



**Sacramento Groundwater Authority**  
*Managing Groundwater Resources  
 in Northern Sacramento County*

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April 16, 2010

California-American  
 Water Company

Carmichael  
 Water District

Citrus Heights  
 Water District

City of Citrus Heights

City of Folsom

City of Sacramento

County of Sacramento

Del Paso Manor  
 Water District

Fair Oaks Water District

Natomas Central Mutual  
 Water Company

Orange Vale  
 Water Company

inda / Elverta  
 unity Water  
 ct

Sacramento Suburban  
 Water District

San Juan  
 Water District

Southern California  
 Water Company

Agricultural and  
 Self-Supplied  
 Representative

Ms. Victoria Whitney, Chief  
 Division of Water Rights  
 State Water Resources Control Board  
 P.O. Box 2000  
 Sacramento, CA 95812-2000

Re: Comment on Petition for Temporary Change Under Permit Nos. 11360 (App. 12622)

Dear Ms. Whitney:

The Sacramento Groundwater Authority ("SGA") is writing to comment on the City of Sacramento's and Sacramento Suburban Water District's ("SSWD") petition for the temporary transfer of a portion of SSWD's surface water contractual entitlements to eight members of the State Water Contractors association. SSWD has filed its transfer proposal as co-petitioner with Petitioner City of Sacramento Permit No. 11360 (Application No. 12622). To assist the State Water Board in its review of SSWD's proposed water transfer, this letter discusses the potential effects of the proposed transfer on the North Area Groundwater Basin ("North Area Basin") managed by SGA. Because SSWD's pumping of additional groundwater to effectuate the proposed water transfer would not exceed the sustainable safe yield of the basin and because of SSWD's long-term conjunctive use efforts, SSWD's proposed water transfer is not expected to impact other pumpers in the North Area Basin. Moreover, the proposed transfer is consistent with the conjunctive management principles in SGA's Groundwater Management Plan ("GMP").

Sacramento Groundwater Authority

SGA is a joint powers authority created by Sacramento County and the cities of Citrus Heights, Folsom, and Sacramento to manage the North Area Basin, which includes all of Sacramento County north of the American River.<sup>1</sup> SGA's membership is composed of 14 local water purveyors, including SSWD, and one representative each from agricultural and self-supplied groundwater pumpers. SGA's primary mission is to study and monitor the North Area Basin and to coordinate its members' groundwater use to ensure the long-term health and sustainability of the North Area Basin, including ensuring that the

<sup>1</sup> See Exhibit 1, *Boundary of the SGA North Area Basin*.

extraction of groundwater from the basin does not exceed the long-term sustainable safe yield of the basin. Additional information about SGA's mission and its membership is available at SGA's website, <http://www.sgah2o.org/sga/>.

#### North Area Basin Groundwater Management Plan

SGA coordinates basin management efforts consistent with its revised GMP, which was adopted on December 11, 2008. The GMP originally was adopted in 2003. SGA members implement their groundwater production programs consistent with the Basin Management Objectives of the GMP, which include:

- Maintaining and improving groundwater quality and elevations;
- Protecting against potential land surface subsidence;
- Protecting against adverse impacts to surface water flows and quality as a result of groundwater pumping;
- Educating members, stakeholders and the public on the need to recharge the aquifer to ensure basin sustainability; and
- Maintaining a sustainable groundwater basin through coordination and collaboration with adjacent groundwater basin management efforts.

#### SSWD's Conjunctive Use Program is Consistent with the GMP

SSWD's groundwater pumping and conjunctive use activities are consistent with the GMP's basin management objectives. One of the primary objectives is to implement conjunctive water management programs through the expanded use of surface water to provide for in-lieu recharge of the North Area Basin. SSWD has been a leader in conjunctive management efforts, annually conveying surface water into its service territory since 1998. SSWD's conjunctive use efforts have measurably improved groundwater levels in the central portion of the North Area Basin. SSWD's conjunctive use program demonstrates the efficacy of in-lieu recharge efforts both in the North Area Basin and generally.

#### SSWD's Conjunctive Use Program Has Improved North Area Basin Conditions

In the central portion of the North Area Basin, groundwater elevations declined at a rate of nearly 1.5 feet per year between the 1950s and the mid-1990s.<sup>2</sup> During this period, the drawdown was as great as 70 feet in certain areas. Since the mid-1990s, groundwater elevations have stabilized due to expanded conjunctive use operations and, in some areas, groundwater elevations are increasing. (See Hydrographs 220, 229 and 270.)

In 2007, a historically dry year with limited surface water availability, SSWD pumped approximately 38,000 AF of groundwater and served a total demand of approximately

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<sup>2</sup> See Attachment 2 – *Representative Groundwater Hydrographs in the SGA Area.*

45,000 AF. In spite of SSWD's increased pumping of groundwater, average groundwater levels in April 2008 returned to April 2007 levels in its South Service Area and rebounded to a higher level than April 2007 in the North Service Area according SSWD's seasonal production well groundwater level monitoring.<sup>3</sup> Also, October 2008 groundwater levels showed a return to historic Fall levels, which is indicative of the benefit of bringing significant surface water supplies back into SSWD's water system during 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, the data indicate that even during dry years, when there is heavy reliance on groundwater resources, the North Area Basin rebounds on a seasonal and long-term basis through natural and in-lieu recharge from SSWD's conjunctive water management program.

*SSWD's 2010 Transfer Proposal Is Within the Basin's Sustainable Safe Yield*

Between 2005 and 2009, the total municipal and industrial groundwater production in the North Area Basin was approximately 80,000 to 90,000 AFA.<sup>4</sup> SGA estimates the annual demand of individual agricultural and self-supplied groundwater users as approximately 20,000 AFA. This estimate includes 10,000 AFA produced by individual agricultural pumpers outside of the Natomas Central Mutual Water Company's service area and 10,000 AFA pumped by other self-supplied users. Thus, SGA estimates that total groundwater production in the North Area Basin during this period was approximately 100,000 to 110,000 AFA.

SSWD's water transfer proposal assumes that its 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 in Order WR 2009-0053-DWR and Order WR 2009-0054-DWR. The proposal also assumes that conditions 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, SGA understands that SSWD is estimating that total 2010 demand during the three transfer months will be approximately 7,730 AF, of which 3,350 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

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<sup>3</sup> See Attachment 3 – *SSWD Biennial Groundwater Elevations Report*.

<sup>4</sup> See Attachment 4 - *SGA Total Municipal and Industrial Water Deliveries in the SGA Area*.

Ms. Victoria Whitney

April 16, 2010

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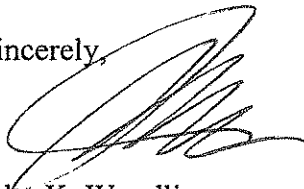
2008, and again following the successful transfer to the 2009 Drought Water Bank, SGA anticipates that under similar conditions in 2010 the central portion of the North Area Basin should recover to pre-transfer levels.

Conclusion

SSWD's proposed 2010 water transfer is consistent with SGA's long-term groundwater management objectives, which require members to use surface and groundwater conjunctively to enhance water supply reliability and to improve the health and long-term sustainability of the North Area Basin. SSWD's proposal is not expected to harm other groundwater pumpers or the North Area basin because any additional pumping for the transfer will not cause overall pumping in the North Area Basin to exceed its sustainable safe yield. The expected lack of impacts is due in part to the significant investment SSWD has made to conjunctively managing its water resources and its participation in and support of SGA's efforts to effectively manage the North Area Basin.

SGA believes that the State Water Board should encourage creative water management solutions such as SSWD's conjunctive use program by approving the proposed transfers. The State Water Board's approval of SSWD's temporary transfer petition will make surface water available during a time when the state is recovering from three years of drought and critical water shortages still exist as a result. The State Water Board's approval of SSWD's transfer also will encourage and reward SSWD's and other agencies' efforts to efficiently and cost-effectively manage groundwater resources not only in the North Area Basin, but throughout California.

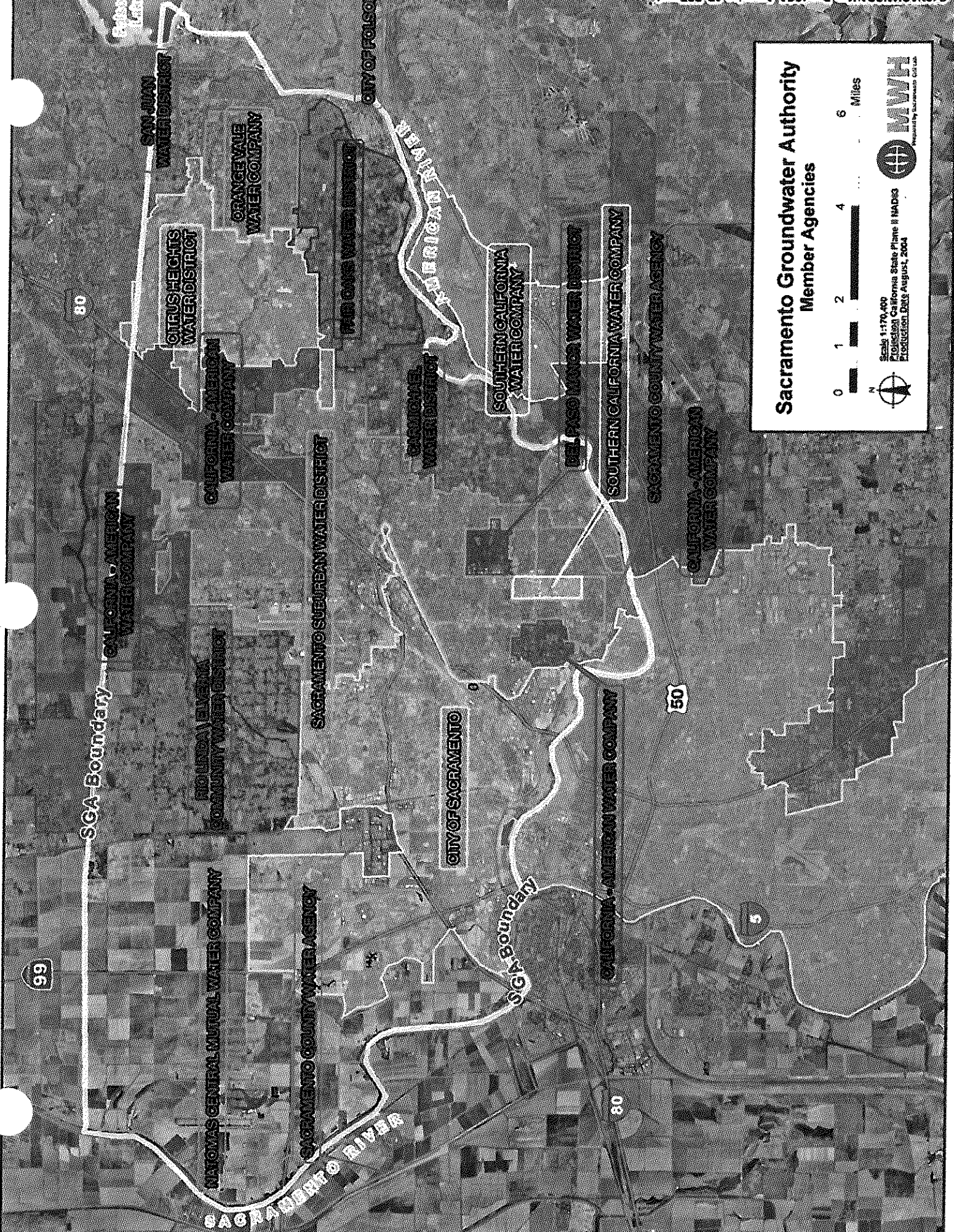
Sincerely,



John K. Woodling  
Executive Director

cc: Dan Sherry, City of Sacramento  
Ed Formosa, SSWD





**Sacramento Groundwater Authority**  
Member Agencies

0 1 2 4 6 Miles

Scale: 1:170,400  
Projection: California State Plane NAD83  
Production Date: August, 2004

**MWH**  
Produced by Sacramento, CA, USA



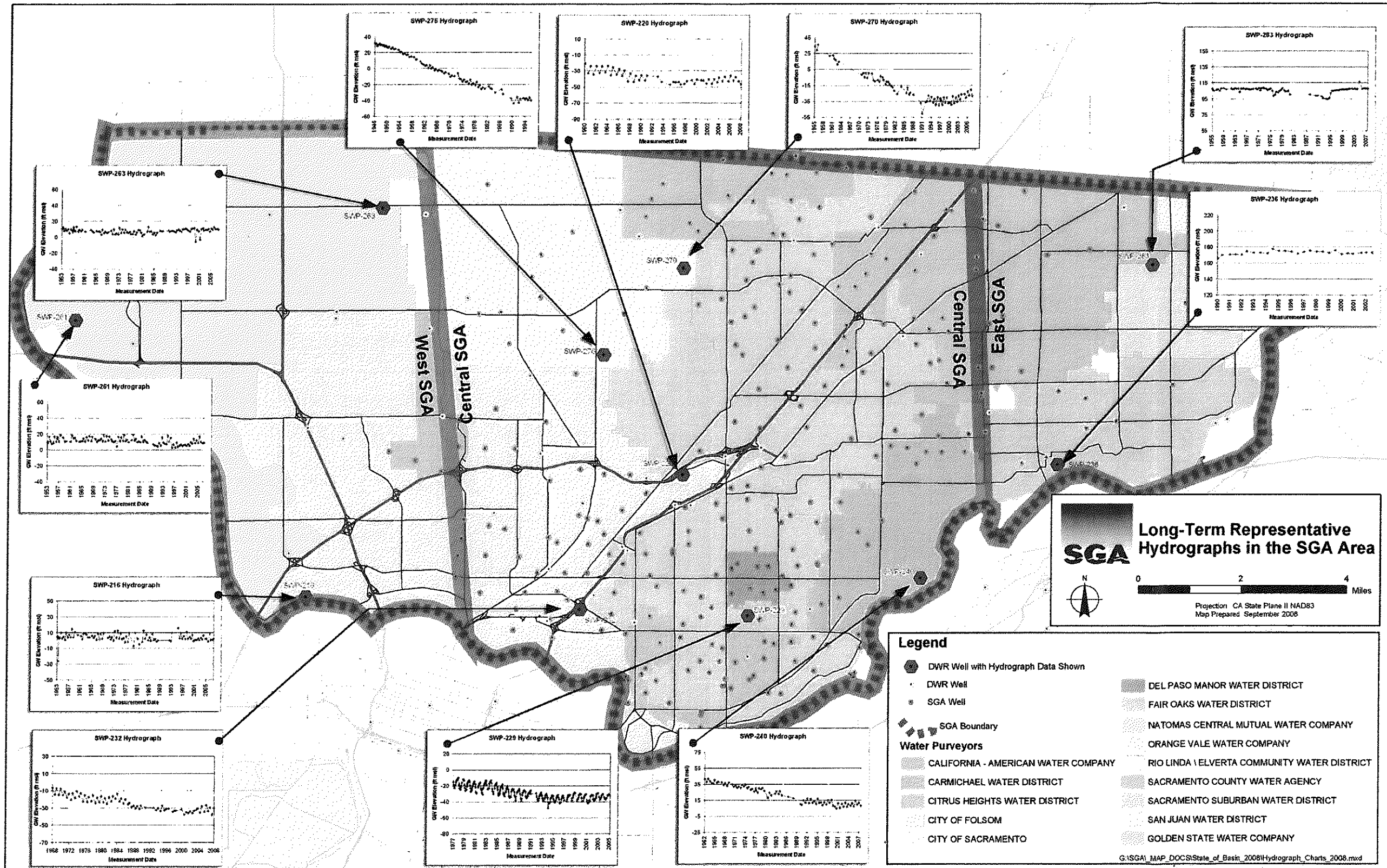


Figure 6. Representative Groundwater Hydrographs in the SGA Area



## Agenda Item: 8

**Date:** November 6, 2008

**Subject:** Biennial Groundwater Elevations Report

**Staff Contact:** Dan York, Manager Field Operations

The following information provides a summary of the standing water levels collected at designated well sites throughout the District. The standing water levels are collected in the spring and fall of each year. By collecting the standing water levels in spring, the data shows the groundwater is usually replenished through the winter months. By collecting the standing water levels in the fall, the data shows the groundwater is depleted through the summer months.

Groundwater levels are monitored as a water management tool designed to help local purveyors implement best management practices on a regional basis. This tool also assists staff in monitoring the location of the well pump with respect to the standing/pumping water levels to avoid loss of pump suction.



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

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

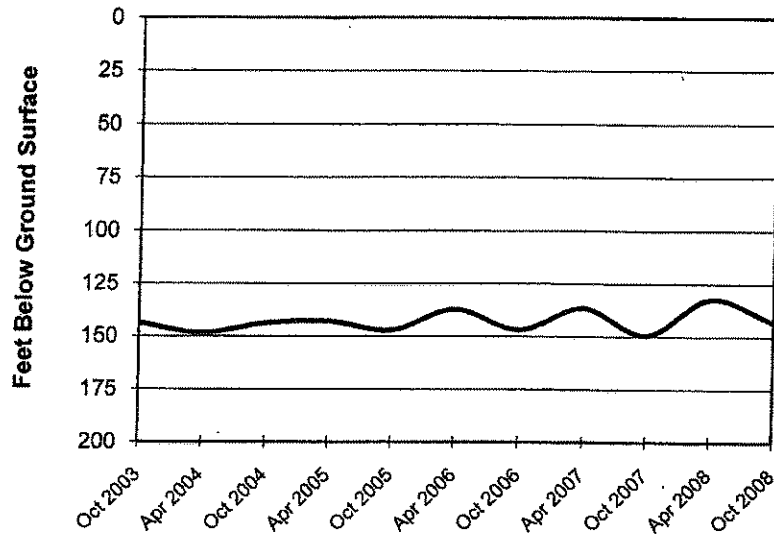
Well Name	Well #	Oct 2003	Apr 2004	Oct 2004	Apr 2005	Oct 2005	Apr 2006	Oct 2006	Apr 2007	Oct 2007	Apr 2008	Oct 2008
Melrose / Channing	27	135	136	134	129	126	117	131	123	137	129	138
Watt / Elkhorn	31A	127	119	128	100	118	101	128	104	127	107	115
La Cieniga / Melrose	34	124	124	124	121	116	107	120	116	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
Fairbain / 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	108	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	106	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	105	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	136	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	55	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**

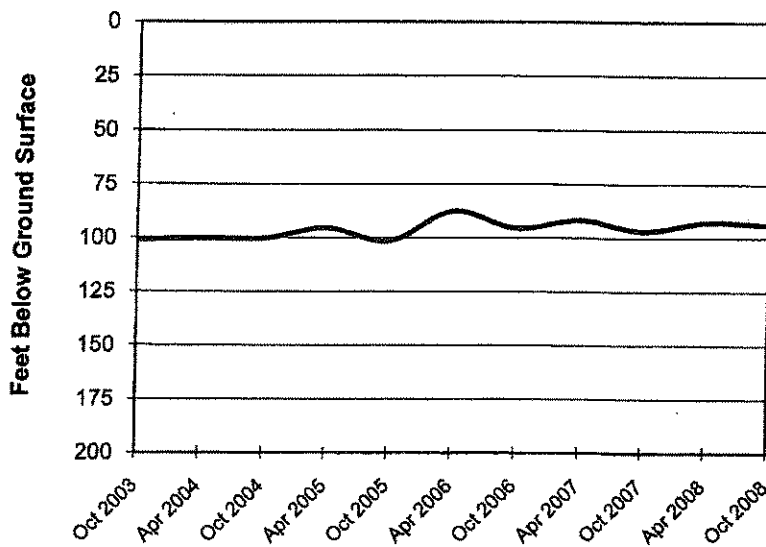


Exhibit 4

**TOTAL MUNICIPAL AND INDUSTRIAL WATER DELIVERIES  
2005-2009**

WATER PURVEYOR	YEAR	Surface Water	Ground Water	Total Water Deliveries
California American WC	2009	620	19,248	19,868
	2008	1,412	19,243	20,655
	2007	384	17,669	18,053
	2006	1,024	17,973	18,997
	2005	440	17,968	18,408
Carmichael Water District	2009	8,965	1,609	10,574
	2008	10,422	1,581	12,003
	2007	9,509	2,868	12,377
	2006	8,971	3,519	12,490
	2005	9,722	2,347	12,069
Citrus Heights Water District	2009	12,007	2,120	14,127
	2008	16,890	352	17,242
	2007	16,236	98	16,334
	2006	18,471	100	18,571
	2005	18,678	100	18,778
Del Paso Manor Water District	2009	0	1,504	1,504
	2008	0	1,610	1,610
	2007	0	1,638	1,638
	2006	0	1,654	1,654
	2005	0	1,657	1,657
Fair Oaks Water District	2009	11,072	1,109	12,181
	2008	10,534	2,225	12,759
	2007	11,533	899	12,432
	2006	11,178	845	12,023
	2005	12,282	172	12,454
Folsom, City of	2009	1,443	0	1,443
	2008	1,608	0	1,608
	2007	1,820	0	1,820
	2006	1,695	0	1,695
	2005	1,561	0	1,561
Golden State Water Company	2009	0	1,127	1,127
	2008	0	1,276	1,276
	2007	0	1,252	1,252
	2006	0	1,296	1,296
	2005	0	1,248	1,248

**TOTAL MUNICIPAL AND INDUSTRIAL WATER DELIVERIES  
2005-2009**

WATER PURVEYOR	YEAR	Surface Water	Ground Water	Total Water Deliveries
Orange Vale Water Company	2009	4,409	0	4,409
	2008	4,982	0	4,982
	2007	4,452	0	4,452
	2006	3,642	0	3,642
	2005	3,376	0	3,376
Rio Linda/Eiverta CWD	2009	0	3,200	3,200
	2008	0	3,340	3,340
	2007	109	3,305	3,414
	2006	0	3,378	3,378
	2005	0	3,209	3,209
Sacramento, City of	2009	21,609	18,867	40,476
	2008	25,431	18,414	43,845
	2007	25,431	18,618	44,049
	2006	22,560	20,917	43,477
	2005	25,213	19,415	44,628
Sacramento, County of	2009	0	5,202	5,202
	2008	0	5,028	5,028
	2007	0	5,353	5,353
	2006	0	5,133	5,133
	2005	0	5,111	5,111
Sacramento Suburban WD	2009	12,084	23,021	35,105
	2008	14,982	23,516	38,498
	2007	7,544	37,932	45,476
	2006	13,345	26,559	39,904
	2005	14,364	26,830	41,194
San Juan Water District	2009	3,249	0	3,249
	2008	4,270	0	4,270
	2007	4,213	0	4,213
	2006	4,038	0	4,038
	2005	3,839	0	3,839
Total for SGA Area	2009	75,458	77,007	152,465
	2008	90,531 0	76,585	167,116
	2007	81,231 0	89,632	170,863
	2006	84,924 0	81,374	166,298
	2005	89,475 0	78,057	167,532