



## North Bosque: Continuous Water Quality Monitoring Stations

<b>Water Body</b>	North Bosque River (Seg 1226), Upper North Bosque (Seg 1255)
<b>Location</b>	Bosque and Erath Counties
<b>River Basin</b>	Brazos River (12)
<b>Contractor</b>	Texas Institute for Applied Environmental Research (TIAER)
<b>Project Period</b>	January 1, 2010 to August 31, 2013
<b>Project Total</b>	\$164,829 (Federal 60% and Local Match 40%)

### Background

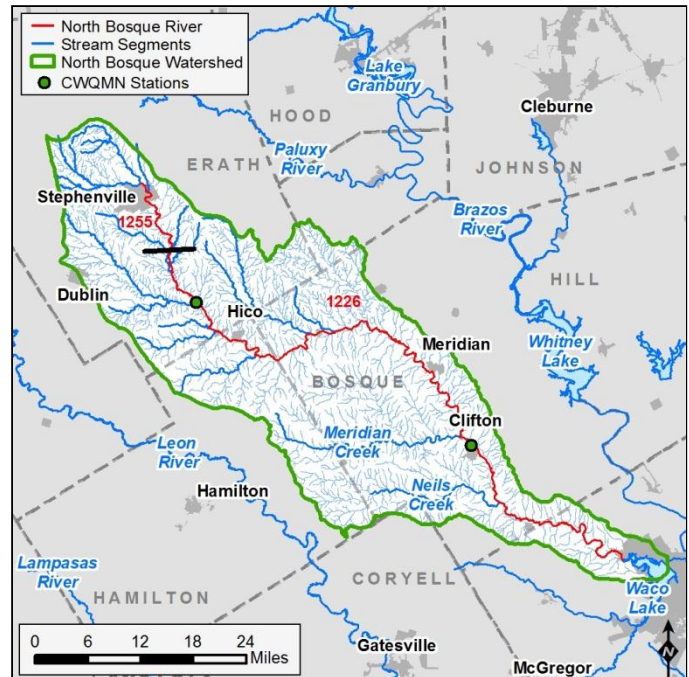
The North Bosque River (Segments 1226 and 1255) originates near the City of Stephenville and flows southeast over a primarily rural landscape, eventually flowing into Lake Waco (Segment 1225). Nutrient and algal concentrations in excess of screening levels established by the Texas Commission on Environmental Quality (TCEQ) have been found since 1996. Excessive algal growth can lead to taste and odor problems for drinking water and potentially low dissolved oxygen levels within a stream, which could result in fish kills.

In response to water quality concerns, two **total maximum daily loads** (TMDL) for phosphorus, the limiting nutrient of the watershed, were completed in 2001. A subsequent TMDL Implementation Plan (I-Plan) was adopted in 2003. Dairy waste application fields and municipal waste water treatment plants were shown to be the major controllable sources of phosphorus in the watershed.

Since approval of the I-Plan, there have been many projects/activities to control and remove sources of nutrient loadings in the watershed. In order to assess the effectiveness of these activities in improving water quality conditions, many monitoring stations were installed in the watershed. It is important to continue this monitoring to gain further data for assessment.

### Project Description

For this project, TIAER continued operation of two existing continuous water quality monitoring network (CWQMN) stations near the City of Clifton and State Highway 6. The data from these stations assist the TCEQ Stephenville Field Office staff in targeting field investigations to likely sources when pollutant concentrations exceed trigger levels and to provide quality assured water quality data during the implementation of the I-Plan. Operation of the Clifton site was discontinued in August 2011.



### Current Status

The project funding ended August 31, 2013. Water quality monitoring continues through other sources of funding.

### For More Information

#### TCEQ Project Manager

Tim Cawthon  
512.239.0845; [Tim.Cawthon@tceq.texas.gov](mailto:Tim.Cawthon@tceq.texas.gov)

#### TIAER Project Manager

Larry Hauck  
254.968.9561; [hauck@tiaer.tarleton.edu](mailto:hauck@tiaer.tarleton.edu)

## Project Highlights

- 01/2010 – The contract was initiated.
- 03/2010 – The annual CWQMN quality assurance project plan (QAPP) update was completed.
- 11/2010 – A contract amendment was signed, extending the contract through August 31, 2013.
- 03/2011 – The annual CWQMN QAPP update was completed.
- 08/2011 – The Fiscal Year 2011 Annual Report for the sites was completed.
- 08/2011 – Operation of the Clifton site was discontinued.
- 06/2012 – Contract was extended through August 31, 2013.
- 07/2012 – The Fiscal Year 2012 Annual Report was completed.
- 04/2013 – The annual CWQMN QAPP update was completed.
- 08/2013 – 2013 Annual Report submitted to TCEQ.
- **08/2013 – Contract closed**