

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Commissioners

Date: June 17, 2010

Thru: LaDonna Castañuela, Chief Clerk

From:  L'Oreal W. Stepney, P.E., Deputy Director
Office of Water

Subject Water Activities in San Antonio, Texas – The Clean Rivers Programs and local partnerships and TCEQ's Edwards Aquifer Program

At the June 25, 2010 Commissioners' Work Session, an overview of water activities in the San Antonio, Texas will be presented. The Office of Water specific topics this presentation will include are as follows. The TCEQ's Edwards Aquifer Program information is submitted under separate cover.

- Clean Rivers Program and local partnerships
 - Background on the Clean Rivers Program (CRP)
 - Goals and activities of the CRP
 - Examples of the program's success

The presentation will incorporate the attached slides.

COMMISSIONERS' JUNE 25, 2010 WORK SESSION WATER ACTIVITIES IN SAN ANTONIO, TEXAS

The Texas Clean Rivers Program

Scope

In 1991, the Texas Legislature enacted Texas Water Code Sec 26.0135, the Texas Clean Rivers Act, which provides for strategic and comprehensive monitoring, and periodic assessment, of water quality. The Texas Clean Rivers Act established the Clean Rivers Program. The goals of this program are to maintain and improve the quality of water within each river basin in Texas through an ongoing partnership involving the TCEQ, river authorities, other state agencies, regional entities, local governments, industry, and citizens. The program's watershed management approach is used to identify and evaluate water quality issues, establish priorities for corrective action, work to implement those actions, and adapt to changing priorities. Due to the program's holistic watershed stewardship responsibilities, the program partners serve as a hub for water quality information and coordination efforts within their respective watershed(s).

Work is targeted to long-term monitoring with a portion dedicated to intensive studies of water quality priorities. The partners primarily collect information to determine compliance with the Texas Surface Water Quality Standards, program priorities also incorporate the needs associated with permits.

Biennial Grant Agreements

The TCEQ accomplishes the work of the Clean Rivers Program through grant agreements with regional water authorities. There are 15 regional water authorities that manage the program in 23 river and coastal basins. The majority are river authorities, with one water district, one council of governments, and a federal water commission. The regional water authorities perform a variety of tasks, including:

- **Quality Assurance** - Ensure water quality samples collected and analyzed meet TCEQ specifications
- **Monitoring and Coordinating Activities** - Collect water quality samples and coordinate monitoring plans to ensure priorities are addressed
- **Data Management** - Verify, manage, and prepare data for the TCEQ
- **Data Analysis and Reports** - Evaluate water quality data using statistical and spatial analysis to effectively communicate water quality in a holistic manner
- **Stakeholder Participation** - Engage stakeholders in water quality, set priorities, and identify solutions
- **Special Projects** - Conduct intensive studies of high priority water quality issues to better define the conditions so that the most effective actions may be considered.

Achieving Success

Some of the most important aspects of the Clean Rivers Program include:

- Over 60% of the water quality data used for TCEQ decision-making comes from this program and much of the sampling is provided as "in-kind" services.
- The Program provides a forum to coordinate multiple monitoring groups to increase sampling coverage in each river and coastal basin.
- Technical expertise has developed with the Clean Rivers Partners over the years fostering strong relationships and a great knowledge base.

- The data are used to help with the development and implementation of TMDLs, Watershed Protection Plans, and other local water quality improvement actions.
- The Clean Rivers Partners conduct holistic and in-depth reviews of water quality problems to determine and communicate the possible reasons for existing conditions.
- The Clean Rivers Program brings stakeholders together to share information and investigate possible solutions. They identify issues and play an active role in addressing water quality issues in their communities.



The Clean Rivers Program

TCEQ Commissioners' Work Session

San Antonio, Texas

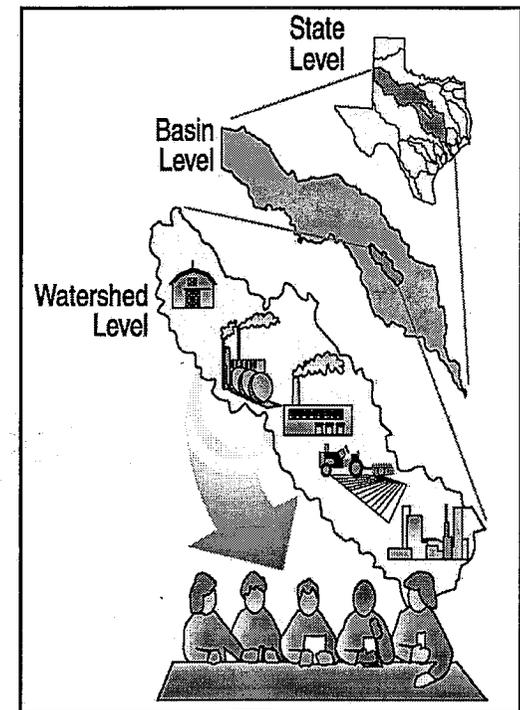
June 25, 2010

Kelly Keel, Director

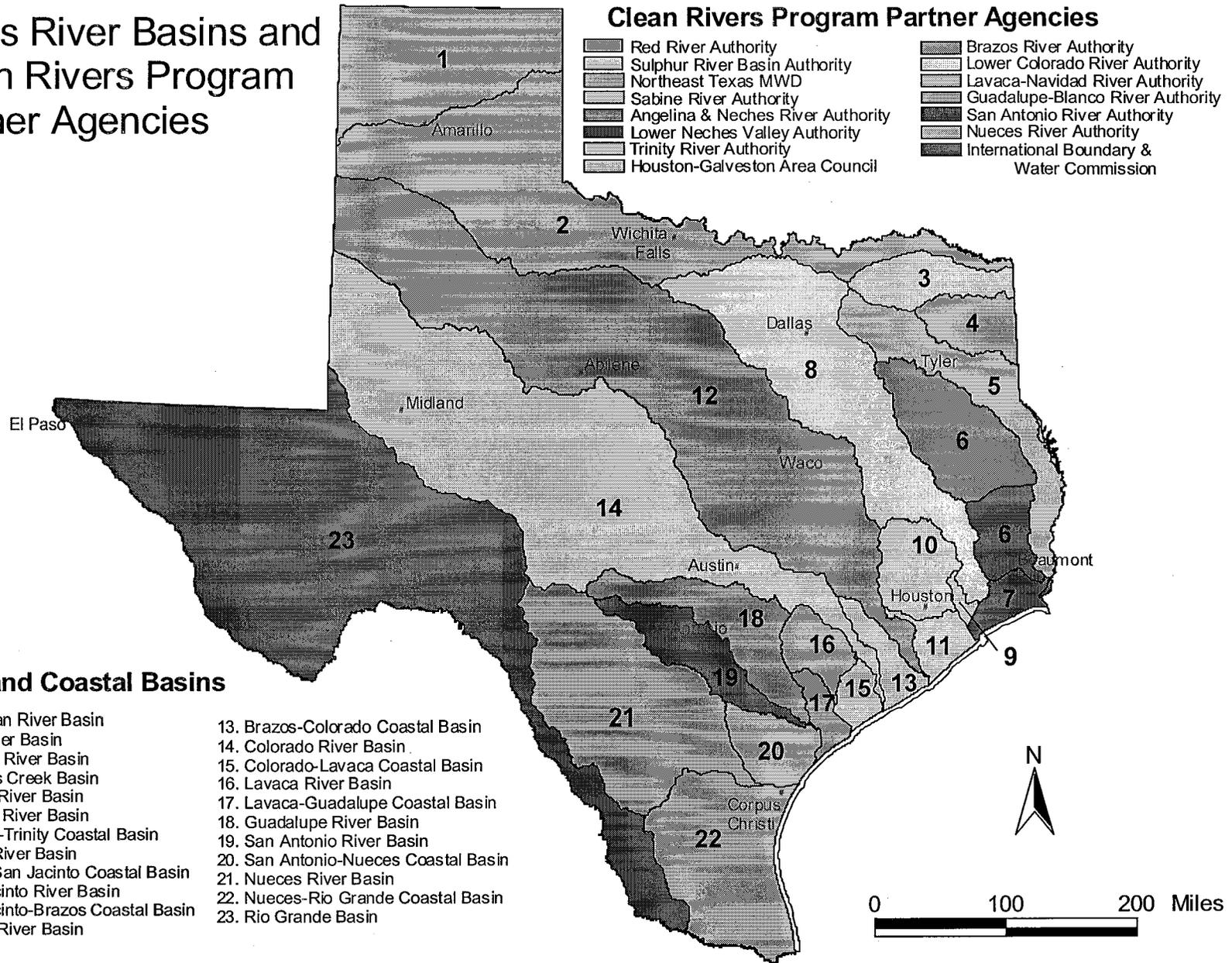
Office of Water – Water Quality Planning Division

Clean Rivers Program

- Established in 1991 – the Clean Rivers program (CRP) is a very successful partnership between the TCEQ, regional water authorities, and the public
- The Program is a hub for water quality information and coordination of monitoring efforts and public participation, for each river basin



Texas River Basins and Clean Rivers Program Partner Agencies

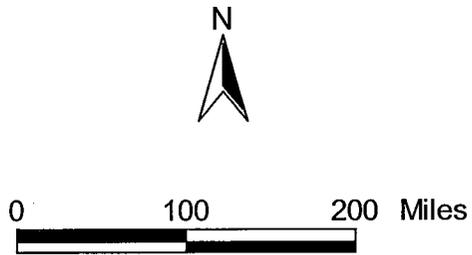


Clean Rivers Program Partner Agencies

- | | |
|-----------------------------------|---|
| Red River Authority | Brazos River Authority |
| Sulphur River Basin Authority | Lower Colorado River Authority |
| Northeast Texas MWD | Lavaca-Navidad River Authority |
| Sabine River Authority | Guadalupe-Blanco River Authority |
| Angelina & Neches River Authority | San Antonio River Authority |
| Lower Neches Valley Authority | Nueces River Authority |
| Trinity River Authority | International Boundary & Water Commission |
| Houston-Galveston Area Council | |

River and Coastal Basins

- | | |
|--------------------------------------|--------------------------------------|
| 1. Canadian River Basin | 13. Brazos-Colorado Coastal Basin |
| 2. Red River Basin | 14. Colorado River Basin |
| 3. Sulphur River Basin | 15. Colorado-Lavaca Coastal Basin |
| 4. Cypress Creek Basin | 16. Lavaca River Basin |
| 5. Sabine River Basin | 17. Lavaca-Guadalupe Coastal Basin |
| 6. Neches River Basin | 18. Guadalupe River Basin |
| 7. Neches-Trinity Coastal Basin | 19. San Antonio River Basin |
| 8. Trinity River Basin | 20. San Antonio-Nueces Coastal Basin |
| 9. Trinity-San Jacinto Coastal Basin | 21. Nueces River Basin |
| 10. San Jacinto River Basin | 22. Nueces-Rio Grande Coastal Basin |
| 11. San Jacinto-Brazos Coastal Basin | 23. Rio Grande Basin |
| 12. Brazos River Basin | |



Water Quality Sampling

- CRP collects over 60% of the water quality data used by TCEQ
- Rigorous quality assurance process
- Additional data provided using partner funds

San Antonio River Authority (SARA) Sampling Overview

Fifty-five sites 6 to 12 times a year

Fifteen biological studies

SARA funds 56% of the parameters analyzed

Seventeen Monitoring Sites for dissolved oxygen

Evaluate Water Quality Issues

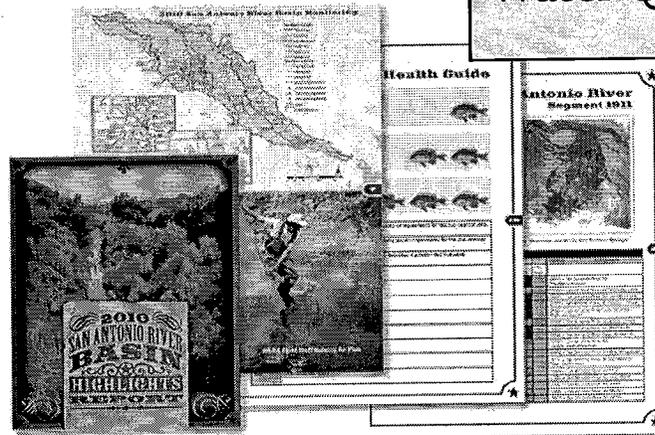
- Intensive study of water quality issues
- Explain water quality conditions
- Track water quality trends
- Investigate solutions

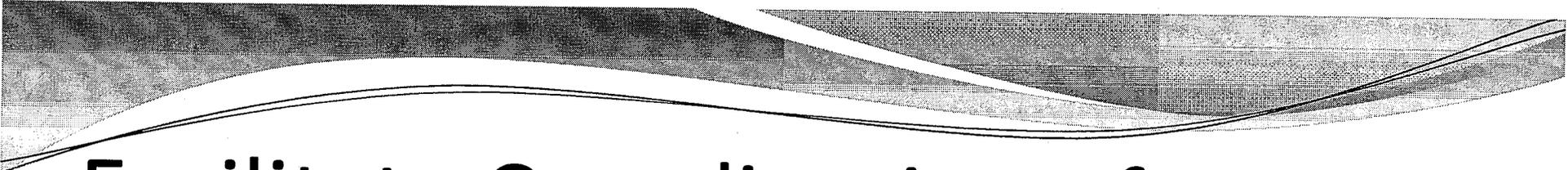
SARA's Proactive Approach –
Using Water Quality Information
to Focus Efforts in the Watershed

Initiated the Upper San Antonio
Watershed Protection Plan

Technical Support of the Cibolo
Creek Watershed Protection Plan

Data Support City of San Antonio
Water Quality Modeling Efforts





Facilitate Coordination of Water Quality Activities

- Meet annually with water quality monitoring entities to plan each year's sampling
- Address sampling priorities of the TCEQ and stakeholders
- Provide a forum for TMDL and Watershed Protection Plan (WPP) activities
- Provide technical input on TCEQ water quality assessment and standards development

Engage Stakeholders

- Periodic basin steering committee meetings
 - Set water quality priorities
 - Discuss local water quality concerns
 - Work to resolve water quality issues
- Water: A Living Lesson

SARA's Steering Committee - An Organized and Formal Approach

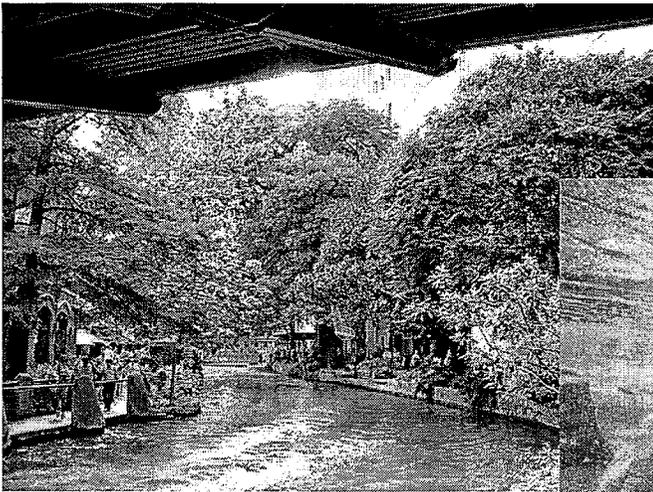
Environmental Advisory Committee (EAC)

EAC is designed to be a comprehensive public participation group that reviews and provides input on environmental activities in the basin



Watershed Protection Plan

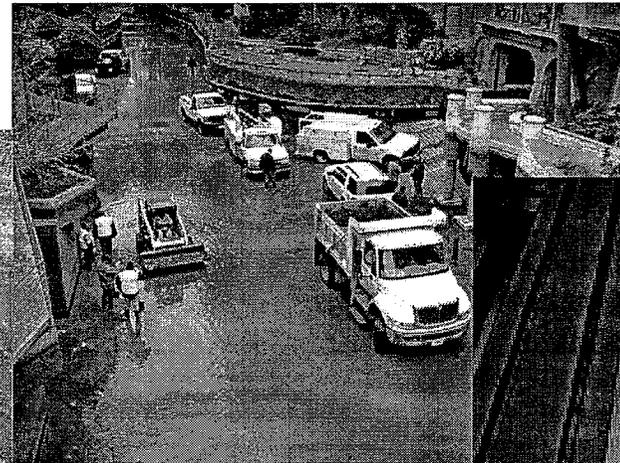
Local Initiatives



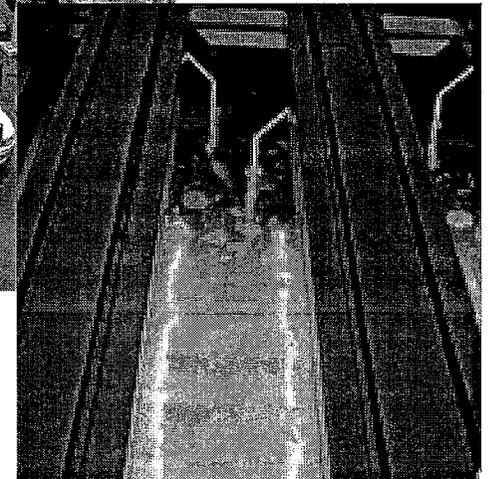
Bat exclusion under
Houston St bridge



San Antonio Zoo
hippo aquarium



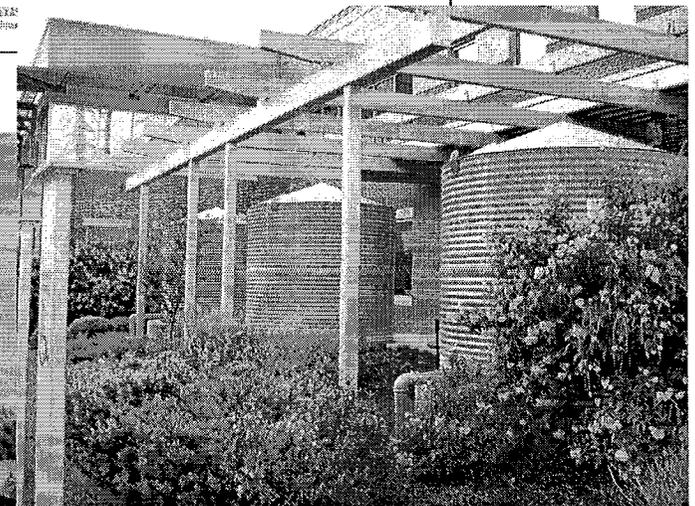
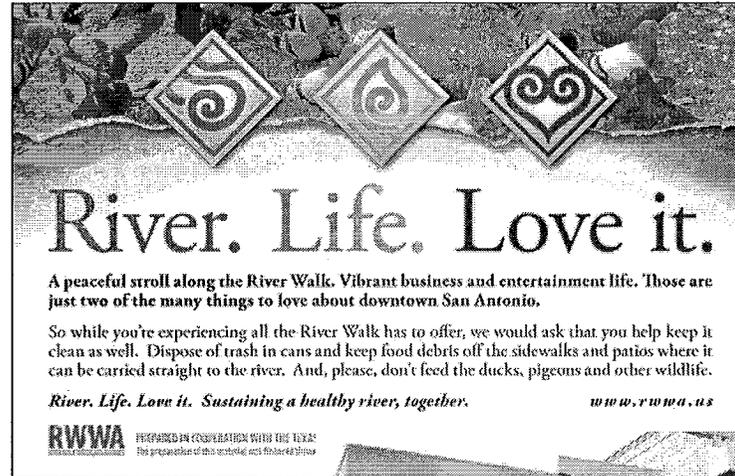
River Loop silt
removal



Ultraviolet disinfection
system for routine
discharges from zoo

Watershed Protection Plan

- River Walk Education Project
- Mission Drive-In Redevelopment Project



COMMISSIONERS' JUNE 25, 2010 WORK SESSION WATER ISSUES IN SAN ANTONIO, TEXAS

San Antonio Edwards Aquifer Protection Program Overview

History and General Information

The Edwards Aquifer is one of the most valuable water resources in the Central Texas area. The aquifer provides water for municipal, industrial, and agricultural uses. A number of cities rely on the aquifer as their only source of drinking water. In fact, the aquifer is the sole source of drinking water for over 1.7 million people in Central Texas. It covers 4,350 square miles in parts of 11 counties.

Applicable Authority

- History - Texas Water Quality Board issued the first regulations in 1970 for the protection of the aquifer recharge and buffer zones
- Current
 - Texas Water Code Chapter 26
 - Clean Water Act Section 33 USCA §§1311, 1319, and 1329
 - Title 30 TAC Chapter 213

Regulated Zones

- San Antonio Region Counties
 - Bexar, Comal, Medina, Kinney and Uvalde
- Austin Region Counties
 - Hays, Travis and Williamson

Fiscal Year 2010 San Antonio Region Compliance Summary

- 158 Protection plans, extension requests and feature closure plans approved
- 84 Site Assessments
- 32 Notices of Violations
- 11 Notices of Enforcement
- 64 Compliance Investigations

Coordination with the Edwards Aquifer Authority (EAA)

- Distribution of plans
- Water Quality Advisory Group Meetings
- Meetings with EAA Staff
- EAA referrals

Maintenance of Structural Best Management Practices (BMPs)

- Edwards rule requires an engineer to certify the construction of permanent BMPs
- Edwards rule established responsibility for maintenance of permanent BMPs
- Investigation findings

San Antonio Edwards Aquifer Protection Program Overview

TCEQ Commissioner's Work Session
Ramiro Garcia, Jr., Area Director
Border South Central Texas



Edwards Aquifer Quick Facts

- Drinking water source for over 1.7 million people
- Provides critical habitat for many federally listed endangered species
- Covers 4,350 square miles
- Texas Water Quality Board issued the first regulations in 1970 for the protection of the aquifer recharge and buffer zones



Edwards Aquifer Quick Facts Continued

➤ Authority

- Texas Water Code Chapter 26
- Clean Water Act Section 33 USCA
§§1311, 1319 and 1329
- Title 30 TAC Chapter 213

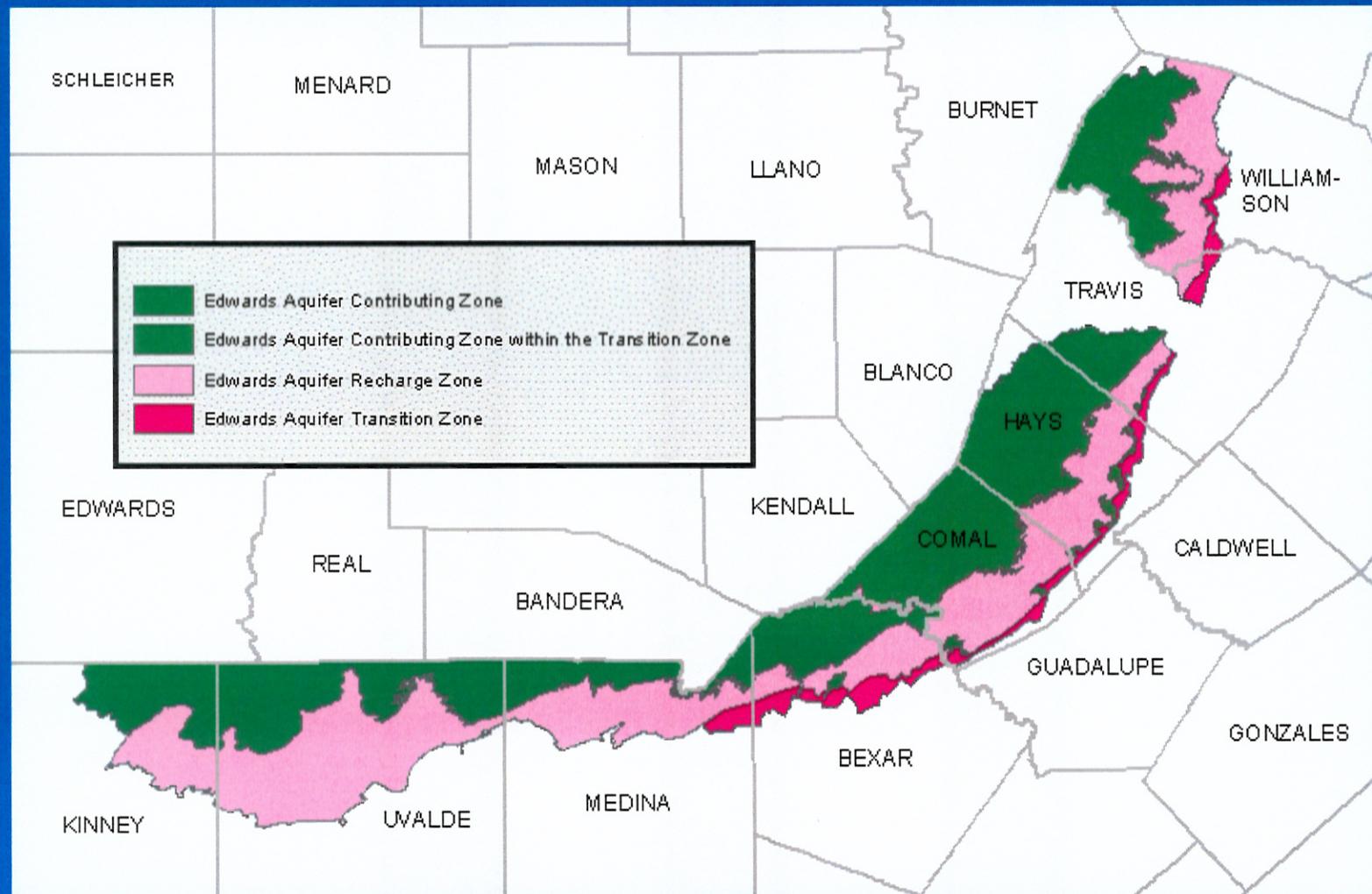


Edwards Aquifer Regulated Zones

- San Antonio Region Counties
 - Bexar, Comal, Medina, Kinney, Uvalde
- Austin Region Counties
 - Hays, Travis, Williamson



Edwards Aquifer Regulated Zones



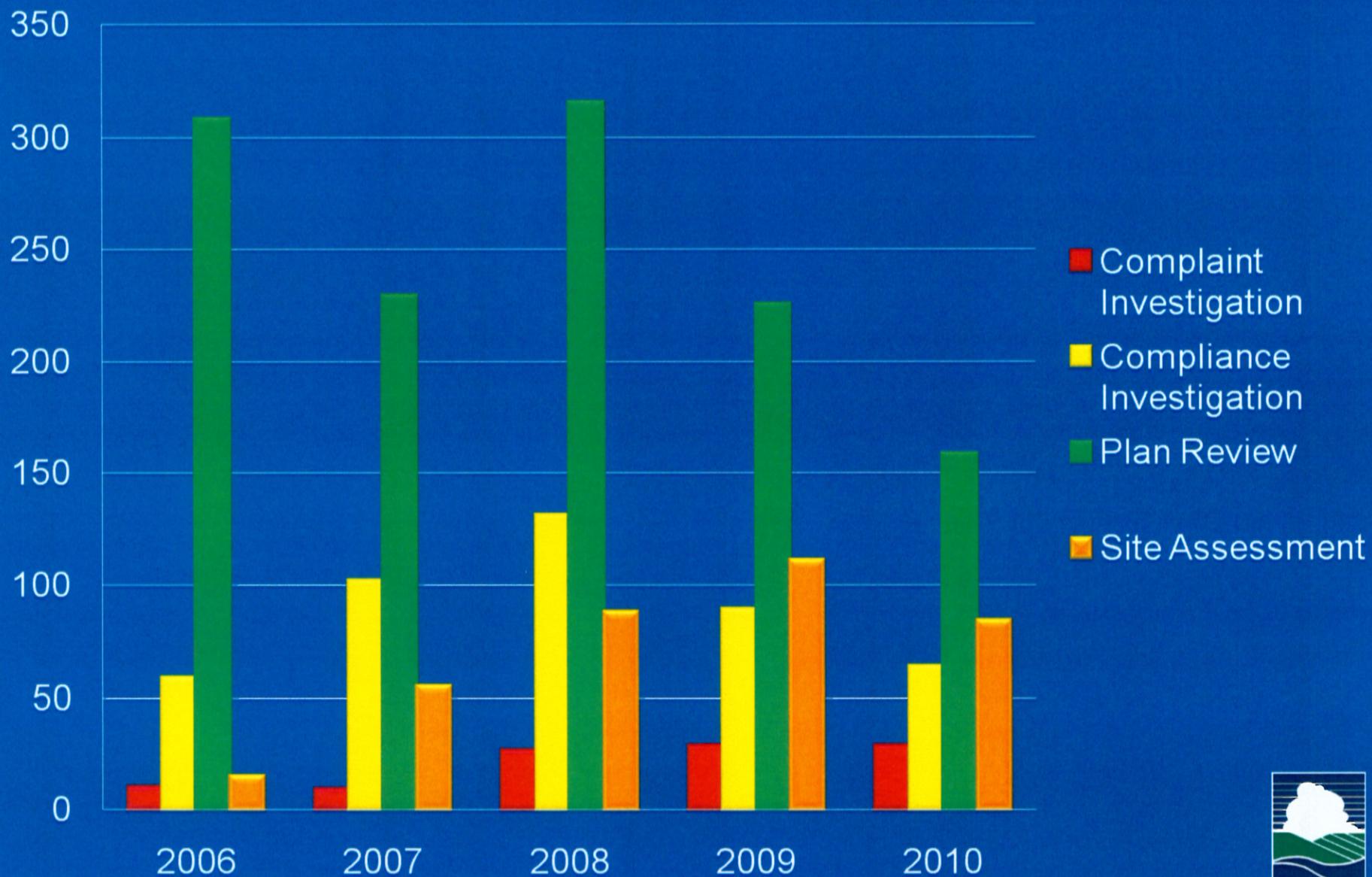
FY 2010

San Antonio Region EAPP Compliance Summary

- 158 Protection plans, extension requests and feature closure plans approved
- 84 Site Assessments
- 32 Notices of Violations
- 11 Notices of Enforcement
- 64 Compliance Investigations



San Antonio EAPP Events



Edwards Aquifer Authority

- TCEQ San Antonio Region distributes all received protection plans to the EAA
- EAA and TCEQ SA Region staff meet regularly
 - EAA Water Quality Advisory Group Meetings
 - 2009 - meetings held to discuss cross training, GIS/GPS applications, database utilization, and compliance issues
- EAA conducts independent site inspections of approved plans.
 - EAA lacks enforcement authority. Referrals are made to San Antonio Region for follow-up

Edwards Aquifer

Maintenance of Structural Best Management Practices (BMPs)





Sand filter basin, where a portion of the wall fell down and no repairs were made





Sand filter basin where a portion of the basin wall washed out



Non-maintained sand filter basin (as evident from the height of the vegetation)





Maintained sand filter basin



Maintained sand filter basin





Maintained sand filter basin with captured water from the construction activities

