

# **Agenda**

## **Sacramento Suburban Water District Facilities and Operations Committee**

3701 Marconi Avenue, Suite 100  
Sacramento, CA 95821

Tuesday, May 13, 2014  
5:30 p.m.

Public documents relating to any open session item listed on this agenda that are distributed to the Committee members less than 72 hours before the meeting are available for public inspection in the customer service area of the District's Administrative Office at the address listed above.

The public may address the Committee concerning any item of interest. Persons who wish to comment on either agenda or non-agenda items should fill out a Comment Card and give it to the General Manager. The Committee Chair will call for comments at the appropriate time. Comments will be subject to reasonable time limits (3 minutes).

In compliance with the Americans with Disabilities Act, if you have a disability, and you need a disability-related modification or accommodation to participate in this meeting, then please contact Sacramento Suburban Water District Human Resources at 679-3972. Requests must be made as early as possible and at least one-full business day before the start of the meeting.

### **Call to Order**

### **Roll Call**

### **Public Comment**

This is an opportunity for the public to comment on non-agenda items within the subject matter jurisdiction of the Committee. Comments are limited to 3 minutes.

### **Items for Discussion and Action**

- 1. Antelope Pump Back Project – Memorandum of Understanding**  
Review draft Memorandum of Understanding and direct staff as appropriate.

**Adjournment**

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**Upcoming Meetings:**

Monday, May 19, 2014, at 6:30 p.m., Regular Board Meeting

Monday, June 6, 2014, at 6:30 p.m., Regular Board Meeting

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I certify that the foregoing agenda for the May 13, 2014, meeting of the Sacramento Suburban Water District Facilities and Operations Committee was posted by May 8, 2014 in a publicly-accessible location at the Sacramento Suburban Water District office, 3701 Marconi Avenue, Suite 100, Sacramento, California, and was made available to the public during normal business hours.

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Robert S. Roscoe  
General Manager/Secretary  
Sacramento Suburban Water District



## Facilities & Operations Committee

### Agenda Item: 1

**Date:** May 8, 2014

**Subject:** Antelope Pump Back Project – Memorandum of Understanding

**Staff Contact:** John E. Valdes, Engineering Manager

#### **Recommended Committee Action:**

Receive report regarding the draft Memorandum of Understanding (MOU) between San Juan Water District and Sacramento Suburban Water District for the Antelope Pump Back Project and direct staff as appropriate.

#### **Discussion:**

The proposed pump back project would construct a booster pump station to pump groundwater from Sacramento Suburban Water District (SSWD) North Service Area (NSA) into the Antelope and Cooperative Transmission Pipelines (CTP) for conveyance to the various San Juan Water District (SJWD) retail customers. Currently, surface water from SJWD's Peterson Water Treatment Plant is transmitted to Citrus Heights Water District, Fair Oaks Water District, Orange Vale Water Company, SSWD and SJWD through these pipelines. All of these districts, with the exception of SSWD, rely on surface water for the majority or all of their supply.

This pump back project would provide groundwater supplies to SJWD during dry years, planned outages of United States Bureau of Reclamation, SJWD's Water Treatment Plant facilities, or emergencies when SJWD's surface water supplies are reduced. SJWD relies on surface water diverted from Folsom Reservoir as its main supply source, but that source is inadequate for supplying the desired minimum levels of service to SJWD if deliveries from Folsom Reservoir are compromised by drought or system failure. A new pump-back facility would supplement SJWD's water supplies during times of limited surface water availability from Folsom Reservoir. It would also allow for the reversal of flow in the Antelope and Cooperative Transmission Pipelines to export conserved and banked groundwater to the other agencies connected to the pipeline. As a result, this project would expand conjunctive use opportunities in the SJWD service area, enabling the retail surface water customers to use more groundwater during dry years and in times of emergency, and greatly expanding regional opportunities for conjunctive use and groundwater substitution transfers both within and outside of the Sacramento Groundwater Authority's (SGA) area of authority.

It would also be possible for the City of Roseville to potentially take water from this facility. The existing Antelope PRV station reduces high pressure flow from the CTP to the NSA (lower

pressure) zone discharging to an existing tee in Antelope North Road. The north leg of the tee continues in a 36-inch pipeline eventually crossing the Placer County line into the City of Roseville. The City of Roseville has rights to surface water delivered by SJWD and would like to convey surface water to their service area through the Antelope PRV station tie in. Currently, the tie-in situated downstream of the PRV station reduces the pressure to a level that cannot be used by the City of Roseville. In order to provide flow to City of Roseville at sufficient pressure, a bypass connection to the high pressure side of the station would be required.

In addition to the above benefits, this project would allow SSWD production operators to move water from the District's NSA to the Arvin Area located south of I-80. Moving water in this direction would help improve water service and provide increased operational flexibility in the Arvin Area.

The pre-design phase of the project was completed in January 2014 by SSWD's consultant, Domenichelli & Associates (D&A). Final design is now underway. The pre-design report includes pump station design criteria, a recommended pump station layout, and cost estimates. The pre-design report shows that the pump station would initially include three separate pumps. Two, larger 5,000 gallon per minute (gpm) pump back pumps would be sized to pump water from the Antelope PRV Station all the way back upstream to SJWD's Hinkle Reservoir. A smaller, 2,000 gpm pump would be used by SSWD for the pump around option to the Arvin Area. Space would be provided in the pump station for the future addition of another 5,000 gpm pump back pump. Provisions would also be made to allow for the installation of a small hydroelectric turbine if the in-conduit hydro project ever becomes cost-effective. The attached drawing (see Exhibit 1) shows a current preliminary layout of the pump back facilities. As indicated, the pumps and related equipment would be housed inside a separate building located to the west of SSWD's new security building.

Since completion of the pre-design report, discussions have been ongoing with SJWD regarding the benefits of the project and the framework for a cost sharing agreement. The cost sharing of the capital costs for this facility would be shared based on the percentage of the facility to be used by each agency with other costs proportioned based on available capacity. Based on this analysis, SJWD would pay 78.9% of the total cost, SSWD would pay 19.5 % and the City of Roseville would pay 1.6%, if all agencies participated.

SSWD and SJWD staff jointly prepared a list of project benefits to be included in a MOU to document the understanding of each District regarding the planning, design, engineering, construction, and construction administration for the proposed construction of a pump-back booster pump station. These elements were then incorporated into a formal MOU by District legal counsel. Note that no cost sharing percentages were negotiated by District legal counsel, only the language and general provisions in the MOU. The final draft MOU is attached as Exhibit 2. Note that a formal agreement for the operation, maintenance, and capital replacement of the project must still be prepared.

The MOU is scheduled for Board review and approval at the District's May 19, 2014 regular Board meeting. The MOU is scheduled to be presented to SJWD's Legal Affairs Committee on May 19, 2014 and their full Board on May 28, 2014.

**Fiscal Impact:**

The estimated total cost of the project is \$2.9 million. This cost would be shared by SSWD and SJWD. Some available grant funds can be used to offset this cost. Below is a summary of the grant funds that are potentially available.

- A DWR Proposition 84 Implementation Grant was awarded in June 2011 for a pump back project at the Antelope Reservoir. The Proposition 84 grant is for \$264,000. Per the Grant Agreement, the grant funds must be spent by June 1, 2016.
- A United States Bureau of Reclamation (USBR) grant that provides \$300,000 to be used for the in-conduit hydro and pump back project. Per the Grant Agreement, the grant funds must be spent by September 30, 2014. However, SSWD staff has formally asked USBR for a time extension of one year which would extend the grant deadline to September 30, 2015. This request is currently pending. USBR was informed that based on preliminary design and the availability of surface water (six out of every 10 years on average), the in-conduit hydro project is not financially feasible at the current time. Therefore, it is possible that this grant amount will be reduced.

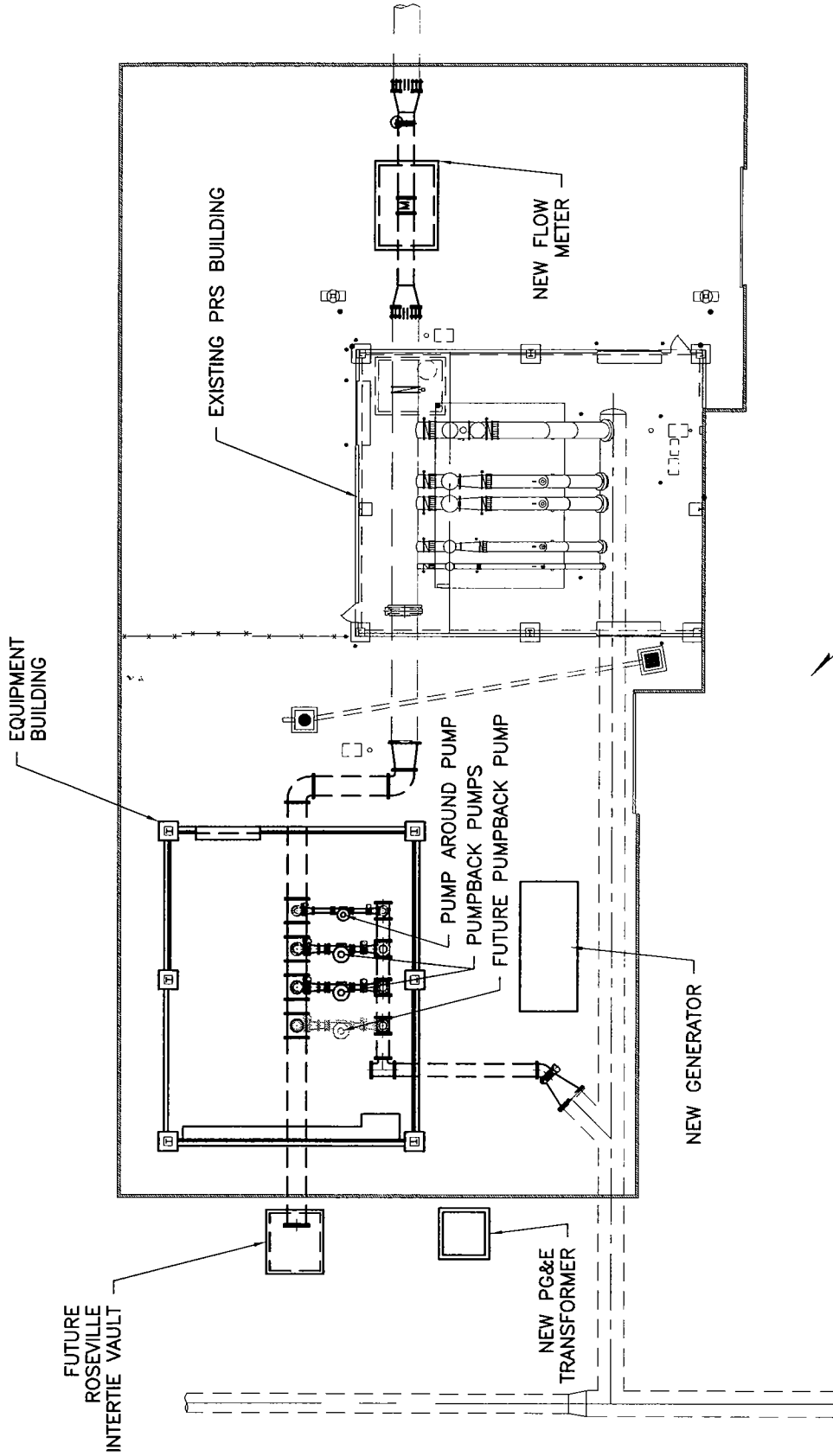
Lastly, this project may be included in a new grant application by Regional Water Authority (RWA) under the recent drought funding; a reassignment of proposition 84 monies for drought relief. Staff of SSWD and SJWD is working with RWA on the grant application process.

**Strategic Plan Alignment:**

Facilities and Operations – 2.B. Monitor and improve the District's efficiencies in operating and maintaining system infrastructure.

Facilities and Operations – 2.C. Develop cost-effective strategies utilizing appropriate technology and other available resources to achieve optimization in delivery of water and enhance service.

This project is in agreement with these goals because this project will provide for conjunctive use opportunities and groundwater substitution transfers. This project will also allow SSWD operators more operational flexibility by moving water into the Arvin Area to improve water service and reliability.



PROPOSED SITE PLAN  
SCALE: NTS

## Exhibit 2

### MEMORANDUM OF UNDERSTANDING REGARDING THE SAN JUAN WATER DISTRICT AND SACRAMENTO SUBURBAN WATER DISTRICT ANTELOPE PUMP-BACK BOOSTER PUMP STATION PROJECT

This Memorandum of Understanding (“MOU”) regarding the planning, design and engineering for a joint pump-back station is made effective on May 28, 2014, by and between the San Juan Water District (“SJWD”) and Sacramento Suburban Water District (“SSWD”), both California public agencies with the authority to carry out the project described herein. SJWD and SSWD are collectively referred to herein as the “Agencies” and individually as an “Agency.”

#### RECITALS

A. The purpose of this MOU is to document the understanding of the Agencies regarding the planning, design, engineering, construction, and construction administration for the proposed construction of a pump-back station, which the Agencies would jointly own, operate and maintain and which would be called the Antelope Pump-Back Booster Pump Station (the “Project”). This MOU is intended to govern the allocation of responsibilities and costs for the joint design, engineering, planning and construction phase work undertaken by SJWD and SSWD while they develop a formal agreement for the operation, maintenance, and capital replacement of the Project.

B. The Project is intended to provide groundwater supplies to SJWD during dry years, planned outages of United States Bureau of Reclamation (“USBR”) or SJWD’s Water Treatment Plant facilities, or emergencies when SJWD’s surface water supplies are reduced. SJWD relies on surface water diverted from Folsom Reservoir as its main supply source, but that source is inadequate for supplying the desired minimum levels of service to SJWD if deliveries from Folsom Reservoir are compromised by drought or system failure. A new pump-back facility would supplement SJWD’s water supplies during times of limited surface water availability from Folsom Reservoir. In addition, SSWD will benefit from the Project by installing facilities to pump water from the northern-most portion of SSWD’s North Service Area (NSA) where the Project will be located to the southern portion of the NSA to improve the water supply reliability within that zone.

C. The Project will be located at SSWD’s Antelope Pressure Reducing Station Site on Antelope North Road within the SSWD service area. The Antelope Pressure Reducing Station is a major connection between SSWD and SJWD at the end of the Cooperative Transmission Pipeline (“CTP”), which normally provides surface water from the SJWD Water Treatment Plant to SSWD and SJWD customers. The Project will enable the Agencies to pump groundwater

supplies to areas where those supplies are needed. Operational SCADA controls and flow meters will be installed to facilitate this new pumping system.

D. SSWD has contracted with Domenichelli & Associates to conduct planning and engineering studies and to design the Project. SJWD and SSWD staffs are cooperating on the design of the Project and providing necessary information and data related to that design to Domenichelli & Associates.

E. As design, engineering, and construction work progresses, SJWD and SSWD will negotiate and prepare an Agreement for Ownership, Utilization, Operation and Maintenance of the Project (the "Agreement"). The Agreement will determine ownership of the Project and allocate capacity and costs for operation, maintenance, capital replacements and repairs of the Project.

F. SSWD has been paying the costs for and directing Domenichelli & Associates' work required to complete preliminary investigations, initial planning, design, and engineering work for the Project. The Agencies have agreed that SSWD will continue to manage and direct the Project planning and design work. SJWD will actively participate in the planning process, design reviews, and other project activities to ensure that the project meets both agencies' needs.

G. The Agencies agree that there is a need to construct the Project and desire to avoid delay in its planning, design, engineering, and construction. This MOU is intended to facilitate that work by providing a written understanding between the Agencies on the scope of the Project and a basis for cost sharing prior to finalizing and executing the Agreement.

### **UNDERSTANDING**

1. Incorporation of Recitals. The Agencies agree that foregoing recitals are true and that they are incorporated herein by reference.

2. Lead Agency. SSWD will continue to act as lead Agency for the planning, design and engineering phases of the Project and will provide primary direction to Domenichelli & Associates. SJWD and SSWD will cooperate to ensure that the Project is designed to meet both Agencies' requirements and will share all information and data required to enable Domenichelli & Associates to perform all tasks necessary to plan, design and engineer the Project. SSWD will also act as lead during the bidding and construction phase of the project and will provide primary direction for construction management and inspection. SJWD will participate and assist during the bidding and construction phase to ensure the constructed facilities meet both Agencies' requirements.



3. Scope of MOU. The Agencies agree this MOU covers Project work completed before the date of this MOU through the expiration or termination of this MOU, as provided in Section 6 below.

4. Project Scope. The Agencies intend that the Project be designed with the following benefits provided to SJWD and SSWD:

a. SJWD:

- Provide pumping capacity of 10,000 gallons per minute (“gpm”), with space reserved within the Project footprint to install an additional 5,000 gpm pump and controls.
- Provide improved water supply reliability during drought or Folsom Reservoir low level conditions and/or extended emergency or planned outages of USBR or SJWD’s Water Treatment Plant facilities.
- Provide a minimum supplemental water supply of 11 million gallons per day to satisfy at least minimum levels of service demand in the portions of SJWD’s service area that do not have access to water supplies other than Folsom Reservoir.
- Allow for improved system operations during dry year, planned outages, and emergency conditions to maximize well production in the existing wholesale service area.
- Increase opportunities for SJWD to participate in conjunctive use projects.

b. SSWD:

- Install a low-head 2,000 gpm to pump water from the northern-most portion of the NSA to the southern portion of the NSA to improve the water supply reliability within the southern zone.
- Install SCADA controls and flow meters to facilitate the new pumping” system, which will permit SSWD staff to optimize the NSA’s operational capabilities.
- Increase SSWD’s opportunities to execute water transfers by providing access to a more diverse water supply portfolio.
- Increase the sustainability of the groundwater basin through increased in-lieu water banking opportunities.
- Maximize SSWD’s capital investment in the CTP by increasing pumping options.

5. Cost Sharing.

a. The total costs for planning, design, construction, and construction administration for the Project is estimated to be approximately \$2,900,000 based on a March 14, 2014 cost estimate prepared by Domenichelli & Associates. The Agencies have agreed that SJWD will pay approximately 79 percent of the costs of the Project work and SSWD will pay approximately 21 percent of the Project costs based on Domenichelli & Associates’ cost estimate breakdown. The

Project cost estimate and cost allocations will be updated from time to time as the Project work progresses and finalized when construction bids are received. The Agencies agree that the final Project costs may vary by 10 percent and the final cost allocations may vary by 5 percent from the March 14, 2014 estimate without the need to renegotiate this MOU.

b. SSWD has already incurred costs for the planning and pre-design of the Project, for which SSWD will invoice SJWD using the above cost allocation.

c. The foregoing cost allocation also will apply to costs incurred for legal work, work performed by other consultants, permits, and/or other direct costs related to this MOU.

d. The Agencies agree that each agency will be responsible for its own staff time and expenses to administer the Project work.

6. Invoices and Payments. SSWD will provide itemized invoices to SJWD monthly. SJWD will pay all invoices received from SSWD for Project work within 30 days of receipt.

7. Grant Funding. SSWD has secured two grants that it may be permitted to apply to the costs of the Project. One grant is in the amount of \$264,000 with an expiration date of June 1, 2016 and was awarded by the California Department of Water Resources under a Proposition 84 Implementation Grant. The second grant was awarded by USBR in the amount of \$300,000 for SSWD to construct an in-conduit hydroelectric generation facility and pump-back project. Because of timing and SSWD's decision not to construct the in-conduit hydro facility, USBR may reduce the amount of this grant. The Agencies are also pursuing other grant opportunities. The Agencies have agreed that the total amount of all available grant funds will be applied without allocation to the total cost of the Project and that only the remaining unfunded costs of the Project will be allocated in accordance with Section 5 of this MOU.

8. City of Roseville Participation. The Agencies acknowledge that SSWD has agreed to design the Project to include a connection that may be used in the future by the City of Roseville. SSWD will pay the costs of planning, designing and constructing this connection from its share of Project costs and will negotiate separately with the City of Roseville for any cost-sharing or reimbursement for this connection.

9. Term of MOU. This MOU will be effective as of the effective date stated above and will remain in effect until the execution of an Agreement for Ownership, Utilization, Operation and Maintenance of the Project. This MOU also may be terminated by either SJWD or SSWD upon 30 days' written notice to the other Agency.

10. Amendment. The terms of this MOU may be modified or amended only by written amendment approved and executed by both Agencies.

11. Cooperation. SJWD and SSWD will reasonably cooperate with each other, including the execution of all necessary documents and providing of all information and data required to carry out the purpose and intent of this MOU.

12. Counterparts. This MOU may be executed in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

SAN JUAN WATER DISTRICT:

SACRAMENTO SUBURBAN WATER DISTRICT:

By: \_\_\_\_\_  
Shauna Lorance  
General Manager

By: \_\_\_\_\_  
Robert S. Roscoe  
General Manager