

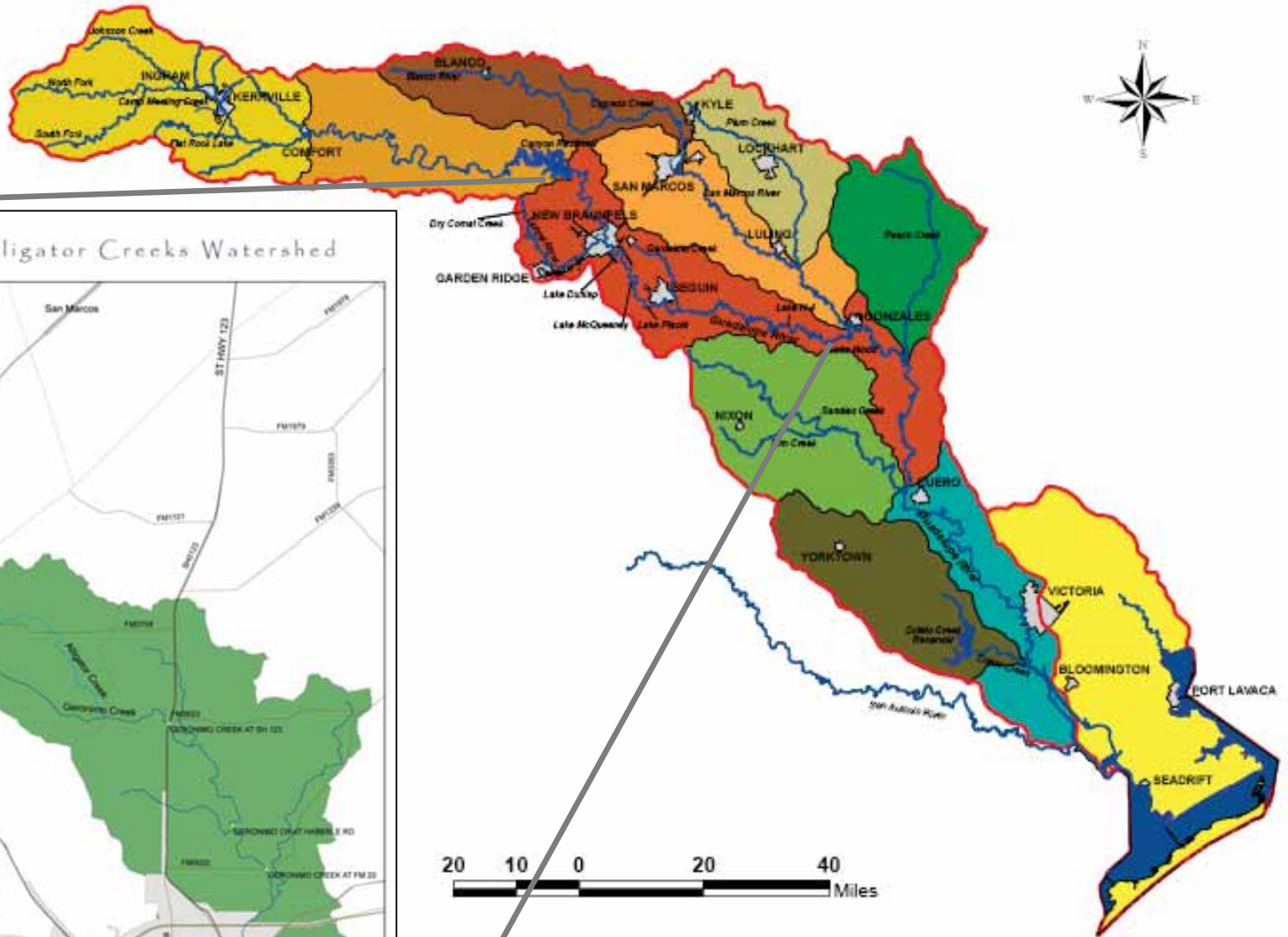
Geronimo and Alligator Creeks Partnership Update



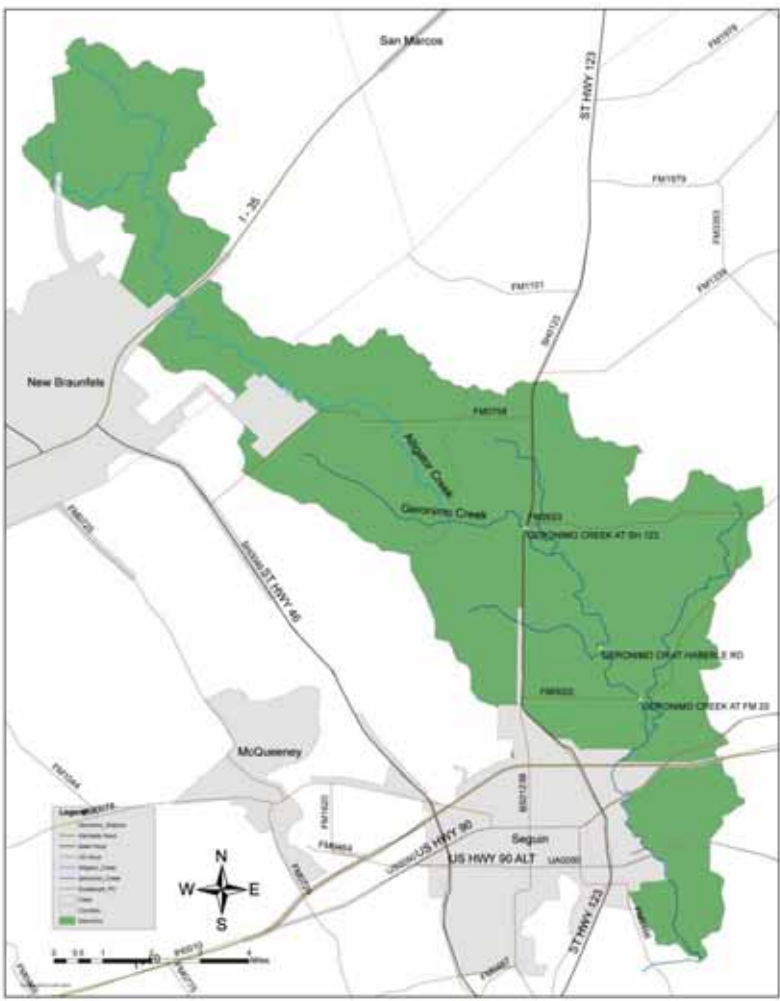
Ward Ling

Texas A&M AgriLife Extension

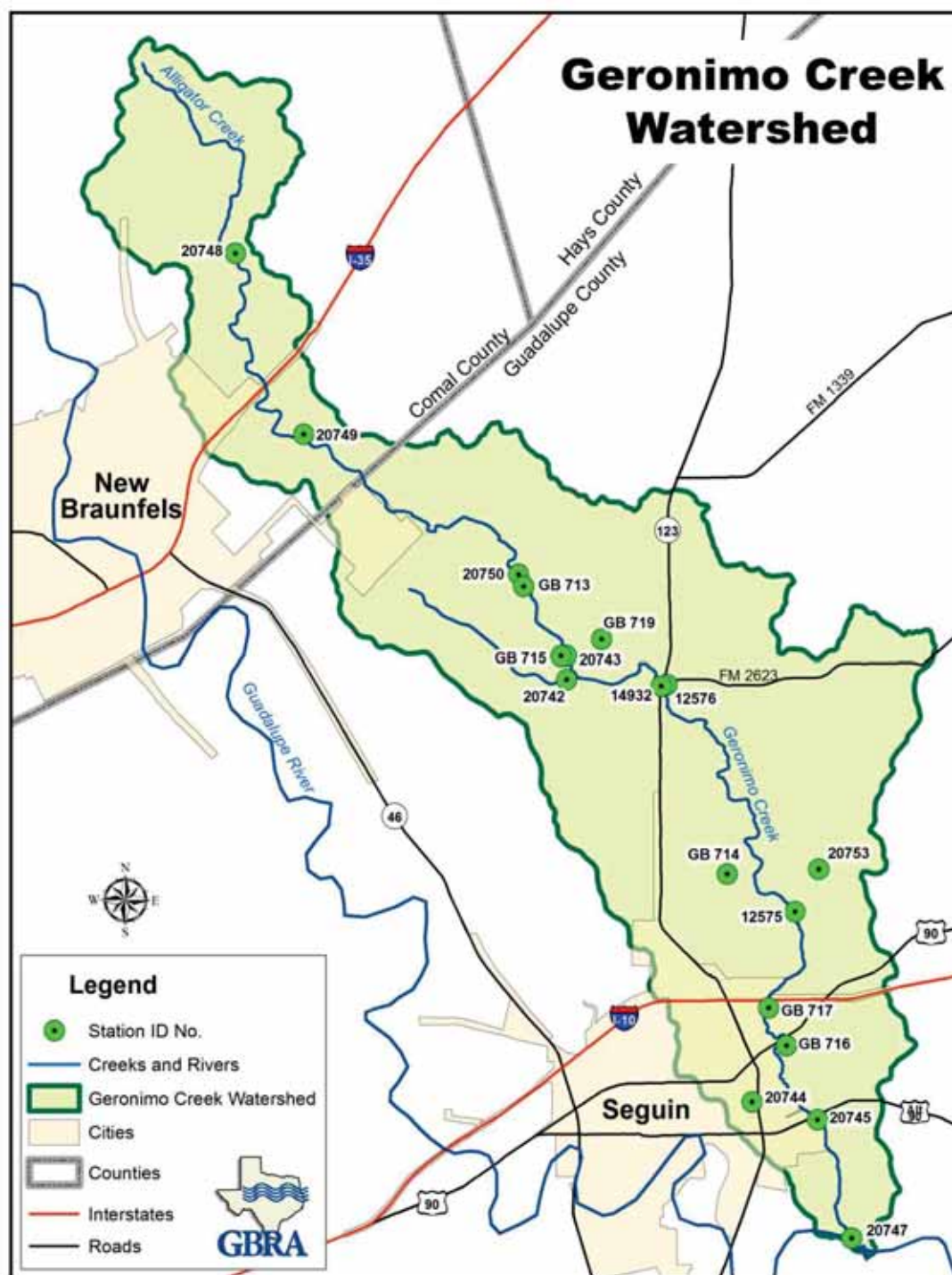
GUADALUPE RIVER BASIN WATERSHEDS



Geronimo and Alligator Creeks Watershed



Geronimo Creek Watershed



Water Quality

- Geronimo Creek was listed on the 2006 303(d) list for not supporting its contact recreation use
- Geronimo Creek was first listed in 2000 for concern for nutrient enrichment

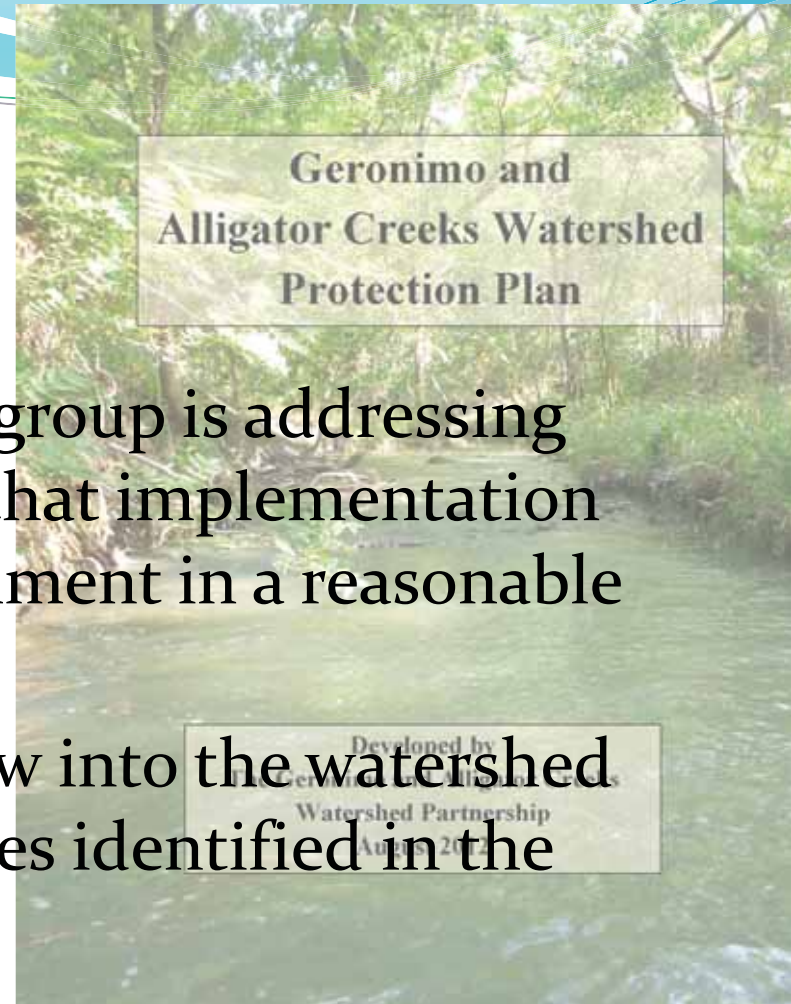


What is the Geronimo and Alligator Creeks Watershed Protection Plan?

- A community-driven management plan developed in 2012 to solve the water quality problems in the creeks
- It was developed and is managed through partnerships among federal, state, county and local groups and citizens
- It relies heavily on stakeholder involvement at the local level

EPA Acceptance

- Satisfies EPA that a stakeholder group is addressing the local watershed issues, and that implementation should result in standards attainment in a reasonable length of time
- Allows for federal funding to flow into the watershed to support management measures identified in the plan



Where is it coming from?

- The impairment is the result of loading from nonpoint sources:
 - Urban sources such as dogs and urban runoff
 - Agricultural sources such as livestock, feral hogs, and wildlife
 - Failing Septic Systems

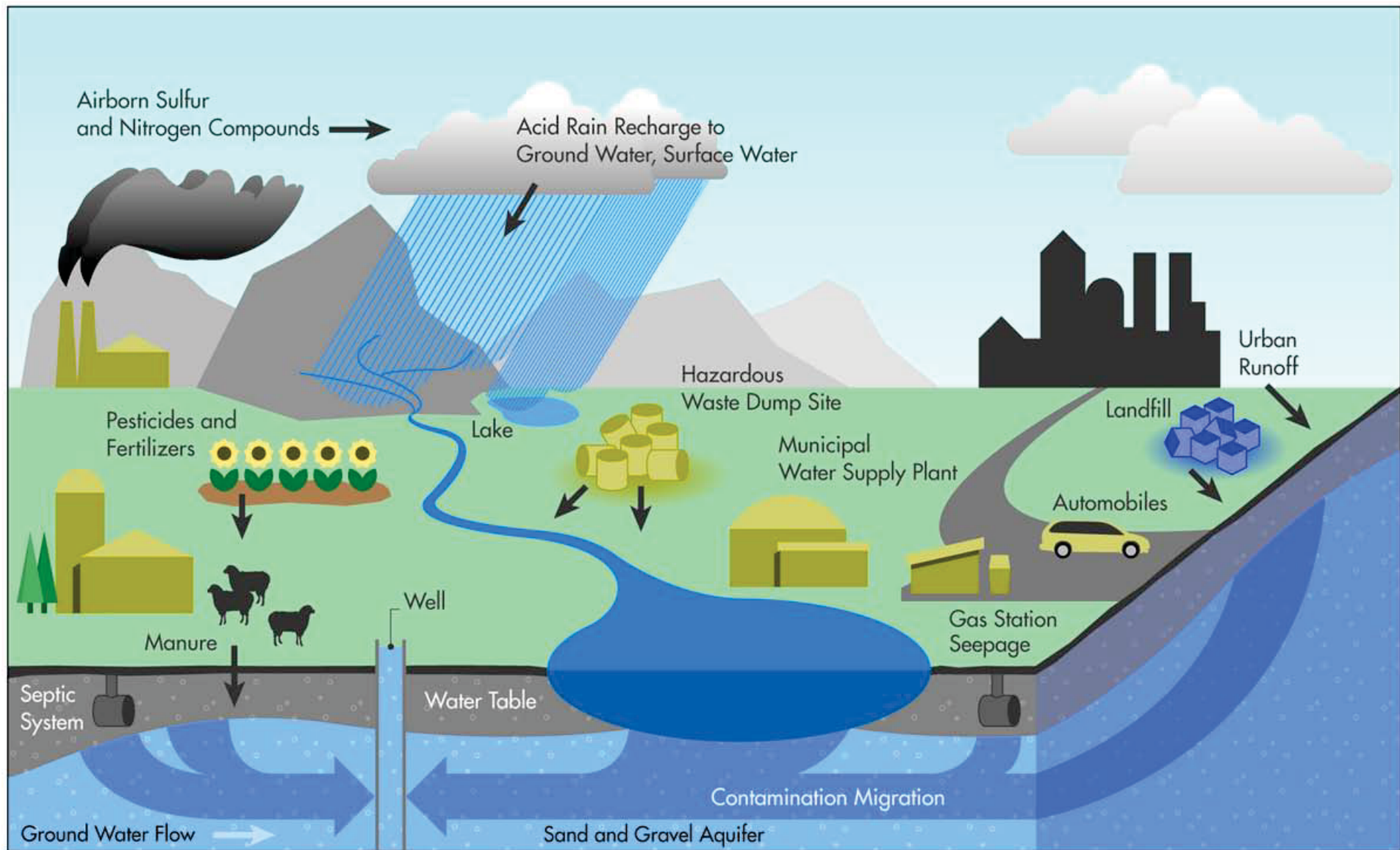


What does stormwater contain?

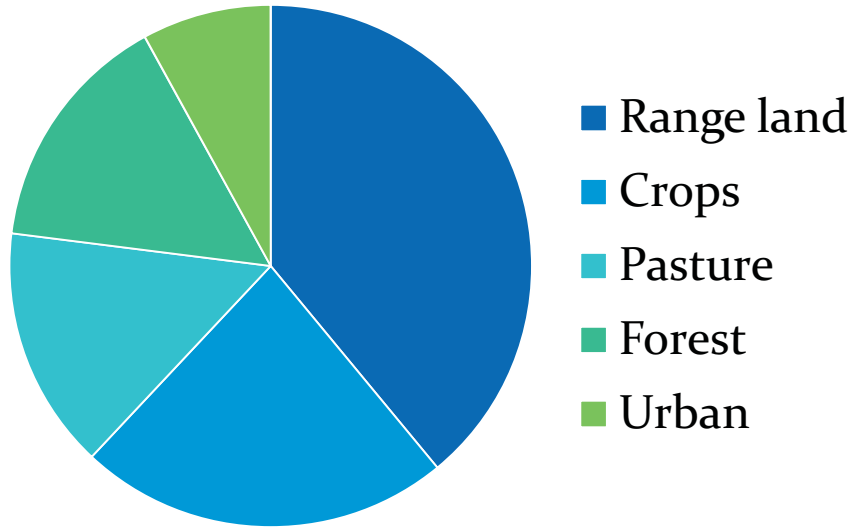
- Sediment
- Nutrients
- Toxic chemicals
- Bacteria



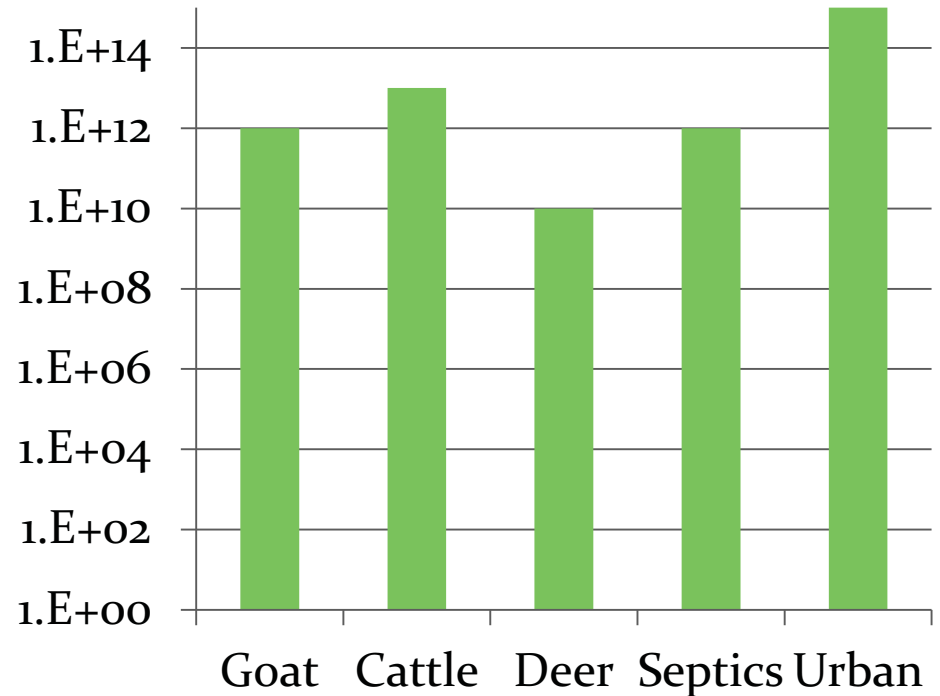
Human Activities Can Impair WQ



Land Use



E. coli Loading



- In terms of loading, urban runoff was higher than all the other sources.



What is being done about it?

Watershed Coordinator

- To ensure that implementation of the WPP is completed and successful
- Funding from TSSWCB to Texas A&M AgriLife Extension



Field Technician

- Cris Perez, is an employee of the Comal-Guadalupe SWCD
- He is a field technician who works with agricultural producers to better manage runoff from their operations



Seguin High School

- Never before seen collaboration
- Impacting high school students and beyond



Purpose

- Students toured a fabrication facility
- Extension provided feral hog and water quality information
- Students combined this knowledge to construct feral hog traps
- Looking at other districts to continue this work



Homeowner Septic System Maintenance Classes

- Classes conducted in the Spring and Fall past 3 years
- Two types of classes conducted
 - 2 hr basic overview class (materials on project website)
 - 6 hr in-depth class on aerobic systems
- Comal and Guadalupe County homeowners with aerobic systems are required to have a maintenance contract for first 2 years
 - After that time, Guadalupe County homeowners can be certified or must have a maintenance contract

Decommissioning Project

- Fund decommissioning costs that the homeowners in OVN would have been responsible for
- Estimated average cost of \$1,500 to decommission a septic system
 - Pump contents of septic tank
 - Remove the tank cover
 - Fill tank with sand/gravel
- Decommissioning is a state requirement



Feral Hog Control

- Josh Helcel, the Feral Hog Education Program Assistant, focuses on feral hog management in the watershed
- The position works directly with landowners to reduce hog populations in the watershed
- Contact info at www.geronimocreek.org/



Irma Lewis Seguin Outdoor Learning Center

- “An aggressive outreach and education program will be vital to successful engagement of watershed stakeholders”
- Collaboration between GBRA, Texas A&M AgriLife, and the Irma Lewis Seguin Outdoor Learning Center
- Combines technology with on-the-ground demonstrations and outdoor education

LID Structures

- Rainwater Harvesting System
- Rain Garden
- Vegetated Swale
- Pervious Pavement









RAINWATER HARVESTING

Rainwater harvesting systems are becoming more popular as people become more aware of the benefits of rainwater and the need to conserve water.

The use of rainwater harvesting systems can help reduce water consumption and save money on water bills. Rainwater is a clean, soft water source that can be used for many purposes, including irrigation, laundry, and flushing toilets.

The use of rainwater harvesting systems can also help reduce the strain on local water supplies and help protect the environment. Rainwater harvesting systems are a sustainable and eco-friendly way to conserve water.

There are many benefits to rainwater harvesting, including: saving money on water bills, reducing the strain on local water supplies, and protecting the environment. Rainwater harvesting systems are a sustainable and eco-friendly way to conserve water.

Benefits of Rainwater Harvesting

- Reduces water consumption and saves money on water bills.
- Reduces the strain on local water supplies and helps protect the environment.
- Provides a clean, soft water source for many purposes, including irrigation, laundry, and flushing toilets.

- Rainwater harvesting systems are a sustainable and eco-friendly way to conserve water.
- They can help reduce the risk of drought and water scarcity.
- They can also help improve water quality and reduce the amount of water that is lost to evaporation.

- Rainwater harvesting systems are a simple and easy-to-install solution for conserving water.
- They can be used in a variety of settings, from residential homes to commercial buildings.
- They can also be used to collect water for agricultural purposes, such as irrigation.



What is Rainwater Harvesting?

- Rainwater harvesting is the process of collecting and storing rainwater for later use.
- It can be done in a variety of ways, from simple rain barrels to complex rainwater harvesting systems.
- Rainwater harvesting systems can be used for many purposes, including irrigation, laundry, and flushing toilets.

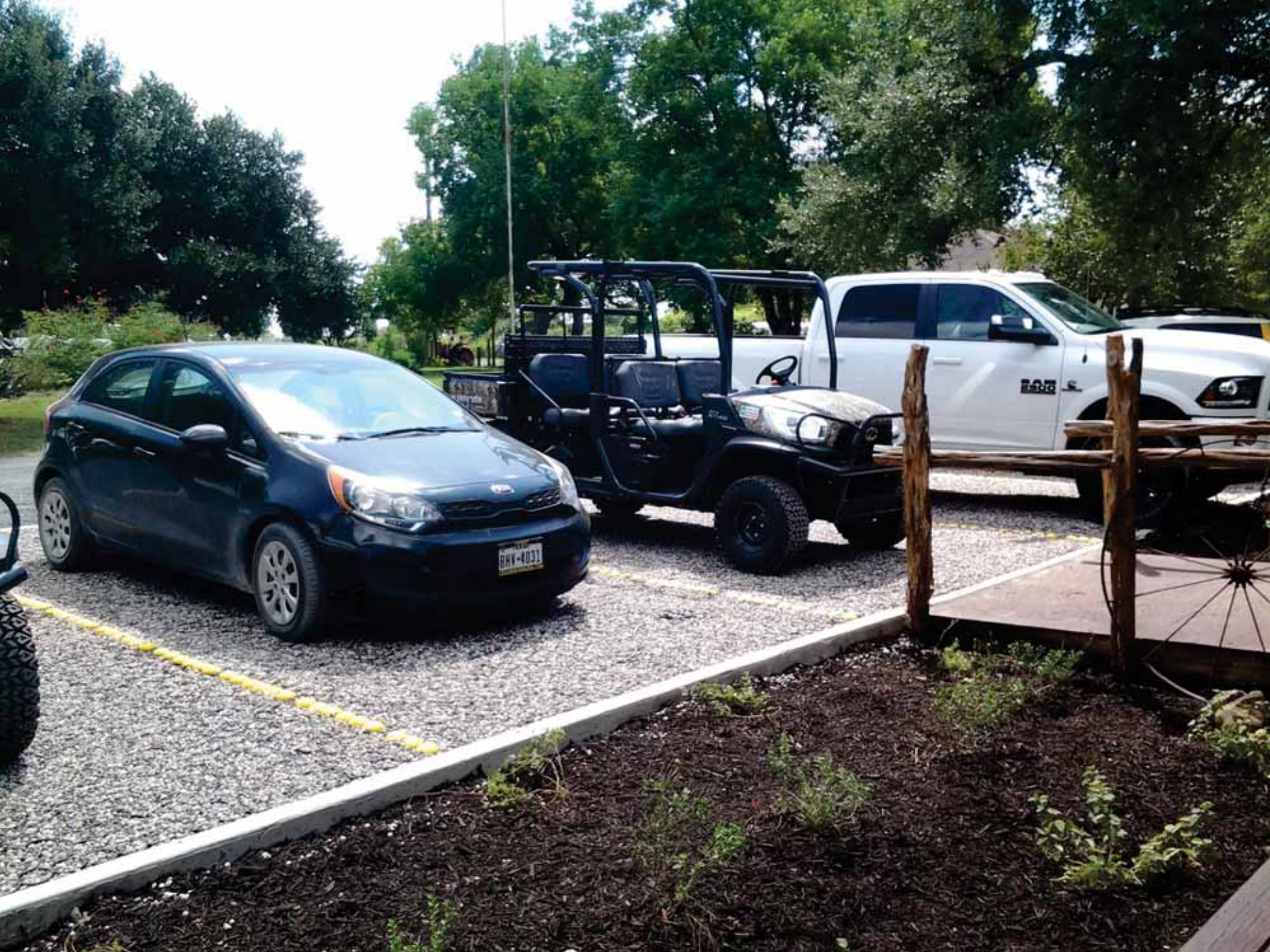
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- They can help reduce the risk of drought and water scarcity.
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How to Install

- Determine the amount of water you need and the location of your rainwater harvesting system.
- Choose the right size and type of rainwater harvesting system for your needs.
- Install the system according to the manufacturer's instructions.







FLORIDA
RHY-4031

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Creek Clean Up Event

- Established the first event in 2013 on the first weekend in April
- In 4 years, over 780 volunteers have removed 12,980 pounds of trash and debris
- The 2016 event removed trash from 27 locations covering 17 miles of roadway and creek bank



Educational Opportunities

- Texas Watershed Steward Workshop
- Texas Well Owner Network Workshop
- Lone Star Healthy Streams Program
- Septic system workshops
- Master Gardener and Naturalist training
- Bacteria, nutrient, and pesticide management programs
- Soil and water testing campaigns



Thank You!

Questions and comments



Contact Information

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