

**Upper Colorado River Authority  
Clean Rivers Program  
Water Quality Advisory Committee Meeting**

**Meeting Notes  
May 12, 2022 @ 9 a.m.**

Nancy Blackwell, UCRA Chairperson, welcomed everyone to the meeting and asked those present to introduce themselves.

**Coordinated Monitoring Meeting Recap**

**UCRA – Lexi Woods, Environmental Specialist**

Woods gave a brief overview of the discussion and changes made to the coordinated monitoring schedule in the Upper Colorado River Basin. To assess the status of the currently impaired (depressed dissolved oxygen) Brady Creek (1416A\_03), UCRA will begin performing 24hr DO monitoring in FY2023. Data collection was suspended at this site in 2007. The resumption will coincide with implementation of the Brady Creek Watershed Protection Plan and monitor anticipated long term water quality improvements.

In the CMM, discussion was raised about the consistent impairment status of the San Saba River (1416\_01) for bacteria in which Lisa Benton explained the impairment status was likely due to agricultural influence and LCRA is looking into developing stakeholder support to investigate further.

Due primarily to TCEQ Region 8 staffing issues, UCRA has agreed to take over their monitoring activities in FY23 on the following reservoirs: Twin Buttes, Lake Nasworthy, O. C. Fisher, Oak Creek, and Brady Creek.

**LCRA – Aaron Richter, Data Manager and Project Coordinator**

Richter discussed key changes made to the coordinated monitoring schedule and consequent discussion followed in the Lower Colorado River Basin at the LCRA CMM. The TCEQ Region 12 Field Office will increase the frequency of sediment sampling at Segment 1402, station ID 16805.

In segment 1428, LCRA proposed increasing current monitoring efforts in Dry, Maha, and Cedar Creeks (downstream of Austin) due to new and proposed wastewater permits in these waterways and the possible influences on water quality. Further discussion with current collecting entity, Travis County, will be aimed at collaborative data reporting under a 2024 QAPP instead of additional sites for FY23. LCRA also proposed to add a monitoring site at Austin Colony Park between FM 973 and Webberville.

On the Llano River (segment 1405), LCRA will be adding a site on FM 1871 in which four samples per year will be collected. At Inks Lake (Clear Creek 1407A\_01), LCRA will be collecting water quality samples for FY23 to address current impairment status and set up routine inspections of this waterbody.

**Water Quality Reports**

**UCRA – Scott McWilliams, General Manager**

McWilliams discussed the recent water level trends and impairment statuses of O.C. Fisher, Oak Creek, Brady Creek, and Twin Buttes reservoirs. O.C. Fisher reservoir has an inverse relationship of water level to TDS and chlorides. McWilliams explained that as water level decreases, the concentration of TDS and chlorides increases due to lack of rainfall and high evaporation rates. McWilliams also discussed regional waterbodies being listed and delisted in the draft 2022 Texas Integrated Report.

The past and current Texas Integrated Reports are available on TCEQ's website:

<https://www.tceq.texas.gov/waterquality/assessment>

New listing for bacteria at E.V. Spence Reservoir (segment 1411) was discussed to address Robin Cypher's (TCEQ) request for possible cause of elevated bacteria in this reservoir. McWilliams explained that although site 12360 is described as part of E. V. Spence Reservoir, because of the reservoirs low contents, it is actually a river site and wildlife, agriculture, and oil field activity could all contribute to elevated bacteria in the waterbody.

McWilliams asked Cypher when nutrient standards will be added to rivers and streams. Cypher said the discussions are underway, but nothing concrete will be developed anytime soon. For now, if analysis reveals 'high' nutrient levels, that waterbody is classified as a 'waterbody of concern'.

#### **CRMWD – John Burch, Water Quality Supervisor/ Aquatic Biologist**

Burch discussed the status and historical water quality trends in Texas, with a focus on CRMWD's regional waterbodies E.V. Spence, Lake J.B. Thomas, and O.H. Ivie. Burch provided the current water elevations of each waterbody and explained the comparison to historical elevation data. Burch also demonstrated the interactive resources available on the CRMWD website and showed the data available on the Texas Water Development Board website.

Burch showed a graph of use and loss of water due to evaporation, explaining that loss of water due to evaporation has increased greatly for the last ten years and that rainfall has been slow to replenish volume in these waterbodies.

Lake level details and interactive resources may be found here: <https://www.crmwd.org/lake-levels/>

Water Quality Reports may be found here: <https://www.crmwd.org/news/current-water-report/>

Texas Water Development Board website waterbody data: <https://www.waterdatafortexas.org/reservoirs/statewide>

#### **Integrated Report Status & Updates**

##### **TCEQ – Robin Cypher, Water Quality Assessor**

Cypher began by defining the purpose and goals of the Texas Integrated Report and the process by which the report information is approved for publishing in each biennial assessment cycle. Cypher then discussed the Draft 2022 Texas Integrated Report and 303(d) List, including listings and delistings of waterbodies added in 2022. In June of 2022, this report will be presented to the TCEQ commission and after approval, it will be sent to EPA for final approval. In September 2022, TCEQ will begin the call for data for the 2024 Integrated Report.

The current Texas Integrated Report are available on TCEQ's website:

<https://www.tceq.texas.gov/waterquality/assessment>

#### **Concho River Project: Water Supply & Infrastructure Improvements**

##### **City of San Angelo – Allison Stube, Water Utilities Director**

Stube explained the Concho River Project: an indirect reuse project that aims to deposit highly treated water from the city wastewater treatment plant into the Concho River to act as a sustainable source of water for municipal use. Improvements to wastewater plant infrastructure were made, replacing certain units greater than 90 years old.

More information on COSA's Concho River Project can be found on their website: <https://www.cosatx.us/departments-services/water-utilities/concho-river-water-project>

McWilliams asked how the water effluent will be regulated before discharge into the Concho River. Stube clarified that the effluent will meet permitting requirements and be in compliance with drinking water standards set by the EPA.

#### **Community Outreach Initiatives**

##### **City of San Angelo, Keep San Angelo Beautiful – Charlotte Anderson, Executive Director**

Anderson gave an overview of the trash-clean-up events, volunteer opportunities for students, hazardous waste removals, tree plantings, and science and art initiatives that KSAB has hosted. KSAB has provided abundant opportunities to students and community members to help improve their community and learn about the importance of maintaining a clean and healthy environment.

More information on KSAB and volunteer events: <https://www.cosatx.us/departments-services/neighborhood-family-services/keep-san-angelo-beautiful>

### **UCRA Nonpoint Source Project Updates**

#### **UCRA – Scott McWilliams, General Manager**

##### **Brady WPP Implementation**

The vortex separator was installed summer 2020 and two monitoring events have occurred since then. COVID has caused numerous delays for this project and UCRA has requested an extension for an additional year. An in-person BioBlitz outreach event was held in April 2022. A water bill insert describing this event and project information was disbursed in Spring 2022. McWilliams and the UCRA staff are hopeful that more rainfall events can be measured this year.

Additional information available on the project webpage: <https://www.ucratx.org/brady.html>

##### **Chloride Investigation in Robert Lee**

The goal of the project was to determine the source of high chlorides in the Colorado River at site 18338 in Robert Lee. More than twenty apparent water wells located in Robert Lee were identified through thorough desk review. McWilliams went door-to-door to obtain landowner permission and conduct field monitoring of shallow groundwater. The project had been extended through February 2022 due to delays caused by the pandemic. The investigation showed that the high levels of chloride were likely due to an old oil field well that was improperly plugged. Although the area near this well was unable to be measured, the TDS levels (indicator of chlorides) in wells in town and surrounding the site were an acceptable range, supporting the final conclusions. The final report was completed in December 2021 and approved by TCEQ in February 2022.

Additional information available on the project webpage: <https://www.ucratx.org/robert-lee>

##### **North Concho River Bank Stabilization Project**

Along with the City of San Angelo, UCRA will be constructing erosion mitigation structure along an 1100ft expanse of the North Concho riverbank. The construction is currently on hold, awaiting generation and approval of a CLOMR (conditional letter of map revision) through FEMA.

Additional information available on the project webpage: <https://www.ucratx.org/bank-stabilization>

### **Plants and Microplastic Pollution**

#### **UCRA – Lexi Woods, Environmental Specialist**

Woods gave a presentation on research done for the completion of her Master's thesis while in Louisiana. Microplastics are plastic particles from 5mm to 1µm in size and originate from a variety of sources. They are now one of the most ubiquitous pollutants in the environment. Effects to the environment and wildlife vary, but emerging research is showing harmful influence on fish, invertebrates, and other aquatic organisms through bioaccumulation of toxic compounds and digestive blockages. The recent draft of Texas Water Quality Standards Proposed Changes is aiming to regulate the discharge of pre-production plastics more strictly, by categorizing pre-production plastic separately from NPS secondary plastic.

Woods's research provides evidence that wetland vegetation can play a role in sequestering microplastics into sediments by allowing microplastics to stick around plant tissues rather than continue to travel through waterways.

### **Golden Algae & Other Updates**

#### **TPWD – Lynn Wright, District Fisheries Biologist, Inland Fisheries Division**

Wright gave an update on golden algae blooms and toxicity. In a typical year, E.V. Spence reservoir has golden algae blooms with low toxicity from December to February. This year has been typical with minor fish kills; overall low impact events. TPWD performed gill net surveying following the blooms and found fish populations were normal, which supported that the blooms had little impact on the fisheries in E.V. Spence.

Moss Creek has toxic blooms every year and last year, TPWD found moderate toxicity around December and a decrease in February. The trend of early toxic blooms that decline as the year goes on has been seen for the past four years or so.

Lake Colorado City has been highly toxic several decades, but this year TPWD found no toxic levels of golden algal blooms. Wright speculated that the heavy rainfall this year has caused enough dilution to keep bloom populations down.

In O.H. Ivie, they haven't observed toxic golden algae blooms since 2017. Wright suggested that heavy rainfall could influence this as well. Wright reported the latest creel survey results which showed that 30% of Texas caught bass 13lbs or larger were caught in O.H. Ivie. Wright stated this is consistent with the economic increase as well; this spring season has yielded approximately two million dollars in fishing-related activity. Typical yield is around one million dollars per year.

### **Zebra Mussel Status & Updates; Native Mussel Updates**

#### **LCRA – Lisa Benton, Aquatic Biologist/ CRP Program Coordinator**

Benton discussed the status of native and zebra mussels in the Colorado River basin. Benton gave an overview of their lifecycles to explain how detrimental invasive zebra mussels can be. O.H. Ivie and all of the Highland Lakes are currently infested with zebra mussels. Benton presented multiple resources to learn more and combat the spread of zebra mussel populations.

Clean Drain Dry & other resources available on LCRA website: <https://www.lcra.org/water/quality/zebra-mussels/>

Dan McClung asked if there was anything being done to track the proliferation of the zebra mussels in our waterbodies. Benton stated that her team is actively tracking the distribution of zebra mussels through the waterways and performing surveys and water quality monitoring to understand effects of zebra mussel presence in each waterbody in the lower basin.

Benton stated that four native freshwater mussel species in the Colorado River basin are proposed for listing under the Endangered Species Act. LCRA is in discussion with U.S. Fish and Wildlife Service (USFWS) regarding a draft CCAA (Candidate Conservation Agreement with Assurances; for more info on CCAAs, click [here](#)). This draft CCAA is currently under review at USFWS and will hopefully be approved before August when the final listing decision is made by USFWS for the four mussel species under review.

Jennifer Bronson-Warren added that critical habitat will be determined for native freshwater mussels in certain areas where the proposed listings (six native species total in central Texas) are found. This categorization will not affect every area in which these native mussels are found but this is important to keep in mind for future monitoring all over the basin.

### **Harmful Algae in the Highland Lakes**

#### **LCRA – Anthea Fredrickson, Aquatic biologist**

Fredrickson gave background information on differing types of algal blooms as well as the toxins produced by harmful algae. Historically, harmful algal blooms are known to peak in late summer, influenced by high temperatures, low flows, and excess nutrients. However, a harmful algae event occurred in late February 2021, when it was reported that a dog had died after playing in Lake Travis. Testing confirmed the presence of toxins produced by blue-green algae.

On-going monitoring is being conducted by LCRA and the City of Austin throughout the Highland Lakes, Lake Austin and Lady Bird Lake.

Fredrickson explained that lab analyses have shown that the toxins are contained within the algae itself. In a few tests, only trace amounts of toxin have been detected in the water directly adjacent to the toxin-producing algae. The blue-green algae that are producing the toxins are benthic (growth stage is on the bottom of the lake in shallow areas) as opposed to planktonic (microscopic cells dispersed throughout the water column).

Analyses have shown that the toxin-producing species are present in all algae samples collected since February, so even if there are no toxins detected at the time of collection, the potential for toxins to be produced is there. Therefore, LCRA is advising that people and pets avoid contact with algae.

More information is available on LCRA's website:

<https://www.lcra.org/water/quality/algae-in-the-highland-lakes/>

**Opportunity for Comments and/or Questions:**

McWilliams and Woods thanked everyone for participating both in person and online, especially those presenting, and asked if there were any other comments or questions. There was no further discussion or questions.

The meeting was concluded.

**List of Acronyms**

UCRA – Upper Colorado River Authority  
LCRA – Lower Colorado River Authority  
TCEQ – Texas Commission on Environmental Quality  
TPWD – Texas Parks and Wildlife Department  
CRMWD – Colorado River Municipal Water District  
COSA – City of San Angelo  
FEMA – Federal Emergency Management Agency  
NPS – Nonpoint source  
USGS – U.S. Geological Survey  
CMM – Coordinated monitoring meeting  
CMS – Coordinated monitoring schedule  
QAPP – Quality assurance project plan  
CLOMR – Conditional letter of map revision  
AU – Assessment unit  
KSAB – Keep San Angelo Beautiful  
CCAA – Candidate conservation agreement with assurances  
USFWS – U.S. Fish and Wildlife Service  
IRTC – Interstate Technology & Regulatory Council

## Upper Basin CRP WQAC Meeting Attendees

May 12, 2022 (Hybrid)

Scott McWilliams	UCRA, San Angelo
Ellen Groth	UCRA, San Angelo
Lexi Woods	UCRA, San Angelo
Nancy Blackwell	UCRA, Ballinger
Leslie Lasater	UCRA, San Angelo
Fred Hernandez	UCRA, San Angelo
Lisa Benton	LCRA, Austin
Aaron Richter	LCRA, Austin
Anthea Fredrickson	LCRA, Austin
Robin Cypher	TCEQ, Austin
Chase Carpenter	TCEQ, Austin
Kiran Freeman	TCEQ, Austin
Kristin Debone	TCEQ, Austin
Cain Cline	TCEQ Region 8, San Angelo
Kirk Fleener	TCEQ Region 3, Abilene
Lynn Wright	TPWD, San Angelo
Blake Thornton	TPWD, San Angelo
Jennifer Bronson-Warren	TPWD, Waco
Samuel Kelley	USGS, San Angelo
John Burch	CRMWD, Big Spring
John Grant	CRMWD, Big Spring
Allison Strube	COSA, San Angelo
Charlotte Anderson	COSA KSAB, San Angelo
Leon Braden	Lipan-Kickapoo Water Conservation District, Wall
David Villareal	Texas Department of Agriculture, Austin
Dan McClung	Citizen and Biologist, San Angelo
Laura Lewis	Representative for the Office of Senator Perry, San Angelo
Chuck Brown	Hydro Corporation, San Angelo