

LAKE MEAD WATER QUALITY FORUM
April 27, 2010
Meeting Summary

I. Introductions – Forum members and participating audience members introduced themselves.

II. Status Reports:

Mr. Tom Porta announced that Allen Biaggi, Director of DCNR, was retiring and that Leo Drozdoff has been appointed Acting Director, DCNR. Mr. Porta announced that he was also retiring on June 11th and that Colleen Cripps has been appointed as Acting Administrator for NDEP. Kathy Sertic has been appointed to continue work with the Lake Mead Water Quality Forum in Tom's place.

Mr. Porta also introduced Mr. Vince Guthrow who is now the new Public Information Officer (PIO) with NDEP.

1. Perchlorate Update - (NDEP – Las Vegas)

The following perchlorate update was discussed by Todd Croft, NDEP, Las Vegas.

LV Wash:

The NDEP has been overseeing assessment through remediation of perchlorate in the Las Vegas Valley since 1997. Shannon Harbour is the current NDEP case officer overseeing the remediation efforts conducted by Tronox and AMPAC. Both perchlorate groundwater plumes are being intercepted and remediated. Consequently, the perchlorate mass flux to the Las Vegas Wash has dropped ~90% compared to pre-remediation values. The perchlorate mass loading passing Northshore Road for over the last two years has stabilized to a range between ~55 to ~90 lbs/day (October 2007 – April 2010). The perchlorate loading for April 2010 was ~70 lbs/day.

The Southern Nevada Water Authority (SNWA) oversees construction of weirs including the Lower Narrows and Homestead weirs below this overlook. The permitting process to allow for construction dewatering has changed over time. The dewatering of these two weirs is managed through a 5-year long NPDES permit. This permit was issued on February 1, 2010 and limits dewatering to the winter season (~December 1 through May 31 each season) when Lake Mead is fully mixed. Monitoring is occurring within the LV Wash, Lake Mead, and below Hoover Dam to help adjust the dewatering amount and season so this additional perchlorate load can be mixed with the least observable increase in perchlorate concentrations within Lake Mead and the Lower Colorado River.

The permit restricts the dewatering discharge to 80 lbs/day perchlorate and that the discharge is returned to the LV Wash. Monitoring conducted by the SNWA (or their contractor) since dewatering was initiated on March 12, 2010 has shown the combined project discharge has varied between ~ 8 and 62 lbs/day with an average of ~ 18 lbs/day for the period from March 12, 2010 through April 21, 2010. Other monitoring conducted by the SNWA at the Northshore Road sampling location has shown ~ 80 and ~ 59 lbs/day in the wash water passing the Northshore Road bridge during the March 24, 2010 and April 21, 2010 sampling dates, respectively. These values are within the expected range of perchlorate mass at this location.

Willow Beach:

The perchlorate concentrations measured at Willow Beach in the Colorado River system continue to remain at or less than 2 ppb since December 2008 and have been measured at < 4 parts per billion (ppb) since June 2004. The perchlorate concentration at Willow Beach last quarter (March 2010) was 1.5 ppb.

Colorado River:

MWD has reported perchlorate concentrations < 2.0 ppb for all samples collected between July 2008 and March 2010. The perchlorate concentration at Whitsett sampling point last quarter (March 2010) was 1.4 ppb.

Tronox LLC (formerly Kerr-McGee):

The Fluidized Bed Reactor (FBR) perchlorate treatment system continues to operate.

AMPAC:

AMPAC currently operates an In-situ Bioremediation (ISB) system at approximately 225-230 gpm that destroys approximately 40-45 pounds per day perchlorate. They recently completed the installation of a groundwater injection trench near the existing re-injection well field to augment use of the injection wells. The trench was constructed because maintenance on the injection wells limited the amount of water that could be injected. The maintenance was needed to reduce reoccurring periodic biofouling in the injection wells.

Ms. Harbour also worked with AMPAC over the last year or so to identify other areas within the perchlorate plume for additional remediation. AMPAC has determined that remediation is needed in the vicinity of the former plant following completion of modeling in the area south of Warm Springs Road. A pilot study is ongoing to help select which remediation system will be installed in this area. The technologies being considered are gravel bed reactors, Hall reactors, and fluidized bed reactors (FBR). For comparison, Tronox uses an FBR for remediating perchlorate at their nearby plant site.

Nationally:

The US EPA, Office of the Inspector General (OIG), issued a peer reviewed report on April 19, 2010 entitled "Scientific Analysis of Perchlorate". The OIG report concludes:

- EPA should use a "cumulative" risk assessment rather than a "single chemical" risk assessment approach. This would allow for an informed environmental decision to be made on how to mitigate the risk effectively;
- There are three iodine uptake inhibitors (IUI); perchlorate, thiocyanate, and nitrate;
- A fourth Sodium-Iodide Symporter (NIS) stressor is low dietary iodide levels;
- Perchlorate is the weakest of these stressors;
- A cumulative risk assessment would consider the impact of all stressors on health;

- The EPA 0.007 mg/kg/day RfD (which corresponds to a 24.5 ppb Drinking Water Equivalent Level [DWEL]) is conservative and protective of public health;
- Limiting perchlorate exposure, alone does not effectively address the underlying public health issue;
- A meaningful opportunity to lower the public's risk is better achieved by addressing moderate to mild iodide deficiency (which occurs in ~ 29 % of the pregnant and nursing population) than by lowering the drinking water limit for perchlorate from 24.5 to 6 ppb. Focusing on proper dietary iodide levels in pregnant and nursing women would be the most effective approach to increase total iodine uptake (TIU) to healthy levels during pregnancy and nursing. This can be achieved through using iodide fortified prenatal vitamins; and
- Increasing TIU would reduce the frequency and severity of permanent mental deficits in children.

2. Quagga Mussels (NDOW)

Mr. Porta briefly mentioned he recently attended the Colorado River Symposium which was very informative and with the presentations done on quagga mussels the current news is that they are still a problem there. Later in the meeting, Mr. Porta was notified that Ms. Emily Austin would be in attendance with more information on quagga mussels. Emily Austin, an employee at Lake Mead, discussed how they are continuing with the Interagency Monitoring Action Plan. They have another round of sonar and dive sampling in June working with UNLV and some of their master students. One of their students has been working on a decontamination study. There is some early detection research that has been done in order to detect quagga mussels early on.

3. Selenium Subcommittee

Ms. Peggy Roefler announced that the subcommittee adopted their "Mission and Goals". She first mentioned the mission statement: "A technical advisory group focused on selenium issues in Southern Nevada with the goal of reaching stake holder consensus on best management practices to ensure protection of water quality and wildlife habitat"

The subcommittee has four goals in four separate areas: monitoring, regulations, research and prevention.

1. Monitoring: Review monitoring data on selenium concentrations in water, sediment and bio-assessment to determine potential for adverse affects to wildlife.
2. Regulations: Track regulatory changes to water quality standards and aquatic life criteria for selenium. Prepare comments to regulatory agencies and/or recommendations to resource managers as needed.
3. Research: Develop a list of priority research projects to meet the existing data gaps to address selenium issues in the Las Vegas Valley. Provide technical review for the projects and support agency efforts to acquire funding.

4. Prevention: Develop a list of recommended actions to reduce selenium levels in the Las Vegas Valley watershed.

Another subject discussed was the Storm Water Permit they received and the formation of the Storm Water Management Plan (SWMP). Ms. Roefer stated they were given 18 months to develop the (SWMP) forum. One of EPA's requirements is for storm water retention and infiltration to be required on new development sites. There are some concerns that this will not work very well in the Las Vegas Valley because it is not best to mobilize constituents, such as selenium, in the ground. The Storm Water Committee is working on requirements that will meet the needs of SNWA, the State and E.P.A.

4. Las Vegas Wash Coordination Committee (SNWA)

The committee will be providing updated information during the Tour scheduled after the Forum.

5. SCOP Update (CWC)

Mr. Jim Devlin, CWC, reported on the lawsuit which was filed by the State of Nevada at the end of March as a Writ of Mandamus. The State of Nevada has asked the Supreme Court to mandate that the CWC turn over \$62 million dollars. It has been asked that both sides submit briefs by Thursday. It is still up in the air as to the avenues with which they will proceed. Mr. Porta cleared up the issue by stating this lawsuit is a result of the special Legislative Session which happened a few months ago where the reserve account of the CWC was swept for \$64 million dollars. They had also swept other accounts in State government.

Mr. Porta mentioned the Center for Biological Diversity was discussed in the last meeting. For one, the request for a hearing by the Center on the North Las Vegas Permit was opted out by NDEP since only one entity was heard from in requesting a hearing. NDEP went ahead and issued City of North Las Vegas' discharge permit for the new treatment plant. In speaking with legal counsel it seems the Center's challenge is with the Bureau of Water Quality Planning regarding the impaired waters list that Kathy Sertic and her staff has been working on. Mr. Porta asked Ms. Sertic when she thought the list of impaired waters would be completed. Ms. Sertic could not confirm if it would be ready by the next Forum and stated further that this is going to be a tough case with regards to cosmetics and pharmaceuticals in water and since NDEP has the most data. Mr. Porta speculated that this is why Nevada was chosen with having the data. In the meantime, NDEP is carefully following the process of the impaired waters listing and getting advice from legal counsel to be sure all processes are being followed by law. It may be challenged, but NDEP will have a good defense for the listing.

III. Other:

1. Discussion on Reconvening the Algae Task Force

Mr. Tom Porta discussed the topic of starting up the Algae Task Force again. Mr. Doug Drury had brought up the subject at the last Forum meeting during his presentation. With the declining lake levels and conditions, the Algae Task Force might want to consider reconvening as there seems to be similar conditions that were detected back in 2001 and there is a concern. Mr. Porta asked Mr. Drury to chair, Peggy Roefer, and others to join the Task Force. Mr. Porta asked if anyone else might be interested in tracking the conditions of Lake Mead and report on any progress. A few more volunteered to join the Task Force. Mr. Porta asked Mr. Drury when the first meeting would be. Mr. Drury stated he would like to arrange the first meeting of the Task Force within two weeks.

2. LMWQF Memorandum of Agreement

Mr. Porta discussed that it was time (every five years) to look at the agreement and make any changes that are necessary. Kathy Sertic thanked everyone for sending in their input and comments. The first thing to be changed was removing use of the word “Nevada” and expanding the effort to include all of Lake Mead. That is why the invitation was extended to the Arizona Department of Environmental Quality and the Metropolitan Water District. The first thing under “goals” was to highlight what specifically is being protected. Most of the changes consisted of revising some of the language. There was a question about citizen members and how they were chosen to be in the Forum. It was suggested that the Forum members pick the two citizen members via a vote. Ms. Sertic stated she would send out an e-mail and invite people to submit nominations and convene a member voting section on-line.

A concern was mentioned regarding signatories for the primary and alternate members on the Forum Member list which also includes the two Citizen Members. Kathy Sertic said they would send out the list for members to state who their alternate will be. She said she would contact each member individually to confirm their alternate. She would like to get an original signature back from each member also.

NDEP Water Quality Standards Proposed Action- Update Reference to Most Recent Report of Colorado River Basin Salinity Control Forum

Kathy Sertic began by stating that NDEP is proposing a minor revision to the Nevada Administrative Code (NAC) regarding the water quality standards for salinity that are developed by the Colorado River Basin Salinity Control Forum. These standards are referenced in our standards. The way it currently reads is that NDEP refers to a specific review by the Control Forum. Currently, it refers to the 2005 Review. Every three years the Salinity Control Forum reviews the current data and comes out with a report. The numbers have not changed for a long time. What is being proposed is instead of referring to a specific review that has to be revised every time a new report comes out NDEP wants to just insert the words “most current”. If the numbers do change they will have to be revised of course. NDEP will be going before the State Environmental Commission after the October Forum. It is not intended to do a workshop in the Las Vegas area; however, there will be a public notification in the newspapers and also on NDEP’s website.

Presentations and other information is available on the NDEP website at ndep.nv.gov/forum

IV. Other Items

V. Next Forum Meeting

The next Lake Mead Water Quality Forum meeting was scheduled for July 27th at 10:30am. **This meeting has since been cancelled and was re-scheduled for October 26, 2010.**

VI. Adjourn

The meeting was adjourned at 9:10 am