

2002

Clean Rivers Program

**BASIN SUMMARY
REPORT**

for the

Colorado River Basin



FOREWORD

This Basin Summary Report is provided to the Texas Natural Resource Conservation Commission and the citizens of Texas to fulfill the requirements of Clean Rivers Program Contract 582-2-44872. It summarizes Clean Rivers Program (CRP) activities and other water quality activities that have occurred in the Colorado River basin from May 1996 through April 2002.

The report was compiled by staff from the Lower Colorado River Authority, Upper Colorado River Authority and Colorado River Municipal Water District, who would like to thank past and current CRP Steering Committee members for their support. The Colorado River, its lakes and its tributaries would not be the resources they are today were it not for the dedication of the following Steering Committee members.

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EXECUTIVE SUMMARY

Background and Overview

The Texas Clean Rivers Program (CRP) began in 1991 with the passage of the Clean Rivers Act (Senate Bill 818). In the 11 years since its inception, the program has matured into the mainstay of water quality data collection and assessment for the state. The program's stringent quality assurance requirements ensure that valid water quality data are available to the public; to local, state and federal agencies; to environmental groups; and to other interested parties. The data are used to set wastewater discharge limits, determine appropriate water quality standards and interpret the overall quality of surface water available for use by people living in Texas.

The program is a mechanism for identifying water quality problems and improvements. It provides a venue for public input into local water quality issues and actively pursues partnerships with other agencies to address those issues. The goals of the Clean Rivers Program are to:

- ◆ Enhance public participation and outreach.
- ◆ Encourage comprehensive watershed planning.
- ◆ Maintain a basinwide water quality monitoring program.
- ◆ Provide reliable water quality data to Texas Commission on Environmental Quality (TCEQ).*
- ◆ Identify, analyze and report on water quality issues and potential sources of pollution.
- ◆ Provide a scientific response to water quality problems.
- ◆ Ensure efficient use of public funds.

The statewide program is funded for \$5 million annually through assessment of wastewater discharge fees and water rights fees. It is administered by TCEQ (formerly TNRCC), but monitoring and water resource protection efforts are carried out by local agencies. This system of statewide funding and local control of watershed priorities encourages the grassroots management of resources on a watershed basis and ensures that local water quality protection efforts are carried out.

The Colorado River Basin Clean Rivers Program is one of 15 in Texas. The program partners are the Lower Colorado River Authority (LCRA), Upper Colorado River Authority (UCRA) and the Colorado River Municipal Water District (CRMWD). The cities of San Angelo and Austin also contribute in-kind services such as laboratory analysis and monitoring. During the current basin summary reporting period (1996-2002), the program partners received approximately \$425,000 annually to achieve these goals.

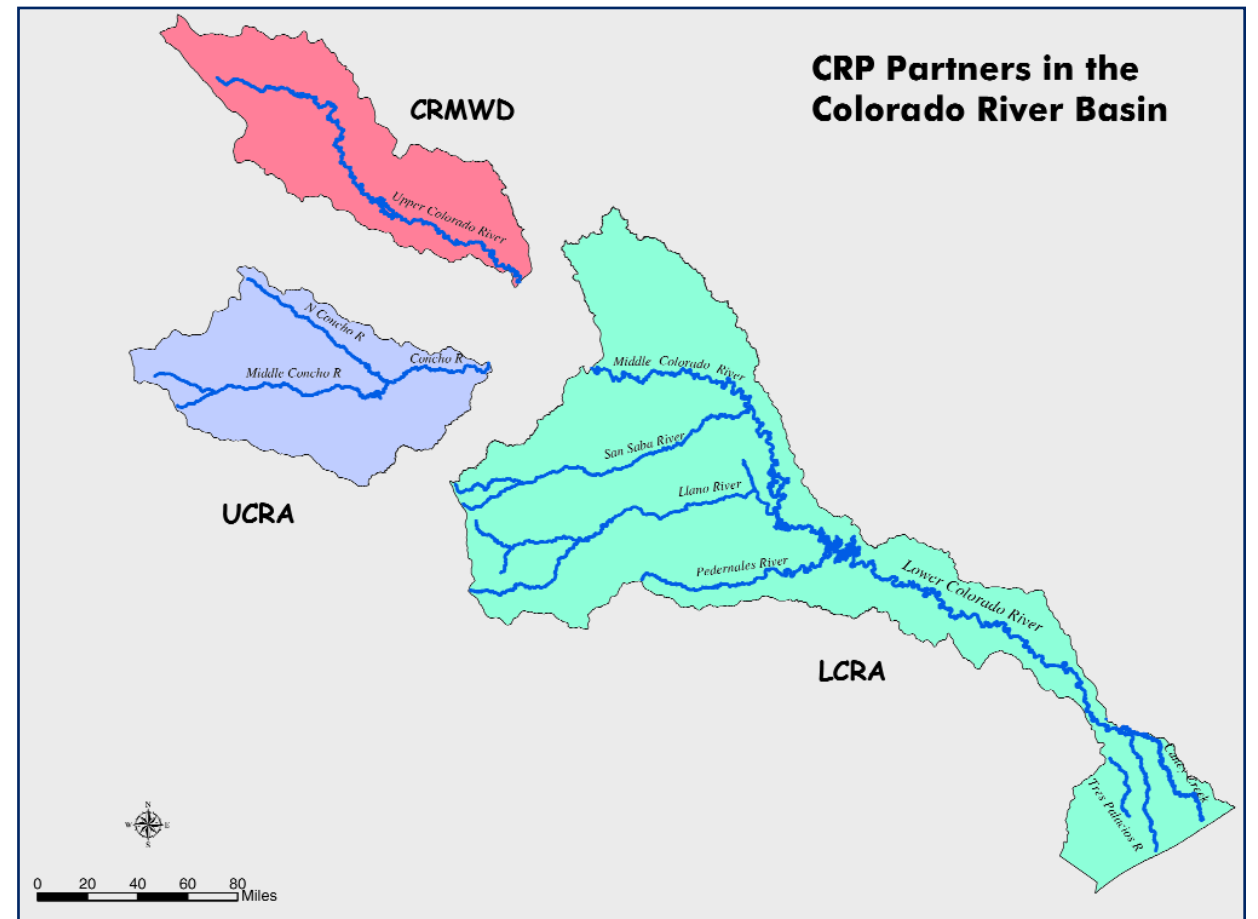
LCRA implements the program from Lake Buchanan to Matagorda Bay. UCRA and CRMWD are responsible for monitoring and assessment upstream of O.H. Ivie Reservoir. CRMWD implements the Clean Rivers Program in the upper Colorado River basin, which includes the O.H. Ivie and E.V. Spence Reservoir watersheds and the Lake J. B Thomas Watershed. The UCRA implements the program in the Concho River basin and the O.C. Fisher Reservoir watershed. Figure 1 illustrates each agency's jurisdiction.

Since the last summary report was published, the Texas Clean Rivers Program and its Colorado River basin partners have made great strides in understanding, assessing and improving water quality in the Colorado River and its tributaries. Routine monitoring has improved with regard to spatial and parameter coverage. Projects, including the Tres Palacios Bacteria Study and the aerial electromagnetic surveys in Runnels and Sterling counties, have provided information about smaller watersheds, information that communities and local agencies use to improve water quality.

Improvements in technology have made available detailed maps and easily accessible water quality data in electronic format, resulting in more informed decision-making and easier public access to water quality information.

The Clean Rivers Program has increased public awareness in the Colorado River basin. Annual steering committee meetings and public forums have been the primary method of communication. But CRP partners also maintain water quality Web sites, provide presentations and support outreach efforts through nonpoint-source pollution education.

Partners Funded by the Clean Rivers Program



Overall the water quality in the Colorado River, Tres Palacios and Caney Creek basins is good. The upper portion of the Colorado River basin continues to be plagued with drought and high dissolved solids (salinity), stemming from natural and manmade causes. Assessment of data collected over the last five years indicates that most water bodies support their designated uses.

The middle portion of the basin, from Lake Buchanan to Columbus, has few water quality concerns. A trend analysis indicates the Highland Lakes have experienced increasing amounts of chlorophyll *a*, nitrates and phosphates. The increase is a naturally occurring phenomenon, possibly expedited by urbanization and loss of pervious cover.

The coastal basins, which includes Caney Creek, Tres Palacios and the Colorado River, continue to feed freshwater into the Matagorda Bay system, providing nutrients to the coastal ecosystem. Data indicate the coastal area has high bacteria levels at some collection sites. Sources of bacteria are likely the result of inadequate onsite sewage treatment facilities, or indigenous wildlife.

The program has had many successes in the past six years:

- ◆ Better coordination and increased cooperation with federal, state and local agencies, resulting in more efficient monitoring and assessment.
- ◆ Increased monitoring network producing reliable data of known quality.
- ◆ Use of biological indicators to better assess water quality.
- ◆ Improved public outreach through steering committees, volunteer monitoring and educational activities.

While successes have been many, numerous issues, both programmatic and specific to watershed protection, need ongoing attention.

Conclusions and Recommendations for the Next Five Years

A shortcoming of the Clean Rivers Program is that it does not fund implementation of projects. LCRA and other partners should pursue implementation of projects identified by studies or steering committee members. UCRA has done an outstanding job of using CWA Section 319(h) funding to address nonpoint-source pollution issues in San Angelo and Brady.

The Clean Rivers Program partners should continue to consider projects based on newly acquired data and steering committee input. Projects already under way should include follow-up monitoring to evaluate the success of the projects. The following projects and activities should be completed, evaluated and reported on in the future:

- ◆ Brush removal efforts in the upper Colorado River basin, including public education and involvement and research/monitoring activities contracted through the Texas State Soil and Water Conservation Board.
- ◆ Salt cedar eradication efforts. Work closely with upper basin soil and water conservation districts and the Texas Department of Agriculture to fund and implement eradication projects.

- ◆ Further development and scrutiny of data collected in the Sterling County Aerial Electromagnetic Survey to focus on localized elevated salinity due to oil production.
- ◆ Investigation of oil field salinity sources within the lakebed of O.C. Fisher Reservoir.
- ◆ The design and development of a special study to evaluate aerial effect and extent of bacteriological contamination in groundwater in the Grape Creek Community in Tom Green County.
- ◆ Work with TCEQ (formerly TNRCC) nonpoint-source pollution program and Texas Railroad Commission to target oil field contamination to include produced-water seeps and improperly plugged oil wells.
- ◆ The Spence Reservoir TMDL. Complete the Segment 1426 TMDL for total dissolved solids (TDS). Continue chloride, sulfate, and TDS monitoring in TMDL project segments.
- ◆ Monitoring nutrient levels in the Concho River. All concentrated animal feeding operations (CAFO) located between the San Angelo wastewater treatment plant and the city of Miles should be identified and evaluated for potential nitrate leaching to groundwater resources (for instance, Lipan Aquifer). Water wells at or near these facilities should be prioritized for inclusion in any future groundwater investigations. Evaluate new CAFO permit requests to ensure they will not add to the existing nutrient problem of the river and groundwater.
- ◆ Cleanup and remediation of the magnesium plant in Snyder.
- ◆ Design a special study to determine the extent of nutrient loading for the Highland Lakes. Use computer models to focus on sedimentation and causes of eutrophication.
- ◆ Pursue a Clean Water Act 319(h) grant to implement an enforcement and education campaign to improve water quality in the Tres Palacios River watershed.
- ◆ Continue to collect biological data to accurately assess the aquatic environment in perennial streams.

Continued input from the steering committee is critical for the future of the Clean Rivers Program. However, if the success of the steering committee/subcommittees and the public meetings are measured by attendance, the steering committee meetings were a mixed success. To address these concerns, the partners recommend:

- ◆ Develop a comprehensive plan to improve the overall effectiveness of the steering committee.
- ◆ Continue to hold regional steering committee/subcommittee meetings.
- ◆ Improve communication among the partners and the steering committee to provide continuity between meetings.

Also, continued state funding for the Clean Rivers Program is critical for success. The Colorado River basin partners faced funding reductions during this summary period while being asked to increase monitoring and meet more stringent quality assurance requirements. The passage of House Bill 2912 further jeopardizes funding, as it requires the combination of wastewater inspection fees and Clean Rivers Program monies into one pot. Discussions should ensue at the steering committee, stakeholder and legislative level to protect program funding statewide.

** On Sept. 1, 2002, the Texas Natural Resource Conservation Commission was renamed the Texas Commission on Environmental Quality (TCEQ).*

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