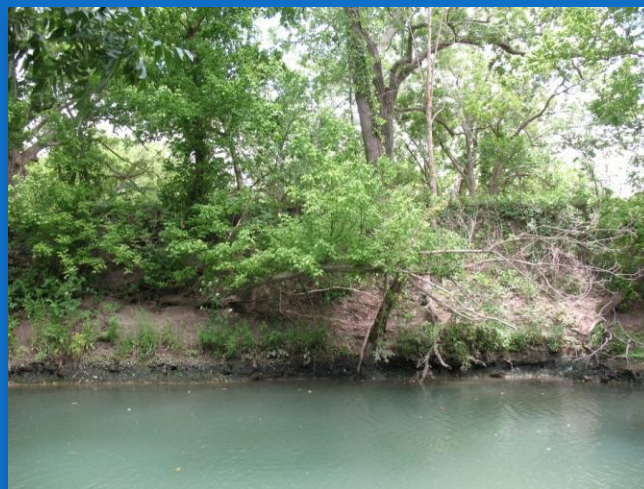


The Geronimo and Alligator Creeks Watershed Protection Plan

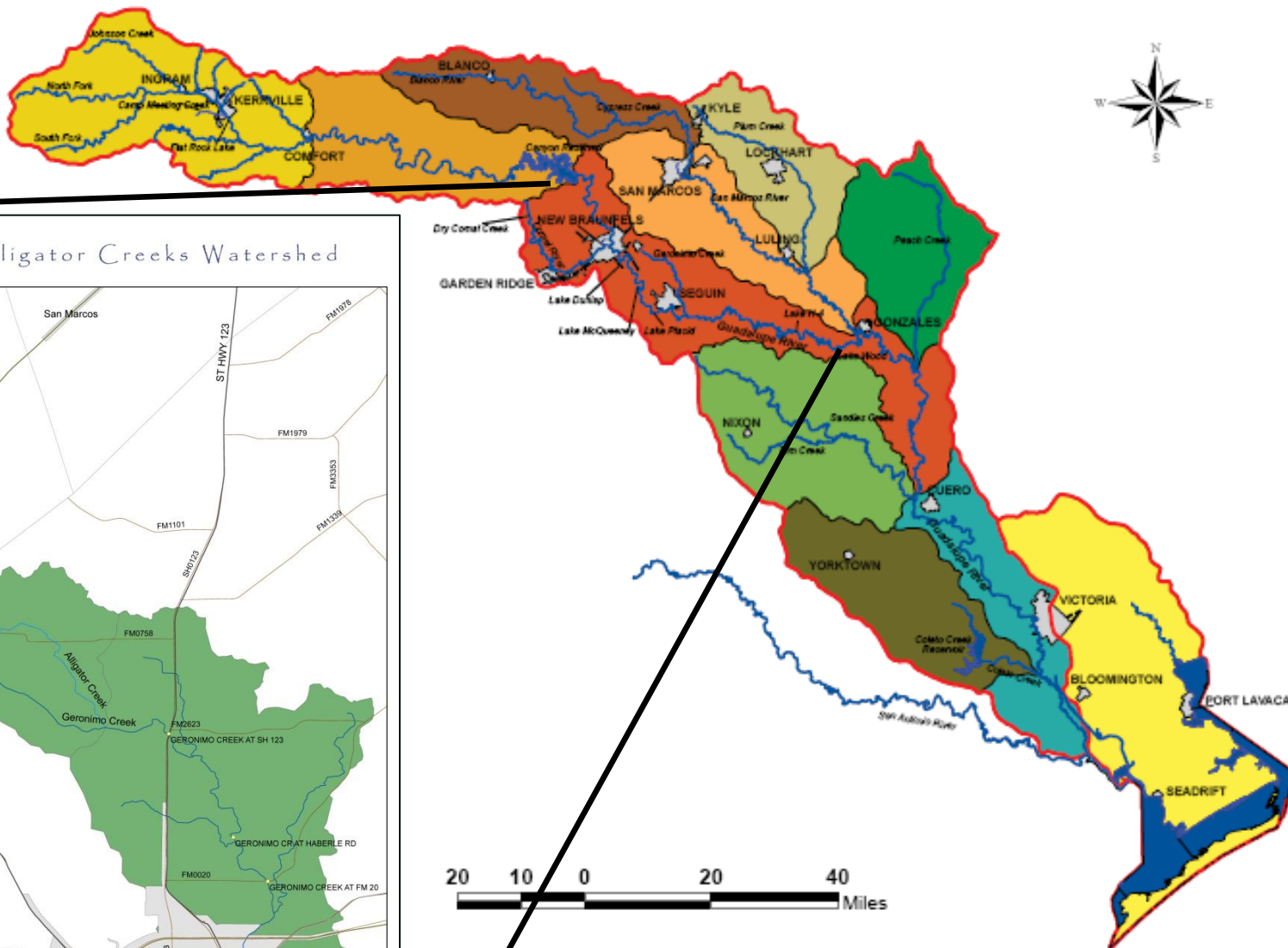


Ward Ling

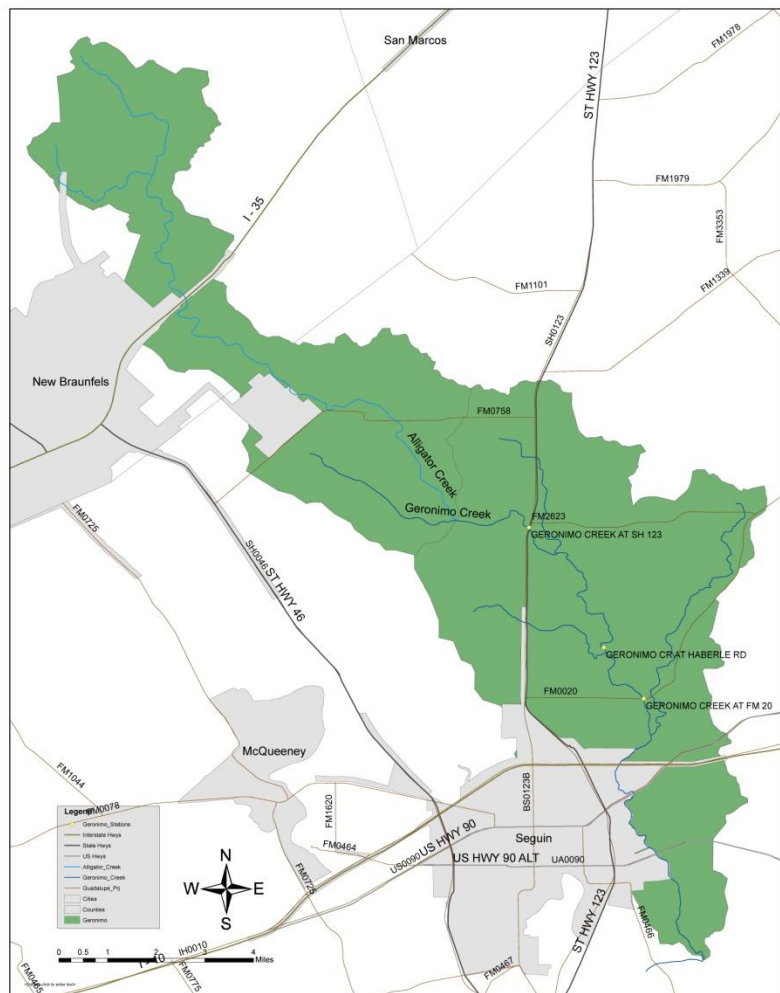
Texas A&M AgriLife Extension



GUADALUPE RIVER BASIN WATERSHEDS



Geronimo and Alligator Creeks Watershed



Water Quality

- Geronimo Creek was listed on the 2006 303(d) list for not supporting its contact recreation use
 - 2008 assessment, *E. coli* geomean of 162 cfu/100mL
- Geronimo Creek was first listed in 2000 for concern for nutrient enrichment
 - 2008 assessment, all 60 samples exceeded 1.95 mg/L nitrate-nitrogen



Funding

- GBRA received grant funding from the Texas State Soil and Water Conservation Board
- GBRA subcontracted to AgriLife Extension to assist with project components



What is the Geronimo and Alligator Creeks Watershed Protection Plan?

- A community-driven management plan that uses the watershed approach to solve complex water quality problems
- The purpose is to restore and protect the creeks
- It was developed and managed through partnerships among federal, state, county and local groups and organizations
- It relies heavily on stakeholder involvement at the local level

“Steak holder”

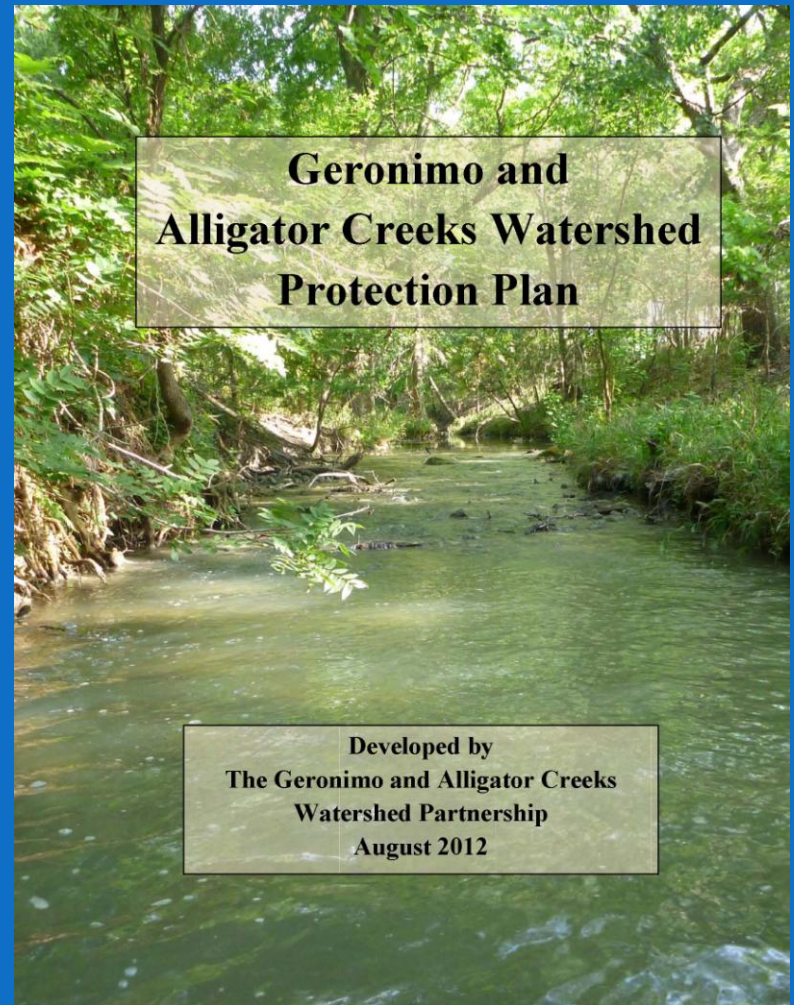


Implementation Partners



Good News!

- EPA accepted the Geronimo and Alligator Creeks WPP on September 13, 2012
- WPP development began in late 2009
- 27 meetings and workshops
- 37,629 website hits



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
- Of the 12 WPPs completed in Texas, only 5 have been accepted by EPA
 - Plum Creek, Lake Granbury, Geronimo and Alligator Creeks, Upper Cibolo Creek, and Lampasas River

Where is it coming from?

- The impairment is the result of loading from nonpoint sources:
 - Urban: dogs, urban runoff
 - Agricultural: livestock, feral hogs, wildlife
 - Wastewater: septic systems



Urban Nonpoint Sources

- Urban Stormwater Runoff
- Dog Waste



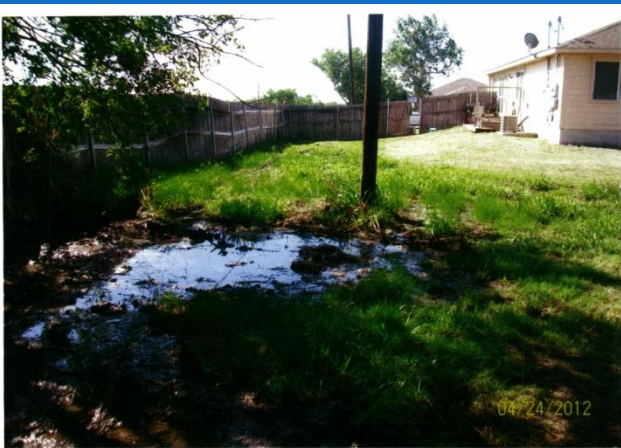
Agricultural Nonpoint Sources

- Livestock (cattle, horses, goats)
- Feral Hogs



Wastewater Work Group

- Failing Septic Systems
- Wastewater Collection Systems



Management Measures

- Urban nonpoint sources
- Agricultural nonpoint sources
- Wastewater sources



Urban Goals

- Implement Phase II Stormwater permit activities
 - Initiate a public education and outreach program
 - Create opportunities for public involvement in the stormwater program
 - Establish an illicit discharge detection and elimination program
 - Manage construction site stormwater runoff
 - Manage post-construction runoff
 - Establish pollution prevention and good housekeeping practices for municipal operations

More Urban Goals

- Implement/expand spay/neuter programs for pets
- Install additional pet waste stations
- Provide nutrient management training to ISDs, city and county maintenance and parks departments and others
- Provide trainings for decision makers on nonpoint source pollution



Agricultural Goals

- Develop Water Quality Management Plans for livestock and cropland operations in the watershed
- WQMPs are voluntary, site-specific management plans for individual operations

County	Subwatershed	Animal Units	Number of Farms	Recommended # of WQMPs
Comal	1	54	2	1
Guadalupe	2	126	4	1
	3	128	4	1
	4	249	8	2
	5	149	5	1

Agricultural Goals

- Created a new position in the watershed for the Comal-Guadalupe SWCD to assist agricultural producers with development and implementation of Water Quality Management Plans



Feral Hog Control

- The new Feral Hog Education Program Assistant, Dan Gaskins, is focusing on feral hog management in the Geronimo and Alligator Creeks watershed
- He is working directly with landowners to manage hog populations in the watershed
- Feral Hog Workshops



Wastewater Goals

- Incorporated NBU's and the City of Seguin's Sanitary Sewer Overflow Initiatives agreement with TCEQ into the WPP
 - Routine, frequent sewer line inspections
 - Replacement/repair of failing sewer lines
 - Upgrade the lift station to the Geronimo Creek WWTF



Wastewater Goals

- Provide educational programs for homeowners with septic systems
- Seek funding sources to provide for repair/replacement/upgrade of failing septic systems
- Explore ways to expand sewer systems to areas served by septic systems
- Continue with current inspection and enforcement programs for septic systems
- Seek funding for annual household hazardous waste cleanups in the watershed

Decommissioning Project

- Fund decommissioning costs that the homeowners would be 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



104 & 106 Long Ln, New Braunfels, TX - Off State Hwy 1044

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

Creeks Clean Up Event

- Established the first event in 2013 on the first weekend in April
- Over 100 volunteers removed almost 3,000 pounds
- This year's event will be bigger and better



Isotope Study

- GBRA and USGS will conduct targeted surface water quality monitoring to better identify the source of nitrates in the groundwater and surface water in the Geronimo and Alligator Creeks Watershed and Plum Creek Watershed

Educational Opportunities

- Texas Watershed Steward Workshop
- Texas Well Owner Network Workshop
- Lone Star Healthy Streams Program
- Sports and Athletic Field Education workshops
- Riparian Workshop
- Bacteria, nutrient, and pesticide management programs
- Soil and water testing campaigns
- Educational Workshops for decision makers
- Master Gardener and Naturalist training

Events for 2014

- Smart Growth Workshop March 25th
- Second Annual Creek Clean Up April 5th
- Septic system homeowner workshops April 28th and 29th
- Feral Hog Workshop May 25th
- Lone Star Healthy Streams Workshop June 5th
- Rainwater Harvesting August 12th
- Quarterly newsletter
- Quarterly Partnership meetings



Thank You!

Questions and comments



Contact Information

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