

Attachment 9. Past Performance

One of the key goals of the proposed 2012 LGA project, through the development of the groundwater – surface water flow model, is to consider the potential effects of conjunctive water use scenarios on stakeholders in the greater Solano area and significant surface water courses in the model area, including the Sacramento River. DWR and the USBR would be interested in the quantification of the potential for streamflow depletion in response to conjunctive use of groundwater in the model area. Much work has been conducted to lay the foundational information to implement the proposed project. A significant part of this work has been fully funded by SCWA, and another part of the foundational information was funded by an AB303 grant in 2008. These projects are summarized below.

SCWA Groundwater Monitoring Facilities – Funded by SCWA

In 2006, SCWA authorized the installation of twelve (12) new deep monitoring wells which were constructed at four sites (LSCE, 2010). Two subsidence stations have also recently been constructed in June 2012. This SCWA program, which is also referred to as the Groundwater Monitoring Facilities (GMF) program, greatly expands groundwater level and quality monitoring of the deep aquifer system. This work as part of the SCWA GMF program has been fully funded by SCWA for \$2,310,652. This SCWA GMF work was also foundational to the work that has been conducted with the support of the AB 303 grant received by SCWA in 2008 and summarized below [DWR AGREEMENT NO. 4600008203].

The SCWA GMF project expanded the subsurface characterization of the regional aquifer system and provides facilities for ongoing groundwater level and quality monitoring of different zones of the aquifer system. The test holes at the four SCWA GMF sites ranged from 1,670 to 2,700 feet in depth. The deepest monitoring wells at the four sites range in depth from 1,680 to 2,370 feet. There are three nested monitoring wells located at each site. Consistent with the expanded monitoring program requirements set forth in the Water Code (Section 10753), the currently collected and future groundwater level, quality, and subsidence monitoring data would be incorporated into the county-wide monitoring program (and has now also been incorporated in the Solano County Water Agency California Statewide Groundwater Elevation Monitoring Program (CASGEM)).

Solano Groundwater Investigations Project – 2008 AB 303 Grant Program Funding

In 2008 Solano County Water Agency was awarded an AB303 grant funded under the Local Groundwater Assistance Act of 2000 to implement the “Solano Groundwater Investigations Project.” The grant was administered by the State of California, California Department of Water Resources (DWR) pursuant to Grant Agreement 4600008203 between DWR and SCWA. The work funded under this grant is 99% complete. The term of this grant has been extended to the end of 2012. A copy of the most recent Quarterly Progress Report is attached.

This project expanded an existing program of joint public agency management of the groundwater basin by overlying users and potential users. The joint users of the groundwater basin currently coordinate monitoring and reporting of groundwater levels. With the support of the AB 303 grant funds, the Solano Groundwater Investigations Project has improved the knowledge and tools to manage the groundwater basin and help ensure future water supply reliability, quality, and sustainability. The Solano Groundwater Investigation Project includes three components: 1. Hydrogeologic interpretation of the deep aquifer system in Northern Solano County; 2. Regional groundwater level monitoring and reporting; 3. Test conjunctive use production well. The project expands on an existing program of joint public agency management of the groundwater basin by overlying users and potential users. The joint users of the groundwater basin currently coordinate monitoring and reporting of groundwater levels. Twelve deep groundwater monitoring wells and two subsidence stations have been constructed to add to the characterization of the groundwater basin and to measure water levels and water quality over the long term. The facilities and studies associated with this grant will improve the knowledge and management of the groundwater basin leading to possible increased safe use of the groundwater basin and potential new conjunctive use programs that will help optimize Solano water supplies.

Component 1 was completed in October, 2010. Information developed under this component includes the depth, areal extent, and water quality of each formation along with the hydraulic connection and vertical gradient between formations. The results help determine where and to what extent greater utilization of groundwater from the deep aquifer system is possible in northern Solano County. This work supports long-range water supply planning, including expanded conjunctive management of surface and groundwater resources. **This understanding was necessary before**

other tools, such as a multi-layer groundwater flow model (as proposed for the 2012 LGA grant), can be developed to evaluate future water supply management scenarios that consider the deeper part of the aquifer system.

Component 2 called for the development of a Data Management System (DMS) and the installation of 12 transducers at various locations throughout Solano County and for the preparation of a technical memorandum that includes documentation of the DMS and procedures for retrieving data and performing manual measurements, QA/QC of data, reporting, and data transfer.

Component 3 of the project was a continuation of RD 2068's feasibility study to evaluate conjunctive use within the RD 2068 service area. Under this project, a test-production well was constructed and operated during one irrigation season and groundwater pumping was metered during operation. A nearby triple-completion monitoring well already equipped with dedicated digital data loggers was also monitored during the test-production period. Water quality samples were collected from the test-production well during the test production period. The information collected was used to assess: 1) groundwater pumping capacity; and 2) potential for interactions between groundwater and the RD 2068 surface water delivery canals; 3) potential for changes in groundwater quality caused by groundwater pumping. The use of groundwater within the district service area during dry years could increase the amount of surface water available in the Delta for use by others, or for environmental benefit. A report detailing construction and pilot testing results is in draft form awaiting final review comments.

The Solano Investigations Project addresses many of the goals and objectives contained in Groundwater Management Plans (GMPs) prepared by entities in Solano County. These GMPs aim to obtain a better understanding of aquifer system response to groundwater pumping and recharge mechanisms. The Solano Investigations Project also provides data to support development of conjunctive use projects, another objective of some of the GMPs. The work is completed with the small exception of installing the dedicated transducers at the Dixon monitoring site. Since the Subsidence station (SCWA funded installation) was just completed at that site in June 2012, the dedicated transducers can now be installed.

SCWA's Administration of Other State Grants

SCWA has administered many State grants in the past 10 years. The following is a list. SCWA has completed grants within budget and on time. Some time extensions to the grants were requested and approved by the State.

- Water Quality Program (10-421-550)- SWRCB- \$960,000- 6/1/11
- DOC Watershed Program (10-325-550)- SWRCB- \$1,987,000- 6/1/11
- River Parkway Program (R54125-0)- CRA- \$1,048,000- 6/1/11
- CA Parks Off Highway Vehicle Program (G-09-03-47-R05)- California Department of Parks and Recreation - \$400,000 - 10/1/10
- Local Groundwater Assistance Grant (4600008203)-DWR- \$355,330- 6/26/08 (date of grant agreement)
- Habitat Conservation Plan Planning Grant (P0630021)- DF&G - \$414,963- 6/18/07
- California River Parkways Grant Program (R81722-0)- CRA - \$452,000 - 1/4/07
- Lower Putah Creek Coordinating Committee (LPCCC) City of Winters Off-Highway Vehicle Remediation (OR-595)-California Department of Parks and Recreation - \$50,000 - 2/20/07
- Habitat Conservation Plan Planning Grant (P0630011)- DF&G-\$82,399- 11/1/06
- LPCCC Urban Streams Grant (P40-13) – DWR - \$345,440- 6/15/05
- LPCCC PIN 96 Lower Putah Creek Watershed Grant (04-168-555-0)- SWRCB - \$992,236 - 1/1/05
- LPCCC Watershed Stewardship Planning (04-071-550-0) - SWRCB - \$92,800 - 1/7/05
- Prop 13 North Bay Aqueduct Watershed BMP Grant (03-247-555-0) - SWRCB - \$399,608 -6/1/04
- LPCCC Yolo Housing Authority (03-248-555-0) - SWRCB - \$279,655 - 6/30/04
- Riparian Habitat Restoration, Lower Putah Creek (WC-4009SC) - Wildlife Conservation Board - \$1,207,000 – 8/18/04
- Habitat Conservation Plan Planning Grant (P0230023) - DF&G - \$47,820 - 4/10/03

SCWA has not received any grant performance evaluations from State agencies administering grants received by SCWA.