

• Water System Operations Group Manager's Update

Summary

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

Attachments

None

Detailed Report

Security Update

Johnson Controls, Inc. (JCI) continued rough installation of conduits and cables for the security cameras and access control devices at Diemer, Orange County Reservoir, Covina Pressure Control Structure (PCS), Valley View Hydroelectric Plant, Coastal Junction PCS, Irvine Regulating Structure, Oak St. PCS, Carson/Alameda PCS, San Gabriel PCS, Santiago Tower PCS, Santiago Creek PCS, and Palos Verdes Reservoir. Metropolitan has started the process of ordering T1 communication lines for the remote sites. In addition, work in water quality continues on the development of sampling strategies for contaminants.

Water Quality and Treatment Update

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

Trihalomethane (THM) Levels

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 October 11, 2004, were:

	<u>THM Levels</u>		
	4-week Average	4-week High	Percent SPW Blends
Mills	29 ppb	31 ppb	100%
Jensen	58 ppb	63 ppb	100%
Diemer	58 ppb	60 ppb	74%
Skinner	51 ppb	57 ppb	36%
Weymouth	54 ppb	59 ppb	74%

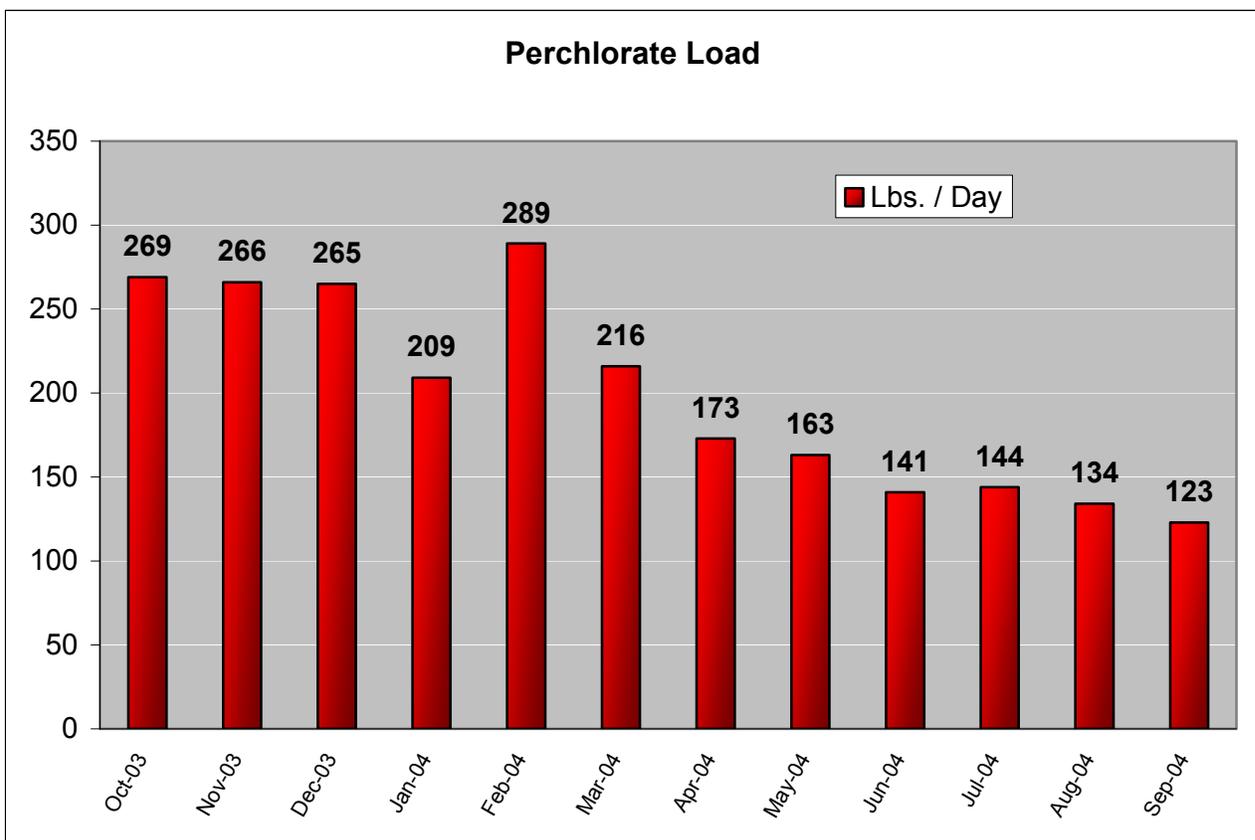
The total organic carbon (TOC) levels at the Mills influent have decreased to a current 4-week average of 2.8 parts per million (ppm), from 3.0 ppm. Jensen influent TOC has decreased slightly with a 4-week average of 3 ppm. The Mills plant THM levels have decreased dramatically over the last 4 weeks due to the return to chloramine secondary disinfection. In addition, the plant is now treating 50 percent of the flow with biologically active filters (i.e., chlorine addition at the filter effluent), which further reduces THM formation. Distribution system THM levels in parts of Orange County and the central pool were as high as 73 ppb. The target SPW blend at Diemer and Weymouth plants was 80 percent for the week of October 18, 2004.

Perchlorate

Perchlorate samples were collected from 34 locations within Metropolitan's system in October 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 (May - October 2004) for the Weymouth, Diemer, and Skinner plants were also less than 4 ppb. Currently, there is no regulatory standard for perchlorate, and the setting of a final maximum contaminant level (MCL) is not expected for at least a 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 September 2004 was calculated to be 123 lbs/day. The average load measured for September 2004 falls within the 95 percent confidence level for the predicted perchlorate loads.

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. Within the last month, PG&E has increased the pumping rate of extracted groundwater to 70 gallons per minute.

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 October. 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 public health goal, which will be used by CDHS to set an MCL for chromium 6 in the upcoming year.

Taste-and-Odor

During the past month, increased algal activity problems occurred at Lake Perris, Diamond Valley Lake (DVL), Etiwanda Reservoir and the Jensen plant. Increased monitoring and/or treatment were initiated to limit any taste-and-odor (T&O) problems from occurring in the water being delivered to our member agencies and their consumers. Lake Perris continues to have elevated methylisoborneol (MIB) levels at the surface with concentrations ranging from 28 to 90 parts per trillion (ppt) due to attached benthic blue-green algae. A meeting between various agencies (California Department of Fish and Game, Department of Water Resources (DWR), Santa Ana Regional Water Quality Control Board, California State Parks, and Metropolitan) is being arranged to determine the conditions under which copper sulfate can be used to treat benthic algae at Lake Perris. Perris is currently available for emergency use and the T&O problem is not considered critical at this time.

DVL is experiencing a similar MIB event, also produced by benthic blue-green algae with concentrations ranging from 37 to 64 ppt in the upper mixed layer of the lake. There is a large volume of high quality water below the epilimnion that can be withdrawn to meet demands. This is a new experience for DVL and divers are exploring the full extent of the event to determine specifically where the production is the most severe and to prioritize treatment sites if they are deemed necessary. As fall approaches and the lake cools, the water mixes deeper, eventually mixing the entire lake resulting in higher levels of MIB throughout the water column. Benthic production of MIB in DVL will require multiple treatments with copper sulfate to bring it under control. Water is being withdrawn from deeper tiers where MIB is still at non-detect levels. A complete set of samples was collected on Monday, October 25, 2004, to update the status of the event. The first treatment is tentatively scheduled for Friday, October 29, 2004. Recent storm events have interfered with the treatment schedule, however, the cloudy skies also hamper algae growth.

Etiwanda was treated with chlorine on Thursday, October 14, 2004, to control geosmin producing blue-green algae growing attached to the bottom. There are currently no T&O problems but the algae must be controlled before excessive biomass accumulates.

The sedimentation basins at the Jensen plant are being treated for a short period once each week with chlorine to reduce taste-and-odor producing algae that are growing attached to surfaces in the plant.

Total Dissolved Solids (TDS) Levels

The October 2003 through September 2004 twelve-month flow-weighted average TDS levels for the Diemer, Skinner, and Weymouth treatment plants were 421, 497, 431 ppm, respectively.

Conveyance & Distribution Update*Shutdowns*

Late in June 2004, a leak on the Orange County Feeder in the City of Costa Mesa was identified and repaired. This is a 36-inch steel pipeline installed in the early 1940s. At the time of the internal repair, it was determined that the cause of the leak was likely due to an external impact that damaged the exterior coating of the pipeline, possibly by a horizontal drilling operation for a utility conduit. It apparently took several years for the steel to corrode through, producing the leak that was discovered in June. It was recommended that an external inspection of the pipeline be conducted to ascertain whether the pipeline had been struck more than one time at this location, creating additional potential leaks. Due to its location in a very busy intersection, it took some time to obtain the necessary local permits to do the required excavation. That excavation and external inspection was conducted on the weekend of September 24-26. The inspection revealed that the only damage to the pipeline coating was at the location of the previously repaired leak. Minor repairs were made to the damaged coating at that time. We are working with Costa Mesa to identify the parties responsible for the damage to the pipeline, and will seek to recover Metropolitan's costs for this repair.

Water System Update

As of October 17, 2004, total State Water Project (SWP) in-basin deliveries for the current calendar year (CY) were 1,433,700 acre-feet (AF). These deliveries include 1,355,100 AF on the East and West Branches and 78,600 AF from the San Bernardino Valley Municipal Water District/Inland Feeder interconnection. An

additional 6,600 AF was delivered from the San Gabriel Valley Municipal Water District. Of the 1,375,200 AF received at the end of September, 856,700 AF was from this year's SWP allocation, which is currently set at 1,307,475 AF for Metropolitan. The remaining deliveries include 2003 Carryover, Turn-Back Pool, Article 21, Article 12(e), Article 14(b), and other SWP sources.

Through October 17, 2004, Colorado River Aqueduct (CRA) net deliveries were 534,000 AF, which is 94 percent of the approved net diversion target of 566,837 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 October 17, 2004:

Metropolitan Reservoirs	Storage to Date	Percent of Capacity
Diamond Valley Lake	507,400 AF	63%
Lake Mathews	145,600 AF	80%
Lake Skinner	38,100 AF	87%
State Water Project Reservoirs		
Lake Oroville	1.70 MAF	48%
San Luis Reservoir Total	0.66 MAF	32%
San Luis State Share	0.47 MAF	44%
Colorado River Reservoirs		
Lake Powell	9.2 MAF	38%
Lake Mead	14.0 MAF	51%
SDCWA Reservoirs		
24-Reservoir Total	192,200 AF	32%

As of October 17, 2004, Hayfield Basin has received only 17 AF of deliveries in 2004 due to CRA shortages, and no significant deliveries are anticipated for the remainder of the CY. 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 September 2004 were 241,666 AF. This amount is 27,266 AF, or 13 percent, greater than the budgeted amount of 214,400 AF. The September 2004 sales set a new high-sales record for the month of September. The previous high-sales record for September occurred in 1990 when total sales were 221,200 AF.

Precipitation

The Colorado River system is in its sixth consecutive water year (October through September) of below-normal precipitation. Currently the Colorado River Basin is 50 percent of normal rainfall for the water year to date. The 2004 water-year runoff into Lake Powell is estimated to be only 50 percent of normal.

After 182 days of no rainfall in Southern California, precipitation finally occurred throughout Metropolitan's service area, resulting in the wettest October on record for the past 100 years. For the current water year (October 1, 2004 through September 30, 2005) through October 20, 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	2.93 inches	1,227%
San Diego Airport	1.75 inches	1,328%
Riverside Airport	1.85 inches	925%
Eight Station Index	3.57 inches	198%

Power Update

On September 8, the Independent System Operator (ISO) reported the latest record for peak power demand at 45,597 Megawatts (MW), which was the seventh record this year. Prior to 2004, the record peak demand stood at 43,609 MW, set in July 1999.

During the month of September, California ISO did not experience any state-wide energy shortages, although some areas did experience problems due to local equipment failures. DWR was requested to reduce its pumping load by 25 MW for one hour on September 2. This was the only curtailment and did not impact deliveries. Metropolitan did not receive any requests to curtail its pumping load.

Natural gas futures started to climb in the second half of September due to damage to the oil and gas facilities in the Gulf of Mexico caused by several hurricanes. Natural gas prices have remained high and reached 52-week record highs by mid October. This has raised future electricity prices, however, next-day spot prices have stayed relatively flat.

During September, Metropolitan received the remaining 720,000 Megawatt-hours (MWh) of its previously banked CRA energy with Southern California Edison (SCE). Metropolitan also received 23,816 MWh of its previously banked CRA energy with DWR. Metropolitan sold 40,331 MWh of excess CRA energy to DWR for use on the SWP. The average DWR sale price was \$38.18/MWh for total revenue of approximately \$1.5 million.

During September, Metropolitan sold 5,243 MWh from the DVL power plant to DWR at \$42.40 per MWh for total revenue of \$212,315. Metropolitan also received a \$134,522 bonus from the California Energy Commission for DVL generation in August and September 2004. In September, the other 15 small hydroelectric power plants generated 41,044 MWh for total revenue of about \$2.0 million.

Negotiations with Pacific Gas and Electric on an amendment to the Etiwanda power sales agreement continued during the month of September. The amendment is necessary due to the termination of transmission contracts to which Metropolitan is not a party. Negotiations are anticipated to be complete by the end of October.