

# Medina River Watershed Protection

*Medina River Below Medina Diversion Lake*

## What is a Watershed?

A watershed is the land area that drains to a common waterway, like the Medina River! Everything on the land surrounding the river is part of the watershed.

## Our Watershed is Changing!

The Medina River below Medina Diversion Lake watershed is experiencing rapid growth and development.

- ◆ Growing Urbanization: Rural land is being replaced by homes, businesses, and industries.
- ◆ Impact on Water Quality: This growth is affecting the health of our river.

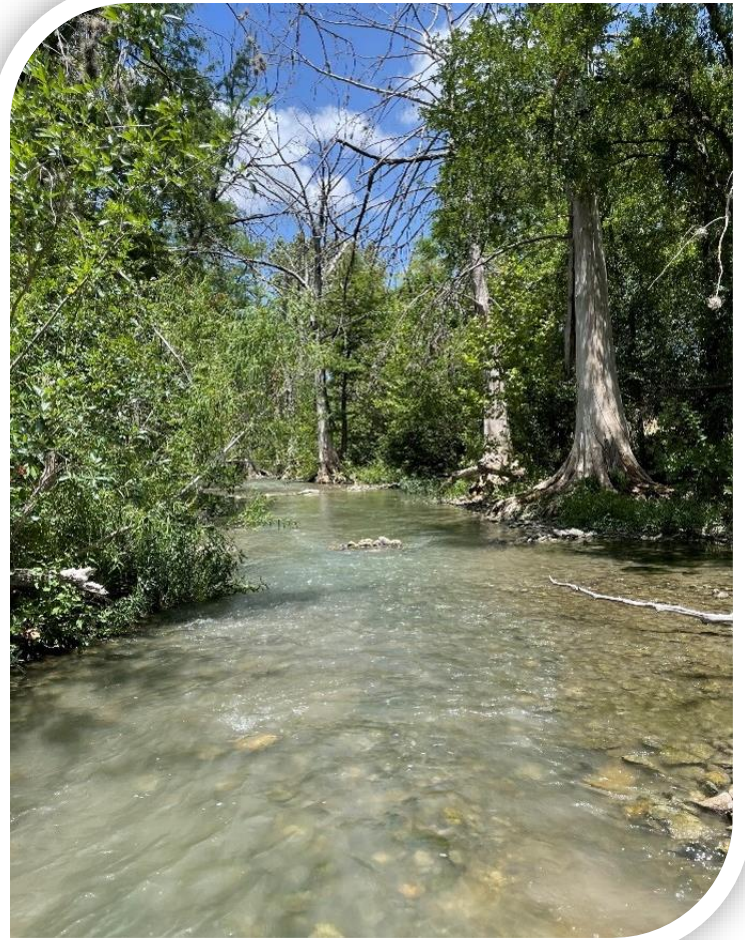
## Why is the Medina River Watershed Important?

- ◆ It's a vital source of drinking water, connected to the Edwards Aquifer.
- ◆ It provides habitat for unique and endangered species.
- ◆ It's a place for recreation and enjoyment.
- ◆ Concerns for Our River:
  - ◆ High Bacteria Levels: Making it unsafe for swimming and wading.
  - ◆ Excess Nutrients: Leading to algae growth and harming the ecosystem.

## Taking Action!

In 2023, local stakeholders came together to develop a Watershed Protection Plan (WPP) to address these issues.

- ◆ Identifying sources of pollution (bacteria and nutrients).
- ◆ Implementing educational and management measures.
- ◆ Reducing pollution from:
  - ✓ Livestock & Pets
  - ✓ On-site Sewage Systems (OSSF)
  - ✓ Wildlife (Deer & Feral Hogs)
  - ✓ Wastewater Treatment Facilities (WWTF)
  - ✓ Urban Stormwater runoff.



**Watershed Protection Plans** are voluntary, stakeholder-driven plans to improve water quality. They also make watersheds eligible for certain sources of grant funding once completed.

## How You Can Be Part of The Solution!

- ◆ Be mindful of pet waste.
- ◆ Maintain your septic system.
- ◆ Reduce runoff from your property.
- ◆ Support local conservation efforts.
- ◆ Learn more about the Watershed Protection Plan.

## Targeted Management Measures:

- ◆ Address both rural and urban sources: A comprehensive approach is essential.
- ◆ Manage increasing pressures from urbanization.

## Key Actions:

### *Wastewater & Stormwater:*

- ◆ Improve Wastewater Treatment Facility operations and prevent Sanitary Sewer Overflows.
- ◆ Improve stormwater quality through Low Impact Development and Green Infrastructure.
- ◆ Work to improve stormwater regulations.

### *Septic Systems:*

- ◆ Provide homeowner education on OSSF maintenance.
- ◆ Repair or replace failing septic systems.

### *Pet Waste:*

- ◆ Educate pet owners on proper waste disposal.
- ◆ Install waste collection stations in parks and neighborhoods.

### *Livestock:*

- ◆ Educate landowners on best management practices.
- ◆ Implement Water Quality Management Plans and Conservation Plans.

### *Feral Hogs:*

- ◆ Reduce feral hog populations through trapping, hunting, and habitat management.

### *Illicit Dumping:*

- ◆ Support enforcement of dumping regulations.
- ◆ Organize stream cleanups and waste collection events.

### *Riparian and Stream Restoration:*

- ◆ Assess and restore degraded riparian areas and streams.

### *Land Conservation:*

- ◆ Support land conservation programs.

### *Abandoned Wells:*

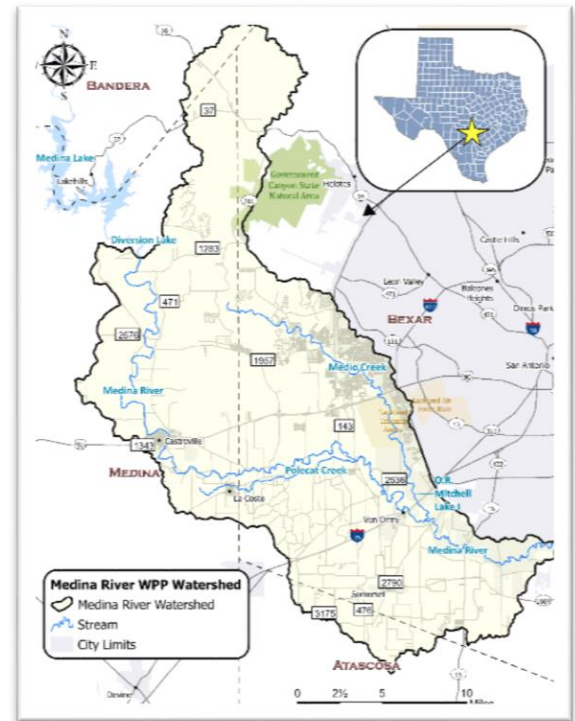
- ◆ Plug abandoned wells to prevent groundwater contamination.

## Education & Outreach:

- ◆ Engage the public through events.
- ◆ Continue public stakeholder meetings.

## Tracking Progress & Success:

- ◆ Monitor achievements and water quality.
- ◆ Adjust strategies as needed.
- ◆ Meet state standards for recreational uses



## Why It Matters:

- ◆ Actions on land affect streams and rivers.
- ◆ We need to work together to protect our watershed.
- ◆ Protects recreational opportunities (swimming, fishing, kayaking).
- ◆ Safeguards agricultural uses.
- ◆ Preserves the Edwards Aquifer, a vital water source.

## Learn More!



<https://medina.twri.tamu.edu/>



Mary Michael Lipford Zahed  
Program Specialist  
[mary.lipfordzahed@ag.tamu.edu](mailto:mary.lipfordzahed@ag.tamu.edu)  
979-314-8092

## Let's keep the Medina River watershed clean and healthy!

*Funding provided by the Texas State Soil and Water Conservation Board  
through a Clean Water Act Section 319(h) Grant from the U.S. Environmental Protection Agency.*



## RIPARIAN SYSTEMS



Healthy riparian systems improve water quality in a stream. Undisturbed soil, soil cover, and vegetation provide shade, plant litter, woody material, and reduce erosion of soil into a stream. A Riparian System is made up of three areas: The Uplands, The Riparian Zone, and The Stream.

Vegetation is a primary component of a riparian system. By acting as buffers between upland areas and flowing water, riparian plants can help filter pollutants such as nutrients and sediment. Vegetation also provides shade, which works to lower water temperatures.

Lower water temperatures support higher dissolved oxygen levels, which are important to maintain aquatic life. The vegetation also contributes wood debris to streams which is important to maintaining stream integrity.

Riparian systems also provide a role in wildlife habitat. Healthy systems will work to increase biodiversity and provide wildlife corridors, enabling both aquatic and land organisms to move along stream systems.



Scan the QR code with your cell phone using a barcode reader app to learn more about Riparian Systems.

SOLC

TEXAS A&M  
AGRICULTURE  
EXTENSION

GBRA

TXCQ



## UPLANDS



Upland areas consist of trees, grasses and forbs growing on higher elevations of a Riparian System, above floodplains. Upland vegetation helps to reduce nonpoint source pollution and erosion. The benefits of uplands can be compromised if there is excessive agriculture or impervious cover from development. The uplands provide cover and food for birds, mammals and wild game.

## RIPARIAN ZONE



A Riparian Zone is the land next to a stream where vegetation is strongly influenced by the presence of water. Riparian zones are important for good water quality as they typically include a filter strip of grasses and sedges along with deep rooted trees and shrubs along the stream. Riparian zones help to prevent sediment, nitrogen, phosphorus, pesticides and other pollutants from entering a stream. Riparian vegetation also allows water to soak into the ground and recharge groundwater.