

Status of TCEQ Project: Indicator Bacteria TMDL North Fork Cottonwood Creek

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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



North Fork Cottonwood Creek, Station 10722

Previously Completed Four TMDLs for Indicator Bacteria in Watersheds Upstream of Mountain Creek Lake

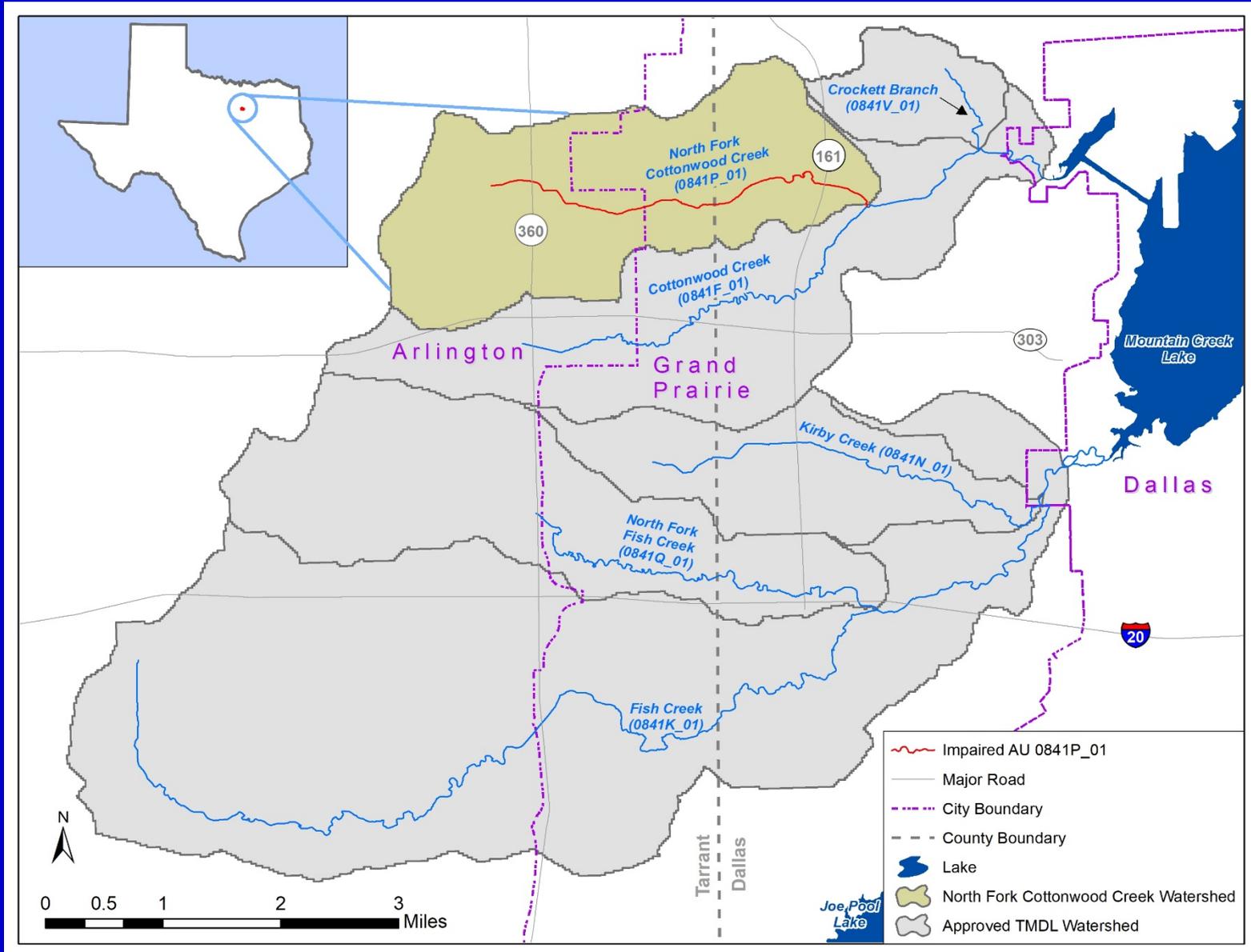
Adopted by TCEQ: Nov. 2, 2016; Approved by EPA: Dec. 7, 2016

Segment Name	Assessment Unit (AU)
Crockett Branch	0841V_01
Cottonwood Creek	0841F_01
Kirby Creek	0841N_01
Fish Creek	0841K_01

Previously Completed Addendum One to Four
TMDLs for Indicator Bacteria in Watersheds
Upstream of Mountain Creek Lake
Added by Addendum October 2020 by TCEQ

Segment Name	Assessment Unit (AU)
North Fork Fish Creek	0841Q_01

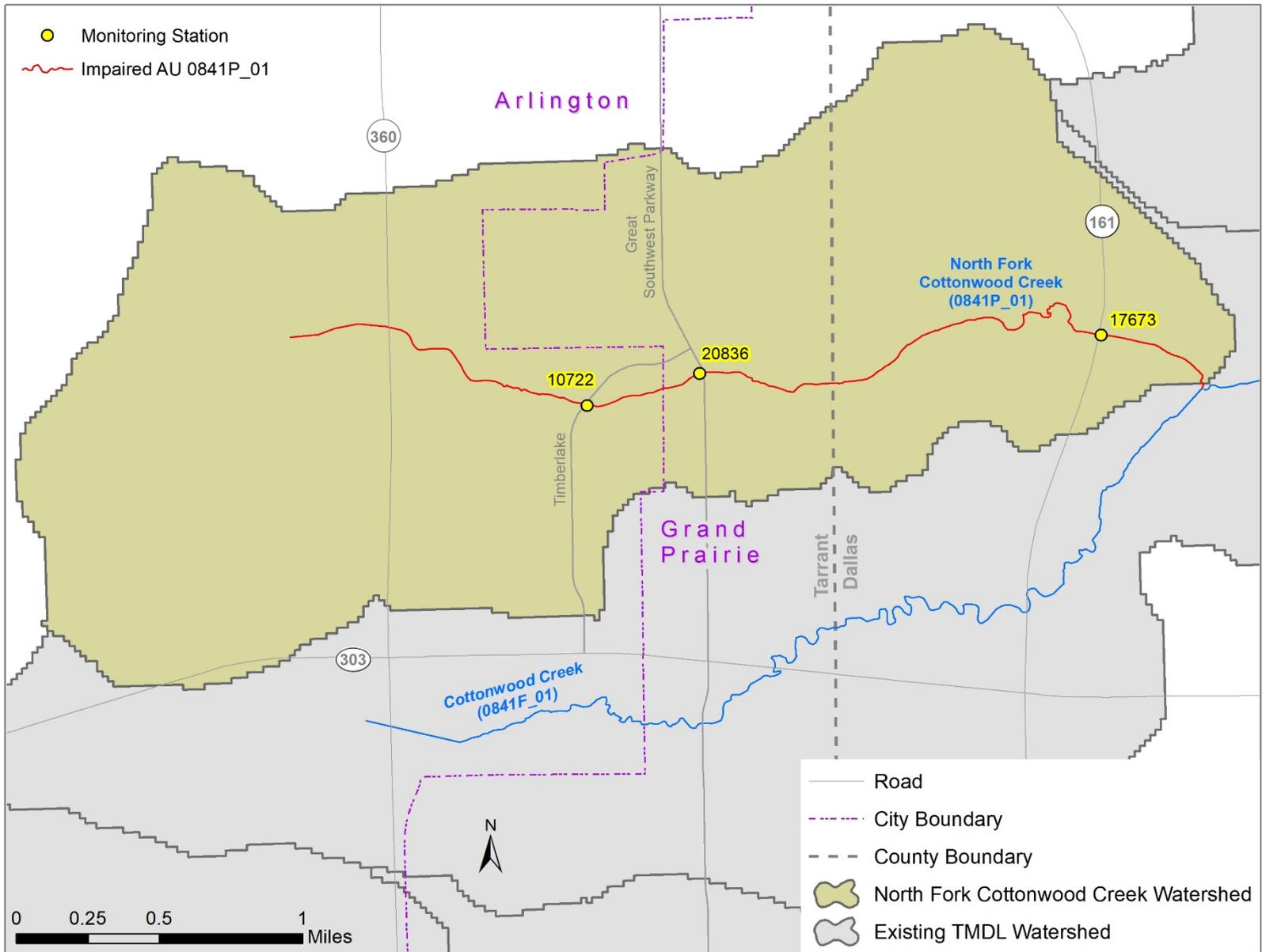
Previously Completed TMDLs: Watersheds Upstream of Mountain Creek Lake



Addendum to Four TMDLs for Indicator Bacteria in the Cottonwood Creek, Fish Creek, Kirby Creek, and Crockett Branch Watersheds Upstream of Mountain Creek Lake

- Project water body
 - North Fork Cottonwood Creek (0841P_01)
- Approach for TMDL – FDCs/LDCs

TMDL Project Area



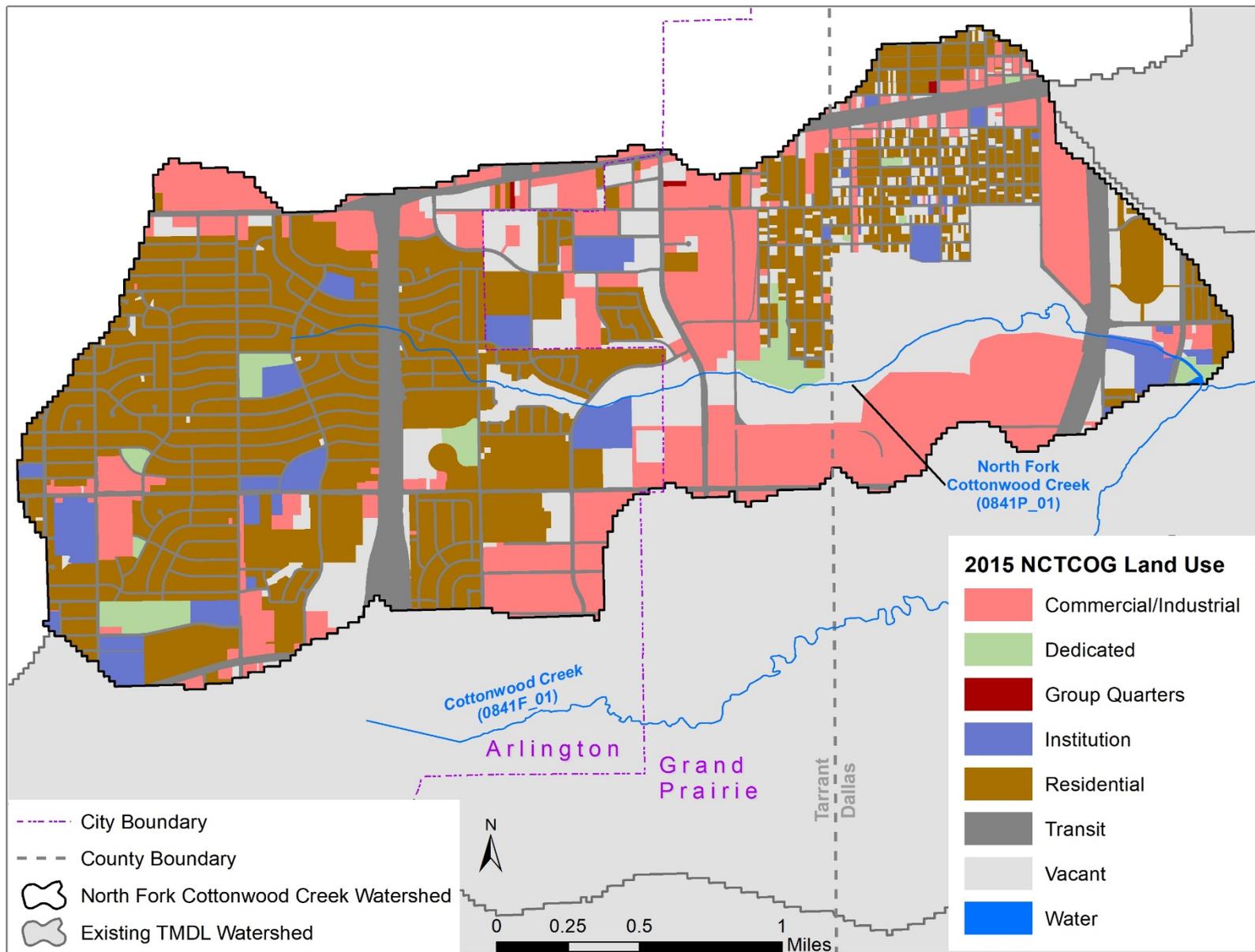
2020 Integrated Report

Findings for *E. coli* Assessment

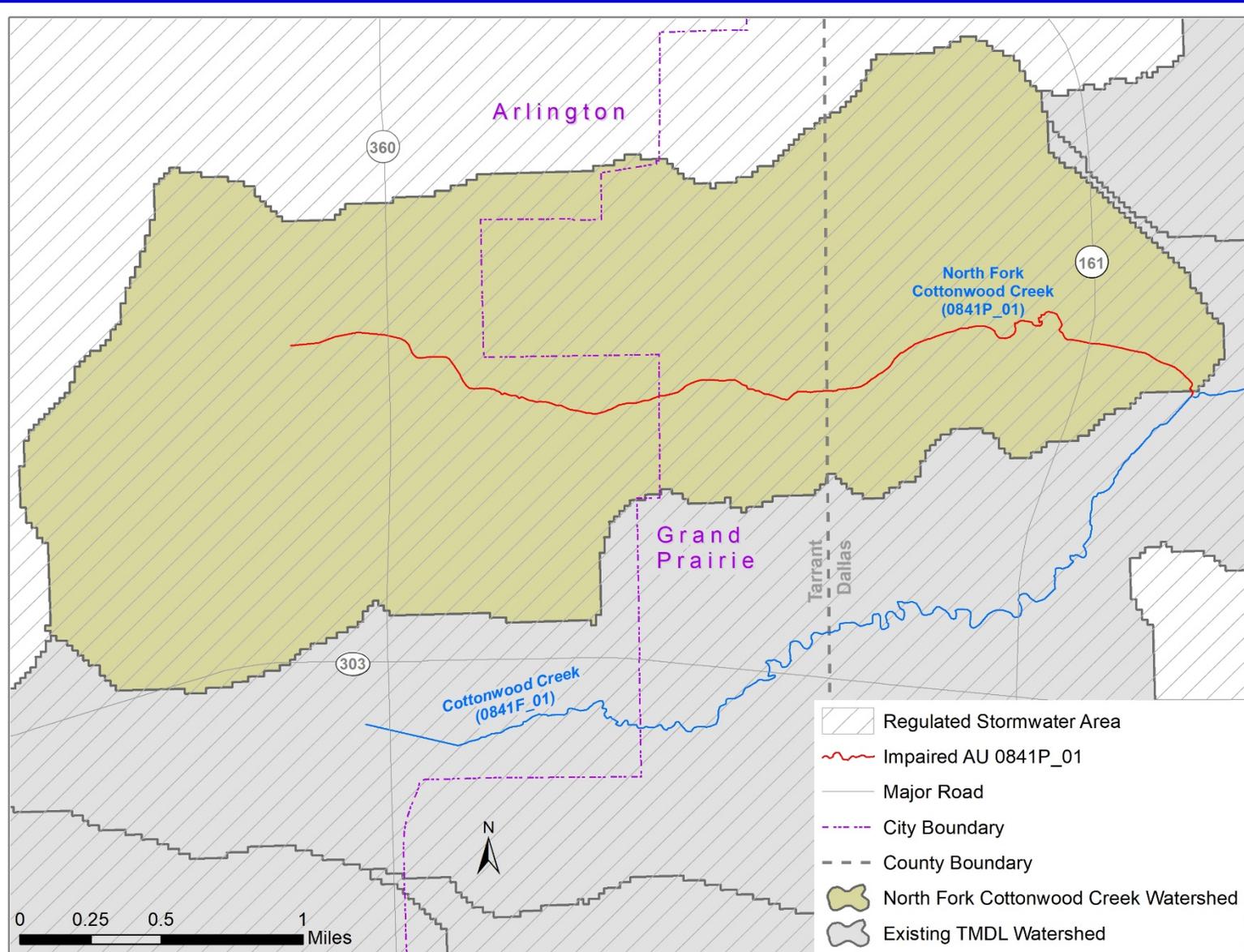
(criterion = 126 MPN/100 mL)

Water Body	Assessment Unit (AU)	Date Range	No. of Samples	Geometric Mean (MPN/100 mL)
North Fork Cottonwood Creek	0841P_01	2011-2018	49	258

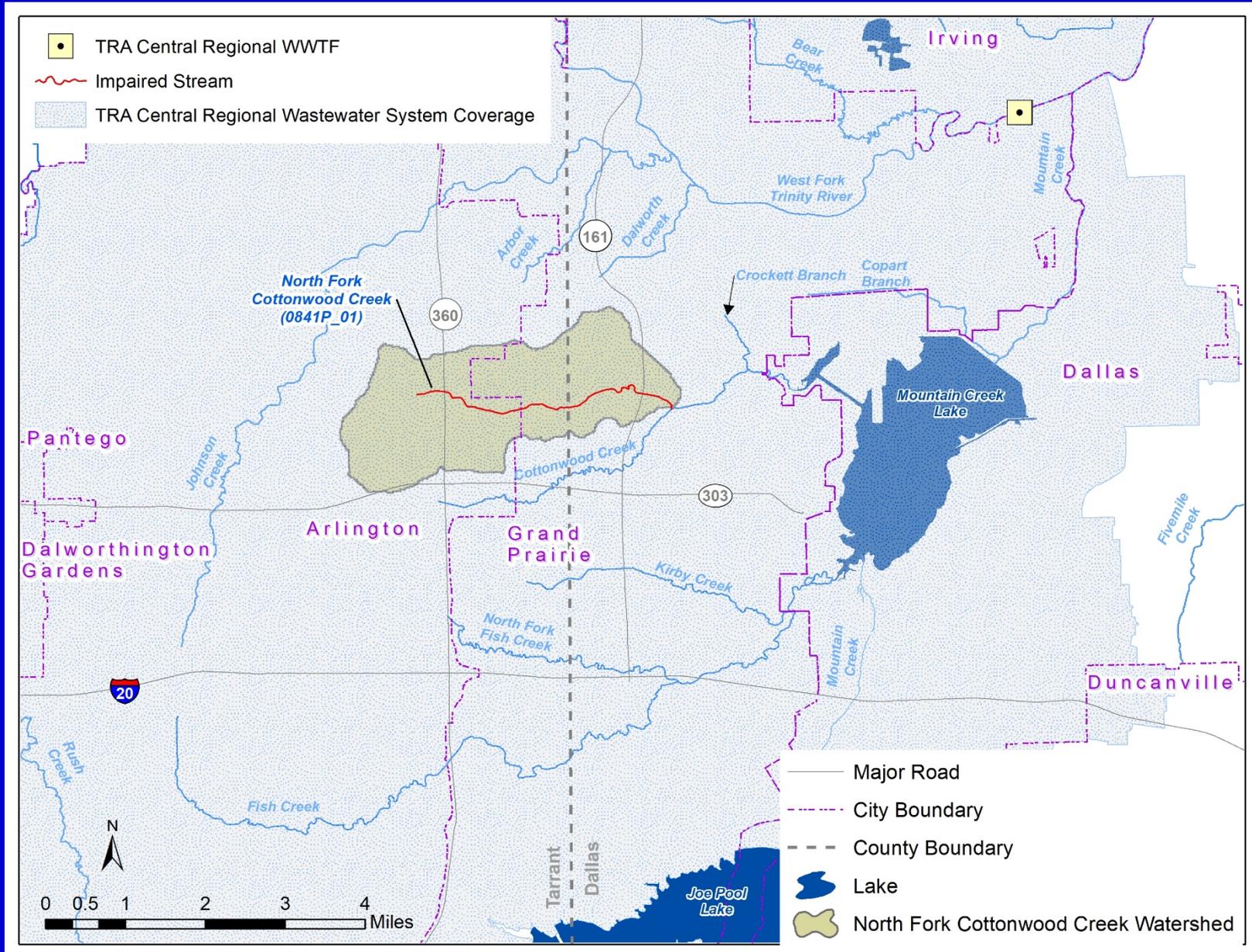
2015 Land Use/Land Cover (Source: NCTCOG)



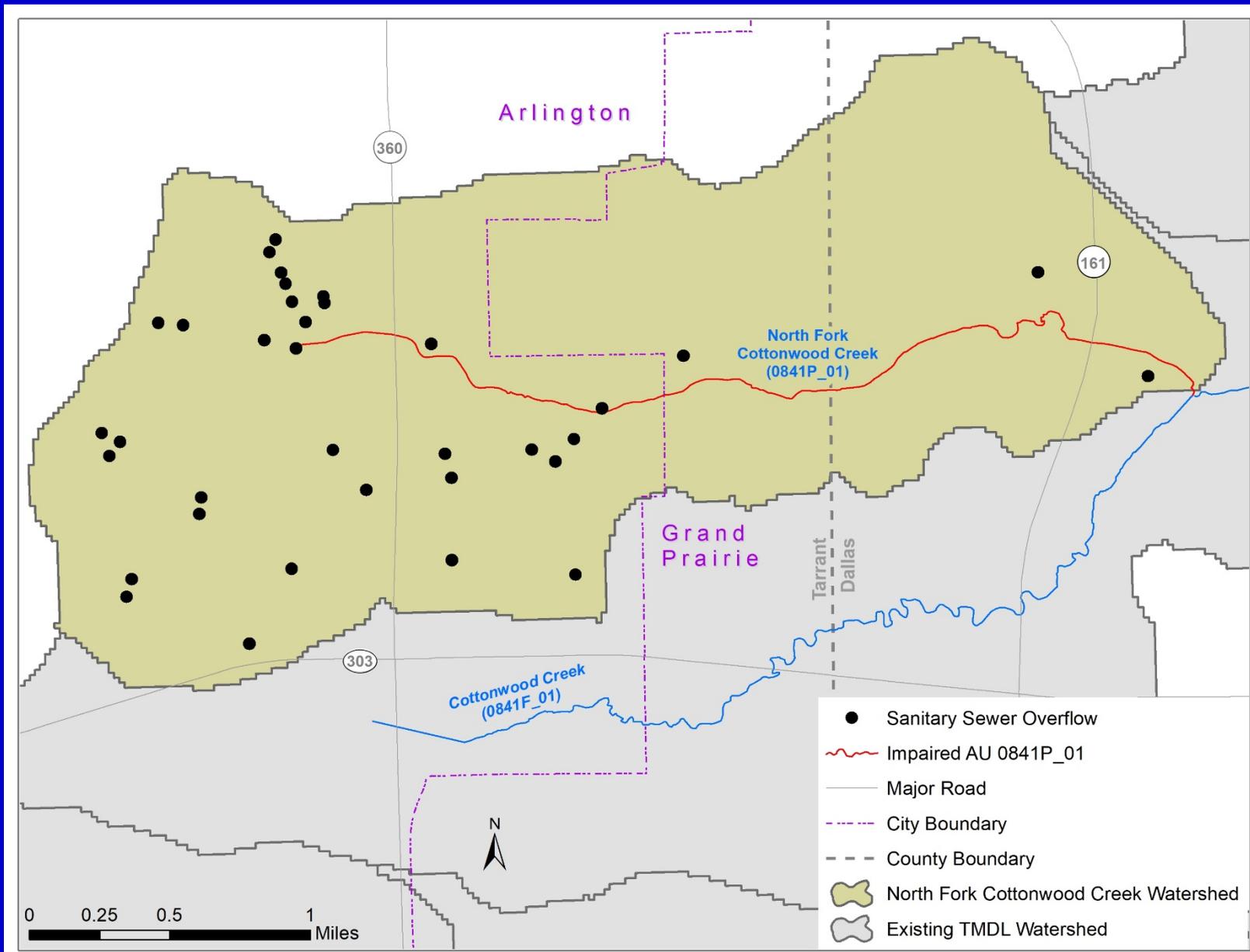
Municipal Separate Storm Sewer System Area (Source: US Census Bureau)



Wastewater Service Area – TRA Central Regional Facility



Reported Sanitary Sewer Overflows 2010 – 2019 (Source: NCTCOG)



Overview

Fundamentals of TMDL

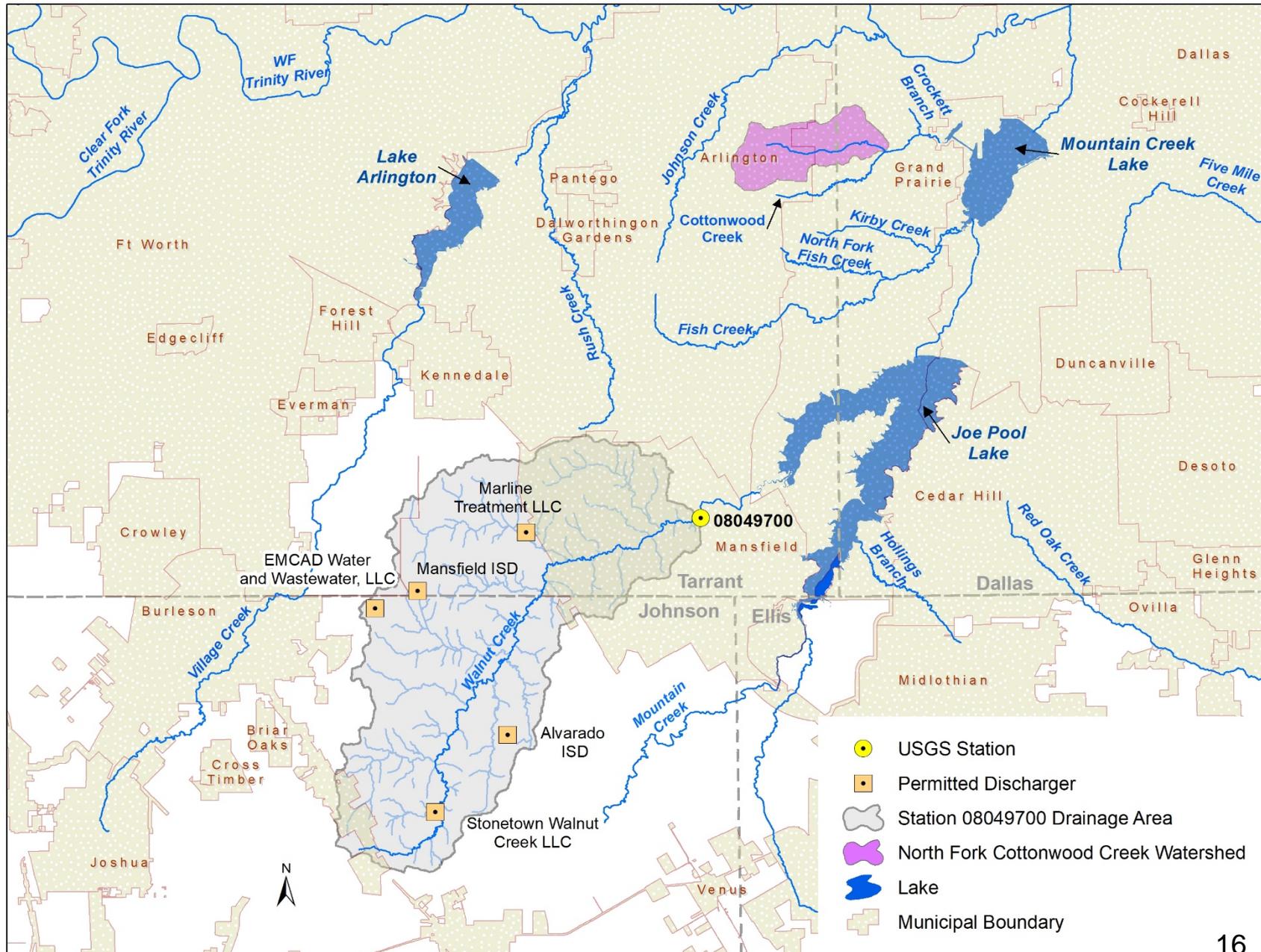
Pollutant Load Allocation

Equation

TMDL Allocation Equation

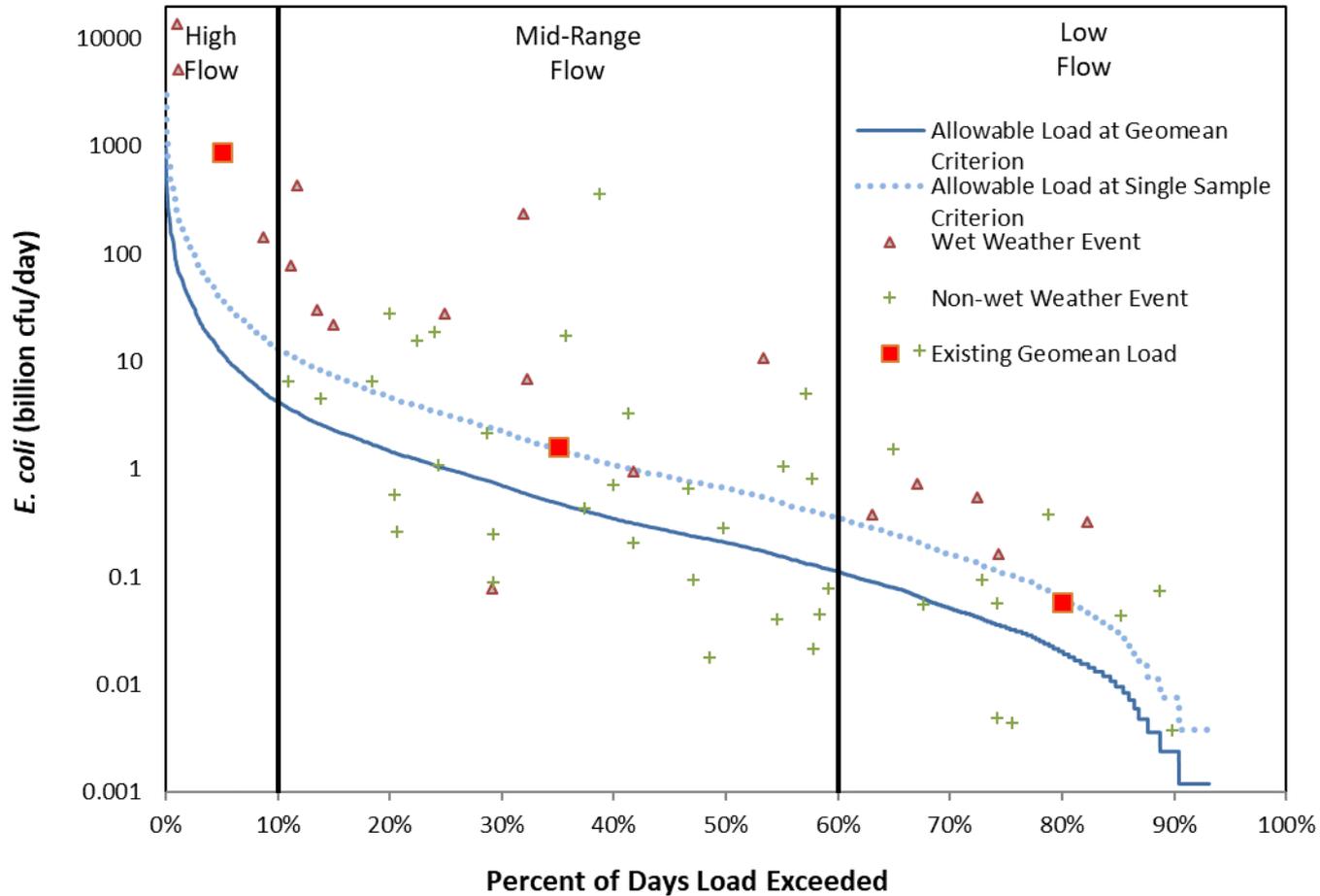
$$\text{TMDL} = \cancel{WLA_{\text{WWTF}}}^0 + WLA_{\text{SW}} + LA + \cancel{LA_{\text{TRIB}}}^0 + \cancel{FG}^0 + \text{MOS}$$

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

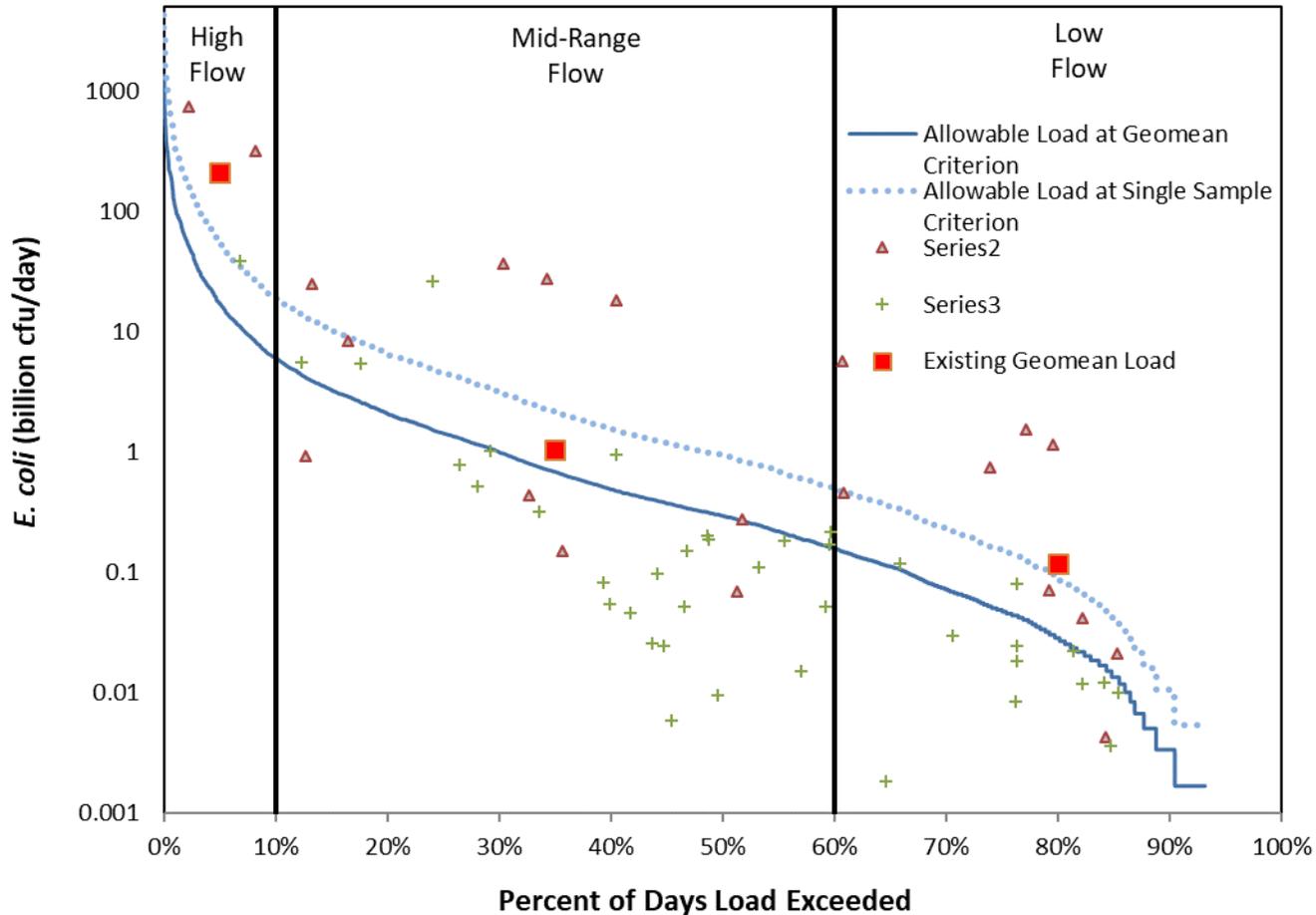


- USGS Station
- Permitted Discharger
- Station 08049700 Drainage Area
- North Fork Cottonwood Creek Watershed
- Lake
- Municipal Boundary

Load Duration Curve for station 10722, NFCC at Timberlake Drive, Arlington, TX



Load Duration Curve for station 20836, NFCC at Great Southwest Parkway, Grand Prairie, TX



Status of TMDL for Indicator Bacteria in North Fork Cottonwood Creek

- Technical Support Document (TSD) to be completed by the end of Aug. 2021; will be made available to 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?

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