400 to 1,800 acre feet of water (total) over the 25 to 48 month construction period and 38 acre feet per year over the planned 30-year operational phase of the Project.

These estimated water supply needs can be readily satisfied using PVID's existing water rights and current water allocations for the Palo Verde Mesa service area without negatively impacting PVID's water supply or customers. PVID understands that the proposed DQSP is currently being evaluated in a joint Environmental Impact Statement /Environmental Impact Report being prepared by the U.S. Bureau of Land Management and Riverside County.

The provision of these water supply services within PVID's service boundary is contingent upon the necessary arrangements for delivery via available PVID pumping and /or canal facilities in accordance with PVID rules and regulations. Fees would include the payment of applicable supply unit rates and charges, including charges for any required PVID facility upgrades for the ongoing needs of the Project.

We anticipate that the terms and conditions of the provision of service to the Desert Quartzite Solar Project would be further clarified in detailed, definitive service agreements.

Sincerely,

Richard Gilmore  
Assistant Manager  
Palo Verde Irrigation District