

# TCEQ's Continuous Water Quality Monitoring Network (CWQMN)



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Texas Commission  
On Environmental Quality

## History of the CWQMN

- Network started by TCEQ in 2001 with 4 sites in the Bosque and Leon River watersheds
- Network continues to progressively grow
- Currently over 50 sites in the network



## Locations in Texas



- Caddo Lake
- Lake Palestine
- Wichita River
- Lake Possum Kingdom
- Lake Granbury
- Lake Whitney
- Bosque River and Tribs.
- Leon River Tribs.
- Upper Colorado River
- San Antonio River
- Pecos River
- Rio Grande
- Arroyo Colorado
- Petronilla Creek
- Houston Bayous
- Groundwater Sites



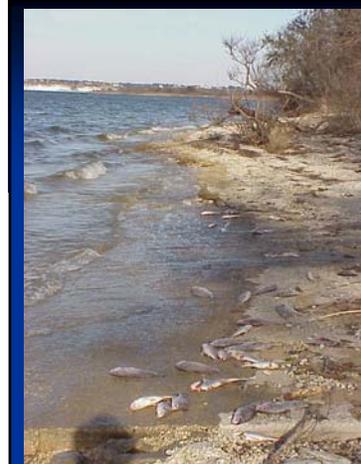
## Benefits of Continuous Data

- Water quality is measured in **greater temporal detail and resolution** than is possible with discrete samples or short-term deployment of monitoring equipment



## Projects in the Brazos

- Harmful Alga Research
  - Partnership with TPWD to collect water quality data in reservoirs affected by Golden Alga
- Environmental Monitoring and Response System (EMRS)
  - Provide timely surface water quality data to TCEQ Field Ops for screening and targeting field responses and investigations in the Upper North Bosque watershed.
- General Water Quality
  - Monitor long-term water quality trends at downstream locations in the Bosque and Leon watersheds.



Lake Whitney  
boat launch,  
February 9, 2005

\*Photo and slide by Dave Buzan

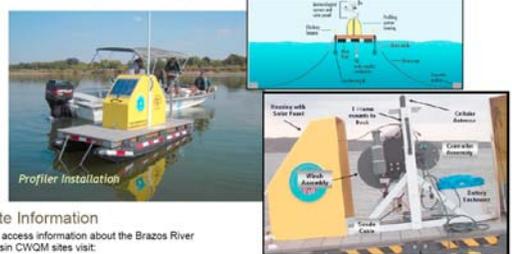


### Locations of Harmful Algal Bloom Continuous Water Quality Monitoring Stations, Brazos River Basin



## Vertical Profiler

### Basic CWQM Profiler Station Equipment



Site Information  
To access information about the Brazos River Basin CWQM sites visit:

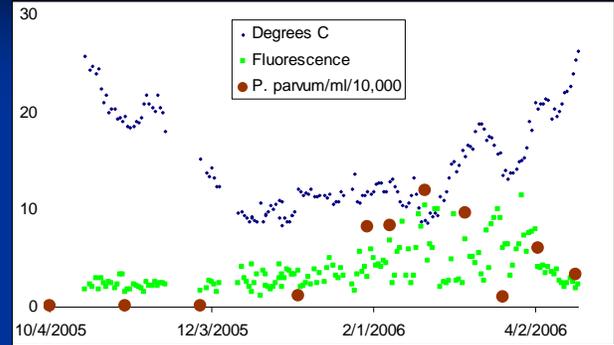
<http://www.texaswaterdata.org>



## Deployed Station



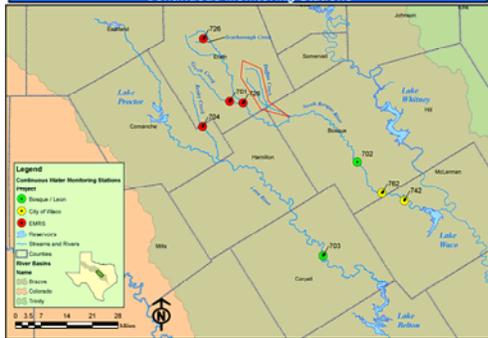
## Golden Alga Data TCEQ/TPWD/ BRA Partnerships



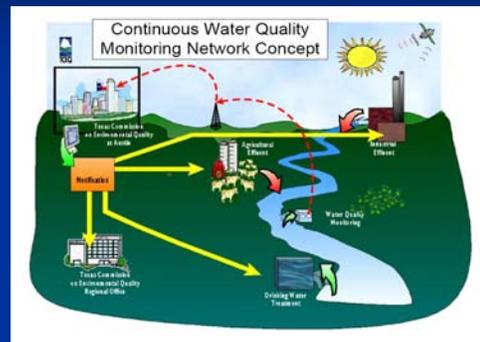
\*Data by Dave Buzan



## Locations of Bosque / Leon Watershed Continuous Monitoring Stations

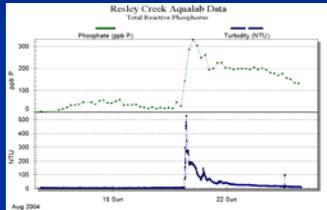


## Environmental Monitoring and Response System



## How it Works

- Landowner permission to establish site
- Develop site specific “trigger levels” based on nutrient concentrations
- Deploy monitoring equipment
- Receive notifications when ambient conditions exceed trigger levels
- TCEQ regional staff decide how/if to respond

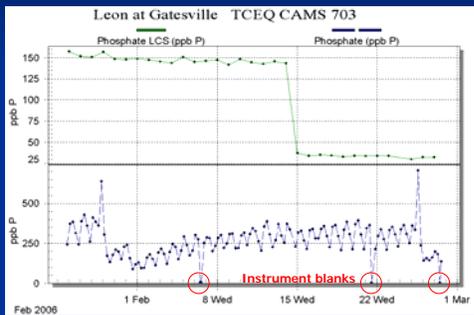


## Parameters Measured

- Ammonia - Nitrogen
- Nitrate -Nitrogen
- Total Reactive Phosphorus
- Total Phosphorus
- Temperature
- Specific Conductance
- Dissolved Oxygen
- pH
- Turbidity



## Nutrient Monitoring Quality Control



## Data Quality

- Each data point is verified and validated by TCEQ Data Management Staff or by contracted data validators.



## Future Expansion in the Brazos

- Leon River at Gatesville
  - Field Parameters only (not nutrients)
  - Replace the station lost in the 2007 Flood
- No other sites planned



## Opportunities

- **Water Resource Management**
- Water Resource Management Projects
  - EV Spence
  - Rio Grande at Andzalduas
  - Pecos River
- Easy Parameters (ex. conductivity)
- Real-time data available to local decision-makers



For more information on TCEQ's  
Continuous Water Quality  
Monitoring Network  
please visit:

[www.texaswaterdata.org](http://www.texaswaterdata.org)



## Questions?

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