



## Improving Water Quality in Aquilla Reservoir

# One TMDL for Atrazine

### Water Quality in Aquilla Reservoir

The state of Texas requires that water quality in Aquilla Reservoir (Segment 1254) be suitable for swimming, wading, fishing, drinking (with treatment), and a healthy aquatic ecosystem. However, testing of treated drinking water found excessive levels of atrazine (a herbicide) affecting the lake's use as a water supply. In response to these conditions, a total maximum daily load (TMDL) project was initiated to address urban and agricultural sources of atrazine and restore water quality in Aquilla Reservoir.

### Description of the Aquilla Reservoir Watershed

Aquilla Reservoir is a 3,280-acre reservoir on Aquilla and Hackberry Creeks in the Brazos River Basin southwest of Hillsboro. The reservoir was constructed in 1983 and is owned by the U.S. Army Corps of Engineers. It was built for water supply, flood control, and recreation purposes. The watershed is 255 square miles and is characterized by Blackland Prairies and Cross Timbers.

Aquilla Reservoir is an important resource to nearby communities. It provides drinking water to Hillsboro (population: 7,072), Milford (population: 711), Bynum (population: 192), and several water supply companies (Chatt, Files Valley, Hill County, Parker, Branden-Irene). Three parks operated by the Corps of Engineers are located on the lake: Dairy Hill Ramp (12,700 visitors annually), Old School Ramp (14,300 visitors annually), and Outlet Area (6,900 visitors annually). Visitors to the reservoir are important contributors to the local economy.

### Public Participation

Two forums participated in the public participation process for this TMDL. Under direction of the TCEQ, the Surface Water Protection Committee was formed. It is comprised of representatives from the Texas State Soil and Water Conservation Board (TSSWCB), the Texas Department of Agriculture, Texas A&M University, Novartis, USDA-Natural Resources Conservation Service, USDA-Agricultural Research Service, the Texas Farm Bureau, the Brazos River Authority, and municipal representatives.



A stakeholder group was formed in the Aquilla Reservoir watershed which includes agricultural producers and representatives of affected water supply companies and cities.

### For More Information

For more information on documents available for review, contact one of the following individuals. Or visit the TCEQ Web site at <[www.tceq.org/goto/tmdl/](http://www.tceq.org/goto/tmdl/)>.

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## TMDL Development Status

Approved by TSSWCB: March 21, 2001

TCEQ Adoption: March 23, 2001

EPA Region 6 Approval: October 30, 2002

## Implementation Plan Status

Start Date: November 2000

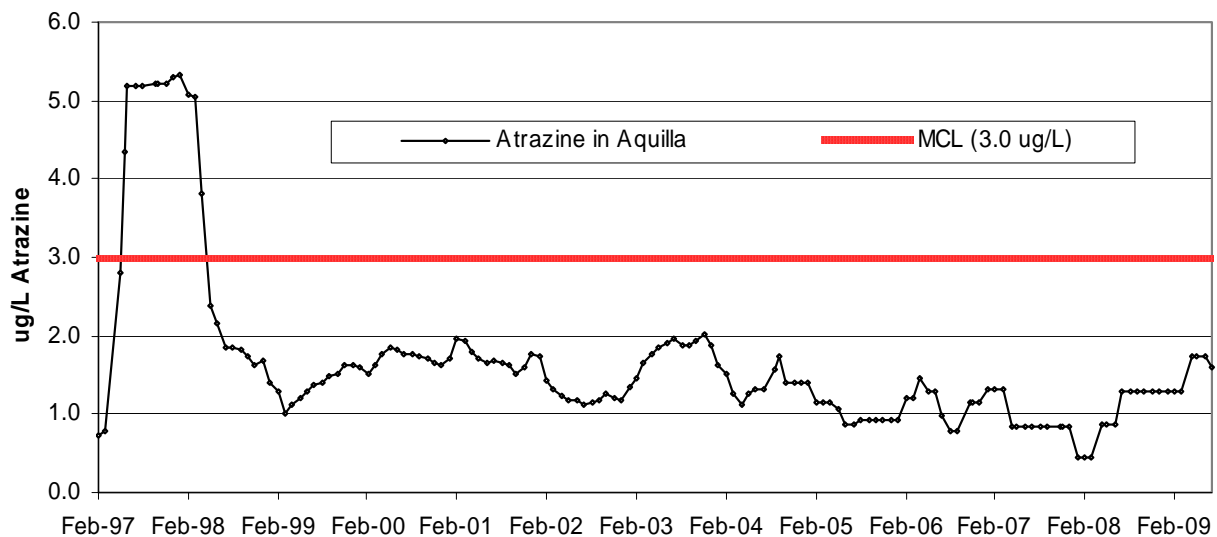
TCEQ Approval: January 18, 2002

### Implementation Plan Highlights

- The water quality goal has been achieved. The sampling results indicate that atrazine concentrations are well below the MCL (see Figure 1).
- Implementation activities fell into two primary categories: (1) implementing management practices to reduce atrazine runoff, and (2) intensive monitoring of the reservoir and its tributaries to determine whether water quality is improving.
- Agricultural producers in the Aquilla Reservoir watershed made a concerted effort to reduce atrazine discharges in runoff by voluntarily implementing BMPs. In a coordinated response, multiple agencies supplied assistance in the form of educational outreach programs, technical assistance to producers in developing BMPs and complying with regulations for use of agricultural chemicals, and cost-share funding.
- The TCEQ will continue to monitor reservoir quality on a routine basis. The AWSD will continue to monitor finished drinking water in compliance with the Safe Drinking Water Act.

**Figure 1. Atrazine Levels in Aquilla Reservoir**

*Running Annual Averages\**



\* Based on monthly mean or individual concentrations collected monthly or quarterly.

February 1997 to December 1998: concentrations in finished drinking water samples collected and analyzed by AWSD.

February 1998 to January 2002: concentrations in surface water samples collected and analyzed by AWSD.

March 2001 to July 2009: concentrations in surface water samples collected and analyzed by TCEQ-Region 9.

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