

• Water System Operations January 2005 Activity Report

Summary

Following is a summary of Water System Operations Group activities for the period following the January 2005 Board Meeting

Detailed Report

Security Update

Security improvements are proceeding according to schedule and budget. Johnson Controls, Inc. (JCI) completed rough installation of conduits and cables at Cactus City Communication site, and Hinds and Eagle Mountain Pumping Plants in the desert. Staff conducted new job walks with JCI at Red Mountain Pressure Control Structure (PCS), West Portal/San Jacinto Tunnel, and Ramona PCS. JCI started work at Detention Peak communication site, Foothill PCS, Venice PCS, Sepulveda PCS, and Greg Ave PCS. In addition, Metropolitan reviewed and commented on the revised 100 percent design including the factory acceptance test plan.

Water Quality 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 February 7, 2005, were:

	<u>THM Levels</u>		
	4-week Average	4-week High	Percent SPW Blends
Mills	49 ppb	68 ppb	100%
Jensen	56 ppb	59 ppb	100%
Diemer	47 ppb	50 ppb	45%
Skinner	64 ppb	69 ppb	57%
Weymouth	45 ppb	52 ppb	45%

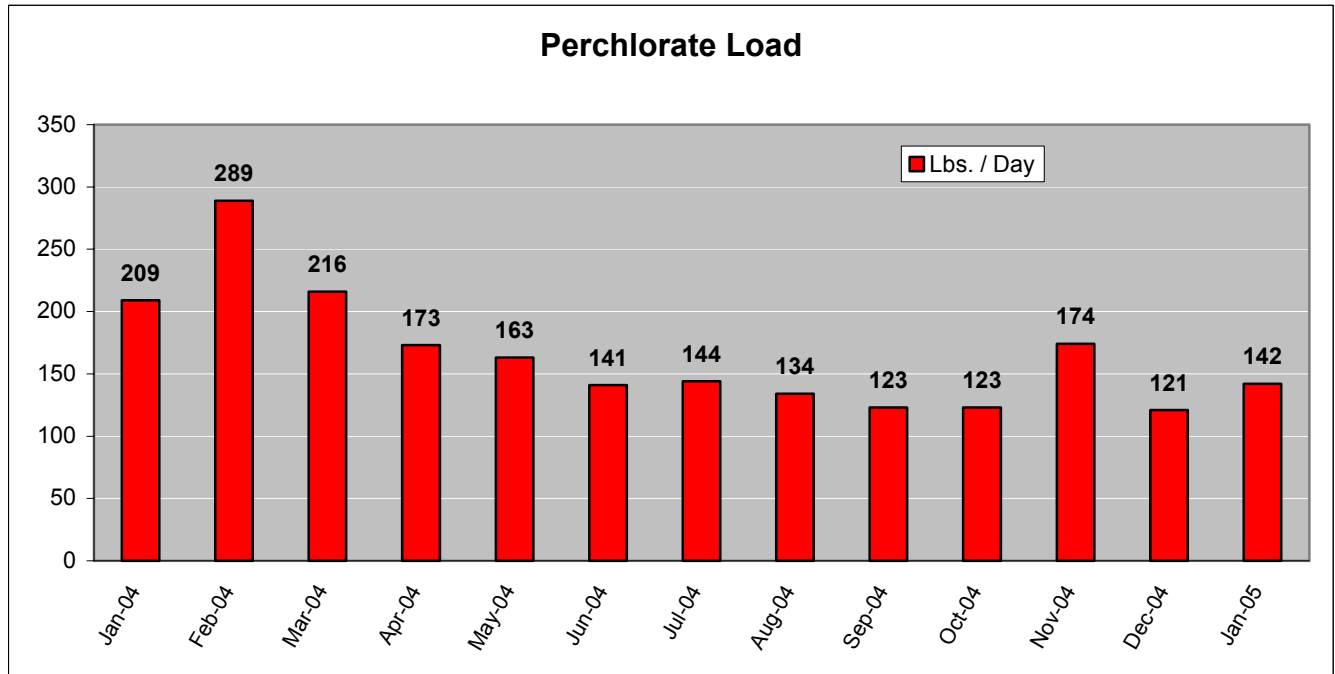
The Mills plant THM increase was the result of the plant using influent chlorine disinfection as part of normal plant procedure for the plant shutdown from February 1 to February 5. The total organic carbon (TOC) four-week average at the Mills influent has continued to increase and is currently 4.3 parts per million (ppm), up from 3.9 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 rains. Jensen influent TOC four-week average has increased to 3.1 from 2.8 ppm reported last month. Distribution system THM levels in parts of Orange County and the central pool were as high as 72 ppb. THMs have been stable in the distribution system in spite of the SPW blend being increased to 50 percent the past two weeks at Diemer and Weymouth. The target SPW blend at the Diemer and Weymouth plants is currently 60 percent for the week of February 14, 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 in February 2005. The most recent six-month running averages (September 2004 – February 2005) 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 January 2005 was calculated to be 142 lbs/day. The average load measured for January 2005 falls above the 95 percent confidence level for the predicted perchlorate load that was calculated at 110 lbs/day, due in part to elevated storm flows through the wash. It should be noted that the perchlorate loading for the month of January was based on results from only the last two weeks in January, since the gauge to measure flow at North Shore Road was inoperable the first two weeks in January.

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. Metropolitan was successful in meeting separately with the Department to further communicate our concerns regarding the Topock site. This meeting was held on February 2, 2005 at Metropolitan’s Headquarters. 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.

A presentation on chromium 6 and the Topock site was given to the Board of Water Commissioners for the Long Beach Water Department on January 27, 2005.

Monthly sampling of the Colorado River near the PG&E site was not conducted as scheduled in February due to low water level in the river. The U.S. Bureau of Reclamation (USBR) is withholding water release from Davis Dam because downstream dams are full from the heavy rain. According to the USBR, water release from Davis Dam will not take place until March 8, 2005. Currently, there is no drinking water standard for chromium 6. The California Department of Health Services maximum contaminant level (MCL) for total chromium is set at 50 ppb. Office of Environmental Health Hazard Assessment (OEHHA) is working on a public health goal (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 February 2004 through January 2005 twelve-month flow-weighted average TDS levels for the Diemer, Skinner, and Weymouth plants were 442, 482, 450 ppm, respectively. These levels meet Metropolitan's water quality objectives for TDS.

Water Treatment Update

Shutdowns

During this period, the Mills plant was shutdown for five days to allow the ozone facility construction contractor, Kiewit Pacific, to make repairs to the effluent conduit. The ozone effluent conduit had been leaking at an expansion joint since ozone startup and required a shutdown of the full plant to allow repair work from the internal side of the joint. Mills plant staff took advantage of the shutdown period and installed the fluoride injection system, and coated the concrete surfaces in the injection area in the plant effluent conduit. The fluoride implementation is scheduled for the end of 2006. Several maintenance projects were completed on areas that normally require dewatering or shutdowns, as well as the five-year cycle of cleaning and maintenance to the high voltage electrical system.

Rain Impact

Each of the treatment plants experienced elevated influent turbidity levels from the runoff into the supply reservoirs during the rains. While this had an operational effect on each of the plants, the Mills plant was the most severely affected. Mills plant influent turbidity is normally five nephelometric turbidity units (NTUs), and it increased to 288 NTUs with the runoff into Lake Silverwood. Each of the plants adjusted their processes to treat the higher turbidity water and all plants met water quality standards throughout the event.

Conveyance & Distribution Update

Maintenance Activities

There were a number of significant shutdowns during February. The completion of the three-week Colorado River Aqueduct (CRA) shutdown occurred in the first week of February. A combination of Metropolitan and contract forces completed all scheduled work, which included replacement of over 70,000 square feet of concrete canal lining and the rehabilitation of headgate operator systems at two of the five CRA pumping plants. Some remedial/corrective work by the contractor on this latter task was necessary after the CRA was returned to service on February 3. The Box Springs Feeder was shut down for five days for remote-field eddy current reinspections of prestressed concrete cylinder pipe (PCCP). The Rialto Pipeline was shut down February 7 through 13 for replacement of a section of PCCP that had previously been identified as structurally weakened due to broken reinforcing wires. The steel-pipe section of this pipeline above the Etiwanda Pipeline turnout was also inspected for mortar lining damage. This area had lining repairs performed in the early 1990s, and this inspection confirmed a need for some additional repairs during a future shutdown.

PCB Investigation at Gene Pumping Plant

Metropolitan recently concluded negotiations with California Environmental Protection Agency's, Department of Toxic Substances (CalEPA) regarding the investigation and potential clean up of polychlorinated biphenyl (PCB) soil contamination at the Gene Pumping Plant. The PCB contamination was discovered in the vicinity of the electrical transformer bank as a result of sampling conducted during the initial phase of the CRA Chemical Discharge and Containment Project (CIP No. 20a). Similar soil sampling conducted at Hinds, Intake, Iron and Eagle indicated non-detect or trace only concentrations of PCBs. Transformer oil containing PCBs was used in pump plant electrical equipment for many decades and was phased out in the mid to late 1980s. As part of the negotiations, Metropolitan's Legal and

Environmental staff, working with CalEPA officials, finalized the details of a Voluntary Clean-up Agreement (VCA) whereby Metropolitan would conduct the work under CalEPA oversight. It is anticipated that the agreement will be executed by March 11, 2005. The first step in implementing the VCA will be to conduct the site characterization, which could begin as early as this spring.

Water System Update

The current calendar year (CY) State Water Project (SWP) allocation is 60 percent, or about 1.2 million acre-feet (MAF). As of February 13, 2005, total SWP in-basin deliveries for the CY were 174,142 acre-feet (AF). These deliveries include 152,014 AF on the East and West Branches and 22,128 AF through the San Bernardino Valley Municipal Water District/Inland Feeder Interconnection. All SWP deliveries to date are from CY 2004 carryover accounts and Article 21.

Through February 13, 2005, CRA net deliveries were 15,000 AF, which is three 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 February 13, 2005:

Metropolitan Reservoirs	Storage to Date	Percent of Capacity
Diamond Valley Lake	642,700 AF	80%
Lake Mathews	161,900 AF	89%
Lake Skinner	38,700 AF	88%
State Water Project Reservoirs		
Lake Oroville	1.89 MAF	54%
San Luis Reservoir Total	1.86 MAF	92%
San Luis State Share	1.03 MAF	97%
Colorado River Reservoirs		
Lake Powell	8.4 MAF	34%
Lake Mead	15.3 MAF	58%
SDCWA Reservoirs		
24-Reservoir Total	341,900 AF	57%

As of February 13, 2005, the San Gabriel Valley Groundwater Basin key well elevation is 206 feet above sea level, which is a seven-foot increase since last month. However, the key well elevation is 30 feet below the previous ten-year average of 236 feet.

Snow pack in the Sierra Nevada Mountains remains above normal. As of February 13, 2005, the snow pack was 163 percent of normal at Mammoth Pass and 117 percent of normal at Donner Summit.

Sales and Deliveries

Final water sales for January 2005 were 115 thousand acre-feet (TAF). This amount is 44 TAF, or 28 percent, less than the budgeted amount of 159 TAF. January 2004 sales were 162 TAF. The high-sales record for the month of January occurred in 1991 when total sales were 183 TAF.

On February 14, 2005, deliveries into Diamond Valley Lake by pumping at the Wadsworth Pumping Plant were initiated due to low demands and high storage levels at Lake Mathews and Lake Skinner. These deliveries are in addition to those from the San Bernardino/Inland Feeder Interconnection. Approximately 1,600 AF/day total are being delivered into DVL; 600 AF/day from the San Bernardino/Inland Feeder Interconnection and 1,000 AF/day from pumping at Wadsworth. Pumping costs at Wadsworth are approximately \$35 per AF.

Precipitation

The Colorado River system has had five consecutive water years (October through September) of below normal rainfall. However, four and a half months into the current water year, rainfall within the Colorado River system is at 112 percent of normal, and the snow pack is currently at 118 percent of normal.

For the current water year (October 1, 2004 through September 30, 2005) through February 13, 2005, total precipitation for four 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	25.16 inches	304%
Santa Ana (John Wayne Airport)	17.61 inches	143%
San Diego Airport	15.48 inches	256%
Riverside Airport	14.01 inches	252%
Eight Station Index	29.70 inches	98%

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 DVL hydroelectric power plant in December. Therefore, Metropolitan did not receive any bonus from the California Energy Commission for DVL generation. 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.