

Gilleland Creek TMDL Implementation Plan Year 1



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TCEQ TMDL Program
Wednesday, March 28, 2012

A TMDL is...

- Total Maximum Daily Load- The amount of pollution (load allocation) a water body can receive and still meet the water quality standards for its uses
- The Report adopted by TCEQ on 8/8/2007 and approved by EPA on 4/21/09. It includes identification of pollutant sources, and allocation of loads to point and nonpoint sources.
- A process for restoring water quality.

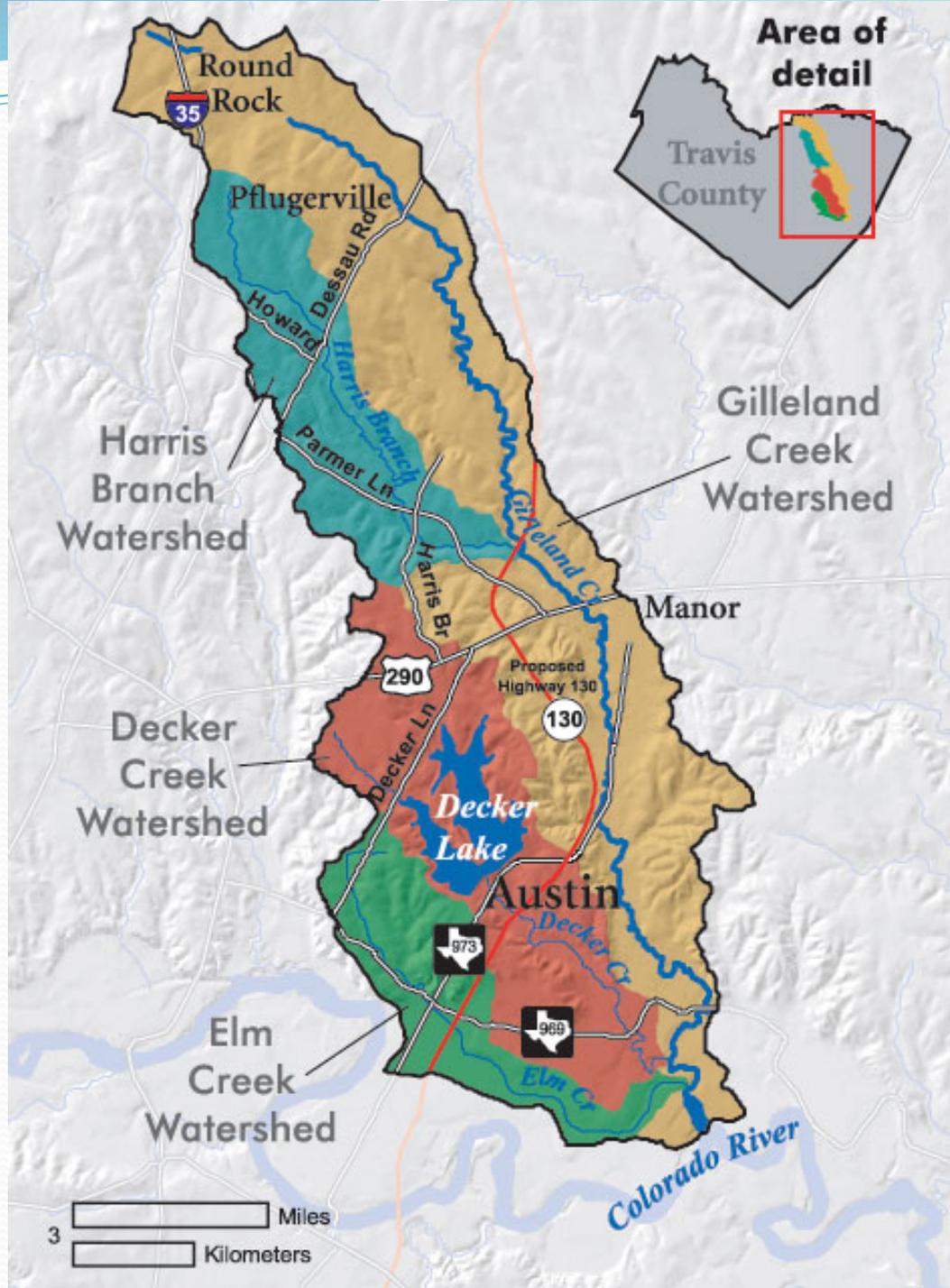
Why do a TMDL?

- Restore water quality in rivers, lakes, and bays affected by pollutants
- An effective tool for determining sources and necessary actions
- Required under Section 303(d) of the federal Clean Water Act (CWA) for water bodies that do not meet water quality standards

Why Gilleland Creek?

- Gilleland Creek was listed on the 2004 303(d) list because elevated *E.coli* densities did not meet the contact recreation standard
- *E.coli* are bacteria commonly found in human and animal waste, and often indicate the presence of disease-causing microorganisms, which can pose a threat to public health





Why do an Implementation Plan?

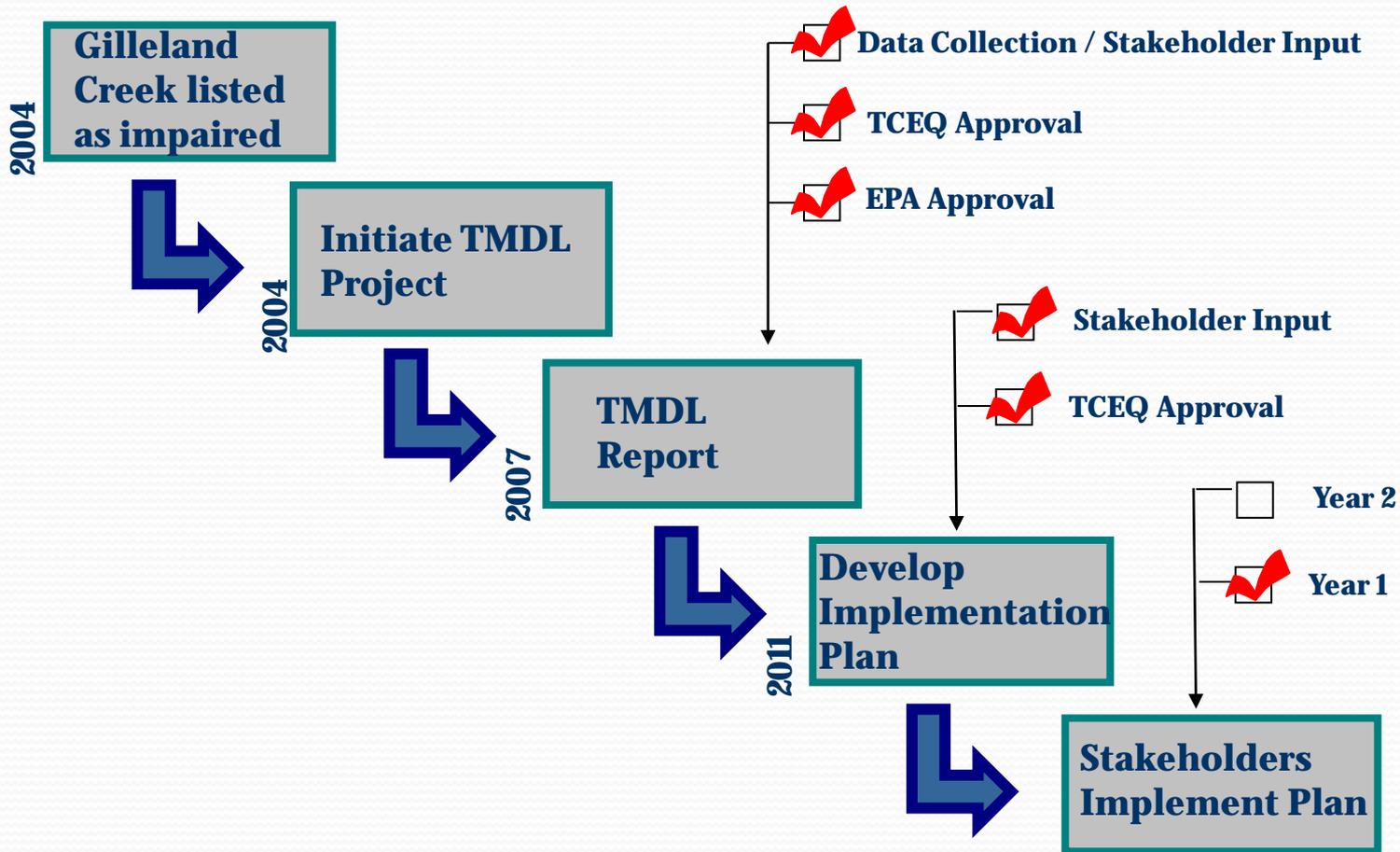
- TMDL requirement
- Developed by stakeholders
- Approved by TCEQ 2/9/2011

Gilleland Creek Partners

- City of Pflugerville
- Lower Colorado River Authority
- City of Austin
- Travis County
- Austin Water Utility
- Windermere Utilities
- Dessau Fountain Estates
- City of Round Rock
- Center for Research in Water Resources
- Natural Resources Conservation Service
- Texas AgriLife Extension Service
- Texas State Soil and Water Conservation Board
- US Fish and Wildlife Service
- Texas Parks and Wildlife Department
- Texas Stream Team
- Volunteers in the watershed



The TMDL Process



Gilleland Creek Headwaters





On-Site Sewage Facilities

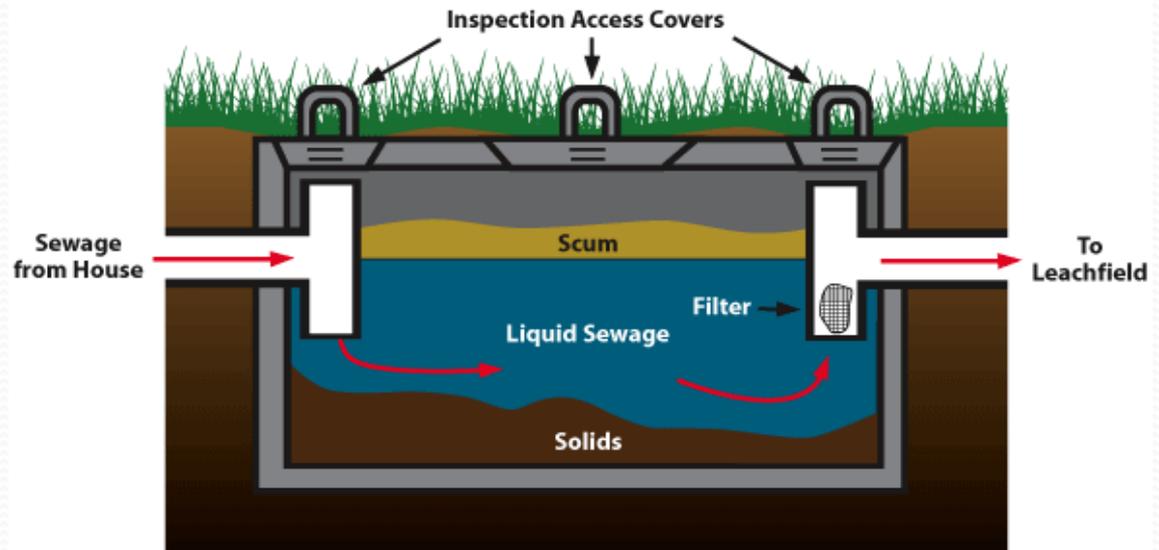
- Identify, prioritize, inspect and bring into compliance malfunctioning on-site sewage facilities

- Partners involved:

City of Austin

Travis County

TCEQ



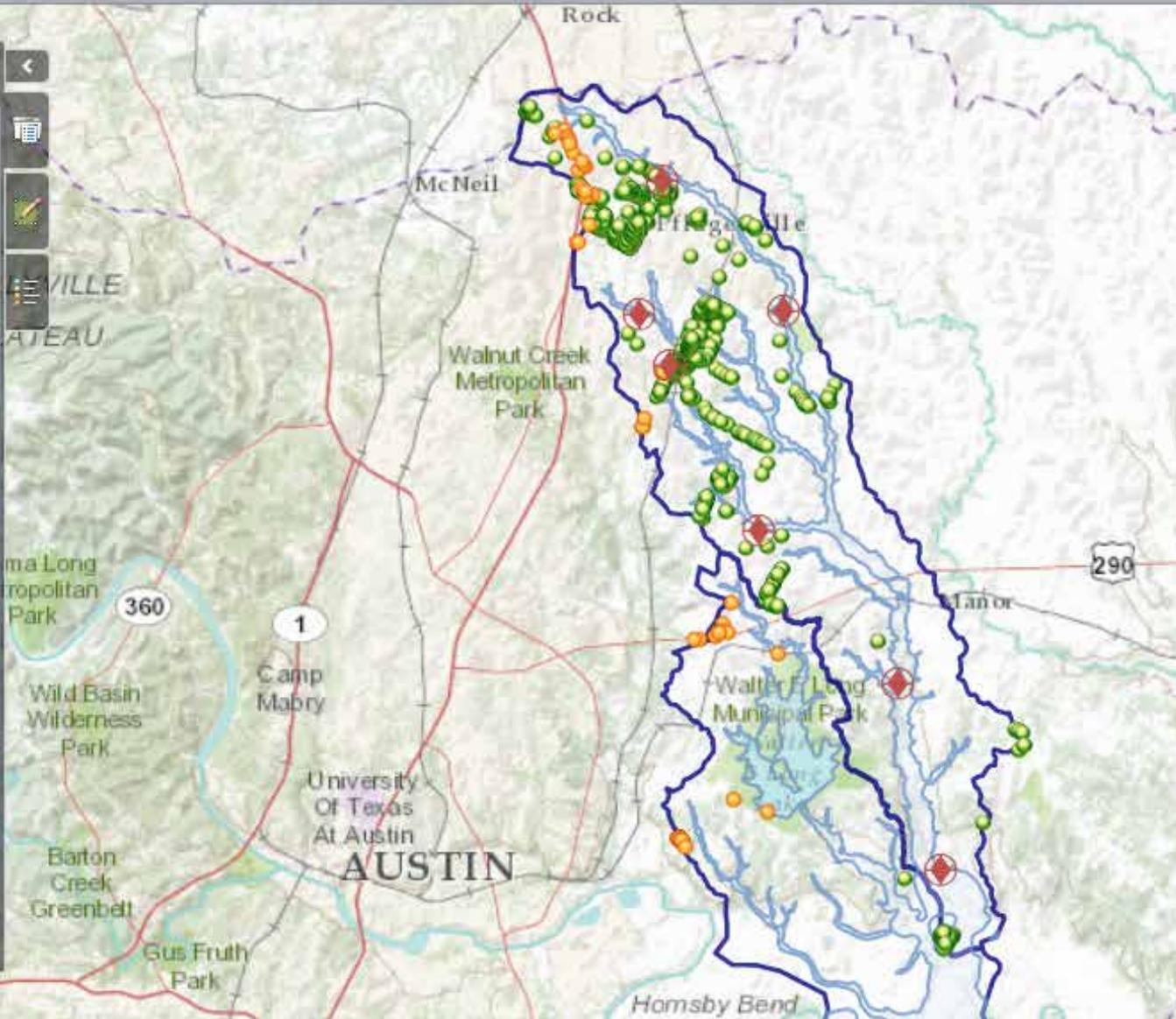
OSSF Implementation Measures

- Available data mapped and evaluated to identify OSSFs
- Inspect up to 10% of highest priority OSSFs
- Conduct one workshop for OSSF owners
- Provide educational materials to OSSF owners

Layers

- Map Notes
- Addresses_That_Meet_Criteria
- WWTP
- City of Austin OSSFs
- Tavis County OSSFs
- Tavis County OSSFs
- Wastewater Outfalls
- 100yr_floodplain
- Gilleland Creek Watershed
- CCN Sewer Districts
- Topographic

Organize



OSSF Workshop

February 28, 2012

Hosted by TCEQ

Presentation by James Maynard, LCRA



Natural Resource Management

- Programs to work with landowners to protect riparian areas
- Partners involved:
 - Governmental and Non-Governmental Programs
 - Local landowners



Implementation Measures

- LCRA Creekside Conservation Program
 - Funding restored for Year 2
- USFWS-Partners for Fish and Wildlife
 - No landowners contacted USFWS for conservation planning assistance
- TSSWCB/SWCD WQMPs developed
 - No landowners contacted TSSWCB for technical assistance with WQMPs
- TPWD site visits
 - Position lost during layoffs in 2011
- TWS feral hog control
 - Worked 4,015 acres and removed 29 feral hogs
- City of Pflugerville
- Texas AgriLife Extension Service
 - Crops and Livestock Clinic
 - Professional Grounds Conference
 - Lone Star Healthy Streams Program

Retrofitting Storm Water Detention Basins

- Determine the effectiveness of retrofitting existing flood control facilities (storm water detention basins) to also perform as water quality facilities
- Partners:
 - Center for Research in Water Resources at the University of Texas
 - City of Pflugerville

Implementation Measures

- Apply for funding
- Secure two detention facilities and appropriate permits
- Detention ponds cleaned and prepared for project.
- Design, retrofit and converts structures from detention facilities to water quality facilities

Current Status

- Project funded
- Verbal permission granted
- Cleaning underway
- Waiting to determine if the basins are successfully restored to proper functioning prior to committing money for the design.

Storm Water Detention Facilities



Source: Dr. Michael Barrett, CRWR

Education and Outreach

- Coordinate with partners to develop a general campaign to raise public awareness of nonpoint-source contributions of bacteria pollution, specifically pet waste
- Partners
 - City of Austin
 - City of Pflugerville
 - City of Round Rock
 - Travis County



Volunteer Monitoring

- LCRA CRWN volunteers
- 6 sites along Gilleland Creek
- 63 monitoring events
- 63 volunteer hours
- \$1,323 approximate value



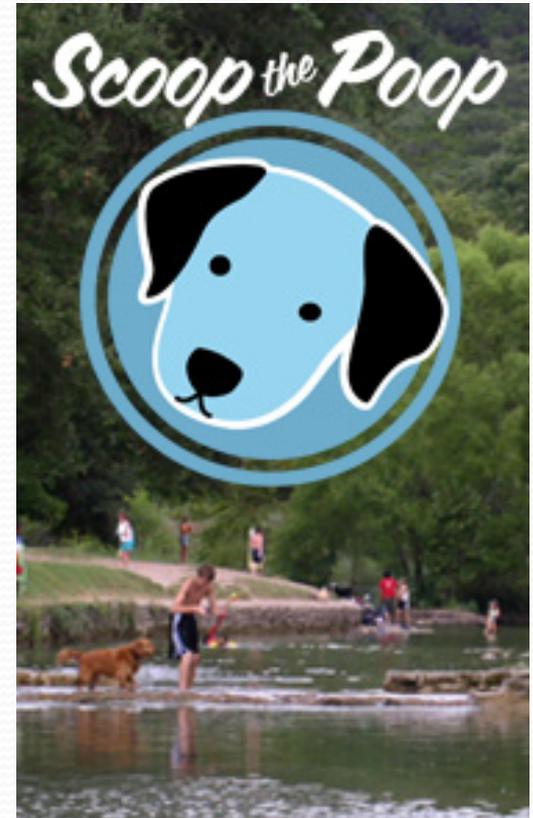
Volunteer Monitoring

Source: LCRA



Pet Waste Implementation Measures

- Survey park users pet waste habits
- Review survey results and construct strategy
- Install additional mutt mitt and waste containers
- Waste receptacles and signage at pilot parks





Water Quality Ordinances

- **Develop and adopt equivalent water quality ordinances between government jurisdictions**

- **Partners:**

 - City of Austin

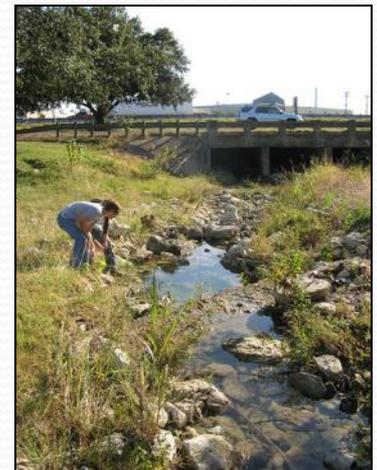
 - City of Pflugerville

 - Round Rock

 - Travis County

Wastewater Collection Systems

- Annual visual inspection of collection systems within 100 feet from the centerline of the Gilleland Creek and its tributaries.
- Partners
 - City of Austin inspected 6.64 miles
 - Dessau Fountain Estates
 - City of Pflugerville identified attribute data
 - Windermere Utility inspected 1.42 miles
- Zero failures identified



Wastewater Monitoring

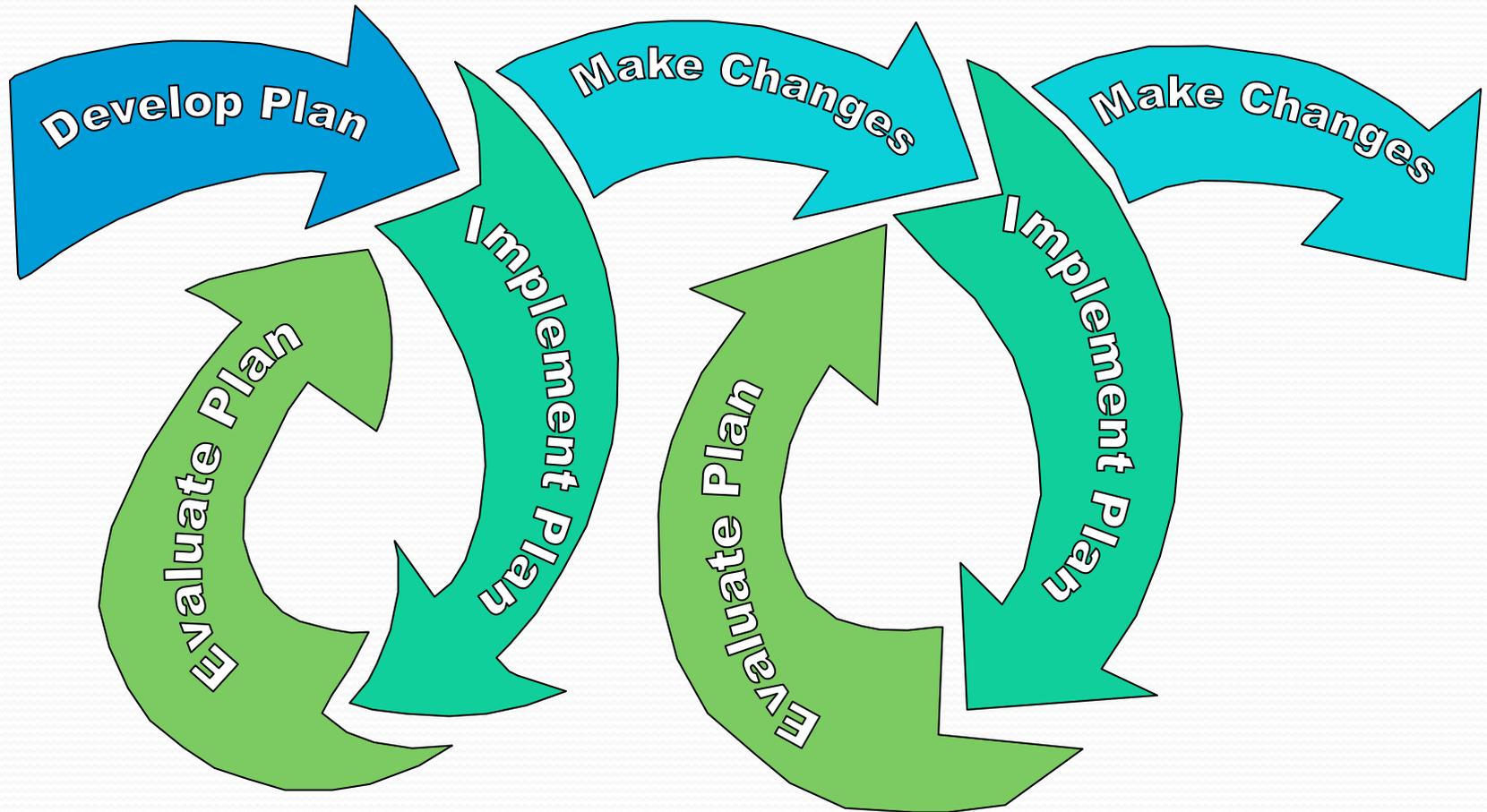
- Monitor and report *E. coli* concentrations from wastewater treatment facilities
- Partners
 - City of Austin: all DMRs submitted, operational changes made
 - Dessau Fountain Estates: no response
 - City of Pflugerville: all DMRs submitted, no operational changes made
 - Windermere Utility: all DMRs submitted, no operational changes made
 - TCEQ: 3 *ecoli* violations from Year 1 from 7 wastewater treatment facilities

What's Next?

- Year 2
- Adaptive Management



Adaptive Management



Telling Our Story

- Other events, activities, tasks
- Hyperlinks to project pages, maps, news stories
- PSAs
- Press releases
- Photos
- Graphs, charts



Texas Integrated Reports

	2004	2006	2008	2010
1428C_01	240	170.0	166.35	129.37
1428C_02	NA	NA	147.32	109.43
1428C_03	NA	NA	175.55	175.55
1428C_04	NA	NA	135.20	144.72

**Standard:
Geomean
126 cfu/100ml**

Questions

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