

# Implementing the Mill Creek Watershed Protection Plan



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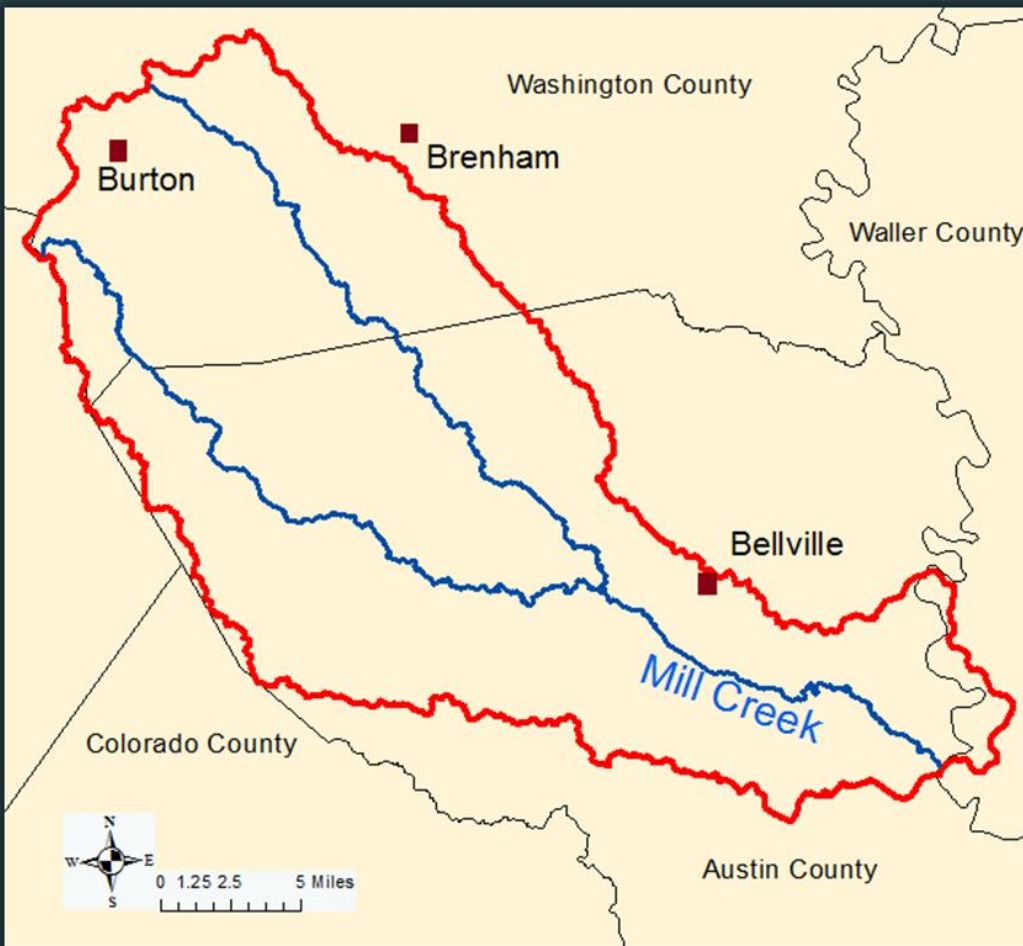
# ***What is a watershed?***

- An area of land that water flows across, through, or under on its way to a stream, river, lake, ocean or other body of water.





# *The Mill Creek Watershed*



- Mill Creek is not meeting the water quality standard due to elevated levels of *E. coli* bacteria
- Mill Creek is important for agriculture, fish and wildlife habitat, and recreation.
- ***Population centers:***
  - Brenham, Bellville, Cat Spring, Industry, and Burton

# *Mill Creek Watershed Protection Plan*

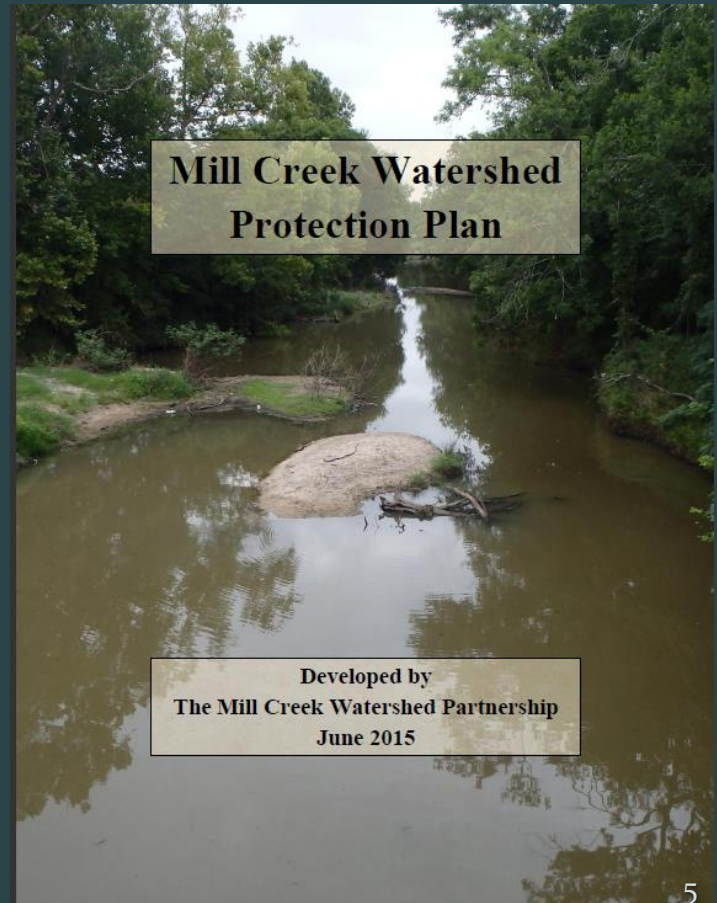
- In response to the elevated bacteria concentrations, a WPP was initiated in January 2015 to develop the WPP, completed by the end of summer, and accepted by EPA Feb 2016



# ***Mill Creek Watershed Protection Plan***

The purpose is to reduce the amount of bacteria getting into the creek, in order to meet the water quality standard

- All measures are voluntary
- Heavy focus on public outreach and education





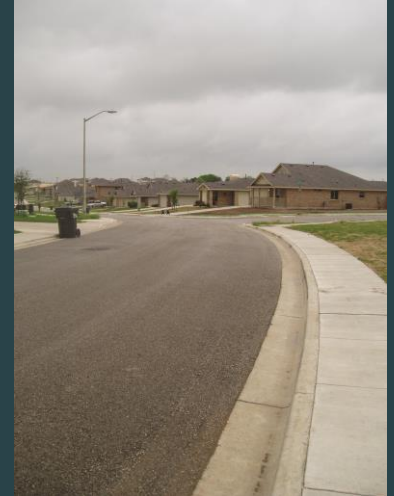
# *So, what is in the WPP?*

- The WPP identified potential sources of bacteria from urban runoff, wastewater, agriculture, wildlife and nondomestic animals.
- Voluntary management measures, that everyone can take part in.
- Let's take a closer look...



# *Management Measures*

- **Urban Nonpoint Sources**
  - Dog Waste
  - Stormwater
- **Wastewater**
  - Septic Systems
  - Wastewater Collection Systems and Treatment facilities
- **Agricultural Nonpoint Sources**
  - Livestock (cattle, goat, hog, sheep, poultry, and horse)
- **Wildlife and Nondomestic Animals**



# *Urban Management Measures*

- Dog waste management
- Urban Stormwater Runoff
  - Seek funding for engineering analyses and implementation of targeted control measures.
  - Implement non-structural BMPs, where possible.
  - Public education and outreach.





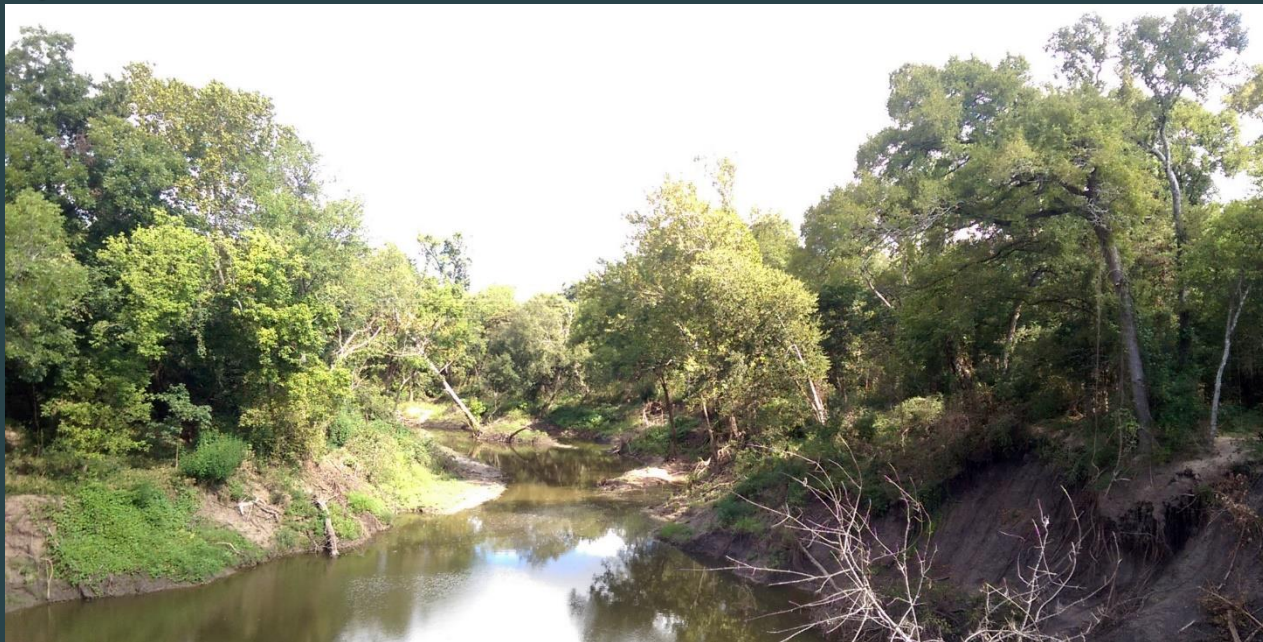
# ***Wastewater Management Measures***

- Work with municipal wastewater treatment systems
- Septic Systems
  - Free classes to educate homeowners on how to maintain and operate their system
  - Seek funding to extend sanitary sewer service to marginal areas of cities.
  - Seek funding for repair/replacement of failing OSSFs.



# ***Agricultural Management Measures***

- Water Quality Management Plans (WQMP)
  - Voluntary, site-specific management plans for individual agricultural operations.
  - WQMPs provide landowners access to funding for implementation of BMPs.





# *Wildlife and Nondomestic Animals*

- Deer
- Feral Hogs





# Implementation

- Now, on to an overview of some upcoming events....



# *Septic System Classes for Homeowners*

- 2 hour class that provides a general overview of all types of septic systems
  - Covers general maintenance and operation
  - When to pump out the system
  - What can and cannot go down the drain
- 6 hour class focuses on aerobic systems
  - Intensively covers how to maintain and operate aerobic systems
  - Provides in-depth explanation of the treatment processes in these complex systems



# Upcoming Class

## Homeowner Maintenance of Septic System Class

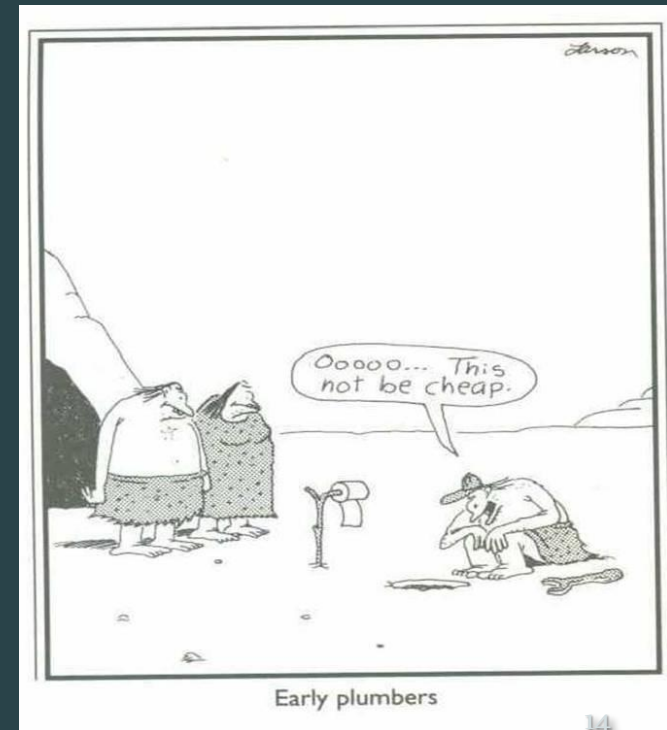
Monday, December 3<sup>rd</sup>

8:30 am-4 pm

Cost: FREE

Location: Bellville VFD

- Will certify homeowners in Austin County to maintain their aerobic septic systems
- <https://ossf.tamu.edu/>





# *Texas Well Owner Network*

- <http://twon.tamu.edu/>
- Free educational training for private water well owners.
- Covers well maintenance, water conservation, septic system maintenance, and water quality and treatment.
- Participants can bring their well water samples to be screened for common contaminants like bacteria, nitrates, arsenic, and high salinity.
- Coming in 2019



# ***SWCD Conservation Technician***

- The District Field Technician, Faith Chase, offices out of Bellville and Brenham
- Provides technical assistance to agricultural producers for the development of WQMPs and implementation of BMPs



# *WQMP Update*

- Number of plans developed 6
- Number of plans implemented 3
- Number of plans in planning 8
- Total plans after certification 13
- Total acres 2020
- Number of participants 10





# *Lone Star Healthy Streams Workshop*

- Goal is protection of Texas waterways from bacterial contamination from livestock and feral hogs
- Half day workshops for area agricultural producers
- Coming in 2019



# *Other Management Measures*

- Feral Hog Control Program
  - Educational programs and support from a regional feral hog specialist
  - <http://feralhogs.tamu.edu/>





# *Creek Clean Up Event*

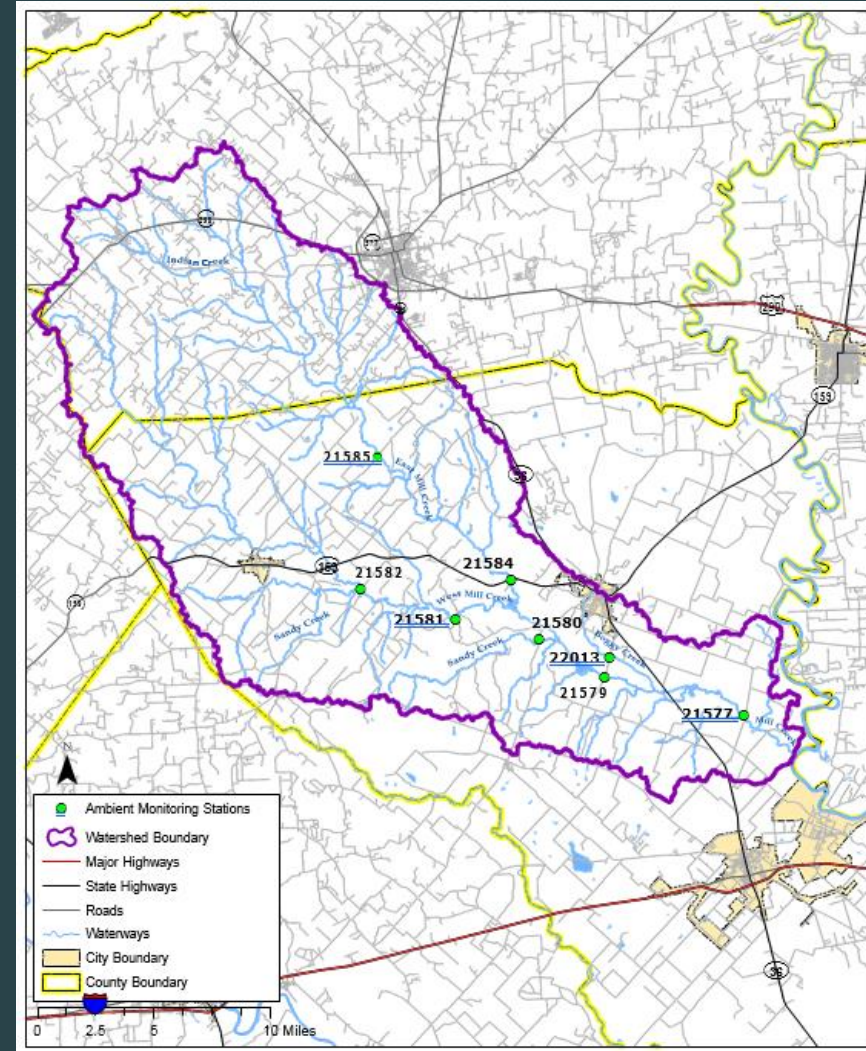
- Implement an annual Creek Clean Up Event starting in 2019
- Will be working with Project Partners in the weeks ahead





# *Water Quality Monitoring*

- The main monitoring location will continue to be monitored
- 8 locations will end this December, but hopefully start again next year
- The geomean of the last 7 years at the main location was 198 and WQ standard is 126



# *Average E. coli Concentrations (cfu)*

- |   |      |
|---|------|
| • East fork Mill Ck at Bleiblerville Rd | 186  |
| • East fork Mill Ck at FM 159           | 412  |
| • West Mill Ck at Tiemann Rd            | 300  |
| • West fork Mill Ck west of Mill Ck Rd  | 313  |
| • Sandy Creek at Mill Ck Rd             | 494  |
| • Mill Ck at FM 2429                    | 44   |
| • Little Boggy Ck at Hwy 36             | 611  |
| • Mill Creek at FM 331                  | 1710 |
- \*State standard is a geomean of 126

# *Texas Stream Team Monitors*

- A state-wide program that equips and certifies citizens to monitor water quality
- Will begin working with the group to learn how I can better assist them to achieve their goals





# *How you can be a part*

- Mill Creek Watershed Partnership Meetings
- Septic System classes, TWON, LSHS, and other workshops
- Go to <http://millcreek.tamu.edu/> for updates, to sign up for email notices, and find us on social media



# Partners



# *Contact Information*

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