

## • Water System Operations December 2004 Activity Report

### Summary

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Following is a summary of Water System Operations Group activities for the period following the December 2004 Board Meeting

### Detailed Report

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#### Security Update

Security improvements are proceeding according to schedule and budget. Johnson Controls, Inc. (JCI) started rough installation of conduits and cables at Cactus City Communication site, and Hinds and Eagle Mountain Pumping Plants in the desert. Some work in the desert has been delayed because of the Colorado River Aqueduct (CRA) shutdown. Work at Detention Peak Communication site has been delayed due to weather conditions. Rough installation work has been completed at San Dimas Pressure Control Structure (PCS), Rio Hondo PCS, and Pleasant Peak Communication site. Staff conducted new job walks with JCI at Foothill PCS, Venice PCS, Sepulveda PCS, and Greg Ave PCS sites. In addition, JCI completed its revised 100 percent design.

#### Water Quality and Treatment Update

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

##### *Trihalomethane Levels*

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 January 10, 2005, were:

	<u>THM Levels</u>		
	4-week Average	4-week High	Percent SPW Blends
Mills	27 ppb	32 ppb	100%
Jensen	51 ppb	62 ppb	100%
Diemer	56 ppb	60 ppb	40%
Skinner	60 ppb	64 ppb	31%
Weymouth	50 ppb	56 ppb	55%

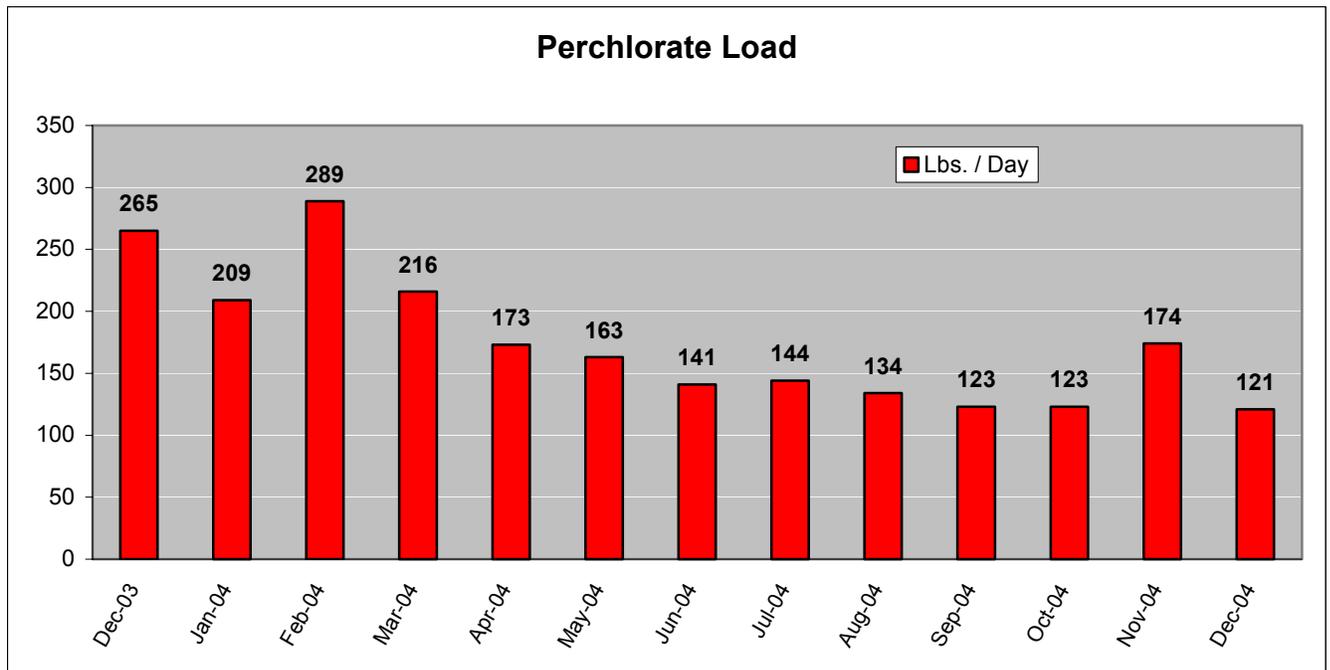
The total organic carbon (TOC) four-week average at the Mills influent increased significantly to 3.9 parts per million (ppm) from 2.8 ppm reported last month. This increase in TOC in the east branch SPW is consistent with normal seasonal trends and results from storm runoff from the recent rain. Jensen influent TOC four-week average remained at 2.8 ppm. Distribution system THM levels in parts of Orange County and the central pool were as high as 69 ppb. THMs have been stable in the distribution system with the continued SPW blend of 40 percent for the majority of the previous 4 weeks at Diemer and Weymouth. The target SPW blend at the Diemer and Weymouth plants remained at 40 percent for the week of January 10, 2005.

*Perchlorate*

Perchlorate was not detected at or above the California Department of Health Services’ (CDHS) detection limit for purposes of reporting (4 ppb) in any of the monitoring locations. The most recent six-month running averages (August – January 2004) for the Weymouth, Diemer, and Skinner plants were also less than 4 ppb. Currently, there is no regulatory standard for perchlorate.

Perchlorate clean-up efforts in Henderson, Nevada continue. Based on our weekly 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 December 2004 was calculated to be 121 lbs/day. The average load measured for December 2004 falls slightly above the 95 percent confidence level for the predicted perchlorate load that was calculated at 113 lbs/day.

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



An update of the Perchlorate Action plan was given on January 10, 2005, to the Water Planning, Quality and Resources Committee.

The National Academy of Sciences (NAS) – National Research Council’s Committee to Assess the Health Implications of Perchlorate Ingestion released its report on January 11, 2005. The report was prepared at the request of the Department of Energy, the National Aeronautics and Space Administration, and the Environmental Protection Agency (EPA). NAS has recommended a reference dose of 0.0007 mg/kg (milligram per kg of body weight) per day, the level that has no adverse effect on the most sensitive human population. This dose, more than 20 times the level proposed by EPA in a 2002 risk assessment, is equivalent to 10.6 ppb, and was calculated using an average body weight of a pregnant woman, daily ingestion of tap water, and relative source contribution (i.e., exposure to perchlorate from drinking water). California’s current public health goal (PHG) is 6 ppb, as published by the Office of Environmental Health Hazard Assessment (OEHHA). OEHHA will review the NAS report and reassess the PHG, if necessary. The California Department of Health Services plans to propose a perchlorate maximum contaminant level (MCL) this year.

*Chromium 6*

Metropolitan continues to participate in the Department of Toxic Substance Control's (DTSC) Consultative Workgroup, in order to ensure that Metropolitan's interests are represented and protected against potential contamination emanating from the Pacific Gas and Electric (PG&E) Topock Gas Compressor Station site along the Colorado River. PG&E is currently extracting 80 gallons-per-minute of chromium-contaminated water and trucking it off-site for disposal. PG&E is also planning to construct an on-site treatment plant to avoid off-site disposal costs. The treatment plant is expected to begin operation in April 2005.

Monthly sampling of the Colorado River near the PG&E site was not conducted as scheduled in January due to unfavorable weather. Tentatively, the sampling has been rescheduled for late-January. Currently, there is no drinking water standard for chromium 6. The California Department of Health Services MCL for total chromium is set at 50 ppb. OEHHA is working on a PHG, which will be used by CDHS to set an MCL for chromium 6 in the upcoming year.

*Taste-and-Odor*

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

*Total Dissolved Solids (TDS) Levels*

The January 2004 through December 2004 twelve-month flow-weighted average TDS levels for the Diemer, Skinner, and Weymouth plants were 435, 489, 445 ppm, respectively. These levels meet Metropolitan's water quality objectives for TDS.

**Conveyance & Distribution Update**

*Maintenance Activities*

The shut down season is now fully underway and several major shut downs occurred during January. The Lake Mathews Forebay facility was completely dewatered for 7 days for inspection and repairs. Major tasks included repair of the control mechanisms for the gates to the Upper and Lower feeders to restore full functionality, and the recoating of the outlet conduit of the Lake Mathews power plant. The San Diego Canal and Diamond Valley Lake Wadsworth Pump Plant Forebay were dewatered for cleaning and repairs to concrete lining. Weather conditions during the January 6-11 storm prevented completion of lining repairs to the canal, and the remaining work will be rescheduled for a later date. A contractor-required shutdown of the OC-88 service connection was conducted to permit installation of the new pump manifold and related activities. There are a number of additional, short-duration shutdowns of this facility scheduled over the next few months in order to complete this complex project and have the reconfigured pump station fully operational by this coming summer. Finally, the first of two 3-week complete shutdowns of the CRA began during January as a part of the ongoing CRA Reliability Program. Major work consisted of contractor repairs to canal lining, rehabilitation of the headgate structures at two of the five pumping plants, and installation of large circuit breakers in several locations to replace 70-year old original equipment. Teams from WSO and Engineering also continued inspections of various CRA facilities. A second complete CRA shutdown is scheduled for March 15-April 5, 2005.

**Water System Update**

The current calendar year (CY) State Water Project (SWP) allocation is 60 percent or 1.2 million acre-feet (MAF). As of January 17, 2005, total SWP in-basin deliveries for the CY were 54,288 acre-feet (AF). These deliveries include 46,336 AF on the East and West Branches and 7,952 AF from the San Bernardino Valley Municipal Water District/Inland Feeder Interconnection. All SWP deliveries to date are from carryover accounts from CY 2004. The remaining CY deliveries include Table A, Article 56, Turn-Back Pool, Article 21, Article 12(e), Article 14(b), and other SWP sources.

Through January 17, 2005, CRA net deliveries were 3,000 AF, which is one percent of the current approved net diversion target of 602,400 AF.

Reservoir levels are indicators of water supply conditions for the SWP, CRA and Metropolitan’s service area. The following storage levels for key reservoirs reflect monthly data as of January 17, 2005:

<b>Metropolitan Reservoirs</b>	<b>Storage to Date</b>	<b>Percent of Capacity</b>
Diamond Valley Lake	629,600 AF	79%
Lake Mathews	175,600 AF	96%
Lake Skinner	36,100 AF	82%
<b>State Water Project Reservoirs</b>		
Lake Oroville	1.74 MAF	49%
San Luis Reservoir Total	1.60 MAF	79%
San Luis State Share	0.89 MAF	84%
<b>Colorado River Reservoirs</b>		
Lake Powell	8.6 MAF	35%
Lake Mead	14.8 MAF	54%
<b>SDCWA Reservoirs</b>		
24-Reservoir Total	267,300 AF	45%

As of January 17, 2005, Hayfield Basin has not received any deliveries in 2005 due to lower CRA supplies, and no significant deliveries are anticipated for the remainder of the calendar year. Overall, total deliveries to the basin remain at 74,000 AF. Currently, the San Gabriel Valley Groundwater Basin key well elevation is 199 feet above sea level, which is 37 feet below the previous ten-year average of 236 feet.

*Sales and Deliveries*

Final water sales for December 2004 were 216 TAF. This amount is 34 TAF, or 18 percent, greater than the budgeted amount of 182 TAF. The high-sales record for December occurred in 1990 when total sales were 238 TAF. December 2003 sales were 201 TAF.

*Precipitation*

The Colorado River system has had five consecutive water years (October through September) of below normal rainfall. However, three and a half months into the current water year, rainfall within the Colorado River system is at 126 percent of normal, and the snow pack is currently at 144 percent of normal.

For the current water year (October 1, 2004 through September 30, 2005) through January 17, 2005, total precipitation for four southern California cities and the Eight Station Index (a measure of precipitation in the SWP’s watershed) is:

<b>Weather Station</b>	<b>Precipitation</b>	<b>Percent of Normal</b>
Los Angeles Civic Center	22.51 inches	443%
Santa Ana (John Wayne Airport)	16.03 inches	130%
San Diego Airport	13.38 inches	329%
Riverside Airport	12.32 inches	359%
Eight Station Index	25.00 inches	123%

At the Los Angeles Civic Center, total precipitation for the month of December 2004 was 8.98 inches, which was the highest December total in 100 years. The water year to date total for Los Angeles (22.51 inches) was also the highest amount in 100 years for the same time period.

The impacts of the recent storms on Metropolitan’s facilities will be detailed at a later date.

**Power Update**

During December, Metropolitan received 21,536, Megawatt-hours (MWh) of its previously banked CRA energy from the Department of Water Resources (DWR) to balance out the annual DWR exchange account as necessary by the end of year. Also, Metropolitan received an additional 57,728 MWh of contracted exchange energy from Southern California Edison (SCE) to meet the CRA pumping load.

Metropolitan did not generate energy at the DVL hydroelectric power plant in December. Hence, Metropolitan did not receive any bonus from the California Energy Commission for DVL generation in December 2004. However, the other 15 hydroelectric power plants generated 34,033 MWh during the month of December for total revenues of about \$1.6 million.

On January 7, 2005, the California ISO requested that DWR reduce its pumping load by 79 megawatts (MW) and increase 164 MW of generation from the Devil Canyon power plant for less than one hour. Metropolitan pumps were not curtailed in December or prior to the CRA outage in January.