

# Status of TCEQ Project: Indicator Bacteria TMDL for Dry Branch Creek

TCEQ TMDL Project Manager

Jason Leifester

Project Staff:

Jimmy Millican

Texas Institute for Applied Environmental Research (TIAER)  
Tarleton State University  
Stephenville, Texas

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# Acknowledgements

- Agency Lead:  
Texas Commission on Environmental Quality (TCEQ)
- Support Funding:  
U.S. Environmental Protection Agency (EPA)

# Major Presentation Topics

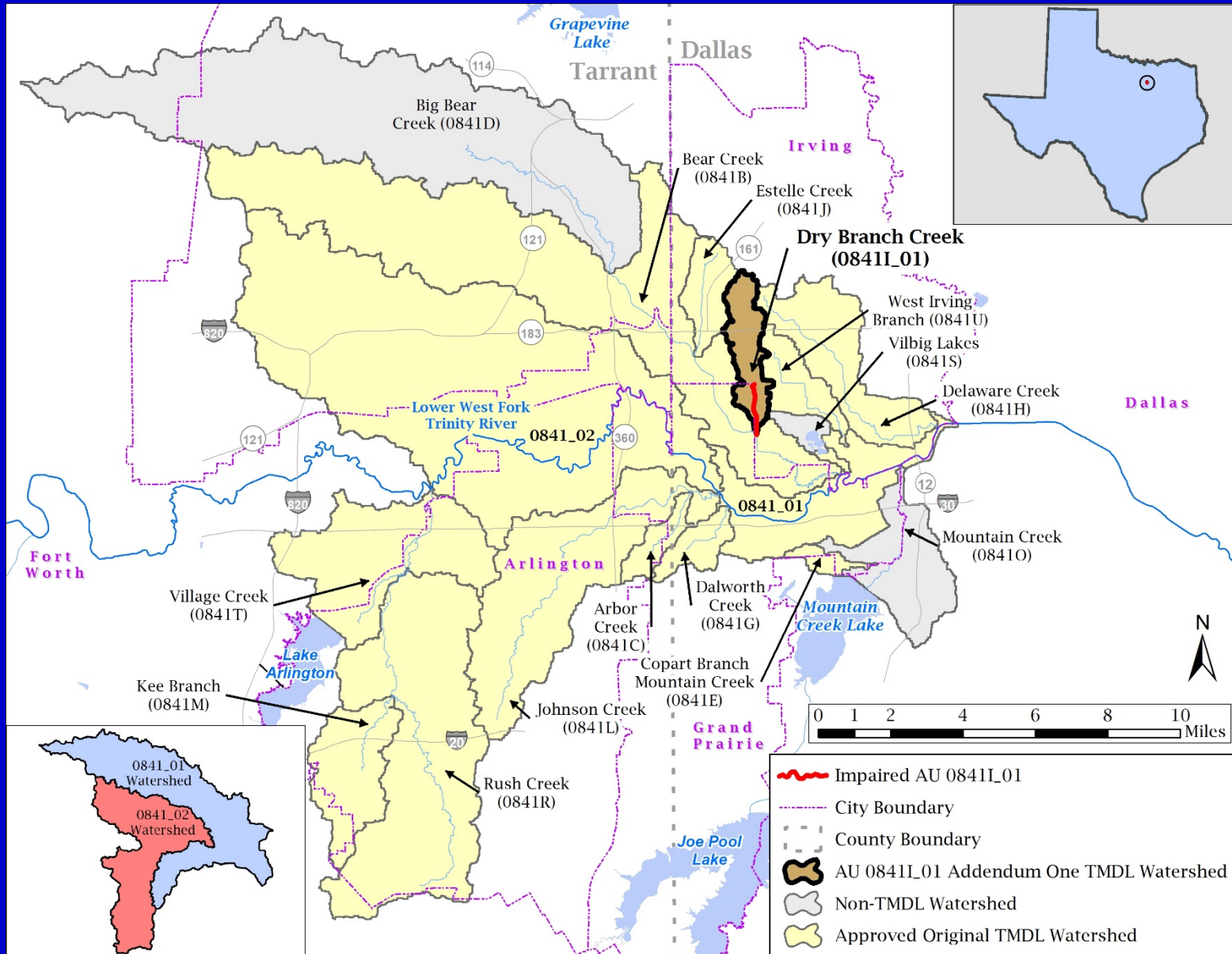
- Previously completed TMDLs
- Overview & status of present TMDL project
- Fundamentals of TMDL equation

# Previously Completed Thirteen TMDLs for Indicator Bacteria in the Lower West Fork Trinity River Watershed

Adopted by TCEQ: Sep. 24, 2013; Approved by EPA: Nov. 7, 2013

| <b>Segment Name</b>           | <b>Assessment Unit (AU)</b> |
|-------------------------------|-----------------------------|
| Lower West Fork Trinity River | 0841_01 & 0841_02           |
| Bear Creek                    | 0841B_01                    |
| Arbor Creek                   | 0841C_01                    |
| Copart Branch Mountain Creek  | 0841E_01                    |
| Dalworth Creek                | 0841G_01                    |
| Delaware Creek                | 0841H_01                    |
| Estelle Creek                 | 0841J_01                    |
| Johnson Creek                 | 0841L_01                    |
| Kee Branch                    | 0841M_01                    |
| Rush Creek                    | 0841R_01                    |
| Village Creek                 | 0841T_01                    |
| West Irving Branch            | 0841U_01                    |

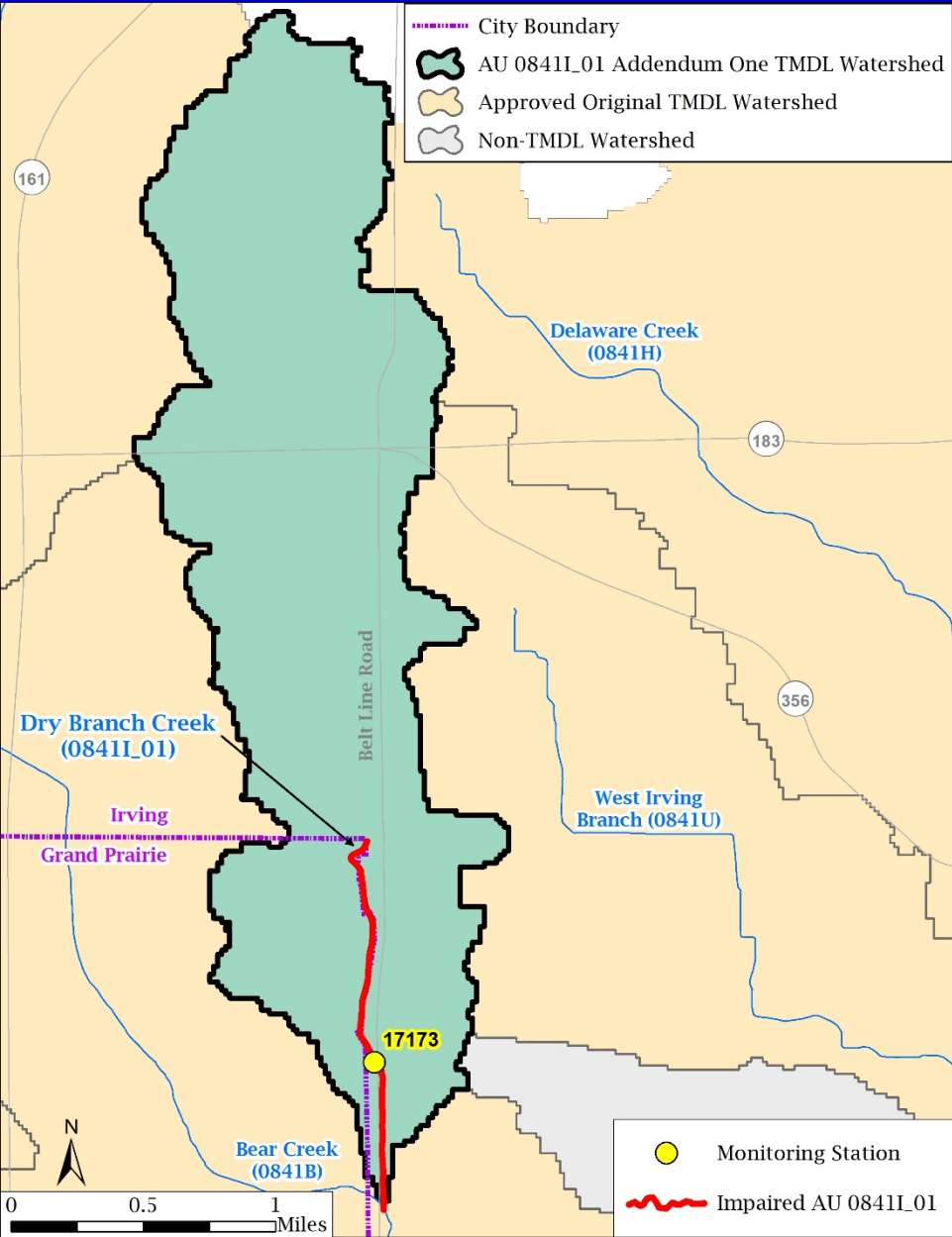
# Previously Completed TMDLs: Within the Lower West Fork Trinity River



# Addendum One to *Thirteen TMDLs for Indicator Bacteria in the Lower West Fork Trinity River Watershed*

- Project water body
  - Dry Branch Creek (0841I\_01) – 1.5 mile stretch running upstream from confluence with Bear Creek to Rock Island Road in Irving, TX
- Approach for TMDL – FDC/LDC

# TMDL Project Area



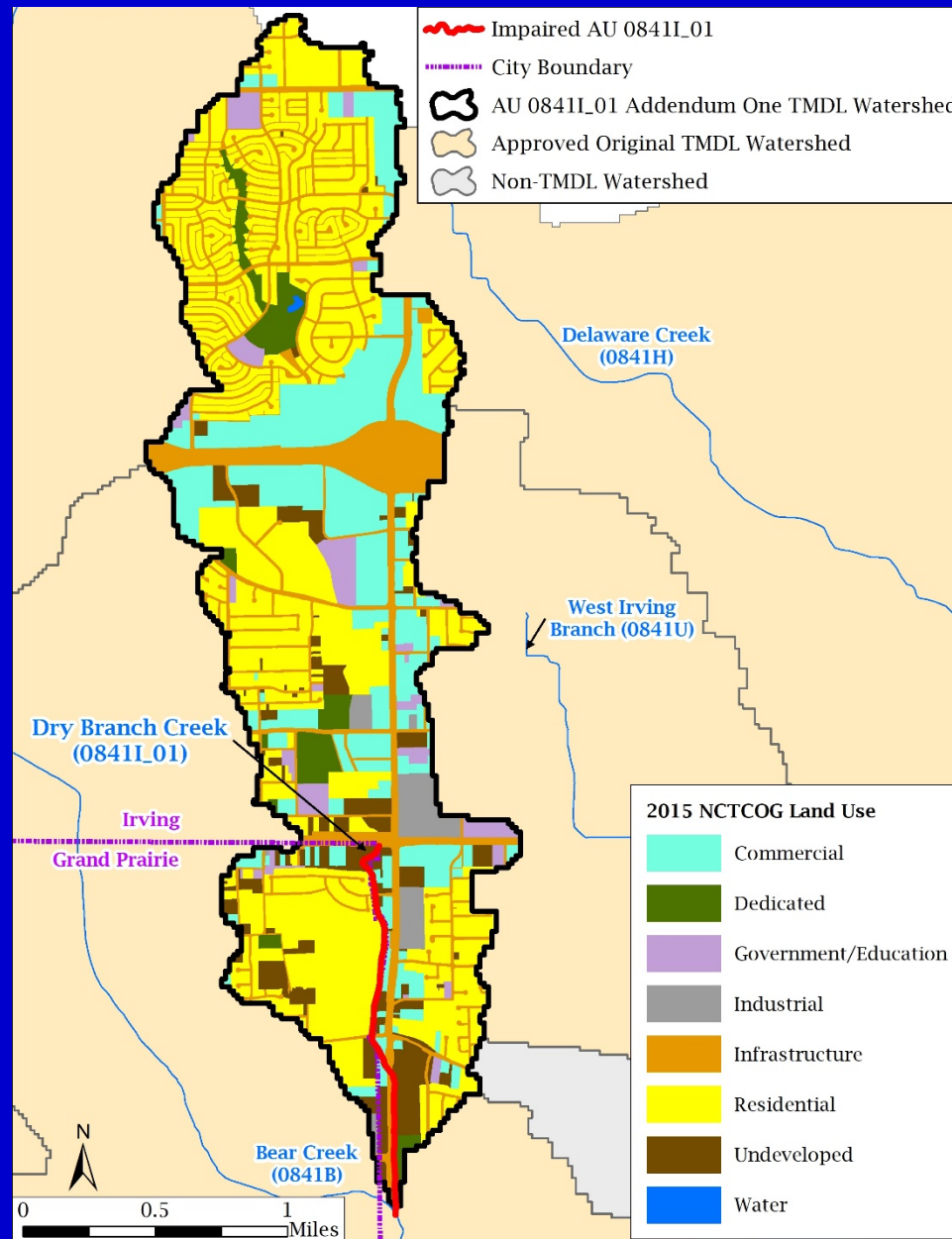


# Integrated Report Findings for *E. coli* Assessment (criterion = 126 MPN/100 mL)

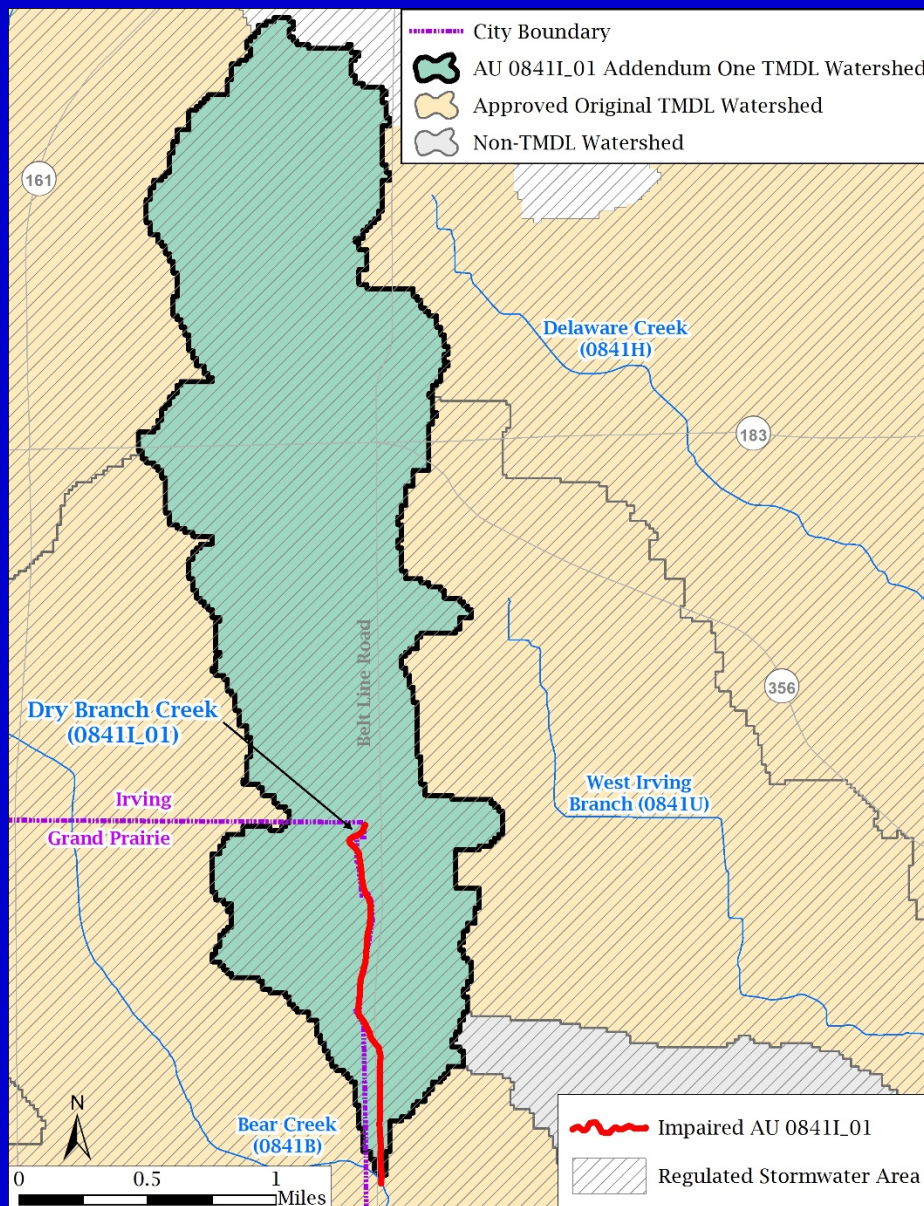
| Report Year | Assessment Unit (AU) | Station | Date Range | No. of Samples | Geometric Mean (MPN/100 mL) |
|-------------|----------------------|---------|------------|----------------|-----------------------------|
| 2020        | 0841I_01             | 17173   | 2011-2018  | 30             | 397                         |
| Draft 2022  | 0841I_01             | 17173   | 2013-2020  | 37             | 416                         |

# Key Features within the Watershed

# 2015 Land Use/Land Cover (Source: NCTCOG)

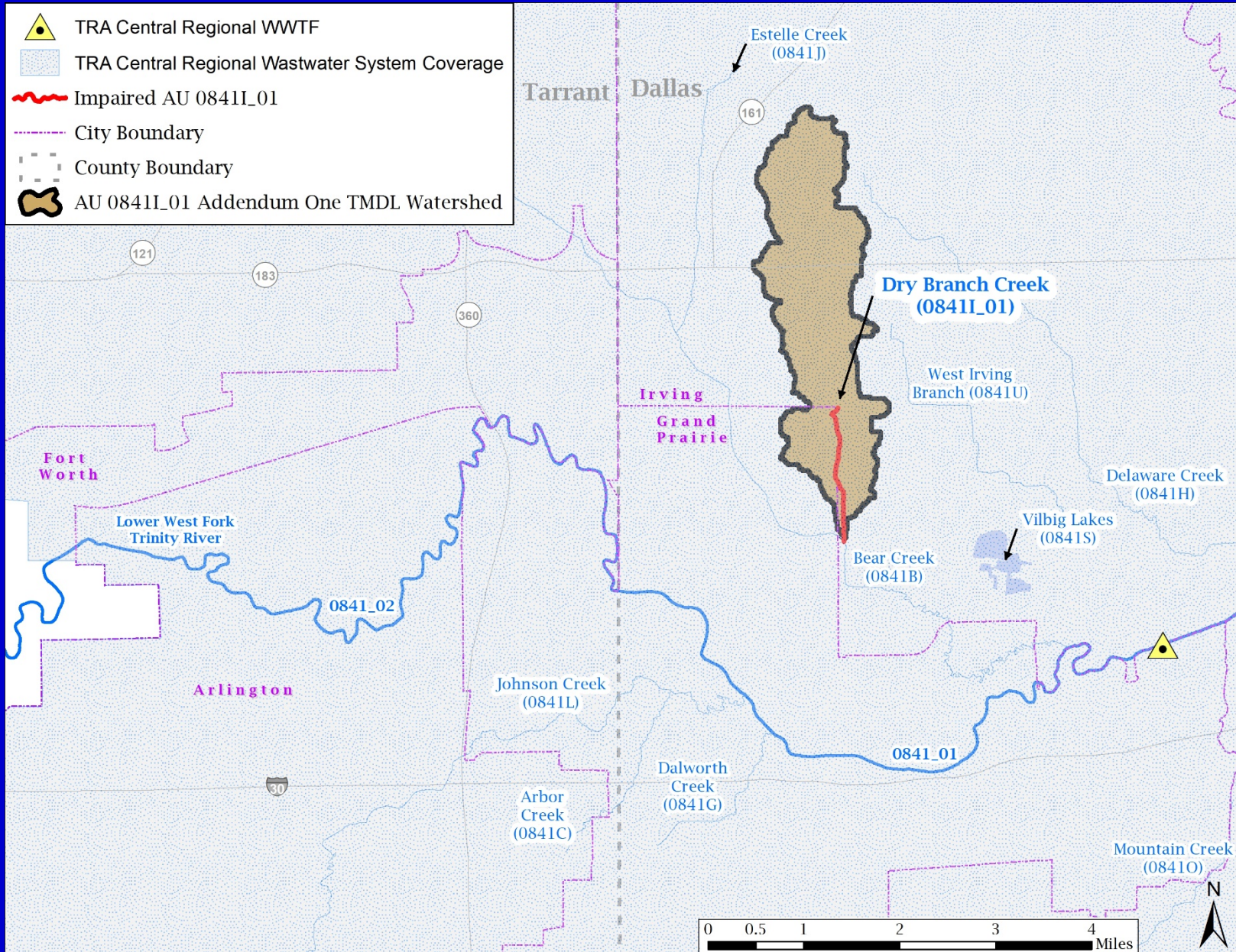


# Municipal Separate Storm Sewer System Area (Source: US Census Bureau)

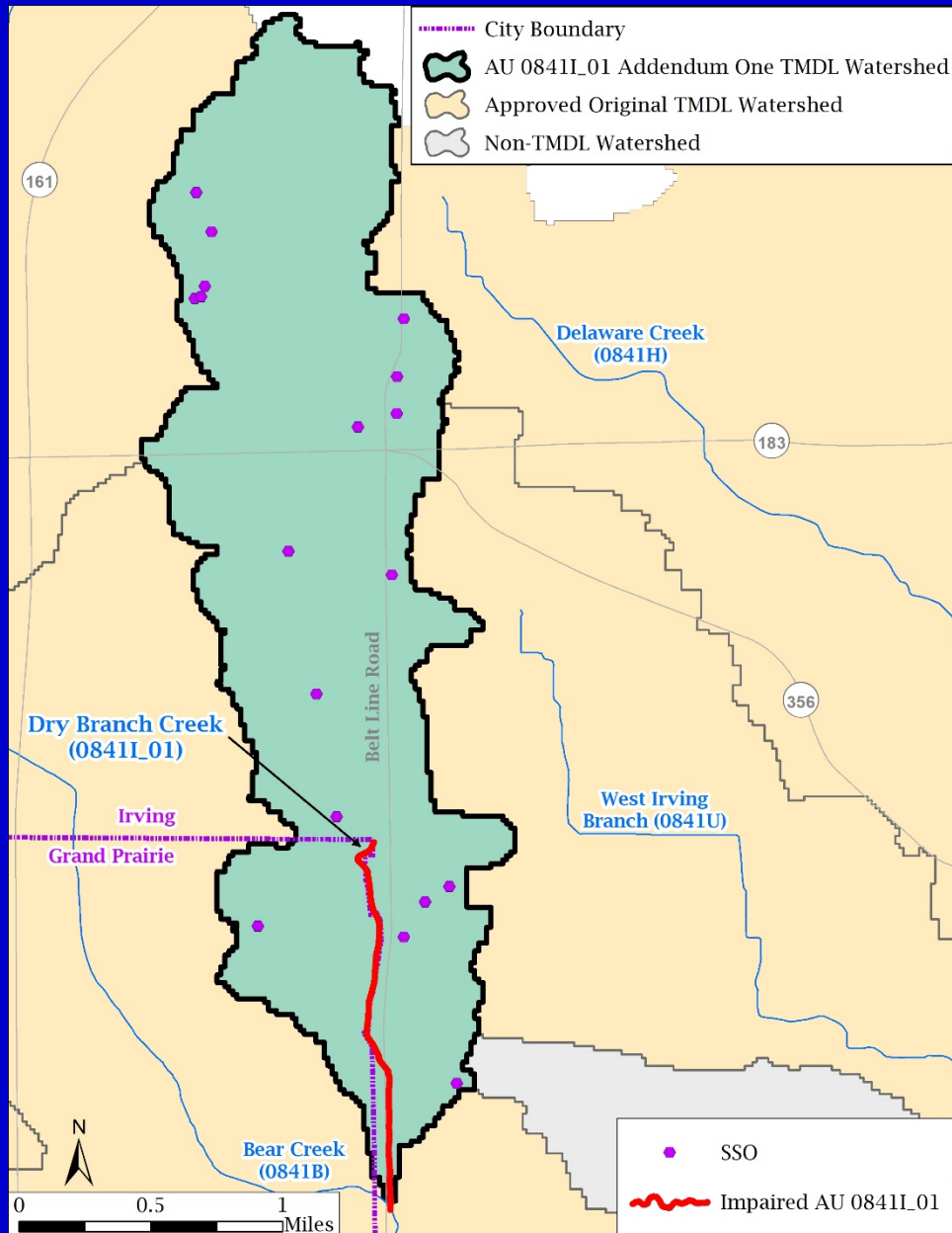




# Wastewater Service Area – TRA Central Regional Facility



# Reported Sanitary Sewer Overflows 2016 - 2021 (Source: NCTCOG)





# Overview

## Fundamentals of TMDL

### Pollutant Load Allocation

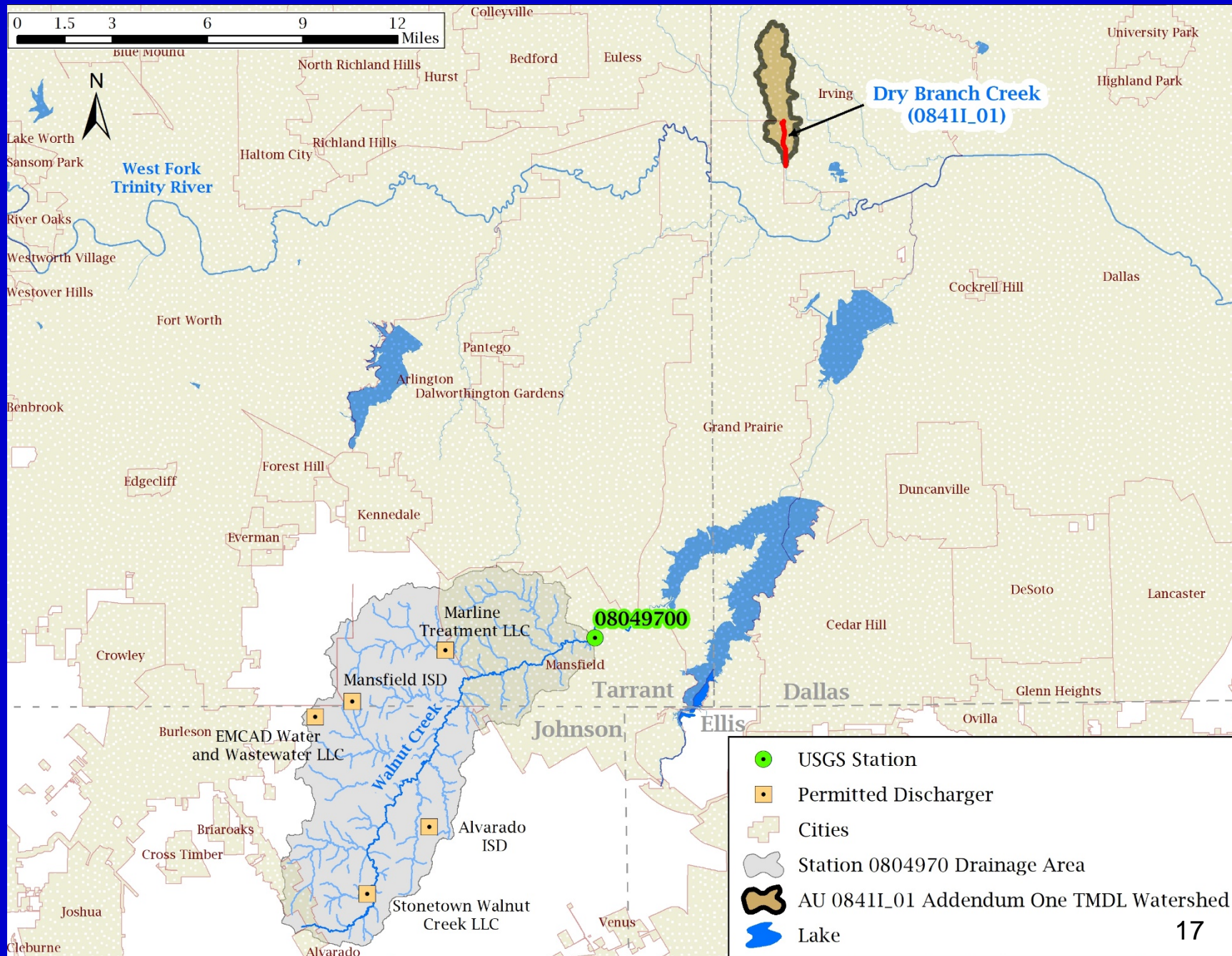
### Equation

# TMDL Allocation Equation

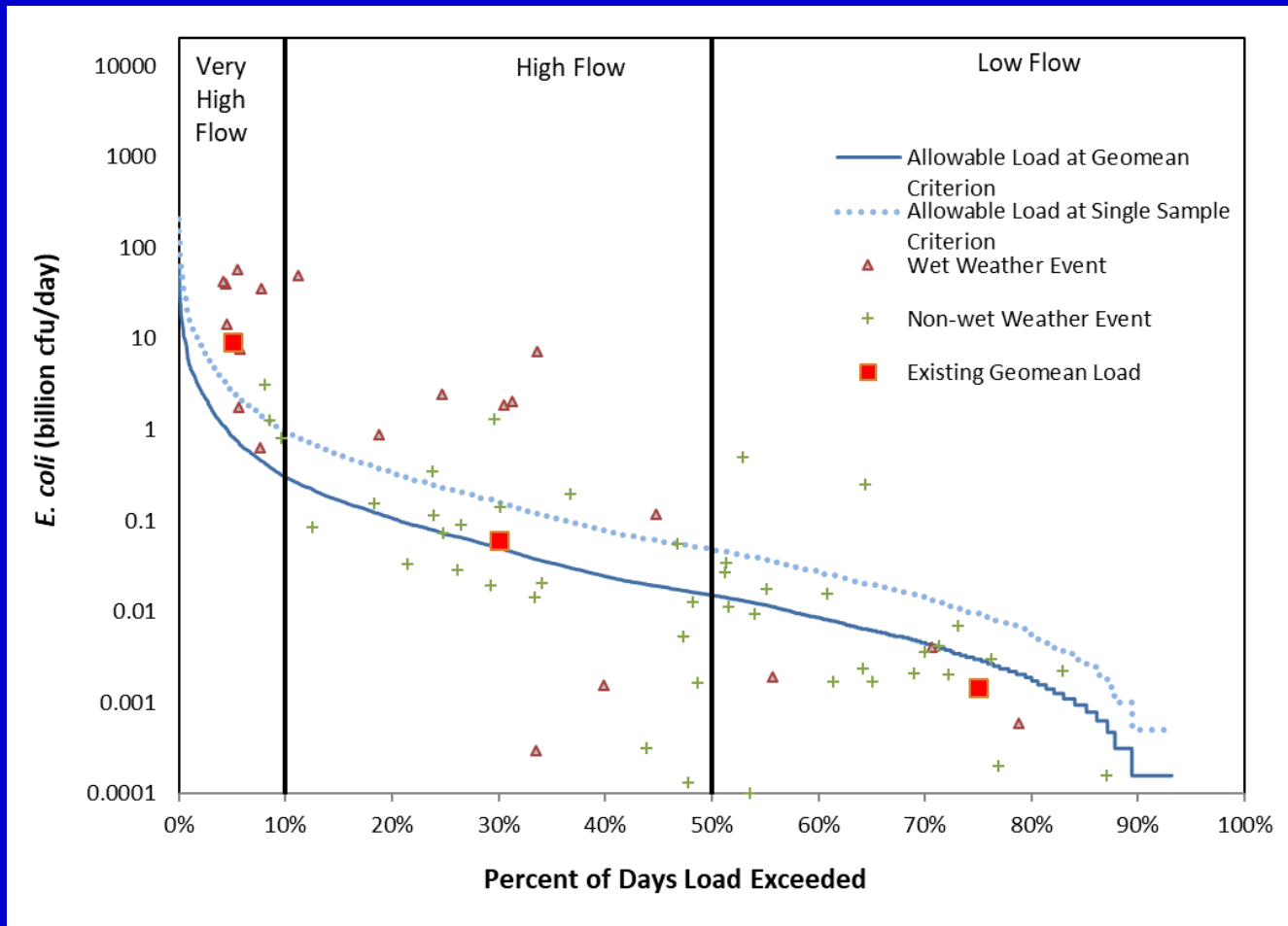
$$\text{TMDL} = \cancel{WLA_{\text{WWTF}}}^0 + WLA_{\text{SW}} + LA + \cancel{LA_{\text{TRIB}}}^0 + \cancel{FG}^0 + \text{MOS}$$

- $WLA_{\text{WWTF}}$  - Existing wastewater treatment discharges.
- $WLA_{\text{SW}}$  - Construction, industrial and MS4 discharges stormwater loading.
- LA - Unregulated stormwater loading.
- $LA_{\text{TRIB}}$  - Loading from TMDL tributary.
- FG - Future growth from potential permitted facilities.
- MOS - Margin of safety.





# Load Duration Curve for station 17173, Dry Branch Creek upstream of Beltline Road Irving, TX



# Status of TMDL for Indicator Bacteria in Dry Branch Creek

- Technical Support Document (TSD) to be completed by the end of Aug. 2022; will be made available to the public on project website after review and approval
- TCEQ will use TSD to develop an addendum to be included in Water Quality Management Plan update.

Thank You

Any Questions?

Jimmy Millican

email: [jmillican@tarleton.edu](mailto:jmillican@tarleton.edu)