

State of California  
State Water Resources Control Board  
**DIVISION OF WATER RIGHTS**  
**P.O. Box 2000, Sacramento, CA 95812-2000**  
Info: (916) 341-5300, FAX: (916) 341-5400, Web: <http://www.waterrights.ca.gov>

**ENVIRONMENTAL INFORMATION  
FOR PETITIONS**

(Petition for Change)

APPLICATION NO. 12622

PERMIT NO. 11360

LICENSE NO. \_\_\_\_

**1. DESCRIPTION OF PROPOSED CHANGES TO EFFECTUATE TEMPORARY  
WATER TRANSFER**

Petitioner City of Sacramento ("City") and Co-Petitioner Sacramento Suburban Water District propose to deliver a total of 4,377 acre-feet ("AF") of surface water normally diverted by the City at its Fairbairn Water Treatment Plant on the lower American River. In addition to treating water for delivery to its customers, the City entered into a wholesale water supply contract with Co-Petitioner Sacramento Suburban Water District ("SSWD") under which SSWD acquired firm capacity of 20 mgd in City water treatment and transmission facilities ("Wholesale Agreement"). SSWD uses the treated surface water received from the City to serve its South Service Area customers and to operate a conjunctive use program to protect groundwater resources. The City has agreed to permit SSWD to forego receiving 4,377 AF of its contractual water supplies and to transfer the foregone supplies to the eight contractors of the State Water Project ("SWP"), including Antelope Valley-East Kern Water Agency, Dudley Ridge Water District, Kern County Water Agency, Metropolitan Water District Of Southern California, Napa County Flood Control and Water Conservation District, Oak Flat Water District, Palmdale Water District, and San Bernardino Valley Municipal Water District ("Transferees").

The water supplies that the City and SSWD propose to transfer to the Transferees will be used for domestic, municipal and industrial, and irrigation uses within the service area of the State Water Project ("SWP"). To make the 4,377 AF of water available to the Transferees ("Transfer Water"), SSWD will pump groundwater to serve its customers' demands. To accomplish this groundwater substitution transfer, the City and SSWD are requesting that the State Water Board approve the following temporary changes:

1. Allow redirection of the Transfer Water at the State Water Project's Harvey O. Banks Pumping Plant via Clifton Court Forebay and Barker Slough Pumping Plant, as determined by DWR (the "SWP Facilities").
2. Allow use of the Transfer Water within the service areas of the Transferees, which are all contained within the authorized SWP service area.

3. Change to points of rediversion by the addition of the points of rediversion identified in paragraph 1 above, and changes to the existing purpose of use (municipal) by the addition of domestic, industrial and irrigation purposes of use. The present points of re-diversion will also remain in place.

The City will leave the Transfer Water in the lower American River and permit it to flow down the Sacramento River and through the Delta to the proposed points of rediversion at the SWP Facilities. DWR will redivert the Transfer Water at the SWP Facilities. After diversion from the Delta, the Transfer Water will either be put to immediate use in the SWP service area, or stored in San Luis Reservoir or other facilities for later use within that service area. Conveyance of the Transfer Water will be scheduled in cooperation with DWR such that it will use available surplus release, pumping and transmission capacity and will not disrupt normal SWP operations as explained below in Section 8.

Only existing facilities will be utilized to accomplish this transfer. The project does not involve construction or modification of any facilities. Because the proposed transfer would be conducted to replace existing water demands that otherwise would be unfulfilled because of cutbacks in the Transferees' SWP contractual entitlements, land uses within the SSWD and affected portions of the SWP service areas will not change as a result of this transfer. This transfer is needed to provide water supplies to the Transferees, which have experienced several years of below average rainfall and reduced water supply allocations due to a combination of dry hydrology and increased regulatory restrictions on SWP pumping. Because the proposed transfer is a one-year temporary transfer, and because its purpose is to make up for those lost supplies, the proposed transfer will not result in any land use changes.

(For more details see Petition)

## 2. COUNTY PERMITS

- a. **Contact your county planning or public works department and provide the following information:**

**Person contacted:** Keith DeVore **Date of contact:** April 5, 2010.

**Department:** Sacramento County Dept. of Water Resources **Telephone:** 916-874-2268.

**County Zoning Designation:**

N/A.

**Are any county permits required for your project?**

Yes, under Sacramento County Water Agency Code section 3.40.090.

- b. **Have you obtained any of the required permits described above?**

Yes. Copy of the county permit and supporting documents are attached as Exhibit I.

**3. STATE/FEDERAL PERMITS AND REQUIREMENTS**

**a. Check any additional state or federal permits required for your project:**

Neither City of Sacramento nor SSWD requires additional state or federal permits for the proposed transfer. This water transfer will be accomplished within the parameters of all existing applicable state and federal laws, regulations, and permits.

**b. For each agency from which a permit is required, provide the following information:**

N/A.

**c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed or bank of any stream or lake?**

No.

**d. Have you contacted the California Department of Fish and Game concerning your project?**

Yes. A copy of this petition was sent to the Department of Fish and Game ("DFG") North Central Region acting manager Kent Smith at 1701 Nimbus Road, Rancho Cordova, CA 95670 Phone: (916) 358-2898, FAX: (916) 358-2899. Neither the City of Sacramento nor SSWD has received DFG's opinion regarding the project, but will provide this information to the appropriate State Water Resources Control Board ("SWRCB") staff when available. Based on the 2009 water transfer from the City and SSWD to the 2009 Drought Water Bank (approved in Order WR 2009-0054-DWR), the City and SSWD expect DFG to indicate that the transfer will not unreasonably affect fish or wildlife resources because of the limited changes proposed, as well as the fact that very similar transfers have been done in the past with no adverse impacts identified by DFG. In fact, in the past DFG has advocated such transfers as part of the transfer of water to the CAL-FED Environmental Water Account ("EWA").

**4. ENVIRONMENTAL DOCUMENTS**

**a. Has any California public agency prepared a CEQA environmental document for your project?**

No. CEQA is not required for this proposed temporary water transfer because temporary water transfers under Water Code § 1725 are statutorily exempt from CEQA. (Water Code § 1729; CEQA Guidelines § 15282(u)).

**b. If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency.**

N/A.

**c. If NO, check the appropriate box and explain below, if necessary:**

No environmental document pursuant to CEQA is required for the proposed water transfer that is the subject of this petition. Pursuant to Water Code § 1729, "a proposed temporary change under this article shall be exempt from the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code." (See also CEQA Guidelines § 15282(u).) The District filed a notice of exemption for this project dated April 20, 2010.

**5. WASTE/WASTE WATER**

**a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?**

No. This transfer project will not require any construction and its operation will not generate waste or wastewater containing sewage or chemicals of any kind. As explained in Section 8 of this Environmental Information Form, the amount of water proposed for transfer will only slightly increase anticipated 2010 baseline water flows in the lower American and Sacramento Rivers and in the Delta in this dry year and will be within the range of historical flows. This negligible increase in 2010 flows will not cause erosion, turbidity, or sedimentation.

**b. Will a waste discharge permit be required for your project?**

No.

**c. What method of treatment and disposal will be used?**

N/A.

**6. ARCHEOLOGY**

**a. Have any archeological reports been prepared on this project?**

No. The proposed transfer would not alter the existing physical conditions within the lower American and Sacramento Rivers, or the Delta, in any way that could impact or affect archeological resources within those watersheds.

**b. Will you be preparing an archeological report to satisfy another public agency?**

No. See response to Question 6a.

**c. Do you know of any archeological or historic sites located within the general project area?**

No. The project area is very large and there may be archeological or historic sites along the riverbanks or underwater in the lower American and Sacramento Rivers and in the Delta, as well as at Folsom Reservoir. However, as explained in response to Question 6a and elsewhere in this form and the associated petition materials, this transfer project will operate within existing

facilities and land uses and therefore will cause no effects to any such resources within the project area.

## **7. ENVIRONMENTAL SETTING**

**Attach three complete sets of color photographs, clearly dated and labeled, showing the vegetation that exists at the below-listed three locations. For time extension petitions, the photographs should document only those areas of the project that will be impacted during the requested extension period.**

**a) Along the stream channel immediately downstream from the proposed point(s) of diversion.**

The proposed additional points of rediversion are the SWP Facilities in the southern Sacramento-San Joaquin Delta. There is no stream channel immediately downstream of the SWP points of diversion because they are the beginning of the California Aqueduct, North Bay Aqueduct, Delta-Mendota Canal and Contra Costa Canal, which all are man-made conveyance facilities. A map of the location of the SWP Facilities is attached as Exhibit 2 hereto.

**b) Along the stream channel immediately upstream from the proposed point(s) of diversion.**

The stream channels immediately upstream from the SWP's Delta pumping facilities comprise various sloughs and channels in the Sacramento-San Joaquin Delta ("Delta"). (See Exhibit 3.) Because of the large geographic area within the Delta, it is not practical to attach photographs. The Delta is an estuarine ecosystem of sloughs and channels that has been heavily modified by agriculture and other human uses for approximately 150 years. During the past 50 years in particular, the natural environment of the Delta has been significantly altered by the construction and maintenance of a vast network of flood control levees. Additionally, dredging and point and non-point water discharges to the Delta have also impacted the environmental setting of the Delta. Added to these physical effects are the serious adverse biological effects of numerous aquatic invasive species, including fish, invertebrates, and plants. No vegetation within the Sacramento-San Joaquin Delta should be adversely affected by the slight increase in anticipated 2010 flows that may occur as a result of this transfer.

**c) At the place(s) where the water is to be used.**

The water will be used in the Transferees' service areas, which are all contained within the authorized SWP service area. The service area of the SWP is shown on Map 1878 - 1, 2, 3 and 4 on file with the Division of Water Rights under Application 5630. Because of the large geographic area encompassed by these service areas, it is not practical to attach photographs. Similarly, these areas contain various diverse assemblages of native and non-native vegetation and associated habitat types. The proposed water transfer will not affect these environmental resources. By providing additional water supplies during a period of water shortage, this transfer may provide water that supports vegetation within the Transferees' service areas.



## **8. ADDITIONAL CONSIDERATIONS**

### **A. Vegetation**

No vegetation will be affected by the release of the additional water for this transfer. Therefore, wildlife habitat will not be affected by the proposed addition of the Transfer Water to the lower American and Sacramento River systems. Water use in the proposed new place of use would support the same land-uses that currently exist within the Transferees' service areas. This transfer will not cause a change or intensification in existing land uses or cause additional acreage to be put to use. The transferred water will simply provide much needed water supplies this summer and fall that otherwise would have been unavailable to existing water users and water uses due to the synergistic effects of three consecutive years of dry hydrology and regulatory pumping restrictions on SWP operations.

### **B. Wildlife and Fish Resources**

DWR is conducting all SWP operations in compliance with the reasonable and prudent alternatives in the salmon and smelt biological opinions on the effects of combined SWP and CVP operations on the Delta smelt. Additionally, there is close monitoring and coordination between DWR, Reclamation, United States Fish and Wildlife Service ("USFWS"), and the National Marine Fisheries Service ("NMFS"), and DFG regarding the effects of combined project operations on the host of species inhabiting the Delta and its tributaries. Similar coordination occurs on the lower American River. This allows the relevant agencies to quickly deal with circumstances as they arise, and to avoid significant impacts to species of special concern (i.e., listed and protected under state or federal laws).

Given the relatively small amount of water involved in this transfer relative to the amount of water in the system and pumped by the projects, it is not expected that any fish species will be adversely affected by the proposed transfer. Similar change petitions and transfers have been granted by the SWRCB in the past to support acquisition of water assets by DWR, including the 2009 Drought Water Bank and the EWA. For example, the SWRCB issued Order WR 2009-0054-DWR, approving the City and SSWD's transfer of up to 2,902 AF of American River water supplies to DWR's 2009 Drought Water Bank.

The amount of change in streamflow, water quality, timing of diversion or use, return flows, and effect on legal users of water will be minimal and will cause no adverse economic, physical, or environmental effects. The addition of up to 4,377 AF to the lower American and Sacramento Rivers is a small increment of the water that will be released from Folsom Reservoir this year. It is anticipated that approximately 600,000 AF will be released from or bypassed at Folsom Reservoir during the three month transfer period. The 4,377 AF of Transfer Water will be a small portion of this flow, spread over a period of three months at the maximum rate of 47.6 AF daily, which will ultimately be rediverted at the SWP Facilities in the south Delta. As it moves downstream, the 4,377 AF of Transfer Water will comprise an increasingly small increment of water flow when compared to the average flows in the lower American and Sacramento Rivers, and the Delta. Data from Reclamation's Central Valley Operations Office showing the average Delta outflow and CVP and SWP pumping during the May through October period support this conclusion. The data provide the Board with information to review the proposed transfer in light

of the potential hydrologic conditions likely to occur during the proposed transfer as required by Water Code § 1727(b)(1).

The Transfer Water will not be transferred all at once, but will be left in the lower American River below the Fairbairn Treatment Plant and conveyed across the Delta to the SWP Facilities over a period of time during July through September 2010, all within existing pumping and other regulatory constraints. The transfer of an additional 4,377 AF of water over the three months would increase flows by only a small amount of the total in any of the water bodies listed. Thus, the proposed transfer would only negligibly affect streamflows, and have no discernible impacts on water quality, timing of diversion or use, return flows, and legal users of water.

The hydrologic systems and project operations affected by this transfer experience wide fluctuations in river stages and pumping operations due to natural events and because of other water project operations such as compliance with the salmon and smelt biological opinions and D-1641. The data presented represent the low flow and low pumping circumstances that are likely to occur in 2010. The fact that river flows and pumping rates are greater in wetter years also supports the conclusion that slightly increased flows caused by this transfer, with a concomitant increase in SWP pumping rates, will not significantly or unreasonably affect streamflow, water quality, timing of diversion or use, return flows, or other legal users of water. This is particularly true in this case because the 4,377 AF of Transfer Water is intended to replace cutbacks in contractual entitlements that normally would be conveyed by the SWP to its contractors and water users downstream of the Delta.

Because of the minimal changes in existing conditions, other legal users of water will not be adversely affected by the proposed transfer. The only effects of this transfer on other legal users of water will be a very slight increase in river flows than otherwise would occur this year (but well within historical averages) because of additional flows in the lower American River. The water SSWD proposes to leave in the river otherwise would be withdrawn by the City and treated and delivered to SSWD. Furthermore, when the Transfer Water is diverted by the SWP Facilities, all existing state and federal regulations will be complied with, including the salmon and smelt biological opinions, Decision 1641, and other regulatory requirements.

See additional supporting information and data in Petition.

### **C. SSWD Groundwater Substitution Transfer Information**

#### **1. Introduction**

SSWD proposes to make available its 4,377 AF of Transfer Water to the Transferees through a groundwater substitution program. SSWD will pump an equivalent amount of groundwater to serve municipal and industrial demands within the District's South Service Area in lieu of using treated surface water diverted from the lower American River under its contractual entitlement from the City. SSWD owns and operates all of the wells that will be pumped for this program. The wells that SSWD will use are all located in its South Service Area, and are shown on Exhibit 4. SSWD's and the Department of Public Health's identification numbers are provided in Exhibit 5. Almost all wells pumped by SSWD are electric powered and therefore no adverse air quality impacts are expected from this pumping.

The South Service Area wells that SSWD will use in its groundwater substitution program are integrated into its water system. SSWD will use those wells to meet demands as they occur within the South Service Area. SSWD has provided DWR and Reclamation with technical information concerning the wells that will be pumped for this proposed groundwater substitution transfer. SSWD will report monthly groundwater production and use to the DWR for each well used in the program.

2. SSWD's Groundwater Pumping Will Not Impact other Groundwater Pumpers

SSWD does not anticipate that groundwater pumping for the proposed transfer will have an adverse impact on other groundwater pumpers in the groundwater basin north of the American River from which it pumps ("North Area Basin"). In 2010, to facilitate the transfer proposal, SSWD is planning to pump a total of approximately 38,000 AF of groundwater (19,000 AF each in both its North Service Area and South Service Area). The amount of groundwater production represents an increase over most years since SSWD began to conjunctively use surface water, but is a quantity that SSWD has historically pumped in previous years when SSWD's predecessors used exclusively groundwater and when there was a limited supply of surface water available for importation. Considered with projected basinwide pumping in 2010, SSWD's anticipated 4,377 AF increase in groundwater production will still total less than the basin's long-term sustainable yield of 131,000 AF. Therefore, SSWD's transfer proposal should not adversely affect other pumpers in the basin or cause any harm to the basin.

3. SSWD's Pumping is Consistent with the SGA Groundwater Management Plan

SSWD's groundwater pumping and conjunctive use activities are consistent with the Sacramento Groundwater Authority's Groundwater Management Plan ("SGA GMP"), which was adopted in 2003 pursuant to Water Code section 10753.7 and amended in December 2008. SSWD's proposed pumping to effectuate the proposed groundwater substitution transfer is consistent with the SGA GMP's Basin Management Objectives and would not adversely impact the groundwater basin. Most important, SSWD been importing surface water into both its North and South Service Areas, which has helped stabilize groundwater levels in the central portion of the North Area Basin. Since the mid-1990s, groundwater elevations in the North Area Basin have stabilized due to these efforts and, in some cases, groundwater elevations are continuing to increase slightly. (See Exhibit 6.) By limiting the quantity of groundwater pumped, SSWD has helped maintain high groundwater quality at its well sites by helping limit migration of contaminants from the former McClellan Air Force Base. As part of this effort, SSWD has consistently coordinated with federal and state regulators to ensure all necessary efforts are being undertaken by the responsible parties to protect drinking water sources from contamination by plume migration.

4. SSWD's Groundwater Pumping is Consistent with Historic Trends

Between 2003 and 2009, the total municipal and industrial groundwater production in the SGA groundwater management area was approximately 77,000 to 90,000 AFA. While the SGA GMP does not track the groundwater production of independent agricultural and self-supplied users, SGA estimates that these users produce and use an additional 20,000 AFA, including 10,000



AFA by some of the independent agricultural users outside of the Natomas Central Mutual Water Company service area and another 10,000 AFA by other self-supplied users. Thus, total groundwater production during this time period is estimated at approximately 97,000 to 110,000 AFA.

In 2007, a historically dry year with limited surface water available to it, SSWD pumped approximately 38,000 AF of groundwater and served a total demand of approximately 45,000 AF to customers within its South Service Area and North Service Area. Based upon SSWD's seasonal production well groundwater level monitoring, average groundwater levels in April 2008 returned to April 2007 levels in the South Service Area and rebounded to a higher level than April 2007 in the North Service Area. (See Exhibit 7.) Also, October 2008 groundwater levels showed a return to historic Fall levels, which demonstrates the benefit of again importing significant surface water supplies into the basin in 2008.

In 2009, SSWD's successful sale of nearly 8,500 AF to the 2009 Drought Water Bank again showed the ability for the groundwater basin to return to pre-transfer levels. As required by the 2009 Drought Water Bank, SSWD monitored and reported groundwater levels to the Department of Water Resources to ensure that no impact to the basin occurred. As of early spring 2010, the monitoring wells used by SSWD for reporting indicate that groundwater levels already have returned to pre-transfer conditions.

Thus, historic and current data indicates that even during dry years when there is heavy reliance on groundwater resources, the aquifer underlying SSWD is able to rebound on a seasonal and long-term basis through importing surface water for in-lieu recharge, even when temporary actions to transfer this surface water are undertaken.

##### 5. Proposed Groundwater Pumping is Within the Basin's Sustainable Safe Yield

It is projected that SSWD's 2010 groundwater demand conditions will be similar to the conditions experienced in 2009, when SSWD transferred water to the Drought Water Bank pursuant to the SWRCB's approvals on Order WR 2009-0053-DWR and Order WR 2009-0054-DWR. Conditions also will be comparable to those in 2007 because SSWD was able to import only a limited amount of surface water after April of that year, and SSWD therefore relied mostly on groundwater resources to serve customer demands through the remainder of 2007. Because high groundwater demand in 2007 was driven primarily by dry springtime conditions and 2010 appears to be less dry, SSWD is estimating that total 2010 demand during the three transfer months will be approximately 7730 AF, of which 3350 AF is groundwater absent the water transfer. Given the fact that the central portion of the North Area Basin rebounded between October 2007 and April 2008, and again following the successful transfer to the 2009 Drought Water Bank, SSWD anticipates that under similar conditions in 2010 the central portion of the North Area Basin should recover to pre-transfer levels.

**CERTIFICATION**

**I hereby certify that the statements I have furnished above and in the attached exhibits are complete to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge.**

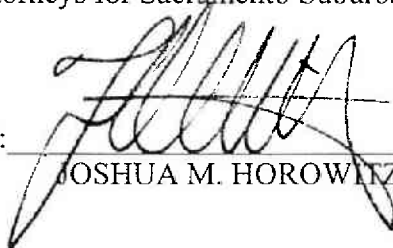
Date: April 20, 2010

CITY OF SACRAMENTO  
EILEEN M. TEICHERT  
City Attorney

By:   
\_\_\_\_\_  
JOE ROBINSON  
Senior Deputy City Attorney

Date: April 20, 2010

BARTKIEWICZ, KRONICK & SHANAHAN  
Attorneys for Sacramento Suburban Water District

By:   
\_\_\_\_\_  
JOSHUA M. HOROWITZ



County of Sacramento  
 Public Works Agency  
 Department of Water Resources  
 827 7<sup>th</sup> Street, Room 301  
 Sacramento, CA 95614

PHONE: (916) 874-6851  
 Mail Code: 01-301

LETTER OF TRANSMITTAL

DATE: APRIL 15, 2010	JOB #:
ATTENTION: ROBERT S. ROSCOE, P.E.	
RE: Application to Export Ground/Surface Water	

Received

APR 19 2010

SSWD

TO: Sacramento Suburban Water District  
3701 Marconi Avenue, Suite 100  
Sacramento, CA 95821-5346

WE ARE SENDING YOU:  Attached  Under separate cover via  
 the following items:

- Specification  Change Order  Submittals  Plans  Prints  
 Copy of letter  Shop Drawing  Report  Copy for your records.

COPY DESCRIPTION

1	Approved Application to Export Groundwater or Surface Water out of Sacramento County

THESE ARE TRANSMITTED as checked below:

- For approval  Approved as submitted  For your use  Resubmit copies for approval  
 Approved as noted  As requested  For you information  Submit copies for distribution  
 Returned for corrections  Disapproved  Sign and return  Return corrected prints  
 For review and comment  Return copies for distribution

REMARKS

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COPY TO:  
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BY:  
 RAMON ROYBAL, 874-6826 \_\_\_\_\_  
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If enclosures are not as noted, kindly notify us at once.



**Application to Permit the Export of Groundwater or Surface Water out of Sacramento County  
(SCWA Code, Title 3, Section 3.40.090 Groundwater and Surface Water Export)**

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**Name and Address  
of Applicant:**

Sacramento Suburban Water District  
c/o Robert Roscoe, General Manager  
3701 Marconi Avenue, Suite 100  
Sacramento, CA 95821-5346

**Owner of Source:**

City of Sacramento  
c/o Dan Sherry, Utilities Department  
1395 35th Avenue  
Sacramento, CA 95822

**Owner of Place  
of Use:**

City of Sacramento - American River Water Rights Place of Use  
Sacramento Suburban Water District - South Service Area

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**Consulting Engineer:  
(Plan and Design  
of Work)**

Tully & Young, Inc.  
3600 American River Drive, Suite 260  
Sacramento, CA 95864

**Description of  
proposed action:**

Please see transfer proposal submitted to Mr. Keith DeVore under separate cover  
on April 5, 2010

**Location of source(s):**

American River

**Point(s) of use:**

Lower American River (point of diversion)  
Sacramento Suburban Water District - South Service Area (place of use under  
City/District Wholesale Agreement)

**Justification for  
proposed action:**

Please see transfer proposal submitted to Mr. Keith DeVore under separate cover  
on April 5, 2010

Application to Permit the Export of Groundwater  
or Surface Water Out of Sacramento County  
Page 2 of 2

\_\_\_\_\_ To Be Completed by the Sacramento County Water Agency \_\_\_\_\_

Is proposal is in conformance with County water planning policies adopted and revised from time to time  
by the County and the Sacramento County Water Agency?

Yes  No Comment: \_\_\_\_\_  
\_\_\_\_\_

Will proposal impose liability on the County or the Water Agency?

Yes  No Comment: \_\_\_\_\_  
\_\_\_\_\_

Does proposal cause adverse impacts on the source, the area of use, or the environment?

Yes  No Comment: SHORT TERM, LESS THAN ONE YEAR

Is this proposal consistent with the general plan of the County of Sacramento, the water plan of the  
Sacramento County Water Agency?

Yes  No Comment: \_\_\_\_\_  
\_\_\_\_\_

Is this proposal consistent with a specific plan of the County or Water Agency which may be affected by  
the work or activity?

Yes  No Comment: \_\_\_\_\_  
\_\_\_\_\_

Pursuant to the findings contained herein, this Application is  Approved  Denied

Permit No: 2010-001

Sacramento County Water Agency

Signature: Keith DeVore  
Name: Keith DeVore  
Title: Director of Water Resources  
Date: 4-14-10

General Manager

Robert S. Roscoe, P. E.



Board of Directors

President - Thomas C. Fellenz  
Vice President - Stephen R. Hanson  
Ken R. Decio  
Frederick A. Gayle  
Neil W. Schild

April 5, 2010

Mr. Keith DeVore, Director  
Department of Water Resources  
Sacramento County Water Agency  
827 7<sup>th</sup> Street, Room 301  
Sacramento, CA 95814

Dear Mr. DeVore:

Pursuant to Sacramento County Water Agency (SCWA) Code Section 3.40.090, the Sacramento Suburban Water District (SSWD) respectfully requests a permit to transfer water in 2010 that SSWD has a right to use in Sacramento County under a wholesale contract with the City of Sacramento. The "buyer" is a collective group of State Water Contractors<sup>1</sup> seeking to augment low water allocations from the State Water Project. The transfer proposal is summarized in this letter and the full proposal is described further in the attached exhibit.

City of Sacramento Contract Water

SSWD would forgo receipt of up to approximately 4,400 AF of surface water it anticipates would be available during July through September 2010 pursuant to the *Wholesale Water Supply Agreement Between the City of Sacramento and Sacramento Suburban Water District* (Wholesale Agreement), and would pump groundwater in an amount equivalent to the surface water which it would otherwise receive pursuant to the Wholesale Agreement. The Wholesale Agreement provides for the City of Sacramento to divert, treat and convey to SSWD up to 20 million gallons a day (mgd) of surface water through the City of Sacramento's Fairbairn Water Treatment Plant when there is adequate flow in the American River. Based on the allowances approved by the California Department of Water Resources under the 2009 Drought Water Bank, the recognized daily diversion rate for the 2010 water transfer will be 15.5 mgd. As of the date of this letter and given past experiences, SSWD anticipates that there will be flows in the Lower American River sufficient to allow it to exercise its right to receive water under the Wholesale Agreement at this rate. (See **Attachment 1** for further proposal details.)

<sup>1</sup> As of the writing of this letter, the following State Water Contractors are collectively the buyers of the water: Antelope Valley-East Kern Water Agency, Dudley Ridge Water District, Kern County Water Agency, Metropolitan Water District Of Southern California, Napa County Flood Control and Water Conservation District, Oak Flat Water District, Palmdale Water District, and San Bernardino Valley Municipal Water District

Compliance with SCWA Code Section 3.40.090 Criteria

Because SSWD is transferring water it would otherwise be entitled to divert from the American River system under the Wholesale Agreement, it does not anticipate having any adverse impacts on the system by forgoing diversion and leaving the water in the American River. Also, because the water being transferred will be used to meet existing demands in another part of the state, there should not be an adverse impact on the place of use.

Because SSWD will be serving existing demands in Sacramento County within the SSWD service area, the use of groundwater as a supply source would not be inconsistent with the County General Plan. Also, because SSWD is transferring surface water that it would otherwise be able to receive under the Water Forum Agreement, which served as a foundational document for the Sacramento County's Water Agency's Water Supply Master Plan, SSWD's proposed 2010 water transfer is consistent with the Sacramento County Water Agency water plan.

The SSWD respectfully requests that SCWA approve this application for a transfer permit.

Sincerely,



Robert S. Roscoe  
General Manager



**Attachment 1**  
**SSWD 2010 Water Transfer Proposal**  
**[under the City of Sacramento Wholesale Agreement]**  
**as proposed to the California Department of Water Resources**

**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

**SSWD GROUNDWATER PUMPING PROPOSAL**

Seller, Sacramento Suburban Water District, is located in Sacramento County as shown on Figure 1 in this Exhibit. Seller proposes to make water available for transfer to the Buyers by pumping groundwater for municipal and industrial uses in lieu of diverting surface water under its *Wholesale Water Supply Agreement Between the City of Sacramento and Sacramento Suburban Water District*. The City of Sacramento has petitioned the SWRCB for approval to change the place of use of Transfer Water. A total of 4,377 acre-feet of Purchase Water will be made available during the months of July, August, and September 2010 from approved wells listed in Table 1 in this Exhibit and shown on Figure 1. Groundwater pumping to implement this water transfer shall be up to the monthly amount of surface water diversions foregone by Seller from the City of Sacramento's Fairbairn Water Treatment Plant, as shown in Table 2B of this Exhibit 1.

**Table 1  
Approved Seller Groundwater Wells**

<b>Well No.</b>	<b>Well Name</b>	<b>Latitude</b>	<b>Longitude</b>
2A	El Prado/Park Estates	38.606873	-121.398206
3A	Kubel/Armstrong	38.597823	-121.398012
4B	Bell/Marconi	38.617526	-121.411642
5	Bell/El Camino	38.611486	-121.410091
7	Rubicon/Seely Park	38.623466	-121.39658
12	Hernando/Santa Anita Park	38.608102	-121.408223
13	Calderwood/Marconi	38.61986	-121.396174
14	Marconi South/Fulton	38.617734	-121.403708
18	Riding Club/Ladino	38.599037	-121.370758
19	Balmoral/Yorktown	38.611713	-121.386044
20A	Watt/Arden	38.59783	-121.381264
22	West/Becerra	38.631332	-121.374865
23	Marconi North/Fulton	38.619742	-121.403645
24	Becerra/Woodcrest	38.62384	-121.374392
25	Thor/Mercury	38.597852	-121.359693
26	Greenwood/Marconi	38.618092	-121.359147
28	Red Robin/Darwin	38.615231	-121.419968
30	Rockbridge/Keith	38.604559	-121.422711
32A	Eden/Root	38.614458	-121.350391
33A	Auburn/Norris	38.64122	-121.370353
35	Ulysses/Mercury	38.600531	-121.359129
37	Morse/Cottage Park	38.605138	-121.390985
38	Watt/Auburn	38.635665	-121.381145
40	Auburn/Yard	38.630293	-121.397611
40A	Auburn/Yard	38.630536	-121.397818

**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

41	Albatross/Iris	38.617812	-121.424001
43	Edison/Truax	38.622894	-121.413812
45	Jamestown/Middleberry	38.601377	-121.42402
47	Copenhagen/Arden	38.594471	-121.351895
55A	Stewart/Lynndale	38.587274	-121.358413
60	Whitney/Concetta	38.627899	-121.358642
65	Merrily/Annadale	38.636151	-121.375075
66	Eastern/Woodside Church	38.624908	-121.362302
68R	Northrop/Dornajo	38.582451	-121.408398
69	Hillsdale/Cooper	38.59447	-121.398582
70	Sierra/Blackmer	38.57875	-121.410934
71	Rodney T. Franz	38.584118	-121.353414
72	River Walk/NETP	38.58284	-121.338201
73	River Walk/NETP East	38.583189	-121.336799
74	River Walk/NETP South	38.582257	-121.338155
75	Enterprise/Northrop	38.582391	-121.417384
76	Larch/Northrop	38.576039	-121.403121
77	Fulton/Fair Oaks	38.580555	-121.383844

**Total Transfer Water** made available to the Buyers in 2010 will be determined by the following:

- At the end of each transfer month, the USGS stream gage on the American River at Fair Oaks (USGS 11446500) will be evaluated to determine the number of days the American River flow exceeds the Hodge Flow Criteria. Each day the Hodge Flow Criteria is met, the Seller will have made 15.5 million gallons per day (mgd) available to the Drought Water Bank (equating to 47.6 acre-feet per day). The 15.5 mgd will be multiplied by the number of days in the transfer month that the Hodge Flow Criteria is met. The resulting value is referred to as the 'monthly surface water total.' The maximum daily and monthly surface water totals are shown in Table 2A.

**Hodge Flow Criteria on American River**

<b>Duration</b>	<b>Cubic Feet per Second</b>
October 15 – February	2,000
March – June	3,000
July – October 15	1,750

- At the end of each transfer month, the Seller will report to DWR the total groundwater pumped from wells listed in Table 1 of this Exhibit 1. The total amount of groundwater pumped from wells listed in Table 1 will be reduced by 1.0 million gallons per day (3.07 acre-feet per day) to account for requirements in the Wholesale Agreement between the Seller and the City of Sacramento to comply with the 'Area D'

**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

service area provisions. The resulting value is referred to as the 'monthly groundwater total.'

3. The total monthly amount of Transfer Water will meet the criteria below:
  - a. If the 'monthly groundwater total' exceeds the 'monthly surface water total,' then the amount of Transfer Water is the 'monthly surface water total.'
  - b. If the 'monthly groundwater total' is less than the 'monthly surface water total,' then the amount of Transfer Water is the 'monthly groundwater total.'

**Net Transfer Water**, as identified as "Amount available to Buyers" in Table 5, Exhibit 1, will be determined as Total Purchase Water from Item 3 above, less:

1. Any metered deliveries from the City of Sacramento's Fairbairn Water Treatment Plant to Seller. Seller will provide DWR monthly records showing metered deliveries through the City of Sacramento's Fairbairn Water Treatment Plant for delivery to the southern portion of the Seller's service area. Seller will provide such data to DWR in addition to well flow meter data pursuant to the Monitoring and Reporting Plan of this Exhibit 1; and
2. A stream flow depletion of twelve percent (12%), or as otherwise determined by DWR in discussions with SSWD and the Regional Water Authority based upon recent modeling.

**TABLE 2A  
Seller's Maximum Daily and Monthly Forgone Surface Water Diversions  
from Fairbairn Water Treatment Plant**

<b>Daily Data</b>	<b>Acre-Feet per Day</b>	<b>Million Gallons per Day</b>
Seller's Daily Diversions	47.6	15.5

<b>Monthly Data</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>Total</b>
Total Days per Month	31	31	30	92
Maximum Hodge Flow Days	31	31	30	92
Purchase Water Made Available	1,475	1,475	1,427	4,377

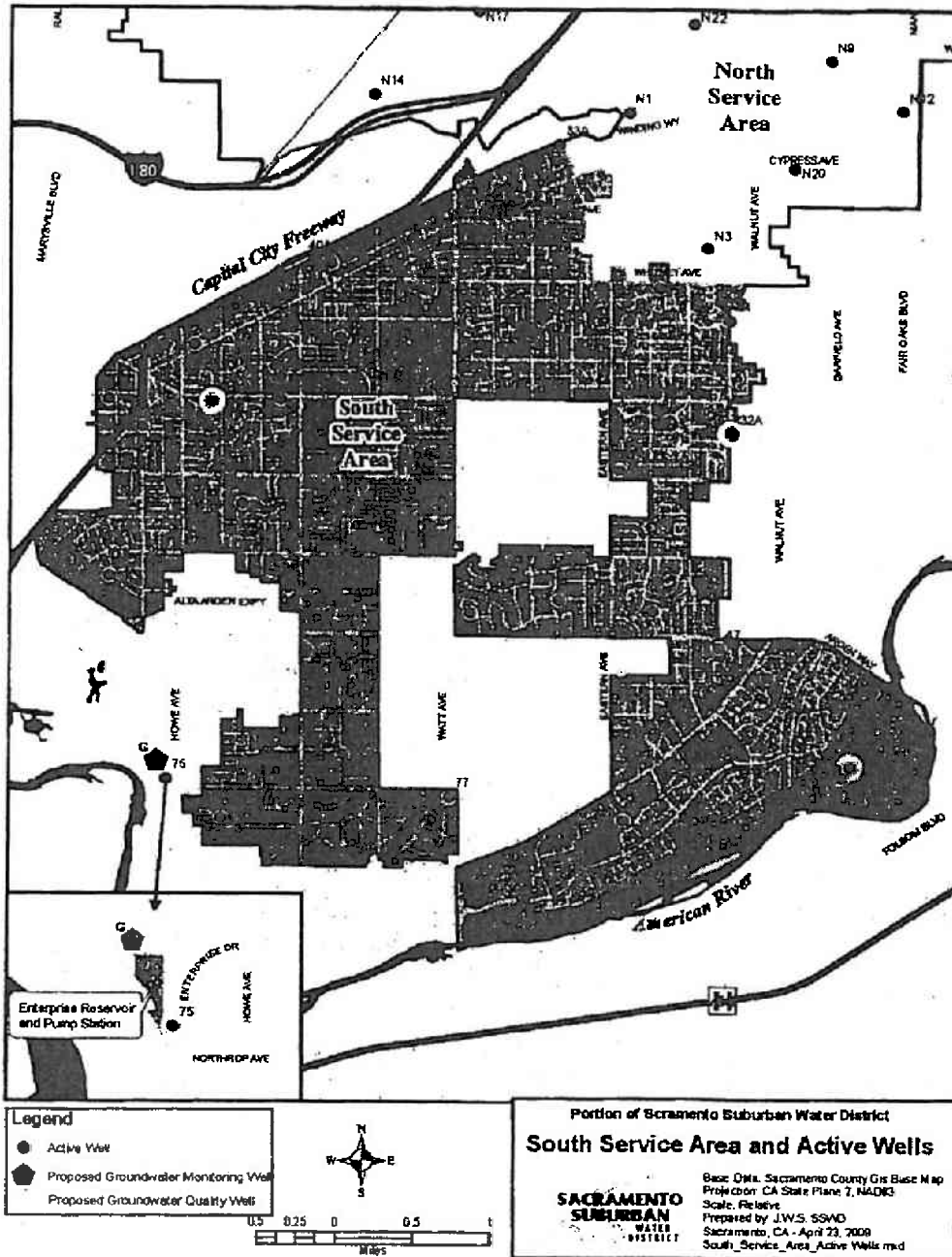
**TABLE 2B  
Estimated Monthly Maximum Purchase Water**

<b>July</b>	<b>August</b>	<b>September</b>	<b>Total</b>
1,475	1,475	1,427	4,377



SCWA Permit Application - Attachment 1  
 Proposed 2010 SSWD Water Transfer

Figure 1. Seller Transfer Well and Monitoring Well Compilation Map



**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

**MONITORING AND REPORTING PLAN**

**1. Flow Meters.** When Seller is pumping wells listed in Table 1 (Approved Seller Groundwater Wells) pursuant to this Agreement, Seller shall record instantaneous and cumulative flow meter values using a properly sized and calibrated flow meter for each well. Measurements will start on the initiation of pumping to replace Purchase Water and continue to be recorded monthly until the last day of pumping to replace Purchase Water. Seller will use the DWR-supplied form in a PDF format file titled "Seller Groundwater Data Collection Form.pdf" to record the flow meter measurements and then transfer the data to electronic format using the DWR supplied spreadsheet titled "Seller Groundwater Data Electronic Reporting Form.xls". The Seller will contact DWR's designated Groundwater Monitoring and Mitigation Records contact to obtain these forms electronically prior to the initiation of the monitoring program. Seller shall submit the completed spreadsheet report with the flow meter measurements as an email attachment to DWR's designated Groundwater Monitoring and Mitigation Records contact each month until the end of the monitoring period.

**2. Power Consumption.** For participating wells utilizing electric power, Seller shall record electric meter readings in *kilowatt hours*, on a monthly basis and make these records available upon request by DWR. For participating wells utilizing natural gas power, Seller shall record meter readings in *hours of operation*, on a monthly basis and make these records available upon request by DWR.

**3. Groundwater Level Measurements.** Seller shall measure water levels in wells listed in Table 3 (Groundwater Level Monitoring Wells) and shown on Figure 1 before pumping under this Agreement begins and continuing monthly until water levels in the monitoring wells recover to the pre-transfer level or through (*date to be determined*), whichever occurs first. Seller shall measure water levels from a reference point clearly marked on the well by the Seller. Seller shall measure water levels with a tape capable of measuring from the reference point to the water surface in the well with an accuracy of at least plus or minus 0.1 feet.

Seller shall download data collected monthly by Sacramento Groundwater Authority (Sac. GW Auth.) and DWR as part of the regional groundwater level monitoring network and incorporate and archive that data with Seller's collected data.

Seller will use the DWR-supplied form in a PDF format file titled "Seller Groundwater Data Collection Form.pdf" for recording groundwater level measurements and then transfer the data to electronic format using the DWR-supplied spreadsheet titled "Seller Groundwater Data Electronic Reporting Form.xls". The Seller will contact the DWR – Groundwater Monitoring and Mitigation Records contact to obtain these forms electronically prior to the initiation of the monitoring program. Seller shall submit the completed spreadsheet report with water level measurements as an email attachment to DWR's designated Groundwater Monitoring and Mitigation Records contact to DWR each month until the end of the monitoring period.

**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

**TABLE 3  
Groundwater Level Monitoring Wells**

<b>Well ID</b>	<b>Data Collection Agency</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Frequency</b>
5	SSWD	38.611486	-121.410091	Monthly
24	SSWD	38.623840	-121.374392	Monthly
71	SSWD	38.584118	-121.353414	Monthly
76	SSWD	38.576039	-121.403121	Monthly
E	DWR	38.601685	-121.376387	Monthly
F	Sac. GW Auth.	38.582783	-121.338408	Monthly
G	Sac. GW Auth.	38.584200	-121.417776	Monthly

**4. Water Quality Sampling.** Seller shall use calibrated equipment to measure the water quality field parameter Specific Conductance in samples from each well listed in Table 4 (Groundwater Quality Monitoring Wells) and shown on Figure 1 when Seller first initiates transfer pumping, at monthly intervals during the transfer period, and at the termination of pumping for the transfer. Please note that conductivity differs from Specific Conductance, as the latter is a temperature corrected measurement. Meter calibration shall be conducted monthly prior to each sampling event. Seller will record meter calibration information, water quality measurements, and other site-specific information relevant to water quality in a field form. Seller will use the DWR-supplied form in PDF format titled "Seller Groundwater Data Collection Form.pdf" for recording field water quality measurements and then transfer the data to electronic format using the DWR-supplied spreadsheet titled "Seller Groundwater Data Electronic Reporting Form.xls". The Seller will contact the DWR – Groundwater Monitoring and Mitigation Records contact to obtain these forms electronically prior to the initiation of the monitoring program. Seller shall submit the completed spreadsheet report with water quality measurements as an email attachment to DWR's designated Groundwater Monitoring and Mitigation Records contact each month until the end of the monitoring period.

If Specific Conductance measurements exceed 900 micromhos/cm, additional water quality field-testing and laboratory analysis may be required, at Seller's expense.

Additionally, DWR may collect samples from the production wells during the project and analyze the samples for one or more of the following constituents: major, minor, and trace elements and stable isotopes of oxygen and hydrogen.

**SCWA Permit Application - Attachment 1  
Proposed 2010 SSWD Water Transfer**

**TABLE 4  
Groundwater Quality Monitoring Wells**

<b>Well ID</b>	<b>Data Collection Agency</b>	<b>Latitude</b>	<b>Longitude</b>
4B	SSWD	38.617526	-121.411642
32A	SSWD	38.614458	-121.350391
73	SSWD	38.583189	-121.336799
75	SSWD	38.582391	-121.417384

**5. Land Subsidence.** Groundwater extraction associated with this Agreement constitutes a small fraction of the seasonal groundwater demand for this area and is not considered to pose a potential risk of land subsidence. Seller referenced two previous subsidence studies that report minimal land subsidence has occurred in the groundwater basin. Additionally, DWR will continue to monitor the potential for land subsidence within the project area through periodic re-surveying of the Sacramento Valley GPS Land Subsidence Network.

**6. Data Collection and Reporting Plan.** Seller will store collected data and make data available to DWR as specified. As data is collected, it will be analyzed to identify any groundwater level or groundwater quality impacts that may trigger mitigation measures. The Seller shall submit the completed spreadsheet report with flow meter, groundwater level, and groundwater quality measurements as an email attachment to DWR's designated Groundwater Monitoring and Mitigation Records contact listed at the same time that it submits all other monthly data until the end of the monitoring period.










Additionally, the Seller will prepare a final water transfer monitoring summary report and submit it to DWR's designated Groundwater Monitoring and Mitigation Records contact by *(date to be determined)*. Copies of all relevant Seller Groundwater Data Collection Forms shall be included in the monthly and final water transfer monitoring summary reports.





# CALIFORNIA STATE WATER PROJECT

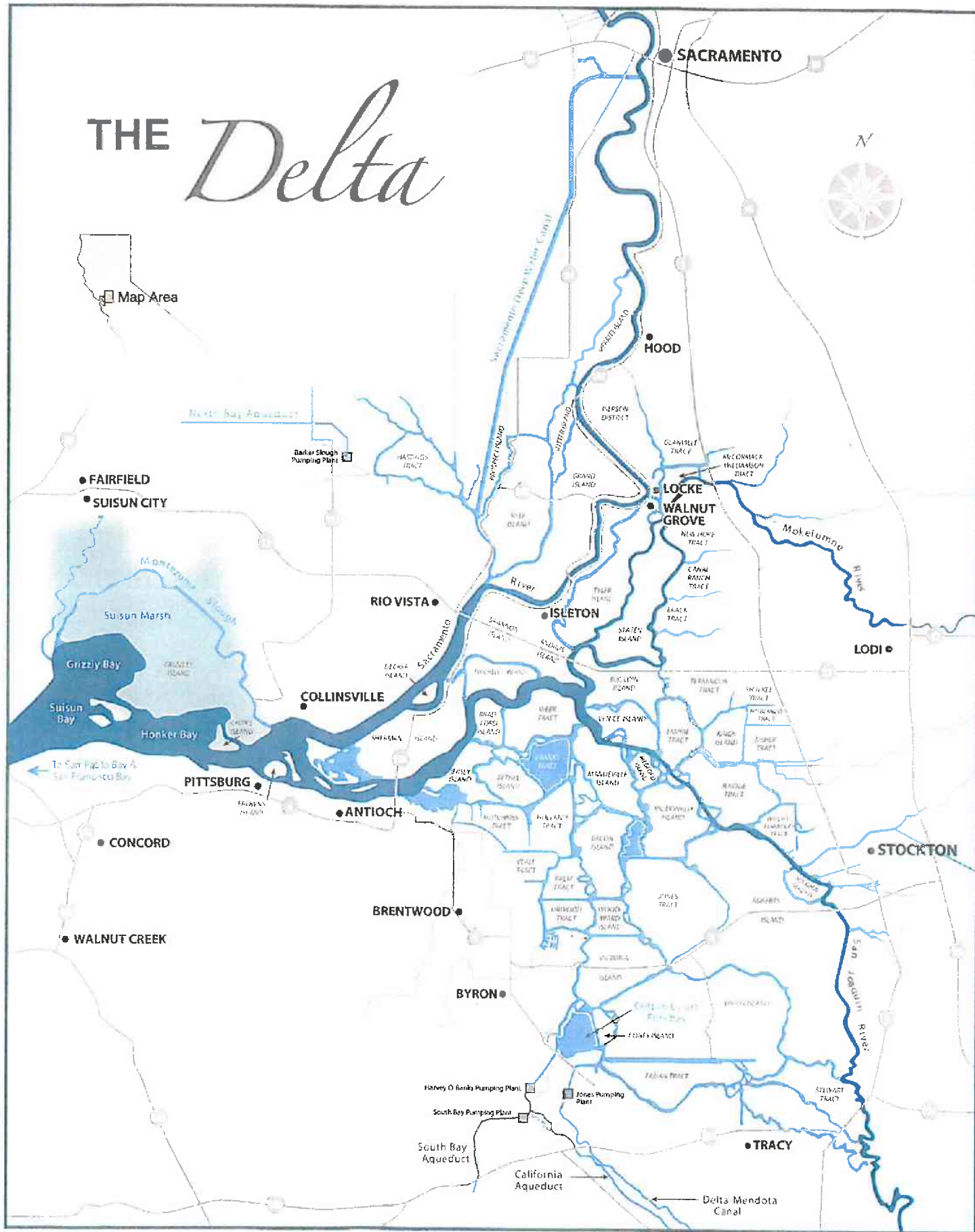
## STATE WATER PROJECT (SWP) FACILITIES

-  RIVERS
-  LAKES
-  CVP CANALS AND AQUEDUCTS
-  SWP AQUEDUCT
-  LOCAL EXTENSION
-  STATE-FEDERAL WATER PROJECT
-  CVP FACILITIES
-  STATE WATER PROJECT FACILITIES
-  STATE-FEDERAL WATER PROJECT FACILITIES





# THE Delta











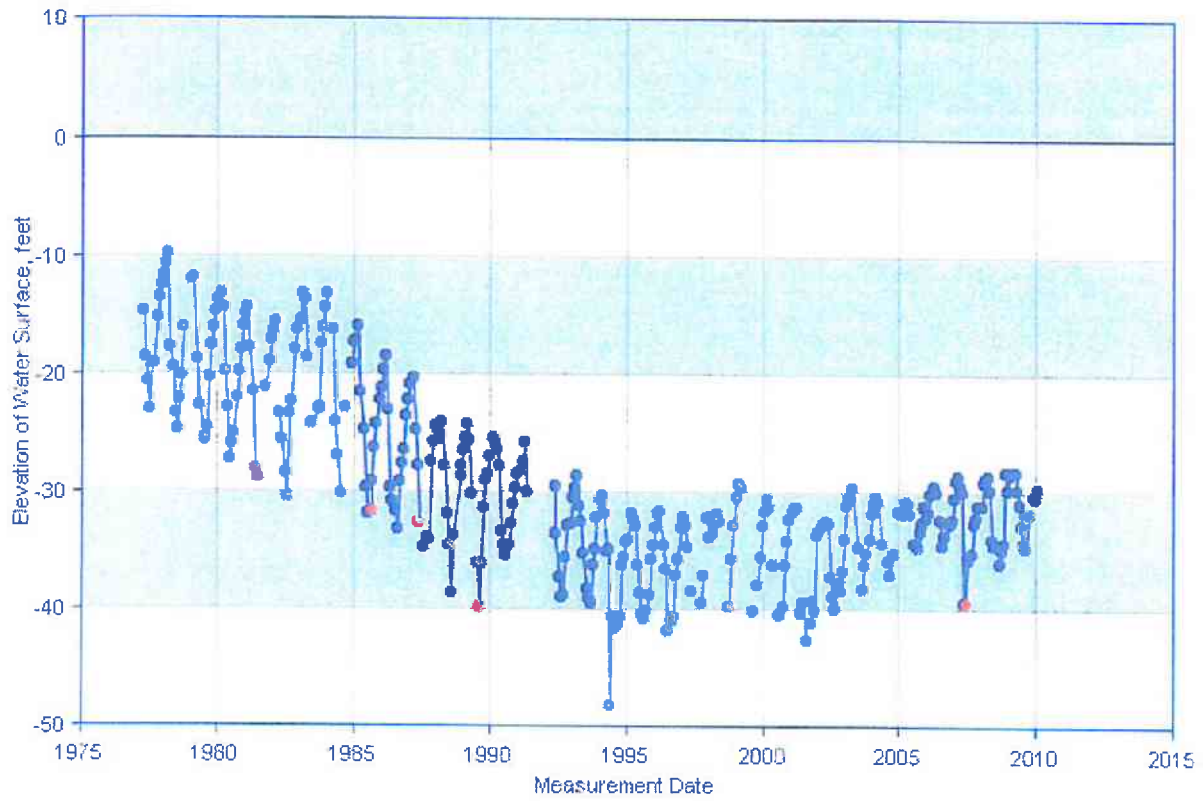


### Logistical Characteristics

Well #	Well Name	Well Address	X-Coordinate (CA State Plane, Zone II, NAD 83)	Y-Coordinate (CA State Plane, Zone II, NAD 83)	DRHO # (PS Code)
2A	El Prado/Park Estates	2250 Park Estates Dr	6733638.55	1983395.761	3410001-001
3A	Kubel/Armstrong	1791 Kubel Circle	6733710.155	1980106.29	3410001-002
4B	Bell/Marconi	2841 Bell Street	6729788.462	1987255.953	3410001-002
5	Bell/El Camino	2550 Bell Street	6730254.315	1985053.534	3410001-004
7	Rubicon/Seely Park	2798 Rubicon	6734057.455	1989447.561	3410001-005
12	Hemando/Santa Anita Park	6301 San Martin	6730767.525	1983830.299	3410001-010
13	Calderwood/Marconi	2951 Calderwood Ln.	6734195.483	1988127.74	3410001-011
14	Marconi South/Fulton	2520 Marconi Ave.	6732044.077	1987327.952	3410001-012
18	Riding Club/Ladino	4012 Riding Club Ln.	6741483.582	1980586.277	3410001-013
19	Balmoral/Yorktown	3330 Balmoral Dr.	6737079.087	1985177.003	3410001-014
20A	Watt/Arden	Arden & Watt Ave.	6738496.597	1980140.914	3410001-015
22	West/Becerra	3812 West Way	6740251.119	1992363.199	3410001-016
23	Marconi North/Fulton	2445 Marconi Ave.	6732048.056	1988077.891	3410001-017
24	Becerra/Woodcrest	3858 Woodcrest Rd.	6740395.161	1989626.474	3410001-018
25	Thor/Mercury	4420 Thor Way	6744661.041	1980191.672	3410001-019
26	Greenwood/Marconi	4501 Marconi Ave.	6744765.191	1987563.792	3410001-020
28	Red Robin/Darwin	Red Robin Lane (reg)	6727394.783	1986405.069	3410001-021
30	Rockbridge/Keith	2116 Rockbridge Rd. (side)	6726644.523	1982507.971	3410001-022
32A	Eden/Roo	Roo Ave. & Eden Ct.	6747276.229	1986257.972	3410001-071
33A	Auburn/Norris	Auburn Blvd. & Norris	6741505.302	1995963.946	3410001-072
35	Ulysses/Mercury	4421 Ulysses Drive	6744808.915	1981217.789	3410001-025
37	Morse/Cottage Park	3169 Ellington Cir. (rear)	6735696.205	1982770.958	3410001-027
38	Watt/Auburn	3830 Watt Avenue	6738436.663	1993919.614	3410001-028
40	Auburn/Yard	2736 Auburn Blvd.	6733746.399	1991931.551	3410001-029
40A	Auburn/Yard	2736 Auburn Blvd.	6733686.632	1992019.879	3410001-073
41	Albatross/Iris	1812 Iris Avenue	6726236.51	1987337.75	3410001-030
43	Edison/Traub	3101 Traub Ct.	6729153.772	1989187.848	3410001-032
45	Jamestown/Middleberry	1848 Jamestown Drive	6726269.146	1981352.362	3410001-033
47	Copenhagen/Arden	1631 Copenhagen Way	6746887.81	1978975.238	3410001-035
55A	Stewart/Lyndale	1210 Stewart Road	6745070.897	1976357.957	3410001-074
60	Whitney/Concetta	Bet. 4528 & 4534 Whitney	6744894.116	1991119.076	3410001-042
65	Merrily/Annadale	E. end Merrily Way	6740147.067	1994070.826	3410001-051
66	Eastern/Woodside Church	3312 Eastern Ave.	6743846.458	1990039.382	3410001-052
68R	Northrop/Dornajo	227' N of Northrop, 630' W of Dornajo	6730778.264	1974488.705	3410001-054
69	Hillsdale/Cooper	2800 Hillsdale Road	6733577.213	1978867.536	3410001-055
70	Sierra/Blackmer	2281 Sierra Blvd.	6730062.168	1973136.188	3410001-056
71	Rodney T. Franz	4705 American River Drive	6746491.268	1975202.794	3410001-064
72	River Walk/NETP	1000 River Walk Way	6750816.357	1974778.593	3410001-061
73	River Walk/NETP East	1000 River Walk Way	6751283.07	1974945.885	3410001-065
74	River Walk/NETP South	1000 River Walk Way	6750886.173	1974528.132	3410001-066
75	Enterprise/Northrop	917 Enterprise Drive	6728209.815	1974450.246	3410001-067
76	Larch/Northrop	870 Larch Lane	6732302.183	1972163.514	3410001-070
77	Fulton/Fair Oaks	541 Monroe Street	6737790.753	1973868.466	3410001-069



### Groundwater Levels in Well 09N05E25J001M



NOTE: red circles denote questionable measurements. Please see the data table below for specifics.

**Groundwater Level Readings -- Well 09N05E25J001M**

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
05-31-1977	64.2	65.0	79.0	-14.8	79.8			5050	
06-30-1977	64.2	65.0	82.8	-18.6	83.6			5050	
07-28-1977	64.2	65.0	84.8	-20.6	85.6			5050	
08-30-1977	64.2	65.0	87.3	-23.1	88.1			5050	
09-28-1977	64.2	65.0	83.3	-19.1	84.1			5050	
10-25-1977	64.2	65.0	83.3	-19.1	84.1			5050	
11-29-1977	64.2	65.0	79.5	-15.3	80.3			5050	
12-20-1977	64.2	65.0	77.8	-13.6	78.6			5050	
01-25-1978	64.2	65.0	76.8	-12.6	77.6			5050	
02-23-1978	64.2	65.0	75.9	-11.7	76.7			5050	
03-30-1978	64.2	65.0	74.9	-10.7	75.7			5050	
04-26-1978	64.2	65.0	74.1	-9.9	74.9			5050	
05-31-1978	64.2	65.0	82.0	-17.8	82.8			5050	
06-27-1978	64.2	65.0	83.7	-19.5	84.5			5050	
07-26-1978	64.2	65.0	87.6	-23.4	88.4			5050	
08-29-1978	64.2	65.0	88.9	-24.7	89.7			5050	
09-26-1978	64.2	65.0	86.4	-22.2	87.2			5050	
10-26-1978	64.2	65.0	84.4	-20.2	85.2			5050	
11-28-1978	64.2	65.0	80.3	-16.1	81.1			5050	
12-18-1978	64.2	65.0					9	5050	
01-24-1979	64.2	65.0					9	5050	
02-27-1979	64.2	65.0	76.3	-12.1	77.1			5050	
03-26-1979	64.2	65.0	76.1	-11.9	76.9			5050	
05-01-1979	64.2	65.0	77.2	-13.0	78.0			5050	
05-29-1979	64.2	65.0	83.1	-18.9	83.9			5050	
06-22-1979	64.2	65.0	86.9	-22.7	87.7			5050	
08-01-1979	64.2	65.0	90.0	-25.8	90.8	4		5050	
08-29-1979	64.2	65.0	89.6	-25.4	90.4			5050	
09-26-1979	64.2	65.0	88.7	-24.5	89.5			5050	
10-26-1979	64.2	65.0	84.6	-20.4	85.4			5050	
11-26-1979	64.2	65.0	81.8	-17.6	82.6			5050	
12-18-1979	64.2	65.0	80.3	-16.1	81.1			5050	
01-29-1980	64.2	65.0	79.0	-14.8	79.8			5050	
02-26-1980	64.2	65.0	78.0	-13.8	78.8			5050	
03-28-1980	64.2	65.0	77.4	-13.2	78.2			5050	
04-29-1980	64.2	65.0	78.6	-14.4	79.4			5050	
05-29-1980	64.2	65.0	84.1	-19.9	84.9	1		5050	

06-27-1980	64.2	65.0	87.1	-22.9	87.9			5050
07-28-1980	64.2	65.0	91.4	-27.2	92.2			5050
08-28-1980	64.2	65.0	90.1	-25.9	90.9			5050
09-29-1980	64.2	65.0	89.2	-25.0	90.0			5050
10-29-1980	64.2	65.0	86.3	-22.1	87.1			5050
11-24-1980	64.2	65.0	84.0	-19.8	84.8			5050
12-22-1980	64.2	65.0	82.2	-18.0	83.0			5050
01-26-1981	64.2	65.0	80.2	-16.0	81.0			5050
02-26-1981	64.2	65.0	79.1	-14.9	79.9			5050
03-30-1981	64.2	65.0	78.6	-14.4	79.4			5050
04-28-1981	64.2	65.0	82.0	-17.8	82.8			5050
05-27-1981	64.2	65.0	85.8	-21.6	86.6			5050
06-29-1981	64.2	65.0	92.3	-28.1	93.1	<u>4</u>		5050
07-30-1981	64.2	65.0	93.0	-28.8	93.8			5050
08-31-1981	64.2	65.0					<u>1</u>	5050
09-29-1981	64.2	65.0					<u>1</u>	5050
10-28-1981	64.2	65.0					<u>9</u>	5050
11-24-1981	64.2	65.0	85.4	-21.2	86.2			5050
12-30-1981	64.2	65.0	83.2	-19.0	84.0			5050
01-26-1982	64.2	65.0	81.4	-17.2	82.2			5050
02-23-1982	64.2	65.0	80.7	-16.5	81.5			5050
03-30-1982	64.2	65.0	79.8	-15.6	80.6			5050
04-28-1982	64.2	65.0					<u>1</u>	5050
05-26-1982	64.2	65.0	87.6	-23.4	88.4			5050
06-28-1982	64.2	65.0	89.7	-25.5	90.5			5050
07-29-1982	64.2	65.0	92.6	-28.4	93.4			5050
08-30-1982	64.2	65.0	94.7	-30.5	95.5	<u>1</u>		5050
09-27-1982	64.2	65.0	87.6	-23.4	88.4			5050
10-27-1982	64.2	65.0	86.6	-22.4	87.4			5050
12-06-1982	64.2	65.0	83.3	-19.1	84.1			5050
12-27-1982	64.2	65.0	82.2	-18.0	83.0			5050
01-25-1983	64.2	65.0	80.4	-16.2	81.2			5050
02-24-1983	64.2	65.0	79.6	-15.4	80.4			5050
03-28-1983	64.2	65.0	77.4	-13.2	78.2			5050
04-25-1983	64.2	65.0	77.9	-13.7	78.7			5050
05-26-1983	64.2	65.0	82.8	-18.6	83.6			5050
06-29-1983	64.2	65.0					<u>1</u>	5050
07-25-1983	64.2	65.0	88.4	-24.2	89.2			5050
10-04-1983	64.2	65.0	87.3	-23.1	88.1			5050
10-26-1983	64.2	65.0	87.0	-22.8	87.8			5050



11-29-1983	64.2	65.0	81.6	-17.4	82.4		5050
12-20-1983	64.2	65.0	80.3	-16.1	81.1	<u>4</u>	5050
01-25-1984	64.2	65.0	78.6	-14.4	79.4		5050
02-27-1984	64.2	65.0	77.4	-13.2	78.2		5050
03-28-1984	64.2	65.0				<u>1</u>	5050
04-26-1984	64.2	65.0	80.4	-16.2	81.2		5050
05-30-1984	64.2	65.0	88.2	-24.0	89.0		5050
06-27-1984	64.2	65.0	91.2	-27.0	92.0		5050
08-01-1984	64.2	65.0	93.8	-29.6	94.6		5050
08-29-1984	64.2	65.0	94.4	-30.2	95.2		5050
09-25-1984	64.2	65.0				<u>1</u>	5050
10-30-1984	64.2	65.0	87.0	-22.8	87.8		5050
11-28-1984	64.2	65.0				<u>9</u>	5050
12-18-1984	64.2	65.0	83.3	-19.1	84.1		5050
01-25-1985	64.2	65.0	81.5	-17.3	82.3		5050
02-26-1985	64.2	65.0	81.3	-17.1	82.1		5050
03-29-1985	64.2	65.0	80.2	-16.0	81.0		5050
04-29-1985	64.2	65.0	85.8	-21.6	86.6		5050
05-30-1985	64.2	65.0	88.9	-24.7	89.7		5050
06-27-1985	64.2	65.0	93.9	-29.7	94.7		5050
07-26-1985	64.2	65.0	96.1	-31.9	96.9		5050
09-04-1985	64.2	65.0	95.8	-31.6	96.6	<u>4</u>	5050
09-24-1985	64.2	65.0	93.4	-29.2	94.2		5050
10-25-1985	64.2	65.0	90.4	-26.2	91.2		5050
11-20-1985	64.2	65.0	88.5	-24.3	89.3		5050
12-19-1985	64.2	65.0	86.4	-22.2	87.2		5050
01-24-1986	64.2	65.0	85.3	-21.1	86.1		5050
02-28-1986	64.2	65.0	83.8	-19.6	84.6		5050
03-24-1986	64.2	65.0	82.7	-18.5	83.5		5050
04-29-1986	64.2	65.0	87.3	-23.1	88.1		5050
05-27-1986	64.2	65.0	93.9	-29.7	94.7		5050
06-26-1986	64.2	65.0	95.0	-30.8	95.8		5050
07-25-1986	64.2	65.0	95.9	-31.7	96.7		5050
08-26-1986	64.2	65.0	97.4	-33.2	98.2		5050
09-26-1986	64.2	65.0	93.3	-29.1	94.1		5050
10-28-1986	64.2	65.0	91.8	-27.6	92.6		5050
11-24-1986	64.2	65.0	90.7	-26.5	91.5		5050
12-23-1986	64.2	65.0	87.8	-23.6	88.6		5050
01-26-1987	64.2	65.0	86.4	-22.2	87.2		5050
02-23-1987	64.2	65.0	85.1	-20.9	85.9		5050

03-24-1987	64.2	65.0	84.6	-20.4	85.4			5050
04-24-1987	64.2	65.0	88.9	-24.7	89.7			5050
05-26-1987	64.2	65.0	92.0	-27.8	92.8			5050
06-23-1987	64.2	65.0	96.9	-32.7	97.7	<u>4</u>		5050
07-28-1987	64.2	65.0					<u>1</u>	5050
08-26-1987	64.2	65.0	98.9	-34.7	99.7			5050
09-24-1987	64.2	65.0	98.0	-33.8	98.8			5050
10-20-1987	64.2	65.0	98.3	-34.1	99.1			5050
11-24-1987	64.2	65.0	91.6	-27.4	92.4			5050
12-23-1987	64.2	65.0	89.9	-25.7	90.7			5050
01-25-1988	64.2	65.0	88.6	-24.4	89.4			5050
02-23-1988	64.2	65.0	89.0	-24.8	89.8			5050
03-25-1988	64.2	65.0	89.8	-25.6	90.6			5050
04-26-1988	64.2	65.0	88.3	-24.1	89.1			5050
05-24-1988	64.2	65.0	92.0	-27.8	92.8	<u>4</u>		5050
06-29-1988	64.2	65.0	96.1	-31.9	96.9			5050
07-27-1988	64.2	65.0	98.8	-34.6	99.6	<u>4</u>		5050
08-31-1988	64.2	65.0	102.8	-38.6	103.6			5050
09-06-1988	64.2	65.0	103.1	-38.9	103.9			5050
09-27-1988	64.2	65.0	97.9	-33.7	98.7			5050
12-01-1988	64.2	65.0	92.9	-28.7	93.7			5050
12-27-1988	64.2	65.0	92.0	-27.8	92.8			5050
01-26-1989	64.2	65.0	90.7	-26.5	91.5			5050
02-24-1989	64.2	65.0	89.6	-25.4	90.4			5050
03-30-1989	64.2	65.0	88.5	-24.3	89.3			5050
04-25-1989	64.2	65.0	89.7	-25.5	90.5			5050
05-31-1989	64.2	65.0	94.3	-30.1	95.1			5050
06-28-1989	64.2	65.0					<u>1</u>	5050
07-28-1989	64.2	65.0	100.2	-36.0	101.0	<u>1</u>		5050
08-29-1989	64.2	65.0	103.9	-39.7	104.7	<u>4</u>		5050
09-26-1989	64.2	65.0	100.2	-36.0	101.0			5050
10-30-1989	64.2	65.0	95.6	-31.4	96.4			5050
11-29-1989	64.2	65.0	93.1	-28.9	93.9			5050
12-20-1989	64.2	65.0	92.6	-28.4	93.4			5050
01-23-1990	64.2	65.0	91.1	-26.9	91.9			5050
02-22-1990	64.2	65.0	89.6	-25.4	90.4			5050
03-26-1990	64.2	65.0	90.0	-25.8	90.8			5050
04-25-1990	64.2	65.0	90.6	-26.4	91.4			5050
05-30-1990	64.2	65.0	91.9	-27.7	92.7			5050
06-28-1990	64.2	65.0	97.6	-33.4	98.4			5050

07-26-1990	64.2	65.0	98.7	-34.5	99.5		5050
08-28-1990	64.2	65.0	99.6	-35.4	100.4		5050
09-27-1990	64.2	65.0	98.7	-34.5	99.5		5050
10-30-1990	64.2	65.0	96.9	-32.7	97.7		5050
11-27-1990	64.2	65.0	95.2	-31.0	96.0		5050
12-18-1990	64.2	65.0	93.9	-29.7	94.7		5050
01-29-1991	64.2	65.0	92.7	-28.5	93.5		5050
02-25-1991	64.2	65.0	92.5	-28.3	93.3		5050
03-27-1991	64.2	65.0	91.6	-27.4	92.4		5050
04-23-1991	64.2	65.0	90.0	-25.8	90.8		5050
05-24-1991	64.2	65.0	94.2	-30.0	95.0		5050
06-24-1991	64.2	65.0				<u>1</u>	5050
03-02-1992	64.2	65.0				<u>5</u>	5050
03-31-1992	64.2	65.0				<u>5</u>	5050
05-05-1992	64.2	65.0	93.7	-29.5	94.5		5050
05-27-1992	64.2	65.0	97.8	-33.6	98.6		5050
07-29-1992	64.2	65.0	101.4	-37.2	102.2		5050
08-20-1992	64.2	65.0	103.1	-38.9	103.9		5050
09-23-1992	64.2	65.0	103.0	-38.8	103.8		5050
10-27-1992	64.2	65.0	99.8	-35.6	100.6		5050
11-30-1992	64.2	65.0	97.1	-32.9	97.9		5050
12-23-1992	64.2	65.0	96.8	-32.6	97.6		5050
01-28-1993	64.2	65.0	94.6	-30.4	95.4		5050
02-22-1993	64.2	65.0	93.8	-29.6	94.6		5050
03-30-1993	64.2	65.0	92.8	-28.6	93.6		5050
04-28-1993	64.2	65.0	95.3	-31.1	96.1		5050
05-25-1993	64.2	65.0	96.7	-32.5	97.5		5050
06-29-1993	64.2	65.0	99.4	-35.2	100.2		5050
07-27-1993	64.2	65.0	102.4	-38.2	103.2		5050
08-31-1993	64.2	65.0	103.3	-39.1	104.1		5050
09-30-1993	64.2	65.0	103.6	-39.4	104.4		5050
10-29-1993	64.2	65.0	100.4	-36.2	101.2		5050
11-24-1993	64.2	65.0	99.1	-34.9	99.9		5050
12-27-1993	64.2	65.0	96.4	-32.2	97.2		5050
01-28-1994	64.2	65.0	94.8	-30.6	95.6		5050
02-22-1994	64.2	65.0	94.5	-30.3	95.3		5050
03-31-1994	64.2	65.0	96.1	-31.9	96.9		5050
04-29-1994	64.2	65.0	99.2	-35.0	100.0		5050
05-31-1994	64.2	65.0	99.1	-34.9	99.9		5050
06-24-1994	65.1	65.0	113.3	-48.2	113.2		5050

07-26-1994	64.2	65.0	104.9	-40.7	105.7		5050
08-30-1994	64.2	65.0	105.9	-41.7	106.7		5050
09-29-1994	64.2	65.0	105.5	-41.3	106.3		5050
10-26-1994	64.2	65.0	104.8	-40.6	105.6		5050
11-29-1994	64.2	65.0	100.4	-36.2	101.2		5050
12-15-1994	64.2	65.0	99.8	-35.6	100.6		5050
01-27-1995	64.2	65.0	98.4	-34.2	99.2		5050
02-17-1995	64.2	65.0	98.2	-34.0	99.0		5050
03-17-1995	64.2	65.0	96.0	-31.8	96.8		5050
04-21-1995	64.2	65.0	96.6	-32.4	97.4		5050
05-18-1995	64.2	65.0	97.0	-32.8	97.8		5050
06-14-1995	64.2	65.0	100.5	-36.3	101.3		5050
07-14-1995	64.2	65.0	102.8	-38.6	103.6		5050
08-28-1995	64.2	65.0	104.6	-40.4	105.4		5050
09-14-1995	64.2	65.0	105.0	-40.8	105.8		5050
10-18-1995	64.2	65.0	104.3	-40.1	105.1		5050
11-16-1995	64.2	65.0	103.0	-38.8	103.8		5050
12-15-1995	64.2	65.0	100.0	-35.8	100.8		5050
01-08-1996	64.2	65.0	98.7	-34.5	99.5		5050
02-15-1996	64.2	65.0	97.2	-33.0	98.0		5050
03-07-1996	64.2	65.0	96.1	-31.9	96.9		5050
04-19-1996	64.2	65.0	95.8	-31.6	96.6		5050
05-03-1996	64.2	65.0	98.8	-34.6	99.6		5050
06-06-1996	64.2	65.0	100.7	-36.5	101.5		5050
07-30-1996	64.2	65.0	106.0	-41.8	106.8		5050
08-13-1996	64.2	65.0				<u>1</u>	5050
09-25-1996	64.2	65.0	105.1	-40.9	105.9		5050
10-03-1996	64.2	65.0	104.9	-40.7	105.7		5050
11-20-1996	64.2	65.0	101.3	-37.1	102.1		5050
12-16-1996	64.2	65.0	100.0	-35.8	100.8		5050
01-30-1997	64.2	65.0	97.2	-33.0	98.0		5050
02-20-1997	64.2	65.0	96.4	-32.2	97.2		5050
03-25-1997	64.2	65.0	97.0	-32.8	97.8		5050
04-14-1997	64.2	65.0	98.9	-34.7	99.7		5050
05-20-1997	64.2	65.0				<u>1</u>	5050
06-08-1997	64.2	65.0	102.6	-38.4	103.4		5050
07-14-1997	64.2	65.0				<u>1</u>	5050
08-19-1997	64.2	65.0				<u>1</u>	5050
09-17-1997	64.2	65.0				<u>1</u>	5050
10-30-1997	64.2	65.0	103.7	-39.5	104.5		5050

11-21-1997	64.2	65.0	101.3	-37.1	102.1			5050
12-11-1997	64.2	65.0					<u>1</u>	5050
01-08-1998	64.2	65.0	99.9	-35.7	100.7			5050
01-22-1998	64.2	65.0	96.3	-32.1	97.1			5050
02-18-1998	64.2	65.0	98.1	-33.9	98.9			5050
03-02-1998	64.2	65.0	97.8	-33.6	98.6			5050
04-24-1998	64.2	65.0	96.8	-32.6	97.6			5050
05-10-1998	64.2	65.0	96.1	-31.9	96.9			5050
06-09-1998	64.2	65.0	96.7	-32.5	97.5			5050
07-17-1998	64.2	65.0					<u>1</u>	5050
08-05-1998	64.2	65.0					<u>1</u>	5050
09-01-1998	64.2	65.0					<u>1</u>	5050
10-09-1998	64.2	65.0	103.9	-39.7	104.7	<u>4</u>		5050
11-09-1998	64.2	65.0	99.9	-35.7	100.7			5050
12-31-1998	64.2	65.0	97.0	-32.8	97.8			5050
02-18-1999	64.2	65.0	94.7	-30.5	95.5			5050
03-26-1999	64.2	65.0	93.5	-29.3	94.3			5050
04-14-1999	64.2	65.0	93.9	-29.7	94.7			5050
05-21-1999	64.2	65.0					<u>1</u>	5050
06-17-1999	64.2	65.0					<u>1</u>	5050
07-07-1999	64.2	65.0					<u>1</u>	5050
08-23-1999	64.2	65.0					<u>1</u>	5050
09-08-1999	64.2	65.0	104.3	-40.1	105.1			5050
10-25-1999	64.2	65.0					<u>1</u>	5050
11-03-1999	64.2	65.0	102.1	-37.9	102.9			5050
12-06-1999	64.2	65.0	99.8	-35.6	100.6			5050
01-13-2000	64.2	65.0	97.1	-32.9	97.9			5050
02-11-2000	64.2	65.0	95.8	-31.6	96.6			5050
03-07-2000	64.2	65.0	94.8	-30.6	95.6			5050
04-20-2000	64.2	65.0	95.5	-31.3	96.3			5050
05-24-2000	64.2	65.0					<u>1</u>	5050
06-12-2000	64.2	65.0	100.5	-36.3	101.3			5050
07-06-2000	64.2	65.0					<u>1</u>	5050
08-01-2000	64.2	65.0	104.7	-40.5	105.5			5050
10-10-2000	64.2	65.0	104.0	-39.8	104.8			5050
11-03-2000	64.2	65.0	100.4	-36.2	101.2			5050
12-07-2000	64.2	65.0	98.4	-34.2	99.2			5050
01-22-2001	64.2	65.0	96.6	-32.4	97.4			5050
02-21-2001	64.2	65.0	95.9	-31.7	96.7			5050
03-06-2001	64.2	65.0	95.5	-31.3	96.3			5050

04-02-2001	64.2	65.0	95.6	-31.4	96.4			5050
05-01-2001	64.2	65.0					<u>1</u>	5050
06-05-2001	64.2	65.0	104.4	-40.2	105.2			5050
07-13-2001	64.2	65.0	103.6	-39.4	104.4			5050
08-08-2001	64.2	65.0	106.8	-42.6	107.6			5050
09-04-2001	64.2	65.0					<u>1</u>	5050
10-02-2001	64.2	65.0	105.4	-41.2	106.2			5050
11-01-2001	64.2	65.0	103.4	-39.2	104.2			5050
12-03-2001	64.2	65.0	104.3	-40.1	105.1			5050
01-14-2002	64.2	65.0	97.9	-33.7	98.7			5050
02-08-2002	64.2	65.0	97.6	-33.4	98.4			5050
03-08-2002	64.2	65.0	97.0	-32.8	97.8			5050
04-05-2002	64.2	65.0	96.9	-32.7	97.7			5050
05-08-2002	64.2	65.0	96.7	-32.5	97.5			5050
06-11-2002	64.2	65.0	96.8	-32.6	97.6			5050
07-09-2002	64.2	65.0	101.5	-37.3	102.3	<u>4</u>		5050
08-09-2002	64.2	65.0	103.1	-38.9	103.9			5050
09-06-2002	64.2	65.0	104.2	-40.0	105.0			5050
10-10-2002	64.2	65.0	101.9	-37.7	102.7			5050
11-13-2002	64.2	65.0	102.6	-38.4	103.4			5050
12-10-2002	64.2	65.0	100.9	-36.7	101.7			5050
01-13-2003	64.2	65.0	98.3	-34.1	99.1			5050
02-07-2003	64.2	65.0	95.3	-31.1	96.1			5050
03-03-2003	64.2	65.0	94.6	-30.4	95.4			5050
03-07-2003	64.2	65.0	95.0	-30.8	95.8			5050
04-04-2003	64.2	65.0	94.6	-30.4	95.4			5050
05-06-2003	64.2	65.0	93.8	-29.6	94.6			5050
07-03-2003	64.2	65.0	98.9	-34.7	99.7			5050
08-08-2003	64.2	65.0					<u>1</u>	5050
09-10-2003	64.2	65.0	102.5	-38.3	103.3			5050
10-06-2003	64.2	65.0	100.4	-36.2	101.2			5050
11-06-2003	64.2	65.0	99.4	-35.2	100.2			5050
12-04-2003	64.2	65.0	98.2	-34.0	99.0			5050
01-13-2004	64.2	65.0	96.0	-31.8	96.8			5050
02-05-2004	64.2	65.0	95.2	-31.0	96.0			5050
03-03-2004	64.2	65.0	94.6	-30.4	95.4			5050
04-08-2004	64.2	65.0	95.0	-30.8	95.8			5050
06-07-2004	64.2	65.0	98.5	-34.3	99.3			5050
07-12-2004	64.2	65.0					<u>1</u>	5050
08-05-2004	64.2	65.0	100.1	-35.9	100.9			5050



09-14-2004	64.2	65.0	101.3	-37.1	102.1		5050
11-09-2004	64.2	65.0	99.4	-35.2	100.2		5050
12-07-2004	64.2	65.0				<u>1</u>	5050
01-18-2005	64.2	65.0	95.9	-31.7	96.7		5050
02-08-2005	64.2	65.0	96.0	-31.8	96.8		5050
03-08-2005	64.2	65.0	96.0	-31.8	96.8		5050
04-11-2005	64.2	65.0	95.0	-30.8	95.8		5050
05-11-2005	64.2	65.0	95.2	-31.0	96.0		5050
06-10-2005	64.2	65.0	96.1	-31.9	96.9		5050
07-13-2005	64.2	65.0				<u>1</u>	5050
08-05-2005	64.2	65.0	98.6	-34.4	99.4		5050
09-06-2005	64.2	65.0	98.9	-34.7	99.7		5050
10-12-2005	64.2	65.0	97.6	-33.4	98.4		5050
11-09-2005	64.2	65.0	96.9	-32.7	97.7		5050
12-09-2005	64.2	65.0	95.4	-31.2	96.2		5050
01-06-2006	64.2	65.0	96.4	-32.2	97.2		5050
02-08-2006	64.2	65.0	95.8	-31.6	96.6		5050
03-08-2006	64.2	65.0	94.4	-30.2	95.2		5050
04-14-2006	64.2	65.0	93.6	-29.4	94.4		5050
05-10-2006	64.2	65.0	94.1	-29.9	94.9		5050
06-05-2006	64.2	65.0				<u>1</u>	5050
07-13-2006	64.2	65.0	96.6	-32.4	97.4		5050
08-07-2006	64.2	65.0	98.8	-34.6	99.6		5050
09-11-2006	64.2	65.0	97.9	-33.7	98.7		5050
11-14-2006	64.2	65.0	96.9	-32.7	97.7		5050
12-11-2006	64.2	65.0	96.6	-32.4	97.4		5050
01-05-2007	64.2	65.0	94.7	-30.5	95.5		5050
02-08-2007	64.2	65.0	93.2	-29.0	94.0		5050
03-08-2007	64.2	65.0	92.8	-28.6	93.6		5050
04-05-2007	64.2	65.0	93.6	-29.4	94.4		5050
05-08-2007	64.2	65.0	94.1	-29.9	94.9		5050
06-11-2007	64.2	65.0	103.7	-39.5	104.5	<u>4</u>	5050
07-06-2007	64.2	65.0	100.0	-35.8	100.8		5050
09-10-2007	64.2	65.0	99.4	-35.2	100.2		5050
10-01-2007	64.2	65.0	96.8	-32.6	97.6		5050
11-05-2007	64.2	65.0	96.4	-32.2	97.2		5050
12-11-2007	64.2	65.0	95.4	-31.2	96.2		5050
01-10-2008	64.2	65.0	95.4	-31.2	96.2		5050
02-01-2008	64.2	65.0	93.3	-29.1	94.1		5050
03-06-2008	64.2	65.0	93.0	-28.8	93.8		5050

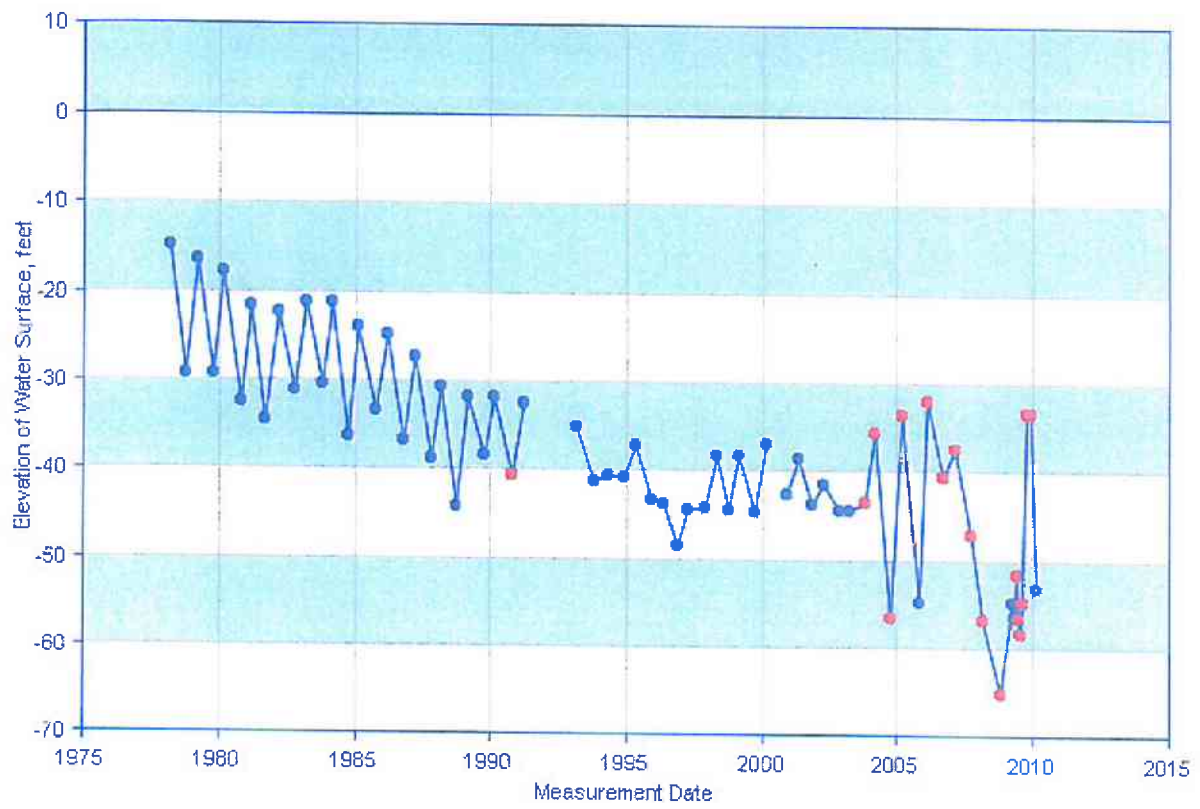
04-01-2008	64.2	65.0	92.9	-28.7	93.7		5050
05-06-2008	64.2	65.0	94.0	-29.8	94.8		5050
06-19-2008	64.2	65.0	98.2	-34.0	99.0		5050
07-08-2008	64.2	65.0	98.8	-34.6	99.6		5050
08-01-2008	64.2	65.0	98.7	-34.5	99.5		5050
09-11-2008	64.2	65.0	100.2	-36.0	101.0		5050
10-08-2008	64.2	65.0	99.0	-34.8	99.8		5050
11-12-2008	64.2	65.0	98.6	-34.4	99.4		5050
12-04-2008	64.2	65.0	92.4	-28.2	93.2		5050
01-20-2009	64.2	65.0	94.0	-29.8	94.8		5050
02-17-2009	64.2	65.0	92.7	-28.5	93.5		5050
03-12-2009	64.2	65.0	92.4	-28.2	93.2		5050
04-07-2009	64.2	65.0	92.5	-28.3	93.3		5050
05-28-2009	64.2	65.0	94.0	-29.8	94.8		5050
06-25-2009	64.2	65.0	95.2	-31.0	96.0		5050
07-13-2009	64.2	65.0	97.1	-32.9	97.9		5050
08-05-2009	64.2	65.0	98.5	-34.3	99.3		5050
09-17-2009	64.2	65.0	98.9	-34.7	99.7		5050
10-14-2009	64.2	65.0	96.0	-31.8	96.8		5050
11-11-2009	64.2	65.0				<u>7</u>	5050
12-23-2009	64.2	65.0	94.5	-30.3	95.3		5050
01-06-2010	64.2	65.0	94.6	-30.4	95.4		5050
02-03-2010	64.2	65.0	93.8	-29.6	94.6		5050
03-17-2010	64.2	65.0				<u>7</u>	5050

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	641500	4273626	metres	10
LL	NAD27	121.3751	38.6017	decimal degrees	
LL	NAD83	121.3761	38.6016	decimal degrees	
UTM	NAD83	641404	4273821	metres	10

Well Use: Domestic

### Groundwater Levels in Well 09N05E12L001M



NOTE: red circles denote questionable measurements. Please see the data table below for specifics.

**Groundwater Level Readings -- Well 09N05E12L001M**

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
03-17-1978	76.3	75.0	91.3	-15.0	90.0			5050	2
10-10-1978	76.3	75.0	105.7	-29.4	104.4			5050	2
03-19-1979	76.3	75.0	92.7	-16.4	91.4			5050	2
10-09-1979	76.3	75.0	105.6	-29.3	104.3			5050	
03-17-1980	76.3	75.0	94.2	-17.9	92.9			5050	
10-07-1980	76.3	75.0	108.7	-32.4	107.4			5050	2
03-11-1981	76.3	75.0	97.9	-21.6	96.6			5050	2
09-28-1981	76.3	75.0	110.9	-34.6	109.6			5050	2
03-22-1982	76.3	75.0	98.7	-22.4	97.4			5050	2
10-21-1982	76.3	75.0	107.4	-31.1	106.1			5050	2
03-11-1983	76.3	75.0	97.4	-21.1	96.1			5050	2
10-04-1983	76.3	75.0	106.8	-30.5	105.5			5050	2
03-05-1984	76.3	75.0	97.6	-21.3	96.3			5050	2
10-03-1984	76.3	75.0	112.7	-36.4	111.4			5050	2
02-28-1985	76.3	75.0	100.3	-24.0	99.0			5050	2
10-21-1985	76.3	75.0	109.6	-33.3	108.3			5050	2
03-11-1986	76.3	75.0	101.2	-24.9	99.9			5050	2
10-23-1986	76.3	75.0	113.0	-36.7	111.7			5050	2
03-16-1987	76.3	75.0	103.7	-27.4	102.4			5050	2
10-20-1987	76.3	75.0	115.2	-38.9	113.9			5050	2
03-14-1988	76.3	75.0	106.9	-30.6	105.6			5050	2
10-11-1988	76.3	75.0	120.6	-44.3	119.3			5050	2
03-07-1989	76.3	75.0	108.2	-31.9	106.9			5050	2
10-07-1989	76.3	75.0	114.6	-38.3	113.3			5050	2
02-28-1990	76.3	75.0	108.1	-31.8	106.8			5050	
10-19-1990	76.3	75.0	117.0	-40.7	115.7	8		5050	
03-20-1991	76.3	75.0	108.7	-32.4	107.4			5050	
04-15-1992	76.3	75.0					7	5050	2
11-15-1992	76.3	75.0					9	5050	
03-17-1993	76.3	75.0	111.4	-35.1	110.1			5050	
11-19-1993	76.3	75.0	117.6	-41.3	116.3			5050	
05-06-1994	76.3	75.0	116.9	-40.6	115.6			5050	
12-16-1994	76.3	75.0	117.2	-40.9	115.9			5050	
05-18-1995	76.3	75.0	113.6	-37.3	112.3			5050	
12-04-1995	76.3	75.0	119.7	-43.4	118.4			5050	
05-03-1996	76.3	75.0	120.1	-43.8	118.8			5050	
12-16-1996	76.3	75.0	124.8	-48.5	123.5			5050	
04-17-1997	76.3	75.0	120.7	-44.4	119.4			5050	

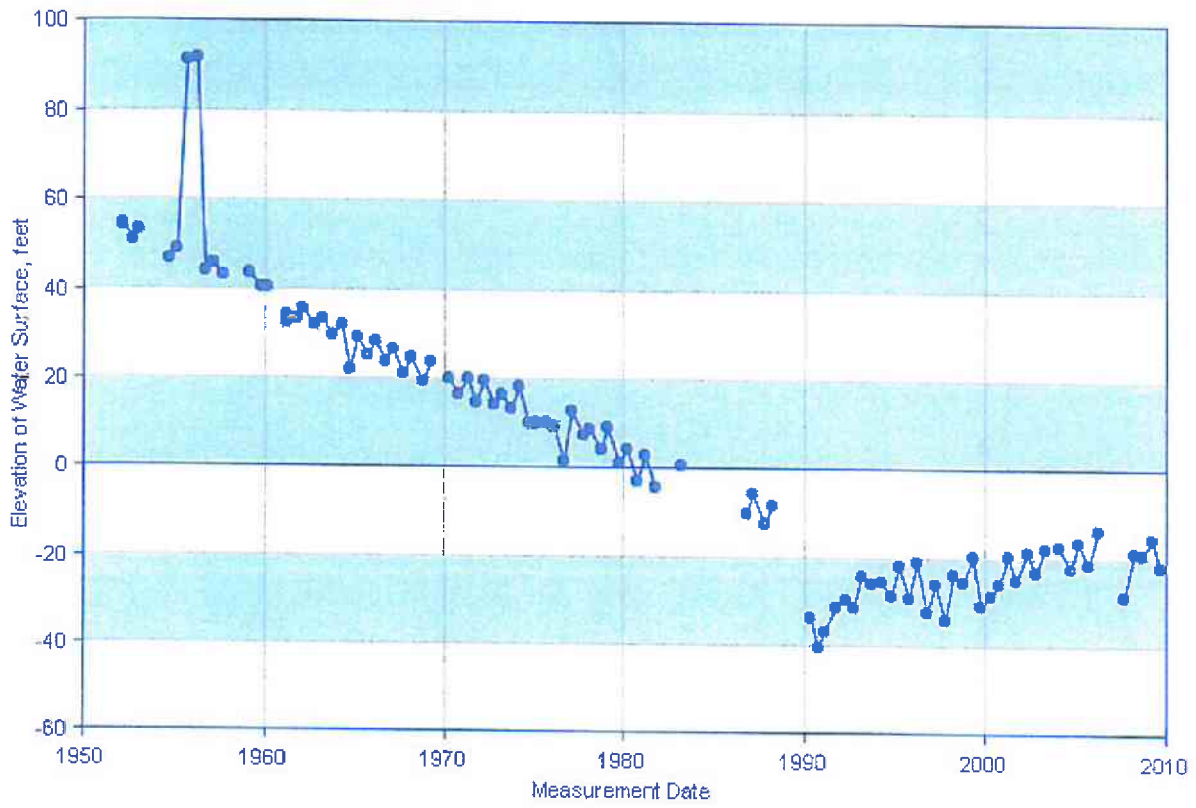
12-02-1997	76.3	75.0	120.6	-44.3	119.3			5050
05-10-1998	76.3	75.0	114.7	-38.4	113.4			5050
10-23-1998	76.3	75.0	120.7	-44.4	119.4			5050
03-25-1999	76.3	75.0	114.6	-38.3	113.3			5050
10-25-1999	76.3	75.0	120.9	-44.6	119.6			5050
03-28-2000	76.3	75.0	113.2	-36.9	111.9			5050
12-01-2000	76.3	75.0	119.0	-42.7	117.7			5050
05-10-2001	76.3	75.0	114.9	-38.6	113.6			5050
11-30-2001	76.3	75.0	120.1	-43.8	118.8			5050
04-30-2002	76.3	75.0	117.8	-41.5	116.5			5050
11-15-2002	76.3	75.0	120.8	-44.5	119.5			5050
04-15-2003	76.3	75.0	120.8	-44.5	119.5			5050
11-25-2003	76.3	75.0	119.8	-43.5	118.5	<u>8</u>		5050
03-19-2004	76.3	75.0	111.9	-35.6	110.6	<u>8</u>		5050
10-28-2004	76.3	75.0	132.9	-56.6	131.6	<u>8</u>		5050
03-29-2005	76.3	75.0	109.9	-33.6	108.6	<u>8</u>		5050
11-28-2005	76.3	75.0	131.0	-54.7	129.7			5050
03-27-2006	76.3	75.0	108.3	-32.0	107.0	<u>8</u>		5050
10-19-2006	76.3	75.0	117.0	-40.7	115.7	<u>8</u>		5050
03-28-2007	76.3	75.0	113.8	-37.5	112.5	<u>8</u>		5050
10-29-2007	76.3	75.0	123.4	-47.1	122.1	<u>8</u>		5050
03-26-2008	76.3	75.0	133.1	-56.8	131.8	<u>8</u>		5050
11-19-2008	76.3	75.0	141.4	-65.1	140.1	<u>8</u>		5050
04-29-2009	76.3	75.0	131.1	-54.8	129.8			5050
05-11-2009	76.3	75.0	132.6	-56.3	131.3			5050
06-22-2009	76.3	75.0	128.0	-51.7	126.7	<u>8</u>		5050
07-15-2009	76.3	75.0	133.0	-56.7	131.7	<u>8</u>		5050
08-10-2009	76.3	75.0	134.6	-58.3	133.3	<u>8</u>		5050
09-14-2009	76.3	75.0	131.1	-54.8	129.8	<u>8</u>		5050
10-12-2009	76.3	75.0	109.6	-33.3	108.3	<u>8</u>		5050
11-11-2009	76.3	75.0					<u>7</u>	5050 <u>2</u>
12-16-2009	76.3	75.0	109.6	-33.3	108.3	<u>8</u>		5050
03-23-2010	76.3	75.0	129.5	-53.2	128.2			5050

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	640703	4278536	metres	10
LL	NAD27	121.3832	38.6461	decimal degrees	
LL	NAD83	121.3843	38.6460	decimal degrees	
UTM	NAD83	640607	4278731	metres	10

Well Use: Irrigation

### Groundwater Levels in Well 10N06E21F002M



NOTE: red circles denote questionable measurements. Please see the data table below for specifics.



**Groundwater Level Readings -- Well 10N06E21F002M**

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
04-11-1952	159.0	158.5	105.0	54.0	104.5			5108	
04-14-1952	159.0	158.5	104.7	54.3	104.2			5108	
10-23-1952	159.0	158.5	108.5	50.5	108.0			5108	
03-16-1953	159.0	158.5	106.0	53.0	105.5			5108	
04-14-1954	159.0	158.5					7	5108	
10-19-1954	159.0	158.5	112.4	46.6	111.9			5108	
03-17-1955	159.0	158.5	110.0	49.0	109.5			5108	
10-07-1955	159.0	158.5	67.9	91.1	67.4			5108	
04-05-1956	159.0	158.5	67.5	91.5	67.0			5108	
10-11-1956	159.0	158.5	115.0	44.0	114.5			5108	
03-25-1957	159.0	158.5	113.3	45.7	112.8			5108	
10-21-1957	159.0	158.5	115.8	43.2	115.3			5108	
03-07-1958	159.0	158.5					7	5108	
03-18-1959	159.0	158.5	115.7	43.3	115.2			5108	
11-04-1959	159.0	158.5	118.9	40.1	118.4			5108	
02-24-1960	159.0	158.5	118.6	40.4	118.1			5108	
04-12-1961	159.0	158.5	125.1	33.9	124.6			5108	
04-27-1961	159.0	158.5	126.8	32.2	126.3			5108	
10-06-1961	159.0	158.5	126.0	33.0	125.5			5108	
03-12-1962	159.0	158.5	123.5	35.5	123.0			5108	
10-15-1962	159.0	158.5	127.5	31.5	127.0			5108	
03-29-1963	159.0	158.5	125.8	33.2	125.3			5108	
10-18-1963	159.0	158.5	129.6	29.4	129.1			5108	
04-08-1964	159.0	158.5	127.4	31.6	126.9			5108	
10-16-1964	159.0	158.5	137.2	21.8	136.7			5108	
03-23-1965	159.0	158.5	129.8	29.2	129.3			5108	
10-13-1965	159.0	158.5	134.1	24.9	133.6			5108	
03-08-1966	159.0	158.5	130.9	28.1	130.4			5108	
10-13-1966	159.0	158.5	135.3	23.7	134.8			5108	
03-15-1967	159.0	158.5	132.8	26.2	132.3			5108	
10-24-1967	159.0	158.5	138.0	21.0	137.5			5108	
03-15-1968	159.0	158.5	134.4	24.6	133.9			5108	
10-23-1968	159.0	158.5	139.7	19.3	139.2			5108	
04-08-1969	159.0	158.5	135.5	23.5	135.0			5108	
04-22-1970	159.0	158.5	138.8	20.2	138.3			5108	
10-28-1970	159.0	158.5	142.7	16.3	142.2			5108	
05-07-1971	159.0	158.5	138.8	20.2	138.3			5108	

10-19-1971	159.0	158.5	144.3	14.7	143.8		5108
03-17-1972	159.0	158.5	139.6	19.4	139.1		5108
10-20-1972	159.0	158.5	144.9	14.1	144.4		5108
03-20-1973	159.0	158.5	142.4	16.6	141.9		5108
10-15-1973	159.0	158.5	145.7	13.3	145.2		5108
03-18-1974	159.0	158.5	141.0	18.0	140.5		5108
10-15-1974	159.0	158.5	149.1	9.9	148.6		5108
03-04-1975	159.0	158.5	148.7	10.3	148.2		5108
10-17-1975	159.0	158.5	148.8	10.2	148.3		5108
03-15-1976	159.0	158.5	150.0	9.0	149.5		5108
10-18-1976	159.0	158.5	157.7	1.3	157.2		5108
03-18-1977	159.0	158.5	146.3	12.7	145.8		5108
10-17-1977	159.0	158.5	151.5	7.5	151.0		5108
03-23-1978	159.0	158.5	150.3	8.7	149.8		5108
10-26-1978	159.0	158.5	154.6	4.4	154.1		5108
03-27-1979	159.0	158.5	150.0	9.0	149.5		5108
10-04-1979	159.0	158.5	158.0	1.0	157.5		5108
03-17-1980	159.0	158.5	155.0	4.0	154.5		5108
10-08-1980	159.0	158.5	162.0	-3.0	161.5		5108
03-16-1981	159.0	158.5	156.0	3.0	155.5		5108
10-23-1981	159.0	158.5	163.5	-4.5	163.0		5108
11-05-1982	159.0	158.5				<u>9</u>	5108
03-24-1983	159.0	158.5	158.6	0.4	158.1		5108
10-20-1983	159.0	158.5				<u>7</u>	5108
03-14-1984	159.0	158.5				<u>7</u>	5108
10-25-1984	159.0	158.5				<u>7</u>	5108
03-27-1986	159.0	158.5				<u>9</u>	5108
10-14-1986	159.0	158.5	169.1	-10.1	168.6		5108
03-25-1987	159.0	158.5	164.5	-5.5	164.0		5108
10-15-1987	159.0	158.5	171.6	-12.6	171.1		5108
03-24-1988	159.0	158.5	167.3	-8.3	166.8		5108
05-09-1990	159.0	158.5	192.6	-33.6	192.1		5108
10-11-1990	159.0	158.5	199.4	-40.4	198.9		5108
02-26-1991	159.0	158.5	196.0	-37.0	195.5		5108
10-15-1991	159.0	158.5	190.4	-31.4	189.9		5108
04-08-1992	159.0	158.5	188.5	-29.5	188.0		5108
10-19-1992	159.0	158.5	190.2	-31.2	189.7		5108
03-23-1993	159.0	158.5	183.1	-24.1	182.6		5108
10-12-1993	159.0	158.5	185.0	-26.0	184.5		5108
04-04-1994	159.0	158.5	184.7	-25.7	184.2		5108

11-02-1994	159.0	158.5	187.5	-28.5	187.0		5108	
04-13-1995	159.0	158.5	181.1	-22.1	180.6		5108	
10-06-1995	159.0	158.5	188.2	-29.2	187.7		5108	
04-05-1996	159.0	158.5	179.9	-20.9	179.4		5108	
10-07-1996	159.0	158.5	191.4	-32.4	190.9		5108	
04-02-1997	159.0	158.5	185.0	-26.0	184.5		5108	
10-23-1997	159.0	158.5	193.2	-34.2	192.7		5108	
04-08-1998	159.0	158.5	182.5	-23.5	182.0		5108	
10-08-1998	159.0	158.5	184.7	-25.7	184.2		5108	
04-27-1999	159.0	158.5	178.5	-19.5	178.0		5108	
10-14-1999	159.0	158.5	189.8	-30.8	189.3		5108	
04-26-2000	159.0	158.5	187.6	-28.6	187.1		5108	
10-04-2000	159.0	158.5	184.9	-25.9	184.4		5108	
04-16-2001	159.0	158.5	178.8	-19.8	178.3		5108	
10-04-2001	159.0	158.5	184.2	-25.2	183.7		5108	
05-22-2002	159.0	158.5	177.9	-18.9	177.4		5108	
10-17-2002	159.0	158.5	182.4	-23.4	181.9		5108	
05-20-2003	159.0	158.5	176.8	-17.8	176.3		5108	
10-17-2003	159.0	158.5				<u>9</u>	5108	
03-29-2004	159.0	158.5	176.6	-17.6	176.1		5108	2
11-02-2004	159.0	158.5	181.5	-22.5	181.0		5108	
04-20-2005	159.0	158.5	175.6	-16.6	175.1		5108	
10-18-2005	159.0	158.5	180.6	-21.6	180.1		5108	
05-02-2006	159.0	158.5	172.9	-13.9	172.4		5108	
10-10-2006	159.0	158.5				<u>2</u>	5108	
04-24-2007	159.0	158.5				<u>2</u>	5108	2
10-09-2007	159.0	158.5	187.6	-28.6	187.1		5108	
04-09-2008	159.0	158.5	177.8	-18.8	177.3		5108	
10-10-2008	159.0	158.5	178.4	-19.4	177.9		5108	
04-13-2009	159.0	158.5	174.7	-15.7	174.2		5108	
10-21-2009	159.0	158.5	180.7	-21.7	180.2		5108	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	645296	4285632	metres	10
LL	NAD27	121.3290	38.7092	decimal degrees	
LL	NAD83	121.3300	38.7092	decimal degrees	
UTM	NAD83	645200	4285827	metres	10

Well Use: Domestic





### Standing Water Levels, April / October, In feet Below Ground Level

#### Sacramento Suburban Water District ~ North Service Area

Well Name	Well #	Oct 2003	Apr 2004	Oct 2004	Apr 2005	Oct 2005	Apr 2006	Oct 2006	Apr 2007	Oct 2007	Apr 2008	Oct 2008
Melrose / Channing	27	135	136	134	129	126	117	131	123	137	129	138
Watt / Elkhorn	31A	127	119	128	100	118	101	128	104	127	107	115
La Cieniga / Melrose	34	124	124	124	121	116	107	120	116	124	116	127
Thomas / Elkhorn	39	133	134	136	94	87	118	N/A	N/A	N/A	N/A	N/A
Gilman / SMUD Station	44	141	140	138	131	134	125	138	132	142	130	140
Weddigen / Gothberg	52	140	143	142	137	143	122	140	131	143	52	140
Fairbairn / Karl	56A	144	146	141	132	138	128	134	127	147	132	141
Thirty Second / Elkhorn	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bainbridge / Holmes	59A	155	151	155	143	152	143	148	134	158	150	N/A
Galbrath / Antelope Woods	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
McClellan Park	MC10	113	114	117	110	115	109	113	103	116	110	115
Capehart	MC-C1	139	137	134	111	116	110	130	118	140	125	129
Capehart	MC-C2	117	115	116	131	134	118	132	105	113	108	114
Capehart	MC-C3	N/A	122	118	106	110	104	104	108	110	112	112
Evergreen	N1	107	104	108	101	106	98	105	96	103	98	96
Engle	N3	109	139	138	103	134	126	107	98	136	139	132
Hillsdale	N5	177	181	167	163	188	180	182	173	168	190	168
Palm	N6	N/A	N/A	124	144	122	112	117	112	124	116	122
Rosebud	N7	122	118	123	113	119	111	140	133	123	119	121
Field	N8	N/A	N/A	134	122	130	120	118	120	132	125	133
Cameron	N9	N/A	N/A	N/A	120	127	118	116	117	126	122	126
Walnut	N10	150	N/A	N/A	155	149	151	146	139	155	144	149
St. John	N12	143	172	144	N/A	N/A	N/A	N/A	N/A	N/A	136	139
Orange Grove	N14	113	111	114	108	113	106	112	105	112	106	112
Cabana	N15	153	150	N/A	137	144	136	139	133	150	140	147
Oakdale	N17	129	125	129	122	127	120	126	118	125	121	126
Cypress	N20	153	152	154	145	152	143	148	142	150	148	146
River College	N22	134	132	134	125	132	122	129	122	133	127	131
Freeway	N23	139	133	137	128	135	125	131	124	135	128	133
Don Julio	N24	174	164	198	161	163	151	162	154	173	160	180
Sutter	N25	164	161	164	168	163	160	198	156	172	155	165
Monument	N26	N/A	336	N/A	330	444	342	395	340	350	190	199
Jamestown	N27	142	137	142	134	140	133	141	137	144	140	140
Merrihill	N29	144	139	142	133	139	132	136	132	143	135	136
Parkoaks	N30	142	137	138	133	136	133	152	116	137	126	136
Barrett Meadows	N31	159	155	157	145	155	147	150	153	165	150	152
Poker	N32A	176	174	177	169	176	170	175	170	184	170	177
Poker	N32B	177	174	180	172	176	171	175	170	184	172	178
Poker	N32C	178	174	179	169	175	170	175	170	184	173	218
Walerga	N33	N/A	162	172	163	170	159	165	158	175	164	172
Cottage	N34	162	160	163	156	162	153	158	142	164	158	164
North Antelope	N35	173	173	175	167	171	162	166	162	174	167	171
<b>Average Standing Water Level</b>		<b>144</b>	<b>148</b>	<b>144</b>	<b>143</b>	<b>147</b>	<b>137</b>	<b>147</b>	<b>137</b>	<b>149</b>	<b>132</b>	<b>143</b>

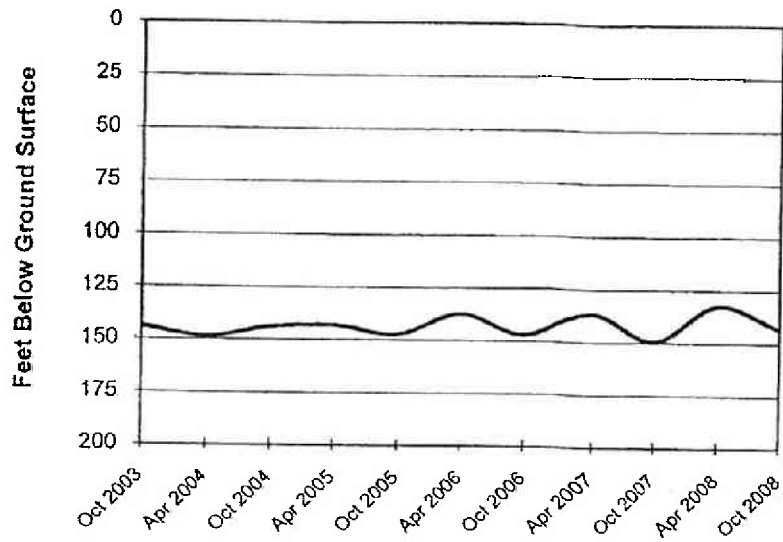


**Sacramento Suburban Water District - South Service Area**

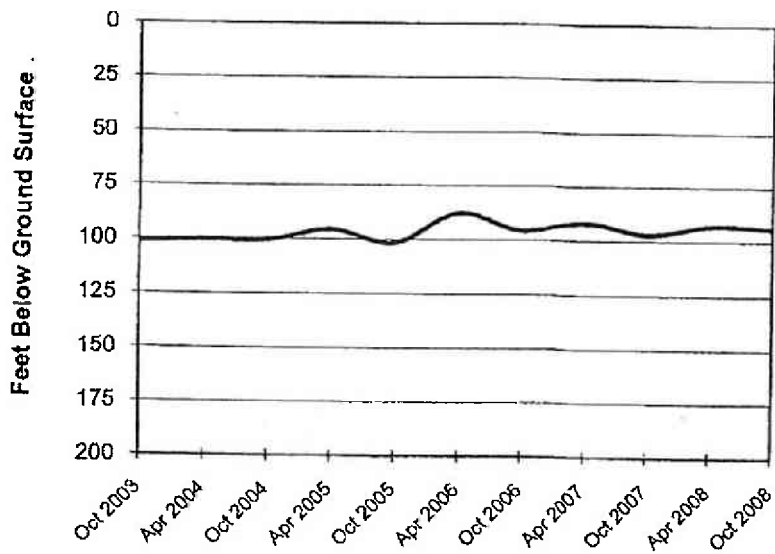
Well Name	Well #	Oct 2003	Apr 2004	Oct 2004	Apr 2005	Oct 2005	Apr 2006	Oct 2006	Apr 2007	Oct 2007	Apr 2008	Oct 2008
El Prado / Park Estates	2A	92	89	92	84	91	77	81	N/A	82	89	86
Kubel / Armstrong	3A	106	100	107	102	107	90	94	94	74	101	104
Bell / Marconi	4B	75	81	69	95	110	98	88	133	139	94	84
Bell / El Camino	5	99	95	98	98	97	82	86	87	N/A	96	93
Rubicon / Seely	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ravenwood / Eastern	9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hernando / Santa Anita	12	80	79	84	83	85	70	74	77	72	83	83
Calderwood / Marconi	13	112	108	112	106	110	93	100	98	108	111	108
Marconi South / Fulton	14	129	129	134	102	109	90	96	98	108	124	111
Riding Club / Ladino	18	100	101	104	99	102	N/A	103	103	102	97	100
Balmoral / Yorktown	19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Watt / Arden	20A	106	92	110	105	114	102	106	108	112	102	104
West / Becerra	22	141	136	137	138	136	133	140	135	138	N/A	N/A
Marconi North / Fulton	23	132	156	141	132	140	116	124	123	134	135	133
Beccerra / Woodcrest	24	121	117	127	115	116	110	119	110	114	117	116
Thor / Mercury	25	131	126	134	116	132	109	120	115	129	106	108
Greenwood / Marconi	26	N/A	N/A	N/A	121	125	N/A	N/A	N/A	N/A	N/A	N/A
Red Robin / Darwin	28	113	109	113	106	111	95	98	98	108	108	106
Rockbridge / Keith	30	75	71	74	70	72	68	61	60	72	N/A	73
Eden / Root	32A	143	145	128	117	126	115	118	133	N/A	123	126
Auburn / Norris	33A	113	106	113	102	110	97	111	96	102	97	105
Ulysses / Mercury	35	135	140	134	135	131	131	141	133	137	133	134
Morse / Cottage Park	37	82	80	83	79	84	68	74	72	82	78	78
Watt / Auburn	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	129	62	N/A
Auburn Yard	40	N/A	118	122	119	122	100	106	106	116	109	106
Auburn Yard	40A	142	148	103	106	112	103	115	110	121	100	152
Albatros / Iris	41	103	103	106	106	110	100	100	98	N/A	90	N/A
Beccerra / Marconi	42	118	135	119	115	120	110	118	112	117	126	N/A
Edison / Truax	43	97	100	100	95	101	83	98	89	97	94	91
Jamestown / Middleberry	45	74	71	74	72	73	57	62	61	72	67	64
Jonas / Sierra Mills	46	76	71	75	72	74	58	62	62	54	70	73
Copenhagen / Arden	47	109	110	126	145	126	117	122	N/A	124	114	123
Columbia / Fair Oaks	50	85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	84	83	84
Sudbury / Elsdon	51	N/A	N/A	N/A	N/A	N/A	N/A	130	124	52	N/A	N/A
Stewart / Lynndale	55A	102	103	107	113	102	115	N/A	113	100	95	106
Whitney / Concetta	60	119	122	118	127	130	N/A	126	N/A	125	123	121
Merrily / Annadale	65	141	136	132	57	133	121	130	127	N/A	N/A	N/A
Eastern / Woodside Church	66	130	132	128	131	129	127	136	129	138	144	135
Northrop / Dornajo	68	46	43	80	54	58	45	44	42	73	51	58
Hillsdale / Cooper	69	75	53	57	71	74	58	66	56	105	69	72
Sierra / Blacmer	70	52	50	52	52	56	52	40	44	71	49	47
Rodney T. Franz	71	82	79	88	73	76	62	103	64	78	74	71
River Walk / North	72	N/A	N/A	76	67	86	64	72	67	75	87	74
River Walk / East	73	122	115	76	66	82	61	71	60	69	70	68
River Walk South	74	82	88	76	70	79	62	103	64	78	68	77
Enterprise / Northrop	75	59	58	60	58	68	51	60	55	56	65	58
Fulton / Fair Oaks	76	57	54	54	54	57	51	44	45	52	55	52
Larch / Northrop	77	81	57	85	81	83	76	72	75	74	53	79
<b>Average Standing Water Level</b>		<b>101</b>	<b>100</b>	<b>100</b>	<b>95</b>	<b>101</b>	<b>88</b>	<b>95</b>	<b>92</b>	<b>97</b>	<b>93</b>	



**SSWD North Service Area  
Average Biennial  
Static Well Water Level**



**SSWD South Service Area  
Average Biennial  
Static Well Water Level**



### Ground Water Level in Feet Below Centerline of Pump Discharge

Station	Well #	Status	April-May 09		Oct. -Nov. 09			
			Date Taken	Static	Dynamic	Date Taken	Static	Dynamic
El Prado / Park Estates	2-A	Active	5/19/2009	111	123	10/26/2009	88	113
Kubel / Armstrong	3-A	Active	5/26/2009	101	119	10/22/2009	102	108
Bell / Marconi	4B	Active	5/29/2009	96	124	10/8/2009	99	157
Bell / El Camino	5	Active	5/19/2009	91	100	10/1/2009	99	106
Rubicon / Seely	7	Active	N/A	N/A	N/A	10/1/2009	N/A	N/A
Ravenwood / Eastern	9	Active	N/A	N/A	N/A	10/1/2009	N/A	N/A
Herr/Ando / Santa Anita	12	Active	5/19/2009	77	87	10/13/2009	83	92
Caldenwood / Marconi	13	Active	5/13/2009	110	125	10/13/2009	105	119
Marconi South / Fulton	14	Active	5/19/2009	125	137	10/13/2009	101	111
Riding Club / Ladino	18	Active	5/20/2009	96	109	10/26/2009	98	113
Balmoral / Yorktown	19	Active	N/A	N/A	N/A	N/A	N/A	N/A
Watt / Arden	20A	Active	5/20/2009	101	115	10/20/2009	113	120
West / Becerra	22	Active	N/A	N/A	N/A	N/A	N/A	N/A
Marconi North / Fulton	23	Active	5/22/2009	129	151	10/8/2009	131	141
Becerra / Woodcrest	24	Active	5/19/2009	107	117	10/1/2009	115	126
Thor / Mercury	25	Active	5/20/2009	102	112	10/23/2009	107	116
Greenwood / Marconi	26	Active	N/A	N/A	N/A	10/1/2009	N/A	N/A
Red Robin / Darwin	28	Active	N/A	N/A	N/A	N/A	N/A	N/A
Rockbridge / Keith	30	Active	5/22/2009	68	172	10/26/2009	70	175
Eden / Root	32A	Active	5/6/2009	124	142	10/22/2009	123	140
Auburn / Norris	33A	Active	5/21/2009	97	119	10/16/2009	102	125
Ulysses / Mercury	35	Active	5/19/2009	128	154	10/21/2009	133	154
Morse / Cottage Park	37	Active	5/20/2009	78	84	10/8/2009	82	88
Watt / Auburn	38	Active	N/A	N/A	N/A	N/A	N/A	N/A
Auburn Yard	40	Active	5/13/2009	104	119	10/8/2009	112	121

Auburn Yard	40A	Active	5/26/2009	156	188	10/8/2009	167	200
Albatros / Iris	41	Active	??	??	??	11/3/2009	N/A	114
Becerra / Marconi	42	Active	5/20/2009	110	N/A	10/13/2009	112	N/A
Edison / Tuax	43	Active	5/8/2009	93	115	10/8/2009	106	120
Jamestown / Middleberry	45	Active	5/20/2009	70	85	10/8/2009	71	82
Jonas / Sierra Mills	46	Active	5/20/2009	69	122	10/27/2009	70	100
Copenhagen / Arden	47	Active	5/13/2009	125	154	10/28/2009	120	141
Columbia / Fair Oaks	50	Active	5/12/2009	79	89	10/22/2009	83	91
Sudbury / Elsdon	51	Active	5/29/2009	52	61	10/22/2009	129	136
Stewart / Lynndale	55A	Active	4/29/2009	104	152	10/27/2009	98	143
Whitney / Concetta	60	Active	5/14/2009	119	127	10/27/2009	124	132
Merrily / Annadale	65	Active	N/A	N/A	N/A	10/6/2009	121	129
Eastern / Woodside Chur	66	Active	5/14/2009	128	146	10/27/2009	131	150
Northrop / Dorrado	68	Active	5/14/2009	48	102	10/21/2009	51	104
Hillsdale / Cooper	69	Active	5/26/2009	70	108	10/22/2009	70	111
Sierra / Blacmer	70	Active	5/14/2009	45	99	10/22/2009	49	105
Rodney T. Franz	71	Active	4/29/2009	62	86	10/28/2009	68	95
River Walk / North	72	Active	5/21/2009	69	n/a	10/26/2009	71	220
River Walk / East	73	Active	5/23/2009	71	118	10/21/2009	74	122
River Walk South	74	Active	5/23/2009	72	98	10/21/2009	72	106
Enterprise / Northrop	75	Active	5/21/2009	54	n/a	10/26/2009	56	N/A
Fulton / Fairoaks	76	Active	5/15/2009	52	61	10/22/2009	52	63
Larch / Northrop	77	Active	5/13/2009	78	85	10/27/2009	78	86