

## • Water System Operations Group Manager's Update

### Summary

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

### Attachments

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None

### Detailed Report

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#### Security Update

Metropolitan and Johnson Controls, Inc. (JCI) continued to coordinate IT requirements for the electronic security system, which will provide closed-circuit TV and access control. JCI resubmitted the 90 percent design. Metropolitan completed the review of the 90 percent design submittals and will be moving ahead with scheduling factory acceptance testing. In addition, Metropolitan initiated procurement of the required communication lines for the remote sites included in the program.

#### 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), which met drinking water quality standards and State project water (SPW) blends for the most recent four-week period, ending the week of June 7, 2004, were:

	<u>THM Levels</u>		
	4-week Average	4-week High	Percent SPW Blends
Mills	44 ppb	46 ppb	100%
Jensen	54 ppb	59 ppb	100%
Diemer	54 ppb	57 ppb	58%
Skinner	52 ppb	55 ppb	37%
Weymouth	51 ppb	54 ppb	55%

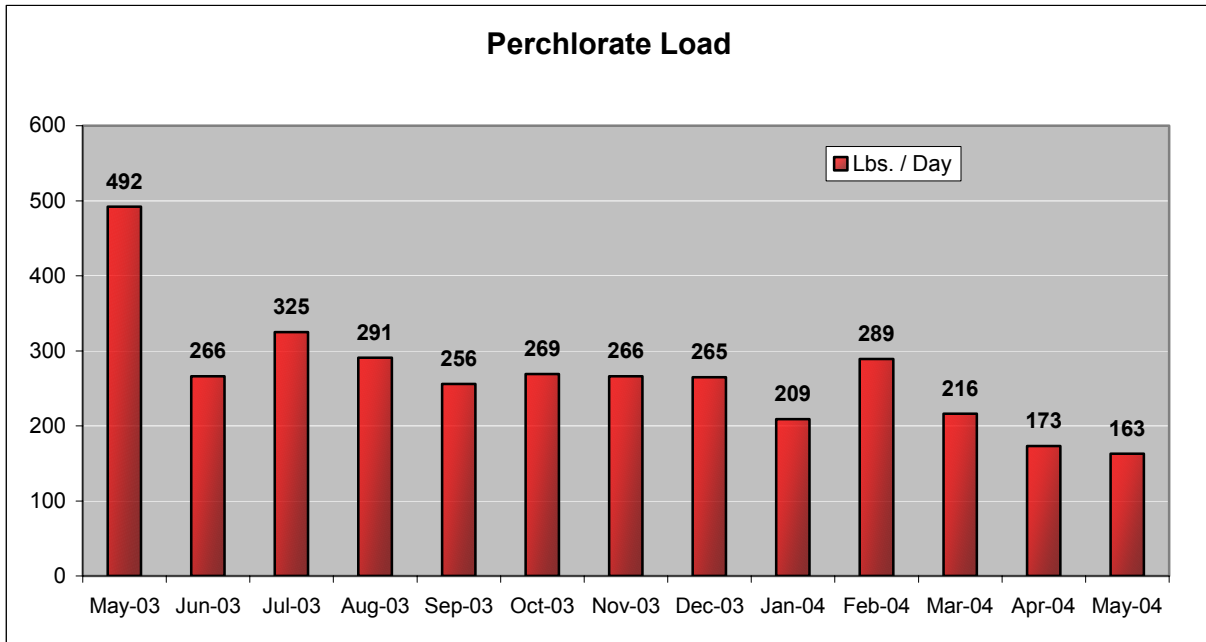
The total organic carbon (TOC) levels at the Mills influent are currently at a 4-week average of 3.6 parts per million (ppm), down from a high of 5.0 ppm. Jensen influent TOC increased slightly to approximately 2.9 ppm. Distribution system THM levels in parts of Orange County and the central pool were as high as 70 ppb and 69 ppb, respectively. The target SPW blend at Diemer and Weymouth plants was 60 and 55 percent, respectively, for the week of June 7.

##### *Perchlorate*

Perchlorate samples were collected from 34 locations within Metropolitan's system in June 2004. Perchlorate was not detected above the California Department of Health Services' (CDHS) detection limit for purposes of reporting (4 ppb) in any monitoring location. The most recent six-month running averages (January 2004-June 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.

Based on our weekly monitoring data and the real-time flow data provided by the NDEP, the average loading at North Shore Road for May 2004 was calculated to be 163 lbs/day. The average load measured for May 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:



A Metropolitan consultant continues to review Kerr-McGee's cleanup efforts and has submitted their final draft recommendations on wash gravel remediation, need for additional clean-up efforts, and performance goals. Some of the findings are: 1) the current clean-up efforts conducted by Kerr-McGee address the major plume mass; 2) the clean-up could be accelerated with more wells at Athens Road and the seep area; and, 3) additional wells at these areas would be more effective than remediation of the wash gravels.

A request for hydrogeological services was advertised on Metropolitan's website on March 16, 2004, and proposals have been evaluated. Interviews were conducted on June 10, 2004. Metropolitan plans to retain a consultant to continue with third-party review of the Henderson remedial activities, as well as provide technical assistance for perchlorate contamination found in local groundwater basins within Metropolitan's service area.

An update on the Perchlorate Action Plan was given on June 7, 2004 at the Board's Water Quality, Planning, and Resources Committee meeting.

*Perchlorate Task Force*

There have been no meetings of the Perchlorate Task Force since a technical review meeting held on April 22, 2004. However, a note was sent to Task Force members in anticipation of CDHS finalizing their criteria for Proposition 50 grants for projects that reduce reliance on surplus Colorado River water. CDHS is expected to finalize its criteria shortly and to begin soliciting pre-applications this fall. Metropolitan has offered to coordinate the application process and even bundle a number of applications together with the thought of adding weight with respect to a regional proposal. Any funding would go directly to the performing agency.

The next Perchlorate Task Force meeting is scheduled for July 20, 2004.

*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.

As indicated in last month's update, PG&E submitted a conceptual proposal and schedule to Metropolitan on April 20, 2004, concerning implementation of a barrier wall to prevent chromium 6 from reaching the River. Staff has completed their assessment of the proposal, and this assessment was part of the informational presentation given on May 10, 2004, at the Water Quality, Planning and Resources Committee meeting.

A letter from Metropolitan's CEO was sent to Mr. Thomas King, Senior Vice-President and Chief of Utility Operations at PG&E on May 18, 2004. The letter transmitted our comments on the schedule, as well as emphasizing three main points: 1) prevention of migration of chromium 6 to the Colorado River should be recognized as one of the highest drinking water priorities in the State; 2) that DTSC dedicate sufficient staff resources to assure remediation will proceed as quickly as possible; and, 3) that DTSC expedite additional extraction wells, an on-site treatment plant, and a fixed subsurface barrier to cut off migration of chromium 6 to the River.

PG&E responded on May 27, 2004, and reconfirmed that PG&E fully understands the importance of protecting the Colorado River. PG&E agreed to meet with Metropolitan, and top officials from DTSC and Cal EPA to address the Topock site. This meeting and tour of the Topock site is being scheduled for July 1, 2004.

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 June. On June 9, 2004, chromium 6 samples were collected from two monitoring wells located on Metropolitan's property near the Topock site. The results were 19 and 25 ppb for MW13 and MW18, respectively.

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 next year.

#### *Taste-and-Odor*

Castaic Lake is experiencing a large planktonic algae bloom that is producing geosmin. Geosmin levels in the epilimnion of Castaic Lake have ranged from 46 to ~1200 parts per trillion (ppt) since June 1, 2004. Department of Water Resources (DWR) conducted copper sulfate treatment of Castaic Lake on Thursday June 10, 2004. Chlorine application was moved from the filter influent to the plant influent at Jensen on June 3 to meet additional disinfection requirements for increased plant flows (as required for the Rialto Feeder shutdown). Chlorine subsequently killed taste-and-odor producing algae growing in the basins and released geosmin. Geosmin levels in the plant effluent ranged from 10 to 25 ppt from June 2 to June 9, 2004. Due to a large release of water from the Elderberry Power Plant on June 8, high levels of geosmin in the upper portion of Castaic Lake were entrained into the deeper water (water drawn from the outlet tower is at 60 m) Geosmin levels in the range of 25 to 55 ppt were measured leaving the plant from June 10 to 13. Chlorine application was moved back to the filter influent on Thursday afternoon, June 10, 2004, because plant flows decreased.

These levels of geosmin were well above the acceptability threshold of approximately 15 ppt and 18 agencies received numerous consumer complaints. Press releases were issued on June 8 and 14, 2004 informing consumers about the problem. A second copper sulfate treatment of the lake on Monday, June 21, 2004, and an accelerated cleanup of the algae growth in the Jensen plant have resulted in a substantial improvement. On June 22, 2004, levels leaving the plant decreased to 11 ppt, and the taste and odor levels were acceptable.

Taste-and-odor producing algae have been growing in the East Branch SPW between Pearblossom Pumping Plant and the Mojave Siphon (inlet to Silverwood Lake). Levels of 2-methylisoborneol (MIB) and geosmin in the aqueduct have reached as high as 35 and 15 ppt, respectively. Levels leaving Silverwood Lake are approximately 11 ppt MIB and 5 ppt geosmin. A copper sulfate treatment of the aqueduct was completed on June 24, 2004. The levels of taste-and-odor compounds in other source waters and treatment plants are at background levels.

*Total Dissolved Solids (TDS) Levels*

The June 2003 through May 2004 twelve-month flow-weighted average TDS levels for the Diemer, Skinner, and Weymouth filtration plants were 410, 492, and 417 mg/L, respectively.

**Conveyance & Distribution Update***Shutdowns*

The Rialto Pipeline, from the Etiwanda turnout to Live Oak Reservoir inlets was shutdown at midnight on June 7. The purpose of the shutdown was to dewater a segment of the pipeline just upstream of Live Oak Reservoir to permit urgent repairs to two sections of 96-inch diameter prestressed concrete cylinder pipe (PCCP). This portion of the Rialto Feeder had been inspected during a shutdown in February utilizing the remote-field eddy current technology. Engineering Services notified Water System Operations' staff of the need for urgent repairs during the week of May 24, after receipt of analyses by a consultant that indicated a high number of wire breaks in sections of the PCCP. In preparation for this pipeline shutdown and repair, staff worked closely with Inland Empire Utilities Agency and Three Valleys Municipal Water District to coordinate conservation measures, system operations, water deliveries, and communications with the retail customers and media. Following an extremely accelerated schedule of planning, design, fabrication, construction, and public outreach, the pipeline was dewatered, and successfully repaired using steel liners and carbon-fiber technology, refilled, and returned to service late on June 11, more than 2 days ahead of schedule. Final site cleanup and restoration are expected to be completed by the end of June 2004.

**Water System Update**

As of June 20, 2004, total SWP in-basin deliveries for the current calendar year were 828,300 acre-feet (AF). These deliveries include 771,250 AF on the East and West Branches, 54,000 AF from the San Bernardino Valley Municipal Water District/Inland Feeder interconnection, and 3,050 AF from San Gabriel Valley Municipal Water District. Of the 828,300 AF received to date, approximately 425,000 AF has been from this year's SWP allocation, currently set at 1.3 MAF for Metropolitan. The remaining deliveries include 2003 Carryover, Turn-Back Pool, Article 21, Article 12(e), Article 14(b), and other SWP sources.

Total CY 2004 CRA net deliveries were 356,000 AF, which is 71 percent of the approved net diversion target of 506,000 AF.

Reservoir levels are indicators of water supply conditions for the SWP, Colorado River and Metropolitan. The following storage levels for key reservoirs reflect monthly data as of June 20, 2004:

<b>Metropolitan Reservoirs</b>	<b>Storage to Date</b>	<b>Percent of Capacity</b>
Diamond Valley Lake (DVL)	626,900 AF	78%
Lake Mathews	147,800 AF	81%
Lake Skinner	38,000 AF	86%
<b>State Water Project Reservoirs</b>		
Lake Oroville	2.87 MAF	81%
San Luis Reservoir Total	0.88 MAF	44%
San Luis State Share	0.52 MAF	49%
<b>Colorado River Reservoirs</b>		
Lake Powell	10.6 MAF	44%
Lake Mead	14.1 MAF	51%
<b>SDCWA Reservoirs</b>		
24-Reservoir Total	247,400 AF	42%

Total CY 2003 deliveries to the Hayfield Groundwater Basin are 6,700 AF, and overall total deliveries to the basin are around 74,000 AF. Hayfield Basin has not received any deliveries to-date for CY 2004. Currently

the San Gabriel Valley Groundwater Basin key well elevation is 206 feet above sea level, which is 30 feet below the previous ten-year average of 236 feet, but 10 feet above the historic low of 196 feet.

#### *Sales and Deliveries*

Final water sales for May 2004 were 243,000 AF. This amount is 68,300 AF, or 39 percent, greater than the budgeted amount of 174,700 AF. The May 2004 sales were the highest May sales in history, exceeding the previous sales record of 220,000 AF for May that was set in 1989.

#### *Precipitation*

The Colorado River system is in its fifth consecutive year of below-normal precipitation and is 81 percent of normal, based on the first nine months of the 2004 water year (October 2003 through September 2004). This month, Lake Mead reached its lowest historic 40-year storage at 14.2 million acre-feet. The 2004 water-year runoff into Lake Powell is estimated to be only 51 percent of normal.

As of June 20, 2004, there has been no rainfall at the Los Angeles Civic Center, City of San Diego airport and City of Riverside airport for the past 90 days. For the current water year through June 20, 2004, total precipitation for three 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	9.25 inches	63%
San Diego Airport	5.20 inches	57%
Riverside Airport	6.22 inches	66%
Eight Station Index	45.87 inches	96%

Currently there is no snow pack at Mammoth Lake, and at Independence Lake (Donner Summit) the snowpack is only 34 percent of normal.

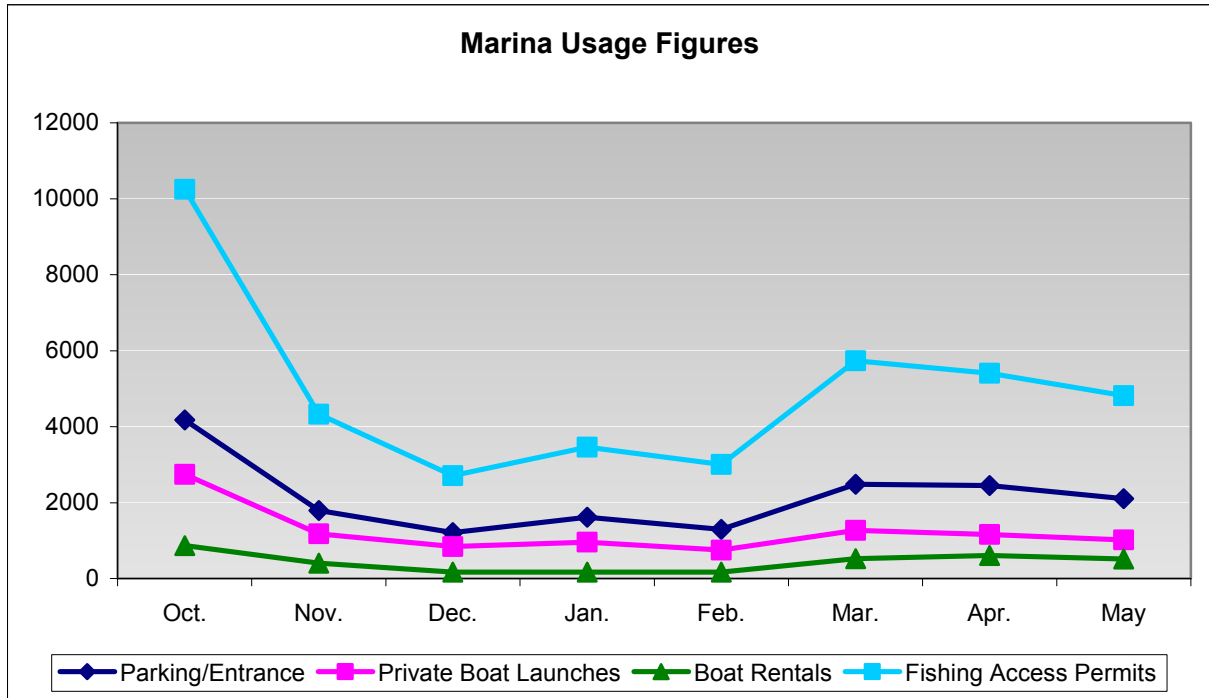
#### **Power Update**

Record-setting high temperatures were experienced throughout California during the first part of May. The high temperatures caused an unanticipated increase in electrical demand, resulting in requests to Metropolitan on May 3, 2004, to curtail pumping at Gene and Intake on the CRA and to reduce power use at the Skinner and Weymouth plants. Additionally, on May 14, 2004, DWR was requested to reduce pumping on the SWP due to local power supply concerns. Metropolitan and DWR provided the requested load reductions without any impact to member agency deliveries.

During May, Metropolitan received 9,464 Megawatt-hours (MWh) of its previously banked energy with SCE and banked 17,045 MWh with DWR. Metropolitan also sold 35,522 MWh of excess power to DWR for use on the SWP. The average DWR sale price was \$48.35/MWh for total revenue of approximately \$1.7 million. During May, Metropolitan sold 7,896 MWh from DVL at \$51.05/MWh for total revenue of \$403,116. The other 15 small hydroelectric power plants generated approximately 38,700 MWh for total revenue of about \$1.6 million.

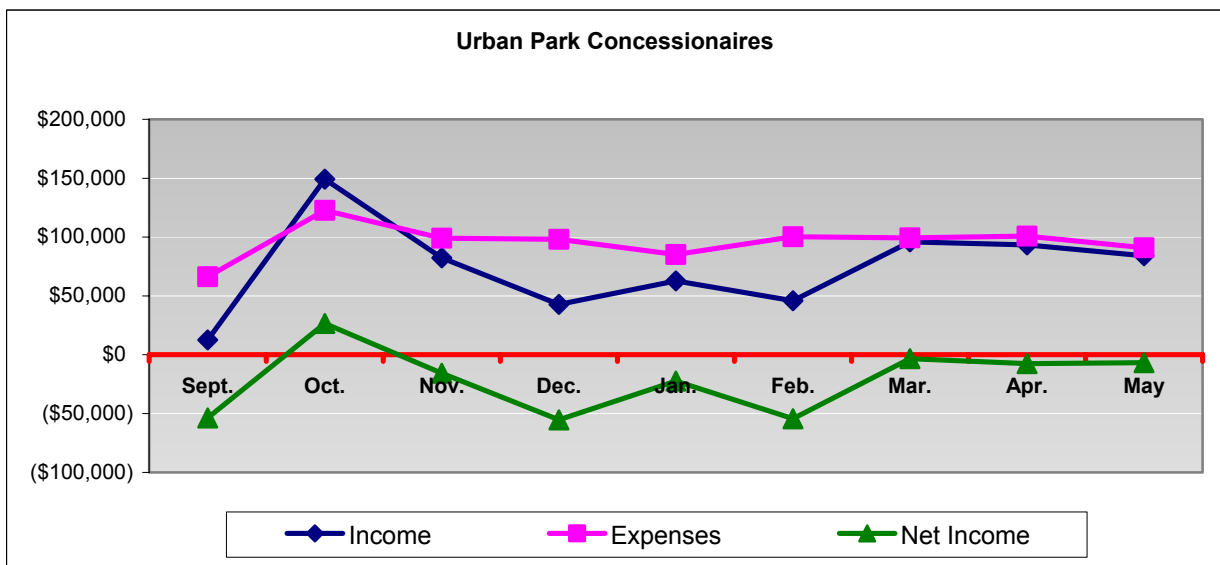
#### **Diamond Valley Lake**

The following graph charts marina usage figures through May 2004. A total of 3,615 boat inspections were performed through May 31, 2004.



Approximately 6,000 pounds of catchable rainbow trout were planted in May and early June. Up to 10 percent of the fish were in the 3- to 10-pound class, with the balance being in the 1-pound class. These plants are funded entirely by the Fishing Access Permit fees.

The following graph charts income and expense figures for Urban Park Concessionaires for the September 2003 through May 2004 time period. Although the facility did not open to the public until October 3, 2003, this chart reflects income and expense figures for September activities, such as the opening of the reservation system and pre-opening events. An additional \$164,989 has been expended in start-up costs to-date.



The following table shows invoice totals for ancillary DVL contracts through May 2004 (estimates were used for invoices not yet received):

<u>Other Contracts</u>	<u>YTD</u>
Sheriff	\$92,643
Solid Waste	\$3,992
Sanitary Waste	\$70,493
Potable Water	\$4,560
Site Maintenance	\$35,183
<u>CA Dept. of Fish &amp; Game*</u>	<u>\$146,676</u>
<b>Total</b>	<b>\$353,547</b>

\* This figure represents 11 months of the \$160,010 FY 03/04 invoice.



***Father-daughter team with bluegill***



*Father's Day trout*



*Happy young man and a string of trout*