

● Water System Operations November 2004 Activity Report

Summary

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

Attachments

None

Detailed Report

Security Update

Security improvements are proceeding according to schedule and budget. Staff conducted job walks with Johnson Controls, Inc. (JCI) at Cactus City Communication Site, Hinds Pumping Plant, Eagle Mountain Pumping Plant, Iron Mountain Pumping Plant, Gene Pumping Plant and Reservoir, Intake Pumping Plant, Black Metal Communication Site, Copper Basin, and Iron Mountain Communication Site to initiate the rough installation of security system devices at these sites. In addition, JCI continued rough installation of conduits and cables for the security cameras and access control devices at the Irvine Regulating Structure, Corona Power Plant, Lake Mathews, Mills Treatment Plant, Pleasant Peak Communication Site, Lake Skinner, Etiwanda, Detention Peak Communication Site, Jensen Treatment Plant, Diemer Treatment Plant, and Weymouth Treatment Plant. Metropolitan anticipates receiving JCI's final design submittal at the end of December 2004, followed by a factory acceptance test plan.

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 December 6, 2004, were:

	<u>THM Levels</u>		
	4-week Average	4-week High	Percent SPW Blends
Mills	22 ppb	24 ppb	100%
Jensen	53 ppb	59 ppb	100%
Diemer	53 ppb	60 ppb	53%
Skinner	51 ppb	56 ppb	36%
Weymouth	52 ppb	59 ppb	53%

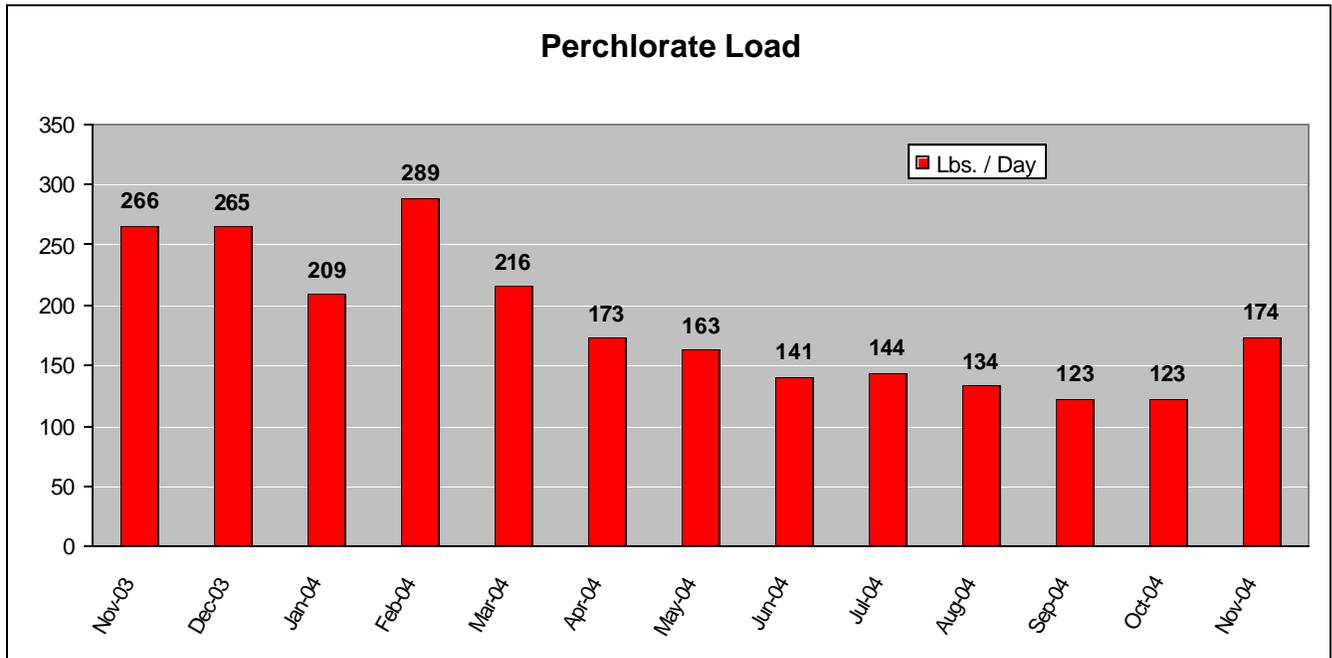
The total organic carbon (TOC) four-week average at the Mills influent decreased slightly to 2.8 parts per million (ppm) from 2.95 ppm reported last month. Jensen influent TOC four-week average was 2.8 ppm, down slightly from 2.9 ppm reported last month. The Mills plant THM levels decreased to a four-week average of 22 ppb from 35 ppb reported last month, due to the plant's return to biofiltration mode. Distribution system THM levels in parts of Orange County and the central pool were as high as 70 ppb. THMs have continued to decline in the distribution system with the continued SPW blend reductions at Diemer and Weymouth. The target SPW blend at Diemer and Weymouth plants were further reduced to 40 percent for the week of December 13, 2004, because of the availability of additional Colorado River water.

Perchlorate

Perchlorate samples were collected from 34 locations within Metropolitan's system in December 2004. 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 (July- December 2004) for the Weymouth, Diemer, and Skinner plants were also less than 4 ppb. Currently, there is no regulatory standard for perchlorate. The public health goal (PHG) for perchlorate is 6 ppb, which will be used by CDHS to set a final maximum contaminant level (MCL) in the coming year.

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 November 2004 was calculated to be 174 lbs/day. The higher loads in November are due to several rain events, each lasting several days in the Las Vegas/Henderson area. Rain events increase the flow measured at North Shore Road, as well as wash out perchlorate from local soils. The average load measured for November 2004 falls above the 95 percent confidence level for the predicted perchlorate load. Preliminary information based upon December 2004 data indicates that the loads have decreased back to a level of approximately 120 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) 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 70 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 March 2005.

Monthly sampling of the Colorado River near the PG&E site continues. Chromium 6 was not detected (<0.03 ppb) in the samples collected in December. Currently, there is no drinking water standard for chromium 6. The CDHS MCL for total chromium is set at 50 ppb. The California Office of Environmental Health Hazard Assessment (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

Taste-and-odor has not been an issue in the source waters for most of the past month. The Jensen plant continues to produce low levels of geosmin that are being controlled through continued weekly chlorination of selected basins. In late November, a slight increase in geosmin at the outlet structure of Lake Skinner led to an investigation that revealed a large bloom of blue-green algae in the lake. Within days geosmin reached 98 parts per trillion (ppt) at one site. The Lake was successfully treated with 10 tons of copper sulfate on Monday, December 13. Geosmin appears to have quickly dissipated. Fortunately, Lake Skinner went on a scheduled 100 percent bypass the day of the treatment for maintenance on the outlet tower. Staff will gradually switch back to the lake during the week of December 20, 2004. No complaints were received.

Total Dissolved Solids (TDS) Levels

The December 2003 through November 2004 twelve-month flow-weighted average TDS levels for the Diemer, Skinner, and Weymouth plants were 425, 493, 436 ppm, respectively. These levels meet Metropolitan’s water quality objectives for TDS.

Conveyance & Distribution Update

Shutdowns

The outlet tower at Lake Skinner was shut down for five days to inspect the valves and to make repairs and upgrades to the hydraulic operating system. The repairs resulted in the return to service of two valves that had been inoperable, and now all 18 valves on the tower can be utilized. The upgrading of the hydraulic operating system will significantly extend its life. Also, three power plants – Lake Mathews, Etiwanda, and Corona were shut down for installation of new meters required by the California Independent System Operator (ISO). These output meters allow the ISO to continuously monitor generation at the power plants.

Water System Update

As of December 14, 2004, total State Water Project (SWP) in-basin deliveries for the calendar year were 1,721,400 acre-feet (AF). These deliveries include 1,608,600 AF on the East and West Branches and 103,600 AF from the San Bernardino Valley Municipal Water District/Inland Feeder Interconnection. An additional 9,100 AF was delivered from the San Gabriel Valley Municipal Water District. As of November 30, 2004, total SWP deliveries were 1,655,700 AF, which included 1,066,400 AF from this year's SWP allocation, which is currently set at 1,307,475 AF for Metropolitan. The remaining deliveries include Article 56, Turn-Back Pool, Article 21, Article 12(e), Article 14(b), and other SWP sources.

Through December 14, 2004, Colorado River Aqueduct (CRA) net deliveries were 704,063 AF, which is 93 percent of the current approved net diversion target of 752,265 AF (the approved diversion was increased on December 14, 2004).

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 December 14, 2004:

Metropolitan Reservoirs	Storage to Date	Percent of Capacity
Diamond Valley Lake	585,100 AF	73%
Lake Mathews	170,600 AF	94%
Lake Skinner	38,000 AF	86%
State Water Project Reservoirs		
Lake Oroville	1.65 MAF	47%
San Luis Reservoir Total	1.13 MAF	56%
San Luis State Share	0.61 MAF	57%
Colorado River Reservoirs		
Lake Powell	8.9 MAF	37%
Lake Mead	14.4 MAF	53%
SDCWA Reservoirs		
24-Reservoir Total	214,800 AF	36%

As of December 14, 2004, Hayfield Basin has not received any deliveries in 2004 due to CRA shortages, 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 196 feet above sea level, which is 40 feet below the previous ten-year average of 236 feet. This current elevation is equal to the record low of 196 feet established in September 1992.

Sales and Deliveries

Final water sales for November 2004 were 153,000 AF. This amount is 59,000 AF, or 28 percent, less than the budgeted amount of 212,000 AF. The high-sales record for November occurred in 1990 when total sales were 238,000 AF. November 2003 sales were 172,000 AF.

Precipitation

The Colorado River system has had five consecutive water years (October through September) of below normal rainfall. However, two and a half months into the current water year, rainfall within the Colorado River system is at 111 percent of normal.

For the current water year (October 1, 2004 through September 30, 2005) through November 14, 2004, total precipitation for three southern California cities and the Eight Station Index (a measure of precipitation in the SWP's watershed) is:

Weather Station	Precipitation	Percent of Normal
Los Angeles Civic Center	5.38 inches	239%
San Diego Airport	6.18 inches	294%
Riverside Airport	4.90 inches	316%
Eight Station Index	14.9 inches	118%

Power Update

During November, Metropolitan received 20,600 Megawatt-hours (MWh) of its previously banked CRA energy from the Department of Water Resources (DWR), with the remaining balance to be received by the end of December. Similarly, Metropolitan received an additional 62,888 MWh of contracted exchange energy from Southern California Edison (SCE) to meet the CRA pumping load.

During November, Metropolitan did not generate energy at the DVL hydroelectric power plant due to reservoir replenishment. Hence, Metropolitan did not receive any bonus from the California Energy Commission for DVL generation in November 2004. In November, the other 15 hydroelectric power plants generated 32,672 MWh for total revenue of about \$1.6 million.

On November 19, 2004, the California ISO requested that DWR reduce its pumping load by 73 MW for one hour after one 1,100 MW unit at the San Onofre Nuclear Generating Station suddenly tripped off-line. Also, on November 30, 2004, DWR was requested to reduce its pumping load by 124 MW and increase its Hyatt and Gianelli Plants generation by a total of 260 MW. Due to water concerns, the pumps resumed operations within a half hour. Metropolitan pumps were not curtailed in November and are not available for load curtailment for the remainder of 2004 in order to maximize the imports from the Colorado River.

On December 2, 2004, DWR returned the fully executed First Amendment to the Power Coordination Agreement with Metropolitan. This amendment provides increased flexibility for scheduling energy sales or exchanges with DWR, while also establishing a new methodology for valuing the energy. On December 17, 2004, Metropolitan executed two agreements with SCE that provide for the delivery of Etiwanda and Phase I small hydroelectric energy to the California ISO grid beginning January 1, 2005, following the termination of two transmission related contracts. Metropolitan is completing negotiations on a letter agreement and revised operating procedures with DWR to replace the power scheduling and transmission services for the Phase I small hydroelectric plants beginning January 1, 2005. Lastly, the new ISO required meters at Etiwanda and the Phase I plants have been installed.