



## **LCRA WATER QUALITY ADVISORY COMMITTEE MEETING**

March 30, 2023

LCRA Redbud Center in Austin TX and Online via Microsoft Teams

### **Welcome and Introductions**

The Middle and Lower Basin meeting of the Clean Rivers Program (CRP) Colorado River Basin Water Quality Advisory Committee (WQAC) was held March 30, 2023, at 9:00 a.m. via Microsoft Teams and in-person at the Lower Colorado River Authority (LCRA) Redbud Center. LCRA's Lisa Benton and Zoe Nichols welcomed the 34 in-person attendees and the 25 online attendees. Stakeholders were present from as far upstream as San Angelo and all the way to the mouth of the Colorado River in Matagorda.

### **Clean Rivers Program Updates for Colorado River Basin – Lisa Benton, LCRA**

Benton provided historical background information on the Clean Rivers Program and the roles of the various stakeholders, including the Upper Colorado River Authority (UCRA) and the City of Austin (CoA). She stressed the importance of data collection, quality assurance, and data management, and how the Water Quality Advisory Committee helps guide resources to gather and assess water quality information to identify and address water quality issues throughout the basin.

The Colorado River basin CRP program has \$887,594 allotted for the current fiscal year (FY) 2022-2023 budget cycle. Approximately 62% of the funds in the contract with Texas Commission on Environmental Quality (TCEQ) are used for monitoring water quality and associated costs. 27% of the funds are contracted to UCRA for administering the Clean Rivers Program in the upper basin, 11% towards personnel/labor, and approximately 1% for supplies and travel. In the upcoming contract, TCEQ will provide \$909,212 for the FY24-25 contract cycle, which is a \$146,000 increase from previous baseline prior to amendments. LCRA is considering using these additional funds in one or more of the following ways: 1) increase monitoring in high priority segments as identified in the Basin Summary Report and by stakeholders, 2) increase number of water quality parameters being collected at certain sites, 3) More in-depth investigation of existing impairments and concerns, 4) additional CRP water quality outreach, and/or 5) biological monitoring.

Benton then turned the floor over to Kiran Freeman, the TCEQ CRP project manager for the Colorado River basin.

Freeman provided information on the Texas Integrated Report and 303(d) List ("Integrated Report"), which is a statewide assessment of the status of water quality that uses data collected from the Clean Rivers Program. The Integrated Report describes the status of Texas' natural waters based on historical data and the degree to which they attain the Texas Water Quality Standards (TWQS).



To create the Integrated Report, the TCEQ uses data collected during a recent seven to ten-year period. The data are gathered by many different organizations all of which operate according to approved quality control guidelines and sample collection procedures. The quality of waters described in the IR represents a snapshot of conditions during the specific time period considered in the assessment. The Texas Integrated Report satisfies the requirements of the federal Clean Water Act Sections 305(b) and 303(d). The TCEQ produces a new report every two years in even-numbered years, as required by law. The 303(d) List must be approved by the EPA before it is final.

Benton then continued the presentation. For the 2022 Integrated Report in the Colorado River Basin, there were 138 water bodies evaluated. 89 of these had enough data to assess, and 19 of them were considered impaired for not meeting the Water Quality Standards for their designated use.

### **Basin Summary Report – Aaron Richter, LCRA**

Richter presented highlights from the Basin Summary Report (BSR), a large undertaking to analyze all the water quality data collected in the Colorado River basin from 2011-2021. The BSR is used in decision making for how to prioritize monitoring initiatives, determining where further investigation or special studies may be needed, and helping identify sections of the basin where there are data gaps. He began by explaining the analysis methodology, which includes both temporal trends (changes over time) and spatial comparisons across sites within each sub-basin. Richter highlighted the concerns and impairments in each sub-basin and then highlighted notable data trends across the watershed.

Richter highlighted the following summary points:

- Decreasing trends in chlorides and sulfates can be attributed to the increase in rain and subsequent flows during the latter half of the data record.
- Throughout the basin, there are increasing concerns and upward trends for nutrient parameters (especially nitrates). This is especially true downstream of more urbanized areas.
- There are concerns for increasing trends in chlorophyll *a* throughout the basin, which is linked to an increase in nutrients.
- In some areas, there are increasing trends for *E. coli* bacteria.

The results from the BSR are being used to narrow in on areas of focus for special studies and additional monitoring, Richter explained. All stakeholders are invited to review the BSR and provide feedback and comments. Those comments need to be sent back to Richter by Friday April 14<sup>th</sup>. [Click here to view the full presentation](#). And [click here to access the final BSR](#) when it becomes available this summer.

### **TPWD Initiatives in the Colorado River Basin – Stephen Curtis, Texas Parks and Wildlife Department (TPWD)**

Curtis provided an overview of projects and initiatives that the TPWD Inland Fisheries group have underway in the Colorado River basin. He began by highlighting work with the American Eel. This long-bodied and long-lived fish has a fascinating life cycle. Breeding adults, known as silver eels, spawn their eggs in the Sargasso Sea in the Atlantic Ocean. The eggs hatch, and



the larval stages live at sea for a brief time until transforming to “glass eels” and traveling to the mouths of rivers along the U.S. east coast and Gulf of Mexico. The eels migrate upstream into the freshwater of these rivers where they live until they become mature silver eels, at which point they migrate from freshwater back into the ocean and spawn in the Sargasso Sea to complete the life cycle. Sampling in Texas involves yellow eel sampling/outreach, eel mop and fyke net sampling, and eel ramp sampling. LCRA is collaborating with TPWD to track eel migration in the Colorado River with a sampling site in Bay City.

Another project in the basin involves the state-threatened fish Blue Sucker. Surveying has been underway for several year to keep track of the life stages of this fish in the Colorado River basin. Steps moving forward will be to continue monitoring the adult Blue Sucker, and also assessing the tributaries in the lower Colorado River for spawning activity.

Curtis also highlighted the River Access and Conservation Areas Program and the Texas Paddling Trails Program. In addition, Curtis spoke about the Aquatic BioBlitzes that have been done across the state since 2012. These events are where a group of biologists survey the river for a variety of aquatic species and in a short period of time (1-2 days) using multiple teams. TPWD plans to partner with LCRA to conduct a BioBlitz in the lower Colorado River sometime this year.

### **Summer Weather Outlook – Bob Rose, LCRA Chief Meteorologist**

Bob Rose then began his presentation focused on summer weather projections. The rainfall departure from normal is 2-4 inches below average since January of this year in many parts of the basin. The U.S. Drought Monitor is still showing exceptional to abnormally dry conditions throughout the majority of the Colorado River basin as of March 21, 2023. However, Rose emphasized the good news for rainfall outlook in the region is that La Nina has ended and a neutral Pacific Ocean is in place. The Pacific Ocean waters are warming, and this could turn into an El Nino pattern by fall, but time will tell if this becomes the case. A neutral Pacific will be in place through spring and early summer. Near-normal rainfall is forecast to occur from April to June. The summer is not expected to be as hot or as dry as last summer. The National Oceanic and Atmospheric Administration (NOAA) supports the National Integrated Information System (<https://www.drought.gov/>) with up-to-date information on drought conditions across the United States. LCRA provides a link to this data by incorporating the drought conditions for the Colorado River basin into the Hydromet website (<https://hydromet.lcra.org/>) via the Drought Monitor layer.

### **Environmental Flows in the Lower Colorado River – Bryan Cook, Lower Colorado River Authority**

Cook began by defining environmental flows, which are related to both the timing and quantity of water flow needed to maintain ecologically health rivers, streams and bays. A flow regime, Cook stated, is defined by Texas Senate Bill 3 (80<sup>th</sup>, 2007) as “a schedule of flow quantiles that reflects seasonal and yearly fluctuations that would vary geographically, by specific location in a watershed, and that are shown to be adequate to support a sound ecological environment.” The flow regimes include subsistence, base, high flow pulses, and overbanking. In order to develop an instream flow recommendation, a habitat model is developed using both biological and hydraulic data. The flow recommendations in the LCRA Water Management Plan are informed



by this science and are translated into operational guidelines for daily management of lower Colorado River flows. [Click here to see the full presentation.](#)

**Great Springs Project: From the Alamo to the Capitol, a Legacy Project for all of Texas –**  
*Garry Merritt and Scott Parker, Great Springs Project*

Merritt explained that the Great Springs Project has a mission to connect four major springs through a corridor of protected lands between San Antonio and Austin over the Edwards Aquifer Recharge Zone. The 100-mile trail network will encompass approximately 50,000 acres of additional protected lands over the recharge zone between Austin and San Antonio. The project will provide multiple conservation benefits to the region's water resources, ecological integrity and diversity, and the local communities.

The project will connect trails in Bexar, Comal, Hays and Travis counties. To identify segments for conservation under this project, a strategic conservation prioritization was completed to evaluate conservation resources for water, community and ecology. Land areas were ranked within these three categories and assigned low, medium and high priority. The final conservation scenario identified 100,831 acres as high priority. Parker explained the landowner engagement process underway within these high priority areas. He highlighted two projects, Presa Grande and La Cima, as success stories.

For more information on Great Springs Project, including the Trails Plan, Economic Benefits Report, and to view an informational video, please visit [www.greatspringsproject.org](http://www.greatspringsproject.org).

**Rain to River – Erin Wood, City of Austin Watershed Protection Department**

Wood began the presentation outlining the Strategic Plan of the Watershed Protection Department, which serves as a guiding blueprint for the department, provides an evaluation framework, and is a tool to help communicate and explain the department's work and priorities. The Watershed Protection Master Plan was originally adopted by the Austin City Council in 2001, and Rain to River is the effort underway to update this plan. The goals are to reflect the community values, incorporate equity and climate resilience, and make the plan accessible and informative to a broad audience of stakeholders in the Austin community.

Wood explained the engagement process to get feedback from stakeholders on the plan, as well as how they are dispersing information to the community about the plan. Wood encouraged all attendees to take the Rain to River Community Vision Survey closes on March 31<sup>st</sup>. For more information, visit [RainToRiverATX.com](http://RainToRiverATX.com).

**Cyanotoxins – Anthea Fredrickson, Lower Colorado River Authority**

To begin the presentation, Fredrickson gave an overview of cyanotoxins and harmful algae blooms (HABs). She explained that cyanobacteria (also known as blue-green algae) can produce cyanotoxins and other irritants that can cause health effects in people and animals. She explained that animals are especially at risk of exposure while they are drinking and swimming in affected waters, or either ingesting algae containing cyanotoxins while feeding or grooming fur/feathers.



Fredrickson provided background information on cyanotoxins in the Highland Lakes, with the first detection occurring after a dog death was reported on Lake Travis in February of 2021. The incident was investigated swiftly and revealed that the cyanotoxin dihydroanatoxin was present in high levels. Since that time, LCRA has been monitoring cyanotoxins throughout the Highland Lakes. Methodology includes SPATT bags (mesh bags filled with resin that absorb toxins from the water column) and whole water sample collection and analysis. For more information, [view the presentation](#) and the [LCRA Algae in the Highland Lakes](#) webpage.

The meeting adjourned at 12:00.