

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.



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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

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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

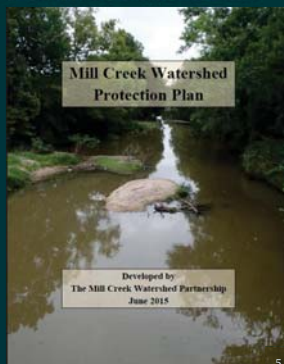


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Mill Creek Watershed Protection Plan

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

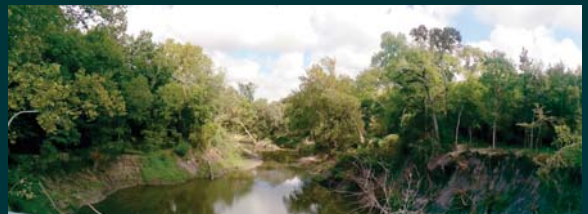
- All measures are voluntary
- Heavy focus on public outreach and education



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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...



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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**



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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.



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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.



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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.



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Wildlife and Nondomestic Animals

- Deer
- Feral Hogs



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Implementation

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



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Septic System Classes for Homeowners

- 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
 - Will certify homeowners in Austin County to maintain their aerobic septic systems



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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



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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



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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 |



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Lone Star Healthy Streams Workshop

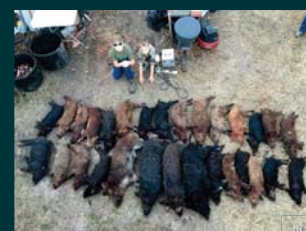
- Goal is protection of Texas waterways from bacterial contamination from livestock and feral hogs
- Half day workshops for area agricultural producers
- Coming in 2019



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Other Management Measures

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



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Creek Clean Up Event

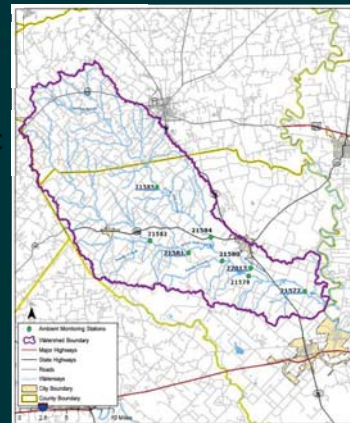
- Implement an annual Creek Clean Up Event starting in 2019
- Will be working with Project Partners in the weeks ahead



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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



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Average *E. coli* Concentrations (cfu)

• East fork Mill Ck at Bleiberville 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

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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



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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



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Partners



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Contact Information

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