

## MEETING SUMMARY

Clean Rivers Upper Basin Water Quality Advisory Committee Meeting  
March 8, 2017

The meeting convened at 9 a.m. at the UCRA office (512 Orient) in San Angelo. Chuck Brown, UCRA Director of Operations, moderated the meeting. Brown welcomed everyone and asked participants to introduce themselves.

### **Robert Lee Chloride Monitoring Study- NPS319**

Chuck Brown presented information on UCRA's Robert Lee Salinity study that began in January. UCRA was awarded an EPA 319h grant managed by TCEQ to study salinity in Robert Lee. A post award meeting was held and staff is in the process of writing the Quality Assurance Project Plan (QAPP). A desktop review of the nearby oil and water wells will be conducted and the next step would be to drill monitor wells if needed. The grant is a result of an impaired Stream Segment 1426 with an ongoing Total Maximum Daily Load (TMDL) and recently updated Implementation Plan. The goal of the project is to identify the source of the salinity issue and help the water body meet stream standards.

Q. Are the chlorides natural or manmade?

A. Unsure at this time. Will be looking for a point source during discovery, parameters are unknown at this time. There are naturally occurring total dissolved solids (TDS) in the groundwater but they are mainly sulfates. Historical releases of water from EV Spence were most likely concealing the salinity at the site.

### **Brady Creek WP Implementation Project-Phase I-NPS319**

The Brady project is part of an on-going NPS program for UCRA that began in 2001. There were several small Best Management Practice (BMP) projects built in Brady with NPS funding. UCRA also developed a Watershed Characterization Plan in 2010 and a Watershed Protection Plan (WPP) in 2014. The WPP was approved in 2016. UCRA applied for funding for an implementation/education outreach project and was notified of contract award in December. It is anticipated that the contract should be initiated in FYE18, barring any cuts to EPA from the current administration. This is a multi-phase project involving the installation of vortex separators in the watershed over the next 10-12 years, if funding is available. Maintenance for the City of Brady is minimal and the City is in support of the plans. Long-term planning involves re-routing Brady's outfall upstream by Richards Park. The goal is to remove pollutants, increase flow and eventually remove the segment from the impaired list.

Robert Grudier, TCEQ Project Manager was introduced. Grudier stated that while it is too early in the administration to say how funding will be affected, TCEQ still feels optimistic about future grant opportunities. There is also potential for Green monies through the TWDB to assist with these projects. All NPS grants require a match and are 60/40.

### **2016 Integrated Report:**

TCEQ's Colorado Basin Assessor, Robin Cypher, was introduced to present information on the current Texas Integrated Report of Surface Water Quality. The Clean Water Act requires an Integrated Report

every two years. The purpose of the report is to determine if stream standards are being met or not. The majority of the data comes from the TCEQ Clean Rivers Program partners. The last approved report was the 2014 Integrated Report, approved in 2015. The 2016 Integrated Report is still in the draft stage.

There are 22 waterbodies listed as impaired in the Colorado River basin, and 11 of these are in the upper portion of the basin. Five of the waterbodies listed as impaired have management plans in place. The Draft 2016 Integrated Report has only one new impaired listing, which is for nutrients/chlorophyll in Lake Coleman. Cypher commented that having only one new listing is positive.

Q. Is the chlorophyll too high or too low?

A. It is too high, which is typically indicative of algae. There is currently not an approved standard for chlorophyll. Chlorophyll is a measurement

The Concho River bacteria impairment has been removed, but the dissolved oxygen is still not meeting the standard. There is management in place with improvements shown. Stream Segment 1431 was delisted for bacteria. The data that is used for the assessment of waterbodies is taken from a 10-year time period. It takes more data over time to delist any segments.

In regards to chlorophyll monitoring, there are currently discrepancies with the analysis methodology. Because this is the first run for setting nutrient standards, TCEQ wants to be comprehensive and cautious before moving forward with getting the standards approved.

Next steps for the 2016 Assessment are public comment, TCEQ approval and EPA approval. The team is already preparing for the 2018 assessment.

For more information, a power point presentation will be available on UCRA's WQAC project webpage at: [http://www.ucratx.org/water\\_adv.html](http://www.ucratx.org/water_adv.html)

#### **Colorado River Alliance Presentation:**

Brent Lyles, Executive Director of the Colorado River Alliance, made a presentation about the organization and updated the group on the current activities. Current issues the Alliance is watching includes: Pending 'Waters of the US' law, freshwater mussels, research pertaining to the linkage of groundwater & surface water interaction and the Alliance continues to look ahead and get people thinking about "the next big drought". The bulk of the organization's work is educational. It is estimated that 12,000 youth are reached annually. The Mobile River came to San Angelo in January, reaching all of the middle schools and over 1000 students.

The Mobile River is the recipient of the 2017 Texas Environmental Excellence Award for Education. The group is also engaging adults. The most recent event was the Barstow Speaker series in Austin that incorporated "Watch Parties" that were held throughout the basin.

Christy Youker said that San Angelo hosted a Watch Party with 40 local high school students who are involved in Earth Science. The students were prepped ahead of time and were able to ask questions via the live feed. Youker felt the event was very impactful for all who were involved.

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### **Coordinated Monitoring Meeting Recap:**

The group met on March 7, 2017 at the UCRA office and reviewed all of the monitoring sites utilizing the tools on the Coordinated Monitoring Schedule website (<https://cms.lcra.org/>). The group was able to see what is currently being monitoring and to discuss what modifications, if any, are needed to the current schedules. It was determined that no changes were needed this year. *Enterococcus* has been added to the parameters in segment 1412. This parameter could not be monitored previously due to lab constraints, however, there is a lab in Abilene that now has the capability to run the tests.

Dave Cowan of LCRA commented that things have really evolved from the early days thanks to new technology which has shortened meeting times and increased productivity. It has allowed for more cohesive programming and the ability to communicate in this way has eliminated overlap. Data is readily available and assists greatly in streamlining shared sites.

### **Lake Level Report -- Now vs. Last Year:**

Chuck Brown of UCRA stated that rainfall in the past year has been productive and flows have been at or above historical norms. The Middle Concho River is the only segment not flowing.

*Brown provided a brief overview of the area lakes:*

O.H. Ivie is at almost 25% and has the capability to provide ¾ million people with water. The last time that Ivie was full was in 1995-96. Twin Buttes Lake is 33.5% low and is gauged at the main pool. O.C. Fisher Reservoir is on the north side of San Angelo and was built for flood control. Lake Nasworthy is a major water supply and is considered a "constant level lake". Lake Brownwood is always 100% full. Lake Spence has never been full and it has been decades since Lake J.B. Thomas was full.

UCRA has applied for brush control funds with the TSSWCB for salt cedar and willow baccharis at O.H. Ivie Reservoir. While it is not ranking high at this time, UCRA is hopeful that this could change.

Q: Why is the project not ranking high?

A: Ranking system is based on computer modeling and in what will yield the most water. The model is based on data submitted. Modeling for a lake basin is harder than for a watershed and the model was not proved enough (too much variance).

Q: Is the salt cedar beetle still working?

A: Yes, when they are present. Problem is that they come and go. It takes repeated infestations and works better in some areas than other, research is ongoing.

Data from the Texas Water Development Board for lake levels can be found via UCRA's website homepage at [www.ucratx.org](http://www.ucratx.org), by clicking on the "Lake Storage Levels" link in the left hand column.

John Burch, Colorado River Municipal Water District (CRMWD), stated that they have a link on their website also, as well as other valuable information at <http://www.crmwd.org/>. Burch gave a brief overview of the CRMWD's website, showing links of interest.

### **CRMWD Raw Water Production Update:**

John Burch provided a power point presentation with current information about the facility, which is housed in Big Spring. Data is also available on the power point.

The facility takes water and treats effluent through micro filtration, reverse osmosis and UV and is then blended with lake water. While CRMWD considers it a blended water system, TCEQ classifies it as Direct Reuse. The plant is four years operational. This plant is the only one of its kind in Texas.

Q: What cause treatment deficiencies?

A: While it can be very efficient, most of the deficiencies are operational issues, i.e. backwashing. Beals Creek is the receiving stream that the plant discharges its concentrated brine waters into. There are wide ranges that are attributed to operational issues. They will not take water if it doesn't meet standards. If it can't be used, it goes back to the Big Spring wastewater treatment plant. The water quality in Beals Creek is ambient.

The TWDB has developed a Water Quality Research and Efficiency paper for the plant. The final report is awaiting approval. UCRA will send a link for the report to the group as soon as it is available.

### **Golden Algae Updates:**

Lynn Wright, Texas Parks and Wildlife, addressed fish kills in a ¼ mile section of the Colorado River arm at O.H. Ivie Reservoir. Based on what was investigated the kill has been going for a week. Samples have been submitted, but results are not back yet. There was a recent kill in Elm Creek at Ballinger with highly toxic test results, but the kill was not excessive. The cell count taken after 4 days was lower. Overall it has been a good year for lower cell counts and toxicity. Toxicity and cell counts don't always match. Ivie fish kills reports are not yet in.

Q: Why don't cell counts and toxicity match?

A: Golden algae might be present in high numbers, but they might not release toxins. Golden algae research is not conclusive and its toxin production still can't be tied to anything specific. Many theories and studies, but it is a moving target.

***Dave Cowan, Project Manager with LCRA CRP announced his retirement*** and expressed his appreciation for the Upper Basin group's commitment and passion over the years. Cowan also expressed his appreciation to UCRA and the staff for their participation in the program since its inception. Lisa Benton was introduced as his replacement.

### **Zebra Mussel Update:**

David Cowan and Lisa Benton made a power point presentation regarding Zebra Mussels.

Zebra mussels are tiny, invasive bivalve mussels that attach to hard substrate in the water bodies where they are present. They have ravaged waterbodies in the Northeast US and have made their way into Texas in recent years. They have not been found in the Colorado River basin, but zebra mussels are established in a handful of reservoirs in the Brazos River basin just to the north.

Zebra mussels grow in large numbers and impact drinking water and recreation. They filter phytoplankton out of the water column and impact the food chain. Preventative strategies are in place and research is on-going. Outreach and monitoring efforts are fairly aggressive.

The mussel's larvae are microscopic and cannot be detected by the naked eye. They can be transported via boat within the live wells and areas of the boat where lake water can collect. Zebra mussel settlement samplers are located throughout the Colorado River basin to serve as an early warning system for detection. If anyone is interested in participating, please contact Benton.

A new TPWD law states that you must clean, drain and dry your boat to deter transport from infested water bodies. Once the mussels are in the lake they completely take over. Use heat, high pressure washing and/or bleach to clean the boat.

Ongoing research is showing that zebra mussels in Texas lakes may follow a boom-bust cycle in the first several years of infestation. When they use up all the food resources in a lake due to their high metabolism in the warm Texas waters, their population dwindles. It is thought that this could be a southern phenomenon—warmer climates are less conducive to their survival.

### **Freshwater Mussels:**

Lisa Benton presented information on the freshwater mussels found in the Colorado basin that are being evaluated by U.S. Fish and Wildlife Service for listing under the Endangered Species Act. There are five species being considered for listing. Four of the species – Texas fawnsfoot, Texas fatmucket, Texas pimpleback and false spike – are currently being evaluated with an expected decision to be made within the next 2 years. The remaining species, smooth pimpleback, is on a two year delay with a final listing decision expected in 4 years from now. Data is being accumulated by U.S. Fish and Wildlife Service for the four species and letters are going out requesting information from stakeholders who could be impacted by a listing decision or involved with mussel conservation efforts. The Fish and Wildlife Service asks: what are the threats, what is the current habitat and what conservation actions are taking place or need to take place?

The Texas State Comptroller's Office is involved in research for endangered species. They bring funding to the table to ensure that science is first and decisions are not made on a political basis. They have recently funded a \$2.3 million research program to survey, research and conduct captive propagation of the mussels in the Colorado River basin, with portions of the Guadalupe and Brazos river basins also included. The Comptroller's staff is asking interested stakeholders to participate in a Central Texas mussel stakeholder group that they are convening together on a monthly basis in Austin for meetings. If you are interested in attending, meeting schedules are available. Contact Lisa Benton for more information. Texas State University is the research institute.

At this time the threats to the mussels are not completely known, which is why the Comptroller-funded study is key. If the mussels are listed as endangered it could impact how water is managed in portions of the basin so it is important for interested stakeholders to stay apprised.

Some discussion ensued regarding local landowner responsibilities and a Natural Resource Conservation Service initiative that provides cost sharing for land conservation measures that could benefit mussel habitat or other species of concern that inhabit the landowners property.

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**Roundtable Discussion:**

There was no roundtable discussion as members felt all pertinent topics were addressed during the other agenda items and the presentations.

Brown and Cowan thanked members for their participation, the discussion concluded and the meeting ended at noon.