

**MINUTES
of the
WATER QUALITY COMMITTEE
Abbey Inn Hotel
St. George, Utah
September 29, 2016**

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MEMBERS AND ALTERNATES PRESENT

ALASKA	David Schade
ARIZONA	Einav Henenson
CALIFORNIA	Betty Olson Jeanine Jones Tom Howard
COLORADO	Trisha Oeth
IDAHO	Jerry Rigby John Simpson
KANSAS	Tom Stiles
MONTANA	Tim Davis
NEBRASKA	Jeff Fassett
NEVADA	--
NEW MEXICO	--
NORTH DAKOTA	Garland Erbele Jennifer Verleger
OKLAHOMA	--
OREGON	--
SOUTH DAKOTA	--
TEXAS	Jon Niermann Jim Rizk

UTAH

Norm Johnson
Eric Millis
Walt Baker
Erica Gaddis

WASHINGTON

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WYOMING

Steve Wolff
Kevin Frederick

GUESTS

Jeff DenBleyker, CH2M Hill, Salt Lake City, UT
Nathan Bracken, Smith Hartvigsen, Salt Lake City, UT
Jim Fredericks, U.S. Army Corps of Engineers, Portland, OR
Jordan Bunker, Southern Nevada Water Authority, Las Vegas, NV
Shaun McGrath, U.S. Environmental Protection Agency, Denver, CO
Don Barnett, Colorado River Basin Salinity Control Forum, Bountiful, UT
Fred Leutner, U.S. Environmental Protection Agency, Washington, DC (via phone)
Danielle Anderson, U.S. Environmental Protection Agency, Washington, DC (via phone)

WESTFAST

Patrick Lambert, WestFAST Liaison, Murray, UT
Sonya Jones, U.S. Geological Survey, Atlanta, GA
Chris Carlson, U.S. Forest Service, Washington, DC
Becky Fulkerson, U.S. Bureau of Reclamation, Washington, DC
Roger Gorke, U.S. Environmental Protection Agency, Washington, DC (via phone)

STAFF

Tony Willardson
Michelle Bushman
Sara Larsen
Cheryl Redding
Carly Hansen (intern)

WELCOME AND INTRODUCTIONS

Kevin Frederick, Vice-Chair of the Water Quality Committee, called the meeting to order.

APPROVAL OF MINUTES

The minutes of the meeting held in Bismarck, North Dakota on July 14, 2016 were moved for approval, a seconded was given and the minutes were approved.

SUNSETTING POSITION

WSWC Position #359 opposes pesticide applications that require National Pollutant Discharge Elimination System (NPDES) permits, and urges Congress to enact legislation to clarify that pesticide applications performed in compliance with FIFRA are not subject to NPDES permitting.

Walt Baker noted that while he is in favor of the resolution, the issue is no longer really a problem as far as the costs. He recommended either sunsetting the resolution to conserve WSWC resources, or minor changes relating to implementation and record keeping. Trisha Oeth reached out to the Colorado administrators. It has not been a big burden for them. She was also in favor of allowing it to sunset, or tweaking the language. Tom Stiles stated Kansas is not as concerned as they were initially. They have a general permit to deal with it, and from a pragmatic political perspective, the WSWC position has become superfluous and is simply a placeholder in the event it is needed again. There are better uses of WSWC time, resources, and political capital, particularly when we have bigger fish to fry. Tony Willardson noted that we can return to the position if needed after it sunsets.

Tom moved to sunset Position #359, Walt seconded, and the motion was approved.

WATER QUALITY IN UTAH

Erica Gaddis, Assistant Director, Utah Division of Water Quality, discussed several water quality concerns Utah is currently tackling, including legacy mine drainage, harmful algal blooms (HABs), and statewide water infrastructure.

They recently completed their 2016 Integrated Report, incorporating CWA §303(d) and §305(b) requirements, and found that 36% of their lake acres are impaired (across 51 lakes and reservoirs comprising 376,676 acres) and 43% of stream miles are impaired (across 240 stream segments for a total of 15,583 miles.) Water quality impairments include algal blooms, phosphorus and other nutrients, and metals from abandoned mines. Utah has many abandoned mines as well as dozens of large and complex petroleum spills each year.

Following the Gold King Mine release in August 2015, Utah reviewed historic mine releases and the depositional area of the San Juan Arm of Lake Powell. They developed a conceptual monitoring plan for the surface water, sediments and biology, identifying potential sampling sites. In 2011, the USGS did a coring study in the San Juan Arm, enabling them to see

what impact the increased metals from the spill are having on Lake Powell. To put the 3 million gallon 2015 release into perspective, in 1978 there was a 500 million gallon release. The Gold King Mine released an estimated 500-850 million gallons of fluid between 2005 and 2015. They are estimating 8.6 million tons of tailings discharged to the river system over the life of the mine.

They've also been dealing with abandoned mine drainage in American Fork Canyon, with high metal concentrations in the sediment causing a massive fish kill along a two-mile stretch of the Tibble Fork River as the water was drawn down. The situation highlighted a possible regulatory gap. Utah has no metals standards for sediments, and she wondered whether other states have standards in place. They are currently utilizing NPDES monitoring permits for point source discharges. They are considering whether to do some sort of NPDES permitting. Abandoned mine management falls under several state and federal agencies: U.S. Forest Service, Bureau of Land Management, and EPA (under CERCLA), as well as the Utah Division of Water Quality and the Division of Oil, Gas, and Mining. The agencies are working to implement best management practices for safety and to reduce stream discharge, finding ways to treat contaminants, remove mine waste, and isolate the metals from the water. They're also working on an inventory of abandoned mines that are actively discharging, and streams impacted by the mines.

In July 2016, the Utah Departments of Environmental Quality (UDEQ) and of Health (UDOH) closed Utah Lake due to harmful algal blooms. UDEQ/UDOH HAB guidelines recommend closure for greater than 10M cells/ML. Water samples contained algal cells in concentrations three times the threshold for closing a body of water. The general scientific consensus is that HABs develop and persist with increased nutrient pollution, warm temperatures, clear water, and stagnant conditions. Sustaining large HABs requires external sources of nutrients, and reduction of nutrient inputs from watershed sources can significantly reduce HAB frequency and magnitude. They need better monitoring, prediction, and analytical tools. They are implementing an adaptive nutrient reduction strategy, reaching out to wastewater treatment plants contributing to HABs. Utah has focused on securing water supplies for a growing population, but initial plans failed to include wastewater treatment plants to cope with the additional water supply. They're working on a proposed technology-based phosphorus effluent limit rule. It would require mechanical wastewater plants to meet a 1 mg/L standard, with variance options to accommodate unique facility circumstances, and is anticipated to create \$24 million in capital costs.

DISCUSSION: PREDICTION, ASSESSMENT, AND RESPONSE TO HARMFUL ALGAL BLOOMS

Given recent concerns with algal blooms impacting water quality, members discussed various approaches their states, including Utah, Texas, and Kansas, are using to address nutrients and public safety.

AMMONIA CRITERIA VARIANCES

Tom Stiles, Chief, Office of Watershed Planning, Kansas Department of Health & Environment (KDHE), offered a presentation on Kansas' water quality standards for EPA ammonia criteria, and adopting variances as authorized by EPA rules and the Kansas legislature in 2015.

Most of the modern mechanical plants can meet the criteria, but older plants and lagoons struggle with the increasingly stringent requirements. EPA's regulations (40 CFR 131.14) allow variances for individual or multiple dischargers, or specific water bodies, while requiring compliance with all other water quality standards and effluent limits. Kansas met with EPA headquarters and Region 7 staff on monthly calls for 18 months to work out the details of the variances, with lots of back and forth with a very cautious EPA over the language.

The time-limited designated use and variance criteria reflect the highest attainable condition as an alternative to the ammonia criteria due to various factors, including natural pollutant concentrations, low flow conditions, efforts to correct the human caused pollution would cause more environmental damage, dams and other permanent hydrologic modifications preclude attainment of criteria, compliance would result in substantial and widespread economic and social impact, or restoration activities preclude attainment of criteria until completed. In Kansas, the multiple discharger variance was driven by economic factors, due to the median household income, tax revenues, and costs for mechanical treatment. Kansas established a schedule for reevaluation and provided supporting documentation to ensure that the term of the variance is no longer than necessary to achieve the highest attainable condition.

The KDHE would review the NPDES permits to determine whether dischargers can potential meet the new ammonia criteria or if a variance is required, calculating projected limits and historical ammonia effluent data. KDHE also determines financial eligibility, whether a community can afford to build a new mechanical treatment facility based on a matrix of various indicators. Eligible towns are issued alternate ammonia effluent limits, included in the NPDES permit along with the Pollutant Minimization Plan (PMP). The PMP requires a certified operator, reasonable and adequate maintenance, system requirements with secondary treatment limitations, accumulated sludge monitoring, excludes industrial strength wastewater containing high concentrations of nitrogen, and plans for expansion of the system if the population grows.

EPA's 2013 criteria will likely be adopted soon, and the revised variance regulations are under internal review. Kansas' variances would aid small towns to achieve the highest attainable condition with the existing systems and minimize the financial burden that would otherwise be needed for large scale upgrades.

DICUSSION: CONNECTING WATER QUALITY AND PUBLIC HEALTH

Trisha Oeth led a discussion about what the states are doing to raise public and legislative awareness about the importance of good water quality for public health.

EPA UPDATE

A. CWA 304(a) Nutrient Criteria for Lakes and Reservoirs

Roger Gorke was unsure of the timing and details on the nutrient criteria.

Walt Baker noted that ACWA had a call last week about EPA's information request to all publicly owned treatment works (POTWs), seeking basic facility identification, characterization, and technical information. Roger said he is aware that EPA is trying to get a sense of all the potential sources of nutrients and how to get a handle on them.

B. Proposed Rulemaking on Baseline Water Quality Standards for Tribes

Danielle Anderson and Fred Leutner (EPA) talked about the advanced notice of proposed rulemaking. The notice was published in the *Federal Register* today (September 29) and is soliciting comments on the proposed questions. There is a 90-day comment period. They will hold two informational webinars for the public in November and December. The standards would apply to reservations as well as trust lands. There are 42 tribes approved with Treatment as States (TAS) authority, but there is a gap of over 250 tribes with reservations that have not achieved TAS authority. Those are the waters that would be targeted for this rule.

C. Gold King Mine Cleanup

Shaun McGrath, EPA Regional Administrator, provided an update on cleanup, monitoring, and investigations of the Gold King Mine incident. EPA has provided \$30 million reimbursements to the states and tribes and local governments, as well as \$2 million for monitoring, \$293 million for Superfund cleanup costs, and \$330,000 for Utah and New Mexico to purchase early warning systems. There has been a ton of work done at the mine to stabilize the ceiling and sides to prevent any further collapse. Since October, EPA has treated 273 million gallons of acid mine drainage, discharging at 1,200 gallons per minute, with 95% of the metals removed from the water discharge. EPA has 30 monitoring sites from the headwaters to Lake Powell, in addition to monitoring by the states and tribes. They kept a close eye on spring runoff, with the highest flow in June, and through the summer. They've had some historical records for comparison, and they're making the reports available to the public as they put them together. The Bonita Peak Mining District, which consists of 35 mines plus tunnels and tailings, was added to the Superfund National Priorities List. The Department of Interior, EPA Inspector General, and Congress have investigated, held hearings, and issued reports to determine how the incident occurred. Several lawsuits have been filed, and there are unresolved claims under the Tort Claims Act. Shaun noted that you should obviously try to avoid this sort of thing if you can, but it has raised national awareness and prompted conversations about challenges in the west. They're trying to take advantage of the opportunity to educate while they can, as the attention is fleeting.

COLORADO RIVER BASIN SALINITY CONTROL PROGRAM

Don Barnett, Executive Director, Colorado River Basin Salinity Control Forum, provided an overview of the Salinity Control Program, which started 40 years ago (1973) amid rising concerns about the increased salinity as well as the implications of the newly passed Federal Water Pollution Control Act. The program includes seven states, as well as hundreds of local agencies, organizations and companies. In 1975 they adopted salinity standards, and over time they established numeric criteria and point source activities. With more than half a billion dollars in funding and the joint efforts of partners, they have significantly reduced the annual salt load (-1.3 million tons per year) from where they were in the 1970s. The millions of users in the lower basin have a better water supply thanks to the implementation of the Salinity Control Program.

Much of the salinity comes from the geology of the region, with the Paradox Basin evaporates and Mancos Shale unit providing natural contributions of salt throughout the basin. Non-point source efforts to control the salinity include lining and piping canals and ditches (Reclamation-FOA, \$8 million appropriation plus \$3.5 million cost share); on-farm irrigation efficiency improvements (NRCS-EQIP, \$10 million appropriation plus \$4.3 million cost share); and rangeland improvements (BLM-Soil Water and Air Program, \$1.5 million appropriation and no cost share). Point source activities include state NPDES administration consistent with the Forum's policies (7 Colorado Basin states and EPA); plugging saline wells (BLM); and saline spring disposal (Paradox Valley Unit, Reclamation). The saline spring disposal involves pumping salt down a deep injection well that reaches down to 16,000 feet, under about 5,000 psi of pressure, which creates thousands of earthquakes, most of them under 4.0. The well has been operating for more than 20 years, which is past its design life, and the pressures have been increasing in the well. The Forum is involved in an EIS process to determine an alternative disposal solution in Paradox Valley.

We spend a lot of time working with USGS. They do studies in advance of our projects, trying to understand the salt mobilization processes and where it's coming from, as well as post-work at the end of projects to identify that our efforts have actually been successful.

The Colorado River Basin Salinity Control Act (1974) provides that because most of the salt comes from federally administered lands, 70% of the funding is paid by the federal government, with 30% paid as a cost-share by the Basin states through the Basin Funds, where they are generated from a mill levy on power revenue on Glen Canyon and Hoover Dam. Program participants also cost-share in their projects. In FY2016, funding levels (including administration, technical assistance and studies) were \$14 million through Reclamation, \$12 million through NRCS, \$1.5 million through BLM, with a cost share of \$11 million for the Basin states.

While the salinity in the Colorado River has been reduced, there is still damage occurring. Reclamation currently estimates \$382 million in damages, predominantly in Imperial Valley (agriculture) and Parker Dam (M&I), which is several hundred million dollars in reduced annual damages. The Forum is a very unique and successful voluntary partnership between

states, federal agencies, and water users. More information, including reviews and documents, is available at the Colorado River Basin Salinity Control Forum, and they will be posting a video soon that provides an overview of the program.

Pat Tyrrell: Don, as a member of the Salinity Control Forum and the Council, that's probably the quickest, most detailed, and encompassing explanation of the Program I think I've ever heard. Thank you for that. Can I get a copy of your power point?

David Schade: What are the historical baselines that you are trying to go toward? I know you might never get there, but I'm from Alaska, so I know nothing on the standards.

Don: So when the states came together and EPA started to mandate and say, hey, you guys are going to clean up the salinity of the river, they looked at it and they came back and said, we're not going to let it degrade any worse than the 1972 levels at those three indicator stations downstream. So that's what the standard and focus has been. Since then, we've come to realize that those levels will create hundreds of millions of dollars in damages to lower basin users. So we don't even want to go up to those levels. So we're trying to hold the salinity below those levels because of the economic impact. Right now we're looking at economic models and trying to include more sectors and evaluate the impact on the economies of lower basin states with increased salinity levels.

Kevin Frederick: Thanks Don. That was one of the best, quickest presentations on a complex subject I've seen in quite a while.

DISCUSSION: PREPARING FOR ADMINISTRATION TRANSITION TEAM

We anticipate hearing more about this topic from the Executive Committee. Start thinking about what three top water quality issues are important to your state, and we'll gather those up.

OTHER MATTERS

We have a sunseting position (#364) coming up in 2017 at the spring meeting in Nebraska.

There being no other matters, the meeting was adjourned.