Annual Update on Water Quality for the Rio Grande and the Clean Rivers Program

USIBWC Citizens’ Forum
and Upper Rio Grande Basin Advisory Meeting
September 15, 2010
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Texas Clean Rivers Program
U.S. Section,
International Boundary and Water Commission
Texas Clean Rivers Program
History

- 1991 Texas Clean Rivers Act
- 1998 TCEQ-USIBWC partnership
- 2010 monitoring sites on Rio Grande:
  - CRP – 54 sites
  - TCEQ – 38 sites
What is the Clean Rivers Program?

- A state fee-funded program
- A group of federal, state and local organizations that have an interest in the health of our states streams, rivers and lakes.
- The USIBWC Clean Rivers Program collects water quality data from the Rio Grande and Pecos Rivers.
- We then use that data to:
  - identify and evaluate water quality issues
  - establish priorities for corrective actions
  - work to implement those actions.
CRP Activities

- **Water Quality Monitoring**
  - Routine monitoring
  - Special studies
- **Water Quality Assessment**
- **Publications**
  - Annual Basin Highlight Report
  - 5-year Basin Summary Report
- **Outreach and Education**
- **Public Participation**
Interested in Monitoring?

- **Texas Stream Team - Volunteer WQ Monitoring Program**
- Great for teachers
- [http://txstreamteam.rivers.txstate.edu/](http://txstreamteam.rivers.txstate.edu/)
- Contact Leslie Grijalva
2010 Monitoring Sites

UPPER RIO GRANDE AND PECOS SUB-BASINS

TCEQ Continuous Monitoring Stations

Rio Grande Basin in Texas
Binational Rio Grande Watershed
Rivers
Upper Rio Grande and Pecos Sub-basin Counties
Middle Rio Grande Sub-basin Counties
Lower Rio Grande Sub-basin Counties
Urban Areas

100 Kilómetros
100 Millas

2010 Monitoring Stations

MIDDLE RIO GRANDE SUB-BASIN

LOWER RIO GRANDE SUB-BASIN
Local Partnerships

- Partners in the Upper Rio Grande help monitor, collect, & analyze samples:
  - USIBWC Field Offices at El Paso and Presidio
  - University of Texas at El Paso
  - El Paso Community College
  - Sul Ross University
  - El Paso Water Utilities
  - TCEQ El Paso Field Office
  - Big Bend National Park
  - Big Bend Ranch State Park
  - TCEQ Continuous Water Quality Monitoring Program

- All use TCEQ sampling procedures and an accredited laboratory for analysis
Upper Rio Grande

- El Paso to Amistad Reservoir
- Pecos, Devils Creek and Independence creek are tributaries
- 34 monitoring stations
- Major Cities/Landmarks – El Paso, Forgotten Stretch, Presidio, Big Bend Parks and Wild & Scenic
- Rio Conchos from Mexico
Forgotten River and Rio Conchos
Big Bend State & National Parks
Rio Grande Wild & Scenic
2010 Upper RG Monitoring Sites

34 Upper & Pecos RG Sites:
20 - IBWC CRP
23 – TCEQ
9 collected by both CRP & TCEQ
TCEQ Continuous WQ Monitoring

- [www.texaswaterdata.org](http://www.texaswaterdata.org)
- 17 CWQM stations in RGB
  - Temp
  - pH
  - sp cond
  - water level
  - TDS
  - DO

Rio Grande Basin
Main RG Basin
Water Quality Issues

- Bacteria
- Phosphorous/Nutrients
- Nitrates
- Salts
- Mercury in fish tissue
- Depressed DO
- Fish kills
- Illegal discharging
- Trash
- Exotic species
Water Quality Uses and Standards

- TCEQ uses these standards to assess the river and determine if any segments are impaired (303d List)
- 2308 Non-contact use
- TDS 1400-1800 in river
States are required by the Clean Water Act to “assess” the health of the river basins

- water bodies not meeting state water quality standards are listed on the impaired waters list (303d list)
  - Impairments → not meeting standards
  - Concerns → near non-attainment of standards, or
    - issues with parameters where standards don’t exist

- 2010 assessment (draft) lists 2306 as impaired for salinity
Impairments and Concerns on the draft 2010 Texas Water Quality Integrated Report/ 303(d) List

Figure 2. a) Upper Rio Grande and Pecos
2010 TSWQ Standards Revisions – Affects to RG Basin

- Contact Recreation → primary and secondary (all in RG are still primary) → Ecoli Bacteria standards change
- Entero → bacteria indicator in salty water (Pecos, tidal)
- Sole-source surface drinking supply designations for Lower RG Valley (2302-2304)
- Nutrient criteria added for Red Bluff Reservoir (chlorophyll-a) 25.14 ug/L

- TEXAS ADMINISTRATIVE CODE - TITLE 30 ENVIRONMENTAL QUALITY PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CHAPTER 307 TEXAS SURFACE WATER QUALITY STANDARDS RULE §307.10
# 2010 TSWQ Standards Revisions

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<th>SEGMENT NAME</th>
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<td>Rio Grande Tidal</td>
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<td>San Felipe Creek $^3$</td>
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<td>Rio Grande Above International Dam</td>
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$^1$ Bacteria per 100 mL

*Table showing water quality standards for various segments of the Rio Grande Basin*
E coli at 13272 in El Paso, 2001-2010
E coli at 13272 in El Paso, 2001-2010

Condutivity at 13272
Metals Study

- CRP will collect total and dissolved metals at 5 sites in El Paso
- Under TCEQ quality assurance plan
- Use TCEQ metals kits
TCEQ Least Disturbed Streams

- TCEQ Surface Water Quality Monitoring Program, TCEQ Regional Staff, TPWD
- Sampling over next several years
- evaluate the biological condition of least disturbed streams in ecoregions throughout Texas
  1. Determine if small unclassified streams could support significant aquatic life uses;
  2. Determine if regional patterns in physical, chemical or biological attributes of streams exist in TX;
  3. Refine and verify Texas Ecoregion boundaries;
- Includes 2306, Alamito Creek, Devils River, Live Oak Creek, Independence Creek
EPCC Service Learning Program

- EPCC grant for STEM students through Service Learning
- IBWC CRP is a collaborating entity (with Zoo & Keystone)
- Students can gain hands-on experiences with CRP in:
  - Water quality monitoring
  - River cleanups
  - Outreach activities
  - Scientific literature reviews, etc
  - Creation of materials – videos, brochures, websites, etc
- Grant includes training of teachers to incorporate SL in classroom
Activities throughout basin from Colorado to Gulf

Schools will be collecting samples and water quality info on Oct 6 in CO, NM, TX and Mexico
  • IBWC CRP will sample with Franklin HS at American Dam

School groups will make YouTube videos

Water Relay culminates in Gulf on Oct 16

Local activities are posted at www.diadelrio.org
The International Boundary and Water Commission, U.S. Section (USIBWC) Texas Clean Rivers Program (CRP) is responsible for collecting water quality data throughout the Texas portion of the Rio Grande Basin. CRP is a state fee-funded program for water quality monitoring, assessment, and public outreach, and aims to maintain and improve the quality of water within each river basin in Texas through partnerships with the Texas Commission on Environmental Quality (TCEQ) and participating entities.
Welcome to the Clean Rivers Program Photo and Video Gallery. This page has pictures and videos from past CRP events and water monitoring. Note: Both the photo and video galleries require Adobe Flash to be installed on your browser.

Photo Gallery

Click on the album below to see additional pictures or to view the video.

CRP Photo Gallery - River Cleanup June 13, 2009

USIBWC CRP hosted a river cleanup event on June 13, 2009 with other organizations, including individual Owners of the Rio Grande (ORIG), Keep El Paso Beautiful, Boy Scouts, and others. The cleanup was located at Courchesne Bridge, at the intersection of Paisano and Andlutt in El Paso, Texas. A total of 37 people participated, and we collected 43 bags of trash, 11 tires, some odd and end garbage, and a couch! We had two local television stations cover the event. Thank you to everyone who coordinated and participated in the cleanup.
USIBWC’s Adopt-a-River Program

- Community groups adopt a 2-mile section of river for 2 years
- Commit to 2-3 cleanups per year
Adopt-a-River

- Community groups leave trashbags on levee
- IBWC picks up and disposes of trash
- Sign acknowledging group posted
Adopt-a-River

Many sections available for adoption

Contact Liz Verdecchia
Questions?
USIBWC - CRP
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Leslie Grijalva, 915-832-4770

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CRP Website
www.ibwc.gov/CRP/Index.htm