Geronimo and Alligator Creeks Watershed Steering Committee Meeting

February 9, 2010
GBRA River Annex
Seguin, Texas

Welcome and Introductions

Debbie Magin
Guadalupe Blanco River Authority

Update on Additional Steering Committee Members and Signing of the Ground Rules

Nikki Dictson
Texas AgriLife Extension Service

Stakeholder Participation

The general public is encouraged to attend all of the meetings and there are three levels of potential participation that include:

- Serve as a Steering Committee Member
- Serve as a Work Group Member
- Attend and participate in any meetings

Affiliation	Name
Comal County	Commissioners Jan Kennady/Greg Parker
Guadalupe County	Jimmy Harless/Commissioner Baenziger
City of Seguin	Asst City Manager, Rick Cortes
City of New Braunfels	Nathan Pence
New Braunfels Utilities	Ian Taylor/Roger Biggers
Comal-Guadalupe SWCD	Russell Bading/Kathy Brady
Guadalupe-Blanco River Authority	Lee Gudgell/Cinde Thomas-Jimenez
Elmwood Subdivision/Business	Cecil Schulze
Oakvillage North Subdivision	Gail Minton/Rex Reininger
Landowner/Ag Producer	Roger Bading
Alamo Group/Industry	John Fisher/Lance Williams
Guadalupe Co. Groundwater Conservation District	Gary Rainwater
Texas Lutheran University	Dr. Mark Gustafson/Dr. William Davis
Landowner	Frank Dietz
Landowner	Wayman Krueger
Educator	Susan Hartley/Rissa Springs
Navaro Ed Found	Kim Mueller
Outdoor Learning Center	Otto Kollaus
Citizens' Alliance for Smart Expansion	Joyce Evans/Sue Cummings
Landowner/ Ag Producer	Clinton Dietert
Continental -Corporation	Rebecca Ehrig
Guadalupe County Farm Bureau	John Friesenhahn
Water Supply Corporations	Jeanne Schnuriger/Mark Speed

Types of Stakeholders

Stakeholders can belong to the following:

- Landowners/Ag Producers (6)
- County or regional representatives (4)
- Local municipal representatives (3)
- State and federal agencies (TAG)
- Business and industry representatives (3)
- Citizen groups (2)
- Community service and Religious organizations
- Universities, colleges, and schools (2)
- Environmental and conservation groups (1)
- Soil and water conservation districts (1)
- Subdivisions – urban (2)

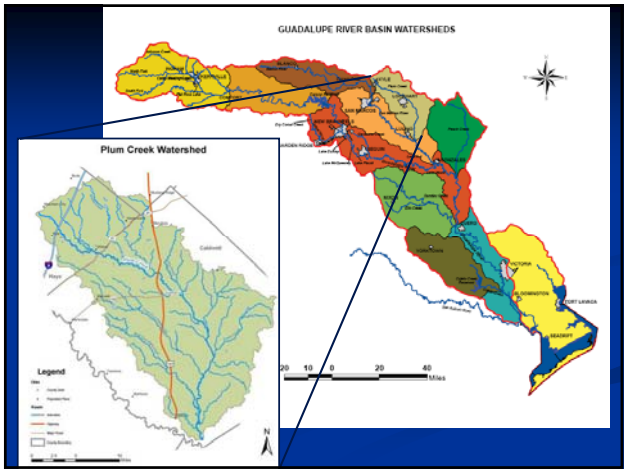
Approval and Signing of Ground Rules

- We modified the language to allow for the election of a chair person if necessary.
- Added descriptions of work group tasks

Plum Creek Example of a Watershed Protection Plan

Nikki Dictson

Texas AgriLife Extension Service



Plum Creek Watershed Partnership

- December 15, 2005 - Plum Creek was selected as the pilot watershed by the Wharton Regional Watershed Coordination Steering Committee based on a 10 metric ranking system
- January 2006 - Meeting and watershed tour with Hays & Caldwell County Agents and Caldwell County Commissioner, GBRA, PCCD, and TPWD.
- January thru March
  - Gathering Watershed Data
  - Conducted Meetings and Media Promoting Project

Plum Creek Watershed Partnership Meetings

- May 9, 2006 – First Steering Committee Meeting (49)
- June 20, 2006 – Steering Committee Meeting/Work Groups (42)
- July 2006 –Work Group Meetings
- July 2006 – Watershed Tour
- August 10, 2006 – Steering Committee/Technical Advisory Group Meeting (45)

Monthly meetings of either steering committee/ partnership or work group meetings.

Watershed Tour

- On July 27, 2006 from 9:00 am to 4:00 pm.
- 62 participants and speakers
- Tour Stops included:
  - Urban - Plum Creek Subdivision in Kyle at headwaters
  - GBRA's Plum Creek Monitoring Site near Uhland
  - Lockhart Springs in Lockhart
  - Don Meador, Ag Producer
  - Drive on south eastern side of Watershed / Oil Wells
  - Lockhart WWTP Tour by GBRA

Major Tasks

- Identify pollutant sources
- Gather data and information and identify gaps
- Estimate pollutant loads
- Set Goals and Objectives
- Identify BMPs that could be implemented to reduce pollution
- Identify Outreach and Education that is needed
- Develop an Implementation Plan & Schedule

Potential Sources

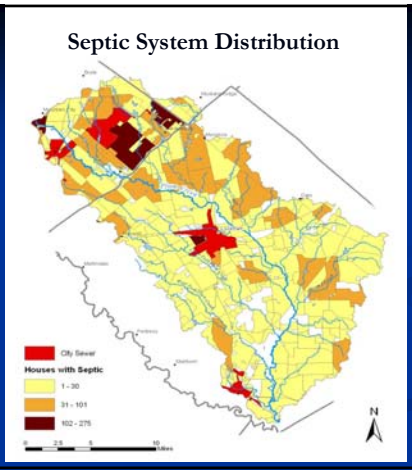
Potential Sources	Bacteria	Nutrients	Other
Septic Systems	X	X	X
Wildlife			
Deer	X	X	
Feral Hogs	X	X	
Cropland		X	
Livestock			
Sheep and Goats	X	X	
Horses	X	X	
Cattle	X	X	
Oil and Gas Production			X
Urban Runoff	X	X	X
Wastewater Treatment Facilities	X	X	

Assessment Tools

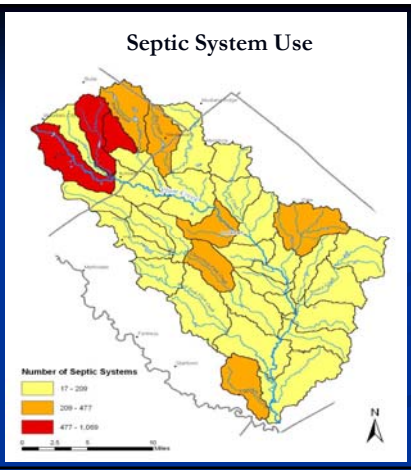
- TAMU team from Spatial Sciences Lab and Biological and Agricultural Engineering Dept.
- Land Use Land Cover Assessment
- Spatially-explicit Geographic Information System (GIS) methodology - SELECT
- Load Duration Curves

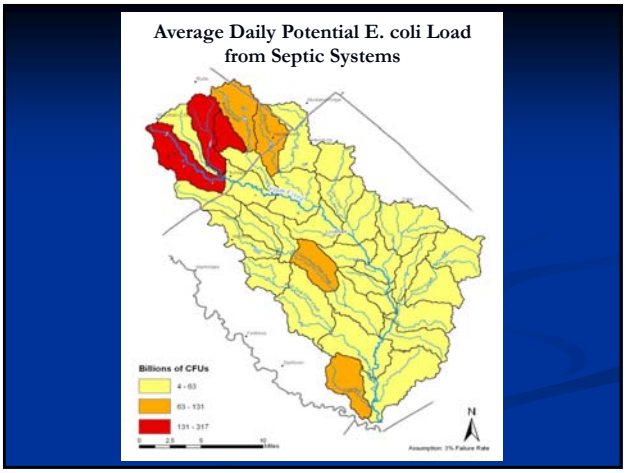
Subwatersheds

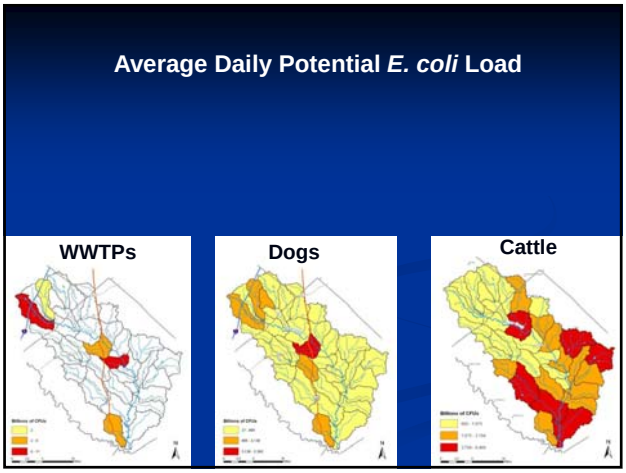
Septic System Distribution

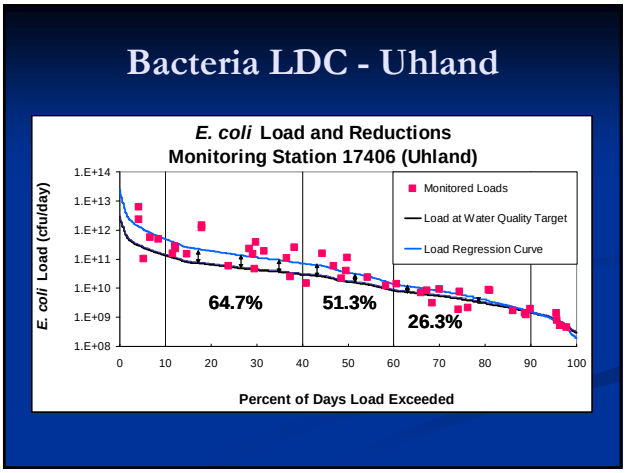


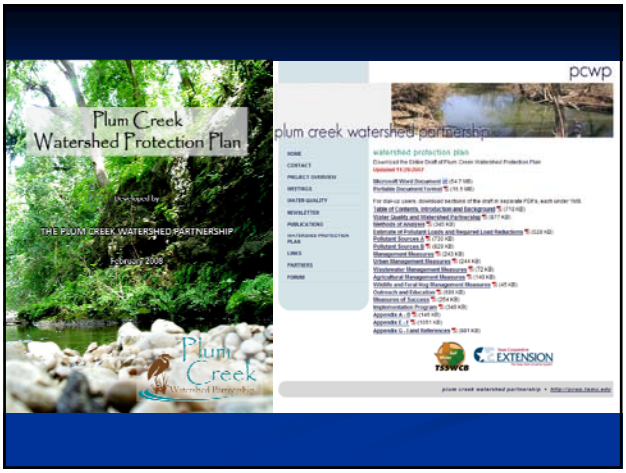
Septic System Use











City Council and County Commissioners Court Meetings

- Project Updates
- Discussion of Proposed Management Measures
- Answer any Questions
- Requested a Letter of Support for the Watershed Protection Plan

Status of the Plan

The Nine Elements

- ✓ Identification of the causes.
- ✓ Estimate of needed load reductions.
- ✓ Description of management measures.
- ✓ Estimate of technical and financial assistance needed to implement the plan.
- ✓ Information/education component to enhance public understanding.
- ✓ Schedule for implementation.
- ✓ Description of interim, measurable milestones.
- ✓ Set of criteria to determine whether load reductions are being achieved.
- ✓ Monitoring component to evaluate effectiveness of implementation.

Support Letters

Through These Partnerships the Plan was Completed!

- January 2008 concluded the comment period
- February 19, 2008 the Steering Committee signed and adopted the Plum Creek Watershed Protection Plan
- Began efforts to acquire funding for implementation projects

Implementation Effort and Funding

- $440,503 Watershed Plan Development (TWDB)
- $150,000 Watershed Outreach and Education (TCEQ)
- $109,000 Water Quality Monitoring (TSSWCB)
- $255,423 Kyle Urban Implementation (TCEQ)
- $275,000 Lockhart Urban Implementation (TCEQ)
- $205,000 Luling Urban Implementation (TCEQ)
- $996,079 Implementing Agricultural Nonpoint Source Components of the Plum Creek Watershed Protection Plan (TSSWCB)
- Total: $2,431,000

Draft Outline of Geronimo and Alligator Creeks Watershed Protection Plan

Ward Ling

Texas AgriLife Extension Service

GBRA AgriLIFE EXTENSION TSSWCB

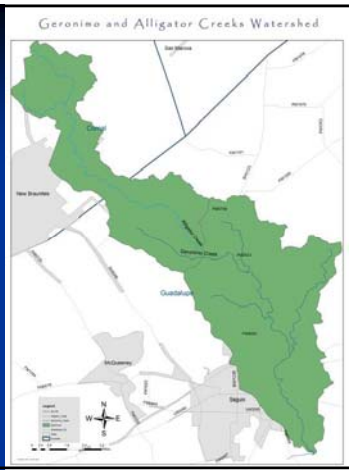
Watershed Characterization Data: Water Quality and Land Use

Nikki Dictson

Texas AgriLife Extension Service

GBRA AgriLIFE EXTENSION TSSWCB

- General Map with Streams, County Lines and City Limits

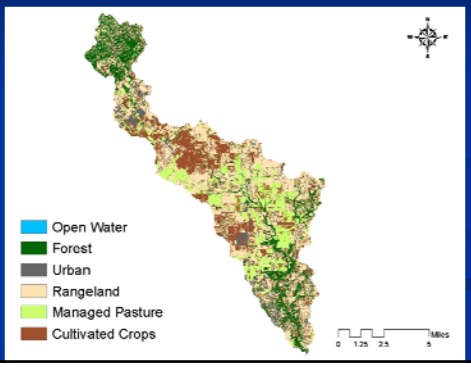


Watershed Characteristics

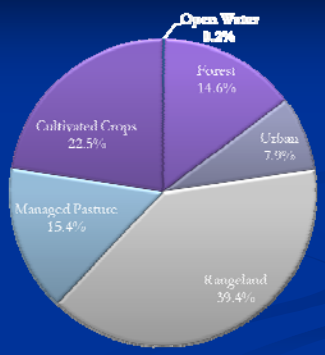
- Watershed: 44,152 acres (69 square miles)
- Climate:
  - Average rainfall – 29 in/yr
  - Average temp – Jan 35º July 95º
- Tributary of the Guadalupe River

Land Use Classification

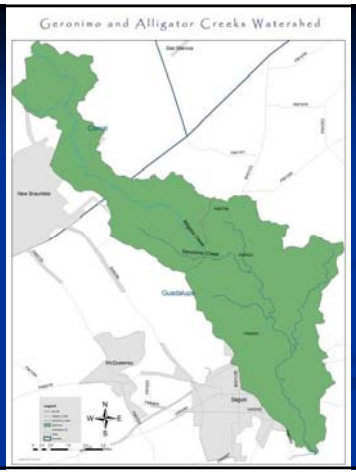
Land Use Land Cover in the Watershed



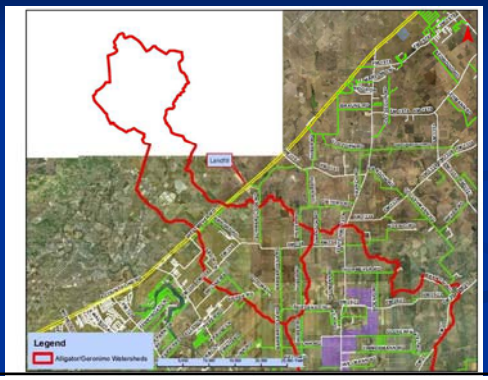
Land Use Percentages



- Google Earth Flyover Tour of the watershed



Landfill



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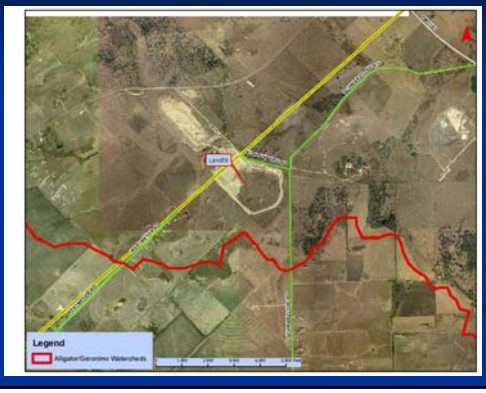
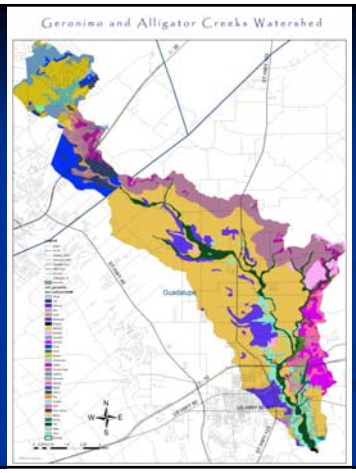
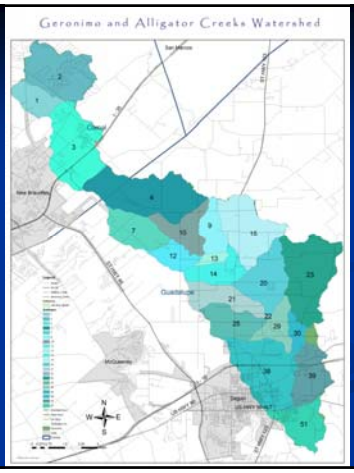


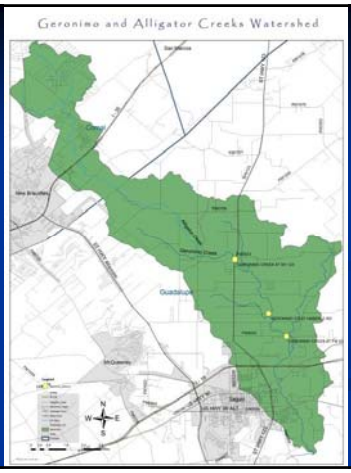
- Watershed Soils



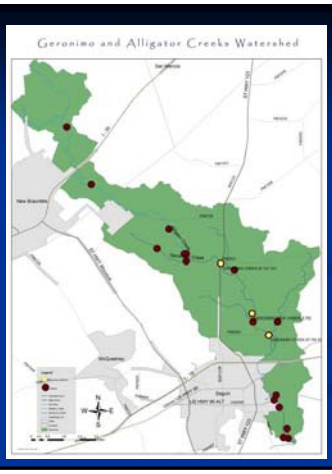
- Watershed Sub-basins



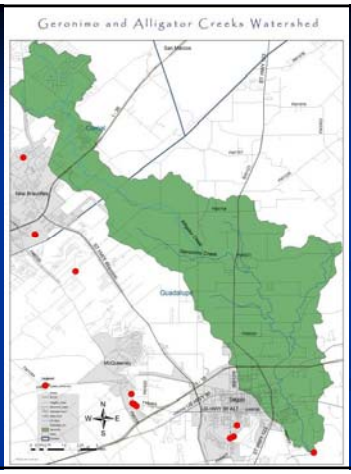
- Historical Water Quality Sites on Geronimo



- Targeted Water Quality Sites on Geronimo



- Wastewater Discharge Sites



Historical Data

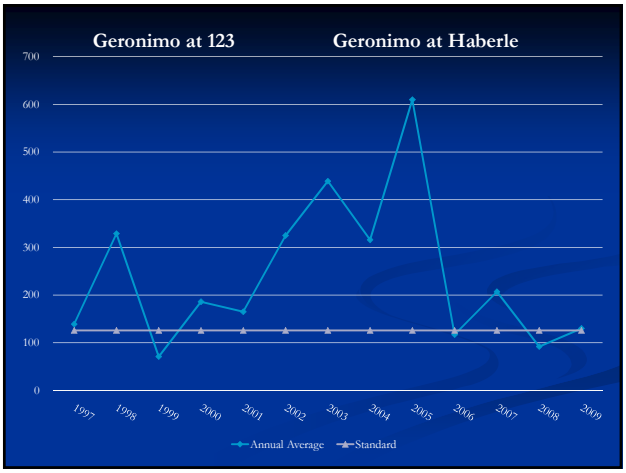
- Geronimo Creek listed as impaired
  - Geronimo at SH 123
    - Sampled monthly 1996-2003
  - Geronimo at Haberle Road
    - Sampled monthly 2003-present

Data Review

GBRA data only

	SH 123	Haberle Road
Flow, cfs	4.9	12.3
Nitrate-nitrogen, mg/L	9.9	14.5
E. Coli, org/100mL	150*	156*

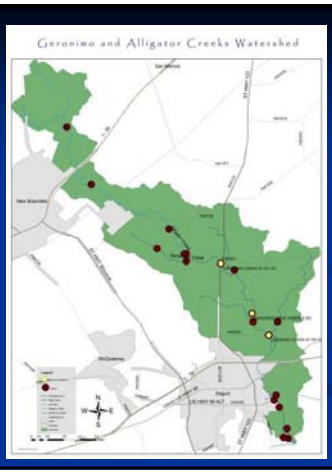
*Water quality standard is 126 org/100mL



New Targeted Data Collection

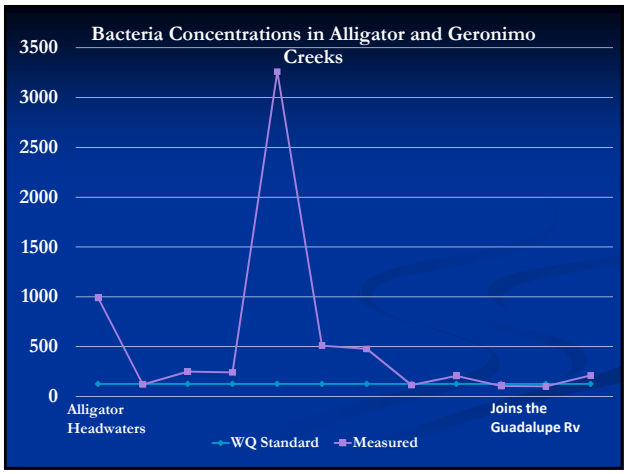
- May '09 – April '10
- Routine monitoring at 7 sites/monthly
- Targeted monitoring at 15 sites quarterly (wet and dry conditions)
- Three groundwater (well water) quarterly
- One wastewater site quarterly

- Targeted Water Quality Sites on Geronimo



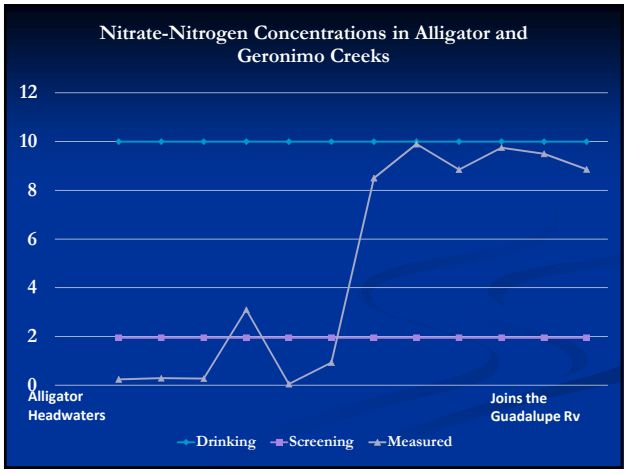
What does the most recent bacteria data look like?

- Data collection was impacted greatly by the drought
- Many sites on Alligator were dry initially, so very few samples collected on the upper end
- Most sites are at or above the water quality standard



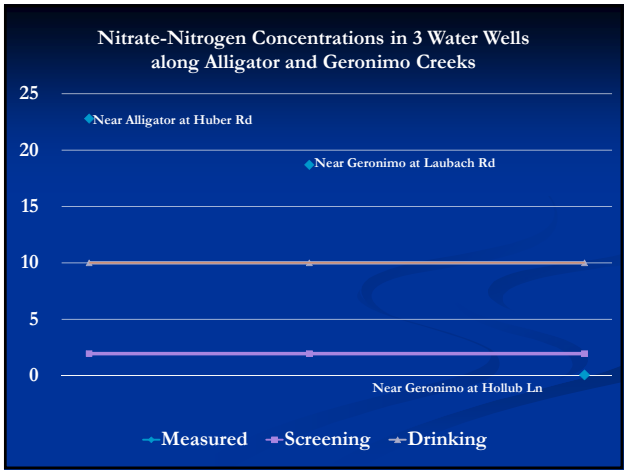
What does the most recent nitrate-nitrogen data look like?

- Again, data collection impacted by drought
- Many sites on the upper end were dry initially
- Concentrations tend to increase as you move downstream



Water Well Data

- Three water wells are being sampled
- Attempt to explore the connection between surface water and groundwater



Formation of Work Groups

Nikki Dictson
Texas AgriLife Extension Service

Role of Work Groups

- Work groups are an extension of the steering committee and partnership that discuss and work on specific topical areas.
- Work groups make recommendations and develop components of the WPP for their topic.
- Work group members will provide leadership in implementation of practices and thus, are the most appropriate forum for decisions on topics in their area.
- Work groups will meet in alternating months from the Steering Committee Meetings.

Proposed Work Groups

- Work Groups include:
  - Urban Nonpoint Source
  - Agricultural Nonpoint Source
  - Wastewater Infrastructure (onsite and treatment facilities)
- Outreach and Education will be a component of each work group instead of a separate group.
- Most topics will fall underneath these headings, but if additional issues arise they can be handled by a special topics meeting.

Agricultural Nonpoint Source Work Group

- The purpose of this Work Group is to discuss the specific causes and sources of nonpoint source pollution stemming from general agricultural and silvicultural (forestry) sources.
- This includes cropland, pastureland, rangeland, and forestland. Sources to be discussed include runoff from cropland, livestock, wildlife and feral hogs (invasive species).
- This Work Group will also identify and recommend strategies to reduce and abate pollution from these sources.

Urban Nonpoint Source Work Group

- The purpose of this Work Group is to discuss the specific causes and sources of nonpoint source pollution stemming from general urban sources.
- This includes residential, commercial, and industrial land uses. Sources to be discussed include runoff from "paved" sources, pets and other non-livestock domestic species.
- Urban growth and development is a topic within the realm of this Work Group. This Work Group will also identify and recommend strategies to reduce and abate pollution from these sources.

Wastewater Infrastructure Work Group

- The purpose of this Work Group is to discuss the specific causes and sources of pollution stemming from on-site sewage facilities (OSSFs or septic systems) and wastewater treatment facilities (WWTFs).
- Regionalization of wastewater treatment, the conversion of OSSFs to a centralized WWTF, and repair/replacement of OSSFs are topics within the realm of this Work Group.
- This Work Group will also identify and recommend strategies to reduce and abate pollution from these sources.

Potential Meeting Dates and Times

Steering Committee Meetings are proposed for the 2nd Tuesday of the month from 6pm – 9pm

- Potential Locations
  - GBRA River Annex
  - Central Texas Technology Center
  - Red Barn near Geronimo
  - New Braunfels Utilities

Break out into Work Groups

- Work Group Discussions
  - Location, Time, and Date for meetings will be determined by the work group members.
  - Discuss causes and sources for water quality issues
  - Discuss any issues that you would like to make sure we address for this project
  - Discuss who else do we need to try to get to participate in the work groups moving forward

Next Steps and Questions?

Ward Ling, Debbie Magin, and Nikki Dictson

Next Steps

March – Work Group Meetings

Begin identifying potential sources and loading estimates in work group meetings

April – Watershed Tour

April – Work Group Meetings

Website

Websites

Geronimo and Alligator Creeks Watershed Partnership
- http://geronimocreek.org/

Guadalupe-Blanco River Authority
- http://www.gbra.org/

TSSWCB Geronimo Creek Watershed
- http://www.tsswcb.state.tx.us/watersheds#geronimocreek

Contact Information

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