

## • Water System Operations April 2006 Activity Report

### Summary

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Following is a summary of Water System Operations Group activities for the period following the April 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. At this point, all individual sites have operated successfully for over 30 days since their recommissioning and they have all been formally accepted. In addition, security improvements will be installed for the newly constructed Jensen Oxidation Retrofit Facility, to ensure consistent security enhancements for this new facility. Metropolitan and JCI are currently planning the final 30 day acceptance testing of the entire system. The final 30-day acceptance test will also include command center testing for Eagle Rock.

#### 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 April 24, 2006 were:

	<u>THM Levels</u> <i>(Plant Effluent)</i>		
	4-Week Average	4-Week High	Percent SPW Blends
Mills	16 ppb	17 ppb	100%
Jensen	23 ppb	26 ppb	100%
Diemer	52 ppb	56 ppb	70%
Skinner	60 ppb	63 ppb	59%
Weymouth	51 ppb	54 ppb	80%

The total organic carbon (TOC) four-week average at the Mills influent was 3.6 parts per million (ppm) in April, down from 3.9 ppm reported in March. The Mills plant influent TOC was relatively steady throughout the month of April. The most recent TOC levels from Northern California have remained under 4 ppm.

Jensen influent TOC four-week average remained at 2.9 ppm in April. Distribution system THM levels in parts of Orange County and the central pool were as high as 73 ppb, and the four-week average ranged from 25 to 65 ppb. The Skinner distribution system sites have ranged from 55 to 63 ppb for the four-week period ending April 24, 2006.

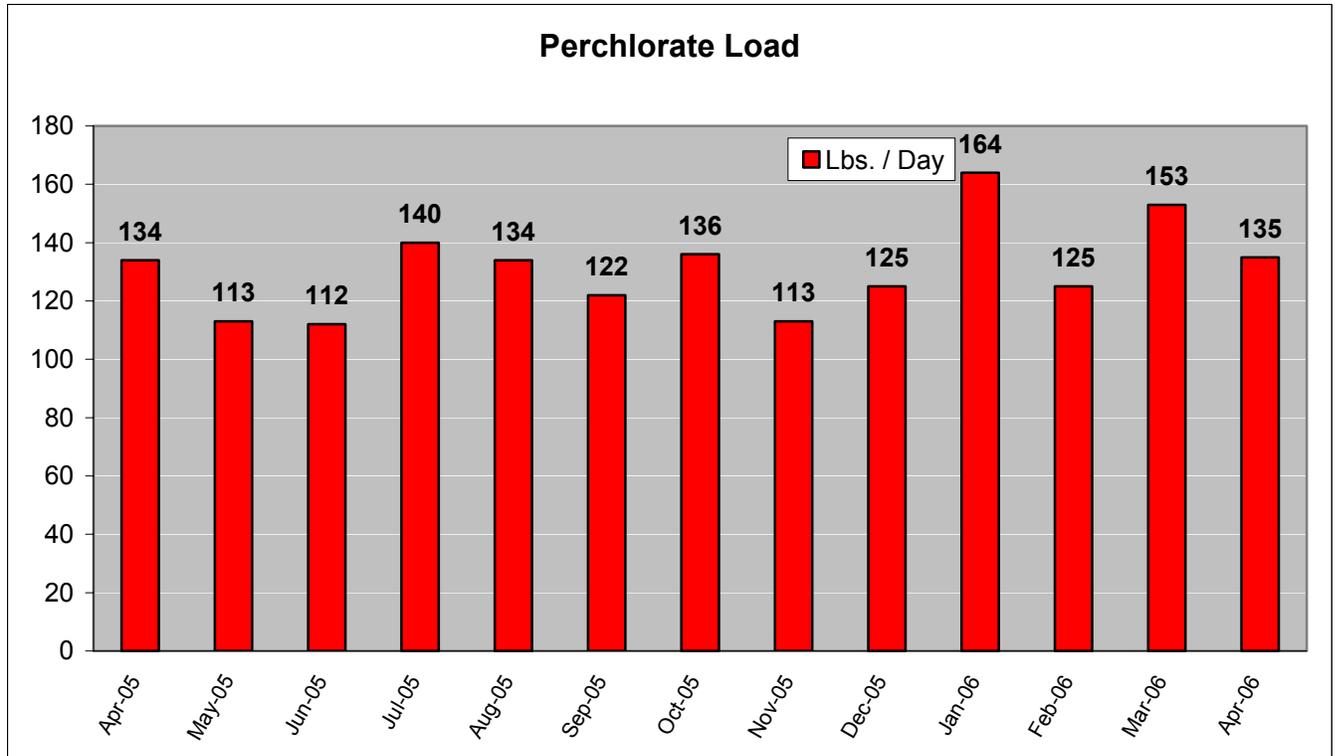
##### *Perchlorate*

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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 2.3 ppb in 2006. For the month of April 2006, perchlorate was detected at 2.3 ppb at Lake Havasu Intake, levels at all other monitoring locations along the Colorado River Aqueduct (CRA) were below detection.

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 March 2006 was calculated to be 135 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.

The chromium 6 levels measured at monitoring well 34-100 (located approximately 50-65 feet from the river) increased from 752 ppb in February 2006 to 858 ppb in April 2006. These monitoring results are reviewed and discussed in consultative work group meetings that represent key stakeholders. In addition, highly elevated levels of chromium 6 were detected at two new monitoring wells, MW 44-115 and MW 44-125 (located 70 feet north of MW 34-100 and 90 feet from the river). Chromium 6 concentrations in monitoring well MW44-115 during the months of March and April have ranged from 1,440 to 1,680 ppb, while chromium 6 concentrations in monitoring well MW 44-125 ranged from 67 to 480 ppb. Monthly sampling of the Colorado River near the PG&E site continues. In April, chromium 6 was detected at 0.03 ppb in a surface sample collected underneath the suspended PG&E gas lines traversing the Colorado River at Topock, Arizona.

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Currently, there is no drinking water standard for chromium 6. The California Department of Health Services (CDHS) maximum contaminant level (MCL) for total chromium is set at 50 ppb. The Office of Environmental Health Hazard Assessment (OEHHA) is working on a public health goal (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. Lake Skinner was experiencing a major non-taste-and-odor producing algae bloom that created fluctuating pH levels in the water column but did not adversely impact plant operations.

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

The May 2005 through April 2006 estimated twelve-month flow-weighted average TDS levels for the Diemer and Weymouth plants were 448 and 428, respectively. The twelve-month estimated flow-weighted average TDS for Skinner was 516 and has exceeded the goal of 500 because of resource management of Colorado River water and SPW at the Skinner plant.

### *Fluoridation*

Construction of fluoridation facilities is in progress at the Diemer and Skinner plants. The construction contract for the Mills plant fluoridation facilities was awarded at the March Board and the construction contract for the Weymouth facility was approved at the May Board. Bids for the Jensen facility construction contract will be opened June 1, 2006.

### *Treatment Plant Shutdowns / Operational Changes*

The Diemer plant operation was modified for five days from May 15 through 19, 2006, to repair minor cracks in the finished water reservoir. The treatment plant by-passed the finished water reservoir to allow for a contractor to inject epoxy into the cracks. There was no effect on plant effluent flow.

The primary coagulant at the Skinner plant No. 1 was changed from alum to ferric chloride on May 24, 2006. The coagulant was changed to improve filtration performance. A minor tear in the Skinner reservoir cover was detected and repaired. The tear did not affect water quality or plant flow.

## **Conveyance & Distribution Update**

As part of the distribution reliability program, the San Diego Pipeline No. 1 was shutdown from April 10 through April 28, 2006 to retrofit several pipeline blow-off structures. Three blow-off structures were completed and an additional 21 structures will be retrofitted in November 2006. The Etiwanda Power Plant and Control Facility was shutdown on May 15, 2006 for power plant annual maintenance and to repair a conical plug valve. The reservoir was also cleaned and inspected as part of this annual maintenance.

## **Water System Update**

As of May 23, 2006, State Water Project (SWP) in-basin deliveries for calendar year (CY) 2006 were 575 thousand acre-feet (TAF) and include 51 TAF of water from the San Bernardino Valley Municipal Water District/Inland Feeder Interconnection. All deliveries were from CY 2005 carryover, Article 21 and Table-A accounts.

For CY 2006 through May 23, 2006, CRA gross deliveries were 226 TAF, or 34 percent of the current approved gross diversion target of 671 TAF.

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Reservoir levels are indicators of water supply conditions of the SWP, CRA and Metropolitan's service area. The following storage levels for key reservoirs reflect monthly data as of May 23, 2006:

	<u>Storage To-Date</u>	<u>Percent of Capacity</u>
<b><u>Metropolitan Reservoirs</u></b>		
Diamond Valley Lake	807,500 AF	100%
Lake Mathews	153,700 AF	84%
Lake Skinner	41,000 AF	93%
<b><u>SWP Reservoirs</u></b>		
Lake Oroville	3.37MAF	96%
San Luis Reservoir Total	1.87 MAF	92%
San Luis State Share	0.97 MAF	91%
<b><u>Colorado River Reservoirs</u></b>		
Lake Powell	11.8 MAF	48%
Lake Mead	14.6 MAF	57%
<b><u>SDCWA Reservoirs</u></b>		
24-Reservoir Total	374,300 AF	63%

As of May 23, 2006, the San Gabriel Valley Groundwater Basin key well elevation was 249 feet above sea level. At 250 feet and above, spreading of imported water is curtailed.

### *Sales and Deliveries*

The official final water sales for April 2006 were 113 TAF, which was 34 TAF, or 23 percent, less than the budgeted amount of 147 TAF. The current sales projection for May 2006 is 160 TAF. The sales record for the month of May was 242 TAF, which was set in 2004, and 153 TAF were sold in May 2005.

### *Precipitation*

For the current water year (October 1, 2005 to September 30, 2006) through May 23, 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	14.54 inches	89%
Santa Ana (John Wayne Airport)	7.36 inches	60%
San Diego Airport	5.31 inches	52%
Riverside Airport	7.03 inches	73%
Eight Station Index	79.20 inches	169%

Rainfall for the four Southern California cities has remained below average since the beginning of the current water year and this trend is expected to continue through September 30 of this year.

The Northern Sierra Eight-Station Index gained 12.2" of rain in April, which is 313% of the monthly average. This is the second wettest April on record for the Eight-Stations after April of 1948, which had 13.0". Recent snowmelt rates remain greater than the historical average, and the snow-water content in the northern Sierra region is still above that of last year.

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 April 23, 2006, precipitation in the Colorado River Basin Watershed was 96 percent of average, and the projected unregulated inflow into Lake Powell was 82 percent of average.

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### **Power Update**

In April, Metropolitan supplied 52,456 Megawatt-hours (MWh) of exchange energy to Southern California Edison (SCE). At the end of April, SCE owed Metropolitan 132,051 MWh of exchange energy.

Metropolitan continued supplying exchange energy to SCE in May. The SCE exchange energy will be returned to Metropolitan during Summer 2006 when CRA pumping is increased.

During April, DVL did not generate any power. The remaining 15 small hydro generating facilities produced about 36,354 MWh of energy that resulted in approximately \$1.6 million in revenues from the Department of Water Resources (DWR), SCE and Pacific Gas and Electric. On April 28, 2006 the Independent System Operator (ISO) requested DWR drop 90 MW of pump load for one hour. There were no requests to curtail pump loads for Metropolitan during the month of April.