

## • Water System Operations February 2006 Activity Report

### Summary

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Following is a summary of Water System Operations Group activities for the period following the February 2006 Board Meeting

### Detailed Report

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#### Security Update

Security improvements are proceeding according to schedule and within budget. Johnson Controls, Inc. (JCI) completed installation of hardware for the security network at all sites. Staff previously identified some technical anomalies with the programming of the video system servers and brought this to JCI's attention for priority resolution. Subsequently, JCI completed specific testing at Eagle Rock, demonstrating their resolution of the issue. As agreed upon, Metropolitan and JCI restarted site acceptance testing at all sites, including the ones accepted prior to the video programming issues, to ensure proper setting and operation of all system components. During this period, 35 individual sites operated successfully for over 30 days since their recommissioning and were accepted. In addition, Metropolitan's security operators and professional security staff received comprehensive system training in March.

#### Water Quality and Treatment Update

Metropolitan has complied with all drinking water quality standards during this reporting period.

##### *Disinfection By-Products and DBP Precursors*

Trihalomethane (THM) samples were collected from the five treatment plants and in the distribution system on a weekly basis. The four-week THM levels (parts per billion - ppb) and State project water (SPW) blends for the most recent four-week period ending the week of February 27, 2006 were:

	<u>THM Levels</u> (Plant Effluent)		Percent SPW Blends
	4-Week Average	4-Week High	
Mills	24 ppb	34 ppb	100%
Jensen	19 ppb	20 ppb	100%
Diemer	47 ppb	49 ppb	60%
Skinner	54 ppb	60 ppb	51%
Weymouth	39 ppb	41 ppb	60%

The total organic carbon (TOC) four-week average at the Mills influent was 3.6 parts per million (ppm) in February, up from 3.2 ppm reported in January. The Mills plant influent TOC continued to steadily increase throughout the month of February due to higher levels of TOC coming from Northern California in the SPW system.

Jensen influent TOC four-week average decreased slightly to 2.9 ppm in February from 3 ppm reported in January. Distribution system THM levels in parts of Orange County and the central pool were as high as 59 ppb, and the four-week average ranged from 29 to 55 ppb. The Skinner distribution system sites have ranged from 47 to 68 ppb for the four-week period ending February 27, 2006.

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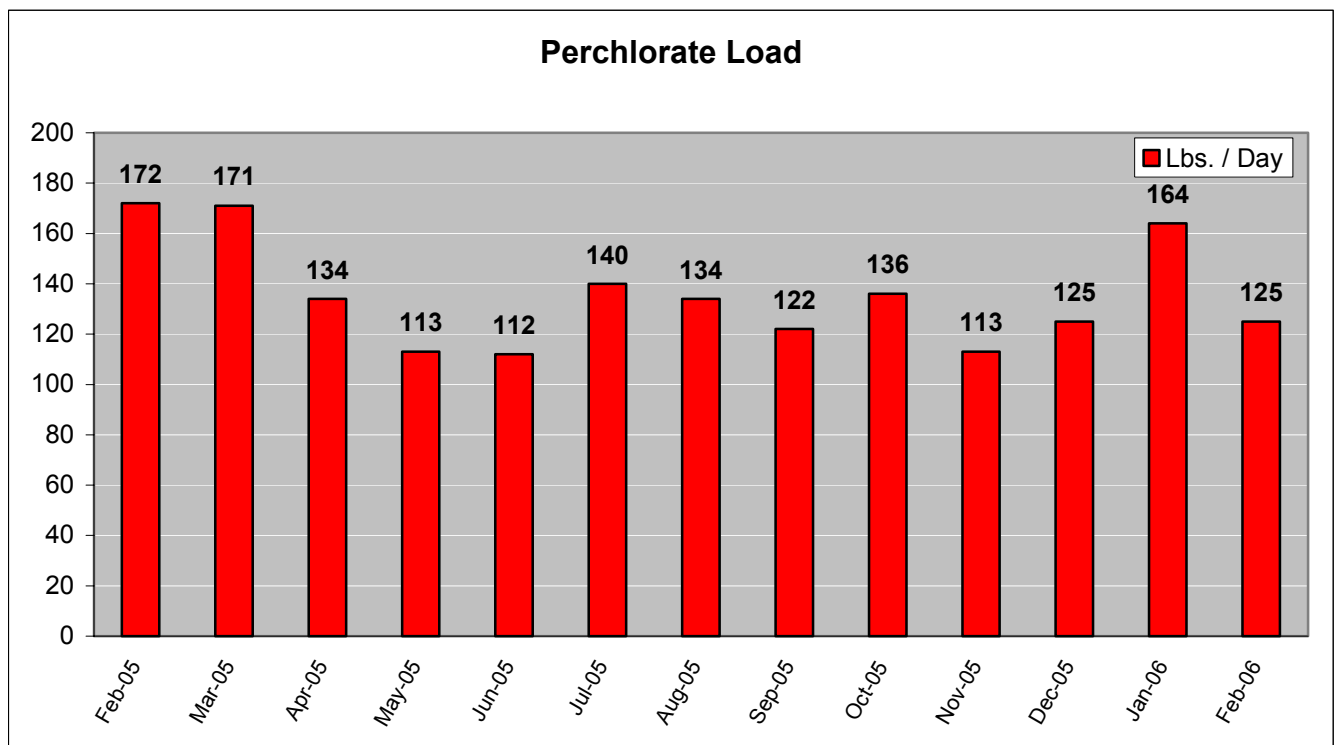
### *Perchlorate*

Perchlorate levels in the Colorado River source water locations (Lake Havasu at Intake, San Jacinto Tunnel West Portal, and Lake Mathews) have ranged from non-detect (<2 ppb) to 3.4 ppb in 2005. For the month of February 2006, perchlorate levels at all monitoring locations along the Colorado River Aqueduct were below detection.

Currently, there is no regulatory standard for perchlorate. California Department of Health Services (CDHS) plans to establish a maximum contaminant level (MCL), based on the Office of Environmental Health Hazard Assessment (OEHHA) public health goal (PHG) of 6 ppb.

Perchlorate clean-up efforts in Henderson, Nevada continue. Based on our monthly monitoring data and the real-time flow data provided by the Nevada Department of Environmental Protection (NDEP), the average loading at North Shore Road for February 2006 was calculated to be 125 pounds per day (lbs/day).

Perchlorate loads measured at North Shore Road are presented in the figure below:



### *Chromium 6*

Metropolitan continues to participate in the Department of Toxic Substance Control's (DTSC's) Consultative Workgroup in order to ensure that Metropolitan's interests are represented.

Chromium 6 concentrations in monitoring well MW 34-100 (located approximately 50 - 65 feet from the river) have continuously increased since April 2005 and ranged from 452 to 837 ppb from April 4, 2005 through January 23, 2006. In February, MW-34-100 showed decreasing levels (dropping to 752 ppb) since pumping began at PE-1 at the end of January 2006. Monthly sampling of the Colorado River near the PG&E site continues. Chromium 6 was not detected (<0.03 ppb) in any of the samples collected in February.

Currently, there is no drinking water standard for chromium 6. The CDHS MCL for total chromium is set at 50 ppb. The OEHHA is working on a PHG that will be used by CDHS to set an MCL for chromium 6.

### *Taste-and-Odor (T&O)*

There are no taste-and-odor problems in our source or finished waters at this time.

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### *Total Dissolved Solids (TDS) Levels*

The March 2005 through February 2006 estimated twelve-month flow-weighted average TDS levels for the Diemer and Weymouth plants were 463 and 445, respectively. The twelve-month estimated flow-weighted average TDS for Skinner was 519 and has exceeded the goal of 500 because of SPW blend restrictions required to meet the Stage 1 Disinfectants/Disinfection By-Products regulations at the Skinner plant.

### *Fluoridation*

Construction of fluoridation facilities has commenced at the Diemer and Skinner plants. The construction contract for the Mills plant fluoridation facilities was awarded at the March Board. The bids were opened March 23rd for the Weymouth facility and award of the construction contract will go to the May Board. Bids for the Jensen facility will be opened April 25th and a contract covering the Jensen Plant is also pending board approval at the June Board meeting.

### *Treatment Plant Shutdowns*

The Jensen plant was shut down from February 27 through March 7 to allow repairs to be completed on the Sepulveda Feeder (see Conveyance & Distribution update). Some work within the treatment plant was also conducted including electrical maintenance and modifications to the liquid chlorine feed system. The chlorine feed system was modified to allow for the future construction of chlorine containment facilities.

The Diemer plant was shut down for five days from March 13 to 17, primarily to tie-in the Yorba Linda Feeder bypass. The new bypass will allow SPW to be delivered to the East Orange County Feeder No. 1. Other plant work conducted included the connection of electrical equipment, the tie-in of a future washwater reclamation plant, the addition of fluoride injectors, and other minor repairs and inspections.

## **Conveyance & Distribution Update**

Major shutdown project work continued on several portions of the distribution system this period. The Sepulveda Feeder was shutdown February 27 through March 9 from the Jensen Plant to the Venice Pressure Control Structure to permit carbon-fiber repairs at three locations in the San Fernando Valley. In addition, this shutdown took the East Valley Feeder and West Valley Feeder No. 2 out of service, permitting the replacement of several aging valves at relief structures. This outage also permitted Calleguas Municipal Water District (MWD) to perform work at its CA-2 service connection. During this shutdown, the Los Angeles Department of Water and Power assisted in providing water service to Calleguas as well as to Las Virgenes MWD.

From March 12 through 27, the Lake Skinner Outlet Conduit was shutdown to permit a number of activities. The San Diego Pipeline No. 6 contractor installed the connection to that pipeline. Remote field eddy current inspection of the Outlet Conduit was also performed, as well as some carbon-fiber repairs to already-identified locations. The 144-inch butterfly valve on the Outlet Conduit was also repaired following the results of an earlier inspection. Finally, this outage permitted valve repairs at the Auld Valley Control Structure.

Another major shutdown project was associated with the Diemer Plant shutdown of March 13 through 17. This shutdown permitted repair of corrosion problems at several locations on the Allen-McCulloch Pipeline, as identified through the Infrastructure Reliability inspections performed in 2004. Staff also assisted the Municipal Water District of Orange County with the startup of its Coastal Junction Bypass pumping station in Irvine. This facility will be key to the maintenance of service to retail agencies during future Diemer Plant shutdowns.

## **Water System Update**

As of March 20, 2006, State Water Project (SWP) in-basin deliveries for calendar year (CY) 2006 were 332 thousand acre-feet (TAF) and include 28 TAF of water from the San Bernardino Valley Municipal Water District/Inland Feeder Interconnection. All deliveries were from CY 2005 carryover accounts and Article 21. To date, no Table-A water has been delivered to Metropolitan in CY 2006.

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For CY 2006 through March 20, 2006, Colorado River Aqueduct (CRA) gross deliveries were 103 TAF, or 15 percent of the current approved gross diversion target of 673 TAF.

Reservoir levels are indicators of water supply conditions of the State Water Project (SWP), CRA and Metropolitan’s service area. The following storage levels for key reservoirs reflect monthly data as of March 20, 2006:

	<u>Storage To-Date</u>	<u>Percent of Capacity</u>
<b><u>Metropolitan Reservoirs</u></b>		
Diamond Valley Lake	801,500 AF	99%
Lake Mathews	151,500 AF	83%
Lake Skinner	38,100 AF	87%
<b><u>SWP Reservoirs</u></b>		
Lake Oroville	2.82 MAF	80%
San Luis Reservoir Total	2.02 MAF	100%
San Luis State Share	1.06 MAF	100%
<b><u>Colorado River Reservoirs</u></b>		
Lake Powell	10.7 MAF	44%
Lake Mead	15.4 MAF	59%
<b><u>SDCWA Reservoirs</u></b>		
24-Reservoir Total	352,400 AF	59%

As of March 20, 2006, the San Gabriel Valley Groundwater Basin key well elevation was 242 feet above sea level. At 250 feet and above, spreading of imported water is curtailed.

*Sales and Deliveries*

The official final water sales for February 2006 were 159 TAF and set a new sales record for the month of February. The old record was 157 TAF, which was set in 2002. The amount for February of this year was 49 TAF, or 45 percent, more than the budgeted amount of 127 TAF. The current sales projection for March 2006 is 119 TAF.

*Precipitation*

For the current water year (October 1, 2005 to September 30, 2006) through March 20, 2006, total precipitation for four Southern California cities and the Eight Station Index (a measure of precipitation in the SWP’s watershed) was:

<u>Weather Station</u>	<u>Precipitation</u>	<u>Percent of Average</u>
Los Angeles Civic Center	8.17 inches	66%
Santa Ana (John Wayne Airport)	4.04 inches	39%
San Diego Airport	2.92 inches	34%
Riverside Airport	4.38 inches	54%
Eight Station Index	60.90 inches	157%

For this current water year, the National Weather Service’s Colorado River Basin Forecast Center has developed a most probable Lake Powell inflow scenario, which is 11.4 million acre-feet, or 95 percent of average. As of March 20, 2006, precipitation in the Colorado River Basin Watershed was 101 percent of average, and the projected unregulated inflow into Lake Powell was 93 percent of average.

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### **Power Update**

In February, Metropolitan supplied 39,024 Megawatt-hours (MWh) of exchange energy to Southern California Edison (SCE). At the end of February, SCE owed Metropolitan 24,515 MWh of exchange energy. Metropolitan continued supplying exchange energy to SCE in March. The SCE exchange energy will be returned to Metropolitan during Summer 2006 when CRA pumping is increased.

During February, DVL generated 808 MWh at an average rate of \$54.33/MWh for total revenue of \$43,902. The remaining 15 small hydro generating facilities produced about 35,823 MWh of energy that resulted in approximately \$1.9 million in revenues from the Department of Water Resources (DWR), SCE and Pacific Gas and Electric. There were no requests to curtail pump loads for either DWR or Metropolitan during the month of February.