



NORTH  
TEXAS  
MUNICIPAL  
WATER  
DISTRICT

Regional Service Through Unity... Meeting our Region's Needs Today and Tomorrow



## REGIONAL FERAL HOG CONFERENCE

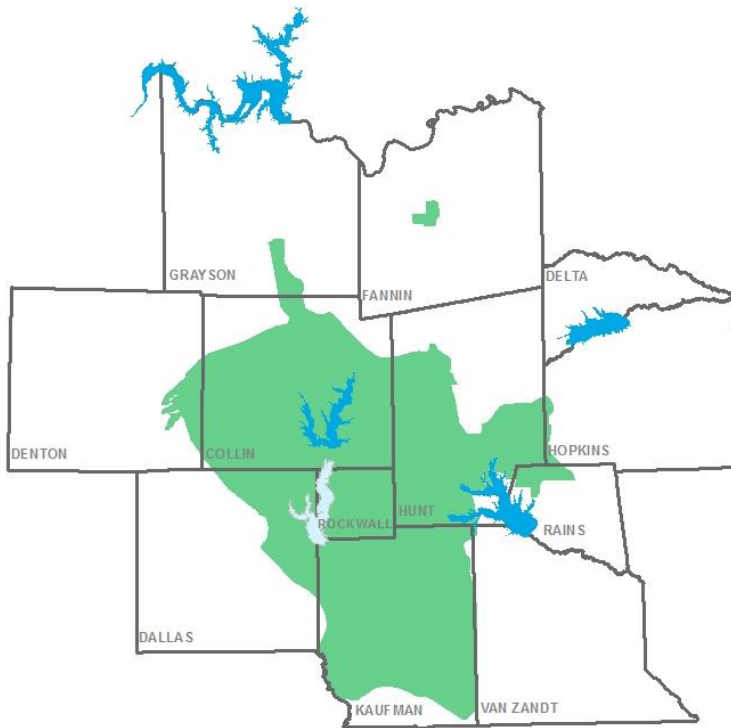
November 6, 2017

Galen Roberts  
North Texas Municipal Water District



## REGIONAL PROVIDER

### Water – Wastewater – Solid Waste



*Serve area nearly twice the size  
of Rhode Island*

## BY THE NUMBERS

SERVE  
**90**  
COMMUNITIES



Service area of 2,200 square miles in 10 counties

Serving 1.6 million people in one of the fastest-growing regions in the country

#### DID YOU KNOW?

**14**  
WATER PUMP STATIONS

WATER PUMP STATIONS

**6**  
WATER TREATMENT PLANTS

WATER TREATMENT PLANTS  
806+ MGD (million gallons/day) capacity

**573**  
MILES  
WATER TRANSMISSION PIPELINES

WATER TRANSMISSION PIPELINES



**250+**  
MILES  
LARGE-DIAMETER WASTEWATER PIPELINES

LARGE-DIAMETER WASTEWATER PIPELINES

**14**  
WASTEWATER TREATMENT PLANTS

WASTEWATER TREATMENT PLANTS

**151+**  
MGD  
WASTEWATER TREATMENT CAPACITY

WASTEWATER TREATMENT CAPACITY  
MGD (million gallons/day)



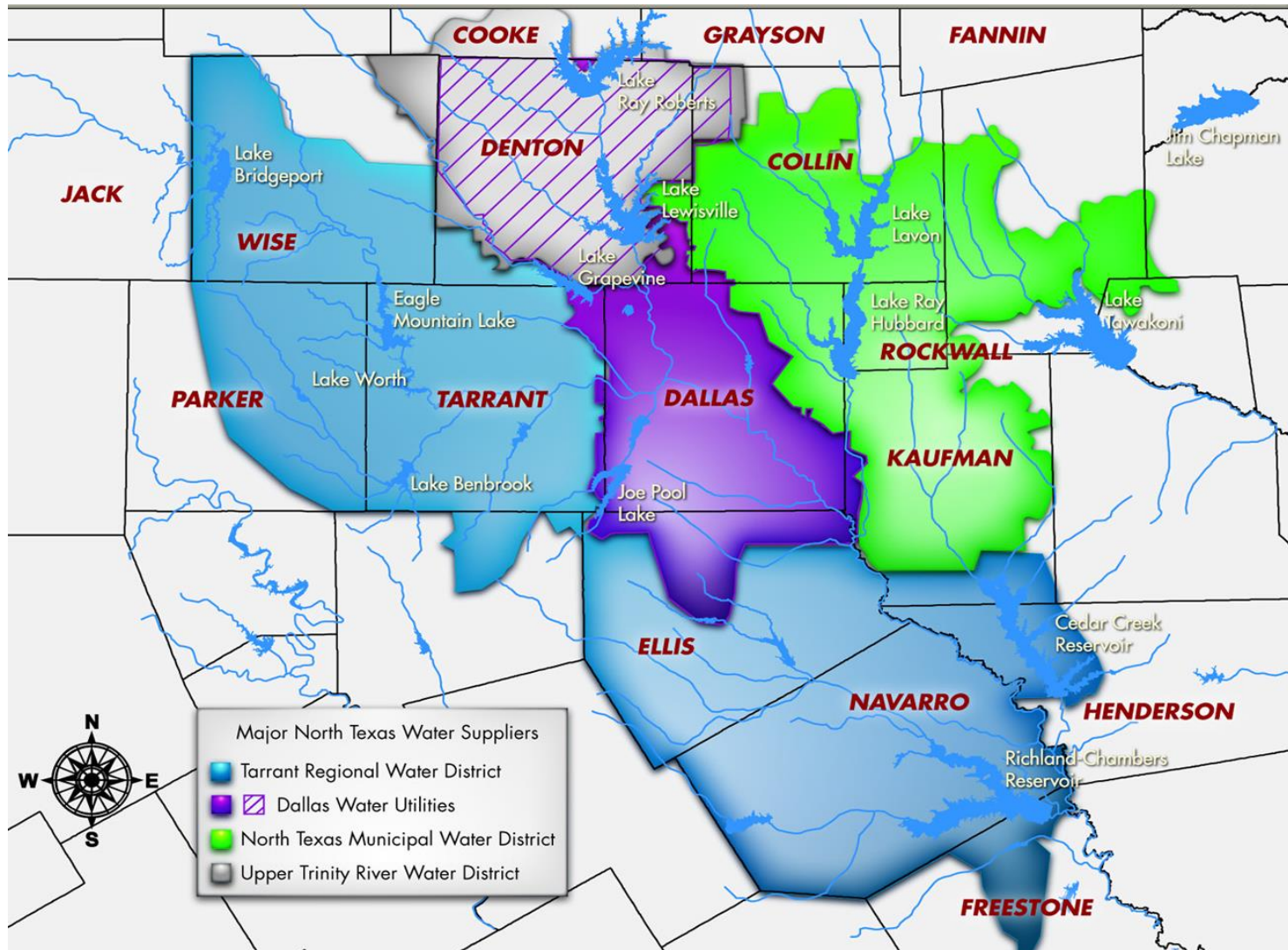
**3** TRANSFER STATIONS  
up to 3,295 tons of solid waste/day

**950,000+**  
tons/year accepted at landfill





# MAJOR NORTH TEXAS WATER PROVIDERS





## NTMWD REGIONAL WATER SYSTEM

**Entities Served Directly:** 61 cities, towns, municipal utility districts, special utility districts, and water supply corporations

- Total of 90 entities receive water directly or indirectly

### Supply Sources:

- Lavon Lake
- Jim Chapman Lake
- Lake Texoma
- Lake Tawakoni
- Lake Bonham
- East Fork Reuse Project

### Fully Ozonated Water Treatment Plant Capacity:

- Wylie: 770 MGD
- Tawakoni: 30 MGD
- Bonham: 6 MGD

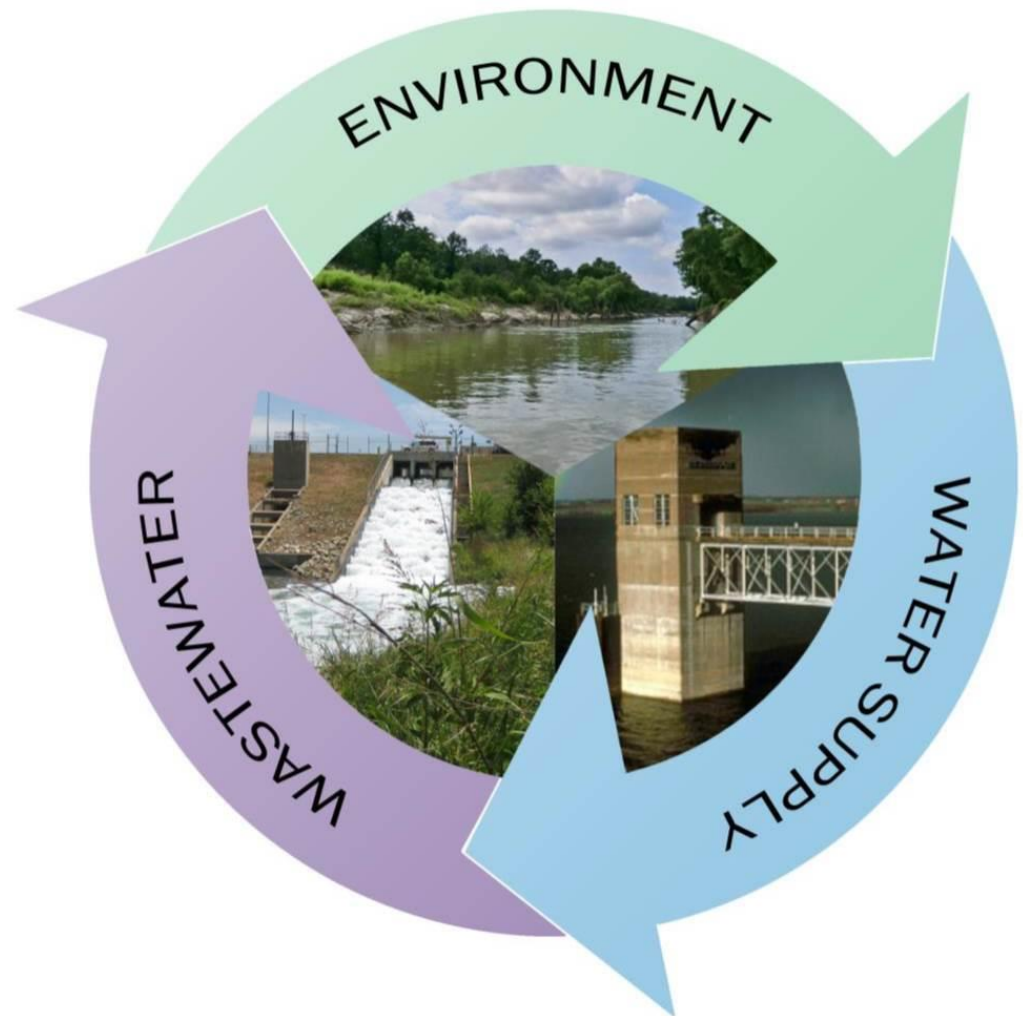


## THE NTMWD WATERSHED PROTECTION PROGRAM

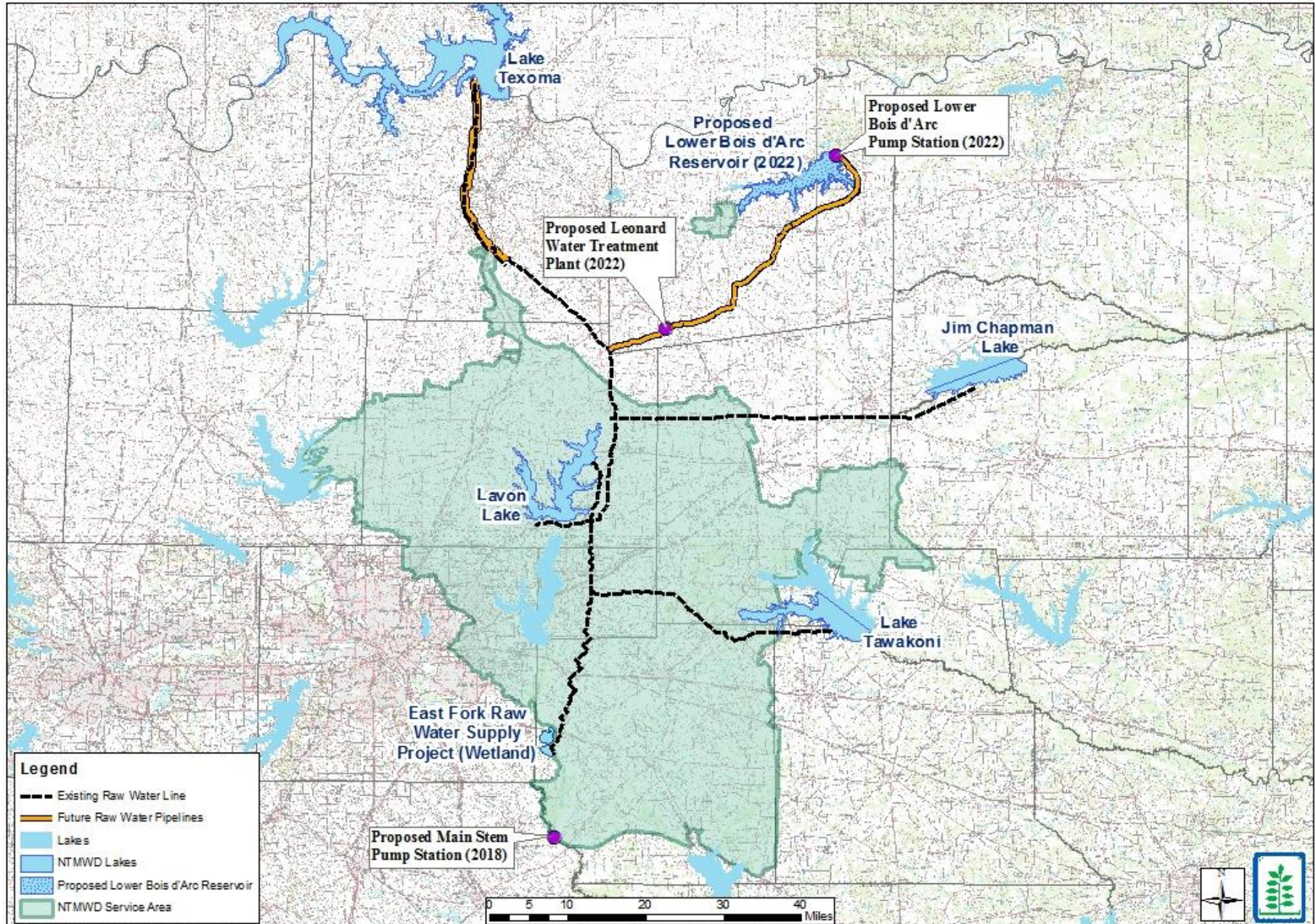
**Goal:** To protect and improve the quality of NTMWD source water supplies.

### Source water quality concerns:

- Nutrients
- Sediment
- Bacteria
- Toxic and Hazardous Materials



# NTMWD Existing and Planned Raw Water Supplies





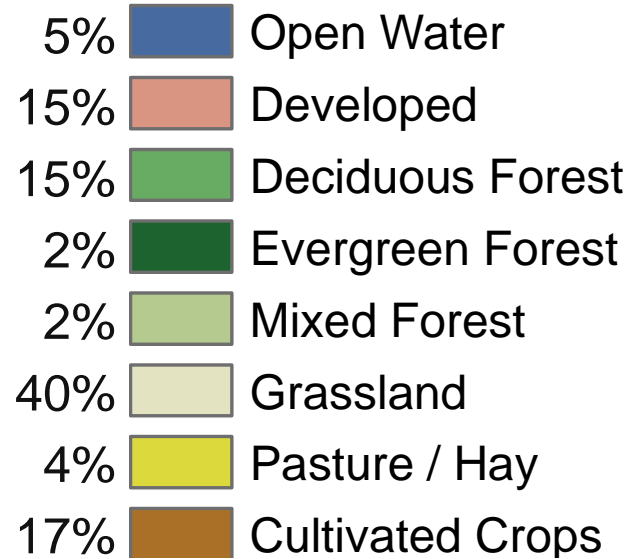
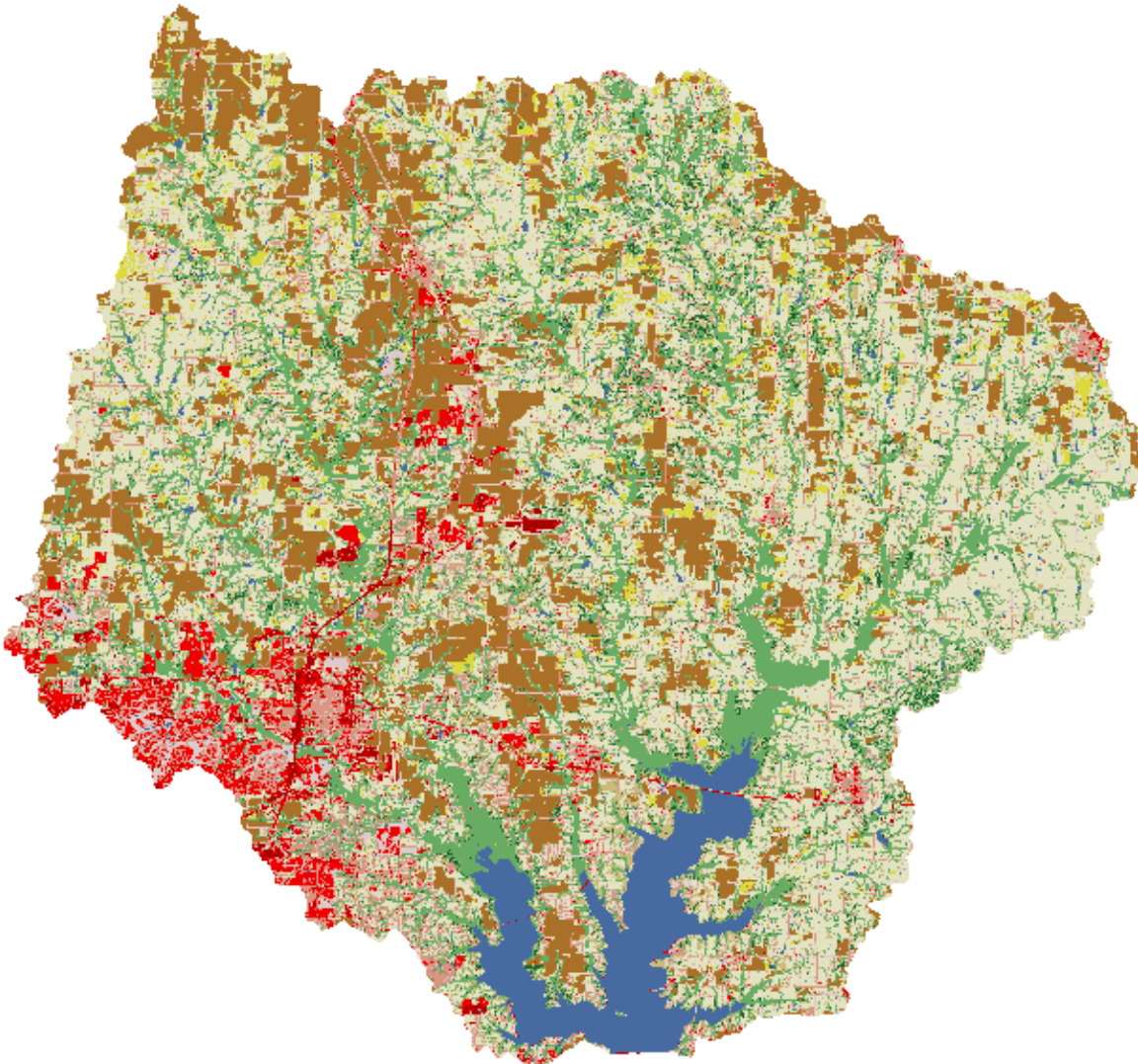
## THE LAVON LAKE WATERSHED



- **Lavon Lake comprises approximately 30% of NTMWD supply**
- **Watershed drains an area of about 769 mi<sup>2</sup>**
- **Largest population centers:**
  - McKinney: 131,117
  - Frisco: 116,989
  - Allen: 84,246
  - Prosper: 9,423
  - Anna: 8,249

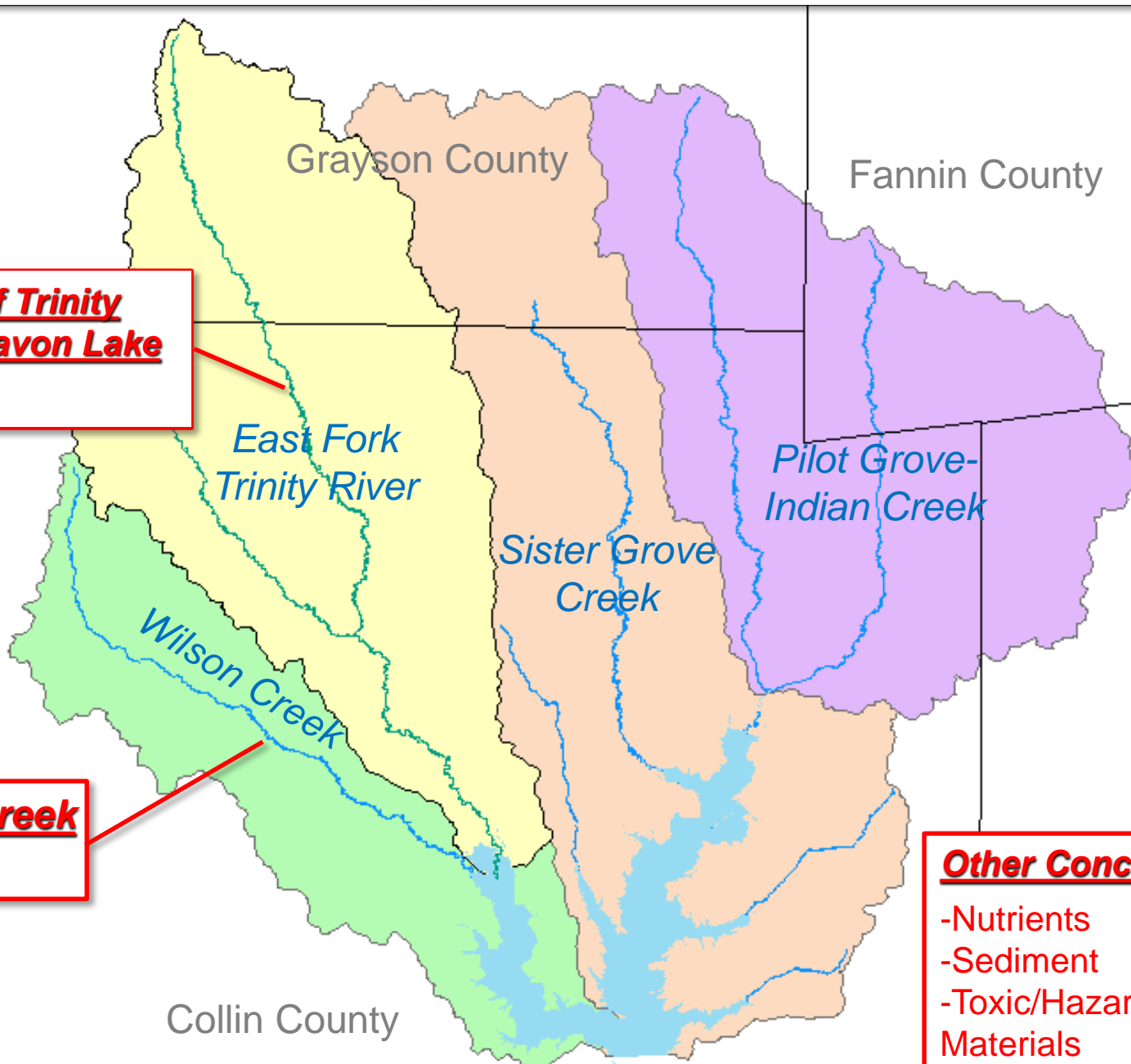


## THE LAVON LAKE WATERSHED





# Watershed Impairments & Concerns



**East Fork of Trinity River abv Lavon Lake**

-Bacteria

*East Fork Trinity River*

*Wilson Creek*

Grayson County

Fannin County

*Sister Grove Creek*

*Pilot Grove-Indian Creek*

Collin County

**Wilson Creek**

-Bacteria

**Other Concerns**

- Nutrients
- Sediment
- Toxic/Hazardous Materials

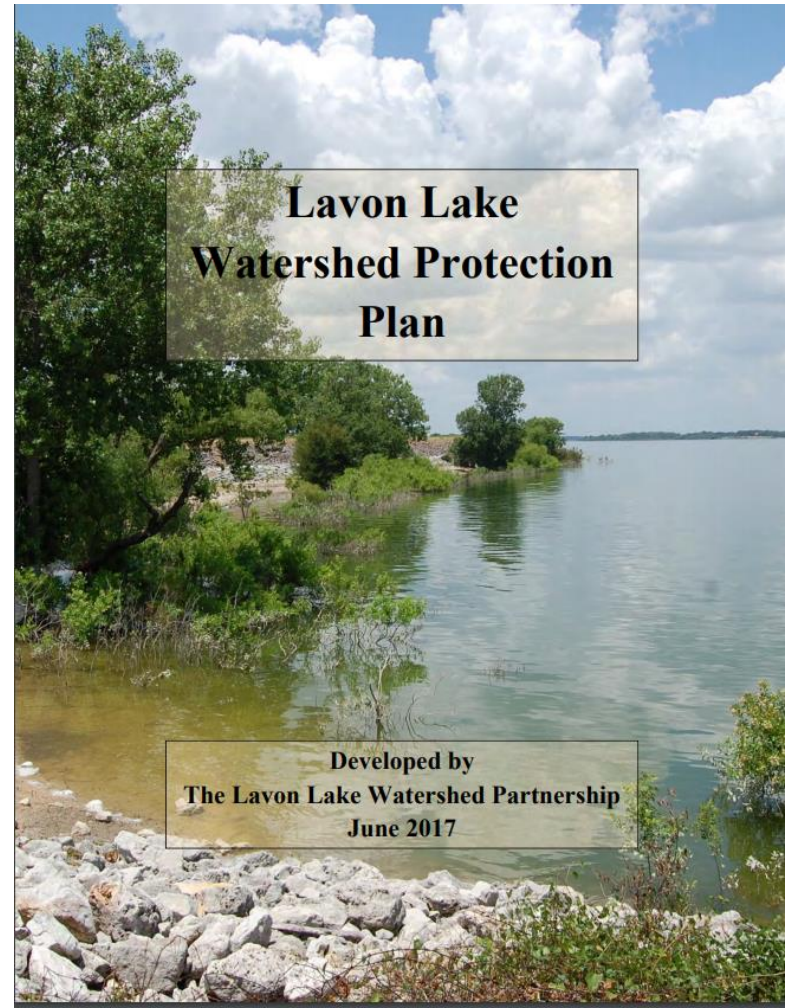


## THE LAVON LAKE WATERSHED PROTECTION PLAN

A **voluntary, non-regulatory** strategy to address existing impairments and protect against future impairments

Primary focus on bacteria, nutrient, sediment, and hazardous/toxic materials

Developed in **Partnership** with the community





## THE LAVON LAKE WATERSHED PROTECTION PLAN

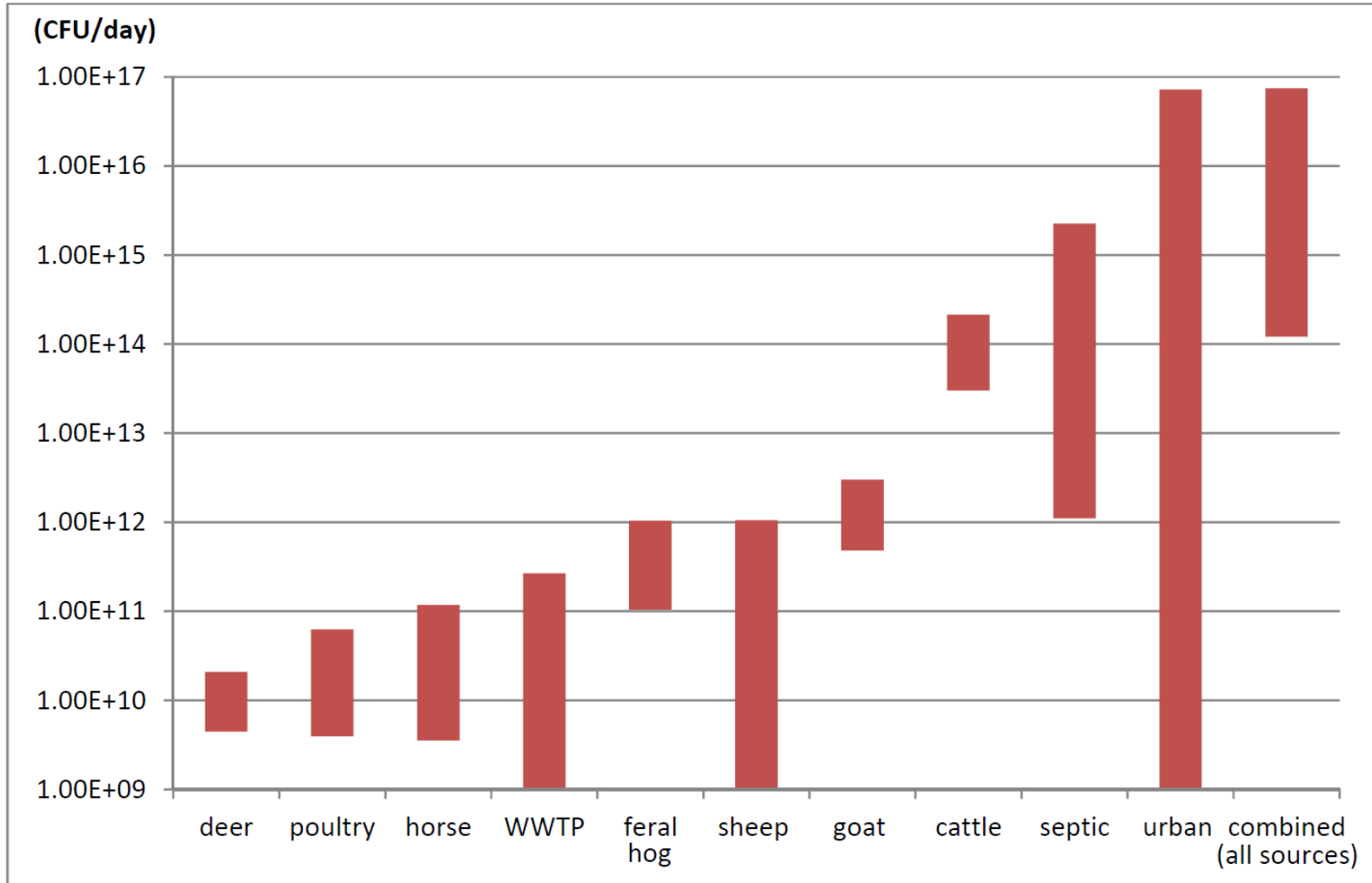
**Worked with researchers at Texas A&M to assess sources of pollution in the watershed and found:**

- **Most nutrient loading in the watershed came from nonpoint sources**
- **Vast majority (>90%) of bacteria load came from nonpoint sources**

**Used the Spatially Explicit Load Enrichment Calculation Tool (SELECT) to assess bacteria sources.**



## SOURCES OF BACTERIA

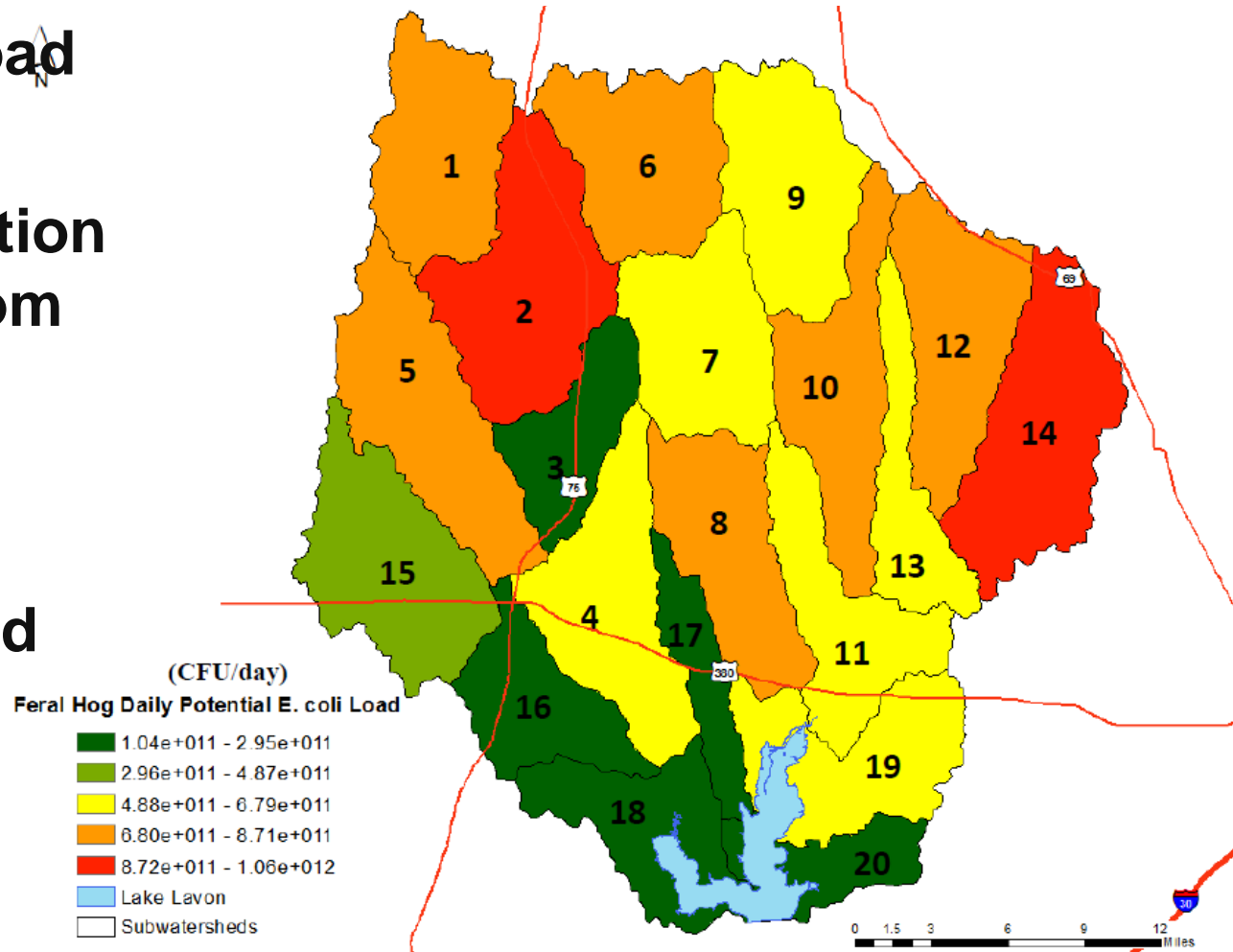




## FERAL HOGS DISTRIBUTION IN WATERSHED

### Potential *E. coli* load from feral hogs:

- Used population estimates from local TPWD biologists
- Distribution based on land use/cover





## REGIONAL FERAL HOG CONFERENCE

### Feral Hog Impacts on Water Quality

- Spend a lot of time in and near riparian areas
- Damage riparian areas and floodplains which increases erosion
- Deposit waste which contains high levels of bacteria and nutrients





## THE LAVON LAKE WATERSHED PROTECTION PLAN

**Plan identified the need for to address feral hogs by reducing populations and limiting their movement to new areas.**

- **Feral hog management activities (e.g. trapping, exclusion, etc.)**
- **Coordinating efforts across jurisdictions**
- **Outreach and Education**









## CONTACT INFO

**Galen Roberts**  
**Watershed Manager**  
**groberts@ntmwd.com**  
**469-626-4637**



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**Project Website – [www.ntmwd.com/watershed](http://www.ntmwd.com/watershed)**