

## **INTRODUCTION**

The principal goal of the Texas Clean Rivers Program (CRP) is to ensure safe, clean water supplies for the future of Texans' drinking water needs, industry, agriculture, healthy ecosystems, and recreation and for all other uses of this valuable state resource. The CRP meets its goal in the Brazos River Basin through an ongoing partnership involving the Texas Commission on Environmental Quality (TCEQ), the Brazos River Authority (BRA), regional entities, local governments, industry and citizens.

As the lead agency for the Brazos River Basin, the Authority oversees all aspects of the Clean Rivers Program process in the basin. This includes: serving as liaison between TCEQ and the stakeholders, participating in statewide CRP task forces; performing all administrative and project tasks; supporting the Brazos River Basin CRP Steering Committee and Technical Advisory Committee; and maintaining regular contacts with other planning agencies.

## **THIS YEARS HIGHLIGHTS**

The water quality in the Brazos River Basin is generally good and the majority of the basin supports aquatic life and recreational uses. Two issues that commonly affect the water quality are drought conditions and excessive levels of chloride. Water quality can also be dramatically impacted by flooding, and although this occurs rarely, we did experience significant flooding in the spring and summer of 2007 which continued to affect the Brazos River basin in 2008.

### **Chloride**

Chloride in the mainstem of the Brazos River Basin comes from natural brine springs in Stonewall, Kent and Garza counties that deposit highly concentrated groundwater into the watershed of the Salt Fork and Double Mountain Fork of the Brazos. Rainfall then flushes this residual salt into the rivers. The natural salt produced in the uppermost portion of the Brazos River Basin affects the mainstem throughout its entire reach.

Drought conditions frequently affect most of the State of Texas; such was the case from 2005 through early 2007. Over this period, chloride levels in mainstem lakes became even more concentrated than normal due to evaporation which reduced water levels while leaving chlorides in the remaining water. During this drought period, chloride levels in Lakes Possum Kingdom and Granbury reached high concentrations never previously observed in either lake. Water releases from both lakes caused abnormally high chloride levels to be observed in the entire mainstem of the Brazos River. Concentrating effects of chlorides and other minerals were also observed in other parts of the basin but were not as dramatic as those observed in the mainstem.

With significant rainfall events occurring in March, May and June of 2007, flooding occurred in almost all parts of the Brazos River basin. In the Upper

Basin, these rainfall events fortunately all occurred east of the salt producing area in the Brazos basin and had a diluting affect on chlorides in the mainstem. In just a few months time, the chloride levels in the mainstem went from the highest ever recorded to the lowest ever recorded. Chloride levels in mainstem lakes remain uncharacteristically low but have risen somewhat in 2008 as rainfall, although not at drought levels, was below average.

### **New Projects**

In 2008, the BRA received funding from the Texas State Soil and Water Conservation Board to further assess water quality in the Little Brazos River Watershed in Robertson County. In 2004, five tributaries to the Little Brazos River were placed on the State's 303(d) List for having bacteria concentrations that exceed state water quality standards for contact recreation. The purpose of this project is to better characterize the bacteria impairment and to determine possible sources. For the project, the BRA added 8 new water quality monitoring sites throughout the watershed and started monitoring flow and collecting stormwater data in November 2008

### **Completion of the 2007 Basin Summary Report**

The BRA was proud to present its 2007 Basin Summary Report. This report is completed once every five years. The report was in a completely different format from previous summary reports. After discussing what would be the most useable format for a report of this magnitude, and after considering usability, development and distribution costs, BRA decided to go with an all-electronic report format (interactive CD) with a companion booklet that included the Executive Summary and a user's guide for the CD.

Response to the report has been overwhelmingly positive. Users are saying it is the most user-friendly water quality report they have used. They like the fact that they can print any maps they want from the report. The data tables are easy to read and easily printed. BRA presented the 2008 and 2009 Basin Highlights Reports and plans to produce all future reports in this same type of format. A copy of the report is available online at:

[http://www.brazos.org/BasinSummary\\_2007.asp](http://www.brazos.org/BasinSummary_2007.asp).

### **National Environmental Laboratory Accreditation Conference**

In 2001, the 77th Texas Legislature passed HB 2912 requiring that all data used by TCEQ for commission decisions regarding permits or other authorizations, compliance matters, enforcement actions, or corrective actions be from an accredited environmental laboratory.

HB 2912 also transferred authority for environmental laboratory accreditation and drinking water certification from Texas Department of Health to the TCEQ, and required that the state's environmental testing laboratory accreditation program be consistent with National Environmental Laboratory Accreditation Conference (NELAC). This transfer of authority became effective on September 1, 2001.

Prior to NELAC, the existing state programs varied widely in scope and requirements. The NELAC Standard provides uniform requirements for accreditation of environmental laboratories to ensure that decisions being made are based on data that is scientifically accurate.

BRA's Environmental Services Laboratory received NELAC accreditation from TCEQ on September 11, 2008.

### Texas Water Quality Inventory and 303(d) List

On March 19, 2008, the Texas Water Quality Inventory and 303(d) list, which is compiled every two years, was approved by the United States Environmental Protection Agency (EPA). Several segments were added to this list while others were removed (Tables 1 and 2). For a more detailed description of the list and water quality evaluation, please see the **Evaluating Water Quality** chapter of this document. For a visual depiction of all water bodies in the Brazos River Basin that are impaired, on the 303(d) list, maps are provided in the **Basin Overview** chapter.

**Table. 1 Brazos River Basin Water Bodies and Impairments  
Added to the 2008 Texas 303(d) List**

| <i>Water Body</i>                      | <i>Segment</i> | <i>Use Impaired</i> | <i>Parameter</i>                                      | <i>Action</i>                             |
|--|----------------|---------------------|---|---|
| Lake Granbury                          | 1205           | General             | elevated chloride                                     | Additional data to be collected           |
| Brazos River Below Possum Kingdom Lake | 1206           | Aquatic Life        | impaired macrobenthic community                       |   |
| Brazos River Above Possum Kingdom Lake | 1208           | Recreation          | elevated bacteria                                     |   |
| Somerville Lake                        | 1212           | Aquatic Life        | depressed dissolved oxygen                            |   |
| San Gabriel River                      | 1214           | General             | elevated chloride                                     |   |
| Leon River Below Leon Reservoir        | 1223           | Aquatic Life        | depressed dissolved oxygen                            |   |
| Paluxy River/North Paluxy River        | 1229           | General             | elevated sulfate, total dissolved solids and chloride | Error - will be removed from list in 2010 |
| Upper North Bosque River               | 1255           | Aquatic Life        | depressed dissolved oxygen                            | Additional data to be collected           |

**Table. 2 Brazos River Basin Water Bodies and Impairments  
Removed from the 2008 Texas 303(d) List**

| <i>Water Body</i>                            | <i>Segment</i> | <i>Use Impaired</i> | <i>Parameter</i>                | <i>Reason</i>                |
|--|----------------|---------------------|---------------------------------|------------------------------|
| Big Creek                                    | 1202J          | Aquatic Life        | impaired habitat                | Changed assessment procedure |
| Lampassas River Below Stillhouse Hollow Lake | 1215           | Recreation          | elevated bacteria               | Meets criteria               |
| Lake Graham                                  | 1231           | General             | elevated bacteria               | Meets criteria               |
| White River Lake                             | 1240           | General             | elevated sulfate                | Meets criteria               |
| Double Mountain Fork Brazos River            | 1241           | General             | elevated total dissolved solids | Meets criteria               |
| Upper Oyster Creek                           | 1245           | Recreation          | elevated bacteria               | Completed TMDL               |

## **PUBLIC INVOLVEMENT AND OTHER INFORMATION**

### **Brazos River Basin Clean Rivers Program Steering Committee**

The size and diversity of issues across the Brazos River Watershed presents a challenge for the large group of stakeholders in our basin. The Brazos River Clean Rivers Program (CRP) Steering Committee participants represent diverse interests that are represented by government agencies, municipalities, industry, agriculture, organized local stakeholder groups, individuals, and environmental groups. For the 2008 fiscal year the Brazos River Authority made a concerted effort to encourage and increase participation at local levels within the basin. The Clean River Program Steering Committee meeting attendance in the Brazos River Basin more than doubled in 2008 from the previous year.

The BRA holds an annual meeting that provides the Steering Committee with an opportunity to hear results of water quality monitoring and CRP special studies and gives them a forum where they may voice opinions, make recommendations and interact with other stakeholder participants and BRA staff. Steering Committee members also participate by providing input into planning water quality monitoring activities, prioritizing problems within the basin for prospective CRP special studies, identifying problem areas and developing actions to address potential problem areas in the basin.

### **How to get involved with the Brazos Basin CRP?**

BRA promotes communication and participation from the general public. If you are interested in serving on the Brazos River Basin CRP Steering Committee, send an email addressed to [jbarrett@brazos.org](mailto:jbarrett@brazos.org). Please indicate what topics you are interested in and provide an email address so that you can receive electronic notices of meetings and reports. In addition, the information you provide will help us to develop more effective meetings and provide direction to the program. We highly encourage participation in our meetings and input on water quality issues in the basin.

### **Brazos Basin CRP Website**

The BRA maintains both a river authority website (<http://www.brazos.org>) and a CRP website (<http://www.brazos.org/crpHome.asp>) as a mechanism to keep the public informed via the internet. These websites provide information on topics of interest in the basin. The websites provide links to a range of information, including:

#### **Water quality data**

Water quality data generated by the BRA is available in a searchable format and can be easily downloaded to an Excel file (<http://crpdata.brazos.org/>). A link to the TCEQ data website is also provided.

### **Special Studies Reports**

Available for download in .pdf format.

### **Quality Assurance Information**

The Quality Assurance Project Plan for CRP and Data Management Plan are available for download in .pdf format.

### **Schedule of Monitoring Activities**

A link is provided to the coordinated monitoring website, which contains a list of the water quality monitoring locations in the state.

### **Information on Non-CRP Water Quality Projects**

Information is provided on a variety of water quality related projects sponsored by the BRA that are not conducted as part of the CRP.

### **River and Reservoir Levels**

An interactive map provides information on USGS Stations in the basin, flood stage at each station and current flow at each station.

### **Current Drought Status**

An updated Palmer Drought Index map is provided along with copies of the BRA's Drought Contingency Plan and Water Conservation Plan.

### **Water Supply Data**

Information is provided on reservoir locations, elevations, and capacities and surface area.

### **Technical Assistance Program**

Information is provided on services offered by the BRA to municipalities and utility districts in the basin, including: Industrial Pretreatment Programs, Regulatory Reviews, and Operations Assistance.