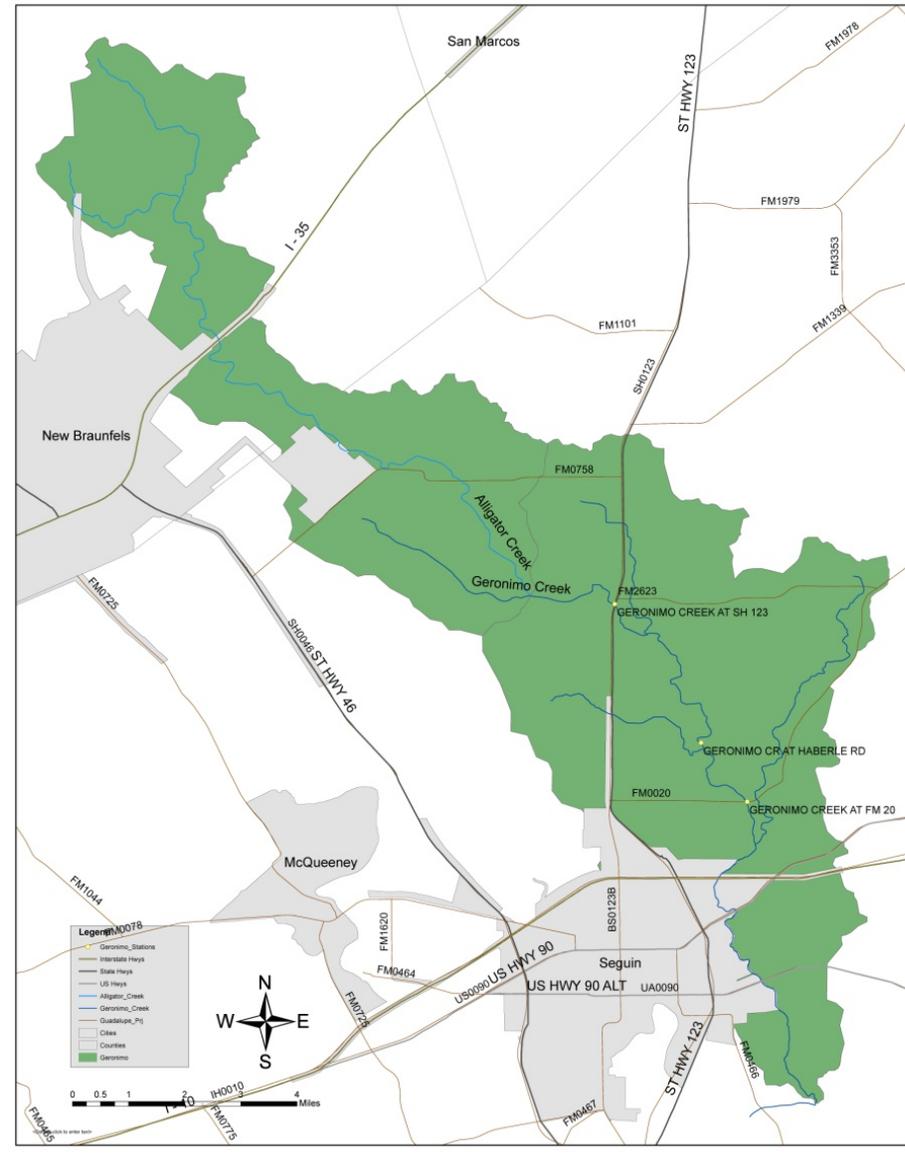


Status of Geronimo Creek Watershed Protection Plan

Debbie Magin

Geronimo and Alligator Creeks Watershed



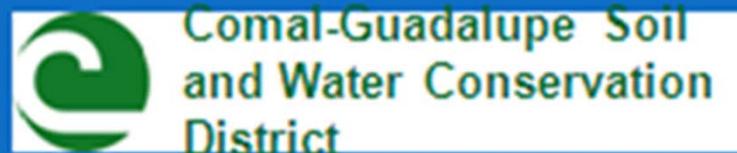
Stream Assessment

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

Watershed Protection Plan

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

Project Partners



Process Elements

- Stakeholder Facilitation
 - Steering Committee
 - Work Groups
- Data Collection
- Data Analysis
- WPP Development

Urban Nonpoint Source Work Group

- Discuss the specific causes and sources of nonpoint source pollution stemming from urban sources
- Included residential, commercial, and industrial land uses: runoff from paved sources, pets and other non-livestock domestic species
- Urban growth and development

Agricultural Nonpoint Source Work Group

- Discuss the specific causes and sources of nonpoint source pollution stemming from general agricultural sources
- Cropland, pastureland, rangeland, and forestland.
- Sources discussed included runoff from cropland, livestock, wildlife and feral hogs (invasive species)

Wastewater Infrastructure Work Group

- Pollution stemming from on-site sewage facilities (OSSFs or septic systems) and wastewater treatment facilities (WWTFs).

Data Collection

- Historic data was primarily from two sites only on Geronimo Creek
- GBRA collected additional WQ data from both Alligator and Geronimo Creeks
 - Better segment the creeks
 - 19 sampling locations
 - Supplement historical data
 - Potential use is to direct implementation

Geronimo Creek at Haberle Road

E. coli Reductions

Flow Condition	Percent Reduction
High Flows	Not applicable
Mid-Range	26%
Low Flows	0%

Geronimo Creek at Haberle Rd

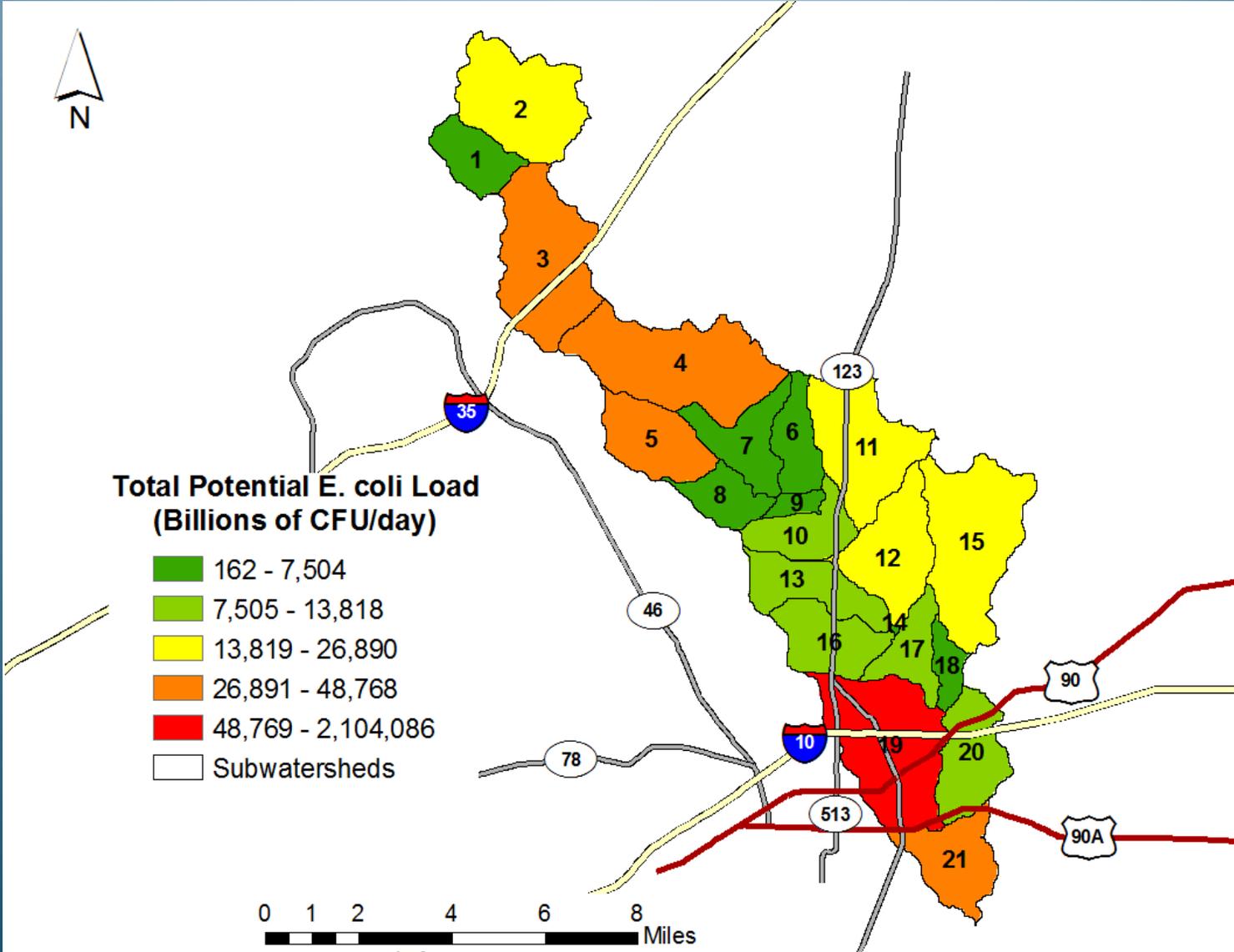
Nitrate Reductions

Flow Conditions	Percent Reduction
High Flows	Not applicable
Mid-Range	85
Low Flows	86

SELECT - How does this tool work?

- Spatially Explicit Load Enrichment Calculation Tool
- Stakeholders reviewed and approved estimated populations of each source
- Populations distributed across the watershed based on land use
- Pollutant loading from each source was estimated based on average amounts produced/released by the sources
- Subwatersheds with greatest potential were identified

Total Potential *E. coli* Load from all Identified Potential Sources



Management Measures

- Urban nonpoint sources
- Wastewater nonpoint sources
- Agricultural nonpoint sources

Urban Storm Water Runoff

- Engineering analysis to identify and prioritize new and retrofitted stormwater management practices
- Implement components of Phase II permits in advance of program requirements
- Provide guidelines and training for effective nutrient management

Seguin's Goals

Enhance funding pet spay/neuter program and expand it to areas outside the city

Install pet waste stations within the watershed and seek funding to purchase and install

Establishment of pet waste ordinances

Conduct an outreach and education program to dog owners in the city about the importance of proper pet waste management, in light of the new "dog park"

Seguin's Goals

Development of stormwater management strategies that incorporate:

- Public education and outreach

- Public involvement and participation

- Illicit discharge detection and elimination

- Construction site stormwater runoff controls

- Post-construction stormwater management

New Braunfels' 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

Agricultural Management Measures

- Develop Water Quality Management Plans for livestock and cropland operations in the watershed
- Pursue funding to create a new position for the local SWCD to assist agricultural producers with design and implementation of WQMPs
- Ed programs for agricultural producers targeting nonpoint source pollution control to include Riparian Workshops

Feral Hog Control

Organize and conduct annual feral hog education workshops for landowners and managers

Employ a full-time position to focus specifically on feral hog management in the Geronimo and Alligator Creeks watershed. The position will work directly with landowners to remove animals from the watershed.

Watershed Coordinator

Pursue funding for a Watershed Coordinator position located in the watershed

Provide leadership for project activities and actively seek additional funding to facilitate implementation of management measures identified in the plan.

Additional duties: facilitate Partnership meetings, conduct educational programs, website maintenance, implementation tracking and reporting.

Where we are now

Draft Plan is under review

Public Comment will begin in early April

Stakeholder – approved plan will go to EPA for acceptance

Stop gap project – monitoring, assisting cities with grant proposals