Brazos River Basin Highlights Report

2026

Brazos River Authority

Brazos River Basin Highlights Report 2026

Introduction

For the 2026 Brazos River Basin Highlights Report, a watershed characterization type report was created. The 14 major subwatersheds of the Brazos River Basin are subdivided into a total of 134 smaller subwatersheds based on the United States Geological Survey (USGS) generated 10-digit Hydrologic Unit Codes (HUC10). This Basin Highlights Report focuses on 7 major subwatersheds: the Leon River Watershed, the Lampasas River Watershed, the Little River Watershed, the Central Watershed of the Brazos River, the Yegua Creek Watershed, the combined Lower Watershed of the Brazos River and the Middle and Upper Oyster Creek Watershed. This report characterizes 30 HUC10-delineated subwatersheds (referred to as watersheds for the remainder of the report). These watersheds all contain waterbody segments included on the 303(d) List as impaired in the draft 2026 Integrated Report (IR). The following headings and figures are included in each watershed characterization:

Watershed Description:
The full name of the watershed is given and area of watershed in square miles.

Land Use Land Cover in Watershed:
A figure is presented showing land use and land cover in the watershed. Land use land cover (LULC) was acquired for the Unites States Geological Survey (USGS) using the most recent, 2024 edition of National Land Cover Data (NLCD) land cover layer for the contiguous United States. Percentage surface areas of each LULC class are calculated for each watershed. For purposes of this report, LULC classes used are:

- **Developed** - Includes areas with a mixture of constructed materials, and vegetation in the form of lawn grasses and impervious surfaces. These areas include single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes, also, apartment complexes, row houses and commercial/industrial areas.
- **Planted/Cultivated -** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation. This class also includes areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total vegetation. All land being actively tilled is also included in this class.
- **Herbaceous/Shrub -** Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions. This class also includes areas dominated by graminoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.
- **Forest** - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover.
- **Wetland -** Areas where forest or shrub land vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water and areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.
- **Water** - All areas of open water, generally with less than 25% cover of vegetation or soil.
- **Barren** - Barren areas of bedrock, scarps, talus, slides, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.

Segments in Watershed:

Each assessment unit (AU) in the watershed is listed with a full name description. If there are stations in the watershed monitored in fiscal year (FY) 2026, the station is listed with a full name description. Where available, pictures accompany stations monitored as well as selected segments with no FY 2026 monitoring stations. Pictures generally represent the downstream perspective.

Impairments in Watershed Description:

If an AU in the watershed is impaired in the draft 2026 Integrated Report (IR), the type of impairment and/or the parameter of concern is listed.

Possible Contributions if Impaired:

Point Sources: Identifies possible point source contributions to the impairment.
Non-point sources: Identifies possible non-point source contributions to the impairment.

Potential non-State Agency Stakeholders:

Listed are entities that operate within the watershed that would potentially have a vested interest in water quality issues.

Actions taken if Impaired:

If actions are being taken to address the impairment in the watershed, they are listed here.

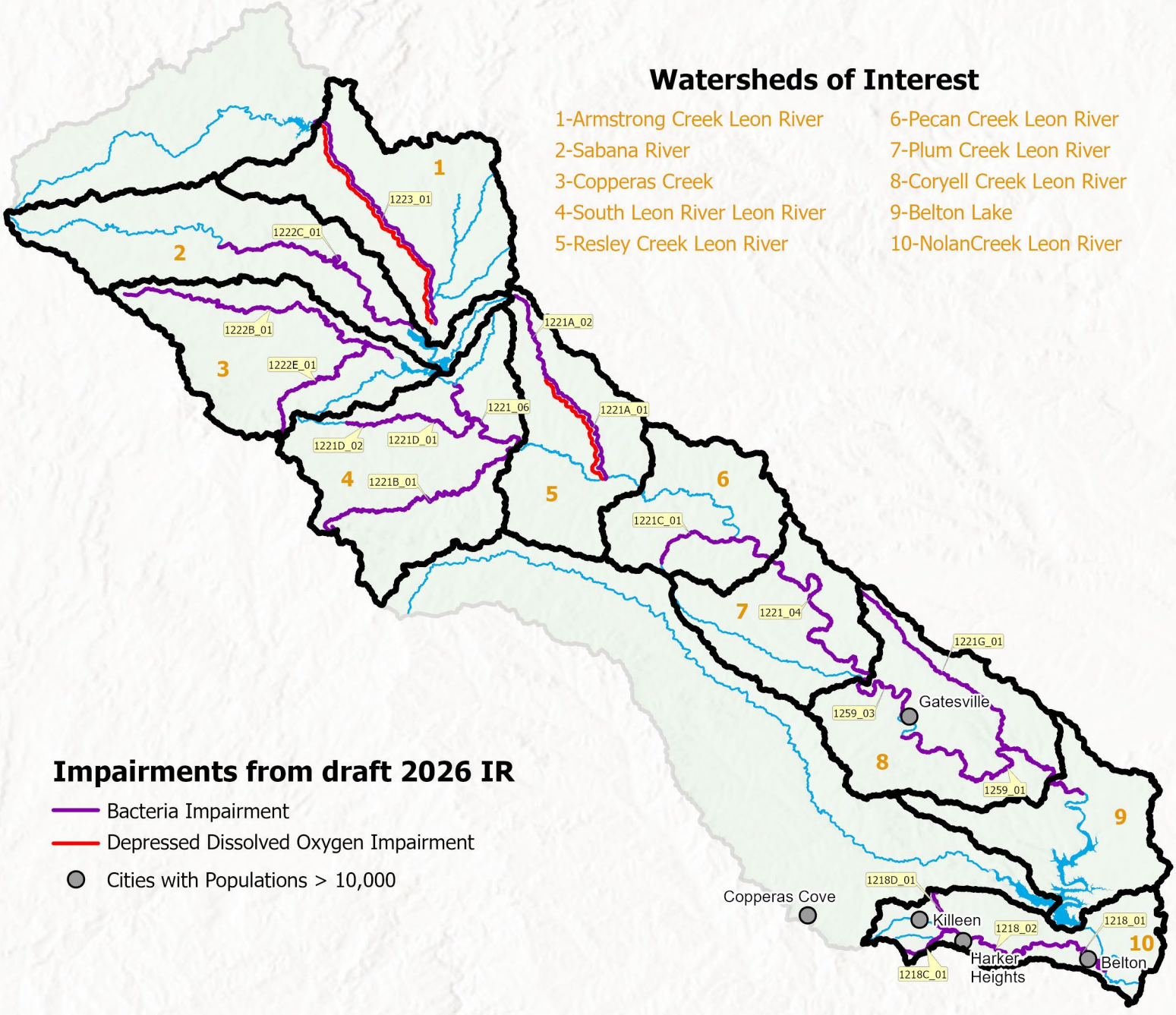
Recommendations if Impaired:

Possible next steps to address any water quality impairment in the watershed are listed here.

At the start of each section is a figure depicting the watershed. There is a map of each of the seven major watersheds depicting a generalized view highlighting the smaller HUC10 subwatersheds of interest in the section and each impairment. Then there are more detailed maps of each HUC10 subwatershed showing land use landcover data, base satellite imagery with counties, cities, roads, AUs, monitoring stations, wastewater outfalls, and any impairment or select concern in the watershed based on the draft 2026 IR. Only concerns based on a parameter that is only assessed on screening levels are illustrated in these maps. For instance, Bacteria, Depressed Dissolved Oxygen concerns are not illustrated in the maps as there is a State Standard that these parameters can be assessed against and potentially result in impairment. Concerns illustrated include only nutrient and/or chlorophyll *a* concerns. These type of concerns are based on parameter screening levels and have no State Standard which could render the segment impaired if violated.

Leon River Watershed

The northernmost tributaries of the Leon River watershed originate in the eastern portion of Callahan County and flows into the mainstem Leon River in Eastland County. From this confluence, the river courses through Comanche, Coryell, Hamilton, and finally reaches Bell, encompassing a total area of 3,748 square miles. There are three impoundments on the mainstem, Leon Reservoir, Proctor Lake, and Lake Belton. These waterbodies are used primarily for recreation, flood control and municipal water supply. Land use in the watershed is primarily rangeland and improved pastureland with areas of mixed forestland. The watershed also hosts a number of municipalities, approximately 50 confined animal feeding operations and row crop agriculture, along with being home to Fort Hood military base. Fort Hood is approximately 214,000 acres and is situated in the Southeast corner of the Leon River watershed. Primary impairments in this watershed include bacterial and depressed dissolved oxygen impairments with concerns for nutrient enrichment and increased chlorophyll a.



Armstrong Creek-Leon River Watershed

Watershed Description:
The Armstrong Creek-Leon River Watershed is 331 square miles in area.

Land Use Land Cover in Watershed (Figure 1):
There are two cities and one wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in this watershed. The dominant land cover in the watershed is herbaceous/shrub land (≈62%) with a moderate amount of the planted/cultivated category (≈18%) and forested area (≈15%). A portion of Lake Proctor lies within this watershed.

Segments in Watershed (Figure 1)**:**

- 1222_01: Lake Proctor, Sabana River arm, the portion where the Leon River Below Leon River Reservoir enters the reservoir
- 1222F_01: Hackberry Creek
- 1223_01: Leon River Below Leon Reservoir
  Monitoring Station: 11938 – LEON RIVER IMMEDIATELY UPSTREAM OF SH 16 NORTH OF DE LEON (Figure 1.1)

- 1223A_01: Armstrong Creek
  Monitoring Stations:
  15065 - ARMSTRONG CREEK IMMEDIATELY UPSTREAM OF FM 2156 10 MILES NORTHWEST OF DUBLIN
  15765 - ARMSTRONG CREEK AT SH 6 3 MILES EAST OF DE LEON
- 1223B_01: Cow Creek

Impairments in Watershed Description (Figure 1):

- 1223_01: Recreational Use – Bacteria impairment and Aquatic Life Use – Depressed Dissolved Oxygen impairment.
    - There is also a concern for chlorophyll-*a* in 1223_01. There are concerns for chlorophyll-*a* and nitrate in 1223A_01, Bacteria in 1223B_01, and Bacteria and Depressed Dissolved Oxygen in 1222F_01.

Possible Contributions if Impaired:

Point Sources:

- Two cities and one municipal wastewater outfall are within the Armstrong Creek-Leon River Watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈74%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈18%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Desdamona
- City of DeLeon
- Eastland County
- Comanche County
- Erath County

Actions taken if impaired:

- Segment 1223 was first listed as impaired for Bacteria in 2006 and impaired for Depressed Dissolved Oxygen in 2008. A Recreational Use Attainability Analysis (RUAA) was conducted in segment 1223. Upon TCEQ's recommendation, the segment remains classified as a primary contact recreation (PCR) segment.
- A watershed characterization, the Proctor Lake Watershed Characterization was conducted that included segments 1223_01 and 1223A_01. The report was published in February 2025.

Recommendations if Impaired:

- Utilizing data acquired in the watershed characterization study, development of a Watershed Protection Plan (WPP) may be appropriate.
- To address the depressed dissolved oxygen impairment, performing a Use Attainability Analysis (UAA) may be appropriate to determine if the existing aquatic life use (ALU) and dissolved oxygen criteria are appropriate, and if not, provide data for establishing new standards.

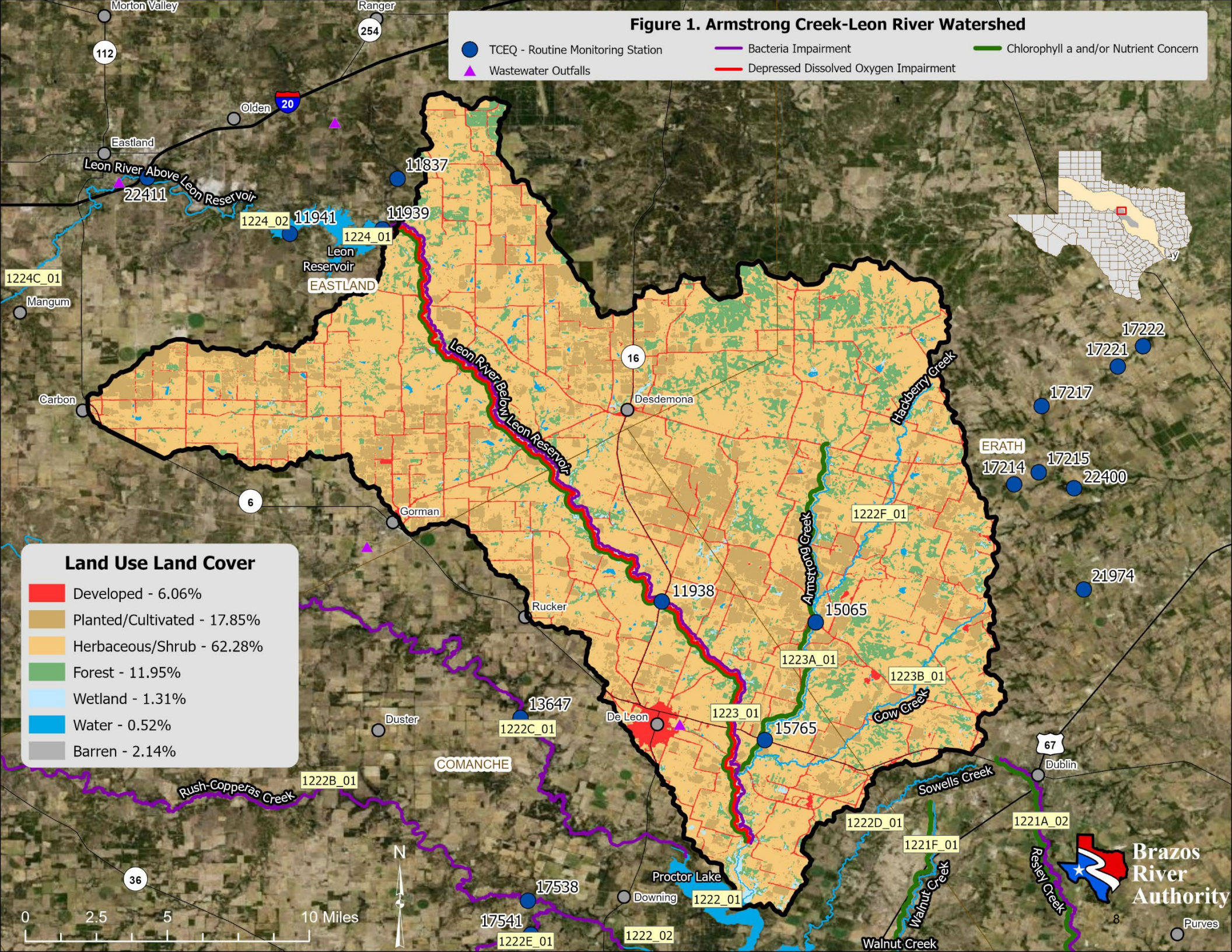


Figure 1. Armstrong Creek-Leon River Watershed
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Depressed Dissolved Oxygen Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 6.06%
Planted/Cultivated - 17.85%
Herbaceous/Shrub - 62.28%
Forest - 11.95%
Wetland - 1.31%
Water - 0.52%
Barren - 2.14%
Morton Valley
Ranger
Olden
Eastland
Leon River Above Leon Reservoir
22411
11837
11939
11941
1224_02
1224_01
Leon Reservoir
EASTLAND
1224C_01
Mangum
Carbon
Leon River Below Leon Reservoir
Desdemona
Hackberry Creek
17222
17221
17217
ERATH
17214
17215
22400
Gorman
1222F_01
Armstrong Creek
21974
11938
Rucker
15065
1223A_01
1223B_01
Cow Creek
13647
1222C_01
Duster
De Leon
1223_01
15765
COMANCHE
Rush-Copperas Creek
1222B_01
Dublin
Sowells Creek
1222D_01
1221A_02
1221F_01
Proctor Lake
Downing
1222_01
17538
17541
1222E_01
1222_02
Walnut Creek
Restey Creek
Purves
Brazos River Authority
N
0 2.5 5 10 Miles

Sabana River Watershed

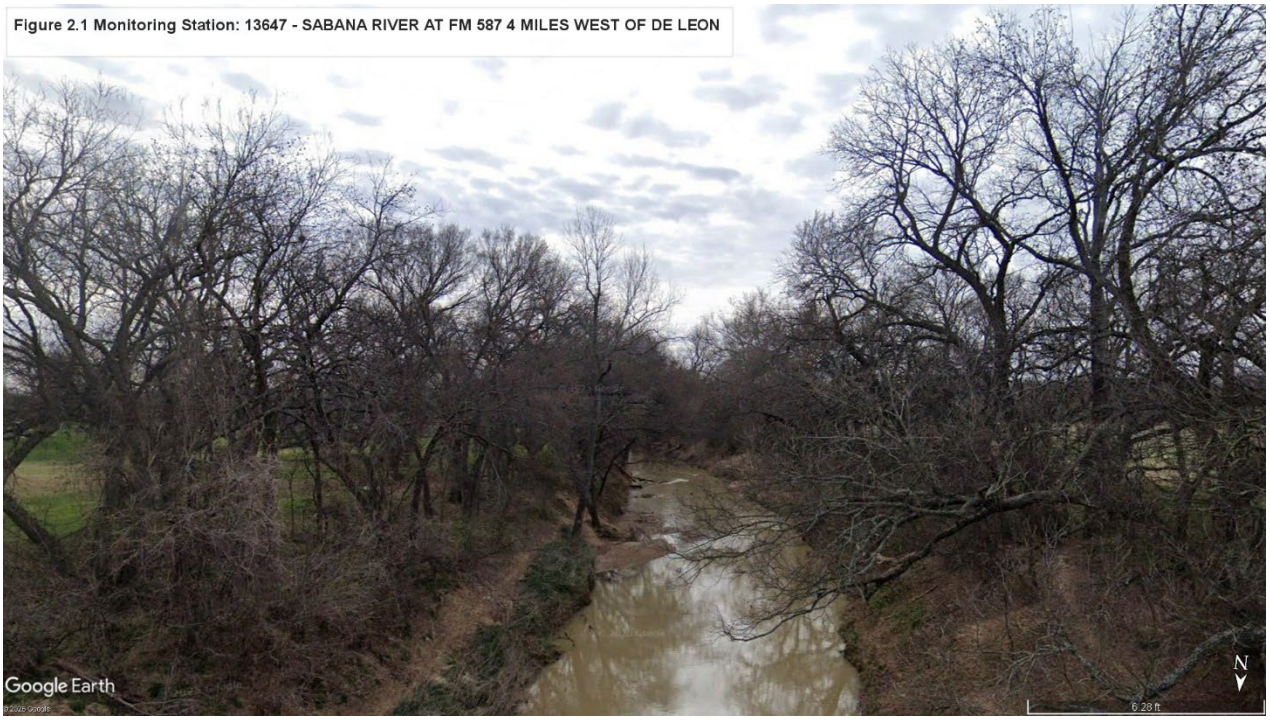
Watershed Description:
The Sabana River Watershed is 338 square miles in area.

Land Use Land Cover in Watershed (Figure 2)**:**
There are six cities and one wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The upstream portion of Lake Proctor lies within the watershed. The dominant land cover is herbaceous/shrub land (≈62%), with a moderate amount of the planted/cultivated category as well as developed land.

Segments in Watershed (Figure 2)**:**

- 1222_01: Lake Proctor, Sabana River arm, the portion where the Sabana River enters the reservoir
  - Monitoring Station: 11936 - LAKE PROCTOR IN LEON AND SABANA RIVER ARM 2.43 KM NORTH AND 1.23 KM EAST OF INTERSECTION OF COMANCHE CR 424 AND FM 2318
- 1222C_01: Sabana River from confluence with Lake Belton in Comanche County upstream to confluence with Elm Creek in Eastland County
  - Monitoring Station: 13647 - SABANA RIVER AT FM 587 4 MILES WEST OF DE LEON (Figure 2.1)

Figure 2.1 Monitoring Station: 13647 - SABANA RIVER AT FM 587 4 MILES WEST OF DE LEON



- 1222C_02: Sabana River from confluence with Elm Creek in Eastland upstream to headwaters in Callahan County
- 1222D_01: Sowells Creek

Impairments in Watershed Description (Figure 2)**:**

- 1222C_01: Recreational Use – Bacteria Impairment
    - There is a bacteria concern in 1222D_01.

Possible Contributions if Impaired:

Point Sources:

- There are six cities and one municipal wastewater outfall in this watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈73%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈19%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Romney
- City of Branton
- City of Carbon
- City of Gorman
- City of Rucker
- City of Duster
- Callahan County
- Eastland County
- Comanche County
- Erath County
- Any marinas or other businesses on or that serve Lake Proctor

Actions taken if impaired:

- Segment 1222C was first listed as impaired for Bacteria in 2006. An RUAA has been completed. Upon TCEQ's recommendation, the segment remains classified as PCR segment.
- A watershed characterization, the Proctor Lake Watershed Characterization, was conducted that included segment 1222C_01. The report was published in February 2025.

Recommendations if Impaired:

- Utilizing data acquired in the watershed characterization study, development of a Watershed Protection Plan (WPP) may be appropriate.

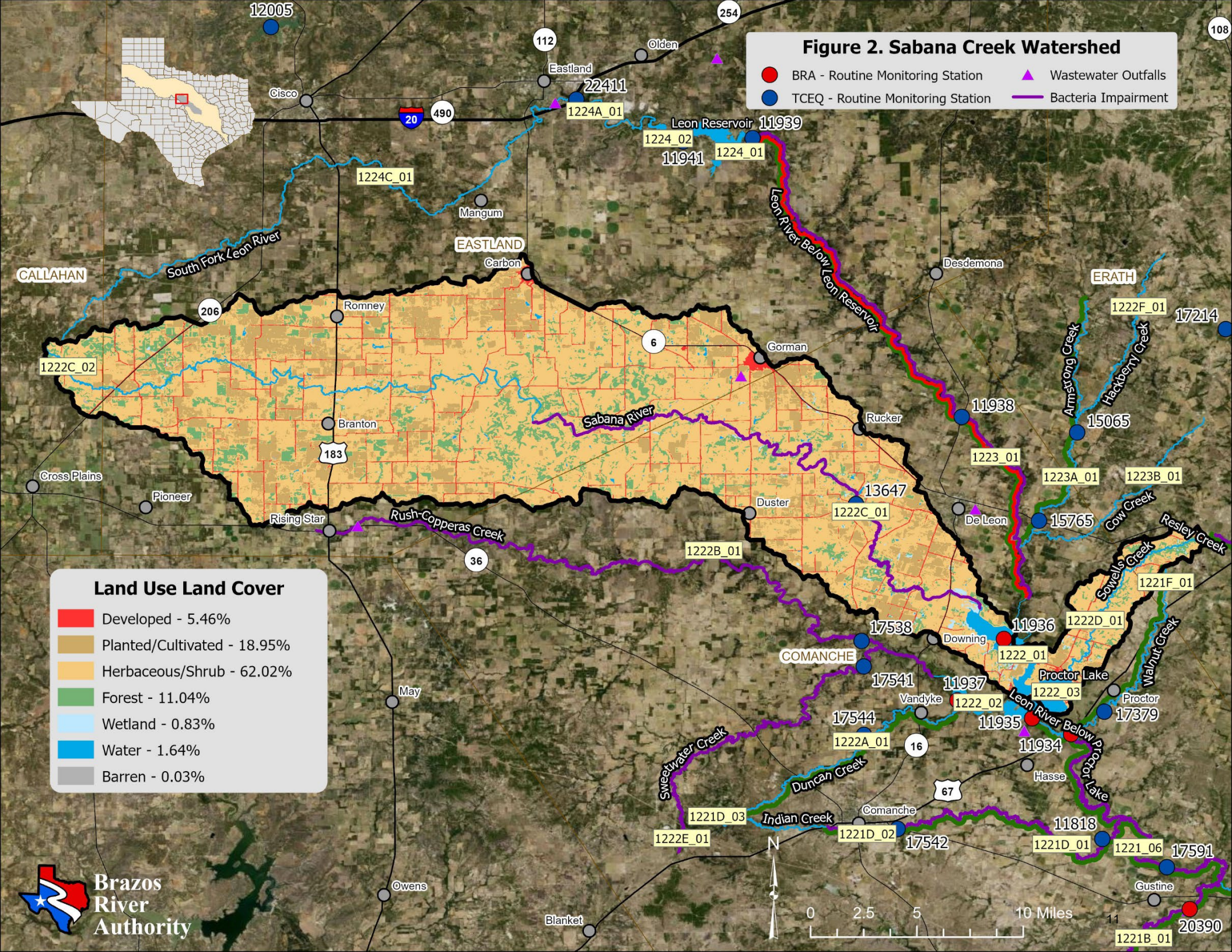


Figure 2. Sabana Creek Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Land Use Land Cover
Developed - 5.46%
Planted/Cultivated - 18.95%
Herbaceous/Shrub - 62.02%
Forest - 11.04%
Wetland - 0.83%
Water - 1.64%
Barren - 0.03%
12005
Cisco
Eastland
Olden
22411
1224A_01
Leon Reservoir
11939
1224_02
1224_01
11941
1224C_01
Mangum
South Fork Leon River
CALLAHAN
EASTLAND
Carbon
Romney
Gorman
Desdemona
ERATH
Leon River Below Leon Reservoir
1222F_01
17214
Armstrong Creek
Hackberry Creek
1222C_02
Branton
Sabana River
Rucker
11938
15065
1223_01
1223A_01
1223B_01
Cross Plains
Pioneer
Rising Star
Duster
13647
1222C_01
De Leon
15765
Cow Creek
Resley Creek
Rush-Copperas Creek
1222B_01
Sowells Creek
1221F_01
1222D_01
17538
11936
Downing
1222_01
COMANCHE
17541
11937
Vandyke
1222_02
Proctor Lake
1222_03
Walnut Creek
Proctor
17379
17544
1222A_01
11935
Leon River Below Proctor Lake
11934
Hasse
May
Sweetwater Creek
Duncan Creek
1221D_03
Indian Creek
Comanche
1221D_02
17542
11818
1221D_01
1221_06
17591
1222E_01
Owens
Blanket
Gustine
20390
1221B_01
Brazos River Authority
N
0
2.5
5
10 Miles

Copperas Creek Watershed

Watershed Description:
The Copperas Creek Watershed is 291 square miles in area.

Land Use Land Cover in Watershed (Figure 3):
The biggest cities within the watershed are Rising Star, Downing, and Vandyke.

There is one wastewater outfall. Part of Lake Proctor lies within the watershed. The dominant land cover is herbaceous/shrub, with a moderate amount of the planted/cultivated category and a smaller amount of forested upland.

Segments in Watershed (Figure 3):

- 1222_02: Lake Proctor, Copperas/ Duncan Creeks arm of lake
  Monitoring Station: 11937 - LAKE PROCTOR COPPERAS CREEK ARM 460 METERS NORTH AND 2.04 KILOMETERS EAST OF INTERSECTION OF COMANCHE CR 410a AND COMANCHE CR 407
- 1222_03: Lake Proctor, portion of water body near dam
  Monitoring Station: 11935 - LAKE PROCTOR MEAR DAM FLOODGATE 911 METERS NORTH AND 940 METERS EAST OF INTERSECTION OF FM 2861 AND COMANCHE CR 418C
- 1222A_01: Duncan Creek
  Monitoring Station: 17544 - DUNCAN CREEK AT COMANCHE CR 419 NORTH OF COMANCHE AND SOUTH OF FAIRVIEW
- 1222B_01: Rush-Copperas Creek
  Monitoring Station: 17538 - COPPERAS CREEK AT COMANCHE CR 419 NORTHWEST OF LAKE PROCTOR
- 1222E_01: Sweetwater Creek
  Monitoring Station: 17541 - SWEETWATER CREEK IMMEDIATELY UPSTREAM OF COMANCHE CR 419 WEST OF LAKE PROCTOR

Impairments in Watershed Description (Figure 3):

- 1222B_01: Recreational Use—Bacteria impairment
- 1222E_01: Recreational Use—Bacteria impairment
  - There are concerns for chlorophyll-*a* in 1222A_01.

Possible Contributions if Impaired:

Point Sources:

- There are three cities and one municipal wastewater outfall in this watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈75%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

- Agricultural runoff: Agricultural activity (≈18%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Rising Star
- City of Vandyke
- City of Downing
- Eastland County
- Comanche County
- Brown County
- Any marinas or other businesses on or that serve Lake Proctor

Actions taken if impaired:

- Segments 1222B and 1222E were first listed as impaired for Bacteria in 2006. RUAAs were conducted in segments 1222B_01 and 1222E_01. Results led to the recommendation that segments 1222B and 1222E remain classified as PCR segments.
- A watershed characterization, the Proctor Lake Watershed Characterization, was conducted that included segments 1222B_01 and 1222E_01. The report was published in February 2025.

Recommendations if Impaired:

- Utilizing data acquired in the watershed characterization study, development of a Watershed Protection Plan (WPP) may be appropriate.

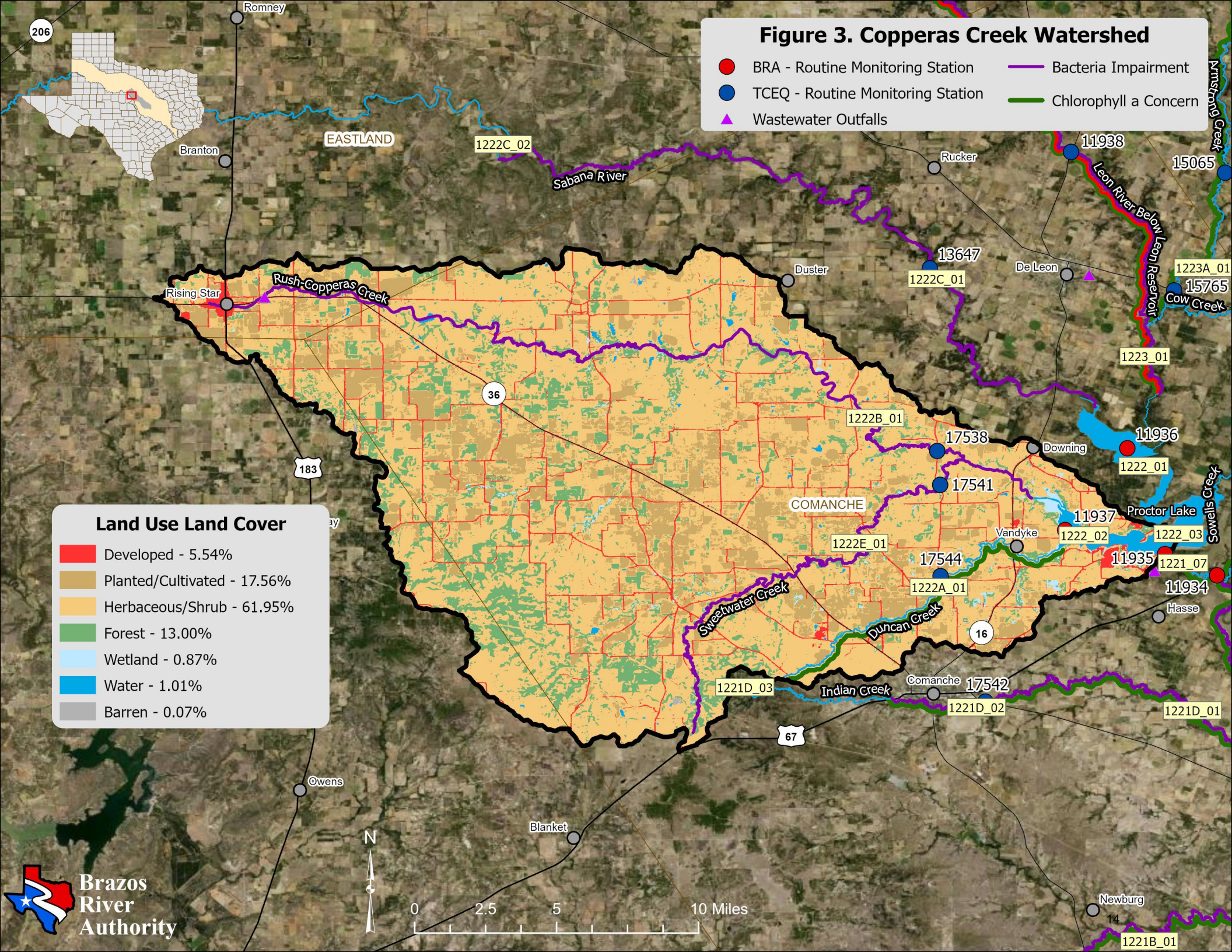


Figure 3. Copperas Creek Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a Concern
Land Use Land Cover
Developed - 5.54%
Planted/Cultivated - 17.56%
Herbaceous/Shrub - 61.95%
Forest - 13.00%
Wetland - 0.87%
Water - 1.01%
Barren - 0.07%
Romney
Branton
EASTLAND
Rucker
Duster
De Leon
Rising Star
Downing
Vandyke
Comanche
Hasse
Owens
Blanket
Newburg
Rush-Copperas Creek
Sabana River
Leon River Below Leon Reservoir
Cow Creek
Armstrong Creek
Proctor Lake
Sowells Creek
Sweetwater Creek
Duncan Creek
Indian Creek
COMANCHE
1222C_02
1222C_01
1223A_01
1223_01
1222B_01
1222_01
1222_02
1222_03
1222E_01
1222A_01
1221D_03
1221D_02
1221D_01
1221_07
1221B_01
11938
15065
13647
15765
11936
17538
17541
11937
17544
11935
11934
17542
206
36
183
16
67
14
N
0
2.5
5
10 Miles
Brazos River Authority

South Leon River-Leon River Watershed

Watershed Description:
The South Leon River-Leon River Watershed is 365 square miles in area.

Land Use Land Cover in Watershed (Figure 4):
There are six cities and three wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant land cover is herbaceous/shrubland (≈73%).

Segments in Watershed (Figure 4):

- 1221_06: Leon River Below Lake Proctor, from confluence with South Leon Creek upstream to confluence with Walnut Creek

  Monitoring Station: 17591 - LEON RIVER IMMEDIATELY UPSTREAM OF COMANCHE CR 340 NORTH OF GUSTINE (Figure 4.1)

- 1221_07: Leon River Below Lake Proctor, from confluence with Walnut Creek upstream to Lake Proctor

  Monitoring Station: 11934 - LEON RIVER IMMEDIATELY DOWNSTREAM OF US 67/ US 377 DOWNSTREAM OF LAKE PROCTOR (Figure 4.2)

- 1221B_01: South Leon River
  Monitoring Station: 20390 - SOUTH LEON RIVER 300 METERS DOWNSTREAM OF COMANCHE CR 260 EAST OF GUSTINE
- 1221D_01: Indian Creek, from confluence with Leon River upstream to confluence with Armstrong Creek
  Monitoring Station: 11818 - INDIAN CREEK AT COMANCHE CR 304, 3.51 KILOMETERS UPSTREAM OF THE CONFLUENCE WITH THE LEON RIVER
- 1221D_02: Indian Creek, from confluence with Armstrong Creek upstream to headwaters of water body
  Monitoring Station: 17542 - INDIAN CREEK AT SH 36 EAST OF COMANCHE
- 1221D_03: Indian Creek, from an unnamed tributary approximately 0.1 km upstream of US 377 upstream approximately 9.0 km to headwaters
- 1221F_01: Walnut Creek
  Monitoring Station: 17379 - WALNUT CREEK AT FM 1476 SOUTH OF PROCTOR

Impairments in Watershed Description (Figure 4):

- 1221_06, 1221B_01, 1221D_01, 1221D_02: Recreational Use—Bacteria impairments.
  - There are also concerns for chlorophyll-*a* in 1221_06, concerns for chlorophyll-a and dissolved oxygen in 1221_07, concerns for chlorophyll-a, dissolved oxygen, Nitrate and Habitat in 1221B_01, concerns for chlorophyll-a and Total Phosphorus in 1221D_01, concerns for chlorophyll-a, Nitrate, Ammonia, and Total Phosphorus in 1221D_02, and concerns for chlorophyll-*a* and Nitrate in 1221F_01.

Possible Contributions if Impaired:

Point Sources:

- There are six cities and two municipal wastewater outfalls within the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate

storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈84%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈11%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Comanche
- City of Hasse
- City of Proctor
- City of Gustine
- City of Newburg
- City of Priddy
- Comanche County
- Erath County
- Mills County

Actions taken if impaired:

- The Leon River Watershed Protection Plan (WPP) addresses issues in segment 1221 which was first listed in 1996. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.
- RUAAs were conducted in segments 1221 and 1221B (first listed in 2006) and resulted in both segments remaining classified as PCR segments.
- 1221D was first listed for bacteria in 2006. An RUAA has also been completed for 1221D_01, _02. EPA approved the recommendation for the recreational use of this segment to be revised to secondary contact recreation 2 (SCR2).

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.
- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate for segments 1221_06 and 1221B.
- Continue routine water quality data collection and assessment based on the approved SCR2 standard for 1221D.

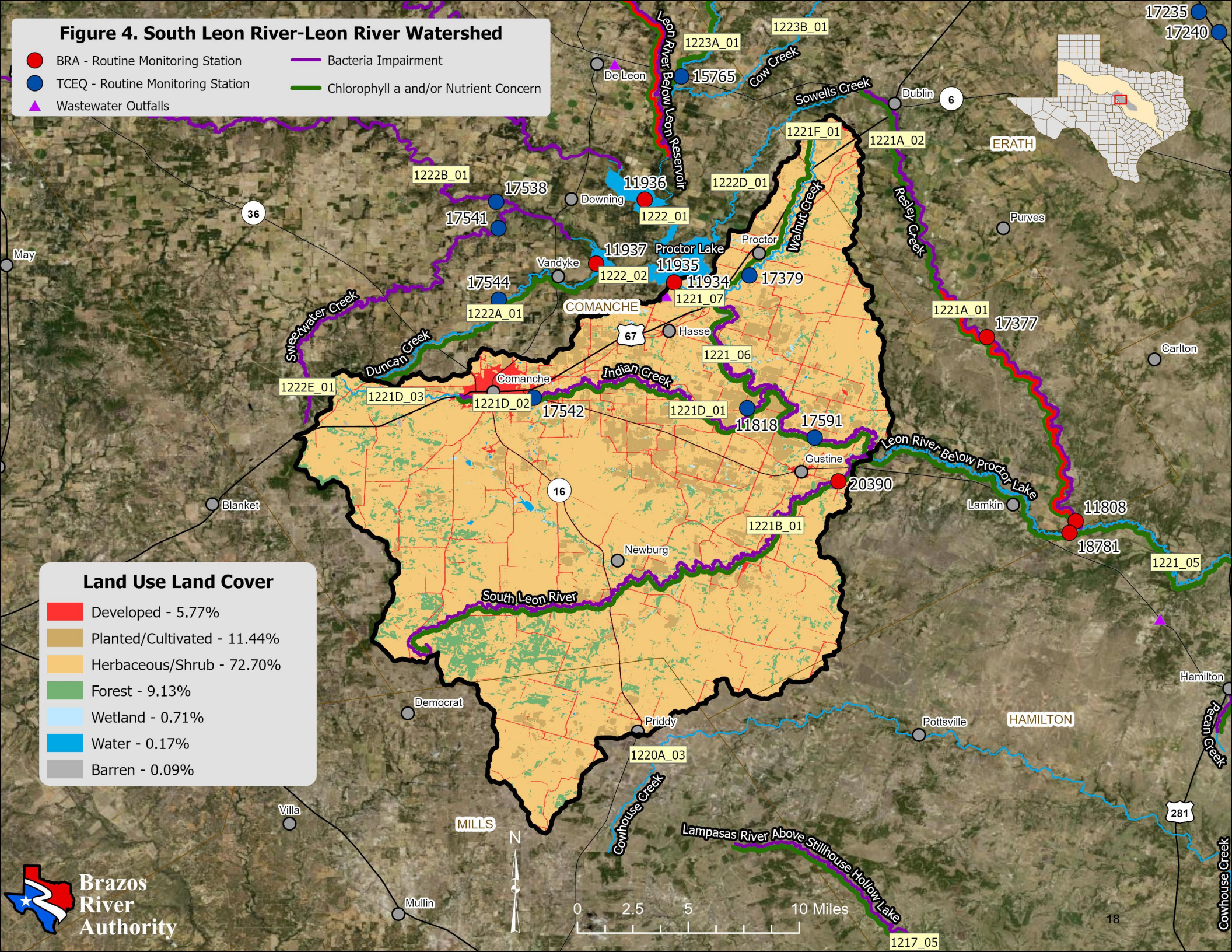


Figure 4. South Leon River-Leon River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 5.77%
Planted/Cultivated - 11.44%
Herbaceous/Shrub - 72.70%
Forest - 9.13%
Wetland - 0.71%
Water - 0.17%
Barren - 0.09%
Leon River Below Leon Reservoir
1223A_01
1223B_01
Cow Creek
De Leon
15765
Sowells Creek
Dublin
6
17235
17240
ERATH
1221F_01
1221A_02
1222B_01
17538
11936
Downing
1222_01
1222D_01
Walnut Creek
Resley Creek
17541
36
Purves
May
Proctor
Proctor Lake
11937
Vandyke
1222_02
11935
11934
17379
17544
1222A_01
1221_07
COMANCHE
Sweetwater Creek
Duncan Creek
67
Hasse
1221A_01
17377
Carlton
1221_06
Indian Creek
1222E_01
1221D_03
Comanche
1221D_02
17542
1221D_01
11818
17591
Gustine
Leon River Below Proctor Lake
20390
16
Blanket
Lamkin
11808
18781
1221B_01
Newburg
1221_05
South Leon River
Hamilton
Democrat
Priddy
Pottsville
HAMILTON
Pecan Creek
1220A_03
Villa
MILLS
Cowhouse Creek
281
Lampasas River Above Stillhouse Hollow Lake
Mullin
N
0
2.5
5
10 Miles
1217_05
Brazos River Authority
18

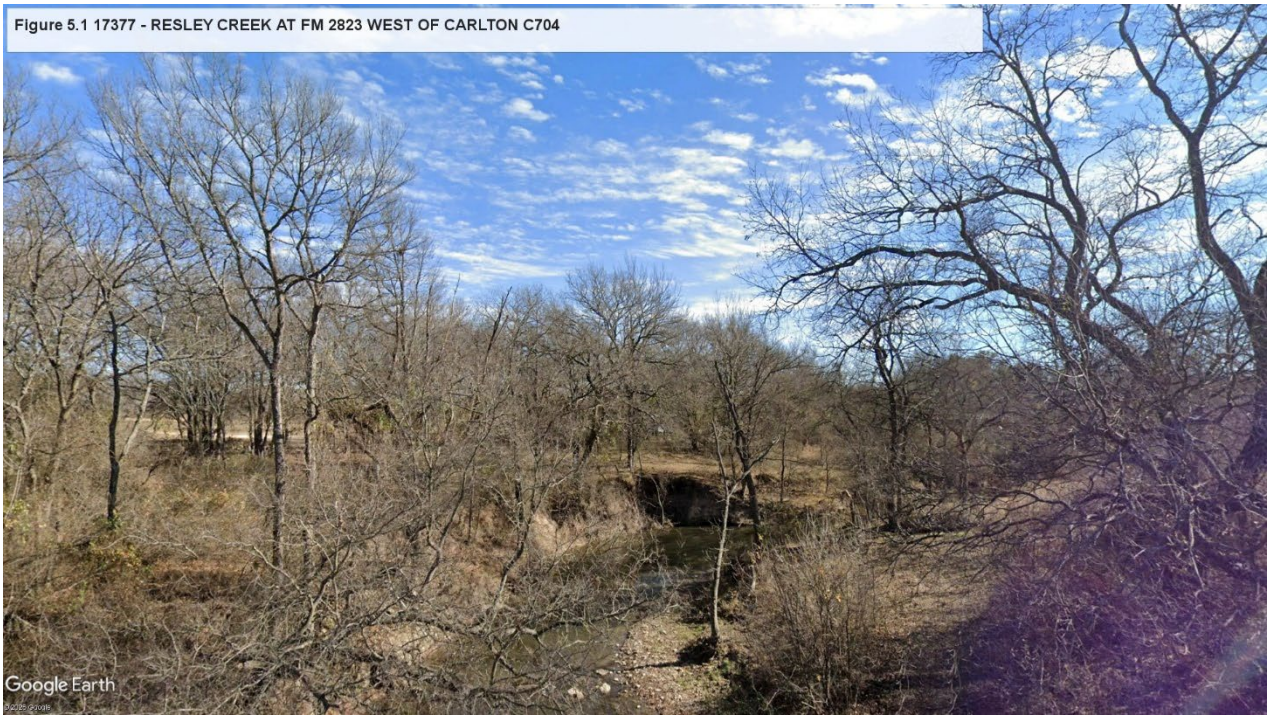
Resley Creek-Leon River Watershed

Watershed Description:
The Resley Creek-Leon River Watershed is 243 square miles in area.

Land Use Land Cover in Watershed (Figure 5):
There are four cities and one municipal wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant land cover is herbaceous/shrub (≈74%).

Segments in Watershed (Figure 5):

- 1221_05: Leon River below Lake Proctor, from confluence with Pecan Creek upstream to confluence with South Leon Creek
  Monitoring Station: 18781 - LEON RIVER AT HAMILTON CR 109
- 1221A_01: Resley Creek, from confluence of Leon River upstream to confluence with unnamed tributary (NHD RC 12070201007823), approx. 1.0 mile N of Comanche County Line
  Monitoring Station: 17377 - RESLEY CREEK AT FM 2823 WEST OF CARLTON C704 (Figure 5.1)



  Monitoring Station: 11808 - RESLEY CREEK AT COMANCHE CR 394, 740 METERS UPSTREAM OF THE CONFLUENCE WITH THE LEON RIVER
- 1221A_02: Resley Creek, from confluence with unnamed tributary (NHD RC 12070201007823), upstream to headwaters in Erath County

Impairments in Watershed Description (Figure 5):

- 1221A_01: Recreational Use—Bacteria impairment; General Use—Depressed Dissolved Oxygen impairments
- 1221A_02: Recreational Use—Bacteria impairment

- There are concerns for chlorophyll-*a* in 1221A_01 and 1221A_02. There are also concerns for chlorophyll-*a* and depressed dissolved oxygen in 1221_05.

Possible Contributions if Impaired:

Point Sources:

- There are four cities and one municipal wastewater outfall in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈83%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈10%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Dublin
- City of Purves
- City of Carlton
- City of Lamkin
- Comanche County
- Erath County
- Hamilton County

Actions taken if impaired:

- The Leon River WPP addresses issues in segment 1221 (first listed in 1996) and many of its tributaries. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.
- 1221A was first listed for bacteria in 2004. A Recreational Use Attainability Analysis (RUAA) was conducted in segment 1221A. EPA disapproved a contact recreation change. The segment remains classified as a PCR segment.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.
- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate for 1221A.

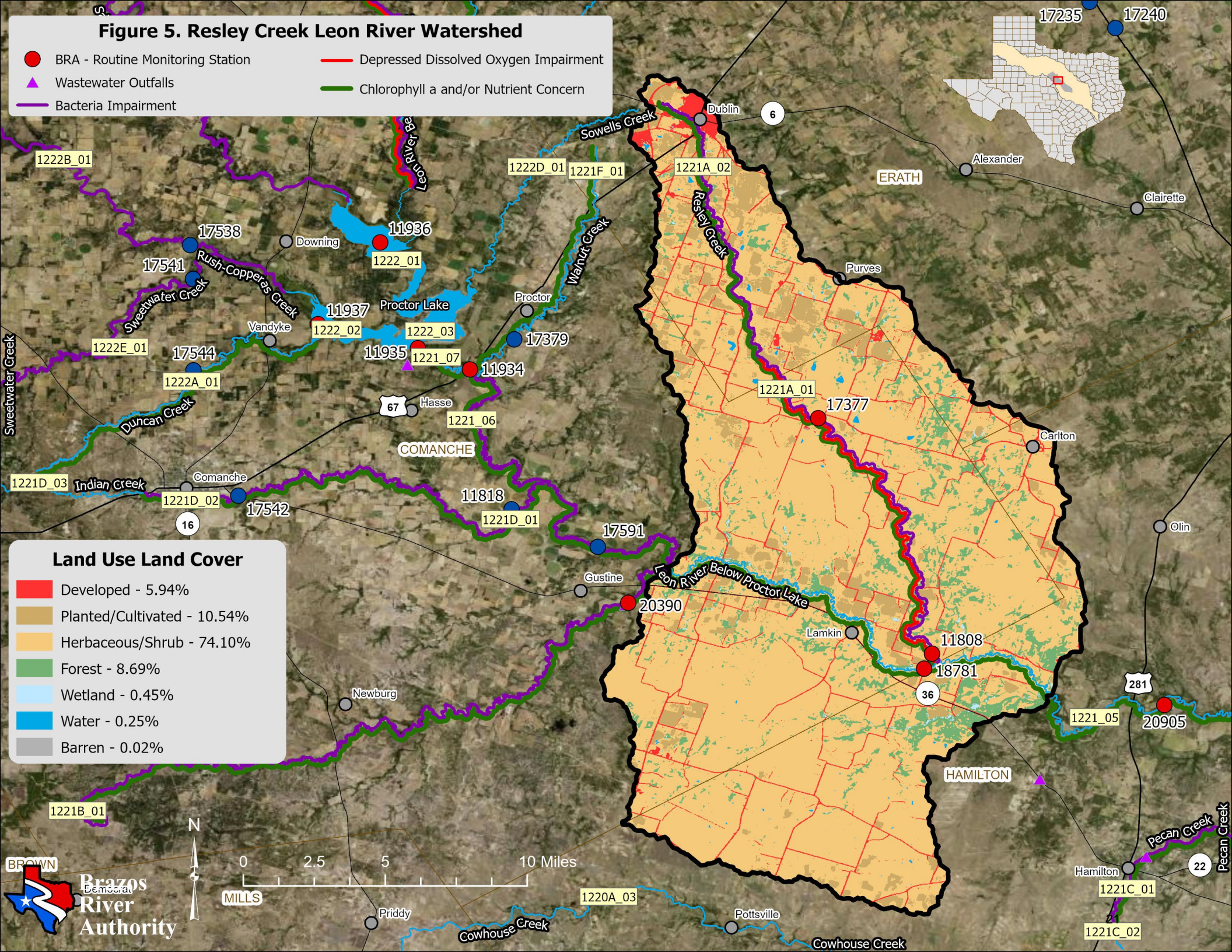


Figure 5. Resley Creek Leon River Watershed
BRA - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Depressed Dissolved Oxygen Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 5.94%
Planted/Cultivated - 10.54%
Herbaceous/Shrub - 74.10%
Forest - 8.69%
Wetland - 0.45%
Water - 0.25%
Barren - 0.02%
17235
17240
Dublin
Alexander
ERATH
Clairette
Purves
Carlton
Olin
Proctor
Proctor Lake
Vandyke
Downing
Hasse
Comanche
COMANCHE
Gustine
Lamkin
Newburg
Priddy
Pottsville
Hamilton
HAMILTON
MILLS
BROWN
Sowells Creek
Walnut Creek
Resley Creek
Leon River Below Proctor Lake
Rush-Copperas Creek
Sweetwater Creek
Duncan Creek
Indian Creek
Cowhouse Creek
Pecan Creek
1222B_01
1222D_01
1221F_01
1221A_02
1222E_01
1222A_01
1221A_01
1221D_03
1221D_02
1221D_01
1221_06
1222_01
1222_02
1222_03
1221_07
1221_05
1221B_01
1220A_03
1221C_01
1221C_02
17538
17541
11936
11937
11935
17544
11934
17379
17377
17542
11818
17591
20390
11808
18781
20905
0
2.5
5
10 Miles
N
Brazos River Authority

Pecan Creek-Leon River Watershed

Watershed Description:
The Pecan Creek-Leon River Watershed is 205 square miles in area.

Land Use Land Cover in Watershed (Figure 6):
There is one city and two municipal wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant land cover is herbaceous/shrub (≈76%).

Segments in Watershed (Figure 6):

- 1221_05: Leon River below Lake Proctor, from confluence with Pecan Creek upstream to confluence with South Leon Creek
  - Monitoring Station: 20905 - LEON RIVER AT HAMILTON CR 203 NORTH OF HAMILTON
- 1221_04: Leon River Below Proctor Lake, From a point immediately upstream of the confluence of Plum Creek in Coryell County to Proctor Dam in Comanche County
- 1221C_01: Pecan Creek, Perennial stream from the confluence with the Leon River upstream to the confluence with an unnamed tributary approximately 3.5 km upstream of SH 36 near the City of Hamilton; App D
  - Monitoring Station: 17547 - PECAN CREEK AT SH 22 EAST OF HAMILTON (Figure 6.1)

- 1221C_02: Pecan Creek, From an unnamed tributary approximately 3.5 km upstream of SH 36 near the City of Hamilton to the headwaters approximately 1.5 km further upstream

Impairments in Watershed Description (Figure 6):

- 1221_04: Recreational Use—Bacteria impairment
- 1221C_01: Recreational Use—Bacteria impairment
  - There are concerns for chlorophyll-*a* in 1221_04 and 1221C_01.

Possible Contributions if Impaired:

Point Sources:

- There is one city and one municipal wastewater outfall in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈87%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈6%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Hamilton
- Hamilton County

Actions taken if impaired:

- The Leon River WPP addresses issues in segment 1221 (first listed in 1996) and many of its tributaries. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.
- 1221C was first listed for bacteria in 2006. An RUAA has been completed for 1221C. Results led to the recommendation that segment 1221C remain classified as a PCR segment.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.
- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate for 1221C.

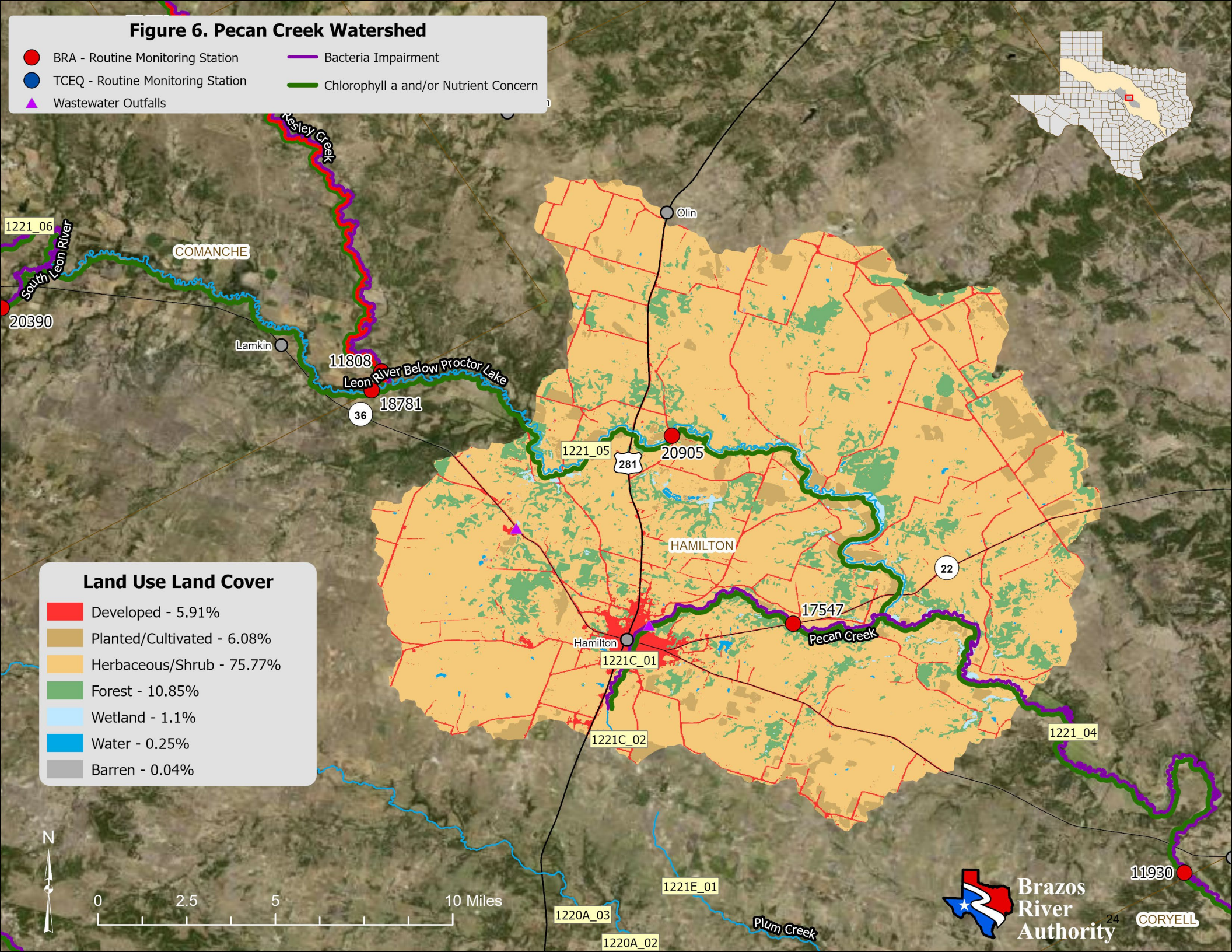


Figure 6. Pecan Creek Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 5.91%
Planted/Cultivated - 6.08%
Herbaceous/Shrub - 75.77%
Forest - 10.85%
Wetland - 1.1%
Water - 0.25%
Barren - 0.04%
Kesley Creek
1221_06
South Leon River
COMANCHE
20390
Lamkin
11808
Leon River Below Proctor Lake
18781
36
Olin
1221_05
281
20905
HAMILTON
22
17547
Pecan Creek
Hamilton
1221C_01
1221C_02
1221_04
11930
CORYELL
1221E_01
1220A_03
1220A_02
Plum Creek
N
0
2.5
5
10 Miles
Brazos River Authority
24

Plum Creek Watershed

Watershed Description:
The Plum Creek Watershed is 210 square miles in area.

Land Use Land Cover in Watershed (Figure 7):
There is one city in the watershed, indicated in the Potential non-State Agency Stakeholders section. The dominant land cover is herbaceous/shrub (≈70%).

Segments in Watershed (Figure 7):

- 1221_04: Leon River Below Proctor Lake, From a point immediately upstream of the confluence of Plum Creek in Coryell County to Proctor Dam in Comanche County
  - Monitoring Station: 11929 - LEON RIVER 18 METERS UPSTREAM OF CORYELL CR 183 NORTHEAST OF LEVITA (Figure 7.1)

  - Monitoring Station: 11930 - LEON RIVER AT HAMILTON CR 431
- 1221E_01: Plum Creek, From its confluence with the Leon River in Coryell county, upstream to its headwaters 2.4 mi east of US Hwy 281 in Hamilton County
  - Monitoring Station: 18405 - PLUM CREEK 10 M DOWNSTREAM OF CORYELL CR 106 NEAR LEVITA

Impairments in Watershed Description (Figure 7):

- 1221_04: Recreational Use—Bacteria Impairment
  - There is a concern for chlorophyll-*a* in 1221_04.

Possible Contributions if Impaired:

Point Sources:

- There is one city in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈86%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈8%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Jonesboro
- Hamilton County
- Coryell County

Actions taken if impaired:

- The Leon River WPP addresses issues in segment 1221 (first listed in 1996) and many of its tributaries. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.

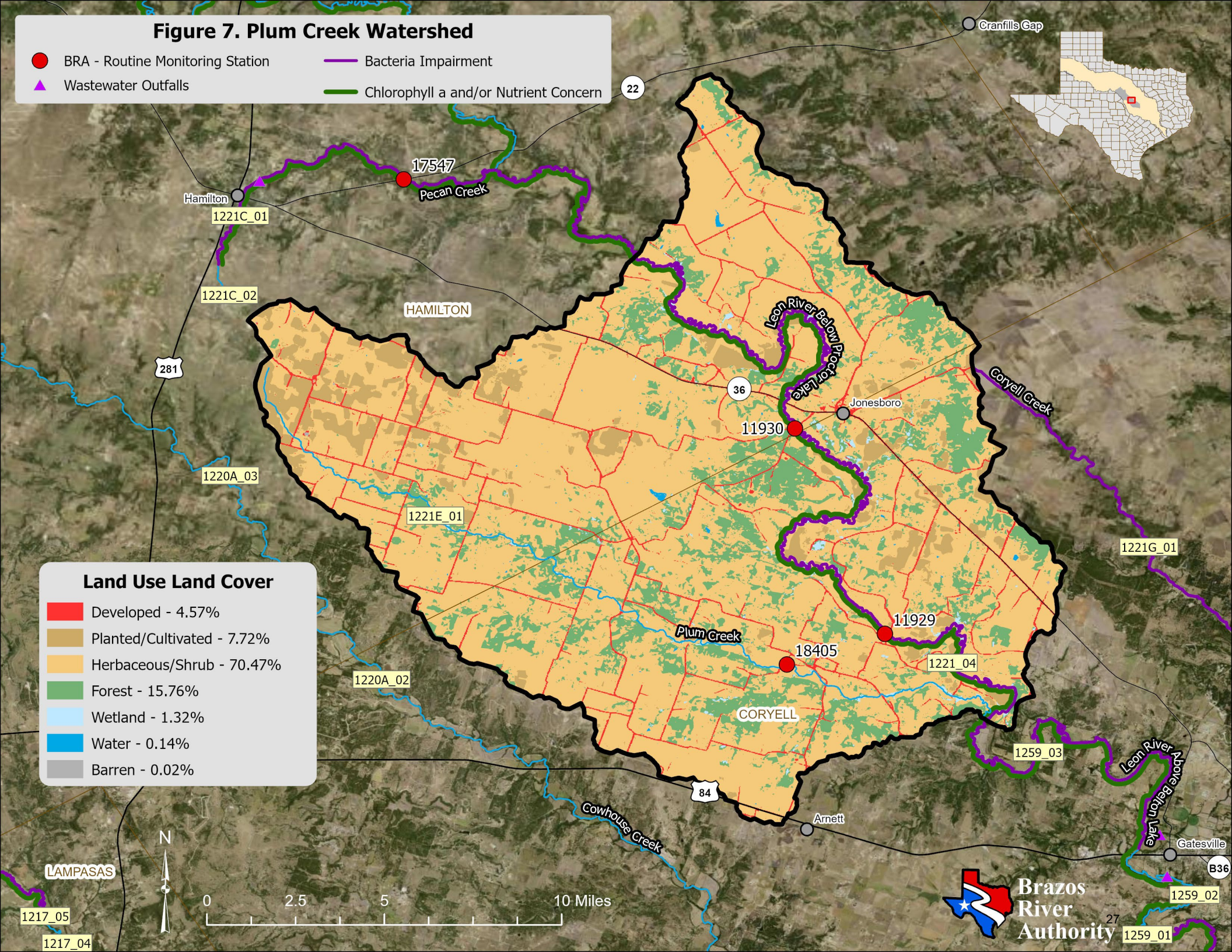


Figure 7. Plum Creek Watershed
BRA - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 4.57%
Planted/Cultivated - 7.72%
Herbaceous/Shrub - 70.47%
Forest - 15.76%
Wetland - 1.32%
Water - 0.14%
Barren - 0.02%
17547
Pecan Creek
Hamilton
1221C_01
1221C_02
HAMILTON
Leon River Below Proctor Lake
11930
Jonesboro
Coryell Creek
1221G_01
1221E_01
1220A_03
11929
Plum Creek
18405
1221_04
1220A_02
CORYELL
1259_03
Leon River Above Belton Lake
Cowhouse Creek
Arnett
Gatesville
1259_02
1259_01
LAMPASAS
1217_05
1217_04
Cranfills Gap
22
281
36
84
B36
27
N
0
2.5
5
10 Miles
Brazos River Authority

Coryell Creek-Leon River Watershed

Watershed Description:
The Coryell Creek-Leon River Watershed is 316 square miles in area.

Land Use Land Cover in Watershed (Figure 8):
There are seven cities and four wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant land cover is herbaceous/shrub land (≈62%).

Segments in Watershed (Figure 8):

- 1259_03: Leon River Above Belton Lake, from the confluence with Stillhouse Creek upstream to a point immediately upstream of the confluence with Plum Creek1259_02: Leon River Above Belton Lake, portion of Leon River from confluence with Cottonwood Creek approximately 2.8 km south of Gatesville upstream to the confluence with Stillhouse Branch in Coryell County
- 1259_01: Leon River Above Belton Lake, portion of Leon River from confluence with Lake Belton upstream to confluence with Cottonwood Creek approximately 2.8 km south of Gatesville in Coryell County

    Monitoring Station: 11925 - LEON RIVER IMMEDIATELY DOWNSTREAM OF FM 1829 SOUTHEAST OF NORTH FORT HOOD (Figure 8.1)

- 1221G_01: Coryell Creek, Coryell Creek from the confluence of the Leon River west of Gatesville upstream to headwater at Coryell CR 219 north of Gatesville

    Monitoring Station: 11804 - CORYELL CREEK 51 METERS DOWNSTREAM OF FM 107, 1.9 KM UPSTREAM OF CONFLUENCE WITH LEON RIVER

Impairments in Watershed Description (Figure 8):

- 1259_03: Recreational Use—Bacteria impairment
- 1259_01: Recreational Use—Bacteria impairment

- 1221G_01: Recreational Use—Bacteria impairment
    - There are concerns for chlorophyll-*a* in 1259_03 and 1259_01, nitrate in 1259_02, and dissolved oxygen in 1221G_01.

Possible Contributions if Impaired:

Point Sources:

- There are seven cities and four municipal wastewater outfalls within the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈82%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity (≈7%) in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading in animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Arnett
- City of Gatesville
- City of South Mountain
- City of Fort Gates
- City of Flat
- City of Leon Junction
- City of Oglesby
- Fort Hood Military Base
- Coryell County

Actions taken if impaired:

- The Leon River WPP addresses issues in segments 1221 and 1259 (first listed in 1996) and many of their tributaries. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.
- An RUAA has been conducted in segments 1221 and 1259 and results have led to the recommendation that the recreational use of the segments remain classified as a PCR segment.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.
- For 1221G, which was first listed in 2020, a watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate.

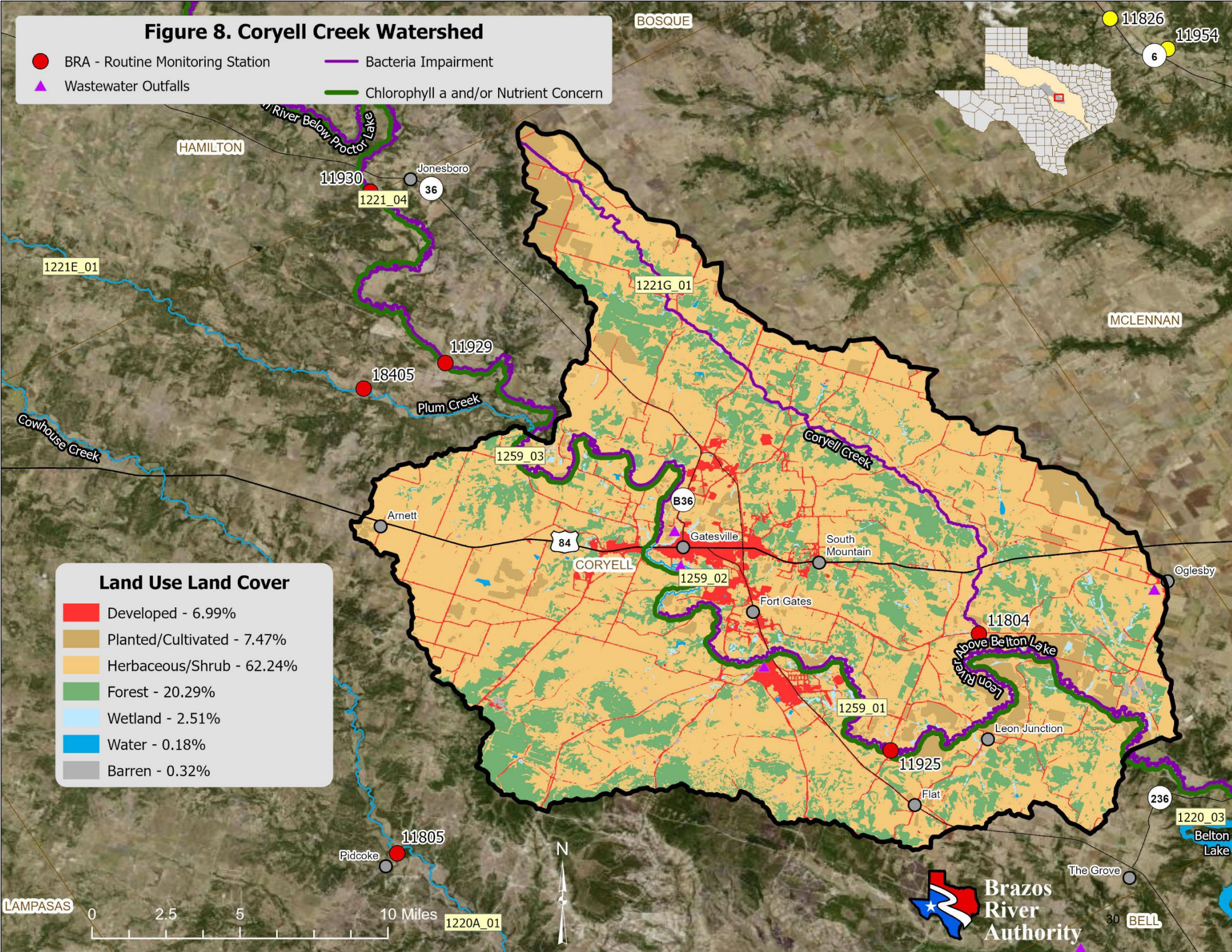


Figure 8. Coryell Creek Watershed
BRA - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 6.99%
Planted/Cultivated - 7.47%
Herbaceous/Shrub - 62.24%
Forest - 20.29%
Wetland - 2.51%
Water - 0.18%
Barren - 0.32%
BOSQUE
HAMILTON
MCLENNAN
CORYELL
LAMPASAS
BELL
11826
11954
11930
11929
18405
11804
11925
11805
1221_04
1221E_01
1221G_01
1259_03
1259_02
1259_01
1220A_01
1220_03
Jonesboro
Arnett
Gatesville
South Mountain
Fort Gates
Oglesby
Leon Junction
Flat
Pidcoke
The Grove
Belton Lake
Plum Creek
Cowhouse Creek
Coryell Creek
Leon River Above Belton Lake
Brazos River Authority
N
0
2.5
5
10 Miles

Belton Lake Watershed

Watershed Description:
The Belton Lake Watershed is 220 square miles in area.

Land Use Land Cover in Watershed (Figure 9):
There are five cities and three wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant land cover is herbaceous/shrub land (≈65%).

Segments in Watershed (Figure 9):

- 1259_01: Downstream portion of Leon River Above Belton Lake, portion of Leon River from confluence with Lake Belton upstream to confluence with Cottonwood Creek approximately 2.8 km south of Gatesville in Coryell County
- 1220_01: From Belton Dam in Bell County to a point 100 meters (110 yards) upstream of FM 236 in Coryell County, up to the normal pool elevation of 594 feet (impounds Leon River)
  - Monitoring Station: 20835 - BELTON LAKE 629M NORTH AND 157M EAST OF THE BOAT RAMP AT WESTCLIFF PARK
- 1220_03: From Belton Dam in Bell County to a point 100 meters (110 yards) upstream of FM 236 in Coryell County, up to the normal pool elevation of 594 feet (impounds Leon River)
  - Monitoring Station: 11923 - BELTON RESERVOIR LEON RIVER ARM NEAR HEADWATERS 626 METERS N AND 288 METERS W OF INTERSECTION OF KUIKENDALL RD AND MC GREGOR PARK RD
  - Monitoring Station: 18798 - BELTON LAKE IN OWL CREEK ARM 313 M NORTH AND 265 M WEST OF BOAT RAMP AT OWL CREEK PARK

Impairments in Watershed Description (Figure 9):

- 1259_01: Recreational Use—Bacteria impairment
  - There are concerns for chlorophyll-*a* in 1259_01.

Possible Contributions if Impaired:

Point Sources:

- There are five cities and three wastewater outfalls within the watershed. However, these potential point sources are downstream of the impairment and are not contributors. No point sources are identified in this watershed for this impairment.

Non-point sources:

- Wildlife: Adjacent to the impaired portion of the segment is herbaceous/shrubland which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.
- Agricultural runoff: Adjacent agricultural activity in the watershed could also contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of The Grove
- City of Moffat
- City of Jubilee Springs

- City of Morgan's Point
- City Moody
- City of Leon Junction
- City of Oglesby
- Bell County
- Coryell County
- McLennan County
- Marinas and businesses reliant on Belton Lake

Actions taken if impaired:

- The Leon River WPP addresses issues in segment 1259 (first listed in 1996) and many of their tributaries. In August 2023 a report entitled Continued Coordination of the Leon River Watershed Protection Plan Implementation was produced. This report highlights how the WPP has been successfully implemented through education.
- An RUAA has been conducted in segments 1221 and 1259 and results have led to the recommendation that the recreational use of the segment remain classified as a PCR segment.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Leon River WPP and monitor for water quality improvements.

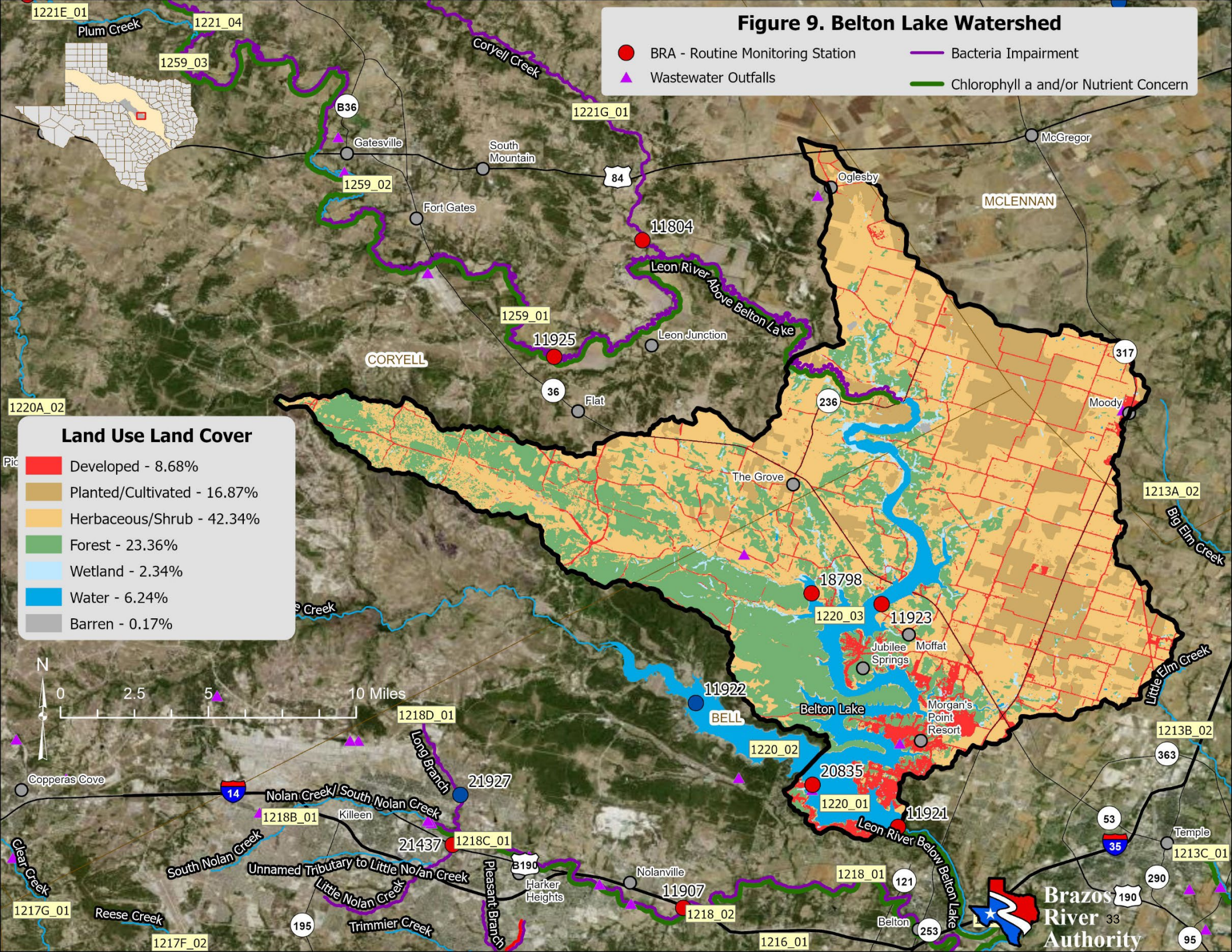


Figure 9. Belton Lake Watershed
BRA - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 8.68%
Planted/Cultivated - 16.87%
Herbaceous/Shrub - 42.34%
Forest - 23.36%
Wetland - 2.34%
Water - 6.24%
Barren - 0.17%
N
0
2.5
5
10 Miles
1221E_01
Plum Creek
1221_04
1259_03
Coryell Creek
1221G_01
B36
Gatesville
1259_02
South Mountain
84
McGregor
Oglesby
MCLENNAN
Fort Gates
11804
Leon River Above Belton Lake
1259_01
11925
Leon Junction
CORYELL
36
Flat
317
236
Moody
1220A_02
The Grove
1213A_02
Big Elm Creek
18798
1220_03
11923
Jubilee
Moffat
Springs
Little Elm Creek
11922
BELL
Belton Lake
Morgan's Point Resort
1213B_02
1220_02
363
20835
1220_01
11921
Leon River Below Belton Lake
53
35
Temple
1213C_01
1218D_01
Long Branch
21927
Copperas Cove
14
Nolan Creek/ South Nolan Creek
1218B_01
Killeen
21437
1218C_01
Clear Creek
South Nolan Creek
Unnamed Tributary to Little Nolan Creek
Little Nolan Creek
Pleasant Branch
B190
Harker Heights
Nolanville
11907
1218_01
121
290
190
1217G_01
Reese Creek
195
Trimmier Creek
1218_02
Belton
253
1216_01
1217F_02
95
Brazos River Authority
33

Nolan Creek-Leon River Watershed

Watershed Description:
The Nolan Creek-Leon River Watershed is 178 square miles in area.

Land Use Land Cover in Watershed (Figure 10):
There are five cities and eight wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, within the watershed. Dominant landcover includes developed land (≈49%) and herbaceous/shrub land (≈24%), with a moderate amount of forested land (≈15%).

Segments in Watershed (Figure 10):

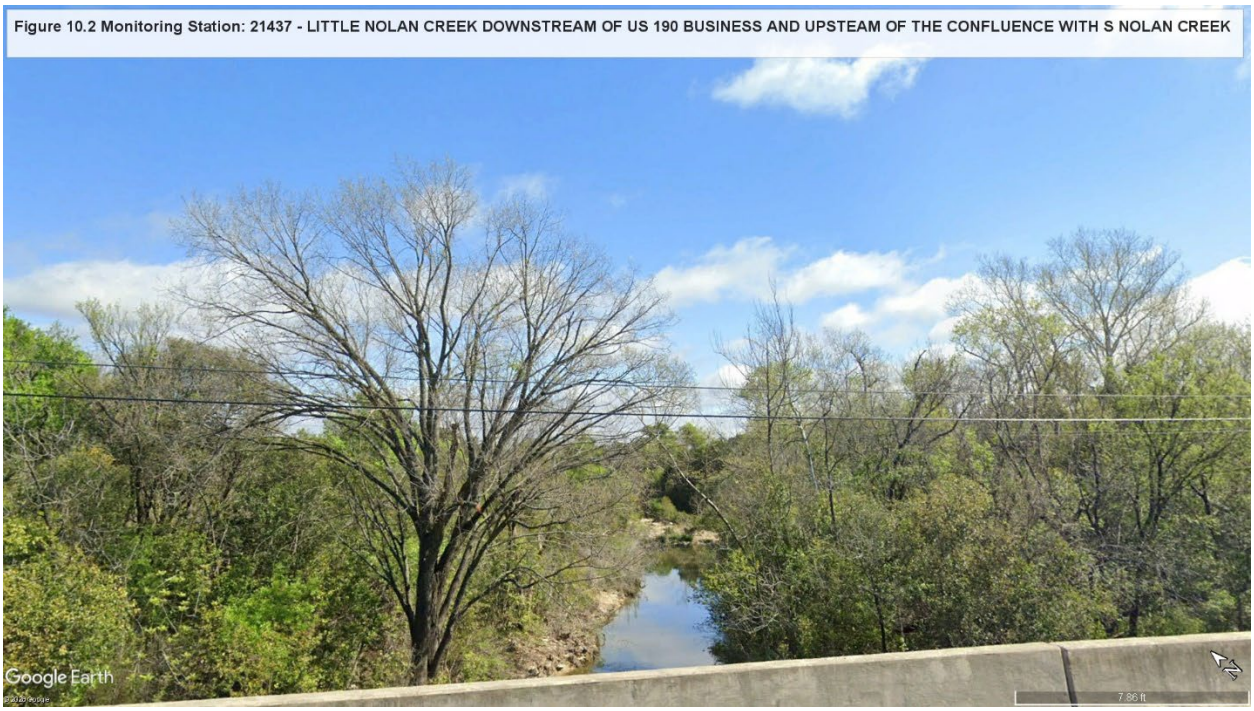
- 1218_01: Nolan Creek/South Nolan Creek, portion of Nolan Creek from the confluence with the Leon River upstream to confluence with North Nolan/South Nolan Creek fork in Bell County
- 1218_02: Nolan Creek/South Nolan Creek, portion of South Nolan Creek from confluence with North Nolan/Nolan Creek fork upstream to confluence with Liberty Ditch in city of Killeen in Bell County

  Monitoring Station: 11907 - NOLAN CREEK IMMEDIATELY UPSTREAM OF US 190 EAST OF NOLANVILLE (Figure 10.1)

Figure 10.1 Monitoring Station: 11907 - NOLAN CREEK IMMEDIATELY UPSTREAM OF US 190 EAST OF NOLANVILLE

- 1218_03: Nolan Creek/South Nolan Creek, portion of South Nolan Creek from confluence with Liberty Ditch in Killeen upstream to a point 100 meters upstream of the most upstream crossing of US 190 near the intersection of US 190 and Loop 172 in Bell County
- 1218A_01: Unnamed tributary to Little Nolan Creek
- 1218B_01: South Nolan Creek
- 1218C_01: Little Nolan Creek

  Monitoring Station: 21437 - LITTLE NOLAN CREEK IMMEDIATELY DOWNSTREAM OF US 190 BUSINESS AND 2.06 KILOMETERS UPSTERAM OF THE CONFLUENCE WITH SOUTH NOLAN CREEK IN KILLEEN (Figure 10.2)



- 1218D_01: Long Branch, Long Branch from the confluence with Nolan Creek/South Nolan Creek in Killeen upstream to the headwaters on the Fort Hood Military Reservation north of Killeen

  Monitoring Station: 21927 - LONG BRANCH AT LAKE ROAD IN KILLEEN 2.48 KILOMETERS UPSTREAM OF THE CONFLUENCE WITH SOUTH NOLAN CREEK (Figure 10.3)

- 1219_01: Leon River below Lake Belton, From the confluence with the Lampasas River in Bell County to Belton Dam in Bell County
  Monitoring Station: 11916 - LEON RIVER AT FM 436 WEST OF LITTLE RIVER (Figure 10.4)

Impairments in Watershed Description (Figure 10):

- 1218_01 and 1218_02: Recreational Use—Bacteria impairments
  - There are concerns for nitrate and total phosphorus in 1218_01, 1218_02 and 1219_01. There is a bacteria concern in 1218A_01.
- 1218C_01: Recreational Use—Bacteria impairment
- 1218D_01: Recreational Use—Bacteria impairment

Possible Contributions if Impaired:

Point Sources:

- There are five cities and eight wastewater outfalls in this watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Urban runoff: There are five cities making up large developed areas in both the western and eastern portions this watershed. Approximately 49% of the watershed is developed. There was a 12% increase in developed area as compared to land use coverage ten years ago, increasing the potential for bacterial and nutrient loading.
- Wildlife: Herbaceous/shrub and forested areas account for approximately 39% of the watershed which is suitable for wildlife. This, however, is a 10% reduction in coverage from ten years ago. A significant wildlife population can contribute to bacterial and nutrient loading.

- Agricultural runoff: Agricultural activity (≈7%) in the watershed could also contribute to runoff. This was a 3% decrease in coverage over the same period, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Killeen
- City of Harker Heights
- City of Nolanville
- City of Belton
- City of Temple
- Fort Hood Military Base
- Bell County
- Coryell County

Actions taken if impaired:

- The Nolan Creek/South Nolan Creek Watershed Protection Plan is addressing issues in segment 1218 which was first listed for bacteria in 1996. For more information on the Nolan Creek WPP please visit the Nolan Creek Matters website.
- An RUAA was conducted in segment 1218 and results led to the recommendation that the recreational use of the segment remain classified as a PCR segment.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Nolan Creek/South Nolan Creek WPP and monitor for water quality improvements.

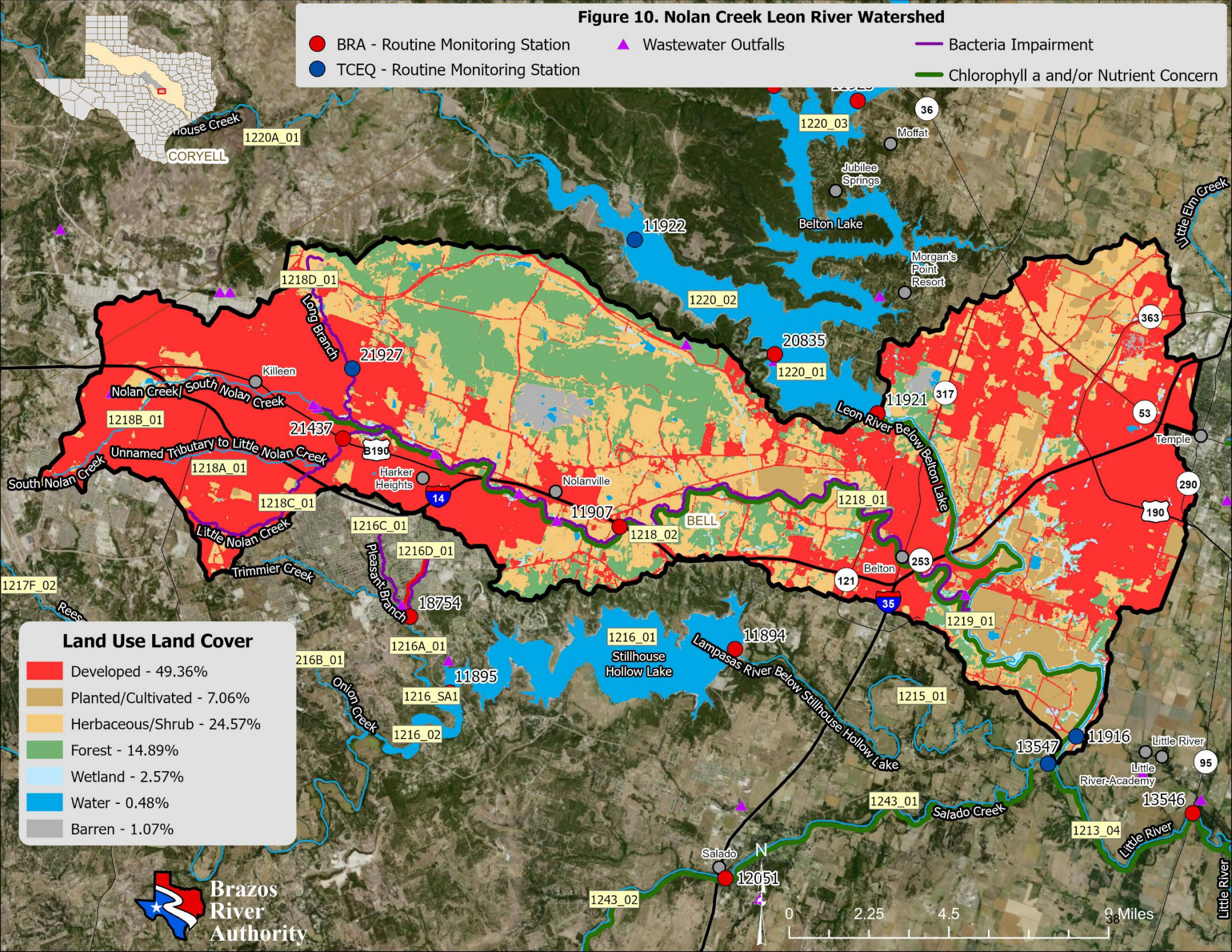
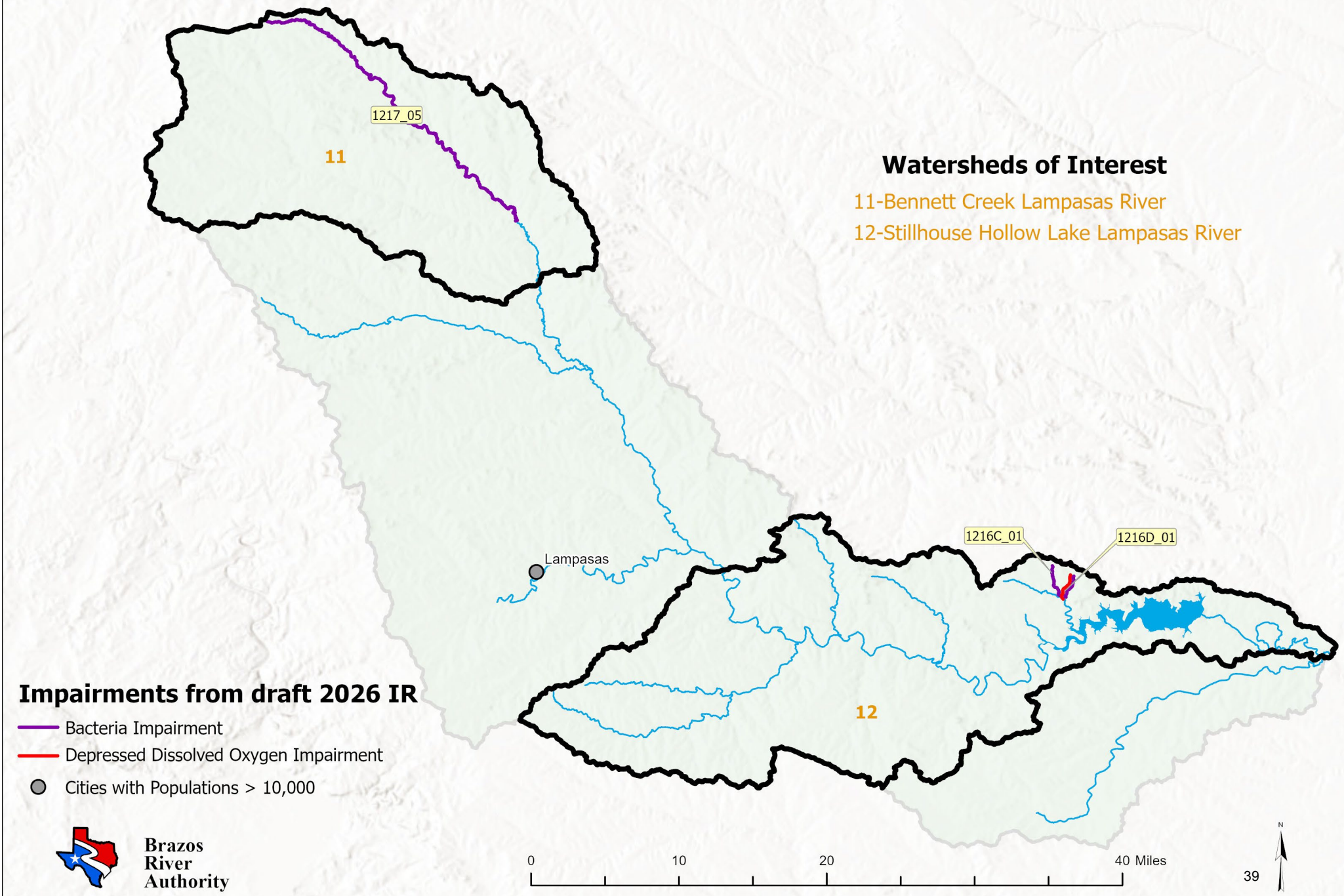


Figure 10. Nolan Creek Leon River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
CORYELL
1220A_01
1220_03
Moffat
Jubilee Springs
Belton Lake
11922
Morgan's Point Resort
1220_02
20835
1220_01
11921
Leon River Below Belton Lake
Little Elm Creek
1218D_01
Long Branch
21927
Killeen
Nolan Creek/ South Nolan Creek
1218B_01
21437
Unnamed Tributary to Little Nolan Creek
1218A_01
South Nolan Creek
Harker Heights
Nolanville
1218C_01
11907
1218_02
BELL
1218_01
Temple
Belton
1216C_01
1216D_01
Little Nolan Creek
Trimmier Creek
Pleasant Branch
18754
1217F_02
1216_01
Stillhouse Hollow Lake
11894
Lampasas River Below Stillhouse Hollow Lake
1219_01
1216A_01
11895
1216B_01
Onion Creek
1216_SA1
1216_02
1215_01
13547
11916
Little River
Little River-Academy
1243_01
Salado Creek
13546
1213_04
Little River
Salado
12051
1243_02
Land Use Land Cover
Developed - 49.36%
Planted/Cultivated - 7.06%
Herbaceous/Shrub - 24.57%
Forest - 14.89%
Wetland - 2.57%
Water - 0.48%
Barren - 1.07%
Brazos River Authority
N
0
2.25
4.5
9 Miles
38

Lampasas River Watershed

The Lampasas River Watershed drains approximately 1,502 square miles through Lampasas and portions of Mills, Burnet, Williamson and Bell Counties. Land use is predominantly agricultural, although development has increased around Stillhouse Hollow Lake. The majority of the Lampasas River watershed drains into Stillhouse Hollow Lake. Salado Creek drains into the Lampasas River below Stillhouse Hollow Lake before the confluence with the Leon River. Much of the Lampasas River has heavily vegetated banks and is characterized by low flow conditions much of the time.



Bennett Creek Watershed

Watershed Description:
The Bennett Creek Watershed is 308 square miles in area.

Land Use Land Cover in Watershed (Figure 11):
There are two cities and no wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, within the watershed. The majority of land in the watershed is herbaceous/shrubland (≈86%).

Segments in Watershed (Figure 11):

- Upstream portion of 1217_04: Lampasas River above Stillhouse Hollow Lake, Portion of Lampasas River from confluence with Simms Creek upstream to confluence with Bennett Creek in Lampasas County.
    - Monitoring Station: 15770 - LAMPASAS RIVER IMMEDIATELY UPSTREAM OF LAMPASAS CR 2925 FORMERLY KNOWN AS LAMPASAS CR 105 AND 10.5 KM NORTH OF ADAMSVILLE
- 1217_05: Lampasas River above Stillhouse Hollow Lake, Portion of Lampasas River from confluence with Bennett Creek upstream to its headwaters in Mills County.
    - Monitoring Station: 15762 - LAMPASAS RIVER IMMEDIATELY UPSTREAM OF US 84 7 MILES NORTHWEST OF EVANT (Figure 11.1)

Impairments in Watershed Description (Figure 11):

- 1217_05: Recreational Use—Bacteria impairment.
    - 1217_05 also has DO and chlorophyll-a concerns.

Possible Contributions if Impaired:

Point Sources:

- There are two cities and no municipal wastewater outfalls within the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: There are significant herbaceous/shrubland and forested areas (≈93%) in the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Star
- City of Center City
- Hamilton County
- Mills County
- Lampasas County

Actions taken if impaired:

The Lampasas River Watershed Protection Plan addresses water quality issues in the Lampasas River Watershed.

Recommendations if impaired:

Continue to follow and implement recommended best management practices outlined in the Lampasas River WPP and monitor for water quality improvements.

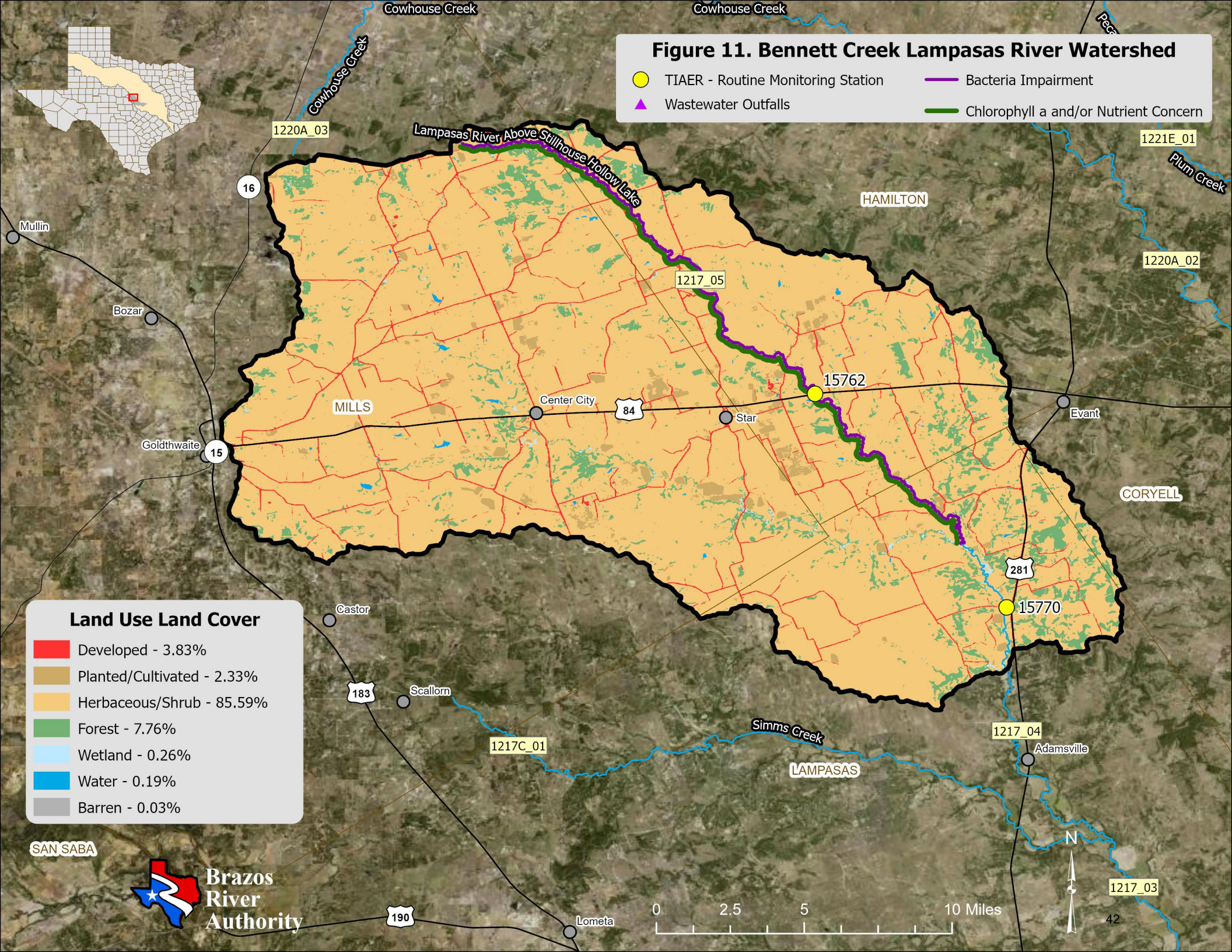


Figure 11. Bennett Creek Lampasas River Watershed
TIAER - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 3.83%
Planted/Cultivated - 2.33%
Herbaceous/Shrub - 85.59%
Forest - 7.76%
Wetland - 0.26%
Water - 0.19%
Barren - 0.03%
Lampasas River Above Stillhouse Hollow Lake
Cowhouse Creek
Simms Creek
Plum Creek
1220A_03
1217_05
1221E_01
1220A_02
1217C_01
1217_04
1217_03
15762
15770
HAMILTON
MILLS
CORYELL
LAMPASAS
SAN SABA
Mullin
Bozar
Goldthwaite
Center City
Star
Evant
Castor
Scallorn
Adamsville
Lometa
16
15
84
281
183
190
0
2.5
5
10 Miles
N
Brazos River Authority
42

Stillhouse Hollow Lake Watershed

Watershed Description:
The Stillhouse Hollow Lake Watershed is 428 square miles in area.

Land Use Land Cover in Watershed (Figure 12):
There are six cities and three wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. The dominant landcover is herbaceous/shrubland (≈60%), with a moderate amount of forested land (≈22%). Developed land cover is in the northern area of the watershed and coverage is ≈12%. Stillhouse Hollow Lake is entirely within this watershed.

Segments in Watershed (Figure 12):

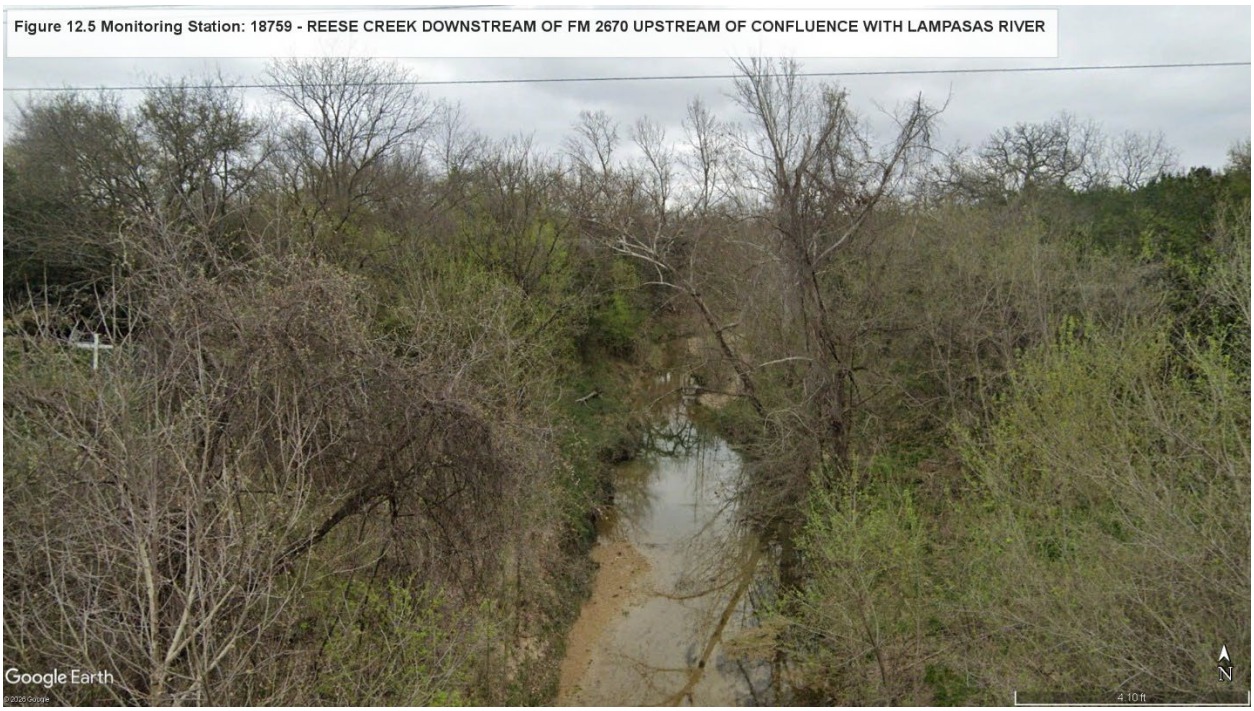
- 1215_01: Lampasas River below Stillhouse Hollow Lake
  Monitoring Station: 13547 - LAMPASAS RIVER IMMEDIATELY DOWNSTREAM OF DICE GROVE RD SOUTHWEST OF FORT GRIFFIN (Figure 12.1)

- 1216_01: Stillhouse Hollow Lake, main body of lake
  Monitoring Stations:
  11895 - STILLHOUSE HOLLOW LAKE MID-LAKE AT LAMPASAS RIVER ARM APPROXIMATELY 60 METERS UPSTREAM OF STILLHOUSE HOLLOW RD/FM 3481
  11894 - STILLHOUSE HOLLOW LAKE NEAR DAM 441 METERS SOUTH AND 302 METERS WEST OF NORTHERN EDGE OF DAM SITE AC USGS 310129097315901
- 1216_02: Stillhouse Hollow Lake, riverine portion of reservoir
- 1216_SA1: Stillhouse Hollow Lake, Branch Cove associated with main body of lake
- 1216A_01: Trimmier Creek
  Monitoring Station: 18754 - TRIMMIER CREEK IMMEDIATELY UPSTREAM OF CHAPARRAL RD WEST OF FM 3481 (Figure 12.2)

- 1216B_01: Onion Creek
- 1216C_01: Pleasant Branch
- 1216D_01: Unnamed Tributary to Trimmier Creek
- 1217_01: Lampasas River above Stillhouse Hollow Lake, from confluence with Rock Creek in Bell County upstream to confluence with Mesquite Creek west of Kempner in Lampasas County
    - Monitoring Station: 11896 - LAMPASAS RIVER AT SH 195 APPROXIMATELY 2.1 KILOMETERS DOWNSTREAM OF REESE CREEK CONFLUENCE SOUTH OF KILLEEN Figure 12.3)

- 1217A_01: Rocky Creek
  Monitoring Station: 11724 - ROCKY CREEK AT FM 963 APPROXIMATELY 1.26 KILOMETERS UPSTREAM OF LAMPASAS RIVER NEAR OAKALLA (Figure 12.4)

- 1217D_01: North Rocky Creek
- 1217E_01: South Rocky Creek
- 1217F_01: Reese Creek, from confluence with Lampasas River above Stillhouse Hollow Lake upstream to confluence with unnamed tributary (NHD reach code 12070203002555)
  Monitoring Station: 18759 - REESE CREEK 33 METERS DOWNSTREAM OF FM 2670 APPROXIMATELY 625 METERS UPSTREAM OF CONFLUENCE WITH LAMPASAS RIVER (Figure 12.5)



- 1217F_02: Reese Creek (unclassified water body), from confluence with unnamed tributary (NHD reach code 12070203002555) upstream to headwaters in Bell County
- 1217G_01: Clear Creek

  Monitoring Station: 21016 - CLEAR CREEK AT OAKALLA RD 3.53 KILOMETERS EAST AND 2.2 KILOMETERS NORTH OF OAKALLA (Figure 12.6)

Impairments in Watershed Description (Figure 12):

- 1216C_01: Recreational Use—Bacteria impairment
- 1216D_01: Recreational Use—Bacteria impairment, Aquatic Life Use—DO impairment and concern

Possible Contributions if Impaired:

Point Sources:

- There are six cities and three wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Urban runoff: There are four cities in the northern portion of the watershed. Approximately 12% of the watershed is developed. There was a 4% increase in developed area as compared to land use coverage ten years ago, increasing the potential for bacterial and nutrient loading.
- Wildlife: Herbaceous/shrub and forested areas account for approximately 82% of the watershed which is suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Watson
- City of Briggs
- City of Killeen
- City of Harker Heights
- City of Nolanville
- City of Copperas Cove
- Burnet County
- Lampasas County
- Bell County
- Coryell County
- Williamson County
- Any marinas or other businesses on or that serve Stillhouse Hollow Reservoir

Actions taken if impaired:

- 1216C_01 was first listed for bacteria in the draft 2026 IR and 1216D_01 in 2022. No actions have been taken.

Recommendations if impaired:

- For 1216C and 1216D_01, a watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate.

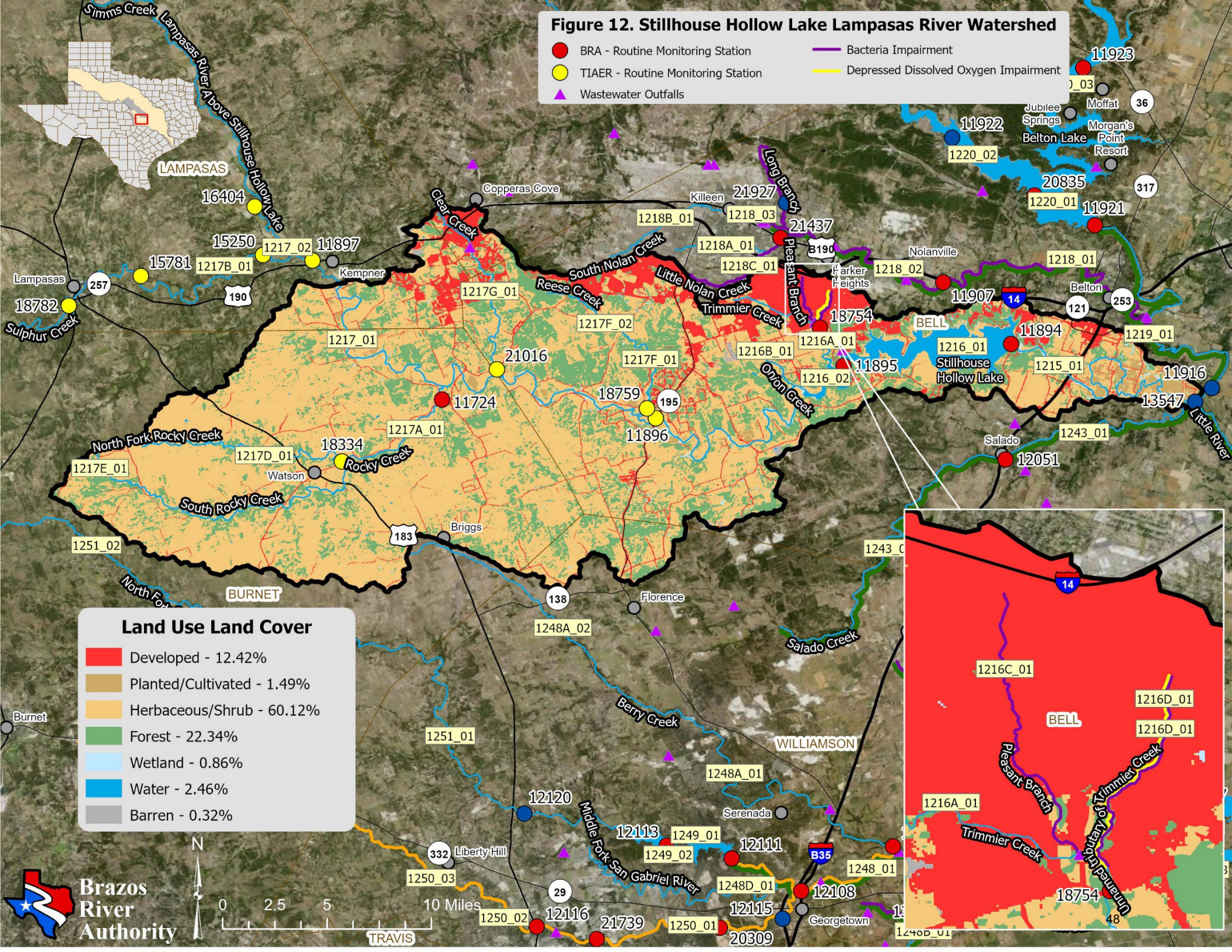


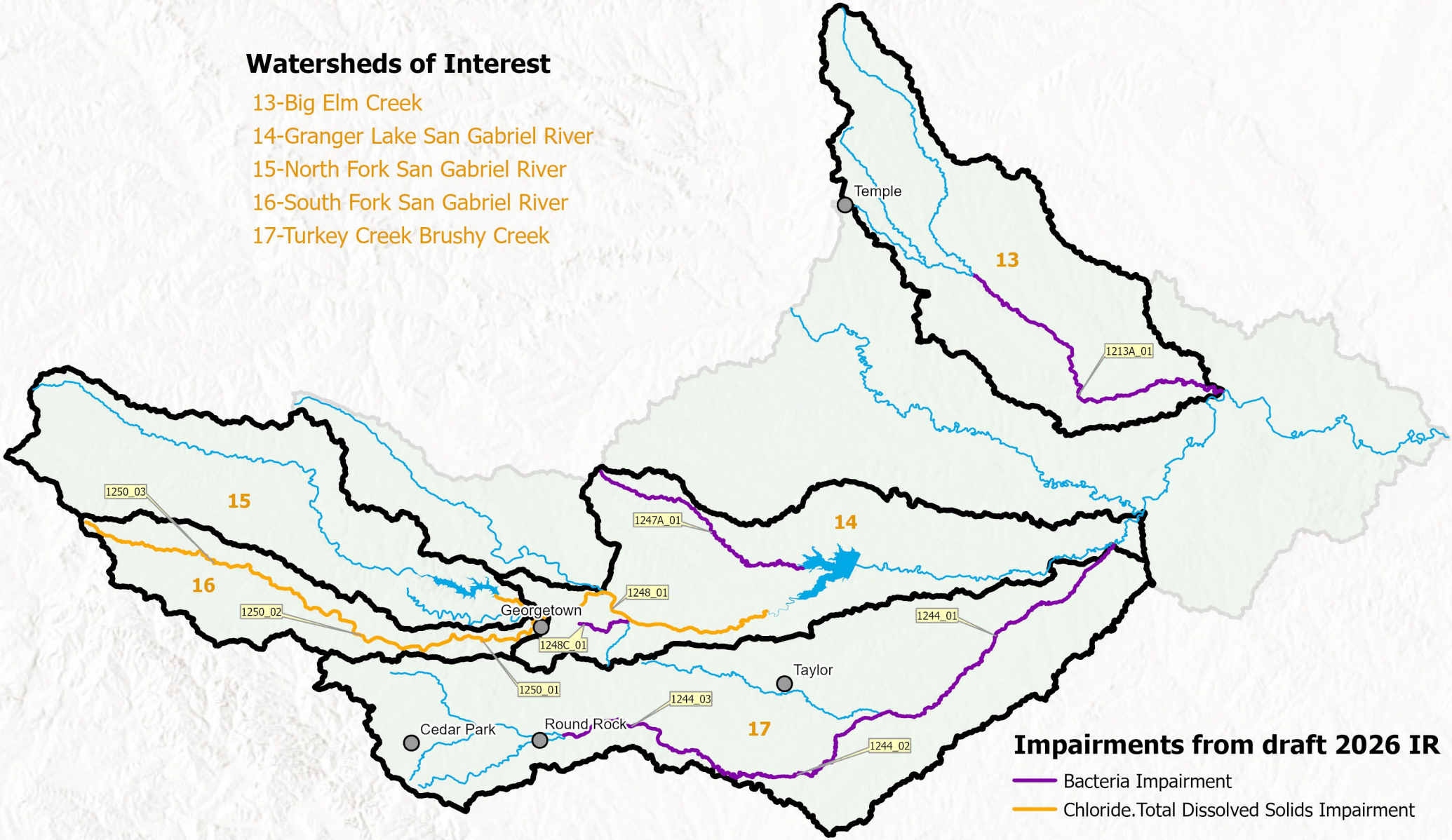
Figure 12. Stillhouse Hollow Lake Lampasas River Watershed
BRA - Routine Monitoring Station
TIAER - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Depressed Dissolved Oxygen Impairment
Land Use Land Cover
Developed - 12.42%
Planted/Cultivated - 1.49%
Herbaceous/Shrub - 60.12%
Forest - 22.34%
Wetland - 0.86%
Water - 2.46%
Barren - 0.32%
Brazos River Authority
N
0 2.5 5 10 Miles
LAMPASAS
BURNET
BELL
WILLIAMSON
TRAVIS
Simms Creek
Lampasas River Above Stillhouse Hollow Lake
Clear Creek
Long Branch
Pleasant Branch
South Nolan Creek
Little Nolan Creek
Reese Creek
Trimmier Creek
Onion Creek
Sulphur Creek
North Fork Rocky Creek
Rocky Creek
South Rocky Creek
Salado Creek
Berry Creek
Middle Fork San Gabriel River
Little River
Unnamed tributary of Trimmier Creek
Stillhouse Hollow Lake
Belton Lake
Copperas Cove
Killeen
Kempner
Lampasas
Nolanville
Harker Heights
Belton
Salado
Watson
Briggs
Florence
Serenada
Georgetown
Liberty Hill
Burnet
Jubilee Springs
Moffat
Morgan's Point Resort
16404
15250
15781
18782
11897
21927
21437
18754
11907
11894
11895
11916
13547
11923
11922
20835
11921
21016
11724
18759
11896
18334
12051
12120
12113
12111
12108
12115
12116
21739
20309
1217_02
1217B_01
1217G_01
1217_01
1217F_02
1217F_01
1217A_01
1217D_01
1217E_01
1218B_01
1218_03
1218A_01
1218C_01
1218_02
1218_01
1216A_01
1216B_01
1216_02
1216_01
1215_01
1219_01
1243_01
1251_02
1248A_02
1251_01
1248A_01
1249_01
1249_02
1248_01
1248D_01
1250_03
1250_02
1250_01
1216C_01
1216D_01
1216D_01
1216A_01
48
B190
B35
14
121
253
317
36
257
190
183
138
195
332
29

Little River Watershed

The Little River Watershed drains approximately 2,349 square miles through Williamson, Bell, Milam and portions of Burnet Counties. This watershed includes Lake Georgetown and Lake Granger. The western portion of this watershed continues to experience rapid urban development and is considered one of the fastest growing areas in the State of Texas while the eastern portion of the watershed remains fairly rural.

Watersheds of Interest

13-Big Elm Creek
14-Granger Lake San Gabriel River
15-North Fork San Gabriel River
16-South Fork San Gabriel River
17-Turkey Creek Brushy Creek



Brazos River Authority

Big Elm Creek Watershed

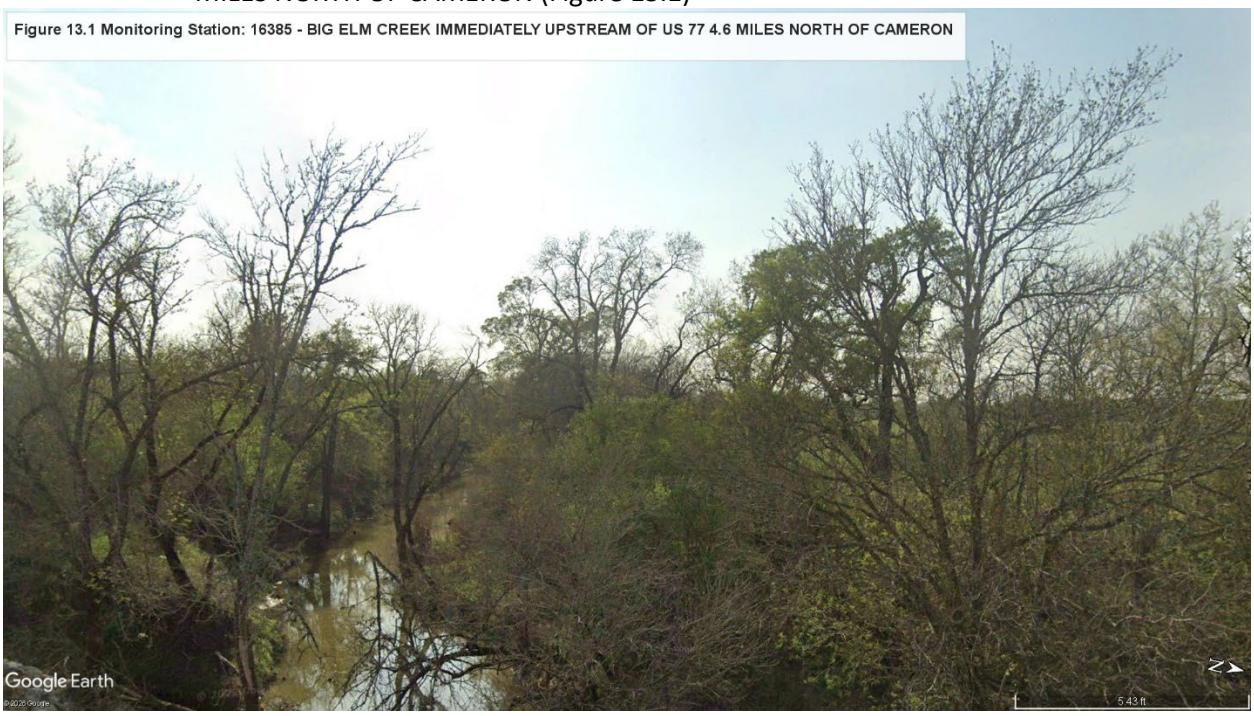
Watershed Description:
The Big Elm Creek Watershed is 324 square miles in area.

Land Use Land Cover in Watershed (Figure 13):
There are six cities and three wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the planted/cultivated category (≈60%), with herbaceous/shrubland being the next most dominant (≈25%).

Segments in Watershed (Figure 13):

- 1213A_01: Big Elm Creek (unclassified water body), from the confluence with the Little River upstream to the confluence with Little Elm Creek
    Monitoring Station: 16385 - BIG ELM CREEK IMMEDIATELY UPSTREAM OF US 77 4.6 MILES NORTH OF CAMERON (Figure 13.1)

Figure 13.1 Monitoring Station: 16385 - BIG ELM CREEK IMMEDIATELY UPSTREAM OF US 77 4.6 MILES NORTH OF CAMERON



- 1213A_02: Big Elm Creek, from the confluence with Little Elm Creek upstream to its headwaters
- 1213B_01: Little Elm Creek, from confluence with Big Elm Creek upstream to confluence with Williamson Branch
- 1213B_02: Little Elm Creek, from confluence with Williamson Branch upstream to headwaters
- 1213C_01: Unnamed tributary of Little Elm Creek

Impairments in Watershed Description (Figure 13):

- 1213A_01: Recreational Use—Bacteria impairment
    - There are concerns for Depressed dissolved oxygen and Nitrate 1213B_01 and a concern for Nitrate in 1213C_01.

Possible Contributions if Impaired:

Point Sources:

- There are six cities and three wastewater outfalls. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: ≈60% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Herbaceous/shrubland could provide contributions from wildlife with a coverage of approximately ≈25%. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Troy
- City of Temple
- City of Seaton
- City of Rogers
- City of Buckholts
- City of Moody
- McLennan County
- Bell County
- Falls County
- Milam County

Actions taken if impaired:

- The Big Elm Creek Watershed Protection Plan aims to address water quality issues in Big Elm Creek Watershed. Development of the Big Elm Creek Watershed Protection Plan was initiated in the fall of 2018. The final draft plan was accepted by the EPA in February 2021, and the plan is in implementation.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Big Elm Creek WPP and monitor for water quality improvements.

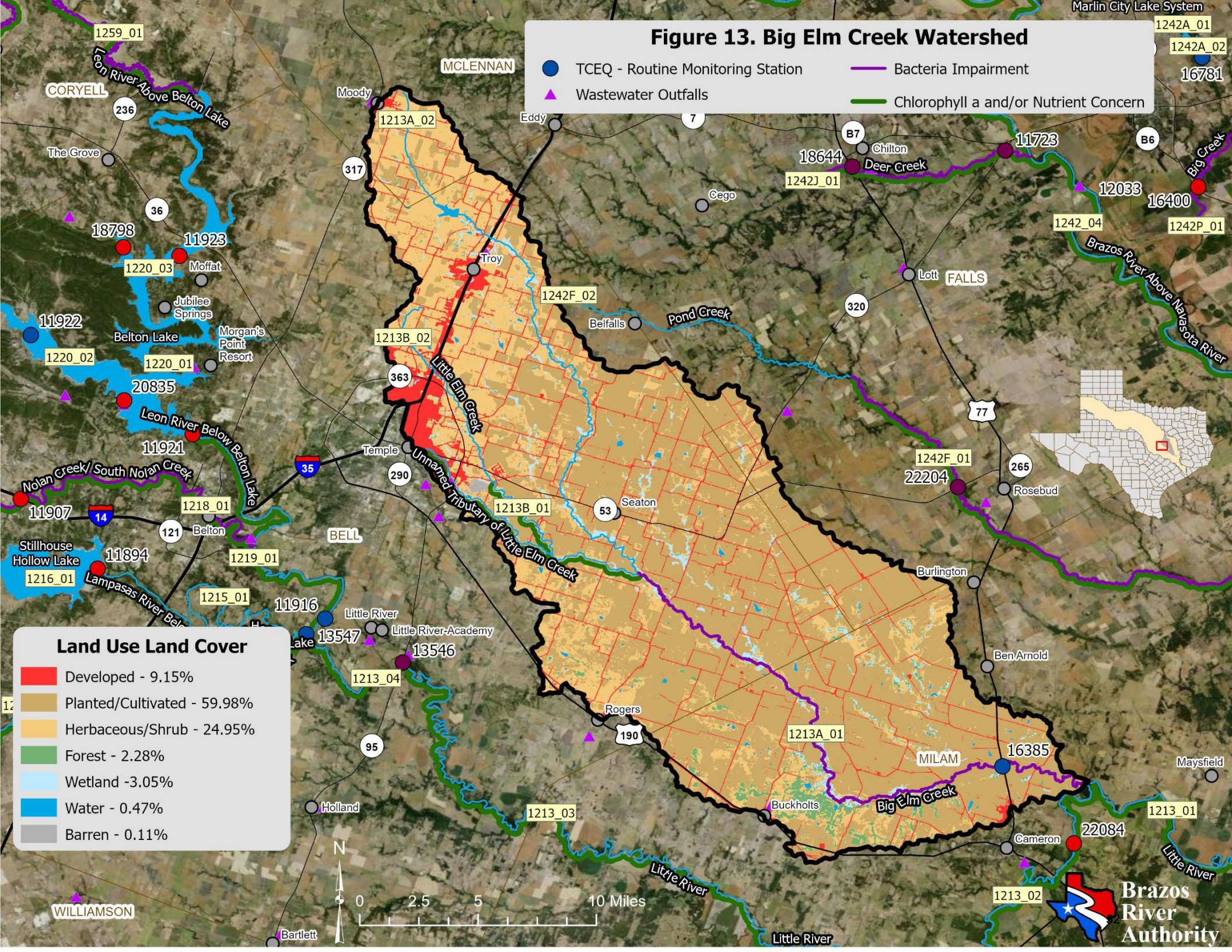


Figure 13. Big Elm Creek Watershed
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 9.15%
Planted/Cultivated - 59.98%
Herbaceous/Shrub - 24.95%
Forest - 2.28%
Wetland -3.05%
Water - 0.47%
Barren - 0.11%
Big Elm Creek
Little Elm Creek
Unnamed Tributary of Little Elm Creek
Pond Creek
Deer Creek
Chilton
Moody
Eddy
Troy
Belfalls
Cego
Lott
Temple
Seaton
Rosebud
Burlington
Ben Arnold
Rogers
Buckholts
Milam
Cameron
Maysfield
Holland
Little River
Little River-Academy
Bartlett
Belton
Moffat
Jubilee Springs
Morgan's Point Resort
The Grove
Stillhouse Hollow Lake
Belton Lake
Leon River Above Belton Lake
Leon River Below Belton Lake
Lampasas River Below Lake
Nolan Creek/ South Nolan Creek
Brazos River Above Navasota River
Marlin City Lake System
1213A_02
1213B_02
1213B_01
1213A_01
1213_04
1213_03
1213_02
1213_01
1242F_02
1242F_01
1242J_01
1242_04
1242P_01
1242A_01
1242A_02
1259_01
1220_03
1220_02
1220_01
1218_01
1219_01
1216_01
1215_01
18798
11923
11922
20835
11921
11907
11894
11916
13547
13546
18644
11723
12033
16400
16781
22204
16385
22084
MCLENNAN
CORYELL
BELL
FALLS
MILAM
WILLIAMSON
0 2.5 5 10 Miles
N
Brazos River Authority

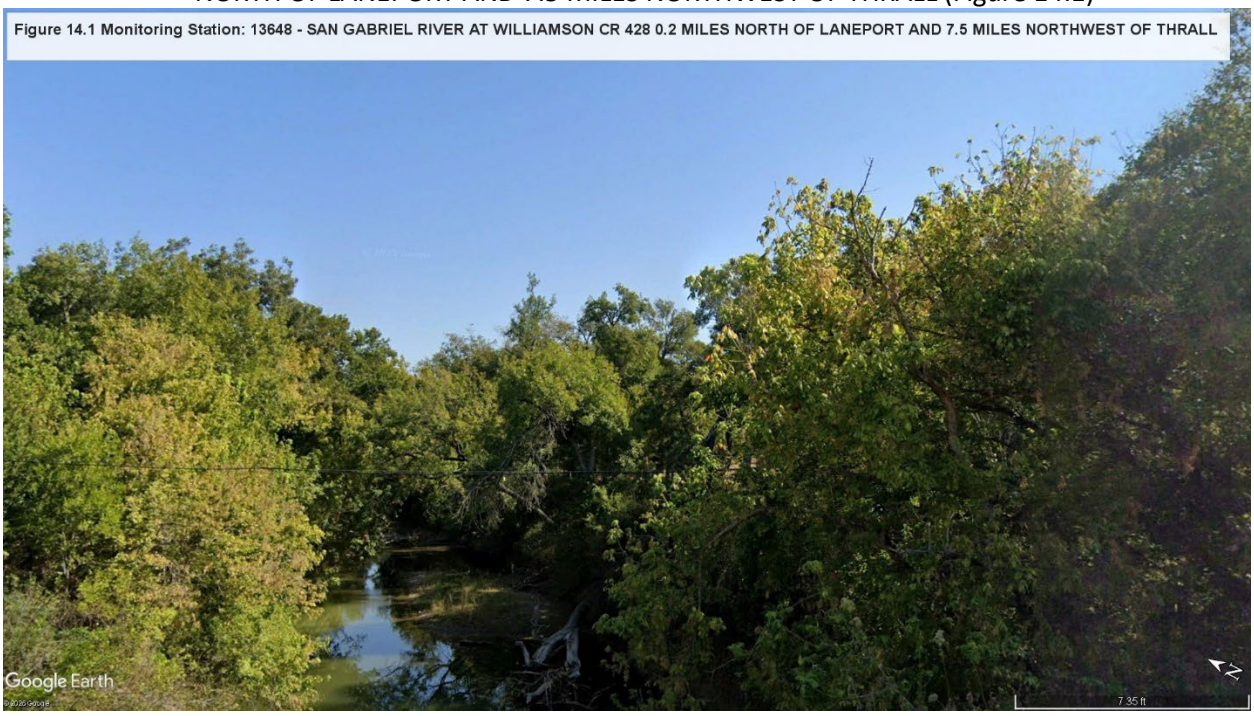
Granger Lake-San Gabriel River Watershed

Watershed Description:
The Granger Lake-San Gabriel River Watershed is 318 square miles in area.

Land Use Land Cover in Watershed (Figure 14):
There are seven cities and six wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the planted/cultivated category (≈54%), with a moderate amount of herbaceous/shrubland (≈23%). Lake Granger lies entirely within this watershed.

Segments in Watershed (Figure 14):

- 1214_01: San Gabriel River, from confluence with Little River upstream to confluence with Alligator Creek
  Monitoring Station: 17651 - SAN GABRIEL RIVER AT MILAM CR 429 SOUTH OF FM 487 NORTHWEST OF ROCKDALE
- 1214_02: San Gabriel River, from confluence with Alligator Creek upstream to Lake Granger
  Monitoring Station: 13648 - SAN GABRIEL RIVER AT WILLIAMSON CR 428 0.2 MILES NORTH OF LANEPORT AND 7.5 MILES NORTHWEST OF THRALL (Figure 14.1)



- 1247_01: Lake Granger, eastern end of lake near dam
  Monitoring Station: 12095 - LAKE GRANGER NEAR DAM 1.44 KILOMETERS NORTH AND 190 METERS WEST OF SOUTHERN EDGE OF DAM
- 1247_02: Lake Granger, Willis Creek arm of lake
  Monitoring Station: 12097 - LAKE GRANGER IN WILLIS CREEK ARM 960 METERS NORTH AND 1.91 KILOMETERS EAST OF INTERSECTION OF WILLIAMSON CR 348 AND CR 389
- 1247_03: Lake Granger, western end of lake on the San Gabriel River

Monitoring Station: 12096 - GRANGER LAKE IN SAN GABRIEL RIVER ARM NEAR HEADWATERS 7.22 KILOMETERS DOWNSTREAM OF SH 95

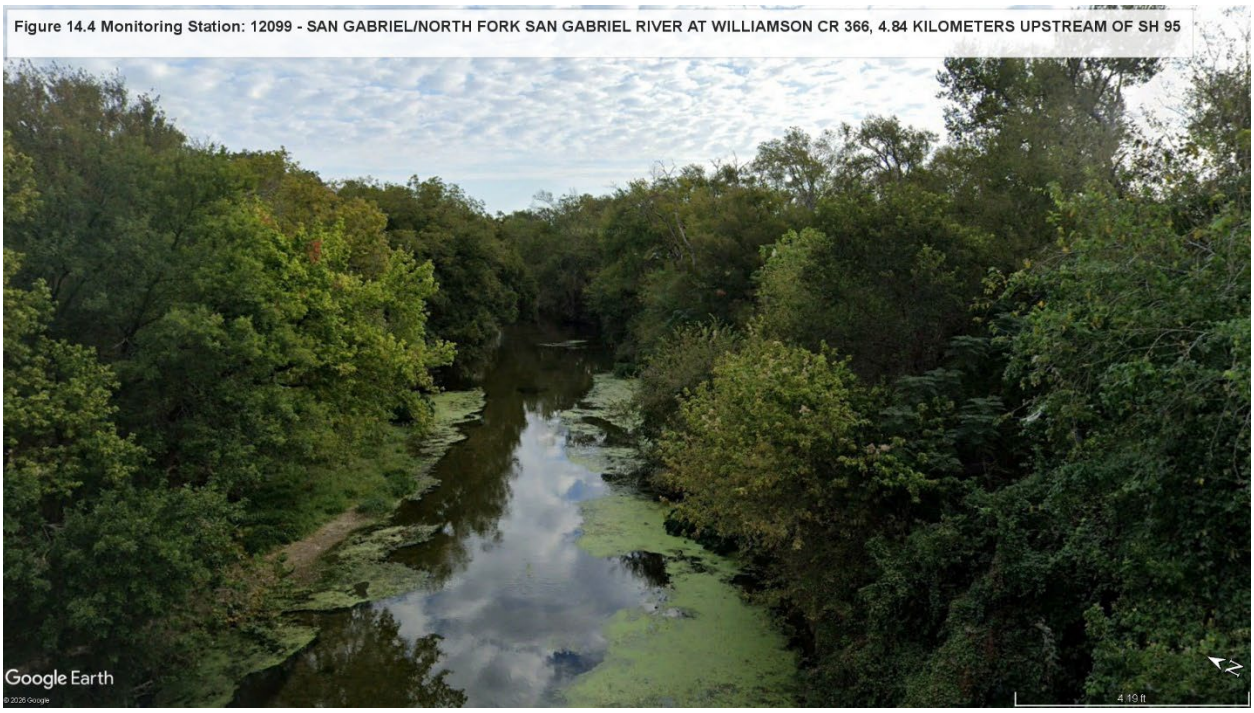
- 1247A_01: Willis Creek

  Monitoring Station: 20305 - WILLIS CREEK AT WILLIAMSON CR 236 WEST OF GRANGER 635 METERS EAST OF THE INTERSECTION OF WILLIAMSON CR 335 AND WILLIAMSON CR 326 (Figure 14.2)

- 1248_01: San Gabriel/North Fork San Gabriel River, the portion from the confluence of the South Fork San Gabriel to Granger Lake

  Monitoring Station: 12102 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER IMMEDIATELYDOWNSTREAM OF SH 29 EAST OF GEORGETOWN (Figure 14.3)

Monitoring Station: 12099 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER AT WILLIAMSON CR 366, 4.84 KILOMETERS UPSTREAM OF SH 95 (Figure 14.4)



- 1248B_01: Huddleston Branch
- 1248C_01: Mankins Branch

Monitoring Station: 13497 - MANKINS BRANCH AT WILLIAMSON CR 100 IMMEDIATELY

UPSTREAM OF THE CONFLUENCE WITH THE SAN GABRIEL RIVER (Figure 14.5)

Impairments in Watershed Description (Figure 14):

- 1247A_01: Recreational Use—Bacteria impairment
  - There is also a concern for nitrate in 1247A.
- 1248_01: General Use—Chloride and Total Dissolved Solids (TDS) impairments
  - There is also a concern for nitrate in 1248_01.
- 1248C_01: Recreational Use—Bacteria impairment
  - There are also concerns for habitat, nitrate and total phosphorus in 1248C_01. And concerns for bacteria and nitrate in 1248B_01.

Possible Contributions if Impaired:

Point Sources:

- There are seven cities and six wastewater outfalls within the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Agricultural activity accounting for approximately 54% of the watershed could contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: There is also a fair amount (≈27%) of herbaceous/shrubland and forested area in the watershed which could provide contributions from wildlife as well. A significant wildlife population can contribute to bacterial and nutrient loading.

- Urban runoff: Approximately 12% of the watershed is developed, concentrated in the upstream area of 1248 allowing for municipal and urban runoff contribution. That is an increase of 5% over the last ten years, increasing the potential for bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Georgetown
- City of Weir
- City of Jonah
- City of Circleville
- City of Granger
- City of Sharp
- City of Serenada
- Bell County
- Williamson County
- Milam County

Actions taken if impaired:

- An RUAA was completed and recommendation approved by EPA for revision to SCR1 in segment 1247A which was first listed for bacteria in 2002.
- Segment 1248 was first listed as impaired for chloride in 2010. It has been delisted and relisted several times since then. In 2012, 1248 was delisted for chloride then in 2014 was listed as impaired for chloride and TDS. In 2016 the segment was delisted for TDS and then in 2018, delisted for chloride. Most recently, 1248 was listed as impaired for chloride in 2024 and listed as impaired for TDS in 2026. No action has been taken.

Recommendations if impaired:

- Continue routine water quality data collection and assessment based on the approved SCR1 standard for 1247A. Additionally, a watershed characteristics study may be appropriate.
- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate.

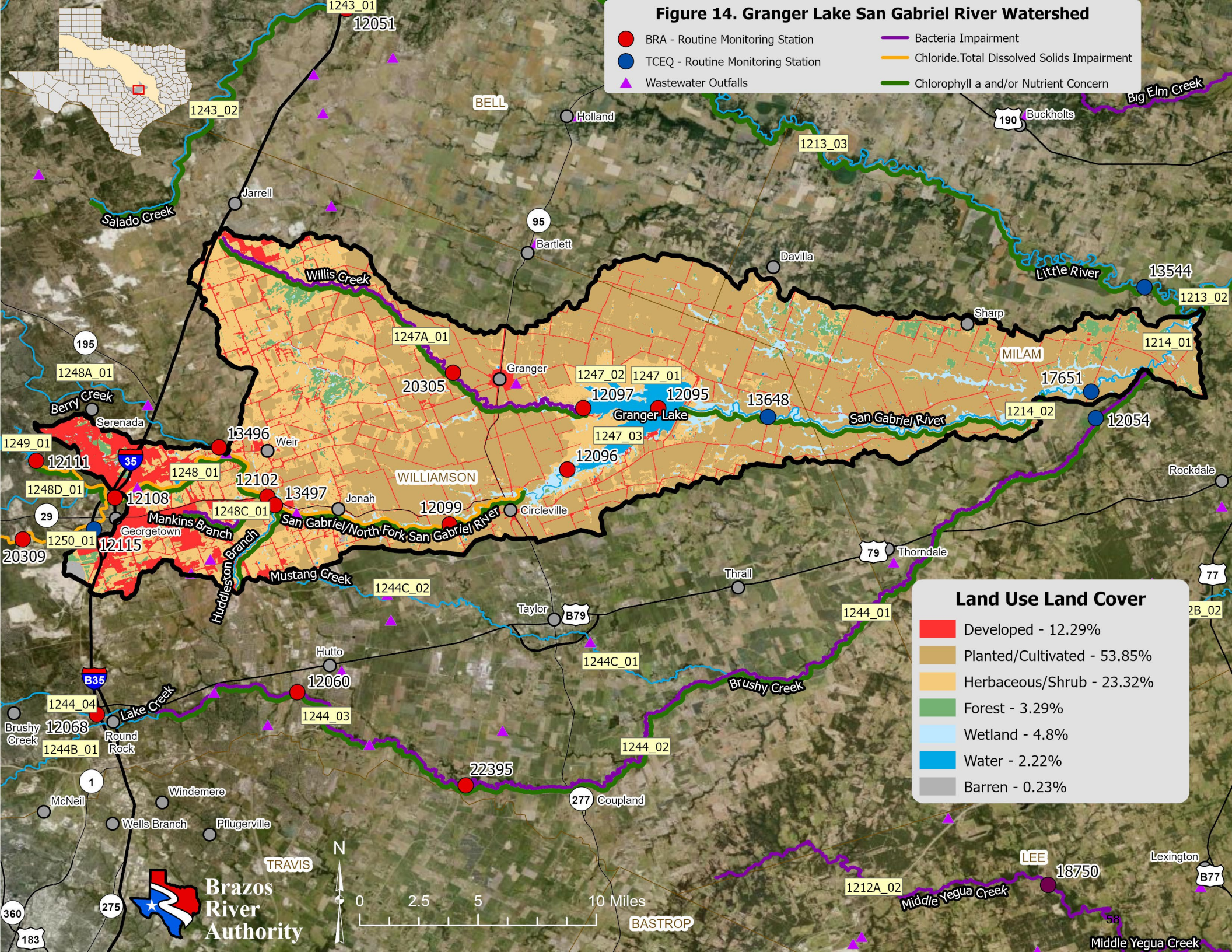


Figure 14. Granger Lake San Gabriel River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chloride.Total Dissolved Solids Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 12.29%
Planted/Cultivated - 53.85%
Herbaceous/Shrub - 23.32%
Forest - 3.29%
Wetland - 4.8%
Water - 2.22%
Barren - 0.23%
1243_01
12051
1243_02
BELL
Holland
Big Elm Creek
Buckholts
1213_03
Jarrell
Salado Creek
95
Bartlett
Davilla
Willis Creek
Little River
13544
1213_02
Sharp
1247A_01
MILAM
1214_01
195
1248A_01
Granger
1247_02
1247_01
20305
12097
12095
17651
Berry Creek
Serenada
Granger Lake
13648
San Gabriel River
1214_02
12054
1249_01
12111
13496
Weir
1247_03
12096
35
1248_01
12102
WILLIAMSON
Rockdale
1248D_01
12108
13497
Jonah
12099
Circleville
29
1248C_01
Mankins Branch
San Gabriel/North Fork San Gabriel River
1250_01
Georgetown
12115
20309
Huddleston Branch
Mustang Creek
79
Thorndale
Thrall
1244C_02
Taylor
B79
1244_01
77
Hutto
12060
1244C_01
B35
Brushy Creek
1244_04
Lake Creek
12068
1244_03
Round Rock
1244B_01
1244_02
22395
1
McNeil
Windemere
277
Coupland
Wells Branch
Pflugerville
TRAVIS
N
0
2.5
5
10 Miles
Brazos River Authority
LEE
18750
Lexington
B77
1212A_02
Middle Yegua Creek
275
360
183
BASTROP
58
Middle Yegua Creek

North Fork San Gabriel River Watershed

Watershed Description:
The North Fork San Gabriel River Watershed is 268 square miles in area.

Land Use Land Cover in Watershed (Figure 15):
There is one city and 1 wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the herbaceous/shrubland category (≈63%), with a moderate amount of forest (≈22%). Developed land cover is in the southeastern area of the watershed and coverage is ≈13%.

Segments in Watershed (Figure 15):

- 1248_01: San Gabriel/North Fork San Gabriel River, the portion from Lake Georgetown to the confluence with the South Fork San Gabriel River
  Monitoring Station: 12108 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER NORTH FORK IMMEDIATELY DOWNSTREAM OF IH 35 IN GEORGETOWN
- 1249_01: Lake Georgetown, East end of reservoir near dam
  Monitoring Station: 12111 - LAKE GEORGETOWN NEAR DAM 68 METERS NORTH AND 88 METERS EAST OF SOUTHWEST EDGE OF DAM
- 1249_02: Lake Georgetown, West end of reservoir near headwaters
  Monitoring Station: 12113 - LAKE GEORGETOWN NEAR HEADWATERS IN THE NORTH SAN GABRIEL ARM 305 METERS SOUTH AND 1.05 KILOMETERS WEST FROM THE INTERSECTION OF WILLIAMSON CR 262 AND PARK ROAD 8
- 1251_01: North Fork San Gabriel River, From confluence with Lake Georgetown in Williamson County upstream to confluence with Russell Fork San Gabriel River in Burnet County
  Monitoring Station: 12120 - NORTH FORK SAN GABRIEL RIVER AT WILLIAMSON CR 257 957 METERS DOWNSTREAM OF US 183 (Figure 15.1)

- 1251_02: North Fork San Gabriel River, From confluence with Russell Fork San Gabriel River upstream to headwaters of water body in Burnet County.

Impairments in Watershed Description (Figure 15):

- 1248_01: General Use—Chloride and Total Dissolved Solids (TDS) impairment
  - There is also a concern for nitrate in 1248_01.

Possible Contributions if Impaired:

Point Sources:

- There is one city and 1 wastewater outfall in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: Herbaceous/shrubland and forested land could provide contributions from wildlife with a coverage of approximately 85%. A significant wildlife population can contribute to bacterial and nutrient loading.
- Urban runoff near the portion of the watershed that contains the impairment: Approximately 13% of the watershed is developed, concentrated in the upstream area of 1248 allowing for municipal and urban runoff contribution.

Potential non-State Agency Stakeholders:

- City of Georgetown
- City of Liberty Hill
- City of Bertram
- Williamson County
- Burnet County

Actions taken if impaired:

- Segment 1248 was first listed as impaired for chloride in 2010. It has been delisted and relisted several times since then. In 2012, 1248 was delisted for chloride then in 2014 was listed as impaired for chloride and TDS. In 2016 the segment was delisted for TDS and then in 2018, delisted for chloride. Most recently, 1248 was listed as impaired for chloride in 2024 and listed as impaired for TDS in 2026. No action has been taken.

Recommendations if impaired:

- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate.

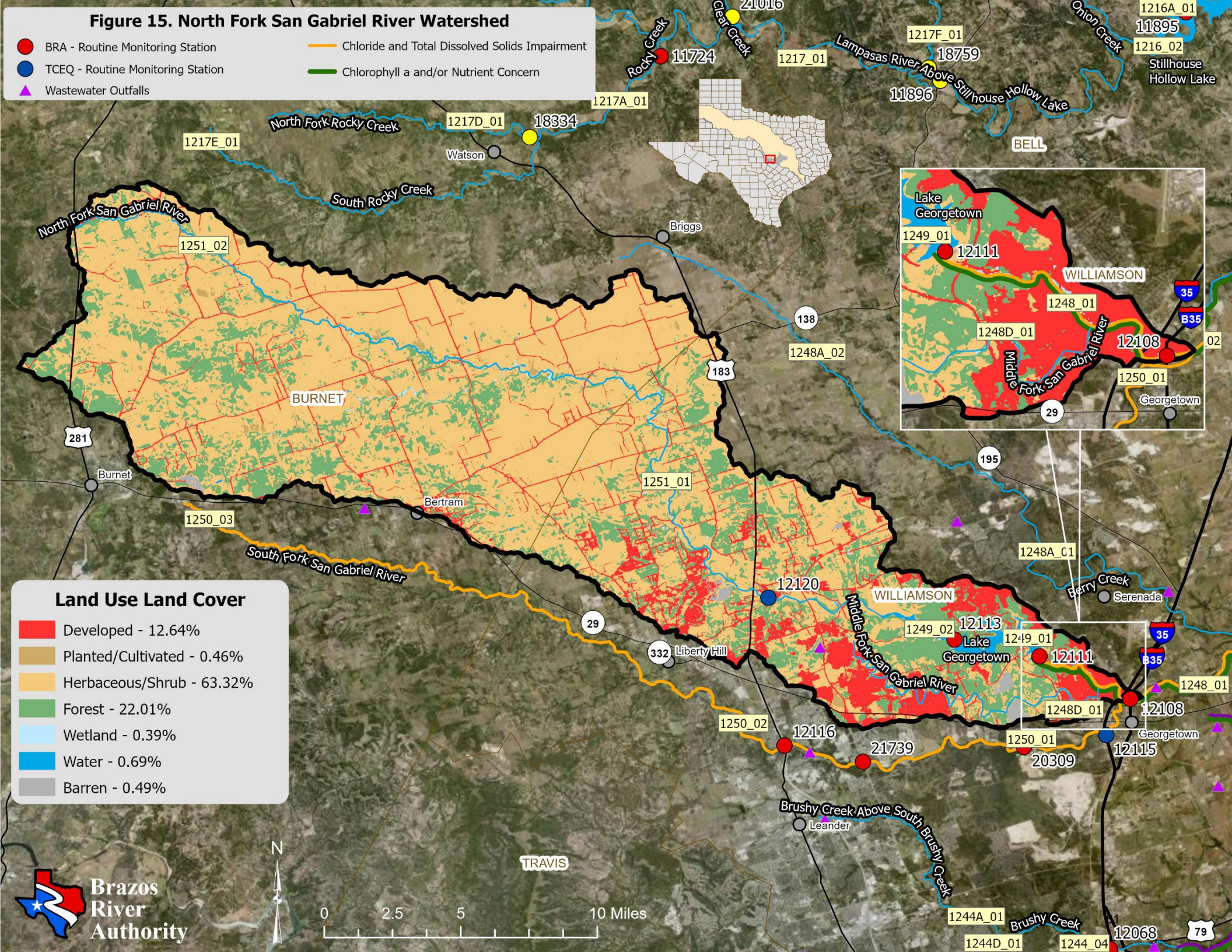


Figure 15. North Fork San Gabriel River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Chloride and Total Dissolved Solids Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 12.64%
Planted/Cultivated - 0.46%
Herbaceous/Shrub - 63.32%
Forest - 22.01%
Wetland - 0.39%
Water - 0.69%
Barren - 0.49%
North Fork San Gabriel River
South Fork San Gabriel River
Middle Fork San Gabriel River
Rocky Creek
Clear Creek
Onion Creek
Lampasas River Above Stillhouse Hollow Lake
Stillhouse Hollow Lake
North Fork Rocky Creek
South Rocky Creek
Brushy Creek Above South Brushy Creek
Berry Creek
Brushy Creek
Lake Georgetown
BURNET
WILLIAMSON
BELL
TRAVIS
Watson
Briggs
Burnet
Bertram
Liberty Hill
Serenada
Leander
Georgetown
1217F_01
1216A_01
1216_02
1217_01
1217A_01
1217D_01
1217E_01
1251_02
1251_01
1250_03
1250_02
1248A_02
1248A_01
1249_01
1249_02
1248_01
1248D_01
1250_01
1244A_01
1244D_01
1244_04
21016
11724
18759
11895
11896
18334
12111
12108
12120
12113
12116
21739
20309
12115
12068
N
0
2.5
5
10 Miles
Brazos River Authority

South Fork San Gabriel River Watershed

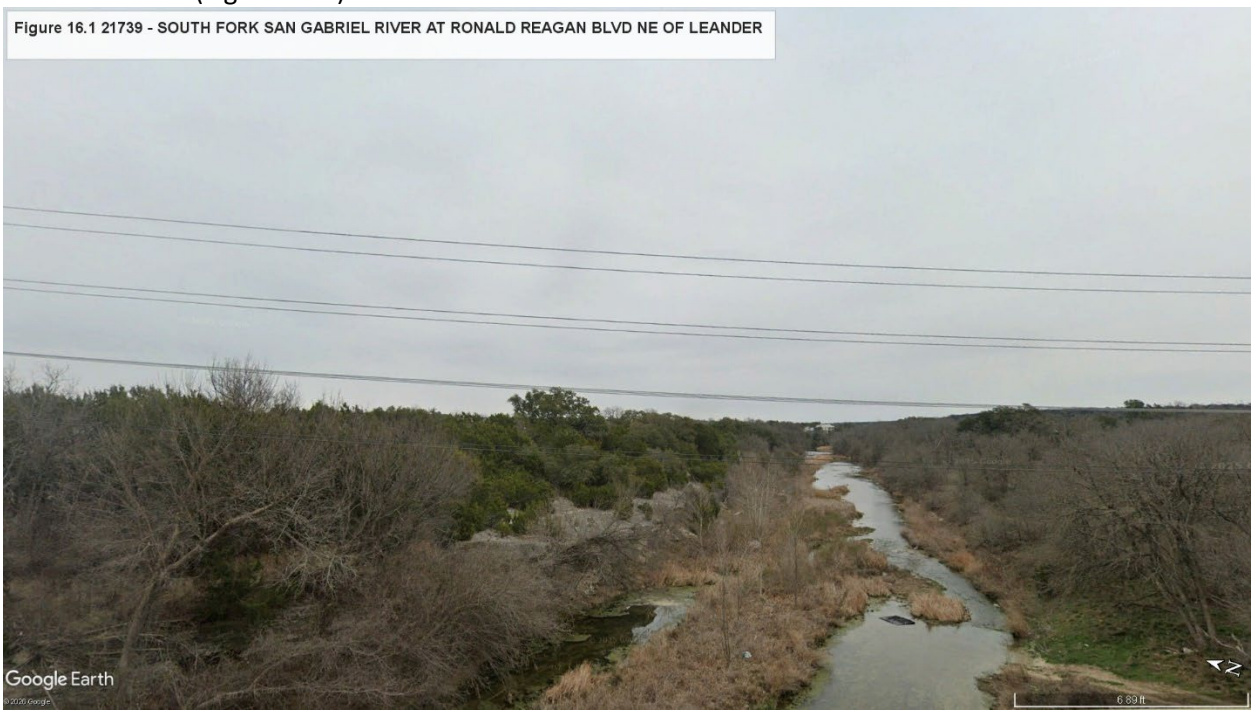
Watershed Description:
The South Fork San Gabriel River Watershed is 134 square miles in area.

Land Use Land Cover in Watershed (Figure 16):
There are 3 cities and 2 wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the herbaceous/shrubland (≈49%) and forest (≈28%). Developed land coverage is high as well with ≈21% of the watershed in the developed category.

Segments in Watershed (Figure 16):

- 1250_01: South Fork San Gabriel River, from the confluence with the San Gabriel River upstream to confluence with unnamed tributary.

  Monitoring Stations:
  12115 - SOUTH FORK SAN GABRIEL RIVER AT IH 35 IN GEORGETOWN
  20309 - SOUTH FORK SAN GABRIEL RIVER 1.44 KM NORTH AND 1.80 KM WEST OF THE INTERSECTION OF WEIR RANCH ROAD AND LEANDER RANCH ROAD / RR 2243
  21739 - SOUTH FORK SAN GABRIEL RIVER AT RONALD REAGAN BLVD NE OF LEANDER (Figure 16.1)



- 1250_02: South Fork San Gabriel River, from the confluence with unnamed tributary upstream to unnamed tributary

  Monitoring Station: 12116 - SOUTH FORK SAN GABRIEL RIVER AT US 183

- 1250_03: South Fork San Gabriel River, from the confluence with unnamed tributary upstream to headwaters of water body

Impairments in Watershed Description (Figure 16):

- 1250_01: General Use—Chloride and Total Dissolved Solids (TDS) impairments
- 1250_02: General Use—Chloride and Total Dissolved Solids (TDS) impairments
- 1250_03: General Use—Chloride and Total Dissolved Solids (TDS) impairments
  - There is also a concern for depressed dissolved oxygen in 1250_03.

Possible Contributions if Impaired:

Point Sources:

- There are 3 cities and 2 wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Urban runoff: Concentrated in the central/eastern, downstream portion, approximately 21% of the watershed is developed, allowing for municipal and urban runoff contribution, potentially introducing bacterial and nutrient loads.
- Wildlife: Herbaceous/shrubland and forested land could provide contributions from wildlife with a coverage of approximately 77%. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Georgetown
- City of Leander
- City of Liberty Hill
- City of Bertram
- Williamson County
- Burnet County

Actions taken if impaired:

- Segment 1250 was first listed as impaired in 2024 for TDS and in 2026 for Chloride. No action has been taken.

Recommendations if impaired:

- Continue routine monitoring of the established long-term stations in this watershed.

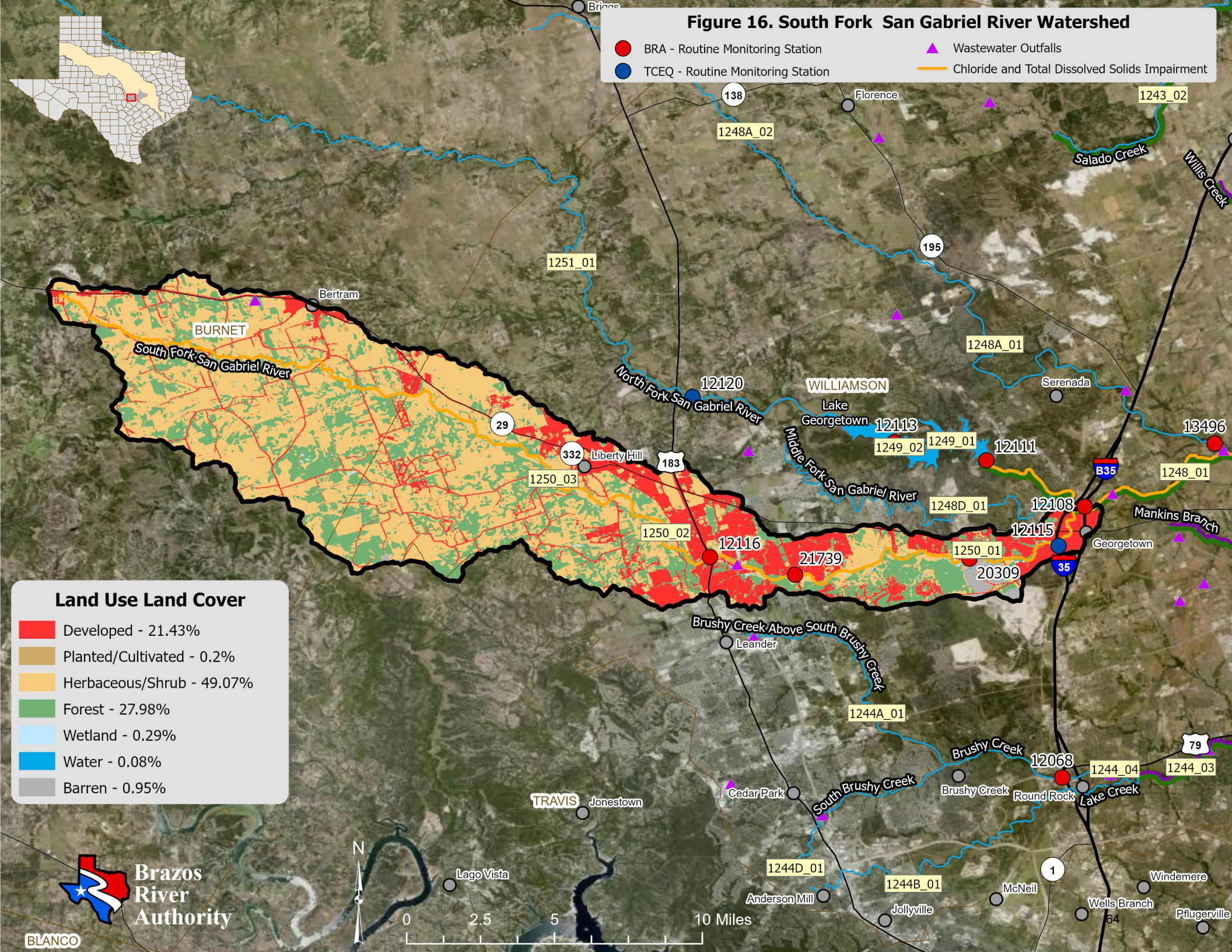


Figure 16. South Fork San Gabriel River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Chloride and Total Dissolved Solids Impairment
Land Use Land Cover
Developed - 21.43%
Planted/Cultivated - 0.2%
Herbaceous/Shrub - 49.07%
Forest - 27.98%
Wetland - 0.29%
Water - 0.08%
Barren - 0.95%
South Fork San Gabriel River
North Fork San Gabriel River
Middle Fork San Gabriel River
Brushy Creek Above South Brushy Creek
Brushy Creek
South Brushy Creek
Salado Creek
Willis Creek
Mankins Branch
Lake Creek
Lake Georgetown
BURNET
WILLIAMSON
TRAVIS
BLANCO
Bertram
Liberty Hill
Florence
Serenada
Georgetown
Leander
Cedar Park
Round Rock
Jonestown
Lago Vista
Anderson Mill
Jollyville
McNeil
Windemere
Wells Branch
Pflugerville
12120
12113
12111
13496
12108
12115
12116
21739
20309
12068
1248A_02
1243_02
1251_01
1248A_01
1249_02
1249_01
1248_01
1248D_01
1250_03
1250_02
1250_01
1244A_01
1244_04
1244_03
1244D_01
1244B_01
138
195
29
332
183
35
B35
79
1
64
Brazos River Authority
N
0
2.5
5
10 Miles

Turkey Creek-Brushy Creek Watershed

Watershed Description:
The Turkey Creek-Brushy Creek Watershed is 520 square miles in area.

Land Use Land Cover in Watershed (Figure 17):
There are 12 cities and 13 wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the planted/cultivated category, with a moderate amount of herbaceous/shrubland and developed land and also a smaller amount of forested upland.

Segments in Watershed (Figure 17):

- 1244_01: Brushy Creek, from confluence with San Gabriel upstream to confluence with Mustang Creek

  Monitoring Station: 12054 - BRUSHY CREEK AT FM 908 NORTHWEST OF ROCKDALE (Figure 17.1)

- 1244_02: Brushy Creek, from confluence with Mustang Creek upstream to confluence with Cottonwood Branch

  Monitoring Station: 22395 - BRUSHY CREEK IMMEDIATELY UPSTREAM OF FM 973 (Figure 17.2)

- 1244_03: Brushy Creek, from confluence with Cottonwood Branch upstream to City of Round Rock WWTP outfall

  Monitoring Station: 12060 - BRUSHY CREEK IMMEDIATELY DOWNSTREAM OF FM 685
- 1244_04: Brushy Creek, from immediately upstream of City of Round Rock WWTP outfall upstream to end of segment

  Monitoring Station: 12068 - BRUSHY CREEK IMMEDIATELY DOWNSTEAM OF CHISOLM TRAIL RD (Figure 17.3)

- 1244A_01: Brushy Creek above South Brushy Creek (unclassified water body)
- 1244B_01: Lake Creek
- 1244C_01: Mustang Creek from the confluence with Brushy Creek upstream to the confluence of North Fork Mustang Creek
- 1244C_02: Mustang Creek, from the confluence of North Fork Mustang Creek upstream to the headwaters 2.5 km east of TX 130
- 1244D_01: South Brushy Creek

Impairments in Watershed Description (Figure 17):

- 1244_01: Recreational Use—Bacteria impairment
- 1244_02: Recreational Use—Bacteria impairment
- 1244_03: Recreational Use—Bacteria impairment
    - There are also concerns for nitrate in all 1244 AUs.

Possible Contributions if Impaired:

Point Sources:

- There are 12 cities and 13 wastewater outfalls. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Urban runoff: Concentrated in the western, upstream portion, approximately 30% of the watershed is developed allowing for municipal and urban runoff contribution. That is a 10% increase over the last ten years, increasing the potential for bacterial and nutrient loading.
- Agricultural runoff: Agricultural activity accounting for approximately 50% of the eastern portion of the watershed could contribute to runoff, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.

Potential non-State Agency Stakeholders:

- City of Leander
- City of Cedar Park
- City of Brushy Creek
- City of Round Rock
- City of Anderson Mill
- City of Jollyville
- City of McNeil
- City of Hutto
- City of Taylor
- City of Coupland
- City of Thrall
- City of Thorndale
- Williamson County
- Milan County
- Bastrop County

Actions taken if impaired:

- An RUAA was conducted in segment 1244 and results led to the recommendation that the segment remain classified as a PCR segment.
- Between 2022 and 2026 water quality and streamflow data were collected at two locations within the watershed and the Brushy Creek Characterization project was completed in August 2025. These efforts provided the essential data and technical foundations needed for the Brushy Creek Watershed Protection Plan development that began in February 2026.

Recommendations if impaired:

- Await stakeholder completion and EPA review and approval of the Brushy Creek Watershed Protection Plan.

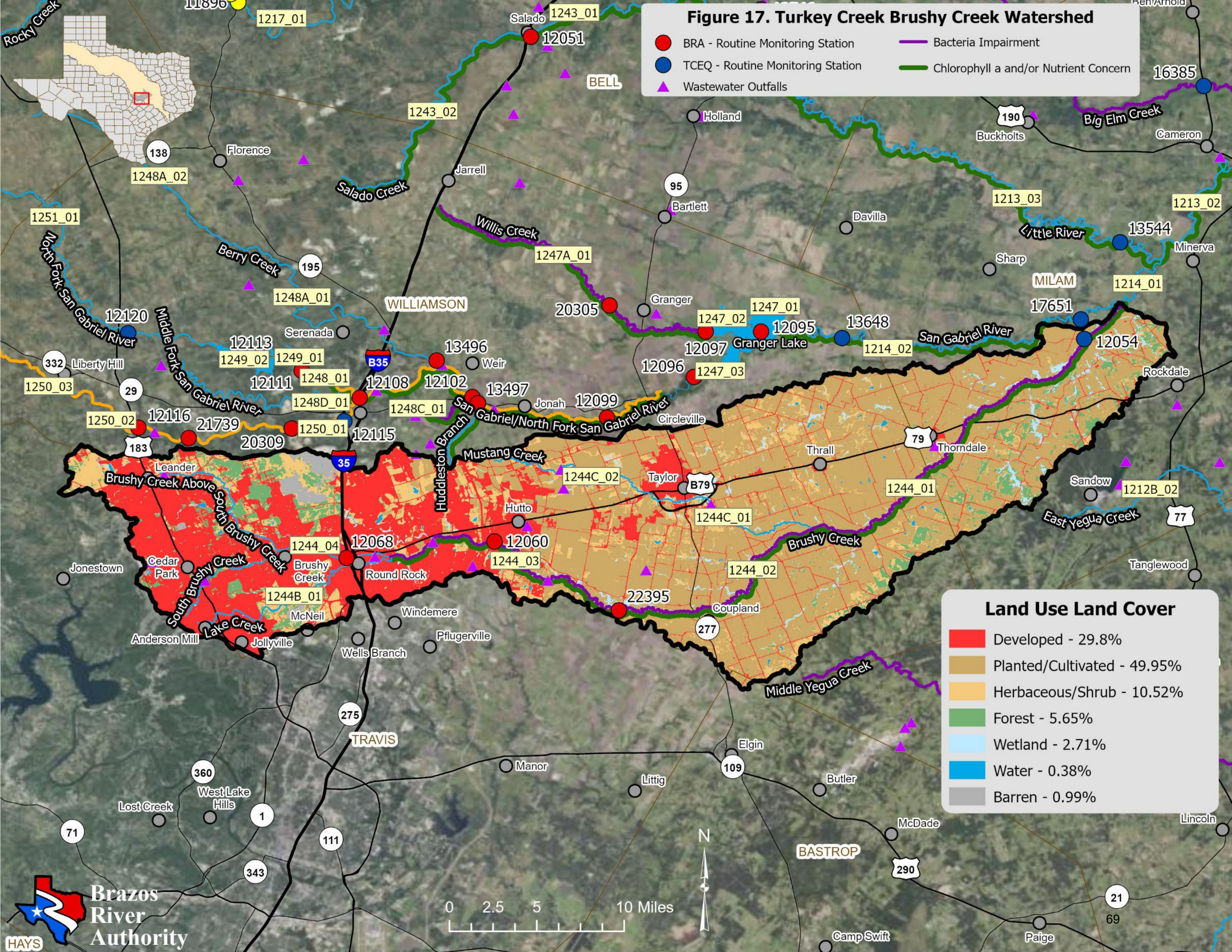
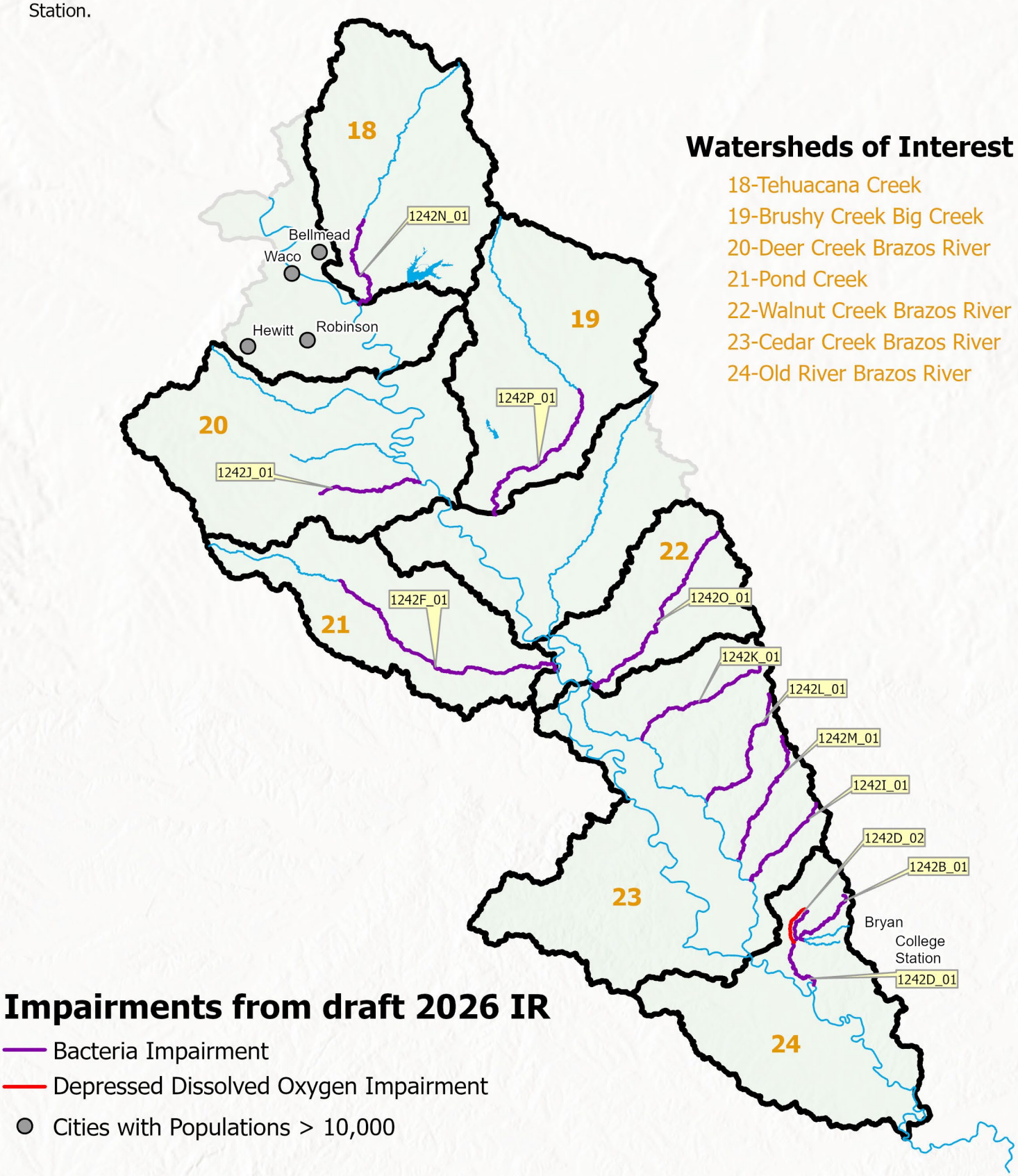


Figure 17. Turkey Creek Brushy Creek Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 29.8%
Planted/Cultivated - 49.95%
Herbaceous/Shrub - 10.52%
Forest - 5.65%
Wetland - 2.71%
Water - 0.38%
Barren - 0.99%
Brushy Creek
San Gabriel River
Granger Lake
Little River
Middle Yegua Creek
East Yegua Creek
Big Elm Creek
Willis Creek
Berry Creek
Salado Creek
Mustang Creek
Huddleston Branch
Lake Creek
South Brushy Creek
Brushy Creek Above South Brushy Creek
North Fork San Gabriel River
Middle Fork San Gabriel River
San Gabriel/North Fork San Gabriel River
BELL
WILLIAMSON
MILAM
TRAVIS
BASTROP
HAYS
Taylor
Hutto
Round Rock
Thrall
Thorndale
Rockdale
Coupland
Granger
Leander
Cedar Park
Elgin
0 2.5 5 10 Miles
N
Brazos River Authority

Central Watershed of the Brazos River

The Central Watershed of the Brazos River drains approximately 2,710 square miles from Lake Brazos Dam in Waco to the mouth of the Navasota River southeast of College Station through Falls, Burleson, Robertson, and portions of McLennan and Brazos Counties. Land usage is primarily agricultural, with two sizeable urban areas, Waco and Bryan/College Station.



Watersheds of Interest

- 18-Tehuacana Creek
- 19-Brushy Creek Big Creek
- 20-Deer Creek Brazos River
- 21-Pond Creek
- 22-Walnut Creek Brazos River
- 23-Cedar Creek Brazos River
- 24-Old River Brazos River

Impairments from draft 2026 IR

- Bacteria Impairment
- Depressed Dissolved Oxygen Impairment
- Cities with Populations > 10,000

Brazos River Authority

0 10 20 40 Miles

N

Tehuacana Creek Watershed

Watershed Description:
The Tehuacana Creek Watershed is approximately 300 square miles in area.

Land Use Land Cover in Watershed (Figure 18):
There are eleven cities and three wastewater discharges, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is planted/cultivated (≈60%) with the next most dominant landcover being herbaceous/shrub (≈20%). There is a moderate amount of development in the watershed (≈10%). Tradinghouse Reservoir lies within the watershed. The reservoir is used for industrial and recreational purposes.

Segments in Watershed (Figure 18):

- 1242H_01: Impounded Tradinghouse Creek, within the city of Hallsburg, McLennan County
  Monitoring Station: 18457 - TRADINGHOUSE CREEK RESERVOIR
- 1242N_01: Downstream portion of water body, from confluence with Brazos River upstream to confluence with Little Tehuacana Creek
  Monitoring Station: 11609 - TEHUACANA CREEK AT OLD MARLIN
- 1242N_02: Upstream portion, from confluence with Little Tehuacana Creek upstream to headwaters

Impairments in Watershed Description (Figure 18):

- 1242N_01: Recreational Use—Bacteria
  - There are concerns for chlorophyll-*a*, nitrate, total phosphorus in 1242N_01.

Possible Contributions if Impaired:

Point Sources:

- There are eleven cities and three wastewater discharges in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: About 60% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Herbaceous/shrubland and forested land could provide contributions from wildlife with a coverage of approximately 23%. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Abbott
- City of West
- City of Ross
- City of Leroy

- City of Northcrest
- City of Lacy-Lakeview
- City of Belmead
- City of Waco
- City of Hallsburg
- McLennan County
- Hill County
- Limestone County
- Sanderson Farms Inc
- Methodist Children's Home
- Tradinghouse Power Co LLC
- Luminant Generation Co LLC
- Any marinas or other businesses on or that serve Tradinghouse Reservoir

Actions taken if impaired:

- The Tehuacana Creek Monitoring and Characterization project began in 2024.

Recommendations if impaired:

- Review results of the Tehuacana Creek Monitoring and Characterization project.

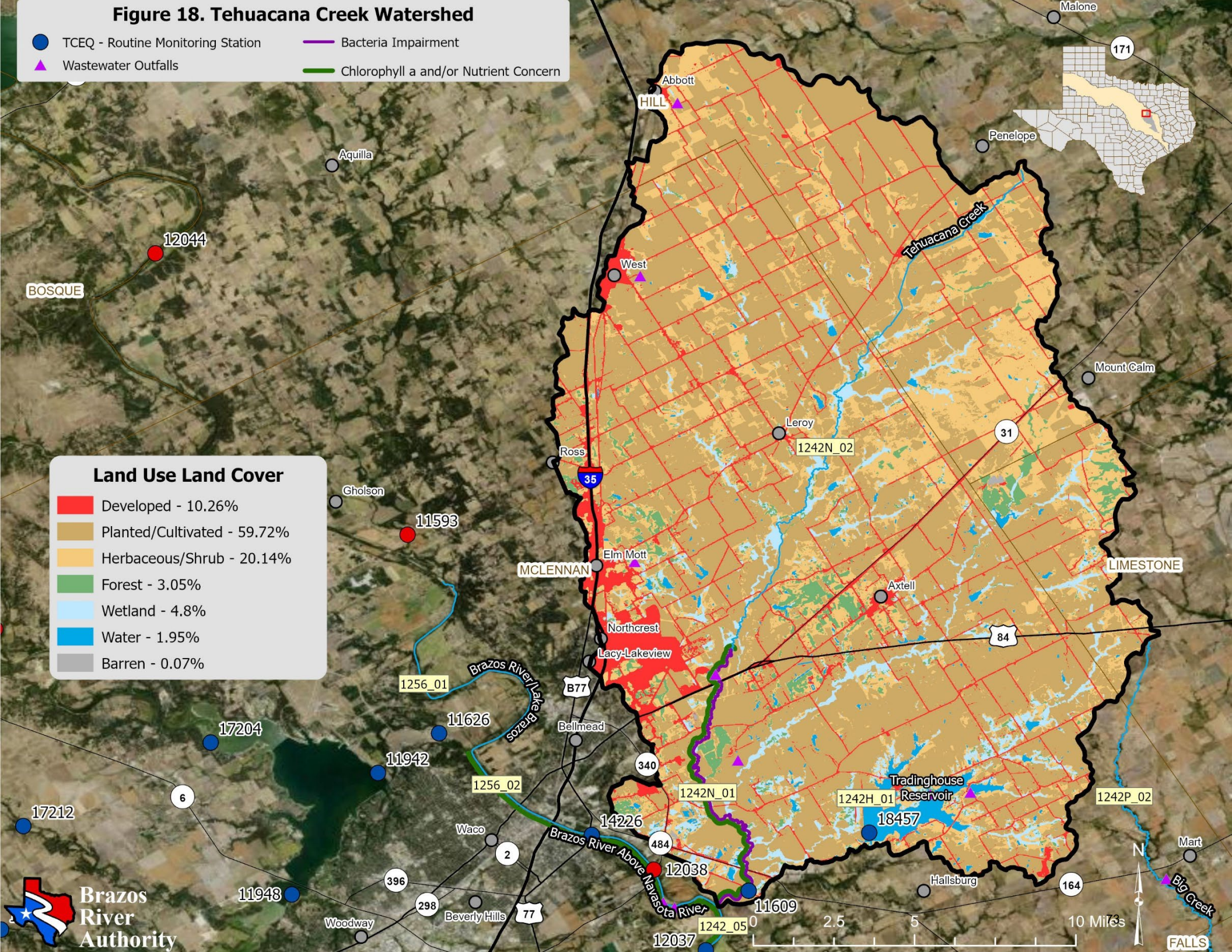


Figure 18. Tehuacana Creek Watershed
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 10.26%
Planted/Cultivated - 59.72%
Herbaceous/Shrub - 20.14%
Forest - 3.05%
Wetland - 4.8%
Water - 1.95%
Barren - 0.07%
Tehuacana Creek
Brazos River/Lake Brazos
Brazos River Above Navasota River
Tradinghouse Reservoir
1242N_02
1242N_01
1242H_01
1242P_02
1256_01
1256_02
1242_05
12044
11593
11626
17204
11942
17212
14226
12038
11948
11609
12037
18457
HILL
MCLENNAN
LIMESTONE
BOSQUE
FALLS
Abbott
Aquilla
Penelope
Malone
West
Ross
Leroy
Mount Calm
Gholson
Elm Mott
Axtell
Northcrest
Lacy-Lakeview
Bellmead
Waco
Woodway
Beverly Hills
Hallsburg
Mart
Big Creek
35
31
84
B77
340
484
6
2
396
298
77
164
171
N
0
2.5
5
10 Miles
Brazos River Authority

Brushy Creek-Big Creek Watershed

Watershed Description:
The Brushy Creek-Big Creek Watershed is approximately 312 square miles in area.

Land Use Land Cover in Watershed (Figure 19):
There are five cities and one wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Two reservoirs comprising The Marlin City Lake System are within the watershed. Dominant landcover is the planted/cultivated category (≈73%) with the next most dominant landcover being herbaceous/shrub (≈11%). There was significant change in land use in this watershed with ≈14% increase in the planted/cultivated category and ≈16% decrease in herbaceous/shrub area.

Segments in Watershed (Figure 19):

- Brushy Creek
- 1242A_01: Old Marlin City Lake
- 1242A_02: New Marlin City Lake
  Monitoring Station: 16781 - NEW MARLIN CITY LK NR DAM 253 M N AND 375 METERS W OF INTERSECTION OF MARLIN AIRPORT RD AND FM 147/MCLANAHAN RD 3.6 KM NE OF MARLIN
- 1242P_01: Downstream portion of Big Creek
  Monitoring Station: 16400 - BIG CREEK IMMEDIATELY UPSTREAM OF SH 6 SOUTH OF MARLIN (Figure 19.1)

- 1242P_02: Upstream portion of Big Creek, including confluence with City of Mart WWTP rec. water

Impairments in Watershed Description (Figure 19):

- 1242P_01: Recreational Use—Bacteria impairment

Possible Contributions if Impaired:

Point Sources:

- There are five cities and one wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 73% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Herbaceous/shrubland, forested land and wetland areas could provide contributions from wildlife with a coverage of approximately 20% combined. A large portion of these land coverages is along the banks of 1242P_01 as well, providing attractive habitat near the stream. A significant wildlife population can contribute to bacterial and nutrient loading. It is noted that in the 2011 edition of National Land Cover Data classification (NLCD), much of the area adjacent to 1242P_01 was classified as forested and in this most current land coverage data set, the 2024 edition of NLCD, that area is classified as wetland.

Potential non-State Agency Stakeholders:

- City of Mart
- City of Ben Hur
- City of Otto
- City of Perry
- City of Marlin
- McLennan County
- Falls County
- Limestone County
- Any marinas or other businesses on or that serve Marlin City Lake System

Actions taken if impaired:

- An RUAA was completed for 1242P_01. TCEQ recommended the contact recreation use on 1242P be revised to secondary contact recreation 1. The recreational use change on 1242P is awaiting EPA action.

Recommendations if impaired:

- Await EPA action on recreational use change recommendation for 1242P.

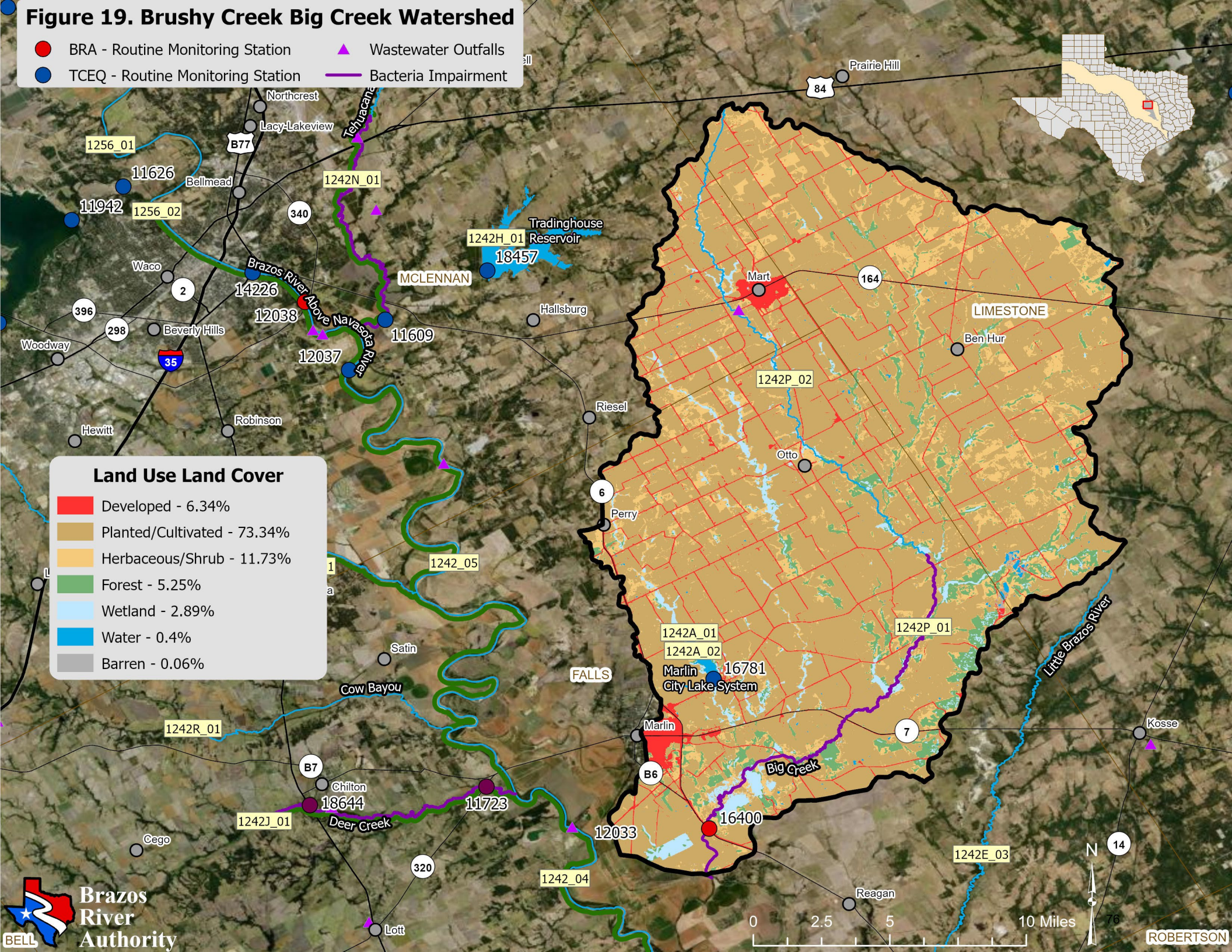


Figure 19. Brushy Creek Big Creek Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Land Use Land Cover
Developed - 6.34%
Planted/Cultivated - 73.34%
Herbaceous/Shrub - 11.73%
Forest - 5.25%
Wetland - 2.89%
Water - 0.4%
Barren - 0.06%
1256_01
1256_02
1242N_01
1242H_01
1242P_02
1242P_01
1242A_01
1242A_02
1242_05
1242_04
1242R_01
1242J_01
1242E_03
11626
11942
14226
12038
12037
11609
18457
16781
18644
11723
12033
16400
Tradinghouse Reservoir
Brazos River Above Navasota River
Tehuacana
Deer Creek
Cow Bayou
Big Creek
Little Brazos River
Marlin City Lake System
MCLENNAN
LIMESTONE
FALLS
Northcrest
Lacy-Lakeview
Bellmead
Waco
Beverly Hills
Woodway
Hewitt
Robinson
Hallsburg
Riesel
Mart
Ben Hur
Otto
Perry
Prairie Hill
Satin
Chilton
Cego
Lott
Marlin
Kosse
Reagan
B77
B7
B6
84
340
396
298
2
35
6
164
7
320
14
0
2.5
5
10 Miles
N
Brazos River Authority
BELL
ROBERTSON

Deer Creek-Brazos River Watershed

Watershed Description:
The Deer Creek-Brazos River Watershed is approximately 378 square miles in area.

Land Use Land Cover in Watershed (Figure 20):
There are twelve cities and five wastewater discharges, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈54%) with the next most dominant landcover being herbaceous/shrub (≈29%).

Segments in Watershed (Figure 20):

- Upstream portion of 1242_04: Portion of Brazos River from confluence with Pond Creek in Milam County upstream to confluence with Deer Creek in Falls County.
- Downstream portion of 1242_05: Portion of Brazos River from confluence with Deer Creek in Falls County upstream to confluence with Tehuacana Creek in McLennan County
- 1242J_01: Deer Creek, an Appendix D perennial stream from the confluence of the Brazos River upstream to the confluence of Dog Branch northwest of Lott
    Monitoring Station: 11723 - DEER CREEK IMMEDIATELY DOWNSTREAM OF SH 320 WEST OF MARLIN (Figure 20.1)

    Monitoring Station: 18644 - DEER CREEK AT US 77
- 1242Q_01: Portion of Bull Hide Creek from the confluence with the Brazos River in Falls County upstream to the confluence with unnamed tributary (NHD RC 12070101002570) in McLennan County.

- 1242Q_02: Portion of Bull Hide Creek from the confluence with unnamed tributary (NHD RC 12070101002570) upstream to the headwaters.
- 1242R_01: Cow Bayou, from the confluence with the Brazos River above Navasota River upstream to the confluence with North / South Cow Bayou in Falls County.

Impairments in Watershed Description (Figure 20):

- 1242J_01: Recreational Use—Bacteria impairment
  - There are concerns for nitrate and the macrobenthic community in 1245J_01.
  - There are also concerns for chlorophyll-*a* in 1242_04 and 1242_05 with additional concerns for nitrate in 1245_05 and 1242Q_01.

Possible Contributions if Impaired:

Point Sources:

- There are twelve cities and five wastewater discharges in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Over 50% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Herbaceous/shrubland and forested land could provide contributions from wildlife with a coverage of approximately 32%. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City Hewitt
- City of Hallsburg
- City of Lorena
- City of Golinda
- City of Satin
- City of Perry
- City of Bruceville-Eddy
- City of Eddy
- City of Cego
- City of Chilton
- City of Marlin
- City of Lott
- McLennan County
- Falls County
- Bell County

Actions taken if impaired:

- An RUAA was conducted in segment 1242J_01 and results led to the recommendation that the segment remain classified as a PCR segment.

- Several data collection initiatives have occurred that included 1242J_01
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (May 2020), Characterizing the Middle Yegua, Davidson Creek and Deer Creek Watersheds Final Report (May 2020),
    - Continued Surface Water Quality Monitoring for Middle Yegua Creek, Davidson Creek and Deer Creek Watersheds Final Report (February 2022),
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (October 2022),
    - Deer and Pond Creeks Surface Water Quality Monitoring and Education Effectiveness Final Report and Data (May 2024)

Recommendations if impaired:

- Utilizing data acquired in the various watershed characterization studies, development of a Watershed Protection Plan (WPP) may be appropriate.

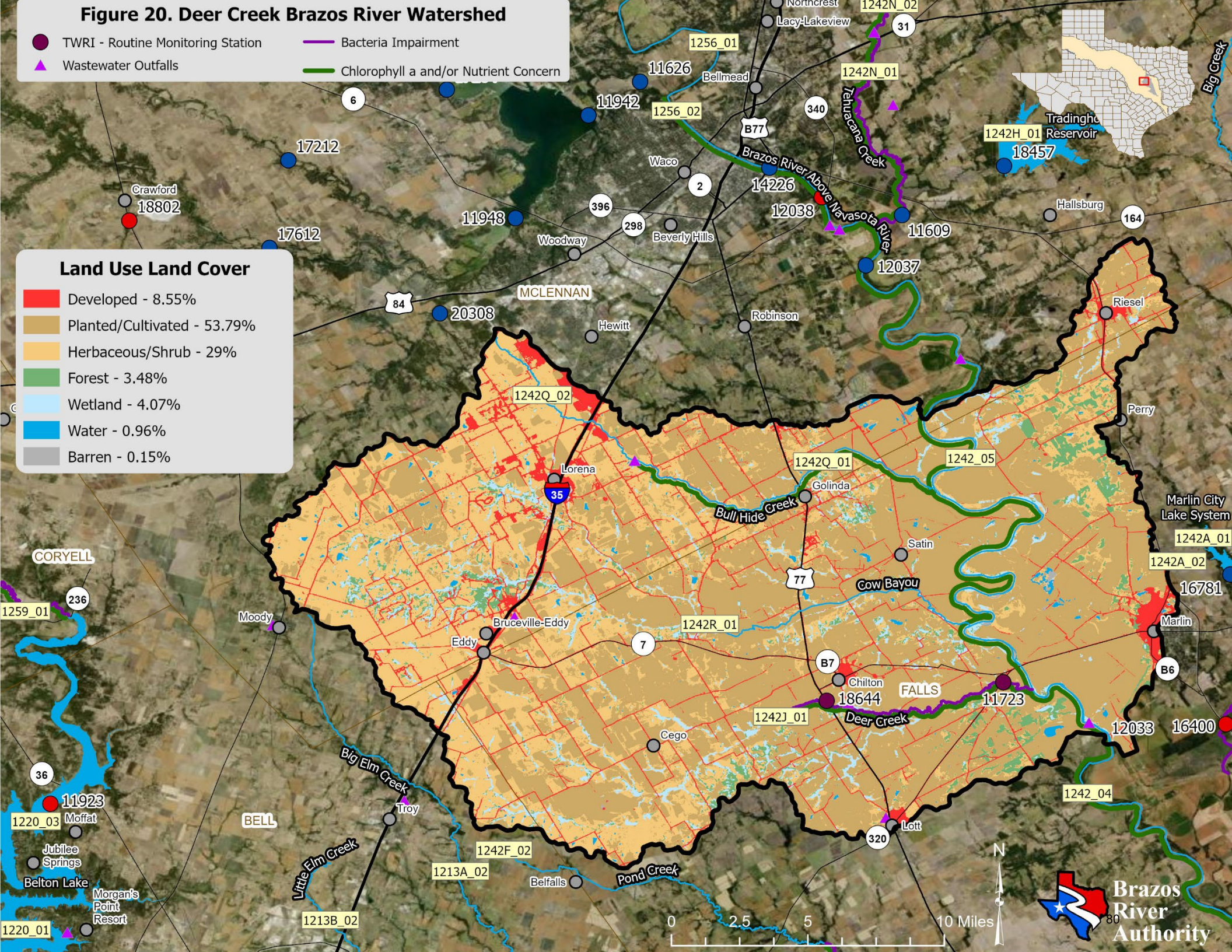


Figure 20. Deer Creek Brazos River Watershed
TWRI - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 8.55%
Planted/Cultivated - 53.79%
Herbaceous/Shrub - 29%
Forest - 3.48%
Wetland - 4.07%
Water - 0.96%
Barren - 0.15%
1242N_02
Lacy-Lakeview
1256_01
11626
Bellmead
1242N_01
11942
1256_02
Tehuacana Creek
Big Creek
Tradinghouse Reservoir
1242H_01
18457
17212
Waco
Brazos River Above Navasota River
14226
12038
11609
Hallsburg
Crawford
18802
11948
Woodway
Beverly Hills
17612
12037
MCLENNAN
20308
Hewitt
Robinson
Riesel
1242Q_02
Perry
1242Q_01
1242_05
Lorena
Golinda
Bull Hide Creek
Marlin City Lake System
1242A_01
Satin
1242A_02
CORYELL
Cow Bayou
16781
1259_01
Moody
Bruceville-Eddy
1242R_01
Marlin
Eddy
B7
B6
Chilton
18644
FALLS
11723
1242J_01
Deer Creek
12033
16400
Cego
Big Elm Creek
1242_04
11923
1220_03
Moffat
Troy
BELL
Lott
Jubilee Springs
1242F_02
Little Elm Creek
1213A_02
Belfalls
Pond Creek
Belton Lake
Morgan's Point Resort
1213B_02
1220_01
N
0
2.5
5
10 Miles
Brazos River Authority

Pond Creek Watershed

Watershed Description:
The Pond Creek Watershed is approximately 229 square miles in area.

Land Use Land Cover in Watershed (Figure 21):
There are three cities and two wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈84%).

Segments in Watershed (Figure 21):

- 1242F_01: Pond Creek from the Brazos confluence upstream to Live Oak Creek confluence.
  Monitoring Station: 16406 - POND CREEK AT FM 2027 4.0 KILOMETERS SOUTH OF BAILEYVILLE
  Monitoring Station: 22204 - POND CREEK UPSTREAM OF SH 53 (Figure 21.1)

Figure 21.1 Monitoring Station: 22204 - POND CREEK UPSTREAM OF SH 53

- 1242F_02: Pond Creek from the Live Oak Creek confluence to the headwaters 0.18 km north of FM 935 in Bell County.

Impairments in Watershed Description (Figure 21):

- 1242F_01: Recreational Use—Bacteria impairment
  - There is a concern for nitrate in 1242F_01

Possible Contributions if Impaired:
Point Sources:

- There are three cities and two wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer

systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: The planted/cultivated category accounts for ≈84% of the land use in the watershed. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 10% of the watershed has land cover suitable for wildlife. Immediately upstream of monitoring station 16406 is the majority of the forested land in this watershed. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Belfalls
- City of Rosebud
- City of Lott
- Westphalia Water & Sewer Supply Corp
- Bell County
- Falls County
- Milam County

Actions taken if impaired:

- An RUAA was conducted in segment 1242F_01 and results led to the recommendation that the segment remain classified as a PCR segment.
- Several data collection initiatives have occurred that included 1242F_01
    - Deer and Pond Creeks Surface Water Quality Monitoring and Education Effectiveness Final Report and Data (May 2024)
    - Continued Monitoring on Deer and Pond Creeks to Support Watershed Characterization (March 2026)

Recommendations if impaired:

- Utilizing data acquired in the various watershed characterization studies, development of a Watershed Protection Plan (WPP) may be appropriate.

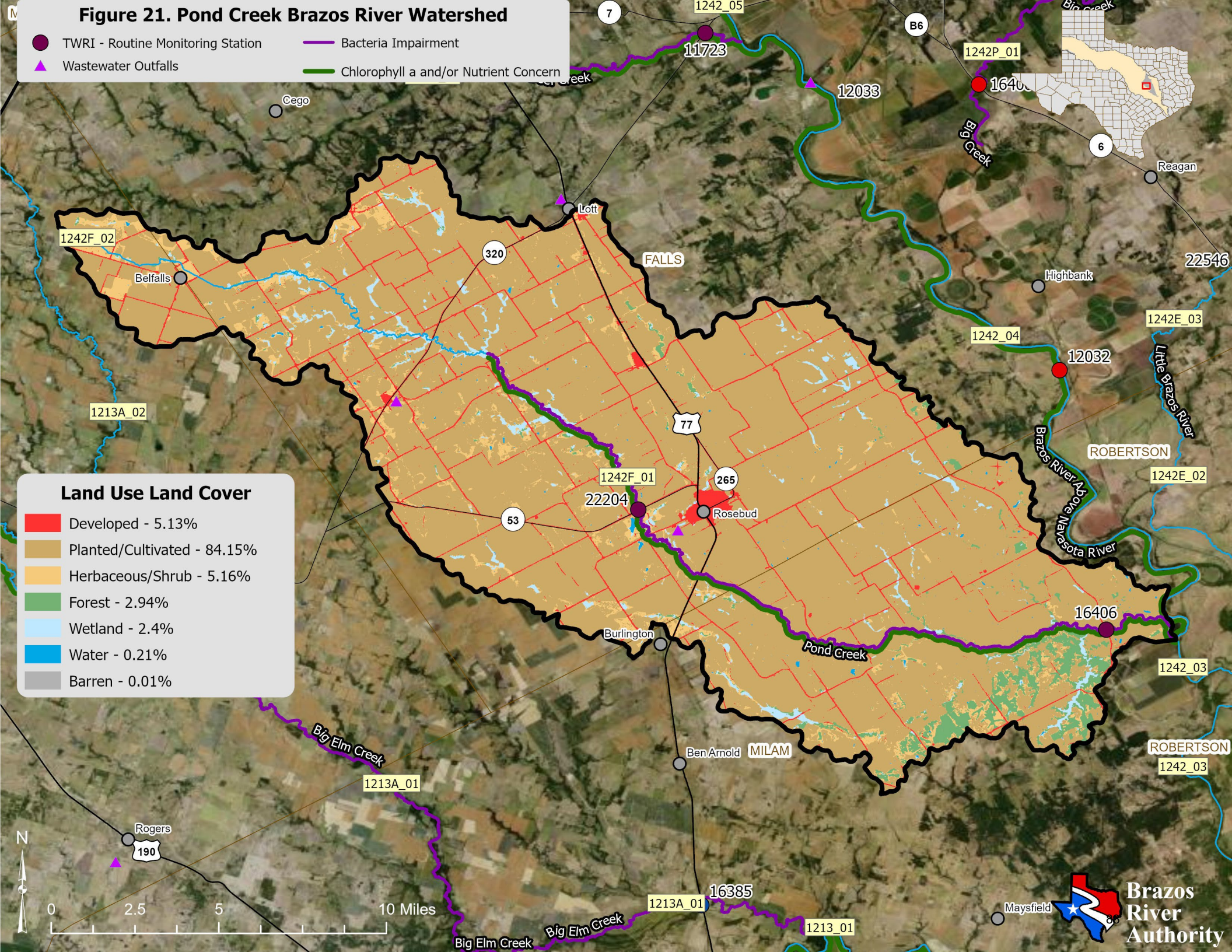


Figure 21. Pond Creek Brazos River Watershed
TWRI - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 5.13%
Planted/Cultivated - 84.15%
Herbaceous/Shrub - 5.16%
Forest - 2.94%
Wetland - 2.4%
Water - 0.21%
Barren - 0.01%
1242_05
11723
12033
1242P_01
Cego
Big Creek
Reagan
Lott
1242F_02
Belfalls
320
FALLS
Highbank
22546
1242_04
12032
1242E_03
Little Brazos River
1213A_02
77
Brazos River Above Navasota River
ROBERTSON
1242F_01
265
22204
Rosebud
53
1242E_02
16406
Burlington
Pond Creek
1242_03
Big Elm Creek
Ben Arnold
MILAM
ROBERTSON
1242_03
1213A_01
Rogers
190
N
0
2.5
5
10 Miles
16385
1213A_01
Big Elm Creek
Big Elm Creek
1213_01
Maysfield
Brazos River Authority

Walnut Creek-Brazos River Watershed

Watershed Description:
The Walnut Creek-Brazos River Watershed is approximately 171 square miles in area.

Land Use Land Cover in Watershed (Figure 22):
There are two cities and nine wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈69%) with the next most dominant landcover being forest (≈18%).

Segments in Watershed (Figure 22):

- Upstream portion of 1242_03: Portion of Brazos River from confluence with Little River upstream to confluence with Pond Creek in Milam County.
- Downstream portion of 1242_04: Portion of Brazos River from confluence with Pond Creek in Milam County upstream to confluence with Deer Creek in Falls County.
- Downstream portion of 1242E_02: Portion of Little Brazos River from confluence with Walnut Creek in Robertson County upstream to confluence with Fish Creek in Falls County.
- 1242O_01: Walnut Creek from the confluence with the Little Brazos River in Robertson County, upstream to the headwaters, one mi south of White Rock

Monitoring Station: 16403 - WALNUT CREEK AT SH 6 NORTHWEST OF CALVERT (Figure 22.1)

Impairments in Watershed Description (Figure 22):

- 1242O_01: Recreational Use—Bacteria

There is a concern for chlorophyll-*a* in 1242_04.

Possible Contributions if Impaired:

Point Sources:

- There are two cities and nine wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Runoff from agriculture and ranchland could provide contributions with the planted/cultivated category accounting for approximately 69% of the land use in the watershed, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 24% of the watershed has land cover suitable for wildlife which could also be a contributor. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Bremond
- City of Hammond
- Robertson County
- Milan County
- Limestone County

Actions taken if impaired:

- An RUAA was completed for 1242O_01. Results have led to the recommendation that the recreational use of this segment be revised to SCR 2.
- Additional flow and *E. coli* data has been collected in 1242I_01, 1242K_01, 1242L_01 and 1242O_01 through the Little Brazos River Tributaries Assessment and Planning Monitoring Support Final Report and Data project.

Recommendations if impaired:

- Await EPA review and approval of revised recreational use for 1242O_01 before a management strategy is selected.

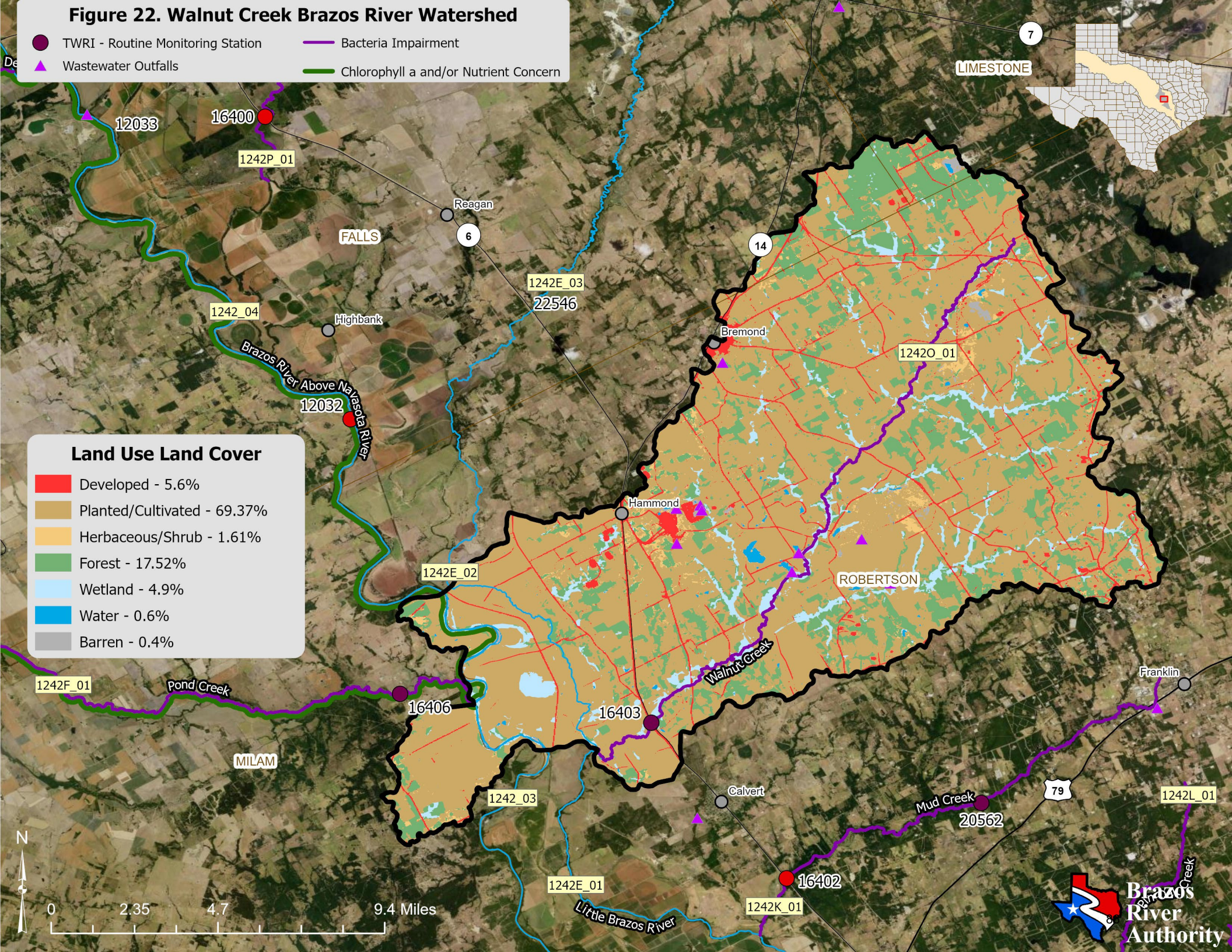


Figure 22. Walnut Creek Brazos River Watershed
TWRI - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 5.6%
Planted/Cultivated - 69.37%
Herbaceous/Shrub - 1.61%
Forest - 17.52%
Wetland - 4.9%
Water - 0.6%
Barren - 0.4%
12033
16400
1242P_01
Reagan
FALLS
6
1242E_03
22546
1242_04
Highbank
Brazos River Above Navasota River
12032
14
Bremond
1242O_01
LIMESTONE
7
Hammond
1242E_02
ROBERTSON
Walnut Creek
1242F_01
Pond Creek
16406
16403
Franklin
MILAM
1242_03
Calvert
Mud Creek
20562
79
1242L_01
16402
1242E_01
1242K_01
Little Brazos River
N
0
2.35
4.7
9.4 Miles
Brazos River Authority

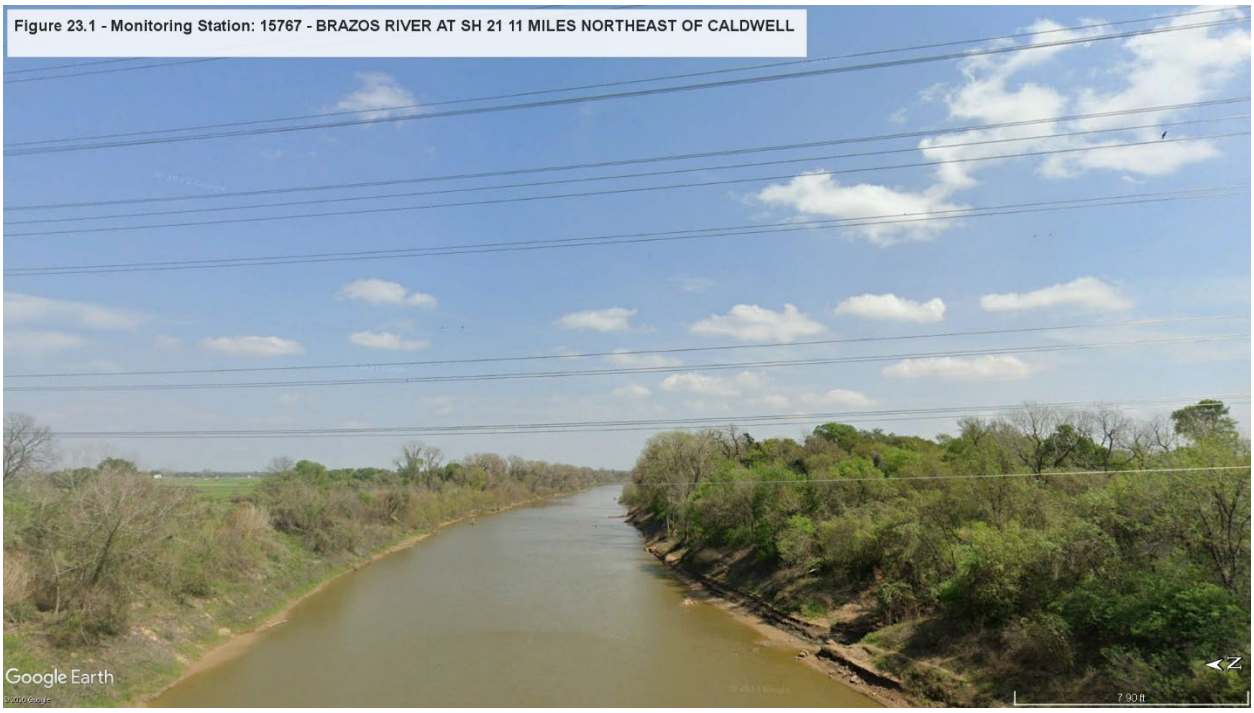
Cedar Creek-Brazos River Watershed

Watershed Description:
The Cedar Creek-Brazos River Watershed is approximately 564 square miles in area.

Land Use Land Cover in Watershed (Figure 23):
There are nine cities and three wastewater treatment plants, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈65%) with the next most dominant landcover being forested land (≈23%).

Segments in Watershed (Figure 23):

- Cedar Creek
- Upstream portion of 1242_02: Portion of Brazos River from confluence with Thompson's Creek in Brazos County upstream to confluence with Little River in Milam County.
  Monitoring Station: 15767 - BRAZOS RIVER AT SH 21 11 MILES NORTHEAST OF CALDWELL (Figure 23.1)



- 1242_03: Portion of Brazos River from confluence with Little River upstream to confluence with Pond Creek in Milam County.
- 1242E_01: Portion of Little Brazos River from confluence with Brazos River in Brazos County upstream to confluence with Walnut Creek in Robertson County.
  Monitoring Station: 11591 - LITTLE BRAZOS RIVER IMMEDIATLEY UPSTREAM OF SH 21 WEST OF BRYAN (Figure 23.2)

- 1242I_01: Campbell's Creek from the confluence with the Little Brazos River upstream to the headwaters, one mi west of Old San Antonio Road

  Monitoring Stations:
  16395 - CAMPBELLS CREEK AT SH 6/US 190 14 MILES SOUTH OF HEARNE
  20561 - CAMPBELLS CREEK AT JACK RABBIT LANE 2.25 KILOMETERS NORTH AND 1.3 KILOMETERS WEST FROM THE INTERSECTION OF JACK RABBIT LANE AND EAST OLD SAN ANTONIO ROAD / COUNTY LINE ROAD IN ROBERTSON COUNTY (Figure 23.3)

- 1242K_01: Mud Creek from confluence with the Little Brazos River, upstream to the confluence with Touchstone Branch and Wolf Den Branch, in Robertson County

  Monitoring Stations:

  16402 - MUD CREEK AT SH 6 4.5 MI NW OF HEARNE

  20562 - MUD CREEK AT JACK BREWER ROAD / ROBERTSON CR 160 2.03 KILOMETERS NORTH AND 464 METERS WEST FROM THE INTERSECTION OF JACK BREWER ROAD / ROBERTSON CR 160 AND US 79
- 1242L_01: Pin Oak Creek from the confluence with the Little Brazos River in Robertson County upstream to the headwaters, 2.07 mi south of Franklin

  Monitoring Stations:

  16401 - PIN OAK CREEK AT SH 6/US 190 2 MILES SOUTHEAST OF HEARNE (Figure 23.4)

20563 - PIN OAK CREEK AT FM 391 103 METERS NORTH AND 1.61 KILOMETERS EAST FROM THE INTERSECTION OF FM 391 AND FM 2549 IN ROBERTSON COUNTY (Figure 23.5)

- 1242M_01: Spring Creek from the confluence with the Little Brazos River in Robertson County, upstream to the headwaters, 1.5 mi north of FM 391

  Monitoring Stations:
  16394 - SPRING CREEK AT SH 6/US 190 8 MILES SOUTH OF HEARNE
  20564 - SPRING CREEK AT JACK RABBIT LANE 1.02 KILOMETERS SOUTH AND 1.86 KILOMETERS EAST FROM THE INTERSECTION OF JACK RABBIT LANE AND FM 2549 IN ROBERTSON COUNTY (Figure 23.6)

Impairments in Watershed Description (Figure 23):

- 1242I_01, 1242K_01, 1242L_01 and 1242M_01: Recreational Use—Bacteria impairments
  - There is also a concern for chlorophyll *a* in 1242_02.

Possible Contributions if Impaired:

Point Sources:

- There are nine cities and three wastewater treatment plants in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Wildlife: Approximately 65% of the watershed is made up of the planted/cultivated category. However, near the impaired segments, forested land cover (making up ≈23% of the watershed) is the dominant land cover, providing attractive habitat for wildlife near these segments. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Calvert
- City of Franklin
- City of Hearne
- City of Gause
- City of Milano
- City of Mumford
- City of Benchley
- City of Mooring
- City of Bryan
- Milam County
- Robertson County
- Brazos County
- Burleson County

Actions taken if impaired:

- An RUAA was completed for 1242I_01, 1242K_01, 1242L_01 and 1242M_01. Results have led to the recommendation that the recreational use be revised to SCR 1 in these segments.
- Additional flow and *E. coli* data has been collected in 1242I_01, 1242K_01, 1242L_01 and 1242M_01 through the Little Brazos River Tributaries Assessment and Planning Monitoring Support Final Report and Data project.

Recommendations if impaired:

- Await EPA review and approval of revised recreational use for 1242O_01 before a management strategy is selected.

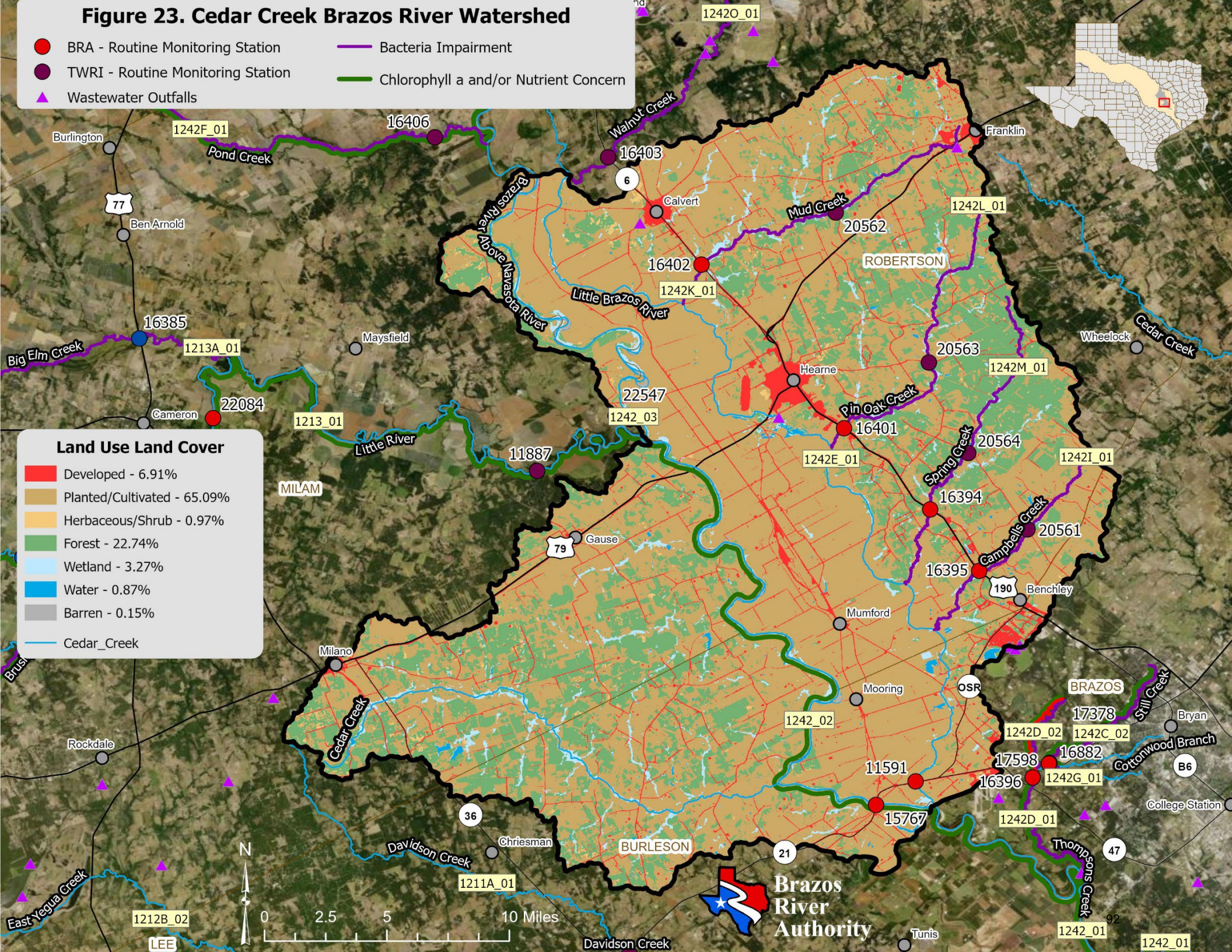


Figure 23. Cedar Creek Brazos River Watershed
BRA - Routine Monitoring Station
TWRI - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 6.91%
Planted/Cultivated - 65.09%
Herbaceous/Shrub - 0.97%
Forest - 22.74%
Wetland - 3.27%
Water - 0.87%
Barren - 0.15%
Cedar_Creek
1242O_01
16406
1242F_01
Pond Creek
Burlington
Walnut Creek
16403
Franklin
Calvert
Mud Creek
20562
1242L_01
Ben Arnold
Brazos River Above Navasota River
16402
1242K_01
ROBERTSON
Little Brazos River
16385
Big Elm Creek
1213A_01
Maysfield
Wheelock
Cedar Creek
20563
1242M_01
Hearne
22547
1242_03
22084
Cameron
Pin Oak Creek
16401
1242E_01
20564
1242I_01
1213_01
Little River
11887
Spring Creek
MILAM
16394
Campbells Creek
20561
Gause
16395
Benchley
Mumford
Milano
Mooring
OSR
BRAZOS
17378
Still Creek
Bryan
1242D_02
1242C_02
Rockdale
Cedar Creek
1242_02
16882
17598
Cottonwood Branch
11591
16396
1242G_01
College Station
15767
1242D_01
Chriesman
Davidson Creek
BURLESON
Thompsons Creek
1211A_01
East Yegua Creek
1212B_02
LEE
Tunis
1242_01
N
0 2.5 5 10 Miles
Brazos River Authority

Old River-Brazos River Watershed

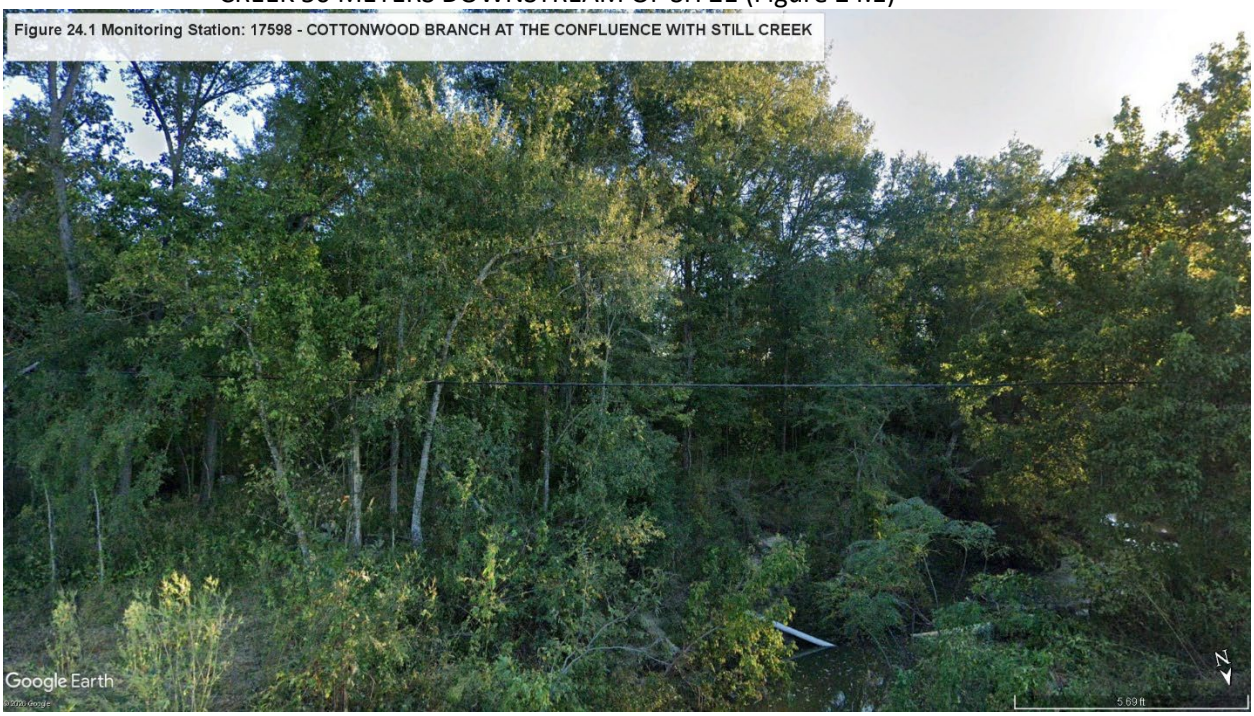
Watershed Description:
The Old River-Brazos River Watershed is approximately 299 square miles in area.

Land Use Land Cover in Watershed (Figure 24):
There are five cities and twelve wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈67%) with moderate amounts of forest and herbaceous/shrub (≈11%), and developed area (≈15%) in the watershed.

Segments in Watershed (Figure 24):

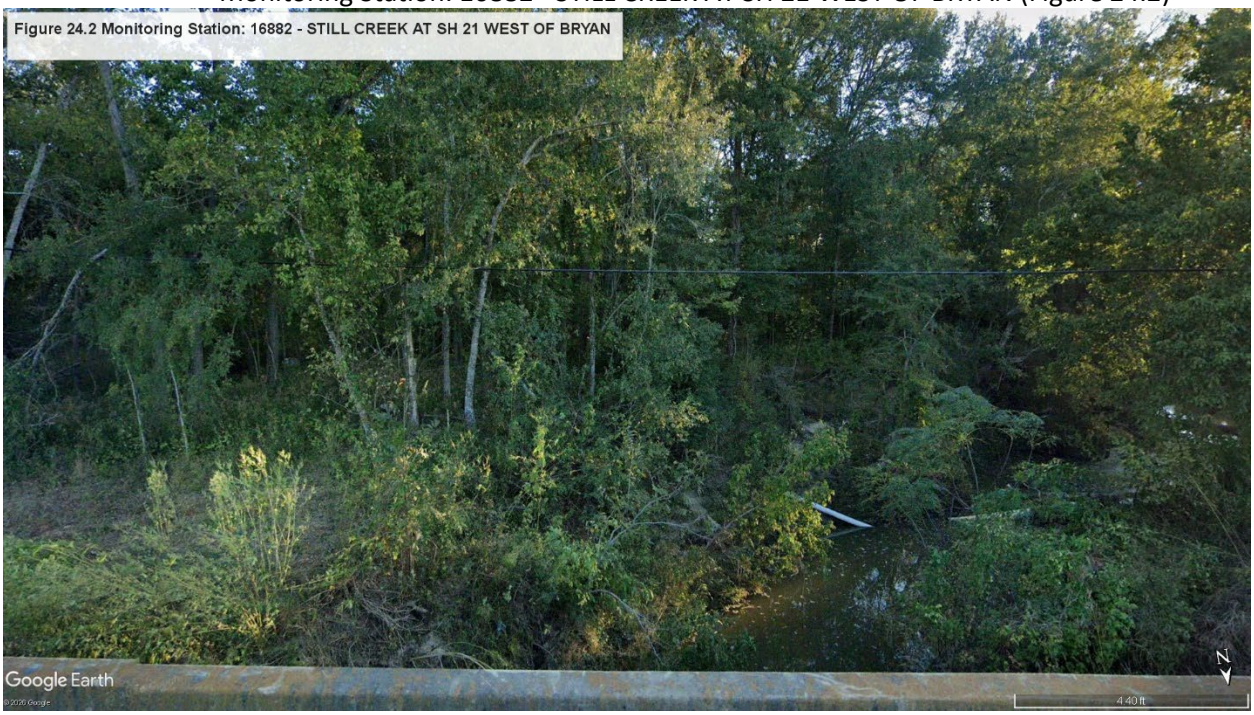
- Old River
- 1242_01: Brazos River above Navasota River, portion of Brazos River from confluence with Navasota River upstream to confluence with Thompson's Creek in Brazos County.
- 1242_02: Brazos River above Navasota River, portion of Brazos River from confluence with Thompson's Creek in Brazos County upstream to confluence with Little River in Milam County.
- 1242B_01: Portion of Cottonwood Branch from confluence with Still Creek upstream to unnamed tributary (NHD RC 12070101000835) in Brazos County.

  Monitoring Station: 17598 - COTTONWOOD BRANCH AT THE CONFLUENCE WITH STILL CREEK 50 METERS DOWNSTREAM OF SH 21 (Figure 24.1)



- 1242B_02: Portion of Cottonwood Branch from confluence with unnamed tributary (NHD RC 12070101000835) upstream to headwaters in Brazos County.
- 1242C_01: Still Creek, perennial stream portion of Still Creek from the confluence with Thompsons Creek upstream to the confluence with Cottonwood Branch; Appendix D.
- 1242C_02: Portion of Still Creek from confluence with Cottonwood Branch upstream to headwaters in Brazos County near US 190.

Monitoring Station: 16882 - STILL CREEK AT SH 21 WEST OF BRYAN (Figure 24.2)



Monitoring Station: 17378 - STILL CREEK AT FM 2818 WEST OF BRYAN

- 1242D_01: Thompsons Creek, an Appendix D perennial stream from the confluence of the Brazos River upstream to the confluence of Still Creek in Brazos County.

Monitoring Station: 16396 - THOMPSONS CREEK IMMEDIATELY UPSTREAM OF SILVERHILL ROAD 765 METERS UPSTREAM OF SH 47 WEST OF BRYAN (Figure 24.3)

- 1242D_02: Thompsons Creek, an Appendix D intermittent stream with perennial pools from the confluence of Still Creek upstream to the confluence of Thompson's Branch, north of FM 1687

- 1242G_01: Unnamed Tributary of Cottonwood Branch, intermittent stream with perennial pools from the confluence with Cottonwood Branch upstream to the headwaters.

Impairments in Watershed Description (Figure 24):

- 1242B_01, 1242C_02, 1242D_01, 1242D_02: Recreational Use—Bacteria impairments
- 1242D_02: Aquatic Life Use – Depressed Dissolved Oxygen impairment
- There are concerns for chlorophyll *a* in 1242_01 and 1242_02.
- There are concerns for nitrate and total phosphorus in 1242B_01.
- There are concerns for nitrate, total phosphorus, and depressed dissolved oxygen in 1242C_02.
- There are concerns for the fish community, ammonia, nitrate and total phosphorus in 1242D_01.
- There are concerns for ammonia, chlorophyll-*a*, and the macrobenthic community in in 1242D_02.

Possible Contributions if Impaired:

Point Sources:

- There are five cities and twelve wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 67% of the watershed is made up of the planted/cultivated category, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Urban runoff: Adjacent to the impaired segments, developed land cover is the dominant land cover, allowing for municipal and urban runoff contribution near these segments, potentially introducing bacterial and nutrient loads.

Potential non-State Agency Stakeholders:

- City of Bryan
- City of College Station
- City of Tunis
- City of Snook
- City of Wilcox
- Brazos County
- Burleson County
- Sanderson Farms, Inc
- Texas A&M University
- HYDER SYED N
- Five Nine Seven Limited Partnership
- Manitou Ltd Inc
- Wellborn Special Utility District
- TCB Rental Inc

Actions taken if impaired:

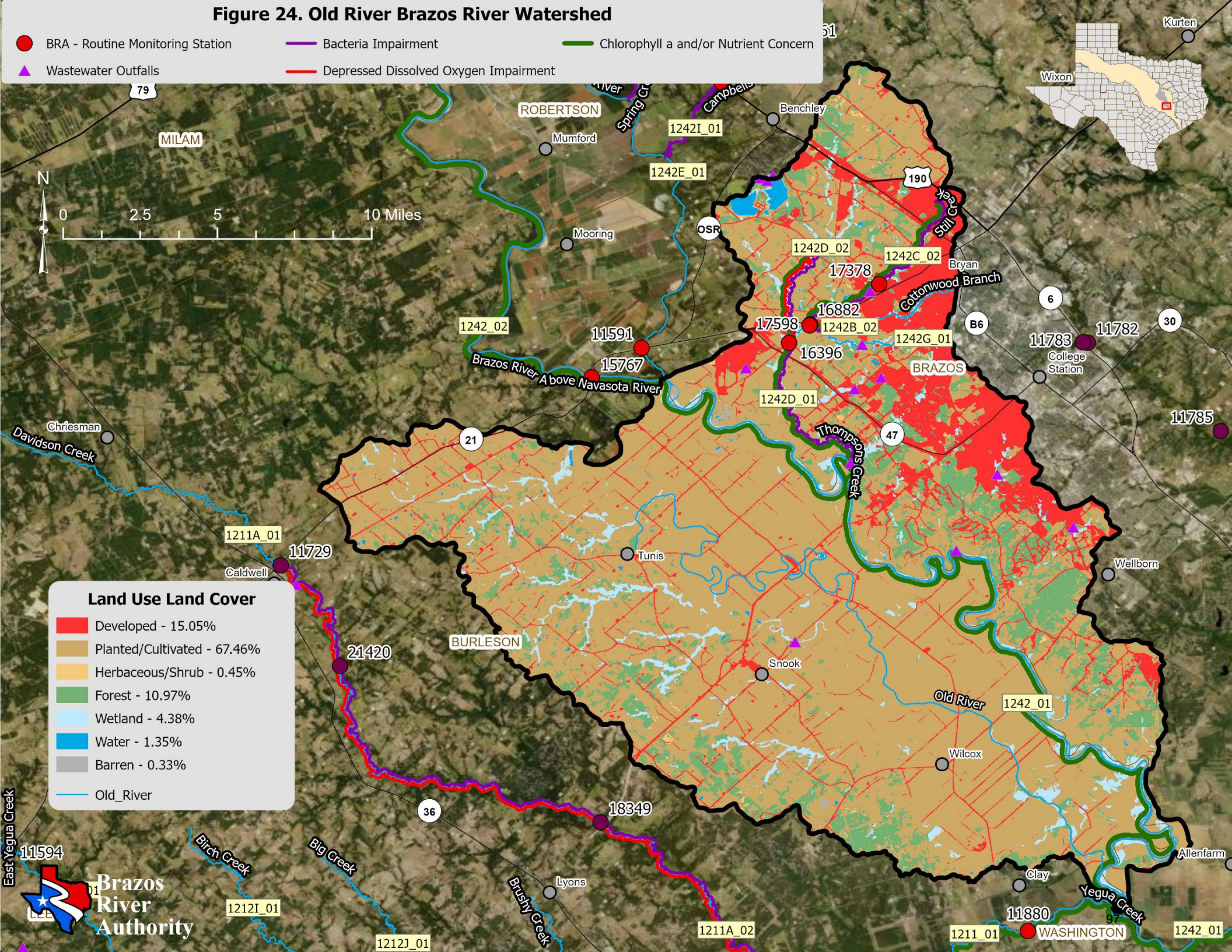
- To address the depressed dissolved oxygen impairment, a UAA was performed on 1242D_02 through the Two Data Collection Initiatives project administered by BRA, ending in 2013. The UAA was performed to determine if the existing ALU and dissolved oxygen (DO) criteria were appropriate, and if not, provide data for establishing new standards. Findings suggested that ALU designations for 1242D_02 should be hydrologically-based. Differential ALU designations may be necessary for physical habitat, benthic macroinvertebrates, and fish. Flow-dependent DO criteria may also be required.
- RUAAs were completed for 1242B, 1242C, and 1242D. EPA has approved the revision of the recreational use standard of segment 1242B to SCR1. Segment 1242C remains classified as a PCR segment. It is recommended that 1242D be revised to the recreational use standard of SCR1. This recreational use change is awaiting EPA action on the recommendation.
- Several data collection initiatives have occurred that included 1242B, 1242C and 1242D.
    - Watershed Characterization of the Thompsons Creek Watershed (June 2020),
    - Comparison of Daily Streamflow Estimation Methods in the Thompsons Creek Watershed (July 2021),
    - Streamflow and Water Quality Properties in the Thompsons Creek Watershed in the Vicinity of Bryan/College Station, 2020–2022 (September 2022)
    - Technical Support Document for Five Total Maximum Daily Loads for Indicator Bacteria in the Thompsons Creek Watershed, Texas (January 2023)

- Development of the Thompson's Creek Watershed Protection Plan began in July 2024 and is currently underway.

Recommendations taken if impaired:

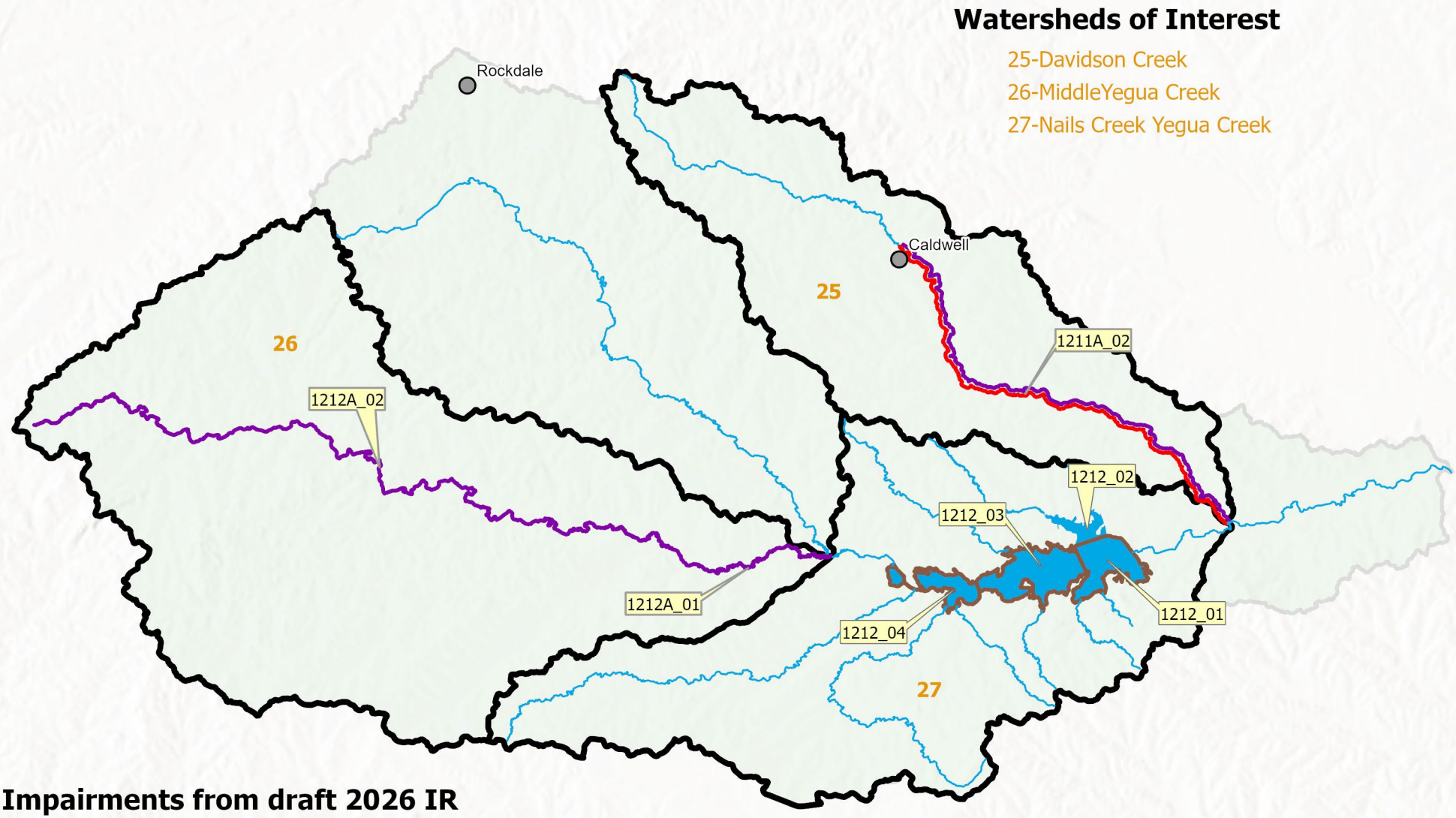
- Await stakeholder completion and EPA review and approval of the Thompsons Creek Watershed Protection Plan before management strategies are selected.
- Await EPA action on the 1242D recommendation before management strategies are selected.

Figure 24. Old River Brazos River Watershed



Yegua Creek Watershed

The Yegua Creek Watershed drains approximately 1316 square miles through Milam, Lee, Burleson and Washington Counties. Land usage in the watershed is primarily agricultural. Oil and gas production has been, and is currently, a major operation in the watershed. Additionally, there is a large lignite mining operation located in the upper area near the City of Rockdale. Rockdale, along with four other small, rural communities (Caldwell, Lexington, Somerville, and Giddings) are the largest in the watershed.



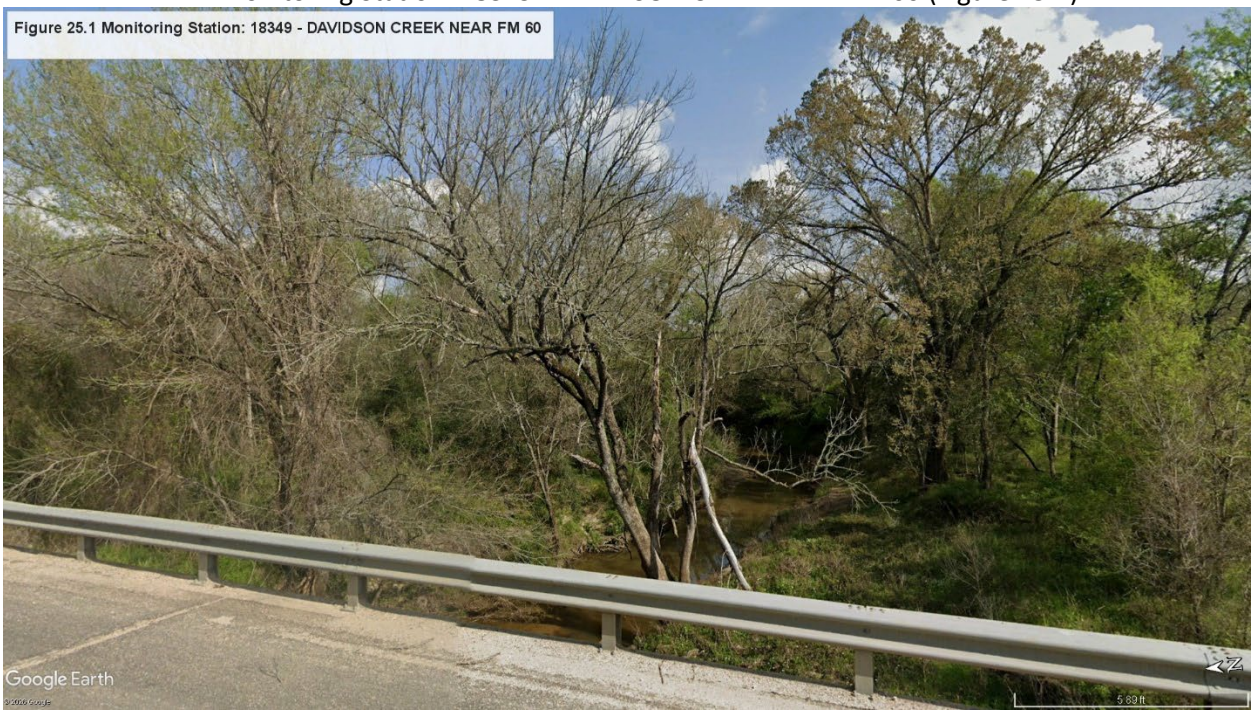
Davidson Creek Watershed

Watershed Description:
The Davidson Creek Watershed is approximately 219 square miles in area.

Land Use Land Cover in Watershed (Figure 25):
There are three cities and one wastewater outfall, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈64%) with the next most dominant landcover being forest (≈21%).

Segments in Watershed (Figure 25):

- 1211A_01: Davidson Creek from 0.2 km above SH 21 near the City of Caldwell upstream to the headwaters 1.7 km above CR 322; Appendix D.
- 1211A_02: Davidson Creek, intermittent stream with perennial pools from the confluence with Yegua Creek upstream to 0.2 km above SH 21 near the City of Caldwell; Appendix D.
    - Monitoring Station: 11729 - DAVIDSON CREEK AT SH 21
    - Monitoring Station: 21420 - DAVIDSON CREEK AT BURLESON COUNTY ROAD 122
    - Monitoring Station: 18349 - DAVIDSON CREEK NEAR FM 60 (Figure 25.1)



Impairments in Watershed Description (Figure 25):

- 1211A_02: Aquatic Life Use – Depressed Dissolved Oxygen impairment and Recreational Use – Bacteria impairment

Possible Contributions if Impaired:

Point Sources:

- There are three cities and one wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 64% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 27% of the watershed has land cover suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Chriesman
- City of Caldwell
- City of Lyons
- Milam County
- SOUTH CENTRAL WATER CO

Actions taken if impaired:

- An RUAA was conducted in segment 1211A_01 and results led to the recommendation that the segment remain classified as a PCR segment.
- Several data collection initiatives have occurred that included 1242J_01
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (May 2020), Characterizing the Middle Yegua, Davidson Creek and Deer Creek Watersheds Final Report (May 2020),
    - Continued Surface Water Quality Monitoring for Middle Yegua Creek, Davidson Creek and Deer Creek Watersheds Final Report (February 2022),
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (October 2022)
- Development of the Davidson Creek Watershed Protection Plan began in February 2025 and is currently underway.

Recommendations taken if impaired:

- Await stakeholder completion and EPA review and approval of the Davidson Creek Watershed Protection Plan before management strategies are selected.

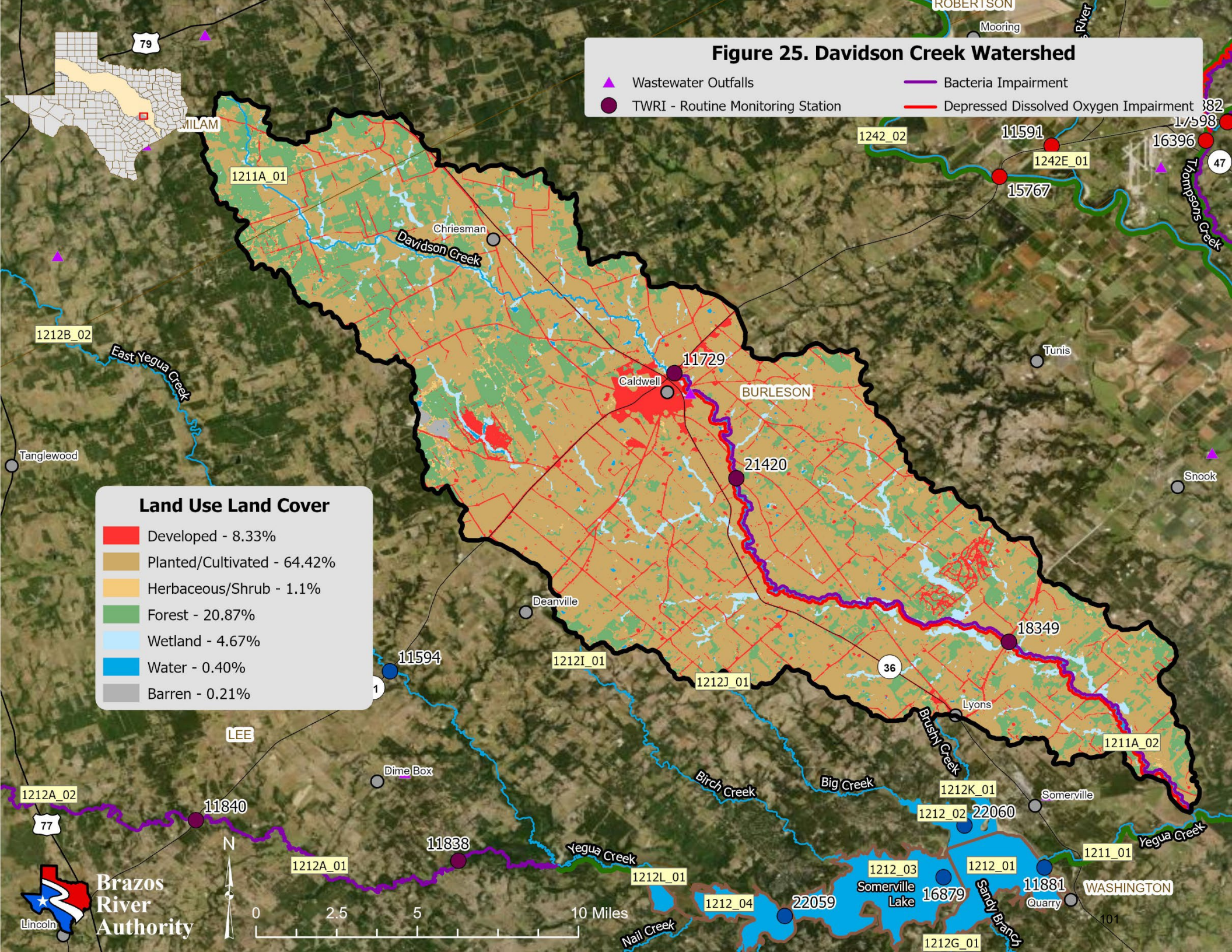


Figure 25. Davidson Creek Watershed
Wastewater Outfalls
TWRI - Routine Monitoring Station
Bacteria Impairment
Depressed Dissolved Oxygen Impairment
Land Use Land Cover
Developed - 8.33%
Planted/Cultivated - 64.42%
Herbaceous/Shrub - 1.1%
Forest - 20.87%
Wetland - 4.67%
Water - 0.40%
Barren - 0.21%
1211A_01
1212B_02
East Yegua Creek
Davidson Creek
Chriesman
Caldwell
11729
BURLESON
21420
18349
11594
1212I_01
1212J_01
Deanville
Tunis
Tanglewood
Snook
Lyons
Brushy Creek
1211A_02
LEE
Dime Box
Birch Creek
Big Creek
1212K_01
1212_02
22060
Somerville
1212A_02
11840
1212A_01
11838
Yegua Creek
1212L_01
1212_04
22059
1212_03
Somerville Lake
16879
1212_01
Sandy Branch
11881
Quarry
1211_01
WASHINGTON
Nail Creek
1212G_01
Lincoln
Brazos River Authority
N
0
2.5
5
10 Miles
1242_02
11591
1242E_01
15767
16396
Thompsons Creek
ROBERTSON
Mooring
79
77
36
47
101

Middle Yegua Creek Watershed

Watershed Description:
The Middle Yegua Creek Watershed is approximately 442 square miles in area.

Land Use Land Cover in Watershed (Figure 26):
There are two cities and six wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the planted/cultivated category (≈66%), with forested land being the next most dominant (≈20%). There is some mining activity in the watershed as well.

Segments in Watershed (Figure 26):

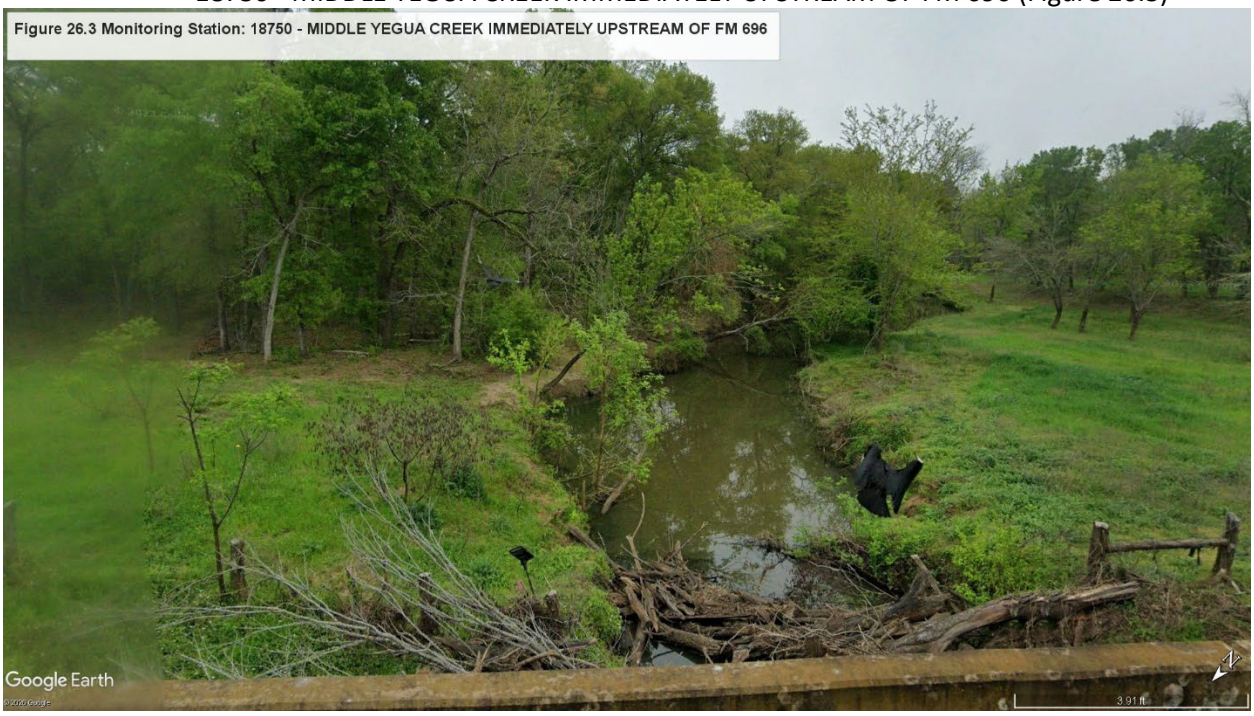
- 1212A_01: Middle Yegua Creek from confluence with East Yegua Creek upstream to confluence with West Yegua Creek in Lee County.

  Monitoring Station: 11838 - MIDDLE YEGUA CREEK IMMEDIATELY UPSTREAM OF FR 141 4 MILES SOUTHEAST OF DIME BOX (Figure 26.1)

- 1212A_02: Middle Yegua Creek from confluence with West Yegua Creek upstream to headwaters of water body in Williamson County.

  Monitoring Stations:
  11840 - MIDDLE YEGUA CREEK AT SH 21 4.4 MILES NORTHEAST OF LINCOLN (Figure 26.2)

18750 - MIDDLE YEGUA CREEK IMMEDIATELY UPSTREAM OF FM 696 (Figure 26.3)



Impairments in Watershed Description (Figure 26):

- 1212A_01: Recreational Use – Bacteria impairment
- 1212A_02: Recreational Use – Bacteria impairment
    - There is also a concern for depressed dissolved oxygen and habitat in 1212A_02.

Possible Contributions if Impaired:

Point Sources:

- There are two cities and six wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 66% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 28% of the watershed has land cover suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Lexington
- City of Lincoln
- Williamson County
- Milam County
- Lee County
- Bastrop County
- MANVILLE WATER SUPPLY CORPORATION
- ALCOA INC
- LUMINANT MINING CO LLC
- AQUA WSC

Actions taken if impaired:

- An RUAA was conducted in segment 1212A_01 and results led to the recommendation that the segment remain classified as a PCR segment.
- In April 2018, TWRI began the Characterization of Middle Yegua, Davidson, and Deer Creeks project.

Recommendations if impaired:

- Several data collection initiatives have occurred that included 1212A.
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (May 2020), Characterizing the Middle Yegua, Davidson Creek and Deer Creek Watersheds Final Report (May 2020),
    - Continued Surface Water Quality Monitoring for Middle Yegua Creek, Davidson Creek and Deer Creek Watersheds Final Report (February 2022),
    - Characterization of Middle Yegua, Davidson, and Deer Creeks Watersheds (October 2022)
- The Middle Yegua Creek Watershed Protection Plan aims to address water quality issues in the Middle Yegua Creek Watershed. Development of the Middle Yegua Creek Watershed Protection Plan was initiated in January 2024. The final draft plan was accepted by the EPA in February 2025, and the plan is in implementation.

Recommendations taken if impaired:

- Continue to follow and implement recommended best management practices outlined in the Middle Yegua Creek WPP and monitor for water quality improvements.

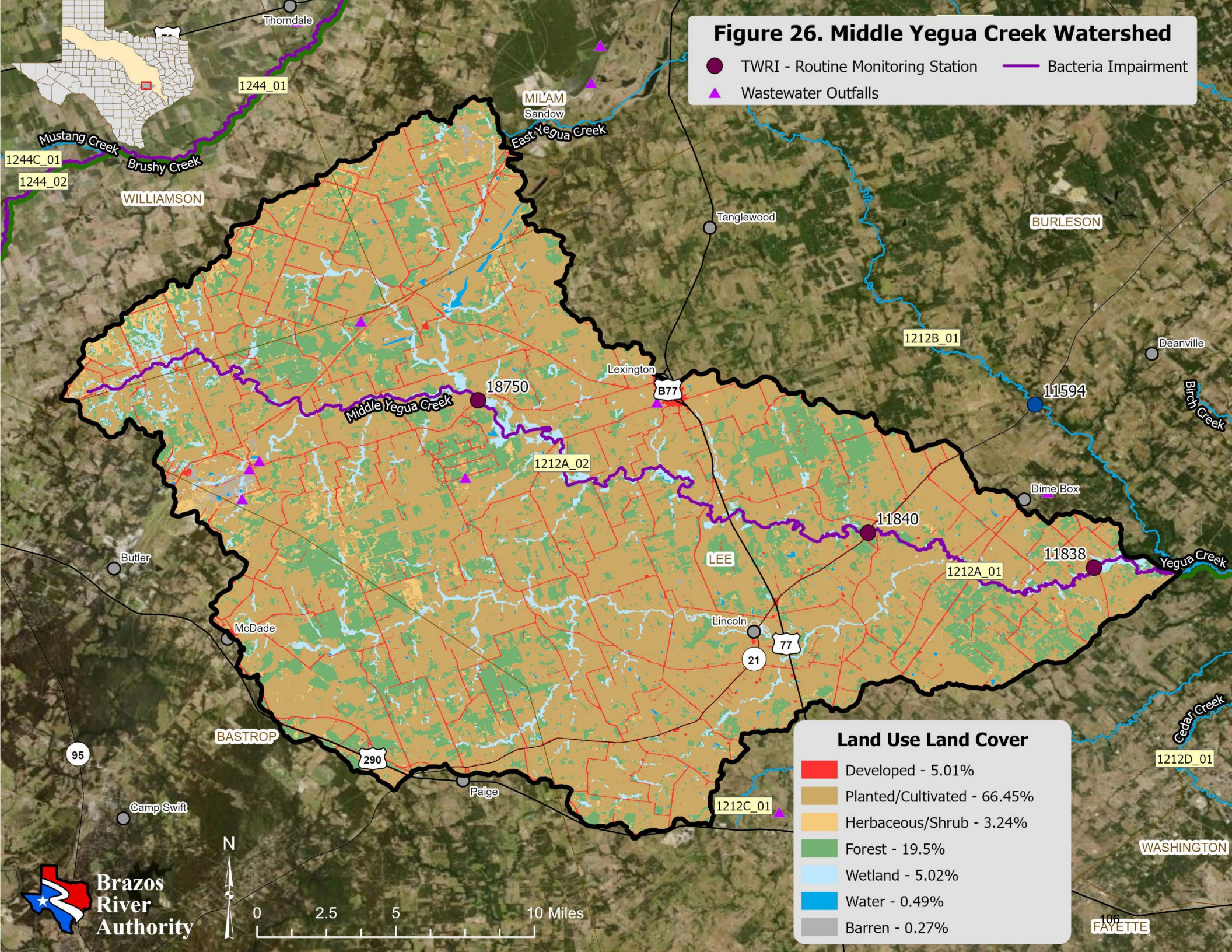


Figure 26. Middle Yegua Creek Watershed
TWRI - Routine Monitoring Station
Bacteria Impairment
Wastewater Outfalls
Land Use Land Cover
Developed - 5.01%
Planted/Cultivated - 66.45%
Herbaceous/Shrub - 3.24%
Forest - 19.5%
Wetland - 5.02%
Water - 0.49%
Barren - 0.27%
18750
11594
11840
11838
Middle Yegua Creek
East Yegua Creek
Yegua Creek
Mustang Creek
Brushy Creek
Birch Creek
Cedar Creek
1244_01
1244C_01
1244_02
1212B_01
1212A_02
1212A_01
1212D_01
1212C_01
MIL'AM
Sandow
Thorndale
WILLIAMSON
Tanglewood
BURLESON
Deanville
Lexington
B77
Dime Box
LEE
Lincoln
77
21
Butler
McDade
BASTROP
95
290
Paige
Camp Swift
WASHINGTON
FAYETTE
106
N
0
2.5
5
10 Miles
Brazos River Authority

Nails Creek-Yegua Creek Watershed

Watershed Description:
The Nails Creek-Yegua Creek Watershed is approximately 304 square miles in area.

Land Use Land Cover in Watershed (Figure 27):
There are three cities and three wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover includes the planted/cultivated category (≈63%), with forested land being the next most dominant (≈17%). Somerville Lake lies within the watershed.

Segments in Watershed (Figure 27):

- Upstream portion of 1211_01: Yegua Creek from the confluence with the Brazos River in Burleson/Washington County to Somerville Dam in Burleson/Washington County.
- 1212_01: Somerville Lake, Eastern end of reservoir near dam.
  Monitoring Station: 11881 - SOMERVILLE LAKE NEAR DAM 117 METERS SOUTH AND 29 METERS WEST OF DAM OUTFLOW USGS SITE AC
- 1212_02: Somerville Lake, Northern arm of reservoir near town of Somerville.
  Monitoring Station: 22060 - SOMERVILLE LAKE BIG CREEK ARM 0.743 KM W. OF WELCH PARK LOOP
- 1212_03: Somerville Lake, Middle of reservoir near Birch Creek State Park.
  Monitoring Station: 16879 - LAKE SOMERVILLE MID LAKE WEST OF DAM 2.72 KILOMETERS SOUTH AND 2.59 KILOMETERS EAST OF INTERSECTION OF REC ROAD 4 AND BURLESON CR 416
- 1212_04: Somerville Lake, Western end of reservoir near upper segment boundary.
  Monitoring Station: 22059 - SOMERVILLE LAKE UPPER PORTION 1.229 KM S. OF INTERSECTION OF LAKEVIEW LANE WITH BIRCH LANE AND AT THE ADJOINING POINT OF BURLESON LEE AND WASHINGTON COUNTIES
- 1212C_01: Nails Creek from the confluence of Yegua Creek upstream to the headwater 340 m north of US 290 west of Giddings.
- 1212D_01: Cedar Creek from the confluence of Somerville Lake upstream to the headwater approximately 2 km north of US 290 approximately 2.2 km west of Burton.
- 1212E_01: McCain Creek from the confluence of Somerville Lake upstream to the headwater near FM 390 W (La Bahia Trail W) approximately 3 km northeast of Burton.
- 1212F_01: Burns Creek from the confluence of Somerville Lake upstream to the headwater approximately 1.4 km north of the intersection of FM 390 W (La Bahia Trail W) and FM 1948 northeast of Burton.
- 1212G_01: Jerdelle Creek from the confluence of Somerville Lake upstream to the headwater near FM 390 W (La Bahia Trail W) approximately 9 km northeast of Burton.
- 1212H_01: Sandy Branch from the confluence of Somerville Lake upstream to the headwater near Haack Lane approximately 4.7 km west of the intersection of FM 390 W (La Bahia Trail W) and SH 36.
- 1212I_01: Birch Creek from the confluence of Somerville Lake upstream to the headwater at FM 60 approximately 11 km south of Caldwell.
- 1212J_01: Big Creek from the confluence of Somerville Lake upstream to the headwater at FM 976 (Frenstat Rd) approximately 12.8 km northwest of Somerville

- 1212K_01: Brushy Creek from the confluence of Somerville Lake upstream to the headwater near the intersection of Burleson CR 408 and CR 415 approximately 3 km northwest of Somerville.
- 1212L_01: Yegua Creek from the confluence of Somerville Lake upstream to the confluence of East Yegua and Middle Yegua Creeks at the Burleson and Lee County Line.

Impairments in Watershed Description (Figure 27):

- 1212_01, 1212_03 and 1212_04: General Use—high pH impairments

There are concerns for chlorophyll-*a* in 1211_01 and 1212L_01.

Possible Contributions if Impaired:

Point Sources:

- There are three cities and three wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 63% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 23% of the watershed has land cover suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Somerville
- City of Lyons
- City of Giddings
- Lee County
- Burleson County
- Washington County
- Camp for all Foundation
- Any marinas or other businesses on or that serve Somerville Lake

Actions taken if impaired:

- Additional data collection including routine monitoring of ten tributaries to Somerville Lake (1212); algae identification, low-level nutrient, silica sampling and algal assays in 1212; and stormwater monitoring in selected subwatersheds were conducted through the Two Data Collection Initiatives project administered by BRA, ending in 2013. No point sources were identified as contributing to the impairment. Internal nutrient cycling within the lake appeared to be the most likely cause of the elevated pH in the reservoir.
- In 2024, evaluation of new assessment methods for 24-hour pH began.

Recommendations if Impaired:

- Continue to monitor long-term stations in segment 1212.

- Await results of evaluation of assessment methods for 24-hour pH and assess achieved pH in 1212 with new methods if approved and appropriate.

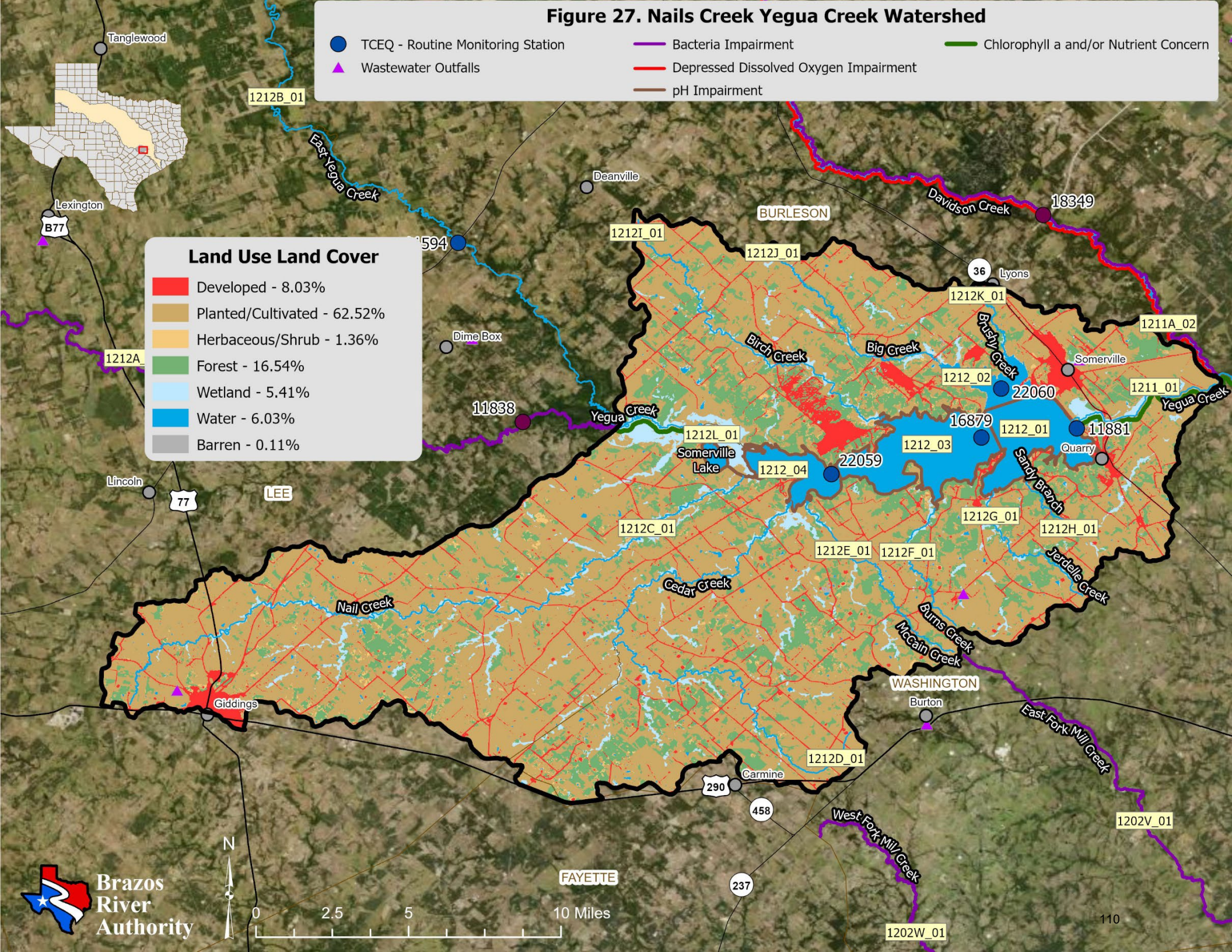
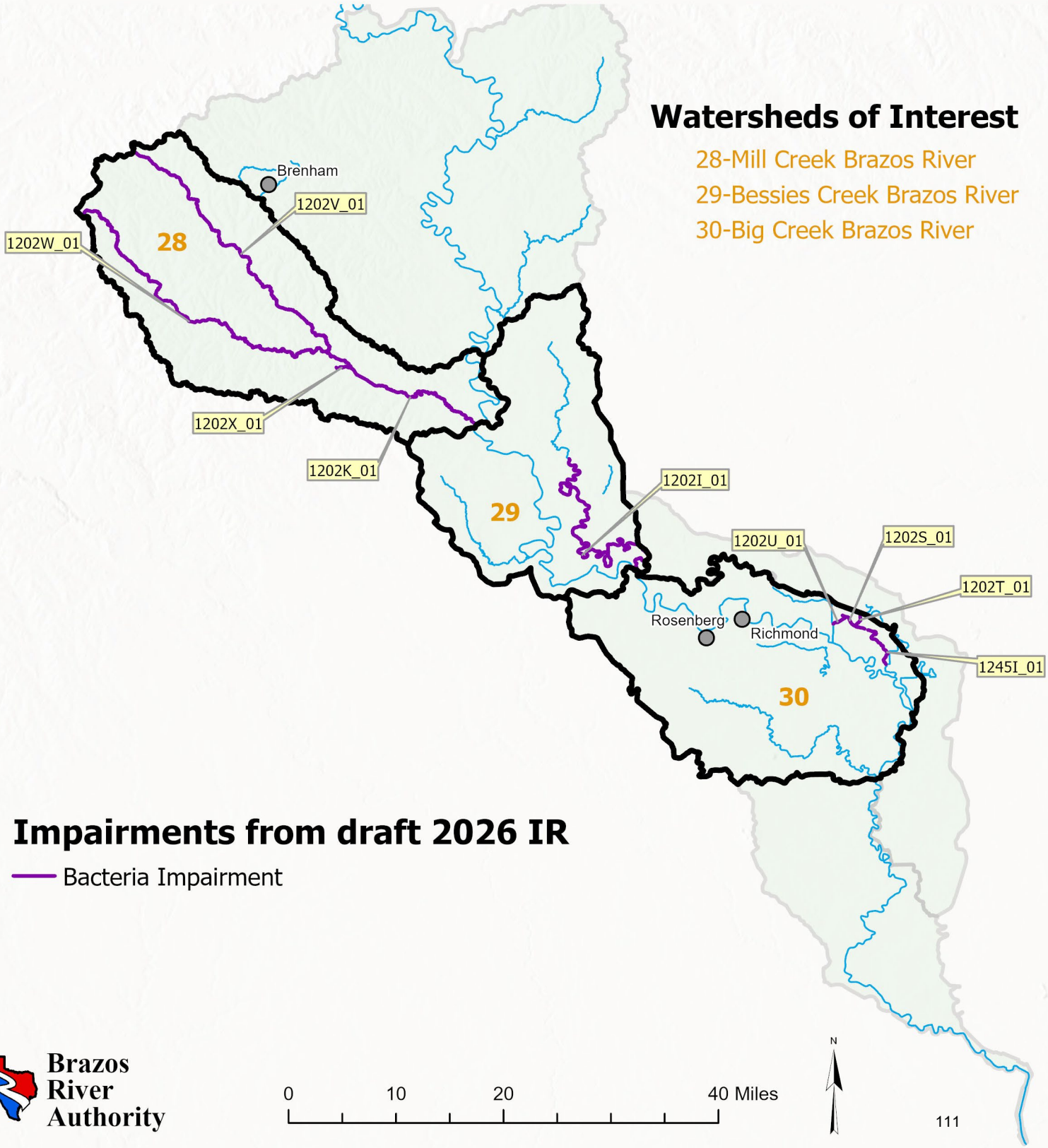


Figure 27. Nails Creek Yegua Creek Watershed
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Depressed Dissolved Oxygen Impairment
pH Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 8.03%
Planted/Cultivated - 62.52%
Herbaceous/Shrub - 1.36%
Forest - 16.54%
Wetland - 5.41%
Water - 6.03%
Barren - 0.11%
Tanglewood
Lexington
B77
Deanville
Dime Box
Lincoln
77
LEE
BURLESON
WASHINGTON
FAYETTE
Giddings
Burton
Carmine
Lyons
Somerville
Somerville Lake
Quarry
1212B_01
East Yegua Creek
1212I_01
1212J_01
1212K_01
1212A_
1212L_01
1212C_01
1212E_01
1212F_01
1212G_01
1212H_01
1212D_01
1211A_02
1211_01
1212_01
1212_02
1212_03
1212_04
1202V_01
1202W_01
Davidson Creek
Birch Creek
Big Creek
Brushy Creek
Yegua Creek
Sandy Branch
Jerdelle Creek
Cedar Creek
Nail Creek
Burns Creek
McCain Creek
East Fork Mill Creek
West Fork Mill Creek
18349
11838
22060
16879
11881
22059
36
290
458
237
N
0
2.5
5
10 Miles
Brazos River Authority

Lower Watershed of the Brazos River and Upper and Middle Oyster Creek Watersheds

The Lower Brazos Watershed and the Upper and Middle Oyster Watersheds drain approximately 2,342 square miles through Washington, Grimes, Waller, Austin, Fort Bend, and Brazoria Counties before discharging into the Gulf of Mexico. Land uses include agriculture, oil and gas retrieval, chemical industry, and municipalities. Agricultural interests include row crops such as cotton, corn, and sorghum in the northern counties of the watershed, and rice and sorghum in Brazoria County with cattle and chicken farming throughout the watersheds. Surface mining operations can be found in Grimes County. There is also a concentration of chemical industry activity in Brazoria County. Fort Bend County has experienced an explosion of growth with the sprawl of the Houston metropolitan area.



Mill Creek-Brazos River Watershed

Watershed Description:
The Mill Creek-Brazos River Watershed is approximately 424 square miles in area.

Land Use Land Cover in Watershed (Figure 28):
There are six cities and five wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈76%). Forested land is the next most dominant (≈11%).

Segments in Watershed (Figure 28):

- Downstream portion of 1202_04: Brazos River below Navasota River, portion of Brazos River from the confluence with Mill Creek in Austin County upstream to confluence with Lewisville Creek in Waller County.
- 1202K_01: Portion of Mill Creek from confluence with Brazos River upstream to confluence with East/West Forks Mill Creek in Austin County.

  Monitoring Stations:
  21577 - MILL CREEK AT FM331, 5.7 KILOMETERS SOUTH OF INTERSECTION OF FM529 AND FM331 AND COMMUNITY OF BURLEIGH (Figure 28.1)

Figure 28.1 Monitoring Station: 21577 - MILL CREEK AT FM331, 5.7 KILOMETERS SOUTH OF INTERSECTION OF FM529 AND FM331 AND COMMUNITY OF BURLEIGH

  11576 - MILL CREEK IMMEDIATELY DOWNSTREAM OF SH 36 SOUTHEAST OF BELLVILLE
  21579 - MILL CREEK AT FM 2429, 6 KM SOUTH OF BELLVILLE AND 3.2 KM NORTH OF FM 949 (Figure 28.2)

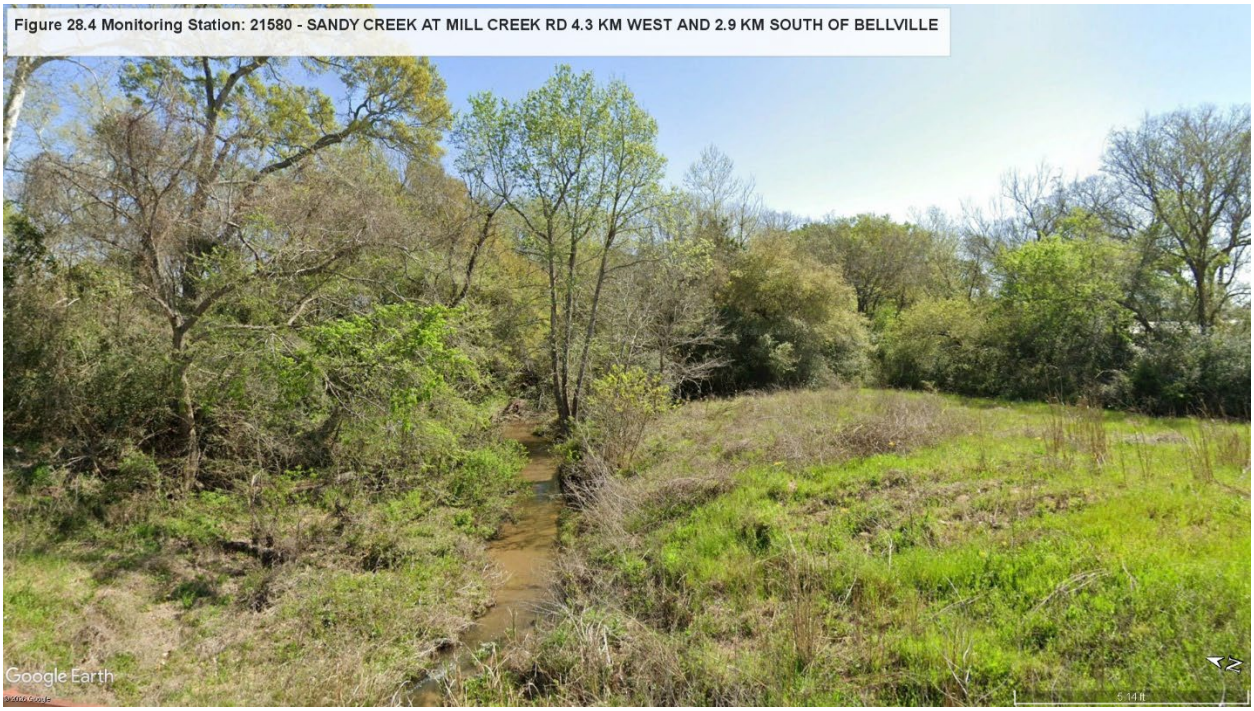
Figure 28.2 Monitoring Station: 21579 - MILL CREEK AT FM 2429, 6 KM SOUTH OF BELLVILLE AND 3.2 KM NORTH OF FM 949

-
- 1202V_01: East Fork Mill Creek, from confluence of Mill Creek and West Mill Creek upstream 34.3 miles

  Monitoring Station: 21584 - EAST FORK MILL CREEK AT FM 159/OLD NELSONVILLE RD 6.7 KM WEST OF BELLVILLE (Figure 28.3)

Figure 28.3 Monitoring Station: 21584 - EAST FORK MILL CREEK AT FM 159/OLD NELSONVILLE RD 6.7 KM WEST OF BELLVILLE

- 1202W_01: West Fork Mill Creek, from confluence of Mill Creek and East Mill Creek upstream 39.1 miles
  Monitoring Station: 21582 - WEST FORK MILL CREEK AT TIEMANN RD 7.7 KM EAST OF INDUSTRY
- 1202X_01: Sandy Creek, from confluence of Mill Creek upstream 1.8 miles
  Monitoring Station: 21580 - SANDY CREEK AT MILL CREEK RD 4.3 KM WEST AND 2.9 KM SOUTH OF BELLVILLE (Figure 28.4)



Impairments in Watershed Description (Figure 28):

- 1202K_01, 1202V_01, 1202W_01, 1202X_01: Recreational Use—bacteria impairments
  - There is a concern for impaired habitat for 1202K_01.

Possible Contributions if Impaired:

Point Sources: There are six cities and five wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Agricultural runoff: Approximately 76% of the watershed is made up of the planted/cultivated category. Runoff from agriculture and ranchland could provide contributions, potentially introducing nutrient loads in planted/cultivated areas and bacterial loading from animal production agriculture.
- Wildlife: Approximately 17% of the watershed has land cover suitable for wildlife. A significant wildlife population can contribute to bacterial and nutrient loading.

Potential non-State Agency Stakeholders:

- City of Burton
- City Kenney
- City of Industry
- City of Bellville
- City of New Ulm
- City of Peters
- Washington County
- Austin County
- Waller County
- US STEEL TUBULAR PRODUCTS INC

Actions taken if impaired:

- The Mill Creek Watershed Protection Plan, addressing issues in segment 1202K, began public meetings in November 2014 forming the Mill Creek Watershed Partnership. The WPP was approved and signed by the Steering Committee in January of 2016 and accepted by EPA in February of 2016. The project is in the implementation phase.

Recommendations if impaired:

- Continue to follow and implement recommended best management practices outlined in the Mill Creek WPP and monitor for water quality improvements.

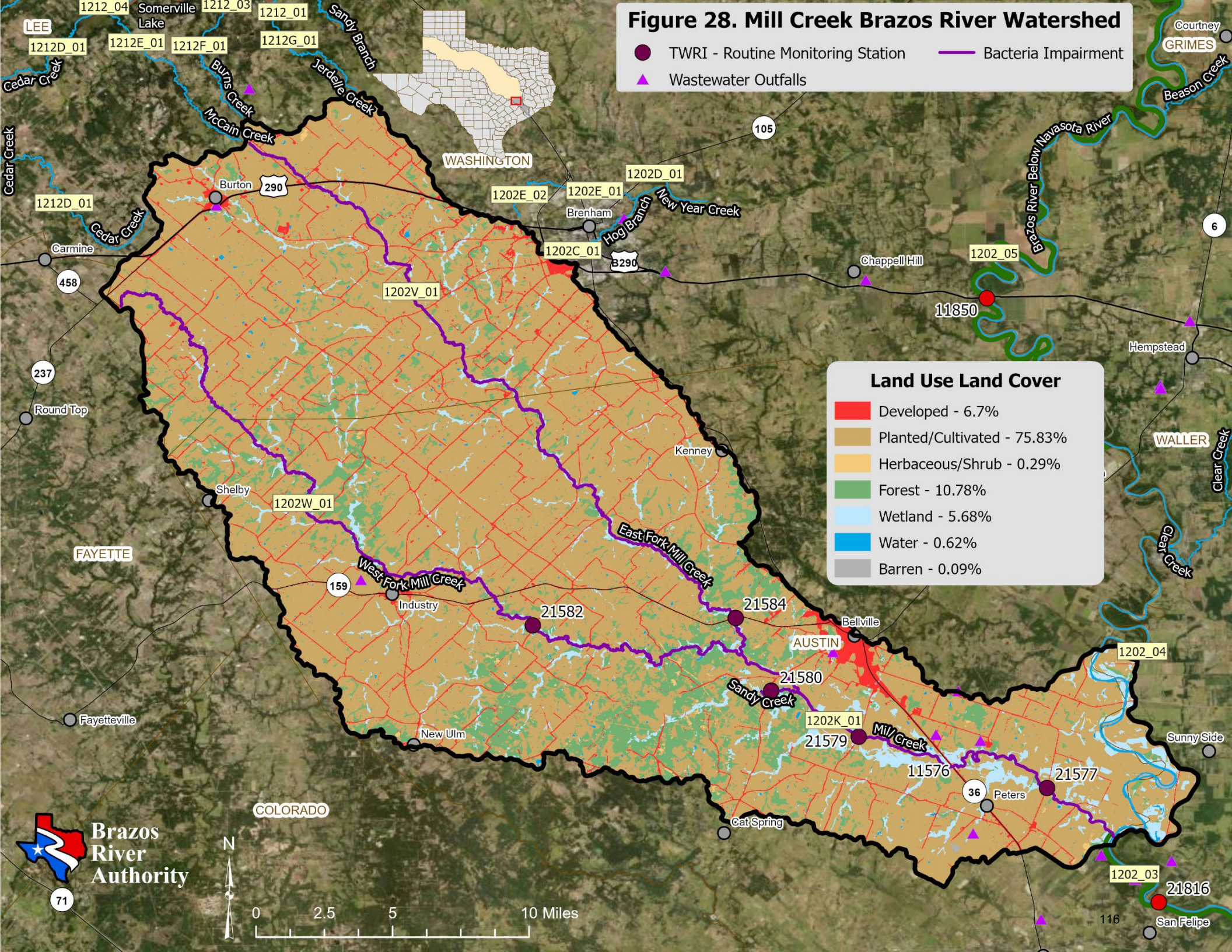


Figure 28. Mill Creek Brazos River Watershed
TWRI - Routine Monitoring Station
Bacteria Impairment
Wastewater Outfalls
Land Use Land Cover
Developed - 6.7%
Planted/Cultivated - 75.83%
Herbaceous/Shrub - 0.29%
Forest - 10.78%
Wetland - 5.68%
Water - 0.62%
Barren - 0.09%
1212_04
Somerville Lake
1212_03
1212_01
1212D_01
1212E_01
1212F_01
1212G_01
Sandy Branch
Cedar Creek
Burns Creek
Jerdelle Creek
McCain Creek
WASHINGTON
105
Courtney
GRIMES
Beason Creek
Brazos River Below Navasota River
1202D_01
1202E_02
1202E_01
New Year Creek
Hog Branch
Brenham
Burton
290
1202C_01
B290
Chappell Hill
1202_05
11850
Carmine
458
1202V_01
Hempstead
237
Round Top
WALLER
Clear Creek
Kenney
Shelby
1202W_01
East Fork Mill Creek
FAYETTE
West Fork Mill Creek
159
Industry
21582
21584
Bellville
AUSTIN
1202_04
21580
Sandy Creek
1202K_01
21579
Mill Creek
Fayetteville
New Ulm
Sunny Side
11576
21577
36
Peters
COLORADO
Cat Spring
1202_03
21816
San Felipe
116
71
Brazos River Authority
N
0
2.5
5
10 Miles

Bessie's Creek Watershed

Watershed Description:
The Bessie's Creek Watershed is approximately 318 square miles in area.

Land Use Land Cover in Watershed (Figure 29):
There are seven cities and thirty wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈74%) with the next most dominant landcover being developed (≈12%). There is a fair amount of wetland area in the watershed (8%).

Segments in Watershed (Figure 29):

- 1202_03: Brazos River below Navasota River, portion of the Brazos River from the confluence with Bessie's Creek in Fort Bend County upstream to the confluence with Mill Creek in Austin County

  Monitoring Station: 21816 - BRAZOS RIVER AT FM 1458 NEAR SAN FELIPE (Figure 29.1)

Figure 29.1 Monitoring Station: 21816 - BRAZOS RIVER AT FM 1458 NEAR SAN FELIPE

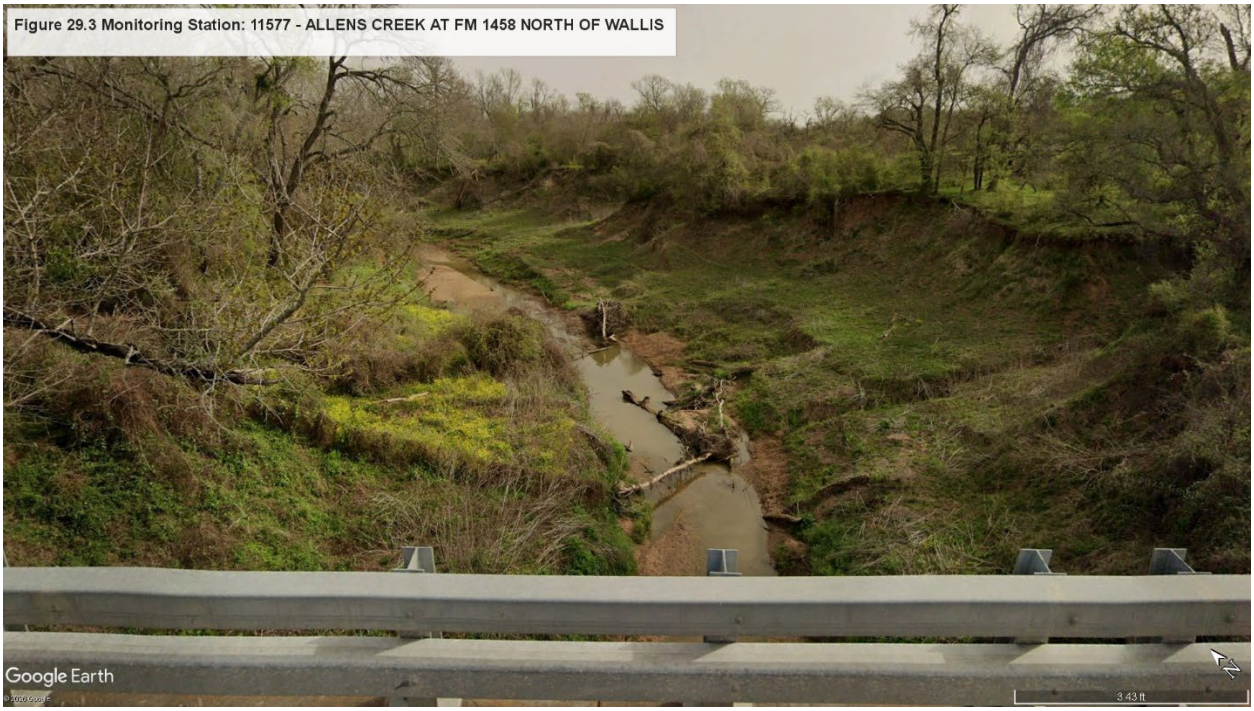
- 1202G_01: Brookshire Creek, appendix D perennial stream from the confluence of an unnamed tributary located 0.2 km downstream of SH 359 upstream to 500 m upstream of US 90

  Monitoring Station: 22502 - BROOKSHIRE CREEK NEAR ROGERS ROAD (Figure 29.2)

- 1202H_01: Allen's Creek. from the confluence with the Brazos River, two mi northeast of Wallis, to the headwaters one mi north of IH 10 in Austin County.

  Monitoring Stations:

  11577 - ALLENS CREEK AT FM 1458 NORTH OF WALLIS (Figure 29.3)



21753 - ALLENS CREEK AT MIXVILLE RD SOUTH OF SEALY (Figure 29.4)

- 1202I_01: Bessie's Creek from the confluence of the Brazos River in Fort Bend County upstream to confluence of Bessie's Bayou west of Brookshire

  Monitoring Station: 21814 - BESSIES CREEK AT FM 1093 EAST OF FULBROOK ROAD AND SW OF FULSHEAR (Figure 29.5)

Monitoring Station: 22498 - BESSIE'S CREEK NEAR FM 529
Monitoring Station: 22500 - BESSIE'S CREEK NEAR POOL HILL ROAD (Figure 29.6)

Monitoring Station: 22501 - BESSIE'S CREEK NEAR FULSHEAR LAKE WAY

- 1202I_02: Bessie's Creek, appendix D section from the confluence of Bessie's Bayou west of Brookshire upstream to the confluence of an unnamed tributary approximately 0.7 km upstream of FM 359 northwest of the City of Pattison

  Monitoring Station: 22499 - BESSIE'S CREEK DOWNSTREAM OF WILPITZ ROAD (Figure 29.7)

- 1202I_03: Bessie's Creek from the confluence of an unnamed tributary approximately 0.7 km upstream of FM 359 northwest of the City of Pattison upstream to the headwater north of Pattison

Impairments in Watershed Description (Figure 29):

- 1202I_01: Recreational Use—Bacteria impairment

There are concerns for chlorophyll-*a* in 1202_03. There are concerns for nitrate and total phosphorus in 1202H_01. There are also concerns for chlorophyll-*a*, depressed dissolved oxygen, nitrate and total phosphorus in 1202I_01.

Possible Contributions if Impaired:

Point Sources:

- There are seven cities and thirty wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- The downstream portion 1202I_01 is adjacent to primarily developed land cover, allowing for municipal and urban runoff contribution near these segments.
- Approximately 74% of the watershed is made up of the planted/cultivated category.

Potential non-State Agency Stakeholders:

- BRAZOS ISD
- BEACON ESTATES WSC
- BROOKSHIRE MWD
- HAMMOND MOUND UTILITIES INC

- TWINWOOD US INC
- ACME BRICK CO
- CITY OF FULSHEAR
- CITY OF SEALY
- FORT BEND COUNTY MUD 81
- THE CENTER SERVING PERSONS W MENTAL RETARDATION
- AQUA TEXAS INC
- SUMMER BREEZE USA KATY LLC
- VULCAN CONSTRUCTION MATERIALS LLC
- POSTIVE FEED LTD
- FULSHEAR LAKES LTD
- FORT BEND MUD NO 198
- FORT BEND COUNTY MUD 213
- LAND TEJAS COMPANIES LTD
- SIMONTON MANAGEMENT DISTRICT NO 1
- CITY OF WALLIS
- SAGE RANCH TX LLC
- WALLER COUNTY MUD 19
- DR HORTON TEXAS LTD
- PECAN ACRES CREEK LLC
- FORT BEND CO MUD NO 213

Actions taken if impaired:

- The Houston-Galveston Area Council is working with stakeholders in the Bessie's Creek Watershed to improve water quality by characterizing, identifying bacteria sources, and developing a TMDL (Total Maximum Daily Load) for the watershed. This Bessie's Creek TMDL project began in February 2026.

Recommendations if impaired:

- Await recommendations from the Bessie's Creek TMDL.

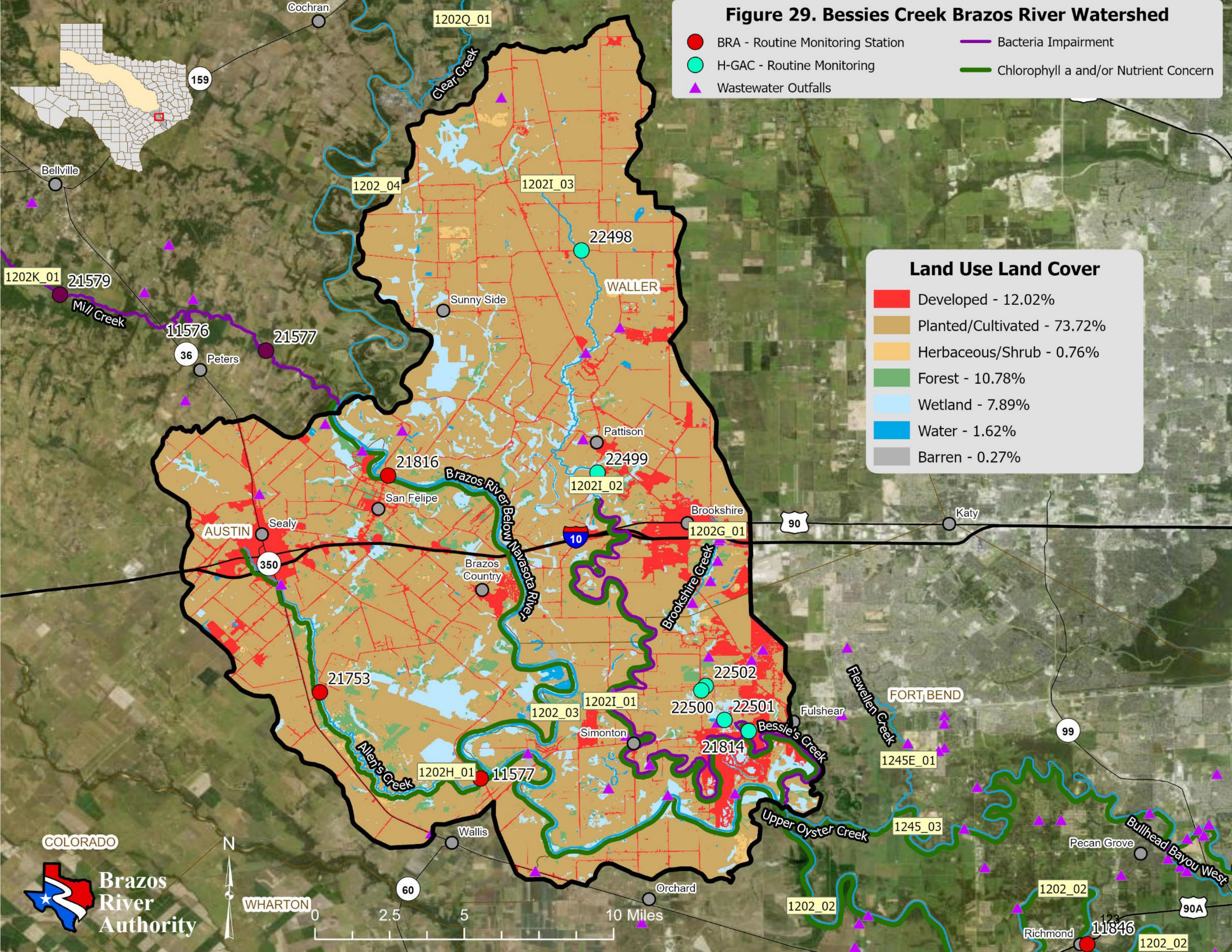


Figure 29. Bessies Creek Brazos River Watershed
BRA - Routine Monitoring Station
H-GAC - Routine Monitoring
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 12.02%
Planted/Cultivated - 73.72%
Herbaceous/Shrub - 0.76%
Forest - 10.78%
Wetland - 7.89%
Water - 1.62%
Barren - 0.27%
Cochran
1202Q_01
Clear Creek
159
Bellville
1202_04
1202I_03
22498
WALLER
1202K_01
21579
Mill Creek
11576
21577
36
Peters
Sunny Side
Pattison
22499
1202I_02
21816
Brazos River Below Navasota River
San Felipe
AUSTIN
Sealy
350
10
Brookshire
1202G_01
90
Katy
Brazos Country
Brookshire Creek
22502
22500
22501
21814
Bessie's Creek
Fulshear
Flewellen Creek
FORT BEND
1245E_01
99
21753
1202_03
1202I_01
Simonton
Allen's Creek
1202H_01
11577
Upper Oyster Creek
1245_03
Bullhead Bayou West
Pecan Grove
Walls
COLORADO
60
Orchard
WHARTON
1202_02
90A
Richmond
11846
N
0
2.5
5
10 Miles
Brazos River Authority

Big Creek-Brazos River Watershed

Watershed Description:
The Big Creek-Brazos River Watershed is approximately 393 square miles in area.

Land Use Land Cover in Watershed (Figure 30):
There are eleven cities and fifty-seven wastewater outfalls, indicated in the Potential non-State Agency Stakeholders section, in the watershed. Dominant landcover is the planted/cultivated category (≈57%) with the next most dominant landcover being developed (≈28%). There is a fair amount of wetland area in the watershed (≈11%).

Segments in Watershed (Figure 30):

- Upstream portion of 1202_01: Brazos River below Navasota River, portion of the Brazos River from the confluence with the Brazos River Tidal in Brazoria County upstream to the confluence with Flat Bank Creek in Fort Bend County.
- 1202_02: Brazos River Below Navasota River, portion of the Brazos River from the confluence with Flat Bank Creek upstream to the confluence with Bessie's Creek in Fort Bend County.

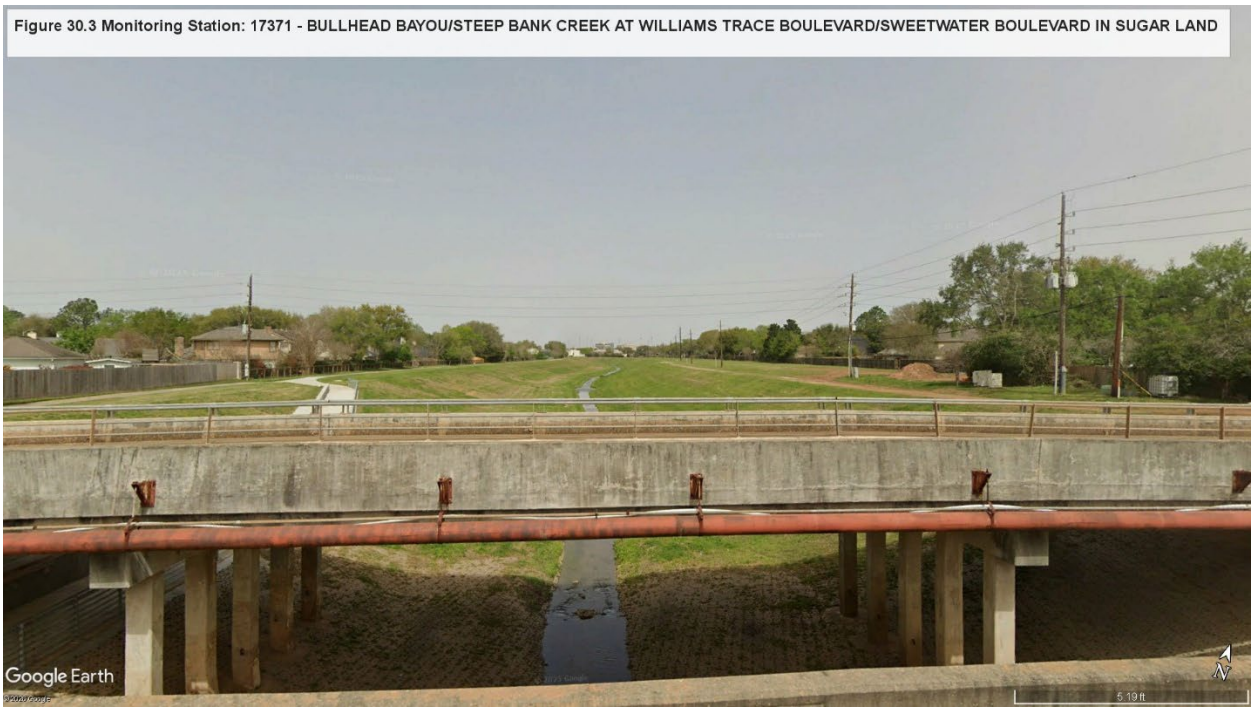
  Monitoring Station:
  11846 - BRAZOS RIVER 70 METERS DOWNSTREAM OF US 90A IN RICHMOND (Figure 30.1)

- 1202B_01: Rabbs Bayou Appendix D perennial stream section from Smithers Lake upstream to the confluence of an unnamed tributary below US 59.
- 1202J_01: Big Creek from the confluence of the Brazos River upstream to the confluence of an unnamed tributary 2.1 km downstream of FM 2977 south of Rosenberg.

Monitoring Station: 16353 - BIG CREEK IMMEDIATELY UPSTREAM OF SAWMILL ROAD 7.0 KM UPSTREAM OF WATERS LAKE BAYOU E OF LONG POINT N OF BRAZOS BEND STATE PARK (Figure 30.2)

- 1202J_02: Big Creek Appendix D intermittent stream with perennial pools section from the
- confluence with an unnamed tributary 2.1 km downstream of FM 2977 upstream to the confluence of Cottonwood Creek and Coon Creek.
- 1202R_01: Bullhead Bayou West from the confluence with the Brazos River upstream, via FBCDD Ditch H, to the headwaters near the intersection of Plantation Dr. and Harlem Rd. in Pecan Grove in Fort Bend County
- 1202S_01: Bullhead Bayou East from Lexington Blvd to the Sweetwater Golf Course in Fort Bend County

Monitoring Station: 17371 - BULLHEAD BAYOU/STEEP BANK CREEK AT WILLIAMS TRACE BOULEVARD/SWEETWATER BOULEVARD IN SUGAR LAND (Figure 30.3)



- 1202T_01: Unnamed tributary to Bullhead Bayou East in Fort Bend County
  Monitoring Station: 17382 - UNNAMED TRIBUTARY OF BULLHEAD BAYOU AT AUSTIN PARKWAY IN SUGARLAND (Figure 30.4)

- 1202U_01: Alcorn Bayou from the confluence with FBCDD Ditch H upstream to the confluence with Bullhead Bayou East in Fort Bend County

Monitoring Station: 17381 - ALCORN BAYOU AT SWEETWATER BOULEVARD IN SUGARLAND (Figure 30.5)

- Downstream portion of 1245_01: Upper Oyster Creek From the confluence with the Brazos River upstream to Dam #3

  Monitoring Station: 22457 - FLAT BANK CREEK AT PEDESTRIAN BRIDGE 680 METERS DOWNSTREAM OF SH 6 SOUTH OF DEWALT
- 1245I_01: Steep Bank Creek from confluence with Oyster Creek (Flat Bank Creek portion) upstream to the electrical transmission lines ROW near Sweetwater Golf Course in Fort Bend County
- Downstream portion of 1258_01: Middle Oyster Creek from the confluence with the Brazos River through the Brazos River Authority Canal to the confluence with Upper Oyster Creek above Tidal and upstream to the confluence with the Flat Creek Diversion Channel in Fort Bend County.

Impairments in Watershed Description (Figure 30):

- 1202J_01, 1202J_02, 1202S_01, 1202T_01, 1202U_01, 1245I_01: Recreational Use—Bacteria impairments
  - There are concerns for chlorophyll-*a* in 1202_01 and 1202_02. There are concerns for depressed dissolved oxygen, habitat and fish community in 1202J_01. There are concerns for depressed dissolved oxygen, nitrate, and total phosphorus in 1202J_02. There is a concern for nitrate in 1202U_01 and 1245I_01. There are also concerns for chlorophyll-a, nitrate, and total phosphorus in 1245_01.

Possible Contributions if Impaired:

Point Sources:

- There are eleven cities and fifty-seven wastewater outfalls in the watershed. Cities responsible for wastewater treatment plants, combined sewer systems or municipal separate storm sewer

systems could create point source pollution contributing to bacterial and nutrient loads as a result of a system failure.

Non-point sources:

- Near all of the impaired segments, developed land cover is the dominant land cover, allowing for municipal and urban runoff contribution near these segments.
- Approximately 57% of the watershed is made up of the planted/cultivated category.

Potential non-State Agency Stakeholders:

- City of Pecan Grove
- City of Orchard
- City of Richmond
- City of First Colony
- City of Rosenburg
- City of Booth
- Town of Thompsons
- Pleak Village
- Village of Fairchilds
- City of Needville
- City of Sugar Land
- City of Beasley
- City of Sienna
- City of Dewalt
- Fort Bend County
- 300 ACRES LLC
- TIDWELL TRACT LTD
- PROENERGY SERVICES LLC
- RICHMOND COMMUNITY ESTATES LLC
- ELENA SLEPTSOVA ODA
- JTI CONSTRUCTORS
- PLANTATION CROSSING OWNERS ASSOCIATION INC
- AQUA TEXAS INC
- THE SIGNORELLI CO
- JACK A FUSCO ENERGY CENTER LLC; CALPINE OPERATING SERVICES CO INC
- LAMAR CONSOLIDATED ISD
- FRITO-LAY INC
- ROYAL VALLEY UTILITIES INC
- GREATWOOD HOSPITALITY INC
- PLANTATION MUD
- SIENNA PLANTATION MUD 1
- NRG TEXAS POWER LLC
- PETRA NOVA CCS I LLC

Actions taken if impaired:

- RUAAs were completed, reviewed, recommendations were made, and EPA approved revising 1202S_01, 1202R_01, and 1202T_01 to a designated use of SCR1.

- TCEQ and Houston-Galveston Area Council (H-GAC) began work on the Total Maximum Daily Loads for Indicator Bacteria project in Big Creek in 2018 as part of a larger regional assessment of water quality the Houston-Galveston area. H-GAC completed a watershed characterization report that was used by TCEQ and stakeholders to decide whether it was necessary to develop TMDLs for Big Creek. In 2023 H-GAC completed the technical support document and TMDLs . The Commission adopted these TMDLs on August 14, 2024. EPA approved them on September 26, 2024, at which time they became an update to the state's Water Quality Management Plan. The Implementation Plan for Two Total Maximum Daily Loads for Indicator Bacteria in Big Creek was approved by TCEQ in July 2025.

Recommendations if impaired:

- Collect additional bacteria data and assess segments 1202S and 1202T using current criteria.
- A watershed characterization study, consisting of a set of water and habitat assessments compiling hydrology, geology, wildlife, LULC, and water quality data to inform on the best way to improve water quality in a watershed, may be appropriate for 1202U_01 and 1245I_01.

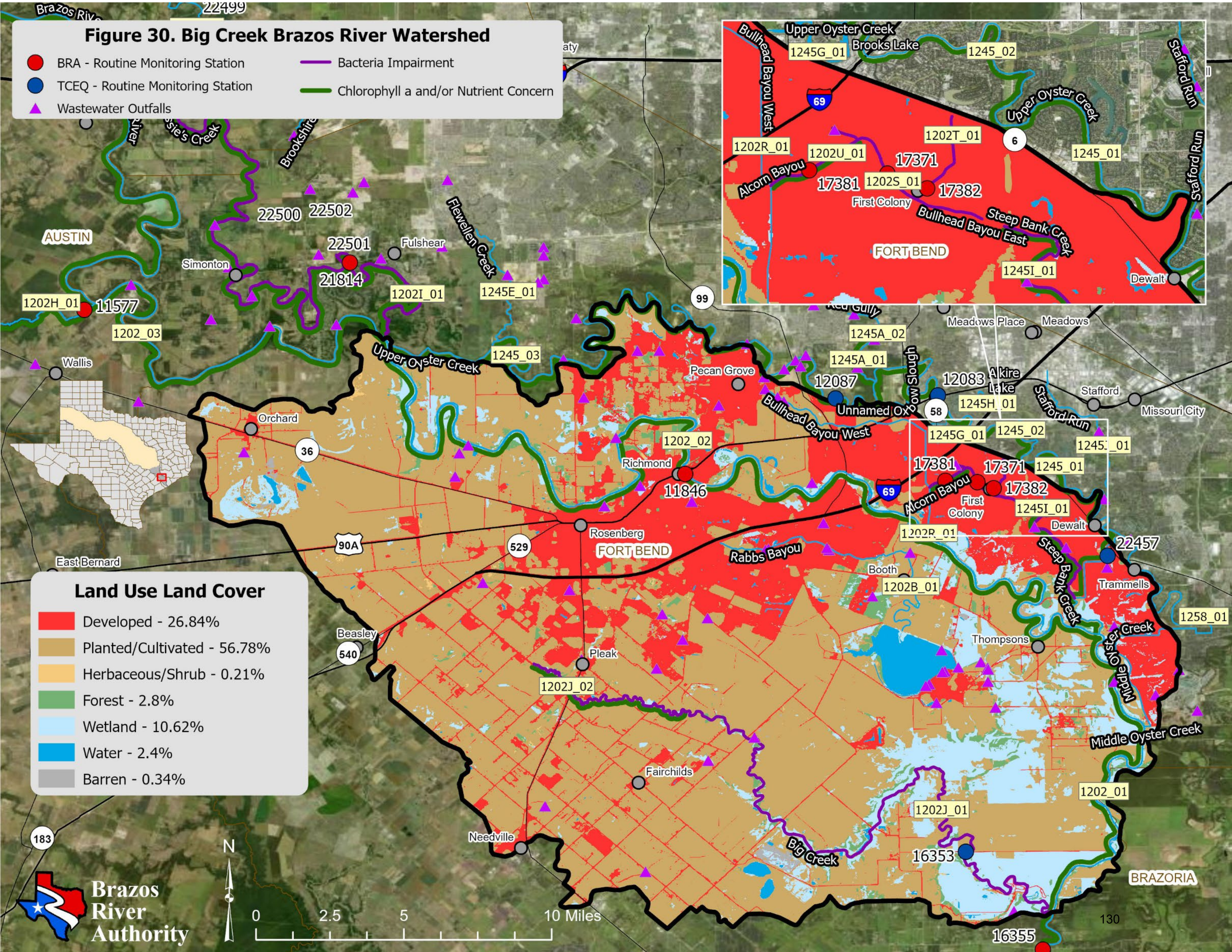


Figure 30. Big Creek Brazos River Watershed
BRA - Routine Monitoring Station
TCEQ - Routine Monitoring Station
Wastewater Outfalls
Bacteria Impairment
Chlorophyll a and/or Nutrient Concern
Land Use Land Cover
Developed - 26.84%
Planted/Cultivated - 56.78%
Herbaceous/Shrub - 0.21%
Forest - 2.8%
Wetland - 10.62%
Water - 2.4%
Barren - 0.34%
Upper Oyster Creek
Brooks Lake
Bullhead Bayou West
1245G_01
1245_02
1202T_01
1202R_01
1202U_01
17371
Alcorn Bayou
17381
1202S_01
17382
First Colony
Steep Bank Creek
Bullhead Bayou East
FORT BEND
1245I_01
1245_01
Stafford Run
Dewalt
22499
22500
22502
22501
21814
AUSTIN
Simonton
Fulshear
Flewellen Creek
1202I_01
1245E_01
1202H_01
11577
1202_03
Wallis
Orchard
1245_03
Pecan Grove
1245A_02
1245A_01
12087
12083
Meadows Place
Meadows
Alkire Lake
Stafford
Missouri City
Unnamed Ox Bow Slough
1245H_01
Stafford Run
1202_02
Richmond
11846
Rosenberg
Rabbs Bayou
1202R_01
22457
Booth
1202B_01
Trammells
1258_01
East Bernard
Beasley
Pleak
1202J_02
Thompsons
Middle Oyster Creek
1202_01
Fairchilds
1202J_01
16353
Big Creek
Needville
BRAZORIA
16355
Brazos River Authority
0 2.5 5 10 Miles
N

Brazos River Authority

THE TEXAS CLEAN RIVERS PROGRAM

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Brazos River Authority
4600 Cobbs Drive
Waco, TX 76710
Phone (254) 761-3100 www. brazos.org

Prepared in cooperation with the Texas Commission on Environmental Quality
under the authorization of the Texas Clean Rivers Act.