

# LAKE MEAD WATER QUALITY FORUM

## February 15, 2006

### Meeting Summary

#### I. Introductions – Forum members introduced themselves.

#### II. Status Reports:

##### 1. Perchlorate – Todd Croft (NDEP – Las Vegas)

Mr. Croft reported that there continues to be progress on perchlorate remediation in the Las Vegas Valley. The Colorado River is benefiting from these efforts. Since June 2004, perchlorate concentrations measured at Willow Beach have been less than 4 ppb and during July, August and September 2005 perchlorate was less than 2 ppb.

##### Locally:

The perchlorate mass flux passing Northshore Road during the last three months ranged between 100 and 150 lbs./day. This loading is about an 80 to 85 percent reduction from pre-remediation values when the mass flux at Northshore Road was approximately 900 to 1,000 pounds per day.

The perchlorate concentrations measured at Willow Beach in the Colorado River system continue to remain low and were reported at: < 4 parts per billion (ppb) since June 2004, < 3 ppb since February 2005, and < 2 ppb for July, August and September - 2005.

The Tronox LLC (Tronox) [formerly Kerr McGee] biological treatment system continues to operate. Perchlorate concentrations in the treated water discharge from the Fluidized Bed Reactor Perchlorate Treatment System are routinely < 18 ppb. Perchlorate removal rates for the Tronox remediation system are typically reported between 1,700 and 2,000 lbs. per day. Removal of perchlorate from the environment through January 2006: ~1,848 tons total; 356 tons from the seep area; 490 tons from Athens Road; and 1,002 tons from the on-site system.

Since the last Lake Mead Water Quality Forum, Tronox has renewed their National Pollution Discharge Elimination System (NPDES) discharge permit. Additionally, Tronox is nearly ready to construct a 9<sup>th</sup> biological reactor and a sand filter. These treatment system improvements will enable processing of approximately 25 % more chemical load (perchlorate, chlorate, and nitrate) through the FBR Perchlorate Treatment System and provide for fewer solids in the effluent. The effluent will be more “clear” after filtering through the sand filter. The FBR modifications are scheduled for completion by approximately August 2006.

AMPAC is nearly finished with the installation of the first phase of their In-situ Biological (ISB) remediation system. This remediation system will focus on impacted

groundwater at the leading edge of the plume and will be activated in two phases. Currently, AMPAC is awaiting electrical connection by Nevada Power Company. This should occur within the next four (4) – six (6) weeks

The Underground Injection Control (UIC) permit has been issued. NDEP & AMPAC are working on a UIC Permit revision to allow for multiple tracer compounds to help track and evaluate ISB Remediation System performance

Ms. Peggy Roefer reported that as of January 17, 2005 the perchlorate concentration at the drinking water treatment facility was 5 micrograms per liter. This slight increase reflects de-stratification in front of the intakes in Lake Mead.

### **Nationally:**

The National Academy of Sciences' (NAS) National Research Council (NRC) issued their report in January 2005. The NAS NRC concluded that an oral reference dose (RfD) of 0.0007 milligrams per kilogram per day (mg/kg/day) would be a health protective reference dose.

The U.S. EPA adopted this RfD in February 2005.

In January 2006, the U.S. EPA Office of Solid Waste and Emergency Response (OSWER) released new guidance to states, regions, and stake holders. This guidance indicates that using the 0.0007 mg/kg/day RfD leads to a Drinking Water Equivalent Level (DWEL) of 24.5 ppb. This guidance also indicated the appropriate preliminary remediation goal (PRG) for perchlorate is 24.5 ppb.

The NDEP is evaluating this new guidance. We will continue to use the Provisional Action Level of 18 ppb for the foreseeable future. The 18 ppb Provisional Action Level is incorporated into both the Tronox NPDES permit and the AMPAC UIC permit.

## **2. Selenium Subcommittee – Kathy Sertic (NDEP):**

The Selenium Subcommittee last met on November 16, 2005. A summary of the meeting was presented to the Forum on November 17, 2005 and is included in the minutes for that Forum meeting. The following is a brief recap of the Subcommittee discussion:

Results of a field experiment conducted by the Bureau of Reclamation showed selenium was mobilized from unsaturated sediments during simulated flood events. There is concern about the potential for movement of selenium in the Ducks Unlimited Wetland as it will be subject to similar wet/dry cycles.

Water quality data continues to show elevated selenium concentrations in tributaries to the Wash with a decreasing trend downstream in the Wash due to dilution from treated wastewater.

Preliminary results of data collected from August 2004 through October 2005 in the uppermost wetland pond at the Nature Preserve show the pond tends to act as a selenium sink. Data collection is complete and data analysis continues.

Potential impacts to water quality due to decreased treated wastewater flow in the Wash as proposed by the Systems Conveyance and Operations Program was discussed.

Flow from the Monson Channel to the Nature Preserve was discontinued in November 2005.

The next Subcommittee meeting will be held later today, February 15, 2006.

### **3. Las Vegas Wash Coordination Committee (SNWA)**

Ms. Peggy Roefer reported that the Las Vegas Wash Coordination Committee is planning a Green Up workday on March 11<sup>th</sup> and is looking for site supervisors. Anyone interested should notify Debbie VanDormalin by February 24<sup>th</sup>. The next Coordination Committee meeting will be April 25, 2006. At that meeting the year-end report will be available. Also the draft "*Las Vegas Wash Monitoring and Characterization Study: Ecological Screening Assessment of Selected Contaminants of Potential Concern in Sediment, Whole Fish, Bird Eggs and Water 2000-2003*" will be presented. Erin Snyder of INTERTOX Inc. will be there for the discussion. Mr. Porta asked if the Green Up was for planting or cleaning up trash. Ms. Roefer confirmed that it was for planting.

## **III. Presentations**

### **1. BMI – Todd Croft, Brian Rakvica (NDEP – Las Vegas)**

### **2. SCOP – Doug Karafa (CCSD) & Ira Rackley (Clean Water Coalition)**

These presentations are available on the NDEP website at [ndep.nv.gov/forum](http://ndep.nv.gov/forum)

## **IV. Other Issues**

Mr. Tom Porta announced that NDEP has a new Public Information Officer, Dante Pistone. Mr. Pistone can be contacted for any press related issues.

Mr. Porta stated that Forum minutes and presentations will now be posted on the NDEP website at [ndep.nv.gov/forum](http://ndep.nv.gov/forum). Presenters should provide a CD to either himself or Karen Fleming.

## **V. Next Forum Meeting**

The next Lake Mead Water Quality Forum meeting was originally scheduled for May 15, 2006.

The meeting was subsequently rescheduled to:

**Wednesday, May 24, 2006**

**10:00 a.m.**

**Colorado River Room—Southern Nevada Water Authority**

## **VI. Adjourn**

The meeting was adjourned at 11:21 a.m.