

- **Board of Directors**
Water Planning, Quality and Resources Committee

September 13, 2005 Board Meeting

9-6

Subject

Semiannual Report on Metropolitan’s State Water Project Strategic Initiatives

Description

In March 2005, staff reported on six strategic initiatives to enhance the value of Metropolitan’s investment in the State Water Project. **Attachment 1** is our first semiannual report regarding effort and progress pursued under this new six-point focus.

The importance of managing Metropolitan’s SWP assets has increased in recent years, as Metropolitan is more fully using SWP contract rights and a new supply regime has materialized on the Colorado River. Low reservoir levels on the Colorado River and many other factors will affect how SWP assets are managed into the future. As a result of member agency input, Metropolitan has developed a comprehensive approach to managing SWP-related issues. Staff is organizing its work around the six strategic initiatives to optimize the return on Metropolitan’s SWP investments. Advances are achieved by influencing actions to be taken by the Department of Water Resources, dealing with regulatory and legislative issues, providing contracted support to the SWP and through protecting Metropolitan’s interests when necessary in litigation. A wide cross-section of Metropolitan staff representing different functional disciplines are involved. Much of the work includes developing positions with the other contractors through the State Water Contractors organization on a regular basis. Staff will report progress and identify emerging issues under a format linked to the six strategic initiatives.

The table below highlights a few accomplishments contained in the attached report.

SWP Initiative	Status
Ensure costs are accurate and reasonable	<p>DWR submitted its Lake Oroville FERC relicensing application on schedule. Metropolitan’s objective is for DWR to obtain a license that minimizes cost impacts, protects water supply, and protects power generation.</p> <p>Lake Oroville/Hyatt-Thermalito energy generation plants help keep water delivery rates affordable.</p>
Promote efficient business practices	<p>State Water Contractors and DWR improved governance through the creation of the DWR Director’s Advisory Board to create a more transparent and effective decision-making process.</p> <p>Metropolitan’s participation in the Advisory Board is expected to result in a higher level of customer service from DWR.</p>
Ensure cost-effective and reliable energy resources	<p>DWR developed a financial risk management policy to guide its expanded role in buying and selling energy on the open market.</p> <p>This approach will enable DWR to better protect affordable and stable delivery rates to Metropolitan under new and evolving energy-market conditions.</p>

SWP Initiative	Status
Ensure sufficient infrastructure reliability	<p>DWR has become more reliable by focusing on preventative maintenance resulting in increased availability of pumps and decreasing the number of forced outage.</p> <p>Metropolitan’s ability to cost-effectively meet demands through reliance on high-levels of SWP deliveries requires facilities that are highly reliable and that can favor off-peak pumping and on-peak generation.</p>
Ensure cost-effective water supplies	<p>Dry-year water supplies will be enhanced through an exchange agreement implemented with the Environmental Water Account.</p> <p>This exchange provides water supply benefits by ensuring a cost-effective implementation of the EWA. This action also provides MWD with compensation for services and a more secure dry-year supply.</p>
Protect and improve water quality	<p>DWR and the State Water Contractors developed a prototype water quality modeling and forecasting tool.</p> <p>The model predicts quality of SWP water entering Metropolitan's distribution system as SWP source water quality changes. This is a significant step in managing SWP water quality and aiding Metropolitan's real-time operations.</p>

Future Steps:

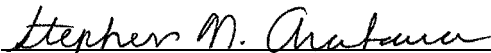
Staff plans to provide a semiannual report to the Board on the six strategic initiatives and will keep the member agencies informed on a regular frequency.

Policy

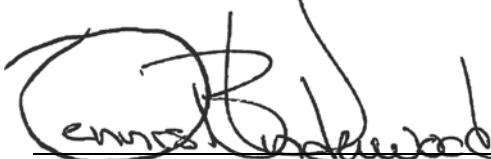
By Minute Item 20862, dated October 4, 1960, the Board authorized Metropolitan to enter into the State Water Project contract and pay all costs associated with the contract.

Fiscal Impact

None


 Stephen N. Arakawa
 Manager, Water Resource Management

8/18/2005
 Date


 Dennis B. Underwood
 CEO/General Manager

8/22/2005
 Date

Attachment 1 – State Water Project Strategic Initiatives Semiannual Report

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Semiannual Report SWP Strategic Initiatives

SPECIAL POINTS OF INTEREST:

Lake Perris Dam seismic concerns
 o Storage reduced by 42 percent (see page 8)

Hyatt-Thermalito litigation
 o Northern Coalition files lawsuit against DWR (see Page 3)

SCRSD EIR Litigation
 o Metropolitan joins other SWP contractors in CEQA suit to protect water quality (see Page 10)

Inside this issue:

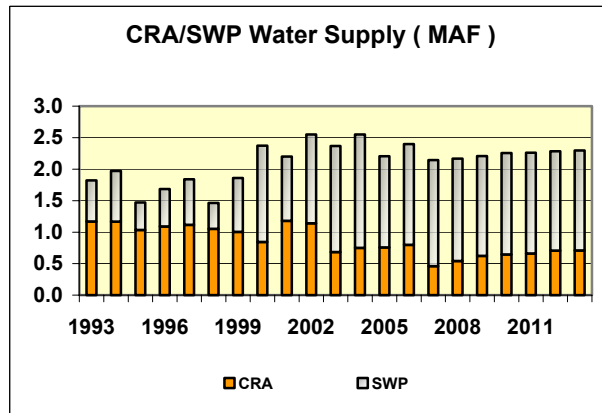
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Introduction

Attention to State Water Project costs and benefits has heightened in recent years as SWP payments have increased and Metropolitan has more fully utilized its contract rights. Overall, while energy costs have increased, the unit cost of SWP supplies has declined as higher levels of deliveries have occurred.

As Metropolitan more fully uses its SWP contract rights to receive supplies through SWP facilities and as SWP payments represent nearly 30 percent of Metropolitan’s annual expenditures, staff is focusing its efforts in six strategic initiatives to control cost and increase value:

- Ensure costs are accurate and reasonable
- Promote efficient business process
- Ensure cost-effective reliable energy sources
- Ensure sufficient infrastructure reliability
- Ensure cost-effective water supplies
- Protect and Improve water quality



The changing supply picture on the Colorado River Aqueduct will result in an increased use of SWP facilities to deliver water

Over the last six months, Metropolitan has been able to advance its objectives in each of the six strategic areas. This report highlights the actions and accomplishment that have resulted during the first half of the year. These efforts have included working individually and with other SWP contractors to influence DWR, CALFED as well as other agencies whose decisions affect the SWP.

Ensure Costs are Accurate and Reasonable

Metropolitan and 28 other public agencies contract with the Department of Water Resources for State Water Project water. Through these contracts the public agencies are repaying the capital costs of facilities and the operations and maintenance costs to deliver water. Metropolitan is the largest Project contractor, with 46 percent of the Project's annual yield and repays the associated costs of the water supply and transportation.

Metropolitan is taking actions to ensure that costs are accurate, reasonable and appropriate for the benefits received. Staff efforts are focusing on the following activities:

- Influencing DWR to obtain a cost-effective license for Lake Oroville power generation complex that protects water supplies
- Ensuring that billings are accurate and reasonable
- Seeking compensation for service provided to the State related to managing the SWP
- Maintaining the value of the investment in Hyatt-Thermalito power generation facilities

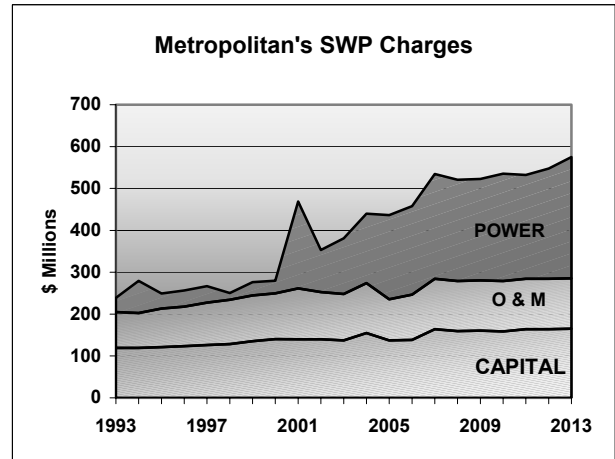
Accomplishment: DWR SUBMITTED THE LAKE OROVILLE FERC RELICENSING PROPOSAL ON SCHEDULE

The current license for the Lake Oroville Hyatt-Thermalito power generation facilities expires in 2007. Metropolitan is concerned that conditions attached to a new license could result in considerable additional cost and that they could impact SWP supplies as well. Metropolitan and the SWC assembled a team to ensure that DWR renews the license while maintaining water supply, power generation and managing the exposure to increased costs. DWR's February 2005 submittal reflects input from Metropolitan and other contractors and is the initial basis for a license renewal in 2007 that would limit the SWP's exposure to increased cost.

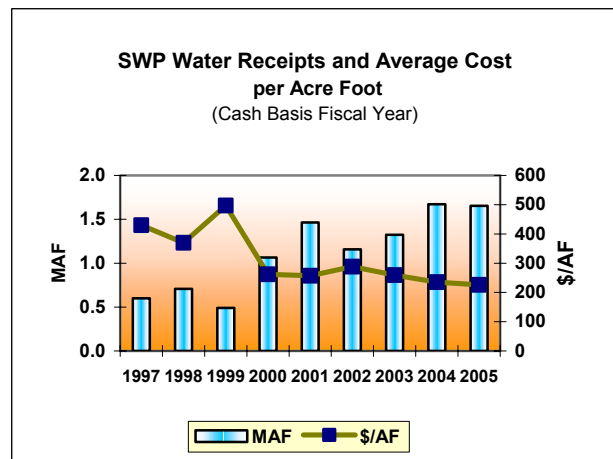
Accomplishment: ENSURED THAT BILLINGS ARE ACCURATE AND REASONABLE

Metropolitan made payments of \$372 million to DWR during FY 2005, taking into account credits and adjustments to the charges. The accuracy of

the payments was verified through staff analysis, an independent audit of DWR's Statement of Charges, and follow-up actions. Total payments have increased over time as more water was received and energy costs have increased.



However, while total costs increased relative to the 1990s due to increased energy requirements, the unit cost for Metropolitan SWP supplies have declined (see graph below), as increased water receipts have more than offset the increase in power costs. This decline is due to economies gained from broadening the base for the fixed costs, which remained nearly constant while deliveries increased.



Accomplishment: OBTAINED COMPENSATION FOR SERVICES

In March, the Board authorized entering into a three-year Environmental Water Account demand shifting agreement with DWR for up to 100,000 AF per year at up to \$30 per acre-foot. Metropolitan receives payment for altering its operations under this agreement.

In June, the Board authorized entering into an EWA exchange agreement with DWR for up to 100,000 acre-feet. Under this agreement Metropolitan received an \$85 per acre-foot deposit to ensure the return of the water in a future dry year.

Accomplishment: FINANCING PLAN FOR CALFED

Metropolitan and other SWC representatives, supported by staff and consultants, continue to negotiate with other stakeholders and CALFED agencies on the financing plan. Focus is on negotiations over the linkage of regulatory assurances in return for project funding by Delta exporters.

An accomplishment was the removal of language from proposed legislation for general non-specific fees on Delta exporters to avoid additional costs to Metropolitan without commensurate benefits.

SPECIAL POINT OF INTEREST***MAINTAINING VALUE FROM INVESTMENT IN HYATT-THERMALITO POWER GENERATION***

A coalition of Northern Contractors have filed suit against DWR claiming that the contract has been improperly administered and are seeking to have revenue from sale of energy generated at Hyatt-Thermalito complex be used to defray the cost of water.

Metropolitan is actively supporting DWR's 40 year-old administrative practice of allocating generation benefits efforts to reduce delivery costs and to ensure that benefits are received by those that paid for the generating facilities.

Metropolitan has joined a coalition of other contractors that would be adversely affected if this claim were upheld. This group is entering into a joint defense agreement with the State Attorney General who is defending DWR in this lawsuit.

Promote Efficient Business Process

Metropolitan strives toward the efficient operation of the State Water Project because of its significant impact on its annual expenditures. However, operation of the SWP occurs within a highly complex and at times cumbersome administrative structure of the California state government. The need for compliance with the state administrative requirements often results in delays and unnecessary administrative costs.

Metropolitan is working with the DWR and the State Water Contractors to seek ways to:

- Remove inappropriate administrative regulations, if necessary, through legislation.
- Implement effective cost control measures within the SWP by requiring DWR to establish budgetary and operational performance standards.
- Improve use of management tools and cost reporting within DWR and provide relevant performance reports to the State Water Contractors.

Our efforts to date have yielded positive results which include:

Accomplishment: IMPROVED MANAGEMENT PROCESS BY PUBLISHING REGULAR MANAGEMENT REPORTS

DWR issued its first quarterly executive management report. DWR recognized Metropolitan's input, which aligned the report closely with Metropolitan's six strategic initiatives. We are continuing the effort to get DWR to

Our desire for efficient operation of the State Water Project is based on the general belief that process often determines outcome. And that any performance objective pitched against a work process will always lose to the process. DWR needs to develop improve management processes to be effective at attaining objectives set forth by the SWP contractors.

improve on the executive report as well as produce other more detailed management reports for DWR and SWC managers and technical analysts.

Accomplishment: IMPROVED CUSTOMER SERVICE THROUGH TRANSPARENT DECISION-MAKING

Creation of a DWR Director's Advisory Board that will promote structured, decision-making and allow more efficient resolution of a wide variety of business related issues affecting SWP's water reliability, quality and costs. Metropolitan's participation in the Advisory Board is expected to result in a higher level of customer service from DWR.

Accomplishment: INITIATED COMPETITIVE CONSULTANT SELECTION PROCESS FOR SAP UPGRADE

DWR selected a consultant for DWR's information system upgrade (SAP Migration) through a competitive process. This effort resulted in a contract of \$200 per hour for subsequent work instead of the typical \$200-\$400 per hour. This was achieved through Metropolitan's effort to steer the process away from an existing consulting arrangement to selection of a new consultant through a competitive process.

Legislation Proposed to Streamline State Approvals of Critically Needed Contracts

Our effort to seek ways of removing inappropriate administrative regulations through legislation remains a major challenge. Proposed legislation by DWR (AB 1665) initially contained with a favorable language that would have made this possible, but was stripped of the favorable provision in its latest amendment. It appears unlikely that this provision will be reinstated in this bill in the future. Staff is assessing other means, politically or otherwise, by which DWR can achieve this objective.

Ensure Cost-Effective Reliable Energy Sources

The SWP is routinely exposed to energy and fuel price fluctuations, credit risk, and unit reliability risk in managing its water delivery operations. Energy is the single area of greatest cost vulnerability in Metropolitan's future SWP costs. To further illustrate this point:

- *The SWP incurs about \$300 million annually, 40 percent of its budget, on energy.*
- *Nationwide energy prices are rising.*

Energy is the single area of greatest cost vulnerability in Metropolitan's future SWP costs.

Metropolitan led the effort to ensure that the SWP has a reliable supply of energy at an affordable and predictable cost. Staff efforts to date have

focused on the following activities:

- Participating in key forums at several levels;
- Influencing DWR's power portfolio management;
- Implementing construction of key off-peak capacity facilities; and
- Ensuring reliable infrastructure since the ability to use cost-effective off-peak energy for pumping is intrinsically linked to the availability of pumping units.

Efforts to date have yielded positive results which include:

Accomplishment: ENERGY RISK MANAGEMENT THROUGH IMPROVED ORGANIZATIONAL STRUCTURE

DWR, in coordination with consultants and the SWC, developed a financial risk management policy to guide its expanded role in buying and selling energy on the open market – a market that has greatly changed in complexity in recent years. To better prepare for this expanded role, DWR adopted an industry-best practices risk-management organizational structure; filled positions devoted to energy trading; and established industry cost, credit risk, and exposure metrics.

By using its risk policy to guide its energy portfolio and metrics, DWR should be able to better provide affordable and stable energy rates to the SWP contractors.

We are working with DWR to create easy to understand reports that will be used to measure the performance of the energy portfolio relative to trading positions and risk strategies.

Accomplishment: INITIAL STEPS TAKEN TO PROVIDE FOR LONG-TERM ENERGY STRATEGIC PLANNING

Because DWR's attractive long-term energy exchange agreement with Southern California Edison expired in

December 2004 and the Reid Gardner supply contract will expire in 2013, DWR needs to develop a new long-term energy strategy. A strategy should guide DWR in assessing opportunities, such as long-term power purchases or exchanges and participation in power plants or transmission projects. At the urging of Metropolitan and the SWP contractors, DWR is placing greater emphasis on mid-term to long-term planning options by pursuing an integrated resource management approach.

Metropolitan and the SWP contractors have proposed that DWR create a new long-term planning business unit, establish a high-level energy manager position and seek additional skilled staff to support this function.

With MWD focusing more efforts on power resources issues, DWR has developed a long-term planning process, acquired key consulting services, and began construction on additional energy management facilities, Tehachapi East Afterbay, to improve efficiency.

Accomplishment: EXECUTED KEY CONSULTING SERVICES

Gas Hedging Contract Approved July 2005—
 The AG Edwards contract for brokerage services was approved July 2005. This contract will help DWR manage its natural gas resource risk exposure.

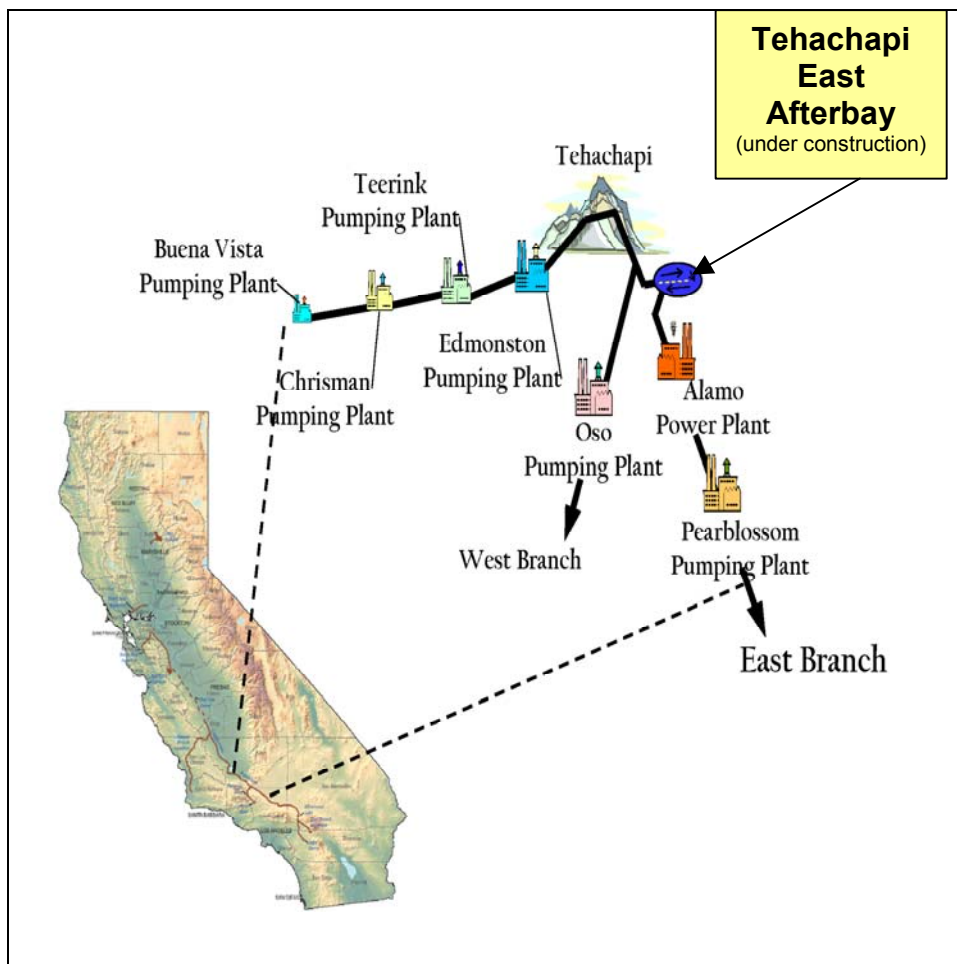
Risk Analysis Consulting Services Approved June 2005—
 The Pace Global Energy Services contract was approved June 2005. This contract will help DWR with its power portfolio management activities.

Accomplishment: COMMENCED CONSTRUCTION OF KEY FACILITIES

Construction commenced January 2005 on the Tehachapi East Afterbay. This project will

provide additional afterbay storage for the "string" of pumping plants in the Central Valley, including Edmonston Pumping Plant, which consumes the most energy on the SWP. Foremost among many project benefits is increased capacity to pump off-peak and additional provision of ancillary services. The reservoir will have active storage of about 910 AF and 250 AF of inactive storage.

Design and construction will cost approximately \$78 million and requires approximately 30 months to be completed while project benefits will range between \$10 - \$20 million per year once operational.



Above is a graphic identifying the location, just south of the bifurcation between the west and east branches of the California Aqueduct, of Tehachapi East Afterbay

Ensure Sufficient Infrastructure Reliability

In order for DWR to deliver water reliably, maintenance must be prioritized to achieve maximum flexibility, safety, and reliability. However, there is a constant balance of “shutting down” operations for maintenance against water and power operations. Historically, DWR has reliably delivered water supplies to its customers but going forward there are several challenges that are coming to a head:

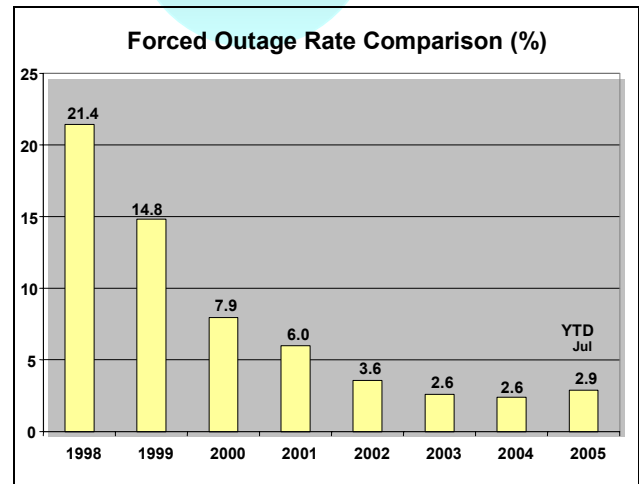
- *Increasing demands system wide;*
- *Aging infrastructure; and*
- *Retaining/incentivizing qualified staff.*

Staff provides oversight and guidance to DWR with the ultimate goal of advocating MWD’s interests. To ensure that DWR is capable of operating SWP conveyance facilities economically, staff is pursuing the following actions:

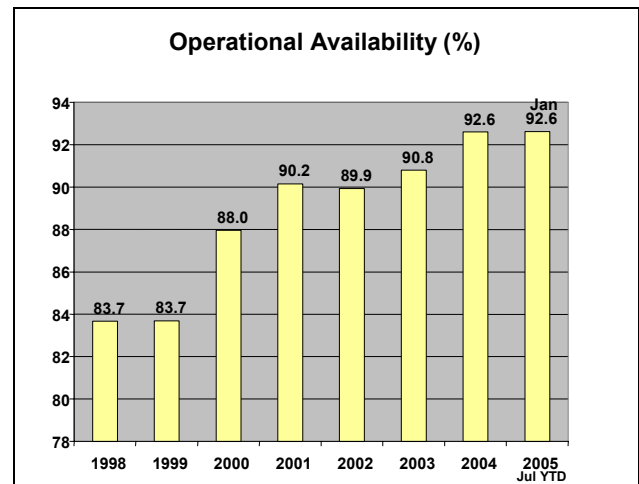
- **Routine Communication with DWR—** Metropolitan routinely communicates with DWR formally and informally. Some of the current mechanisms include participation in SWC committees, weekly conference calls, and annual outage/shutdown meetings.
- **Reporting Performance Measures—**Because much of the infrastructure is at least 40 years old, staff seeks to ensure that infrastructure reliability gains are accomplished in a cost-effective manner through developing reports and performance measures.
- **Metropolitan/DWR Shop Services Agreement—**Metropolitan continues to provide operations and maintenance-related support to DWR under this agreement.

Accomplishment: INITIAL STEPS TAKEN TO MANAGE RELIABILITY RISK

Benchmarking—DWR has been participating in a benchmarking program over the past four years. Benchmarking gives DWR the opportunity to use best practices knowledge to identify methods used by like industries in an effort to continuously improve.



Since 1998, SWP pumping plant forced outages have decreased due to an aggressive preventative maintenance plan.



Since 1998, SWP pumping plant operational availability has increased. As water deliveries increase, operational availability has become much more important as windows for repairs and maintenance have become smaller.

Currently, MWD, the SWP contractors, and DWR have developed performance measures to evaluate performance achievements. These performance measures “indicate” that the SWP is trending towards being more reliable. Future refinements of reporting performance measures include incorporating deliveries and cost.

In furthering our efforts, a focus group including Metropolitan, the SWP contractors, and DWR is working together to develop a “scorecard” of SWP facilities.

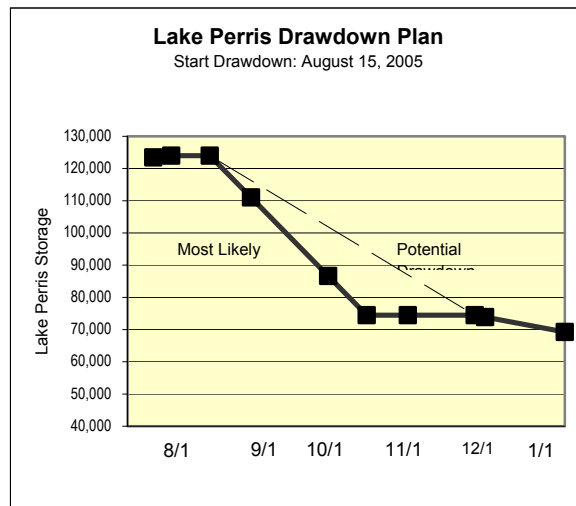
Accomplishment: RETAINING/ INCENTIVIZING STAFF

It is very difficult to retain DWR high quality staff -- with retirements occurring and those positions being eliminated and less competitive wages and benefits causing staff to leave to pursue other opportunities.

Incentive Program—DWR’s O&M Division has developed an innovative approach to incentivizing their maintenance staff by linking pumping plant Operational Availability targets and compensation. This appears to be resulting in increased facility reliability and increased retention.

SPECIAL POINT OF INTEREST

The Department of Water Resources informed Metropolitan on July 22, 2005, that they plan to reduce Lake Perris water levels as soon as possible because of potential seismic safety issues. DWR is taking such actions to be proactive in light of a recently completed study, that incorporated more recent seismic activity data, which indicated the reservoir's dam might be damaged during a large earthquake on a nearby fault. After consulting with Metropolitan, DWR announced its proposed near-term plan for the lowering of the lake water surface level by about 25 feet to a new maximum water storage elevation of approximately 75,000 acre-feet, commencing on August 15, 2005, with a target completion of mid-October. Water Resource Management



staff has been closely coordinating with the Water System Operations Group, the Corporate Resources Group, and DWR to make sure that the necessary actions occur quickly, always keeping public safety as our highest priority and concern. In addition the External Affairs Group has been working very closely with DWR's Information Office to inform federal, state and local elected officials as well as emergency services and flood control officials.

Ensure Cost-Effective Water Supplies

Reliable SWP water supplies are a cornerstone of Metropolitan's Integrated Resources Plan. On average, Metropolitan expects to receive 1.5 MAF of SWP supplies annually. Though a recent DWR reliability study indicates that Metropolitan may receive as little as five percent of its Table A supply in a dry year, Metropolitan will still meet its IRP planning 2010 target of 463 TAF of SWP supplies in a single dry year. Efforts to meet the IRP goals will have a considerable effect on the SWP cost structure. Successfully addressing Delta fisheries issues is an ongoing effort associated with the development of SWP supplies.

Metropolitan has been working with the DWR and the State Water Contractors to:

- Increase Permitted Delta Pumping Capacity
- Implement the Environmental Water Account
- Streamline the Water Transfer Process
- Complete the Monterey Amendment EIR
- Secure Access to Lake Perris Storage

Our efforts to date have yielded the following results:

Accomplishment: IMPLEMENTATION OF THE ENVIRONMENTAL WATER ACCOUNT

The primary purpose of an Environmental Water Account is avoiding ESA take limits at the Harvey O. Banks Delta Pumping Plant. This is accomplished through the curtailment of exports or outflow adjustments to protect Delta smelt, migrating salmon and other fish species. The EWA then compensates the State Water Project for lost pumping opportunities using surplus Delta water or by purchasing replacement water as necessary. Metropolitan provided support to the EWA through source-shifting and exchange agreements. Under these agreements, Metropolitan was compensated for services that were provided to the State, because of the use of Metropolitan storage.

Metropolitan and other State Water Contractors continue to analyze and recommend refinements to the operations of the State Water Project. Studies suggest the average annual yield of the State Water Project would increase under a modified approach to managing storage. Additional studies and refinements are being examined for 2006.

Accomplishment: INITIATED AN EFFORT TO STREAMLINE THE WATER TRANSFER PROCESS

DWR agreed to a policy that considers water transfers as a key water management objective of the SWP. Metropolitan representatives are participating on the SWC Water Transfer Committee, which is focusing on developing an approach to enhance the ability to implement water transfers.

Accomplishment: ADVANCE WATER QUALITY PROJECTS TO ENSURE ACCESS TO SUPPLIES AT LAKE PERRIS

Metropolitan has made considerable progress in addressing water quality problems at Lake Perris. Additional actions are being pursued using State grant funds totaling more than \$4 million. Metropolitan is proceeding with two projects to address low-dissolved oxygen and microbial contamination conditions. A Notice of Preparation of an EIR was issued and the Draft EIR will be issued this fall.



Projects to reduce risk of microbial contamination are intended to improve Metropolitan's ability to reliably access storage at Lake Perris, shown above on a hot summer weekend.

Protect and Improve Water Quality

The quality of SWP water is highly variable and is dependant upon hydrologic changes in SWP watersheds. Changing water quality conditions affect not only Metropolitan's ability to meet drinking water standards, but also to manage water supply deliveries, groundwater recharge and water recycling in Southern California.

Changing water quality in the SWP can impair the efficient use of SWP. Metropolitan is seeking to reduce the impact of changing water quality conditions through the following:

- Implementation of the DWR/SWC Municipal Water Quality Investigations (MWQI) program
- Continued efforts to develop Friant River water quality exchange opportunities
- Pursuing implementation of an effective policy governing introduction of non-project water in the California Aqueduct
- Participation in CALFED water quality efforts
- Pursuit of projects to protect and improve water quality in the Bay-Delta watershed
- Pursuit of projects in the SWP system that improve water quality

Efforts to date have yielded positive results which include:

Accomplishment: INITIATED MONITORING AND PREDICTION

As part of the MWQI, DWR now reports weekly on Bay-Delta water quality and with the help of the SWC has developed an improved method for modeling and predicting water quality in the SWP system. Metropolitan intends to renew the MWQI agreement when it expires at the end of this year.

Accomplishment: INCREASED FOCUS ON SOURCE PROTECTION AND IMPROVEMENT

A report was submitted to CALFED that included an analytical framework for evaluating water quality challenges in Southern California and the elements of an integrated strategy for Southern California to meet CALFED and other water quality goals.

A Proposition 50 grant funding agreement was executed pursuant to development of a Central Valley Drinking Water Policy. Work completed under that grant included prioritization of drinking water constituents of concern for policy development and development of a source water quality database for drinking water constituents. This policy and water quality baseline will serve as a foundation for source water quality protection of supplies originating in the Central Valley.

Metropolitan and the SWC worked to protect our interests and convey the Board's position on wastewater discharges in discussions with the Sacramento Regional County Sanitation District regarding a proposal to increase wastewater discharges into the Sacramento River. This effort sought to identify and evaluate candidate watershed projects to reduce loadings of drinking water constituents of concern in SRCSW wastewater discharges. After some initial success in discussions progress has slowed, leading to a threat of legal action by the downstream parties.



Levee failures, like the recent Wheeler Island levee (shown above) and the Lower Jones Tract levee failure last year, pose a threat to the quality of SWP supplies. Aggressive monitoring and analyses during event like these have allowed Metropolitan to minimize potential impacts. Development of sophisticated forecasting models has become a priority to understand and reduce the risk of future changed water quality conditions.

SPECIAL POINT OF INTEREST

Metropolitan has joined other SWP contractors in a lawsuit challenging the CEQA process for expanding a major wastewater treatment plant that discharges into the Sacramento River. Metropolitan is seeking to ensure that increases in loading of microbial constituent, nutrients, and salinity are mitigated. The Sacramento County Regional Wastewater Treatment Plant accounts for over half of the urban area discharges in the Central Valley that could affect SWP supplies.