

# Lampasas River Watershed Partnership

Urban Nonpoint Source Work Group Meeting  
February 18, 2011

Lisa Prcin  
Watershed Coordinator  
Texas AgriLife Research at  
Blackland Research & Extension Center

# Introductions

# Past Business

# Work Group Report

## February 2011

- ▶ Identified potential management strategies to mitigate bacteria contribution
  - WWTF:
    - Work with cities to schedule routine inspections of lift stations
    - Encourage any new WWTF that may come into the watershed to operate at the same level of efficiency that existing WWTF are currently operating at
  - Sanitary Sewer Systems:
    - Inlet protection systems
    - Stormwater mapping of drainage, detention facilities and storm sewer systems

# Work Group Report

## February 2011

- ▶ Identified potential management strategies to mitigate bacteria contribution
  - Septic Systems:
    - Address 10% of potentially failing systems (approximately 764 systems) through:
      - Development of database of OSSFs in watershed
      - Repair/ replacement of failing septic systems
      - Owner education about proper maintenance, etc
  - Dog Waste:
    - Recommend installation of doggie waste stations in parklands and trails, particularly in areas of high pet density
    - Education to homeowners about importance of cleaning up at home(?)
    - Focus efforts in the Sulphur Creek, Lampasas River 4 and Lampasas River 5 subwatersheds

# Work Group Report

## February 2011

- ▶ Identified potential funding sources for implementation of BMPs
- ▶ Timeline for Septic System Implementation:
  - Years 1–3:
    - Development of OSSF database
  - Years 4–10:
    - Repair and replace septic systems in subwatersheds with older homes; Lampasas River 1 and Lampasas River 2 subwatersheds
    - Education and outreach for homeowners in newer developments with systems that may not be maintained properly; Sulphur Creek, Lampasas River 4 and Lampasas River 5 subwatersheds

# TCEQ's Nonpoint Source Program

Tim Cawthon  
Project Manager  
Nonpoint Source Program  
Water Quality Planning Division

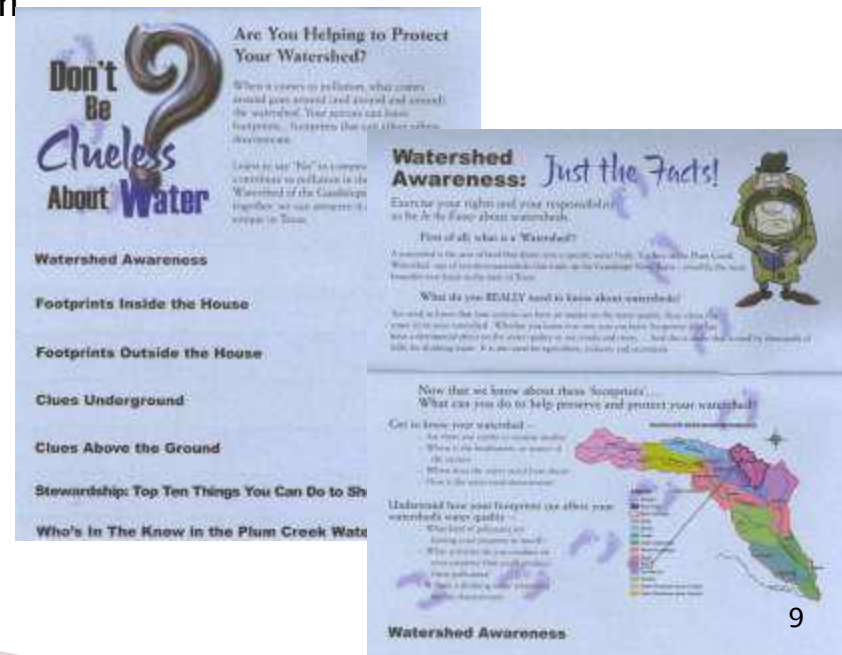
# Outreach and Education Strategies

Broad-based Programs



# Lampasas River Watershed Partnership Awareness Campaign

- ▶ Develop promotional and educational materials that address WPP implementation:
  - Brochures
  - Fact sheets
  - Posters
  - Watershed maps
  - Door hangers
  - Adapt Plum Creeks “Don’t Be Clueless About Water” to the Lampasas River
  - Adapt material from TWDB’s Water IQ Program
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- ▶ Target Audience:
  - All



# Community Outreach

- ▶ Disseminate project information through presentations and/or participation in public events
  - Lampasas Spring Ho Festival
  - Celebrate Killeen
  - Copperas Cove Rabbit Fest
  - Bell County Crops and Livestock Conference
  - Other?
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- ▶ Target Audience:
  - All

# Texas Watershed Steward Program

- ▶ Science-based watershed education program designed to help citizens identify and address water quality impairments; “Water Quality 101”
- ▶ Lead Organization:
  - Texas AgriLife Extension Service
- ▶ Target Audience:
  - All
- ▶ Frequency:
  - 2012, 2014
  - every 3 years thereafter



# Riparian Proper Functioning Condition Workshops

- ▶ Program to help develop a common vocabulary and understanding of riparian areas among people who live and work on the land
  - Workshops detail the values and functions associated with riparian areas and streams
- ▶ Lead Organization:
  - NRCS
- ▶ Target Audience:
  - All
- ▶ Frequency:
  - Yearly



# Tributary and Roadway Signage

- ▶ Develop signs to be posted along major roadways notifying travelers when they are entering the watershed or crossing the Lampasas River or other major tributaries to encourage residents and travelers to play a positive role in protecting water quality
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- ▶ Target Audience:
  - All

# Texas Waterway Cleanup Program

- ▶ Coordinate with Keep Texas Beautiful to organize roadway cleanups at bridge and stream crossings
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Keep Texas Beautiful
- ▶ Target Audience:
  - All
- ▶ Frequency:
  - Yearly
  - Possible locations?



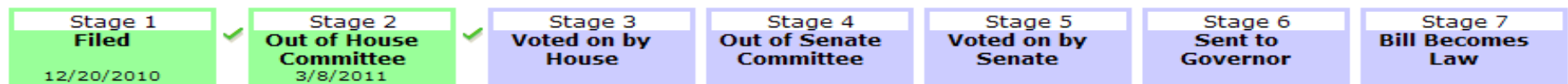
# Don't Mess With Texas Water

- ▶ Proposed H.B. 451 creates the Don't Mess with Texas Water program, administered by the Texas Commission on Environmental Quality
  - Program will place signs on major highway water crossings that display a toll-free hotline to report illegal dumping
  - Program will be optional for local governments and will be a method for combating the rising incidence of illegal dumping in Texas
  - Partnership may evaluate and support if bill is passed
- ▶ Lead Organization:
  - TCEQ
  - TxDOT
- ▶ Target Audience:
  - All

**Bill:** HB 451

**Legislative Session:** 82(R)

**Author:** Lucio III



**Legend**

- Indicates bill passed stage
- Indicates bill has not reached stage
- Indicates bill failed to complete stage

# Illegal Dumping Campaign

- ▶ Develop and post signs at known “dumping points” to dissuade dumping of waste into the streams and river
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - TxDOT
- ▶ Target Audience:
  - All
- ▶ Frequency/ Target Area:
  - List of known “dumps”?



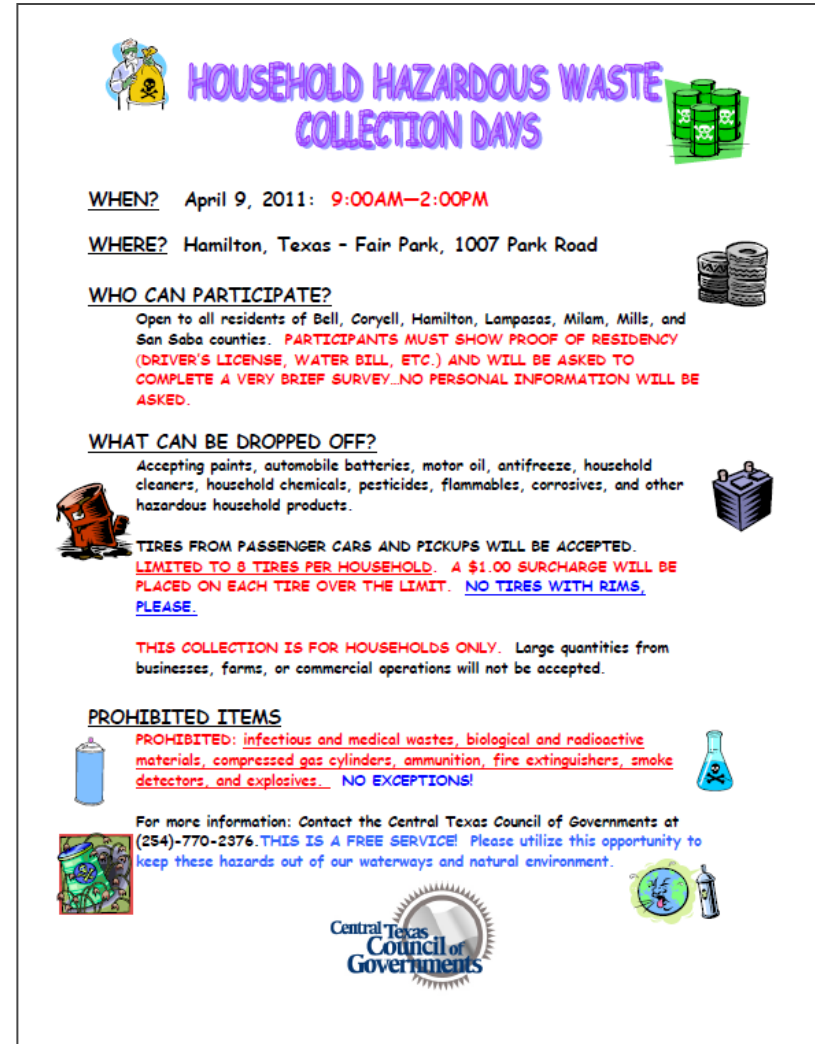




# Water Quality in the Classroom

- ▶ Promote and/or adapt modules designed for school-aged children
  - Curriculum to involve educate children about watersheds, nonpoint source pollution and the Lampasas River Watershed Partnership
  - Brazos River Authority: Major Rivers Curriculum
  - Texas Stream Team: Volunteer monitoring program
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
- ▶ Target Audience:
  - Elementary, middle or high school teachers and students
  - Parrie Haynes Ranch Youth Programs


# Household Hazardous Waste Collection Days

- ▶ Support the Central Texas Council of Governments by providing publicity for annual or biannual hazardous waste collection events to increase public participation within the watershed
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
- ▶ Target Audience:
  - All





 **HOUSEHOLD HAZARDOUS WASTE COLLECTION DAYS** 

**WHEN?** April 9, 2011: 9:00AM—2:00PM



**WHERE?** Hamilton, Texas - Fair Park, 1007 Park Road 



**WHO CAN PARTICIPATE?**  
Open to all residents of Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba counties. **PARTICIPANTS MUST SHOW PROOF OF RESIDENCY (DRIVER'S LICENSE, WATER BILL, ETC.) AND WILL BE ASKED TO COMPLETE A VERY BRIEF SURVEY...NO PERSONAL INFORMATION WILL BE ASKED.**


**WHAT CAN BE DROPPED OFF?**  
Accepting paints, automobile batteries, motor oil, antifreeze, household cleaners, household chemicals, pesticides, flammables, corrosives, and other hazardous household products. 

 **TIRES FROM PASSENGER CARS AND PICKUPS WILL BE ACCEPTED. LIMITED TO 8 TIRES PER HOUSEHOLD. A \$1.00 SURCHARGE WILL BE PLACED ON EACH TIRE OVER THE LIMIT. NO TIRES WITH RIMS, PLEASE.**

**THIS COLLECTION IS FOR HOUSEHOLDS ONLY.** Large quantities from businesses, farms, or commercial operations will not be accepted.

**PROHIBITED ITEMS**  
 **PROHIBITED: infectious and medical wastes, biological and radioactive materials, compressed gas cylinders, ammunition, fire extinguishers, smoke detectors, and explosives. NO EXCEPTIONS!** 

For more information: Contact the Central Texas Council of Governments at (254)-770-2376. **THIS IS A FREE SERVICE!** Please utilize this opportunity to keep these hazards out of our waterways and natural environment.  



# Outreach and Education Strategies

Urban NPS Programs

# Management Measure: Septic System Education

- ▶ Outreach and Education Recommendation:
  - Coordinate with Texas AgriLife Extension to adapt and distribute existing technical guidance for owning and operating an OSSF through mailings, door hangers, point of sale displays in hardware/plumbing supply stores, real estate closing agreements, etc
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Extension Service
- ▶ Target Audience:
  - Homeowners with OSSFs
- ▶ Frequency/Target Area:
  - ?

[http://ossf.tamu.edu/educational\\_materials.html](http://ossf.tamu.edu/educational_materials.html)

# Management Measure: Septic System Education

- ▶ **Outreach and Education Recommendation:**
  - Promote GBRA's Online Training for Septic System Owners
    - Online program that illustrates proper septic system function and maintenance to ensure efficiency and extend the life of the system
- ▶ **Lead Organization:**
  - Lampasas River Watershed Partnership
- ▶ **Target Audience:**
  - Homeowners with septic systems
- ▶ **Frequency/ Target Area:**
  - Make available on or link to Partnership website

# Management Measure: Septic System Education

<http://www.gbra.org/septic.swf>

The screenshot shows a Windows Internet Explorer browser window displaying the website <http://www.gbra.org/septic.swf>. The page content includes:

- GBRA NOTICE** logo in the top left corner.
- HOW A SEPTIC SYSTEM WORKS** title in large yellow letters.
- AgriLIFE EXTENSION** logo in the top right corner.
- Wastewater Source (House)** section with a text box explaining that domestic wastewater is discharged from plumbing fixtures, appliances, toilets, baths, laundry, and dishwashers.
- Diagram of a house** showing plumbing fixtures in the **Bedroom**, **Bathroom**, **Kitchen**, **Half Bath**, and **Laundry** rooms. A **Piping** line is shown connecting these fixtures to the septic system.
- Navigation buttons** at the bottom: **Overview**, **To Septic Tank**, and **To Aerobic System**.

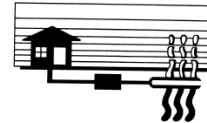
**Wastewater Source (House)**

The source of wastewater is the domestic water used in homes, schools or businesses that the treatment system serves. Domestic wastewater is water discharged from plumbing fixtures, appliances, toilets, baths, laundry and the dishwasher. Wastewater is typically 99.9% liquid.

Click on the home water applications to learn their uses and misuses.

# Management Measure: Septic System Education

- ▶ Outreach and Education Recommendation:
  - Collaborate with Texas AgriLife Extension Service to provide one-day workshops for homeowners to discuss operation, maintenance and repair
- ▶ Lead Organization:
  - Texas AgriLife Extension Service
- ▶ Target Audience:
  - Homeowners with OSSFs
- ▶ Frequency/ Target Area:
  - ?



**ONSITE WASTEWATER TREATMENT SYSTEMS EDUCATIONAL PROGRAM:**  
These educational courses are being provided to increase participants knowledge concerning possible approaches for managing domestic wastewater.

For more information contact:

817-217

## HOMEOWNER MAINTENANCE OF AEROBIC TREATMENT UNITS

October 8, 2010

Austin County Extension  
Office  
20 South Holland Street  
Bellville, Texas

### HOMEOWNER MAINTENANCE OF AEROBIC TREATMENT UNITS

This course covers the components of an aerobic treatment unit and spray field onsite wastewater treatment system. Presentations discuss the importance of maintaining the treatment system, health and safety considerations, basic concepts about the aerobic treatment processes, testing and reporting on the status of the treatment system, care and feeding of the aerobic treatment unit, maintaining the aerobic treatment system and tools and supplies for evaluating the system. These presentations provide a basic understanding of the operational and maintenance activities for an aerobic treatment unit. The course explains how activities within the home can impact the operation of an aerobic treatment unit. The participants will leave this class with a better understanding of the practices required to keep their system working and limit interferences with the enjoyment of their property.

Cost: \$50.00

Register On-Line:  
<http://agrilifevents.tamu.edu>  
Keyword Search: Homeowner

### COURSE INFORMATION

**LOCATION**  
Austin County Extension Office  
20 South Holland Street  
Bellville, Texas 77418  
979-865-2072

**DATE AND TIME**  
Friday, October 8, 2010. Class will meet from 9:00 a.m. to 4:30 p.m.

**PURPOSE**  
Present information on the function, operation and maintenance of aerobic treatment units. Hands-on demonstration of evaluation techniques to determine operational status of the treatment system.

**TEACHING METHODOLOGY**  
This course is designed for classroom instruction, it will consist of a lecture with demonstration aids.

**AUDIENCE**  
Homeowners interested in gaining knowledge about the operation and maintenance of their onsite wastewater treatment systems.

### REGISTRATION FEE – \$50.00

Register On-Line:  
<http://agrilifevents.tamu.edu>  
Keyword Search: Homeowner

Name \_\_\_\_\_  
Organization \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Email \_\_\_\_\_

Check/Money Order (payable to Texas AgriLife Extension Service)  
 Visa  Master Card  Discover  
Card Number \_\_\_\_\_  
Exp. Date \_\_\_\_\_ Billing Zip Code \_\_\_\_\_  
3-Digit Security Code \_\_\_\_\_  
Total Amount(s) \_\_\_\_\_

Texas AgriLife Extension Conference Services  
2139 TAMU  
College Station, Texas 77843-2139  
Office 979/845-2604  
Fax 979/862-4511

Registration Questions: 979/845-2604 or  
agrilifevents@ag.tamu.edu

# Management Measure: WWTF Education

- ▶ Outreach and Education Recommendation:
  - Promote GBRA's Online Wastewater Treatment Facility Training Program
    - Online module that shows the procedures of wastewater treatment and explains why it is important to properly manage wastewater at all steps in the process, from the home all the way to the stream where the treatment facility discharges
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
- ▶ Target Audience:
  - All who are served by a WWTF
- ▶ Frequency/Target Area:
  - Make available on or link from Partnership website
  - Subwatersheds served by a WWTF



# Management Measure: WWTF Education

<http://www.gbra.org/wastewater-treatment.swf>

http://www.gbra.org/wastewater-treatment.swf - Windows Internet Explorer

http://www.gbra.org/wastewater-treatment.swf

File Edit View Favorites Tools Help

★ Favorites Sign In ftp-ftp.epa.gov-wed-ecore... Soil Data Mart - SSURGO Me... Suggested Sites Get More Add-ons

http://www.gbra.org/wastewater-treatment.swf

Page Safety Tools

## Wastewater Treatment



The diagram illustrates the wastewater treatment process. It starts with a pump station (bottom left) that moves wastewater into a series of rectangular primary treatment tanks. From there, the water flows into circular secondary treatment tanks, which include aeration basins and clarifiers. The final effluent is discharged into a body of water (bottom right). A GBRA NOTICE logo is present in the upper right corner of the diagram area.

**Start Tour**



Roll over each of the images above to find out what it is, and click on it to get a detailed description. Click on the "start tour" button to run the show from the beginning.

Done Internet 100%

# Management Measure: Sanitary Sewer Systems

- ▶ Outreach and Education Recommendation:
  - Promote GBRA's Online Fats, Oils and Grease Module
    - Online training program to address management practices for handling fats, oils, grease, and household chemical use and disposal
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
- ▶ Target Audience:
  - Homeowners and business
- ▶ Frequency/Target Area:
  - Make available on or link from Partnership website

# Management Measure: Pet Waste Management

- ▶ Outreach and Education Recommendation:
  - Develop or adapt existing campaigns to educate the general public on the effects of pet waste on water quality and the importance of waste management at home and on public property
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
- ▶ Target Audience:
  - All pet owners
- ▶ Frequency/Target Area:
  - Subwatersheds with areas of high dog populations?



*Austin guide to...*  
**SCOOP the POOP**

*Pet Waste Pollutes Our Water!*

60,000 lbs. of pet waste is deposited throughout Austin every day. When not disposed of properly, this waste washes into local waterways and causes problems with:



**Cleaner Creeks, Streets & Feet!**

**Human and Pet Health**

- Giardia
- Roundworms
- Salmonella
- Other viruses and parasites

**Water Quality**

- Algae and aquatic weeds
- Reduced oxygen for fish
- Unsafe recreational areas for fishing or enjoying

**What Can You Do?**

Remove your pet's waste from parks, sidewalks, your yard and everywhere!

- **Bring It!** Carry a scooper bag when you walk your dog
- **Scoop It!** Use a baggie as a glove, scoop the poop, invert and seal the bag
- **Toss It!** Place pet waste in the trash

[www.ScoopThePoopAustin.org](http://www.ScoopThePoopAustin.org) 27

# Management Measure: Urban Nutrient Management

- ▶ Outreach and Education Recommendation:
  - Adapt and promote programs like Grow Green (City of Austin) and Earth-Kind Landscaping and Master Naturalist/Gardener programs (both Texas AgriLife Extension Service) to encourage the general public to manage their landscape in a sustainable manner
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Extension
- ▶ Target Audience:
  - Homeowners/ Homeowner's Association
  - Municipal Parks Maintenance Departments
- ▶ Frequency/Target Area:
  - ?

# Management Measure: Urban Nutrient Management

<http://www.ci.austin.tx.us/growgreen/>

The screenshot shows the City of Austin Grow Green website. The browser title is "City of Austin - City of Austin - Grow Green - Windows Internet Explorer". The address bar shows "http://www.ci.austin.tx.us/growgreen/". The page features a navigation menu on the left with links: Home, What's New, About Us, Partners, Retailers, Gardening Basics, Landscape Problems, Plants, Integrated Pest Management (IPM), Events/Training, Data/Studies, Related Programs/Resources, and Watershed Home. The main content area has a "grow green" banner with the tagline "landscaping for clean water". Below the banner is a section titled "Grow Green THE CHRONICLE" with the text "is a comprehensive, earthwise landscaping program to help protect and conserve Austin's water." The "The Big 3" section includes: Reduce Pesticides, Avoid Weed & Feed, Landscape Designs, Gardening Basics, Landscape Problems, and Plants.

# Management Measure: Urban Nutrient Management

- ▶ Soil and Water Testing Campaign
  - Campaign to promote the need and benefits of soil testing for proper nutrient management
- ▶ Lead Organization:
  - Texas AgriLife Extension Service
- ▶ Target Audience:
  - Homeowners
  - Cities/organizations with recreational fields and/or golf courses



# Illegal Dumping Campaign

- ▶ Develop or adapt existing material about respecting property rights and disposing of trash while recreating on the river; distribute at sporting good centers and kayak rental facilities and other points deemed appropriate
- ▶ Lead Organization:
  - Lampasas River Watershed Partnership
  - TPWD
- ▶ Frequency/ Target Area:
  - Primary points of public access to the river

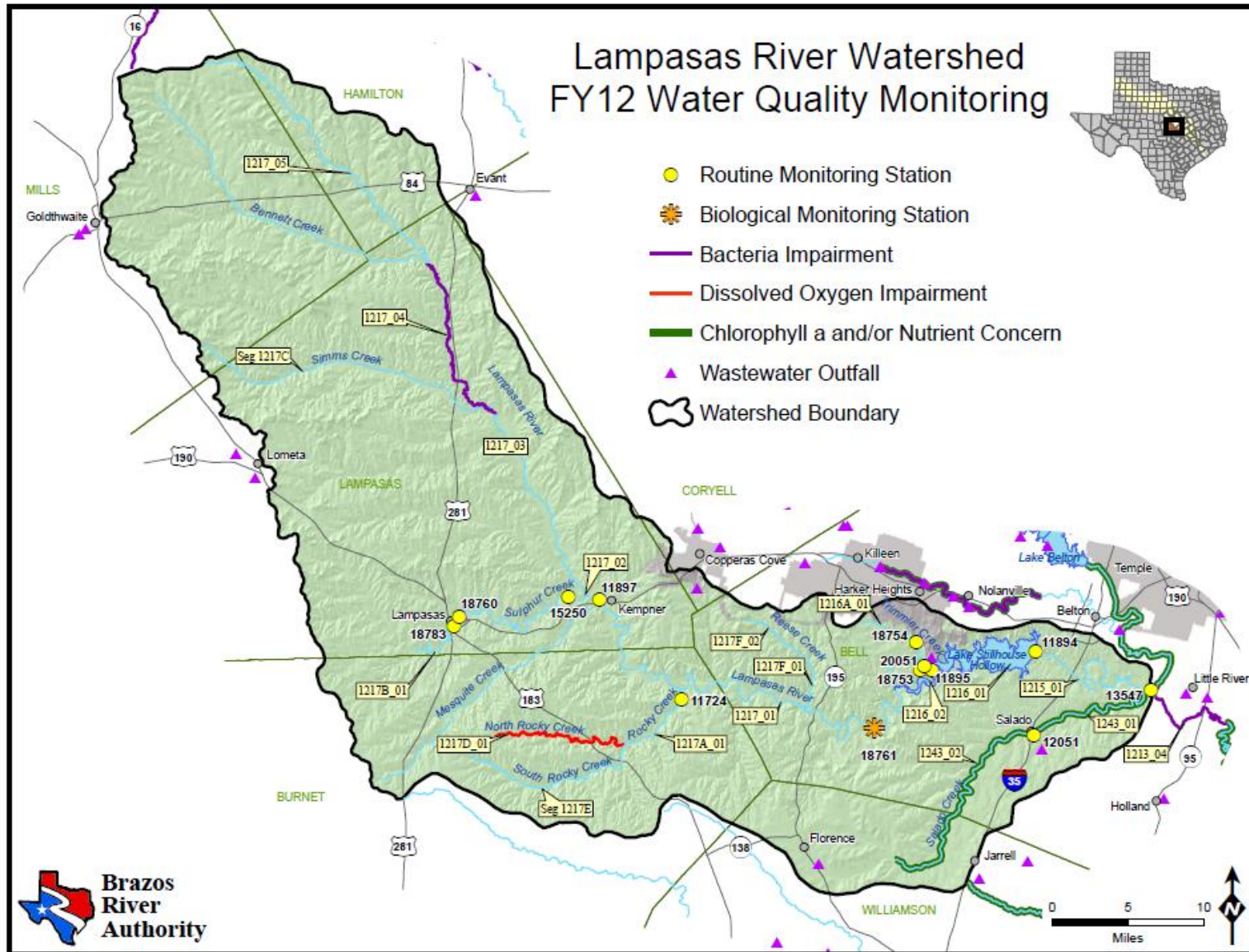
# Long Term Monitoring



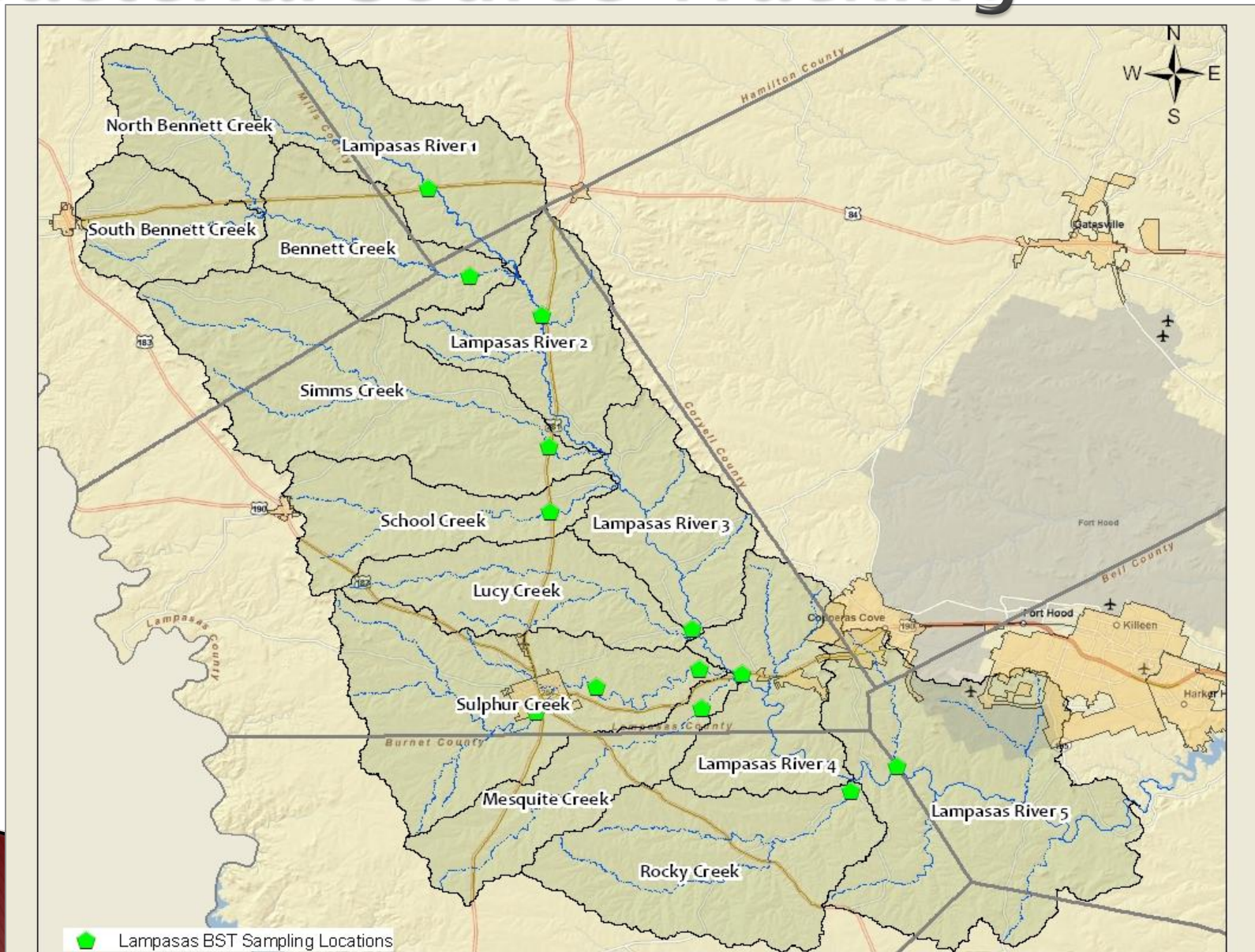
# Texas Clean Rivers Program

- ▶ In 1991, The Texas Legislature passed the Texas Clean Rivers Act [Senate Bill 818]. The act established the *Texas Clean Rivers Program* (CRP)
- ▶ The principal aim of the CRP is to ensure safe, clean water supplies for the future of Texans' drinking water needs, industry, agriculture, healthy ecosystems, and recreation and for all other uses of this valuable state resource
- ▶ CRP is used to provide the baseline data needed by TCEQ for a variety of processes, including: monitoring, standards development, permitting, enforcement, public outreach, field investigations and research in water quality
- ▶ Funded by fees assessed on wastewater discharge permittees and water rights holders as well as through TCEQ's own state appropriations
- ▶ Brazos River Authority is the lead CRP partner for the Lampasas River Watershed

# FY 11 and FY12 CRP Monitoring Locations



# Bacterial Source Tracking



# Long Term Monitoring Needs

- ▶ Continued intensive monitoring on subwatershed level on a monthly basis?
- ▶ Rely upon CRP quarterly monitoring?
  - Recent CRP monitoring sites have been in the mid to lower portion of the watershed
- ▶ Mix between the two programs?
  - Quarterly monitoring at subwatershed level?
- ▶ Request additional biological assessments within watershed?

# Next Steps

# Riparian Proper Functioning Condition Workshop

- ▶ Hosted by NRCS
- ▶ Spring 2011
- ▶ Tuesday, April 26<sup>th</sup>
  - Need landowner volunteer for field site venue
- ▶ Wednesday, April 27<sup>th</sup>
  - Classroom and Field at Parrie Haynes Equestrian Center
  - Lunch provided by City of Killeen



# March Work Group Meetings

- ▶ Develop outreach and education strategies specific to recommended management practices
- ▶ Outline long-term water quality monitoring concerns

## *Agriculture and Wildlife*

Thursday, March 24, 2011

6:00 – 9:00 p.m.

Lampasas County Farm Bureau

1793 U.S. 281

Lampasas, TX 76550

## *Urban Nonpoint Source*

Friday, March 25, 2011

9:00 a.m. – 12:00 p.m.

City of Killeen Solid Wastes

2003 Little Nolan Road

Killeen, TX 76542

# Remaining Activities

- ▶ April 2011
  - Steering Committee Meeting
    - Present final work group recommendations, finalize priorities and long-term monitoring
- ▶ Summer 2011
  - Distribute WPP for 45 day public comment
  - Public Comment meeting
- ▶ Fall 2011
  - TSSWCB and EPA Consistency Review Period
- ▶ Winter 2011
  - Print WPP & begin implementation



# Next Steps

# Riparian Proper Functioning Condition Workshop

- ▶ Hosted by NRCS, free of charge
  - Workshops detail the values and functions associated with riparian areas and streams
- ▶ Sign-in begins at 8:00 am
- ▶ Tuesday, April 26<sup>th</sup>
  - Classroom location: Lampasas County Farm Bureau Building
  - Field location: Mr. Ed Lilley's in Lampasas
- ▶ Wednesday, April 27<sup>th</sup>
  - Classroom and Field at Parrie Haynes Equestrian Center
- ▶ Please register by April 21<sup>st</sup>

[lprcin@brc.tamus.edu](mailto:lprcin@brc.tamus.edu)

254.774.6008



# Upcoming Meeting

- ▶ The next meeting date will be announced in the April Newsletter