



- Semiannual Report on State Water Project Strategic Initiatives

Detailed Report

This report discusses efforts to meet challenges facing administration of the State Water Project contract. Staff is taking measures to protect Metropolitan's State Water Contract rights and benefits in five strategic areas: costs, energy, infrastructure reliability, supplies, and water quality. Highlights are listed below and explained in the subsequent pages.

Overview

- ❖ 2009 payments for SWP deliveries of up to 1.1. MAF approved (page 2).
- ❖ Increased SWP fixed charges combined with reduced supplies has resulted in increased SWP unit costs in 2007 and 2008 (see Figure 1).

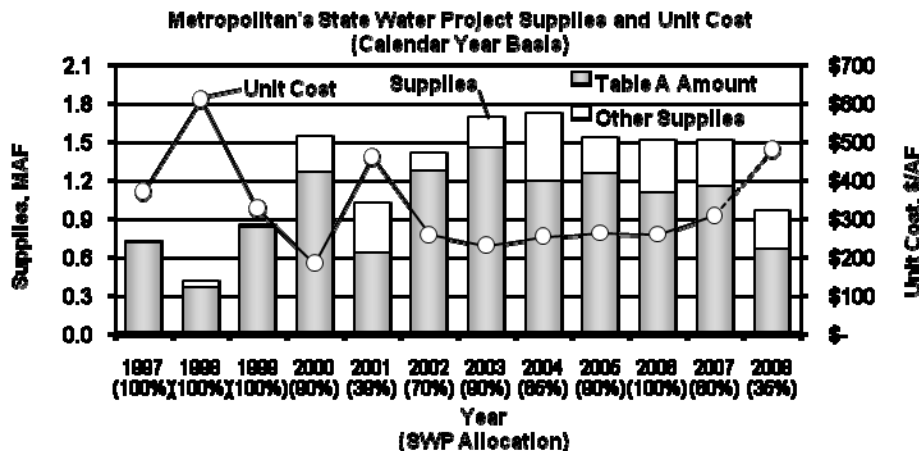


Figure 1. Total annual MWD SWP supplies and transfers in million acre-ft (left) and unit cost in \$/AF (right). Unit costs reflect payments to DWR and do not include costs related to ground water storage programs with partners along the California Aqueduct. Table A refers to Metropolitan's regular SWP allocation (currently 20 percent). Other supplies include prior year's carryover, Central Valley Storage programs, Article 21, Pool A, Pool B, Flexible Storage withdrawal, Article 141b), EWA Exchange and north of Delta transfers.

- ❖ North-of-Delta water transfer agreement yielded a net 41,078 AF (page 5).
- ❖ Environmental documentation prepared for Two-Gates Fish Protection Demonstration Project (page 5).

SWP Strategic Initiatives

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Ensure Costs are Accurate and Reasonable and Promote Efficient Business Processes

Metropolitan repays the State for its costs of developing and transporting water. Because of significant cost exposure and need for reliable supplies, Metropolitan strives to influence efficiency of operations and equity of benefits provided.

Key near-term goals include:

- DWR obtaining a cost-effective Federal power license for Lake Oroville power generation complex that protects water supplies;
- Ensuring that DWR billings are accurate and reasonable;
- Maintaining the value of the investment in Hyatt-Thermalito power generation facilities; and
- DWR improving use of management tools and disclosing relevant business information to the State Water Contractors.



Figure 2. Aerial view of the Delta (Photo courtesy DWR).

MILESTONE:

MANAGED COSTS ASSOCIATED WITH 2009 SWP CHARGES

Recognizing the unusually dry conditions and limited water supply in February, the Board approved payment of the CY 2009 State Water Project water supply fixed charges and variable energy costs for up to 1.1 MAF of deliveries. In the event additional water supplies become available staff will return to the Board to request authorization to pay for the additional supplies.

MILESTONE:

COMMENCED SETTLEMENT DISCUSSIONS ON 2006-2009 SWP PROTEST ITEMS

In January 2009, DWR accelerated settlement discussions in a major step towards resolving Metropolitan's protest and claim of the 2006 State Water Project charges.

EMERGING CHALLENGE

PROPOSED LEGISLATION TO REDUCE THE STATE'S OBLIGATION FOR RECREATION COSTS AT SWP FACILITIES

The Department of Finance has initiated legislative action to shift costs for recreation and boating at the State Water Project reservoirs to the water contractors. The budget action would provide limited funding for future recreation while at the same time reducing the share of existing SWP costs allocated to recreation and eliminating the State's obligation to provide any funding for an estimated \$150M in past recreation costs. The specific impact upon Metropolitan is being analyzed but is expected to be significant.

The State Legislative Analyst Office has issued two reports related to the SWP. The report on the proposed legislation contains inaccuracies, and is viewed as very unfavorable and the report's recommendation, if followed, has the potential to substantially increase Metropolitan's costs. The SWC are developing responses to the document and are preparing to provide input to the legislative process..

Ensure Cost Effective Reliable Energy Sources

With the expiration of long-standing contracts and radical changes in energy market regulations, the SWP is experiencing increased exposure to energy and fuel price fluctuations, credit risk, and power plant reliability risk.

Metropolitan influences and supports DWR to provide a reliable supply of energy at an affordable and predictable cost for the SWP. Metropolitan staff actions are focused on the following goals:

- Increasing attention to evolving green-house gas and renewable policies;
- Developing a strategic plan and IRP-like power portfolio that manages cost and risk when pursuing future acquisitions and sales; and
- Ensuring reliable infrastructure that supports the ability to use cost-effective off-peak energy for pumping.

MILESTONE:

VARIABLE ENERGY RATE

The SWC reached agreement with DWR that it would make more frequent and comprehensive adjustment to the rate applied monthly for pumping energy use. Traditionally, the rate starts out high in January and adjusts downward as the year progresses. DWR will now conduct more thorough internal coordination meeting to propose more timely reviews and updates in response to evolving hydrologic, operational and market conditions. Proposed rate changes would be shared with the SWC prior to adoption. The change should benefit Metropolitan's cash flow.

EMERGING CHALLENGE:

MARKET REDESIGN AND TECHNOLOGY UPGRADE

The California Independent System Operator has been developing protocols for operation of California's electricity grid to automate the process of transmission planning and usage to improve energy delivery reliability. CAISO announced that they will begin operating the grid under the MRTU in April of this year. One controversial aspect of this re-operation is "Locational Market Pricing" that will assign a higher cost for transmission in congested parts of the grid. This strategy has the potential to add significantly to the cost of electricity required to pump SWP water supplies. DWR has budgeted

\$10 million in new SWP costs to prepare for increased transmission billings.



Figure 3. Energy transmission congestion is a growing concern in California (Photo from Wikimedia Commons.)

EMERGING CHALLENGE:

COMPLIANCE WITH ELECTRIC RELIABILITY STANDARDS

The Energy Policy Act of 2005 authorized the Federal Energy Regulatory Commission to impose electricity transmission and generation reliability standards. FERC has designated the North American Electric Reliability Corporation (NERC) – a non-profit New Jersey corporation – and the Western Electricity Coordinating Council (WECC) – a member of NERC – as the organizations responsible for establishment of and compliance with reliability standards. As a hydroelectric energy generator and owner of limited SWP transmission facilities, DWR is responsible for compliance with NERC and WECC reliability standards through "self certification" beginning in June 2007. Complexity associated with initial program requirements along with prioritization issues regarding SWP limited operations staff have constrained DWR's ability to comply with the new regulations and expose the SWP to appreciable monetary penalties. The SWC are working with DWR to avoid penalties under the new federal regulatory program.

Ensure Sufficient Infrastructure Reliability

Metropolitan and other contractors' water delivery schedules call for the SWP system to move more water through its aging infrastructure, requiring increased focus on maintaining infrastructure reliability.

To ensure that DWR is operating, maintaining and repairing SWP facilities with Metropolitan's interests in mind, staff is pursuing the following goals:

- Monitoring and influencing key project decisions; and
- Providing DWR shop-services to support equipment maintenance and rehabilitation.

MILESTONE:

DEFERRED TIMING OF EAST BRANCH ENLARGEMENT

Metropolitan staff supported the recommendation of the East Branch Enlargement Committee to direct the Department of Water Resources to not publish the Notice of Preparation for the DWR East Branch Enlargement Phase II Project EIR. The East Branch Enlargement would provide an additional 866 cfs to the 95-mile long reach of the California Aqueduct at a cost of around \$540 million. Metropolitan's share of the cost would be about \$410 million. The committee requested DWR to delay completion of the CEQA work because of the increased supply uncertainty due to challenges in the Delta, and financial considerations.



Figure 4. East Branch of the California Aqueduct near Pearblossom (DWR Photo.)

EMERGING CHALLENGE:

COMPREHENSIVE CAPITAL INVESTMENT PLAN PROCESS FOR SWP

Metropolitan staff is working with the State Water Contractors and DWR to develop a process to evaluate the State Water Project capital investment plan. Metropolitan has shared its own CIP process with DWR and is requesting that DWR develop a similar process. Developing a transparent process will allow Metropolitan and the other contractors to better understand how DWR prioritizes its work and capital investments. Metropolitan could then provide better direction to DWR on what investments provide the greatest benefits to the contractors.

Ensure Cost-Effective Water Supplies

Staff participates in activities to optimize Metropolitan's water supply benefits, including protection of its contract rights.

Metropolitan is working with other SWP Contractors and State agencies to ensure cost-effective water supplies. Key goals are:

- Monitoring current water supply conditions;
- Developing water management actions; and
- Preserving access to flexible storage.

MILESTONE:

ACCOMPLISHED NORTH-OF-DELTA TRANSFERS

The Yuba Dry Year Purchase Program is Metropolitan's first multi-year transfer agreement from sources north of the Delta. Under the agreement among CVP and SWP users, Metropolitan is able to secure approximately 25 percent of the total available supply. This dry-year program also provides water to SWP when the SWP Table A allocation is less than 40 percent and an optional supply in case of allocation between 40 and 60 percent. During calendar year 2008 Metropolitan purchased 26,430 AF of which 20,510 AF was delivered after deduction of conveyance losses.

Metropolitan also participated in the SWP buyers group in which supplies were purchased from several contractors in the Feather River Basin. Net deliveries to Metropolitan from this single year program totaled 20,658 AF.

Lastly, Metropolitan facilitated the delivery of water acquired by SDCWA from two Feather River Basin contractors by taking delivery of the acquired water in 2008 in exchange for providing a storage credit to SDCWA within Metropolitan's share of its Semitropic storage account. Total net delivery to Metropolitan was 17,908 AF.

MILESTONE:

COMMENCED DELTA HABITAT CONSERVATION AND CONVEYANCE PROGRAM

Metropolitan has vigorously participated in the Delta Habitat Conservation and Conveyance Program, a new joint effort of state and federal agencies, as well as other federal and state water contractors to

address the Delta environmental work necessary to assess the feasibility to construct Delta conveyance facilities. Metropolitan has voting representation on the DHCCP Executive Committee, the new State/Federal Contractors Water Authority as well as the Delta Specific Project Committee of the State Water Project Contractors Authority.

MILESTONE:

ADVANCED TWO-GATES FISH PROTECTION DEMONSTRATION PROJECT

Water export stakeholders have prepared draft environmental documents and a cooperation agreement for development of the Two-Gates Fish Projection Demonstration Project. In December 2008, the U.S. Fish and Wildlife Service (FWS) imposed restrictions on reverse flows in the south Delta toward the export pumps to ensure protection of Delta smelt from entrainment. The Two-Gates Project includes the installation of new temporary gates in central Delta channels that will be operated in a real-time demonstration mode to reduce fish take, relax water supply restrictions at the state and federal export facilities, and improve Delta water quality. Two-Gates Project operations compatible with FWS restrictions can reduce Delta smelt salvage and place smelt and its preferred habitat further from the export pumps. It is anticipated that environmental documents would be filed and certified by the Department of Water Resources and the US Bureau of Reclamation. Targeted in-service operation is late 2009. Funding would be through state and federal export contractors and recently enacted state proposition bonds, at a total project initial implementation cost of approximately \$29 million.

MILESTONE:***EXECUTED ADDITIONAL DELIVERY/EXCHANGE AGREEMENTS WITH DWA AND CVWD***

During 2008, Metropolitan entered into two separate exchange and delivery agreements with Desert Water Agency (DWA) and Coachella Valley Water District (CVWD) that are in addition to the pre-existing Exchange and Advance Delivery agreements.

Under a September 23, 2008 letter agreement with DWA, DWA will acquire up to 36,000 AF of non-SWP water to be exchanged with Metropolitan. Exchange deliveries will be made in increments through 2016. As of December 2008 Metropolitan has taken delivery of 8,350 AF of water acquired by DWA and has delivered 503 AF of exchange water.

Under an October 17, 2008 letter agreement with CVWD, from 2008 through 2010 CVWD will acquire 10,000 AF of water in addition to its Table A supplies. Metropolitan will take delivery of the water acquired by CVWD and make an equal volume of exchange deliveries from its Colorado River supply at the Whitewater River turnout or by deducting credits from the Advanced Delivery Account. As of December 2008 Metropolitan has taken delivery of 3,000 AF of water acquired by CVWD and has effected the exchange via the Advance Delivery Account.

In addition to the above transactions, under the original delivery and exchange agreements a total of 61,872 AF of water was received by Metropolitan during calendar year 2008.

MILESTONE:***CENTRAL VALLEY GROUNDWATER STORAGE PROGRAMS***

Metropolitan has requested the maximum available water returned from its Central Valley groundwater storage programs. Last calendar year, these programs resulted in a recovery of about 180,000 acre-feet in supply. For this calendar year Metropolitan projects that around 100,000 acre-feet will be returned from these programs. Projected returns are lower this year because the return capability of some programs is linked to the State Water Project allocation which is thus far lower this year.

EMERGING CHALLENGE:***2009 STATE WATER PROJECT ORDER/WATER ALLOCATION***

Below average precipitation in northern California from September 2008 through January 2009 coupled with depleted storage in Oroville and San Luis reservoirs has resulted in a 15 percent allocation determination for calendar year 2009. Metropolitan submitted a SWP delivery schedule that ensures the capability to serve those portions of its service area that can only be served by SWP facilities. In addition to nearly 300,000 AF of Table A and carryover from the previous year, total scheduled deliveries of 786,000 AF includes making full use of Metropolitan flexible storage accounts in Castaic and Perris reservoirs (128,000 AF), recovery of water from its water management programs (100,000 AF), and the remainder to be met from the Yuba Dry Year Purchase Program, the drought water bank being developed by DWR, and other actions.

EMERGING CHALLENGE:***AREA-OF-ORIGIN LAWSUIT***

The Sacramento Superior Court granted a motion to intervene by Metropolitan and 12 other state water contractors in this case on February 25, 2009. Four state water contractors located north of the Delta filed a suit against DWR alleging that since they are located in the "are of origin" of SWP water they should not be subject to the shortage provisions of their state water contracts. If plaintiffs are successful it would result in less water available for Metropolitan and the other contractors during shortage years. Metropolitan and its fellow interveners are now full parties and intend to vigorously support the Department of Water Resources interpretation of the contract shortage provisions and protect our interest in our SWP supply

Protect and Improve Water Quality

The quality of SWP water is highly variable, creating challenges in meeting drinking water standards, integrating various water supply sources, and supporting service area needs for groundwater and recycling.

Metropolitan is pursuing SWP water quality needs by:

- Promoting projects to protect and improve water quality in the Bay-Delta watershed and SWP system;
- Implementing the Municipal Water Quality Investigations program; and
- Supporting DWR in administering appropriate criteria for the introduction of non-project water into the California Aqueduct.

MILESTONE:

DWR QUAGGA MUSSEL CONTROL PROGRAM

DWR's Quagga Mussel Control Program includes surveillance and detection, research, response, prevention, and a long-term management plan. DWR regularly monitors the entire State Water Project for the presence of Quagga mussels at 17 different locations. In the event Quagga mussels are detected in the SWP, DWR's rapid response would be to determine mussel distribution in SWP facilities and implement quarantine and control measures. Once detected, DWR's long-term O&M management plan identifies the most vulnerable facilities, control measures and possible engineering and operational solutions. Unfortunately, zebra and Quagga mussels prefer the nutrient rich waters of the State Water Project and grow at a faster rate than when in Colorado River water. Zebra mussels have been detected in San Justo Lake, a water body that receives water from San Luis Reservoir. The mussels harm native wildlife by eating plankton and require millions of dollars in annual maintenance to drinking water infrastructure.



Figure 5 Testing for mussel veligers (larvae) (DWR photo.)

MILESTONE:

INITIATED SEMITROPIC ARSENIC TREATMENT DEMONSTRATION PROGRAM

The Semitropic Groundwater Storage Program has provided Metropolitan with dry year water supply benefits. However, water quality concerns, specifically with arsenic levels in the pump-in water, threatened to reduce the utility of the program. In past years DWR pump-in guidelines required that arsenic concentrations in the California Aqueduct not be increased by pump-in water more than 2 ppb over background levels. In late 2008, Semitropic implemented a temporary demonstration treatment process using their distribution system to remove arsenic from water pumped into the aqueduct. The removal of arsenic helps ensure the maximum return of previously stored water to Metropolitan. Treatment also protects the water quality for downstream users including Metropolitan's service area and other southern SWP contractors, which have aligned interests with Metropolitan. Semitropic continues to modify the treatment process to improve performance.



Figure 6. Semitropic arsenic treatment demonstration program (MWD photo.)



Figure 7. Quail Lake on West Branch of California Aqueduct (Photo courtesy DWR).

Acronyms

AF	– Acre-Feet
BDCP	– Bay Delta Conservation Plan
CARB	– California Air Resources Board
CEQA	– California Environmental Quality Act
CVP	– Central Valley Project
CY	– Calendar Year
DFG	– California Department of Fish and Game
DWR	– California Department of Water Resources
FEIR	– Final Environmental Impact Report
FERC	– Federal Energy Regulatory Commission
IRP	– Integrated Resources Plan
MAF	– Million Acre-Feet
MW	– Megawatt
MWQI	– Municipal Water Quality Investigations
NCPA	– Northern California Power Agency
NMFS	– National Marine Fisheries Service
NPC	– Nevada Power Company
SOC	– Statement of Charges
SWC	– State Water Contractors, Inc. (includes Metropolitan)
SWP	– State Water Project
USBR	– United States Bureau of Reclamation
USFWS	– United States Fish and Wildlife Service