

Brazos River Basin Highlights Report 2015



Brazos River Basin Highlights Report 2015

Watersheds Covered



Lubbock

Abilene

Fort Worth Dallas

Waco

Austin

San Antonio

Houston

 Area Covered in 2015 BHR

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Introduction

In recent Basin Highlights Reports (BHR), water quality of 14 major subwatersheds in the Brazos River Basin were presented. For the 2014, 2015 and 2016 BHRs, the 14 major subwatersheds are subdivided in to a total of 154 smaller subwatersheds based on the USGS generated 10-digit Hydrologic Unit Codes (HUC10). The 2014 BHR characterized 51 of these HUC10 delineated subwatersheds (referred to as watersheds for the remainder of the report) within the Clear Fork of the Brazos River and the Salt and Double Mountain Forks of the Brazos River watersheds. For this 2015 Brazos River Basin Highlights Report, 53 watersheds within the Aquilla, Bosque, Lampasas, Leon, Little River and Upper watersheds of the Brazos River are characterized. The remaining watersheds will be characterized in the 2016 Basin Highlights Report. 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 United States Geological Survey (USGS) using the most recent, 2011 edition of National Land Cover Data (NLCD) 2006 land cover layer for the United States. Percentage surface areas of each LULC class are calculated. 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 grammanoid 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 or 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 AU monitored in 2015, the station is listed with a full name description.

Impairments in Watershed Description:

If an AU in the watershed is impaired in the draft 2014 Integrated Report (IR), the type of impairment 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 end of each section is a figure depicting the watershed. Each figure shows base satellite imagery with counties, cities, roads, the watershed of interest, AUs, monitoring stations, waste water outfalls, and any impairments or concerns in the watershed.

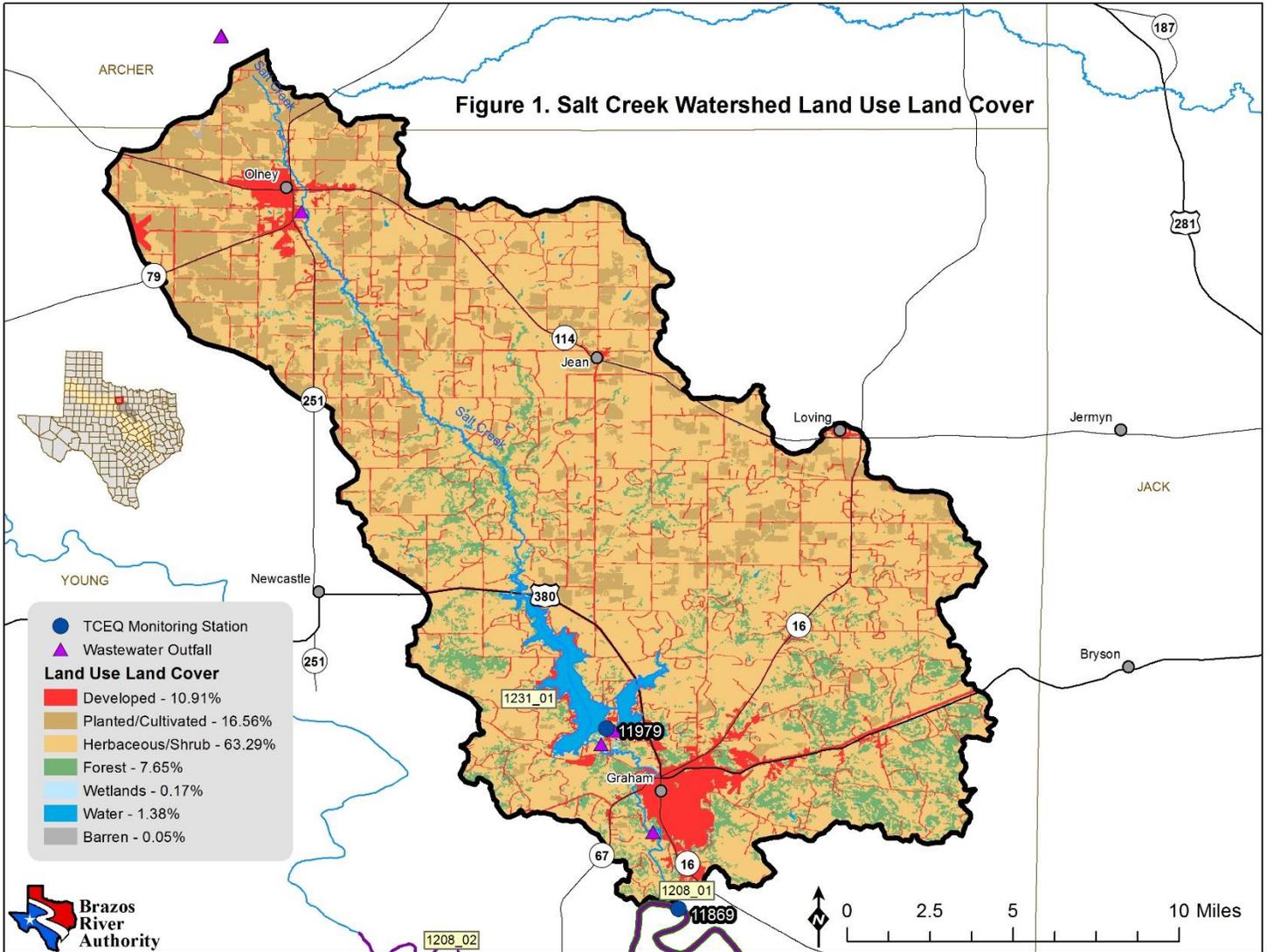
Salt Creek Watershed

Watershed Description:

The Salt Creek Watershed is 270 square miles in area.

Land Use Land Cover in Watershed (Figure 1):

There are four cities and four wastewater outfalls in the watershed. Lake Graham lies entirely within the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of planted/cultivated land.



Segments in Watershed (Figure 2):

- Salt Creek
- 1231_01: Lake Graham
Monitoring Station: 11979 - LAKE GRAHAM NEAR DAM

Impairments in Watershed Description (Figure 2):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

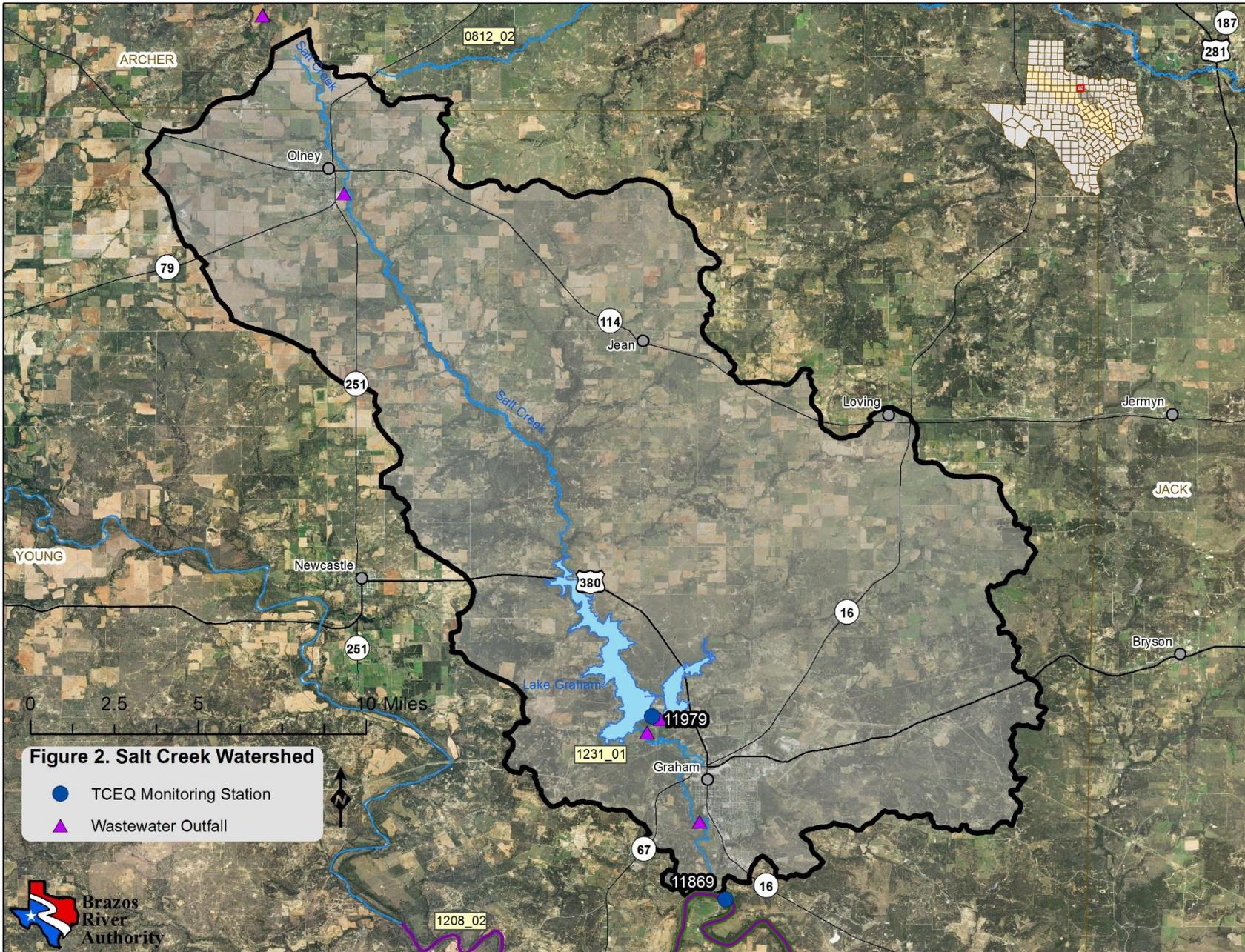
- City of Olney
- City of Jean
- City of Graham
- City of Loving
- Archer County
- Young County
- Any marinas or other businesses on or that serve Lake Graham

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



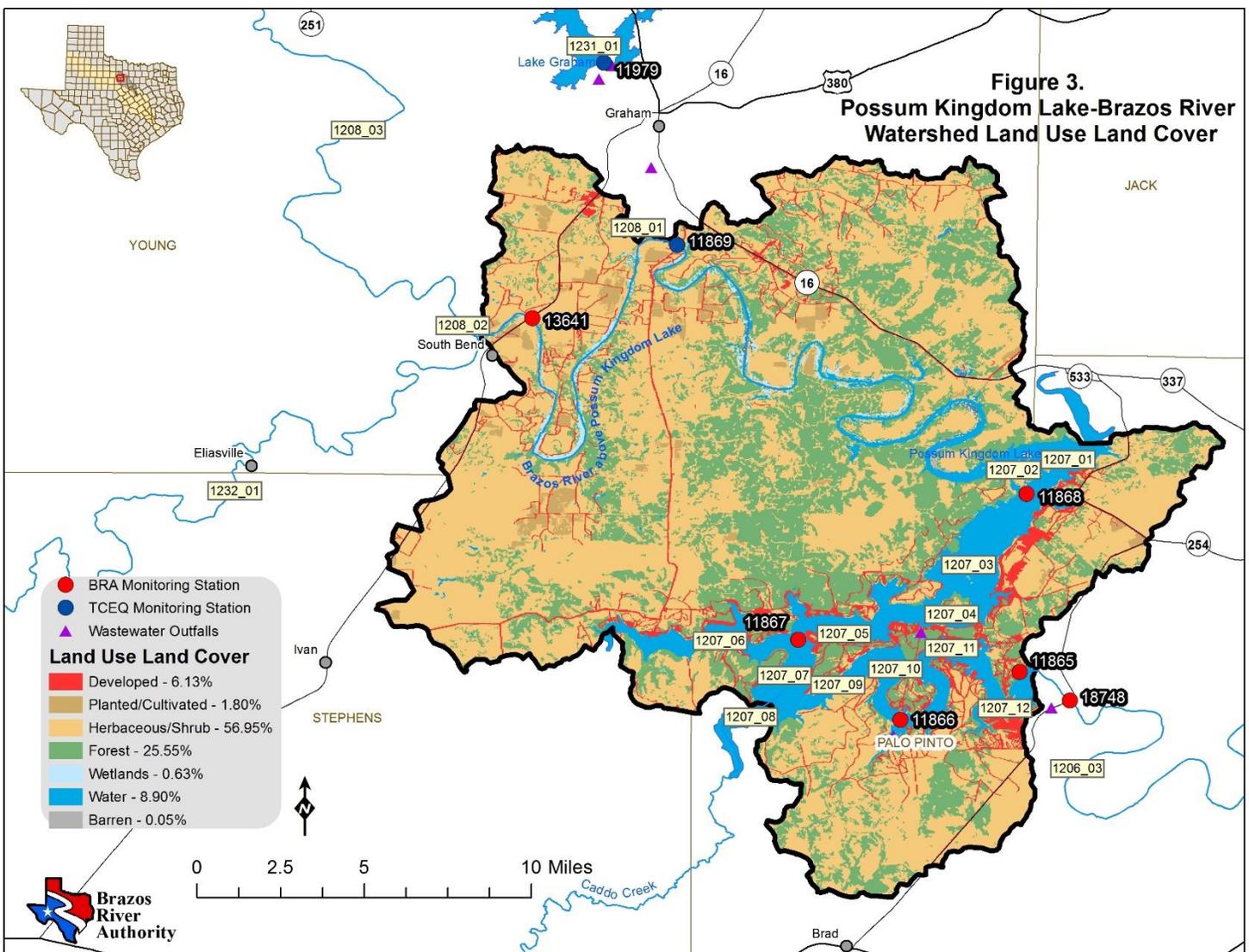
Possum Kingdom Lake-Brazos River Watershed

Watershed Description:

The Possum Kingdom Lake-Brazos River Watershed is 263 square miles in area.

Land Use Land Cover in Watershed (Figure 3):

There are no cities in the watershed. There are three wastewater outfalls in the watershed. The majority of Possum Kingdom Lake lies within the watershed. Dominant landcover includes herbaceous/shrubland with a moderate amount of forested upland and a smaller amount of open water.



Segments in Watershed (Figure 4):

- 1207_02: Possum Kingdom Lake, Deep Elm Creek arm
Monitoring Station: 11868 - POSSUM KINGDOM RESERVOIR DEEP ELM CREEK ARM 597 METERS NORTH AND 880 METERS WEST OF INTERSECTION OF ANTHONY LOOP AND LEFTYS COURT
- 1207_03: Possum Kingdom Lake, portion of segment west of SH 16
- 1207_04: Possum Kingdom Lake, portion of lake containing Costello Island
- 1207_05: Possum Kingdom Lake, Elm Creek arm of segment
Monitoring Station: 11867 - POSSUM KINGDOM RESERVOIR NEAR END OF FM 2951, 67 METERS NORTH AND 864 METERS WEST OF INTERSECTION OF FM 2951 AND SANBAR RD
- 1207_06: Possum Kingdom Lake, Veale Creek arm of segment
- 1207_07: Possum Kingdom Lake, portion of lake adjacent to northeast corner of state park
- 1207_08: Possum Kingdom Lake, Caddo Creek arm of Lake
- 1207_09: Possum Kingdom Lake, portion of lake south of FM 2951
- 1207_10: Possum Kingdom Lake, Bluff Creek arm of lake
Monitoring Station: 11866 - POSSUM KINGDOM RESERVOIR NEAR JOHNSON BEND 437 METERS NORTH AND 429 METERS WEST OF INTERSECTION OF HELLS GATE LOOP AND HELLS POINT RD
- 1207_11: Possum Kingdom Lake, Jewell Creek arm of lake
- 1207_12: Possum Kingdom Lake, downstream portion of lake
Monitoring Station: 11865 - POSSUM KINGDOM RESERVOIR NEAR DAM 696 METERS WEST AND 221 METERS SOUTH OF NORTHERN EDGE OF DAM
- 1208_01: Brazos River above Possum Kingdom Lake, portion of segment from confluence with Possum Kingdom Reservoir headwaters upstream to confluence with Spring Branch in Young County
Monitoring Station: 11869 - BRAZOS RIVER IMMEDIATELY UPSTREAM OF FM 1287 SOUTH OF GRAHAM
- 1208_02: Brazos River above Possum Kingdom Lake, portion of segment from confluence with Spring Branch upstream to confluence with Fish Creek
Monitoring Station: 13641 - BRAZOS RIVER 72 METERS DOWNSTREAM OF SH 67, 2.0 MILES NORTHEAST OF SOUTH BEND 2.81 KILOMETERS DOWNSTREAM FROM THE CONFLUENCE WITH CLEAR FORK BRAZOS RIVER

Impairments in Watershed Description (Figure 4):

- 1208_01: Recreational Use—bacteria
There are concerns for chlorophyll-*a* in 1208_01.
- 1208_02: Recreational Use—bacteria

Possible Contributions if Impaired:

Point Sources: There are three wastewater outfalls in the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 82% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

- Stephens County

- Palo Pinto County
- Young County
- Any marinas or other businesses on or that serve Possum Kingdom Lake

Actions taken if impaired:

- An [RUAA](#) has been conducted in segment 1208 and results have led to the recommendation that the segment remain classified as a Primary Contact Recreation (PCR) segment.
- AUs 1208_01 and _02 are currently on the Watershed Action Plan (WAP) table for discussion and evaluation. Input from regional water quality monitors is obtained during yearly coordinated monitoring meetings.

Recommendations if impaired:

- Continue routine monitoring of the established long-term stations in this watershed.
- Conduct a more thorough watershed evaluation.

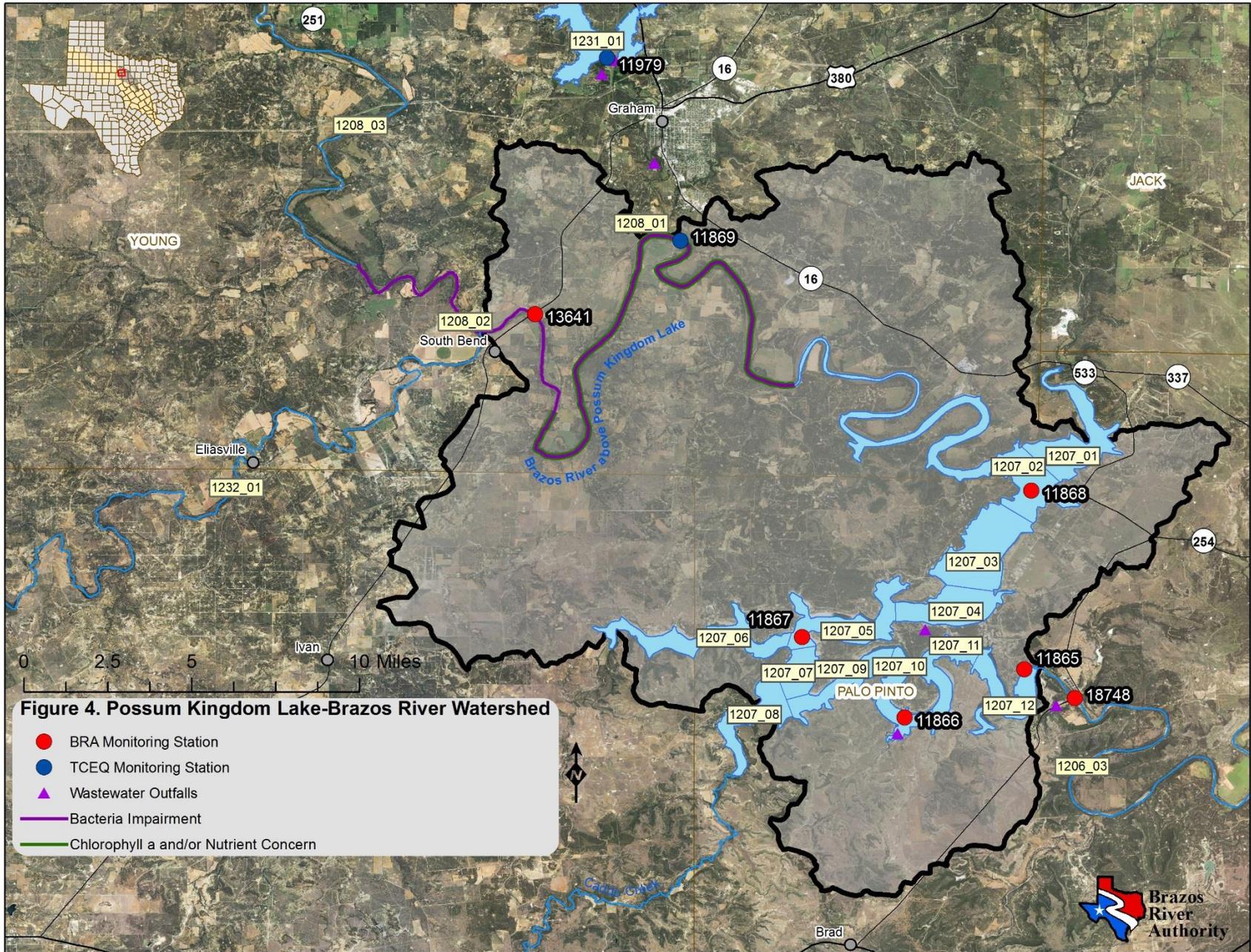


Figure 4. Possum Kingdom Lake-Brazos River Watershed

- BRA Monitoring Station
- TCEQ Monitoring Station
- ▲ Wastewater Outfalls
- Bacteria Impairment
- Chlorophyll a and/or Nutrient Concern

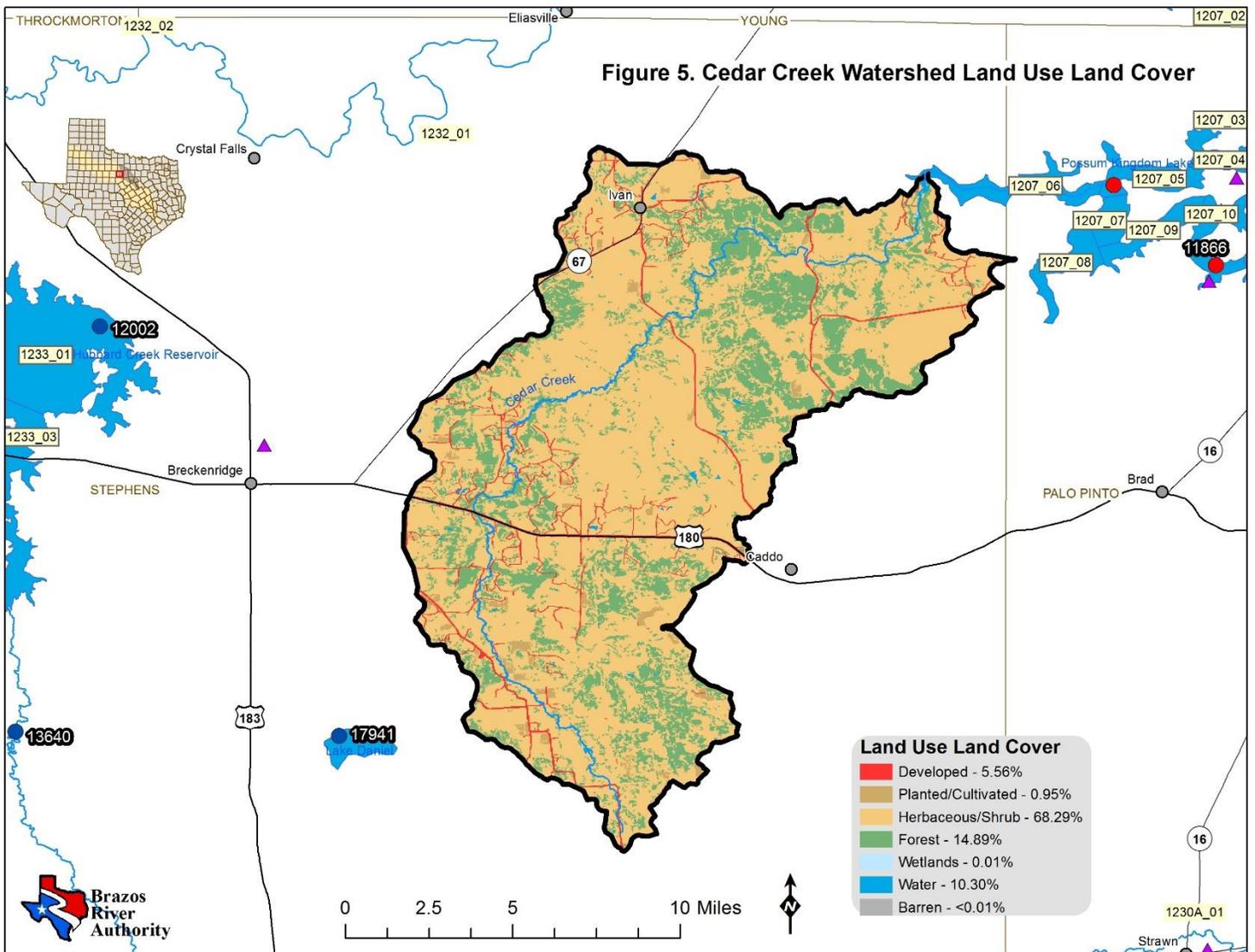
Cedar Creek Watershed

Watershed Description:

The Cedar Creek Watershed is 155 square miles in area.

Land Use Land Cover in Watershed (Figure 5):

There is one city in the watershed. There are no wastewater outfalls in the watershed. A small portion of Possum Kingdom Lake lies within the watershed. Dominant landcover includes herbaceous/shrubland with a moderate amount of forested upland.



Segments in Watershed (Figure 6):

- Cedar Creek
- The upstream portion of 1207_06: Possum Kingdom Lake, Veale creek arm of segment

Impairments in Watershed Description (Figure 6):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

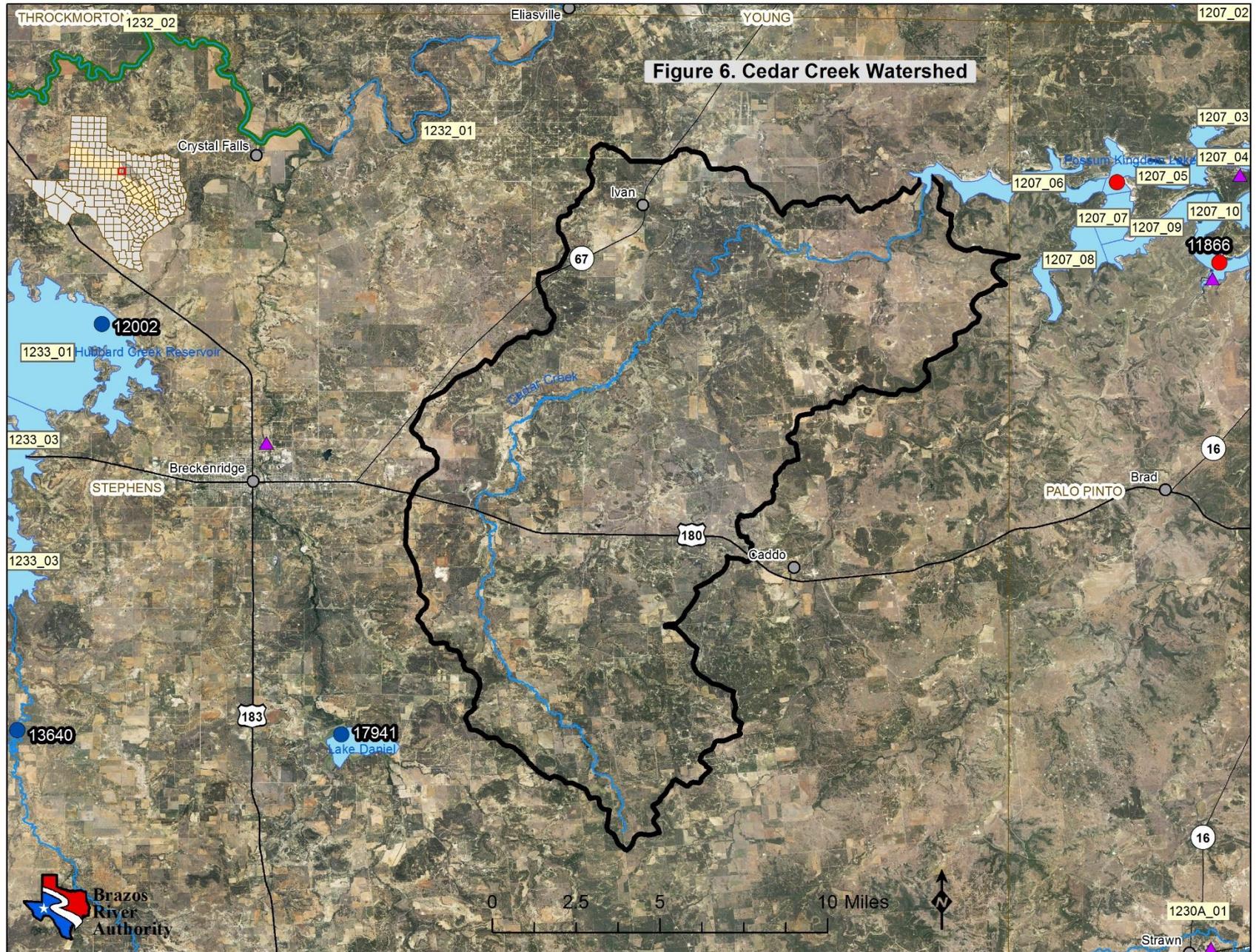
- City of Ivan
- Stephens County
- Any marinas or other businesses on or that serve Possum Kingdom Lake

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



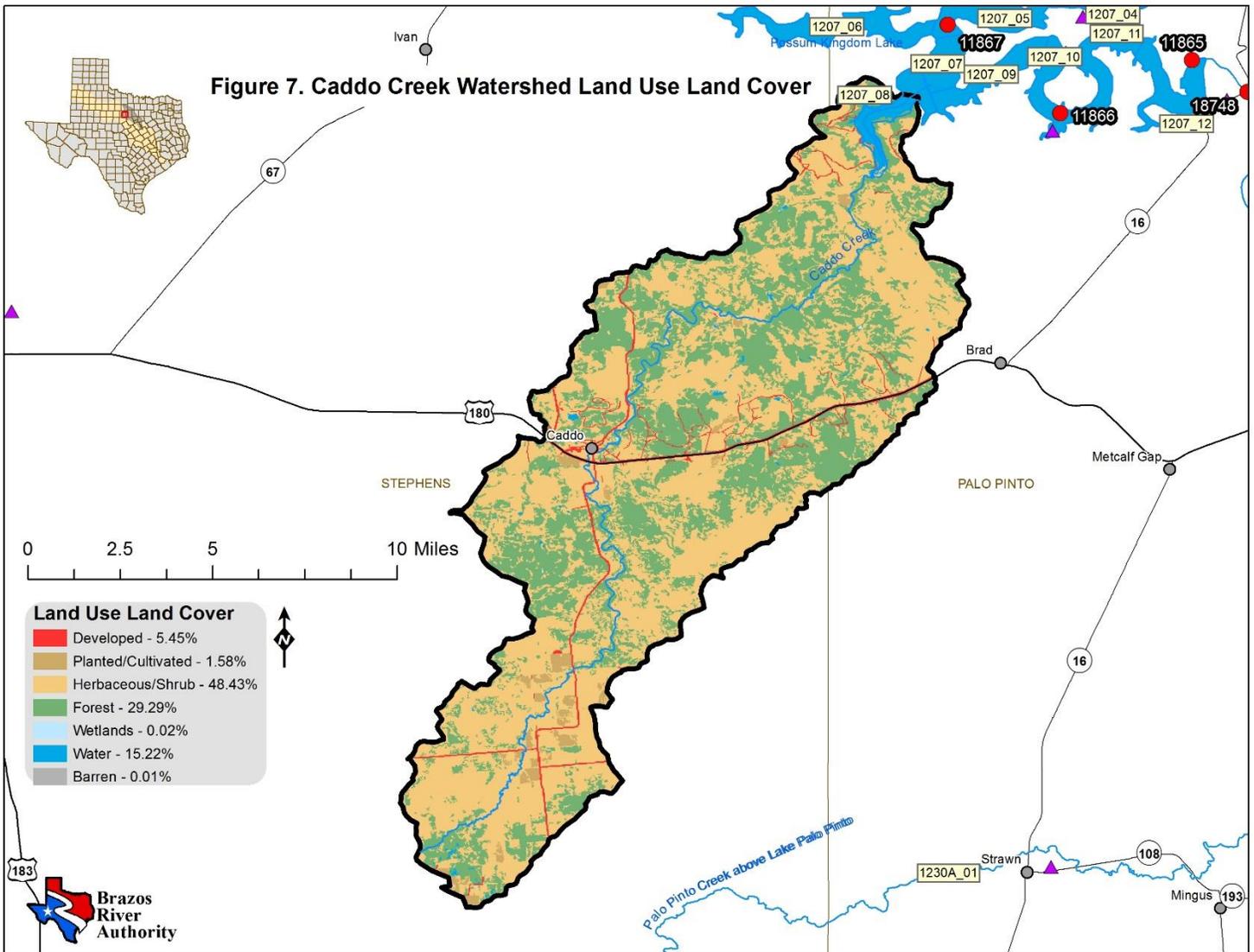
Caddo Creek Watershed

Watershed Description:

The Caddo Creek Watershed is 113 square miles in area.

Land Use Land Cover in Watershed (Figure 7):

There is one city in the watershed. There are no wastewater outfalls in the watershed. A small portion of Possum Kingdom Lake lies within the watershed. Dominant landcover includes herbaceous/shrubland and forested upland.



Segments in Watershed (Figure 8):

- Caddo Creek
- The upstream portion of segment 1207_08: Possum Kingdom Lake, Caddo Creek arm of lake

Impairments in Watershed Description (Figure 8):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

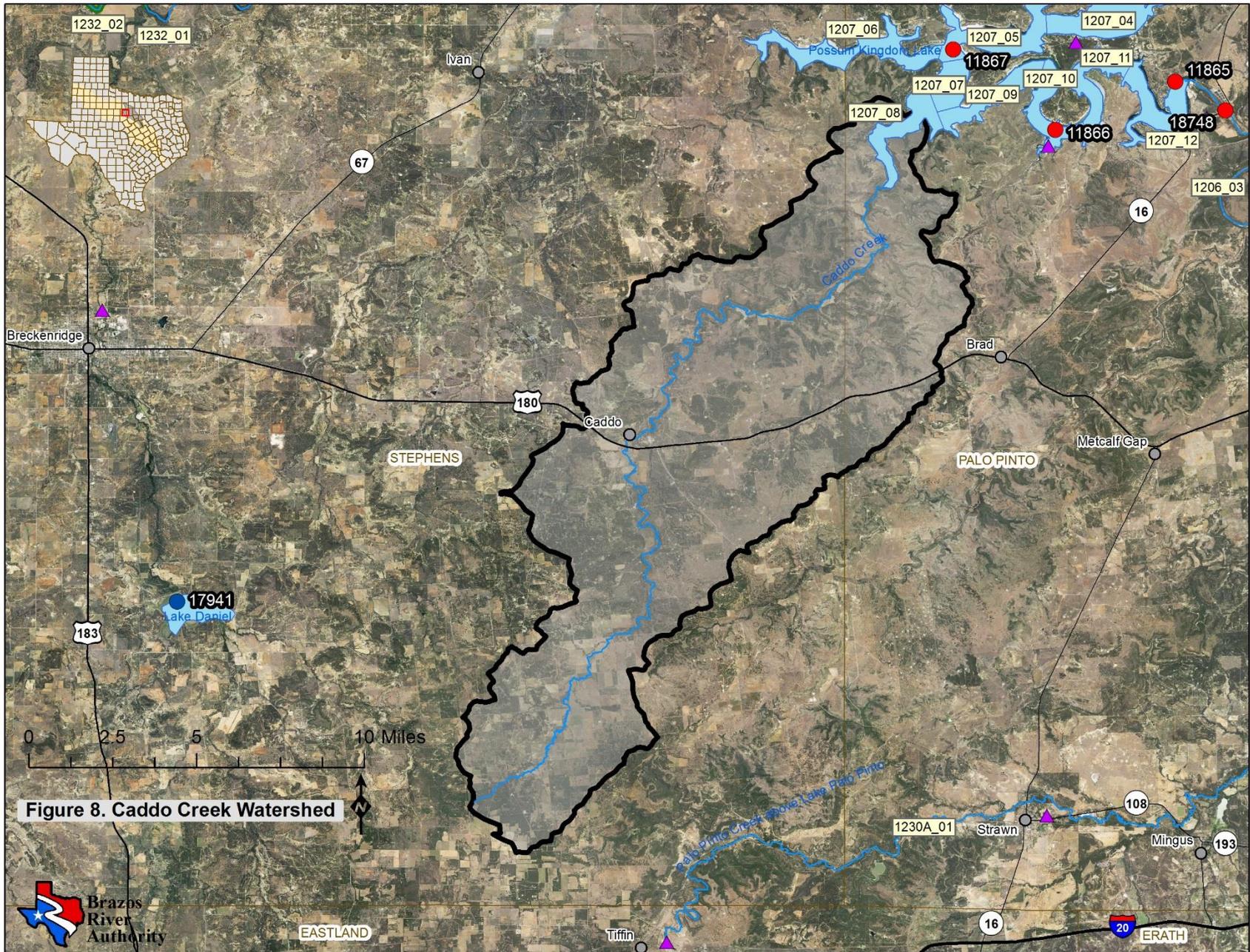
- City of Caddo
- Stephens County
- Palo Pinto County
- Any marinas or other businesses on or that serve Possum Kingdom Lake

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



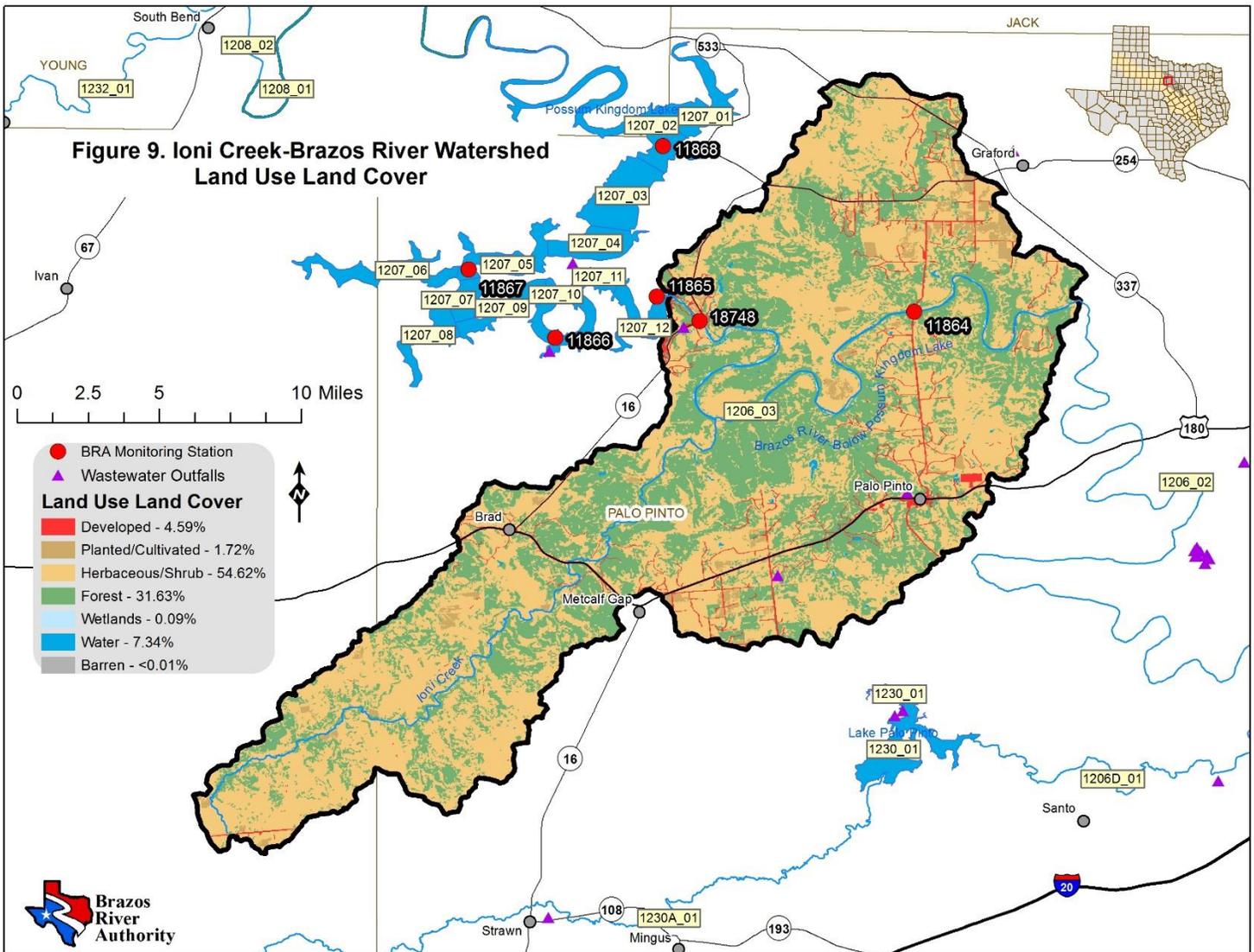
Ioni Creek-Brazos River Watershed

Watershed Description:

The Ioni Creek-Brazos River Watershed is 258 square miles in area.

Land Use Land Cover in Watershed (Figure 9):

There are two cities in the watershed. There are three wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland and forested upland.



Segments in Watershed (Figure 10):

- Ioni Creek
- 1206_02: Brazos River below Possum Kingdom Lake, from confluence with Rock Creek upstream to confluence with Elm Creek in Palo Pinto County
- 1206_03: Brazos River below Possum Kingdom Lake, from confluence with Elm Creek in Palo Pinto County upstream to Possum Kingdom Reservoir in Palo Pinto County

Monitoring Stations:

18748 - BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF SOUTH SH 16

11864 - BRAZOS RIVER AT FM 4 NORTH OF PALO PINTO

Impairments in Watershed Description (Figure 10):

- None
There are concerns for impaired habitat and impaired macrobenthic community in 1206_02.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

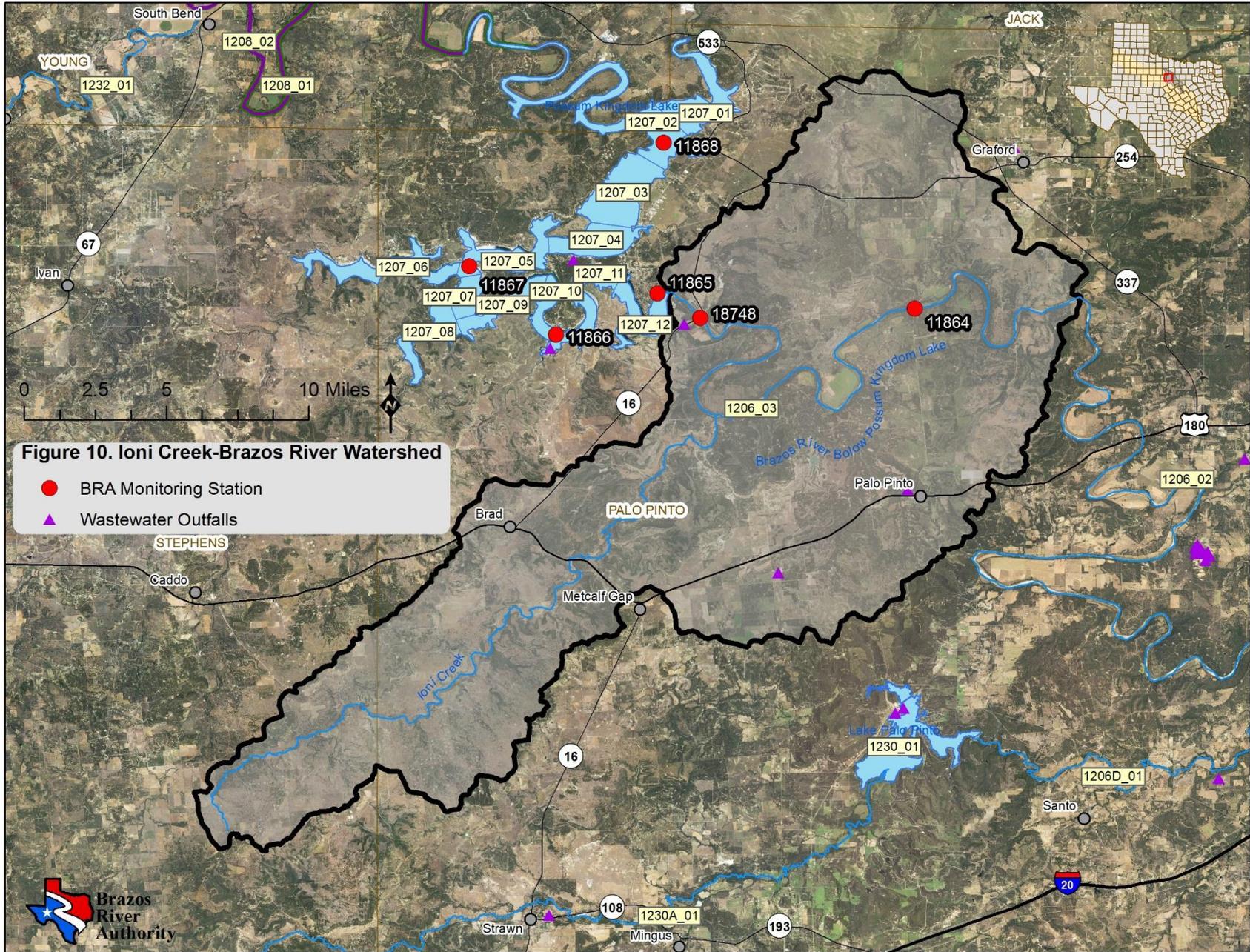
- City of Brad
- City of Palo Pinto
- Stephens County
- Palo Pinto County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



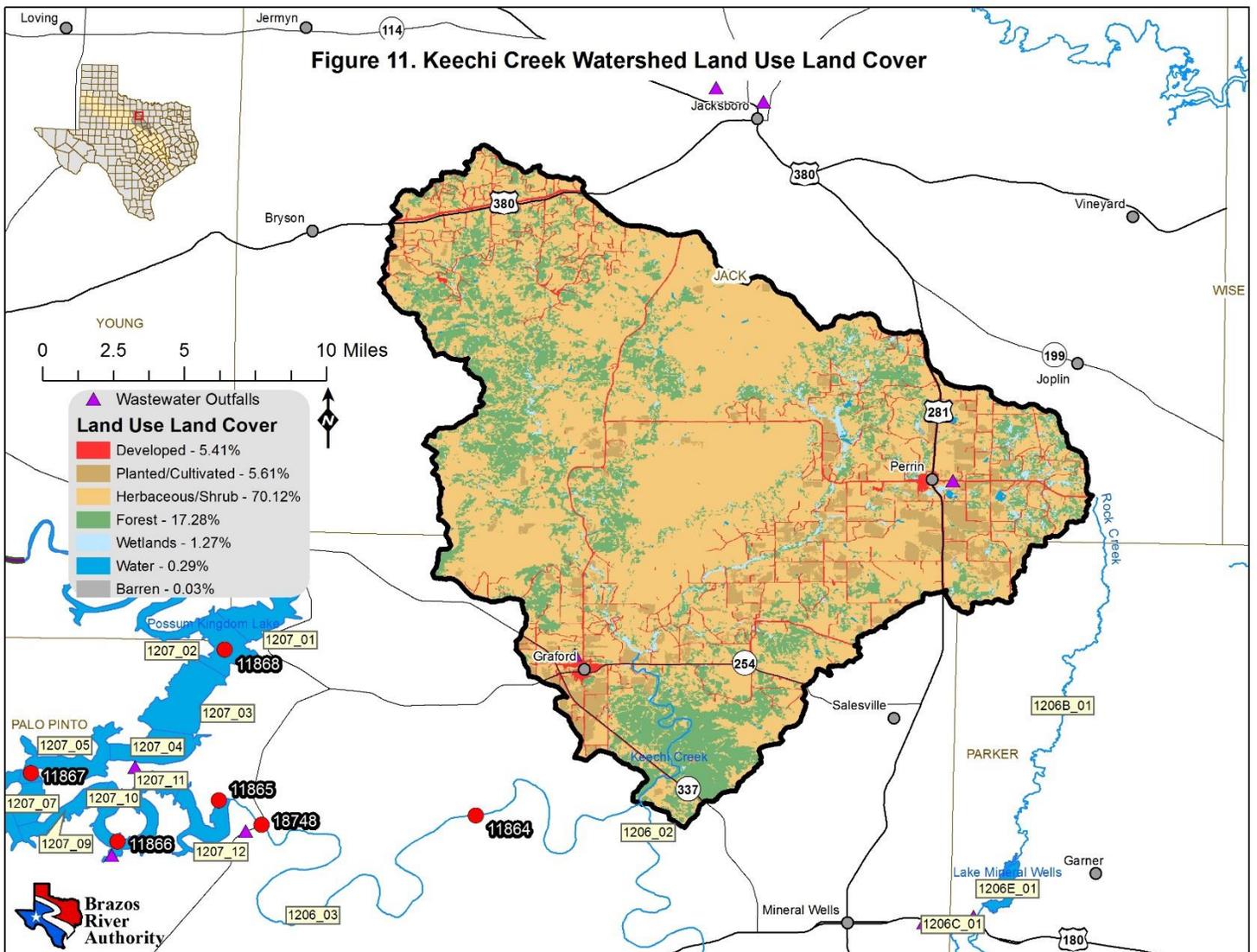
Keechi Creek Watershed

Watershed Description:

The Keechi Creek Watershed is 265 square miles in area.

Land Use Land Cover in Watershed (Figure 11):

There are two cities in the watershed. There are two wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of forested upland.



Segments in Watershed (Figure 12):

- Keechi Creek
- There are no classified or unclassified segments in this watershed.

Impairments in Watershed Description (Figure 12):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

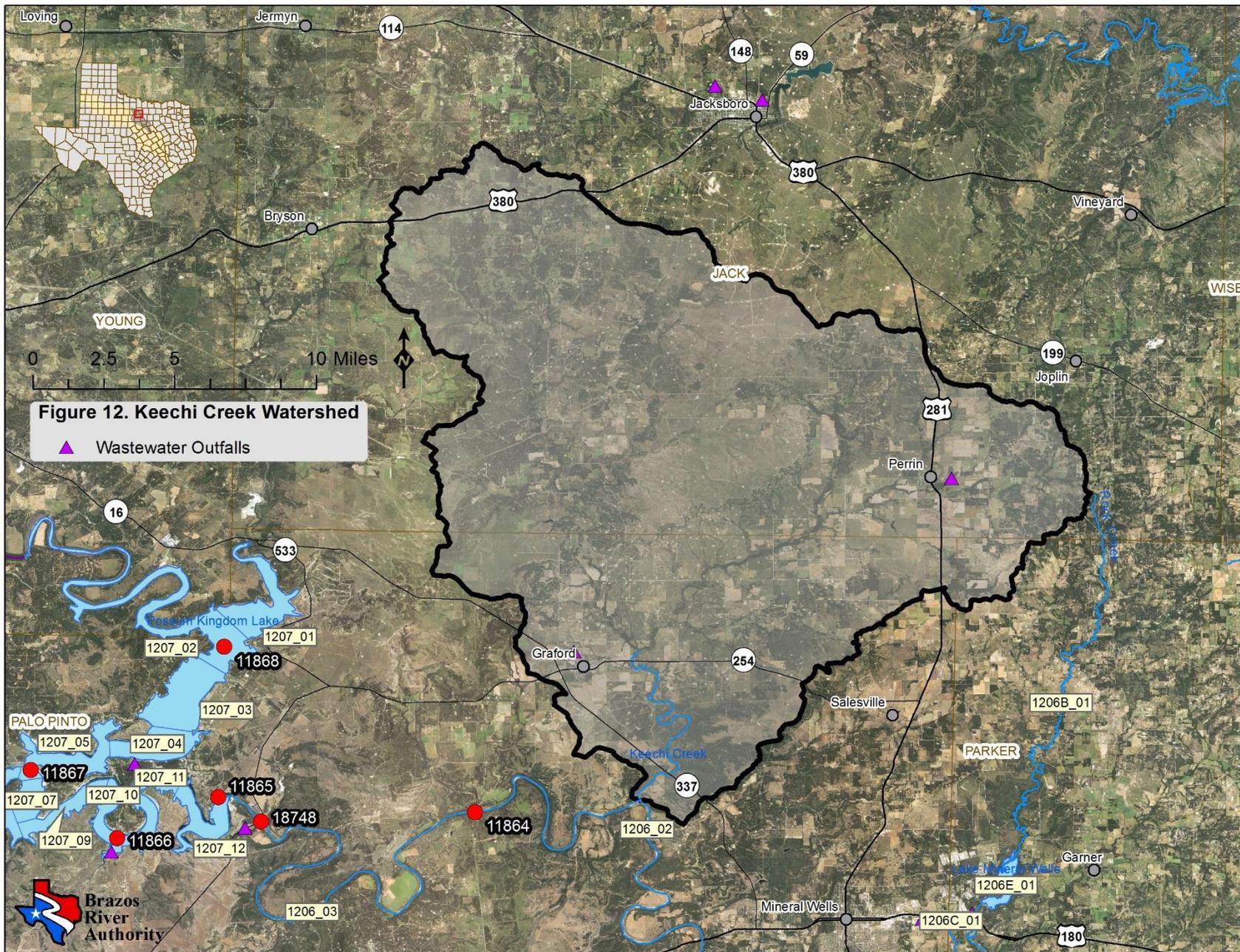
- City of Perrin
- City of Graford
- Jack County
- Palo Pinto County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



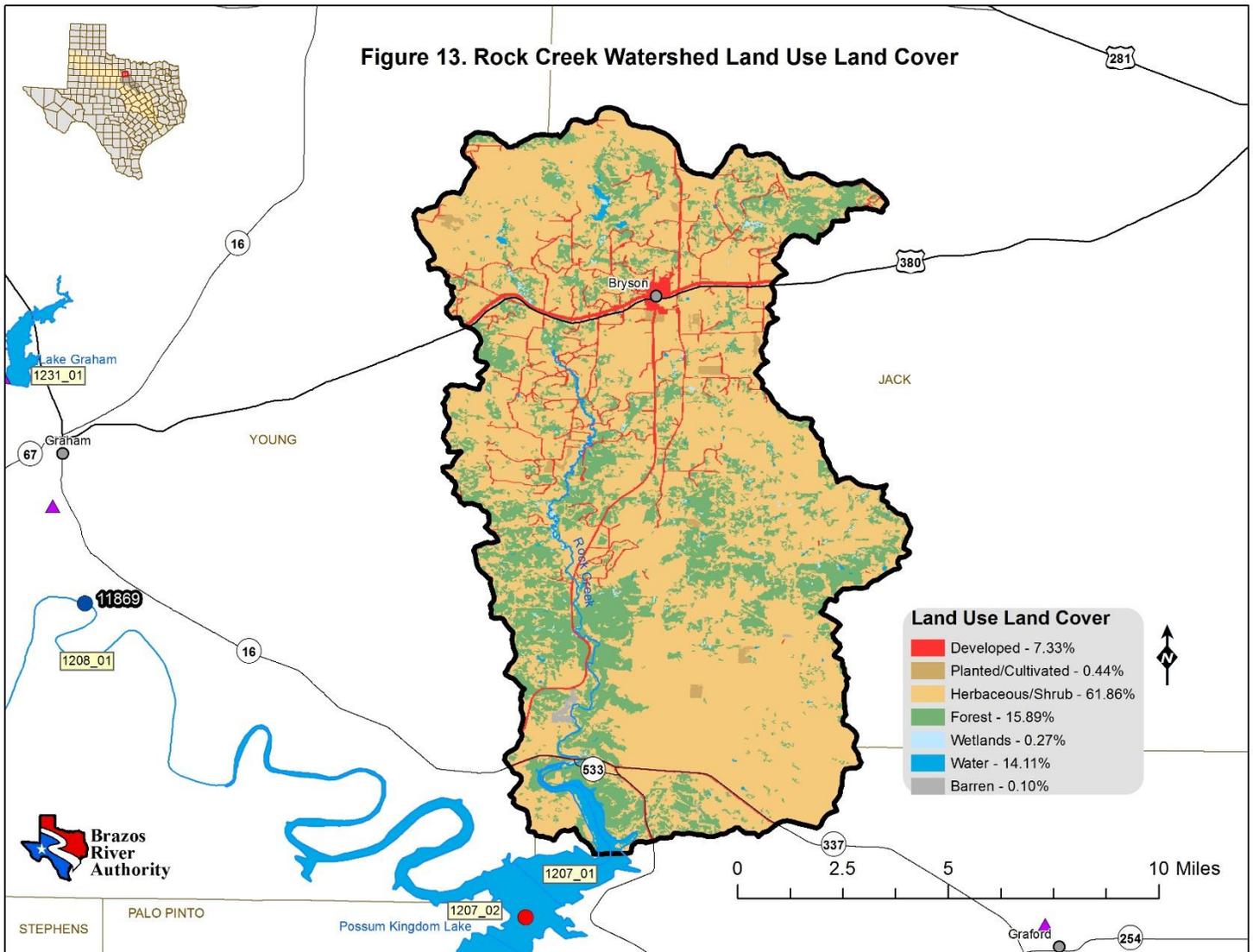
Rock Creek Watershed

Watershed Description:

The Rock Creek Watershed is 115 square miles in area.

Land Use Land Cover in Watershed (Figure 13):

There is one city in the watershed. There are no wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with smaller amount of forested upland. A portion of Possum Kingdom Lake lies within this watershed.



Segments in Watershed (Figure 14):

- Rock Creek
- There are no classified or unclassified segments in this watershed.

1207_01: Possum Kingdom Lake, Rock Creek arm of lake

Impairments in Watershed Description (Figure 14):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

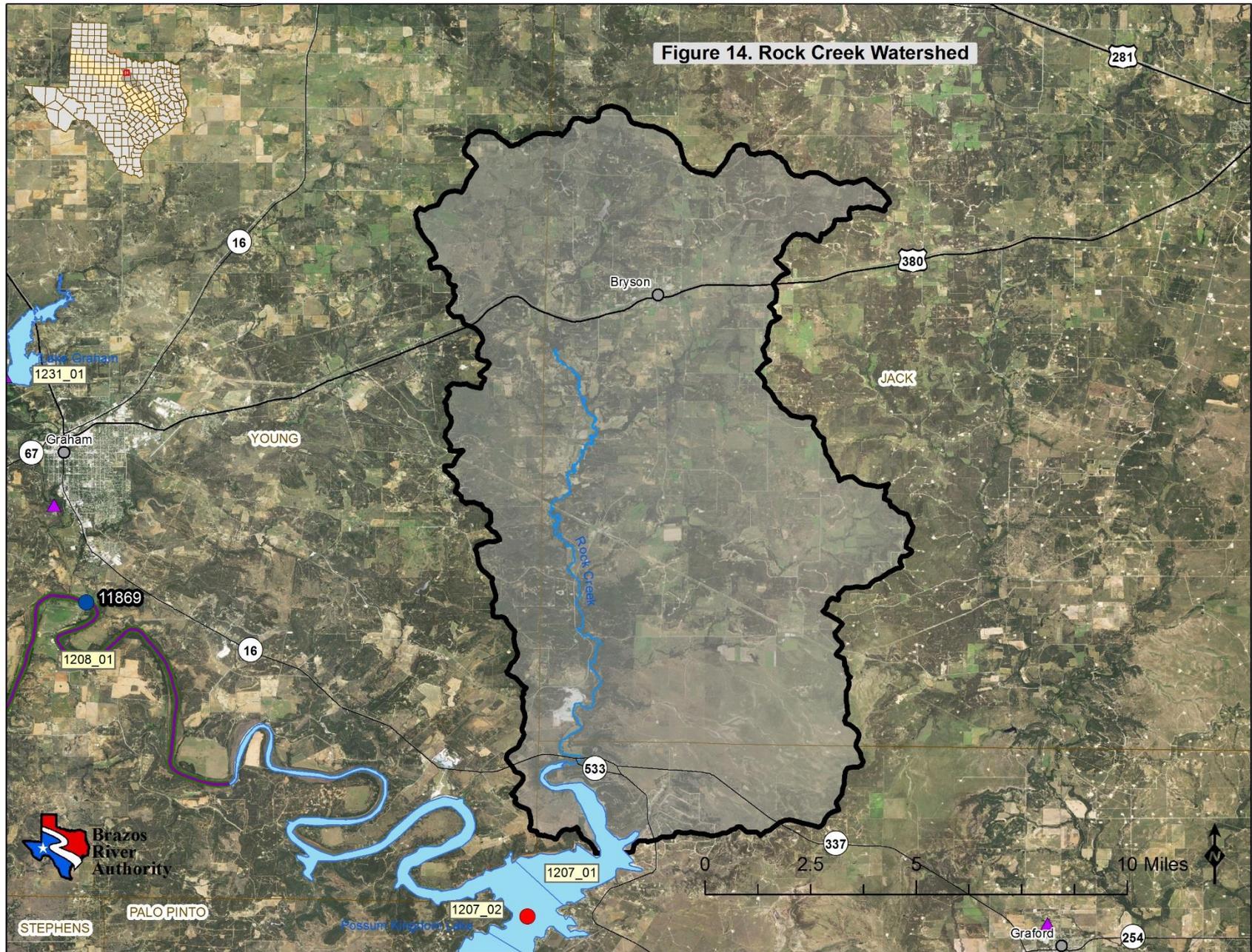
- City of Bryson
- Jack County
- Palo Pinto County
- Young County
- And marinas or other businesses that serve Possum Kingdom Lake

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



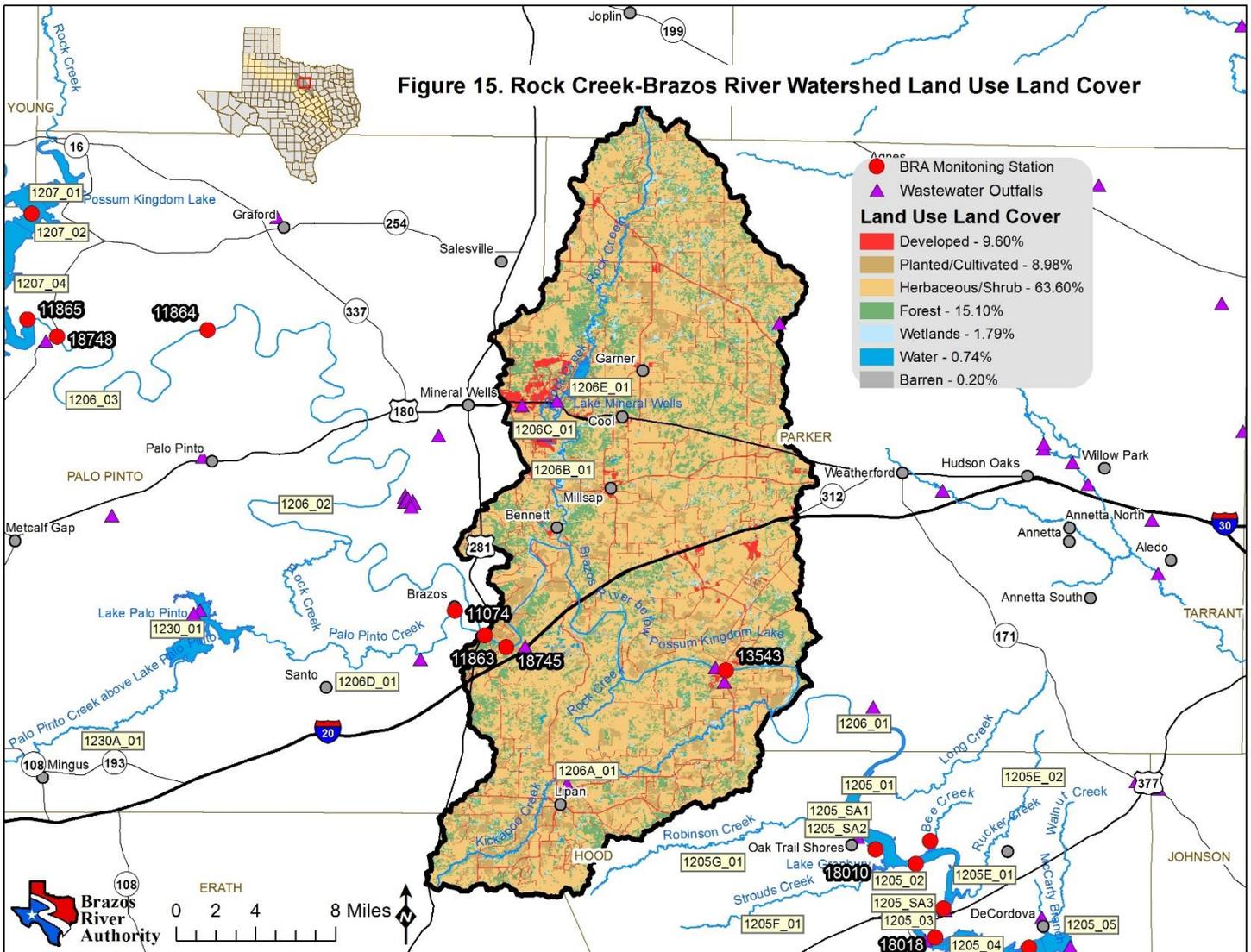
Rock Creek-Brazos River Watershed

Watershed Description:

The Rock Creek-Brazos River Watershed is 415 square miles in area.

Land Use Land Cover in Watershed (Figure 15):

There are six cities and eight wastewater outfalls in the watershed. Lake Mineral Wells lies within the watershed. Dominant landcover includes herbaceous/shrubland, with a smaller amount of forested upland and planted/cultivated land.



Segments in Watershed (Figure 16):

- 1206_01: Brazos River below Possum Kingdom Lake, 100 meters upstream of FM 2580 in Parker County upstream to confluence with Rock Creek in Parker County
Monitoring Station: 13543 - BRAZOS RIVER IMMEDIATELY UPSTREAM OF FM 1189 SOUTH OF DENNIS
- 1206_02: Brazos River below Possum Kingdom Lake, from confluence with Rock Creek upstream to confluence with Elm Creek in Palo Pinto County
Monitoring Stations:
11863 - BRAZOS RIVER AT US 281 SOUTH OF MINERAL WELLS
18745 - BRAZOS RIVER SOUTH BANK 1.74 KILOMETERS DOWNSTREAM OF US 281 IN PALO PINTO COUNTY
- 1206A_01: Kickapoo Creek
- 1206B_01: Rock Creek
- 1206C_01: Unnamed tributary of Rock Creek
- 1206E_01: Lake Mineral Wells

Impairments in Watershed Description (Figure 16):

- None
There are concerns for chlorophyll-*a* in 1206_01.
There are also concerns for habitat and macrobenthic community in 1206_01 and 1206_02.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

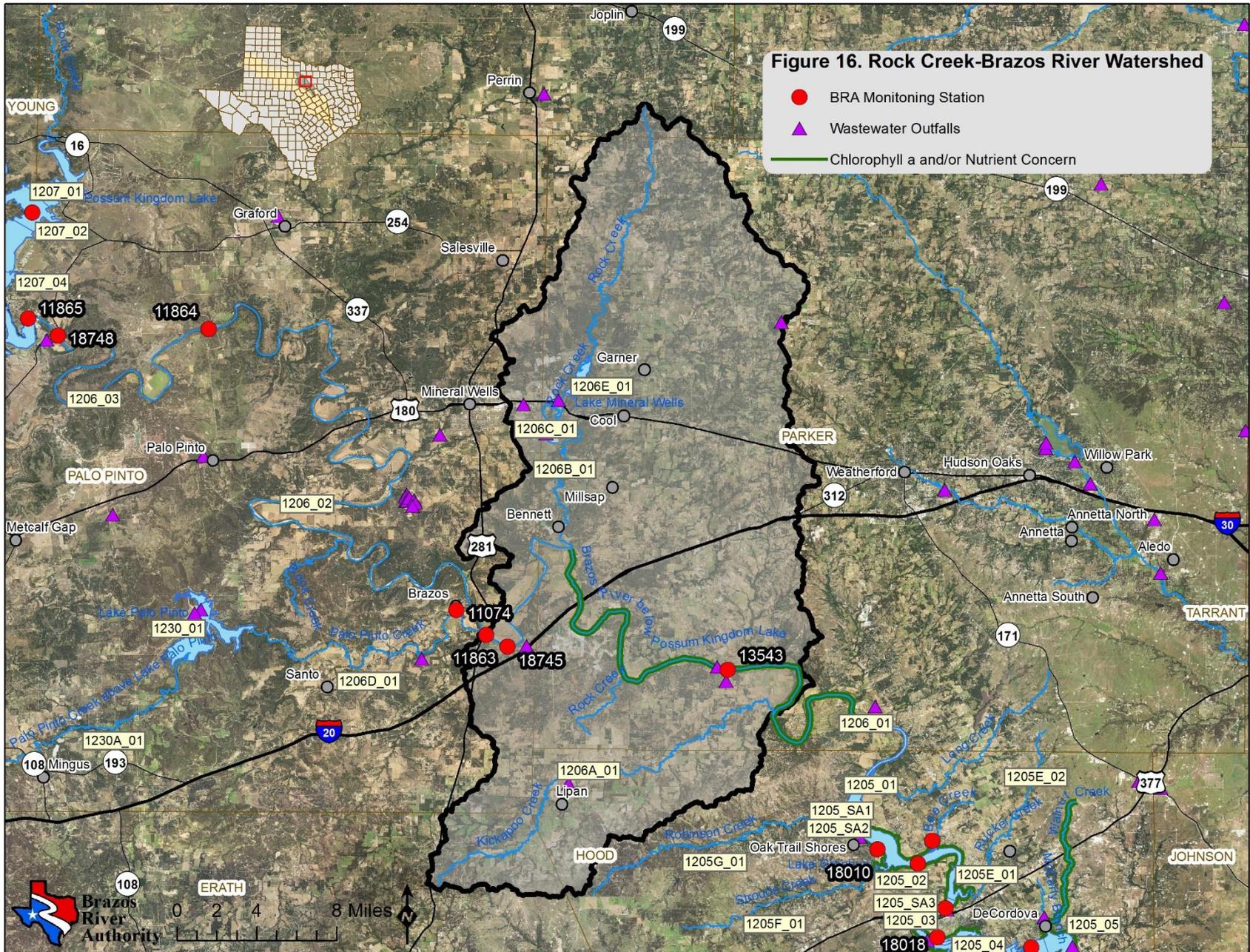
- City of Mineral Wells
- City of Garner
- City of Cool
- City of Milsap
- City of Bennett
- City of Lipan
- Parker County
- Palo Pinto County
- Hood County
- Erath County
- And marinas or other businesses that serve Lake Mineral Wells

Actions taken if impaired: None

- N/A

Recommendations if impaired:

- N/A



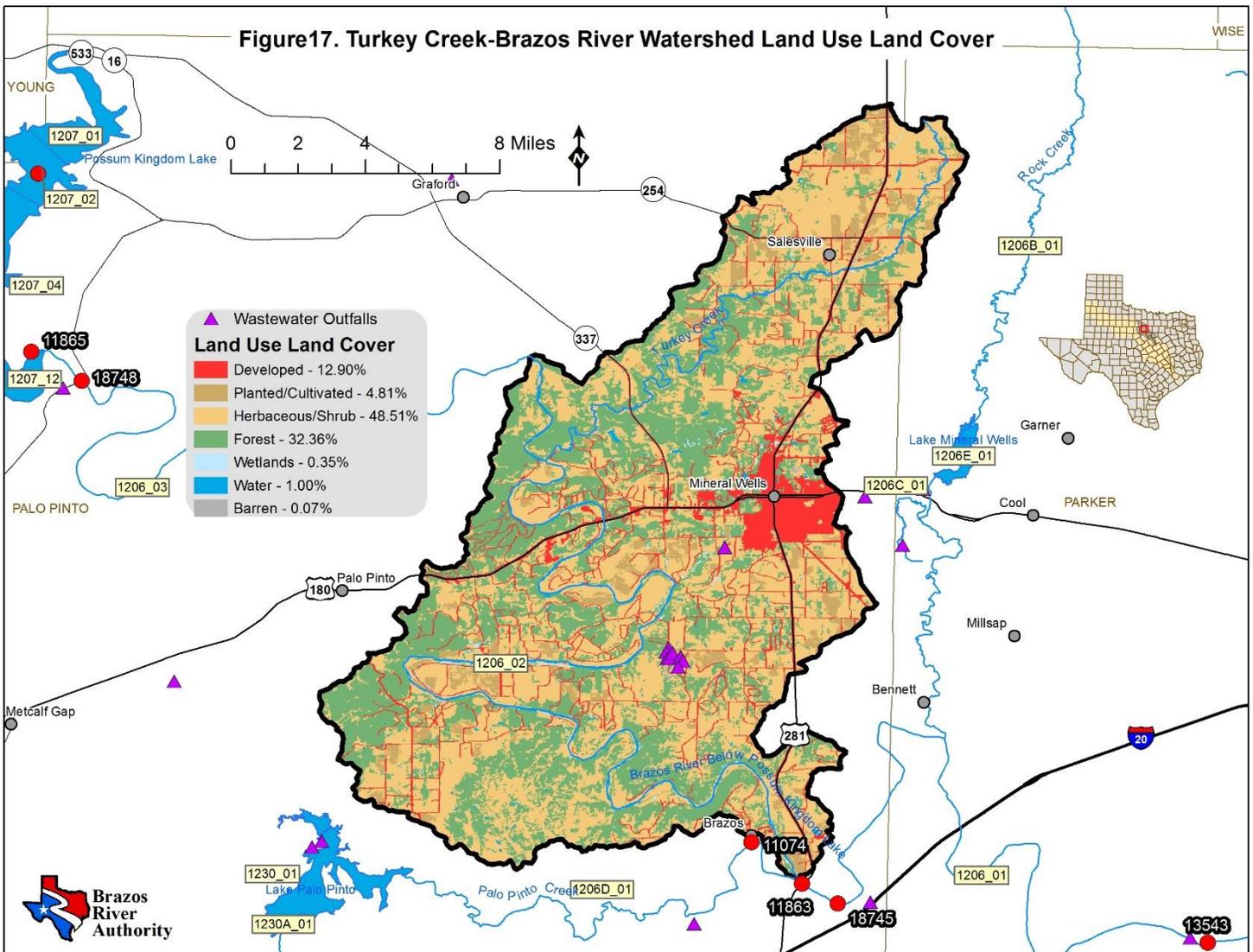
Turkey Creek- Brazos River Watershed

Watershed Description:

The Turkey Creek-Brazos River Watershed is 182 square miles in area.

Land Use Land Cover in Watershed (Figure 17):

There are three cities in the watershed. There is one wastewater outfall and eight storm water outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of forested upland and a smaller amount of developed land.



Segments in Watershed (Figure 18):

- Turkey Creek
- 1206_02: Brazos River below Possum Kingdom Lake, from confluence with Rock Creek upstream to confluence with elm creek in Palo Pinto County

Impairments in Watershed Description (Figure 18):

- None
- There are concerns for habitat and macrobenthic community in 1206_02.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

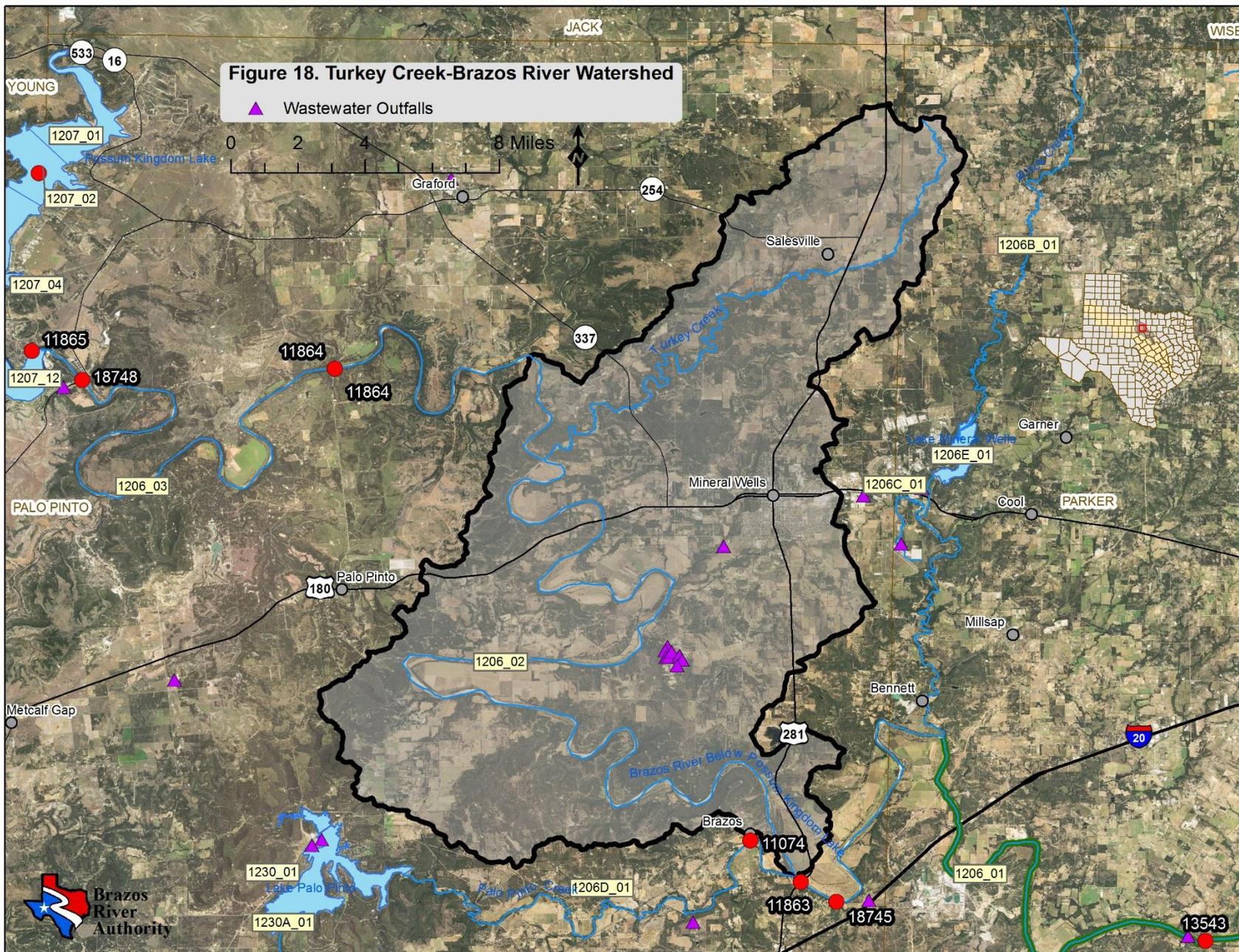
- City of Salesville
- City of Mineral Wells
- City of Brazos
- Parker County
- Palo Pinto County

Actions taken if impaired:

- N/A

Recommendations taken if impaired:

- N/A



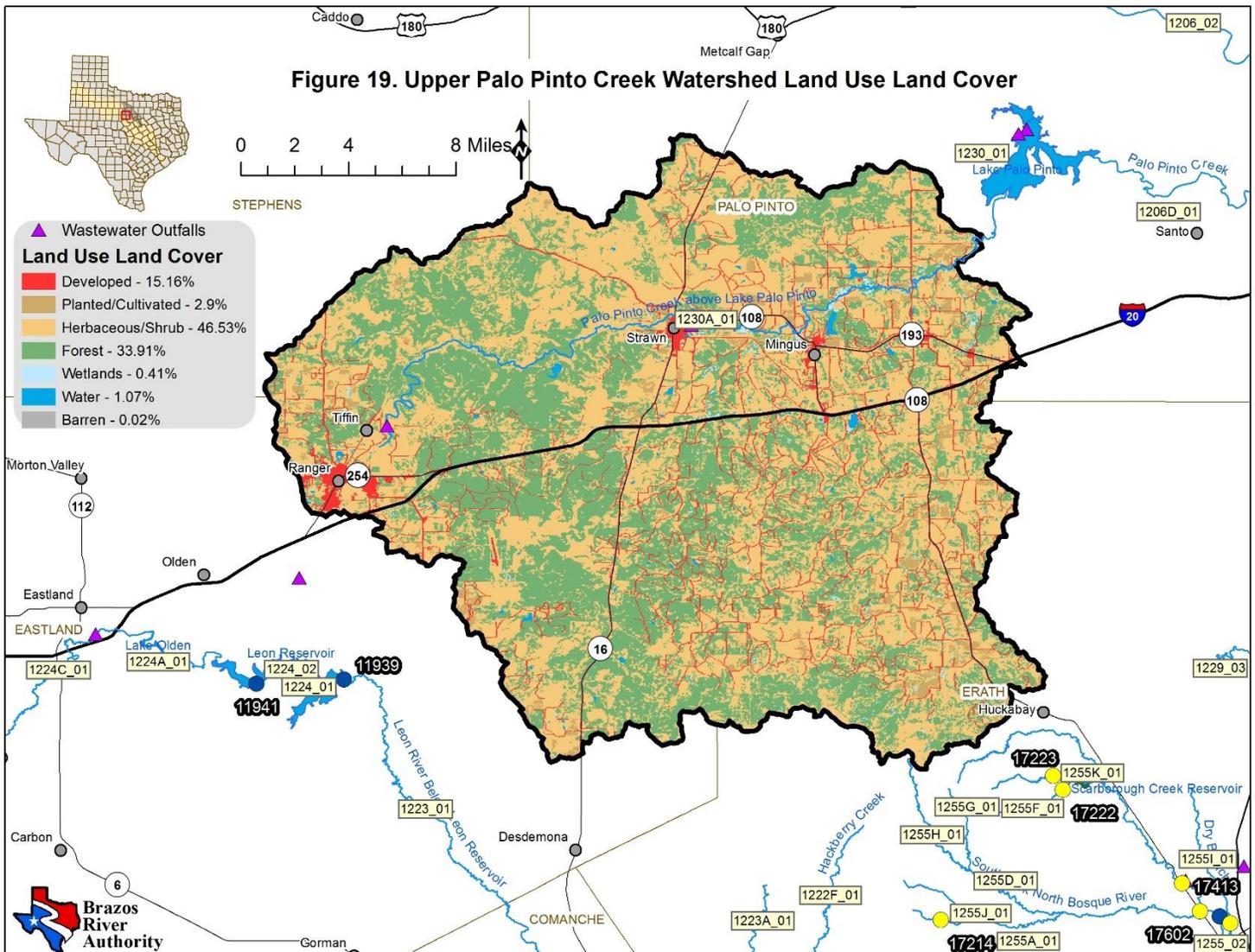
Upper Palo Pinto Creek Watershed

Watershed Description:

The Upper Palo Pinto Creek Watershed is 390 square miles in area.

Land Use Land Cover in Watershed (Figure 19):

There are five cities in the watershed. There are two wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland and forested upland, with a smaller amount of developed land.



Segments in Watershed (Figure 20):

- 1230A_01: Palo Pinto Creek above Lake Palo Pinto

Impairments in Watershed Description (Figure 20):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

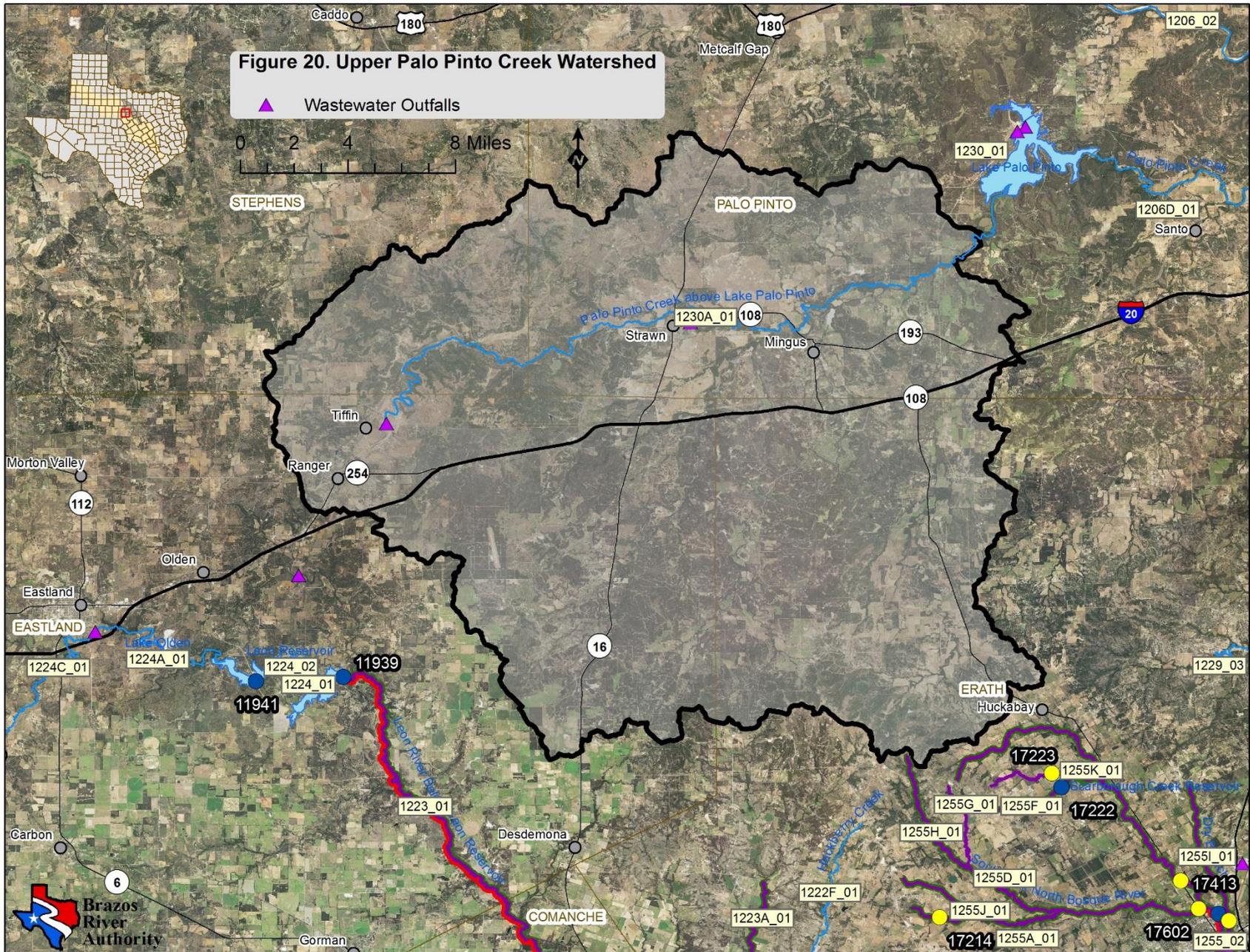
- City of Ranger
- City of Tiffin
- City of Strawn
- City of Mingus
- City of Gordon
- Stephens County
- Palo Pinto County
- Eastland County
- Erath County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



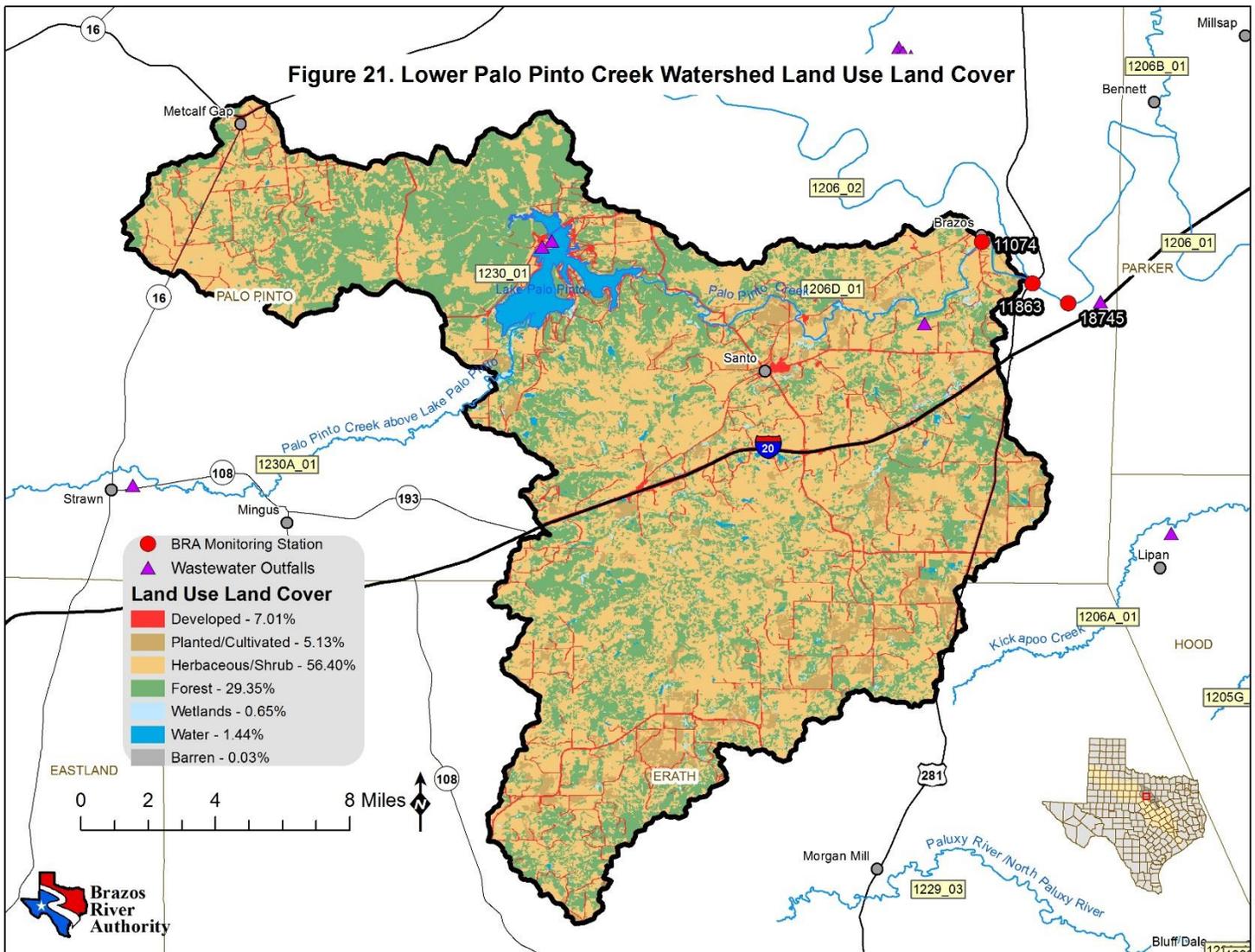
Lower Palo Pinto Watershed

Watershed Description:

The Lower Palo Pinto Watershed is 247 square miles in area.

Land Use Land Cover in Watershed (Figure 21):

There are three cities in the watershed. There are two wastewater outfalls and one stormwater outfall in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of forested upland. Lake Palo Pinto lies entirely within this watershed.



Segments in Watershed (Figure 22):

- 1206D_01: Palo Pinto Creek, from confluence with the Brazos River upstream to Palo Pinto Reservoir Dam in Palo Pinto County
Monitoring Station: 11074 - PALO PINTO CREEK IMMEDIATELY DOWNSTREAM OF FM 129 SOUTH OF BRAZOS
- 1230_01: Lake Palo Pinto
- 1230A_01: Palo Pinto Creek above Lake Palo Pinto

Impairments in Watershed Description (Figure 22):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

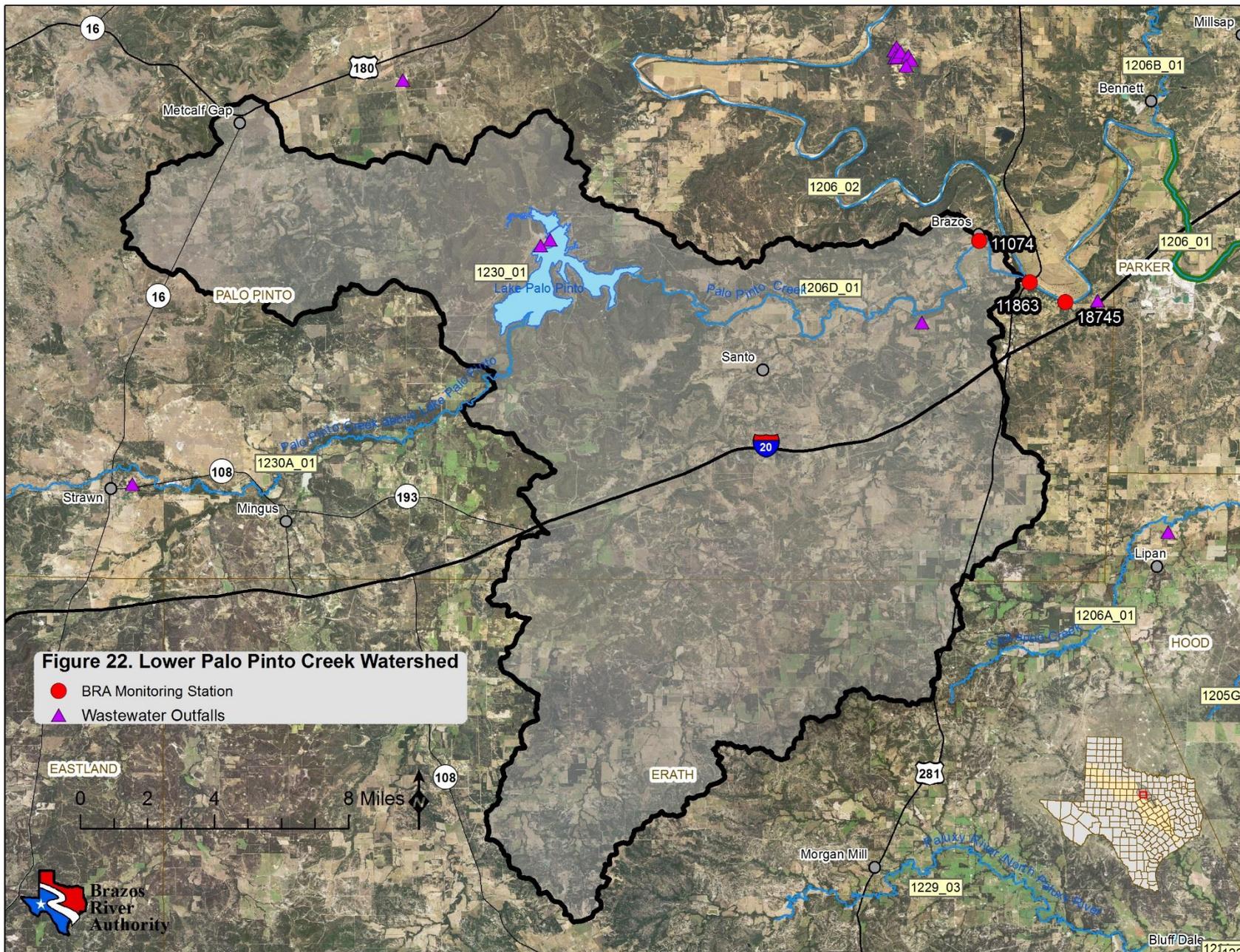
- City of Metcalf Gap
- City of Brazos
- City of Santo
- Palo Pinto County
- Erath County
- Any businesses or marinas that serve Lake Palo Pinto

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



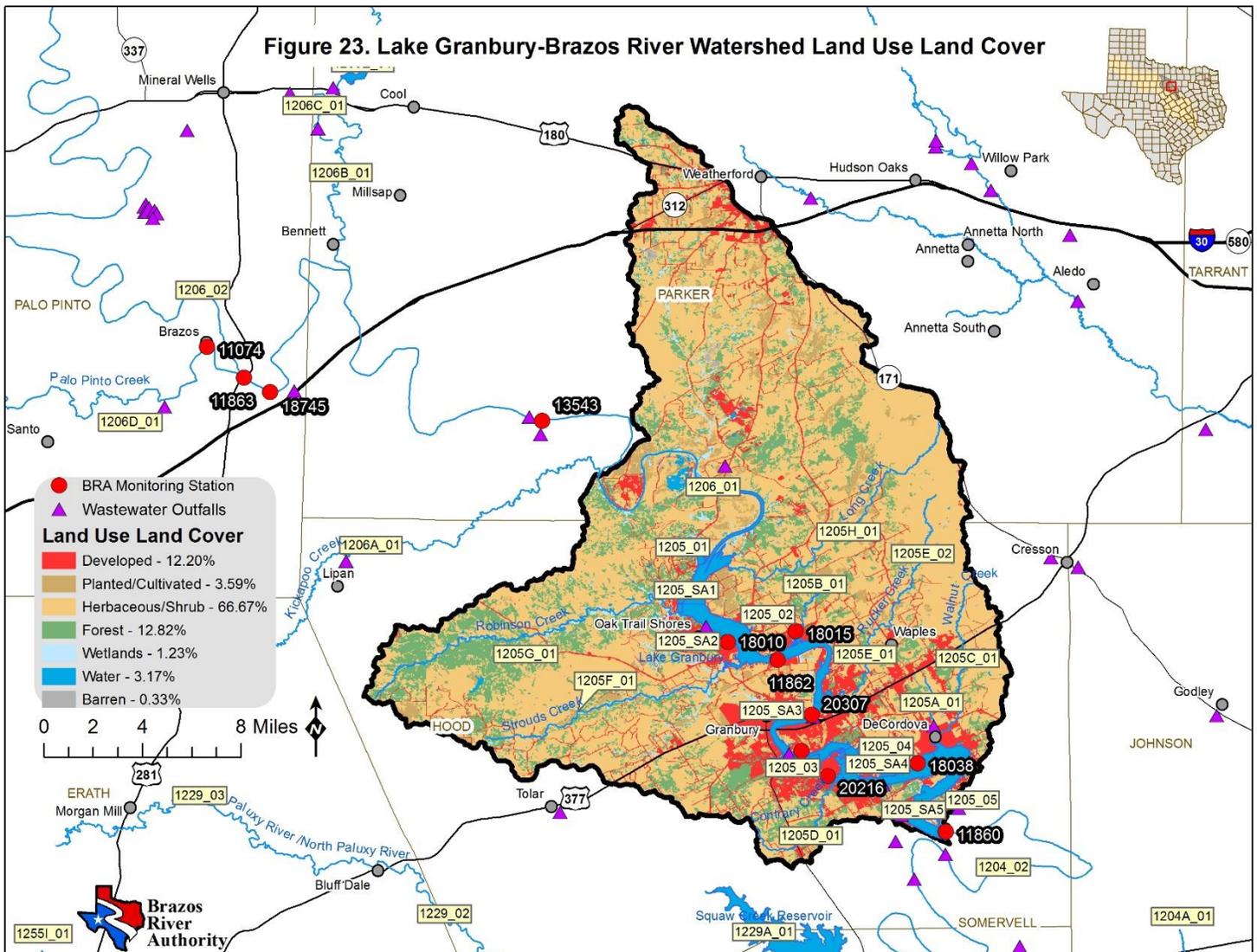
Lake Granbury- Brazos River Watershed

Watershed Description:

The Lake Granbury-Brazos River Watershed is 326 square miles in area.

Land Use Land Cover in Watershed (Figure 23):

There are five cities and 10 wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with smaller amounts of forested upland and developed land. Lake Granbury lies entirely within this watershed.



Segments in Watershed (Figure 24):

- 1205_01: Lake Granbury, upstream portion of lake
- 1205_02: Lake Granbury, portion of lake adjacent to the city of Oak Trail Shores
Monitoring Station: 11862 - LAKE GRANBURY AT FM 51 NORTH OF GRANBURY 265 METERS WEST AND 69 METERS NORTH OF INTERSECTION OF FM 51 AND SIESTA COURT
- 1205_03: Lake Granbury, portion of lake adjacent to the city of Granbury
Monitoring Station: 20307 - LAKE GRANBURY IMMEDIATELY UPSTREAM OF ATCHISON TOPEKA AND SANTA FE RAILROAD 110 METERS UPSTREAM OF US 377/EAST PEARL STREET EAST OF GRANBURY
- 1205_04: Lake Granbury, portion of lake downstream of Granbury
- 1205_05: Lake Granbury, downstream portion of lake
Monitoring Station: 11860 - LAKE GRANBURY NEAR DAM 102 METERS WEST AND 56 METERS NORTH OF NORTHERN EDGE OF SAM SITE AC USGS 322227097412101
- 1205_SA1: Lake Granbury, unnamed inlets and canals adjacent to 1205_01
- 1205_SA2: Lake Granbury, unnamed inlets and canals adjacent 1205_02
Monitoring Stations:
18010 - UNNAMED CANAL ON LAKE GRANBURY AT 3709 GREENBROOK DRIVE
18015 - UNNAMED CANAL ON LAKE GRANBURY 120 METERS SOUTH AND 24 METERS EAST OF INTERSECTION OF APOLLO COURT AND SKY HARBOR DRIVE
- 1205_SA3: Lake Granbury, unnamed inlets and canals adjacent to 1205_03
Monitoring Station: 18018 - UNNAMED CANAL ON LAKE GRANBURY 130 METERS NORTHWEST OF THE INTERSECTION OF MALLARD WAY AND MALLARD COURT
- 1205_SA4: Lake Granbury, unnamed inlets and canals adjacent to 1205_04
Monitoring Stations:
20216 - UNNAMED CANAL ON LAKE GRANBURY 135 METERS NORTH AND 130 METERS EAST OF THE INTERSECTION OF DAKOTA TRAIL AND CONEJOS COURT
18038 - UNNAMED CANAL ON LAKE GRANBURY 23 METERS SOUTH AND 91 METERS EAST OF INTERSECTION OF HARTWOOD DRIVE AND EAST FERNWOOD COURT
- 1205_SA5: Lake Granbury, unnamed inlets and canals adjacent to 1205_05
- 1205A_01: McCarty Branch
- 1205B_01: Bee Creek
- 1205C_01: Walnut Creek
- 1205D_01: Contrary Creek
- 1205E_01: Rucker Creek, from confluence with Lake Granbury upstream to confluence with unnamed tributary (reach code 1206020100907) in Hood County
- 1205E_02: Rucker Creek, from the confluence with unnamed tributary in Hood County upstream to headwaters in Parker County
- 1205F_01: Strouds Creek
- 1205G_01: Robinson Creek
- 1205 H_01: Long Creek
- 1206_01: Brazos River below Possum Kingdom Lake, 100 meters upstream of FM 2580 in Parker County upstream to confluence with Rock Creek in Parker County

Impairments in Watershed Description (Figure 24):

- None

There are concerns for chlorophyll-*a* in 1206_01, 1205_02, 1205_03, 1205_05; depressed dissolved oxygen in 1205_05; nitrate in 1205C_01; and impaired habitat and macrobenthic community in 1206_01.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

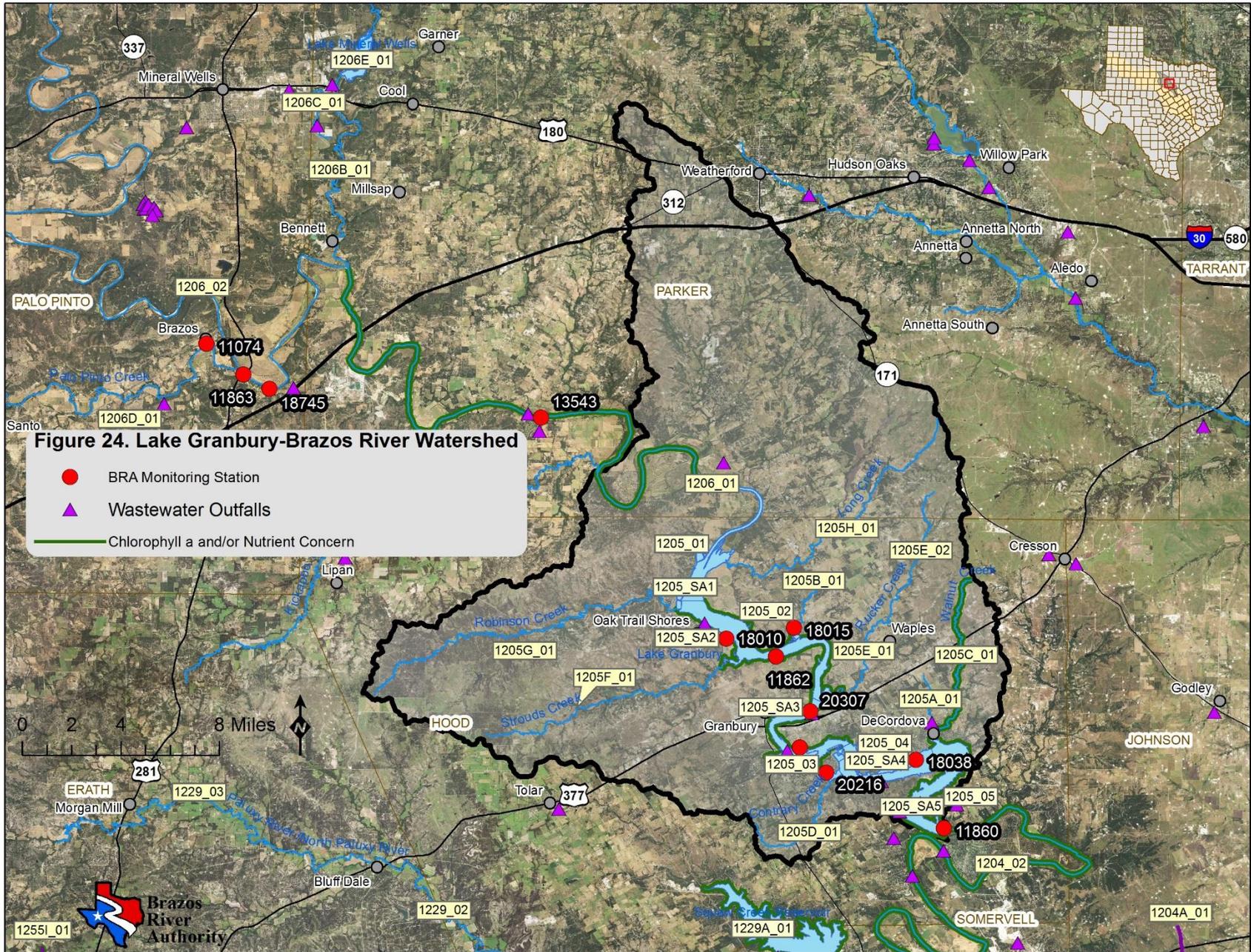
- City of Oak Trail Shores
- City of Granbury
- City of Waples
- City of De Cordova
- Parker County
- Hood County
- Any businesses or marinas that serve Lake Granbury

Actions taken if impaired:

- Although no segments in this watershed are impaired, a [Lake Granbury Watershed Protection Plan \(WPP\)](#) was approved in May 2011 and continues to be implemented.

Recommendations if impaired:

- N/A



Segments in Watershed (Figure 26):

- Fall Creek
- 1204_02: Brazos River below Lake Granbury, from confluence with the Paluxy River upstream to DeCordova Bend Dam in Hood County

Impairments in Watershed Description (Figure 26):

- None
- There is a concern for chlorophyll-*a* and impaired habitat in 1204_02

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

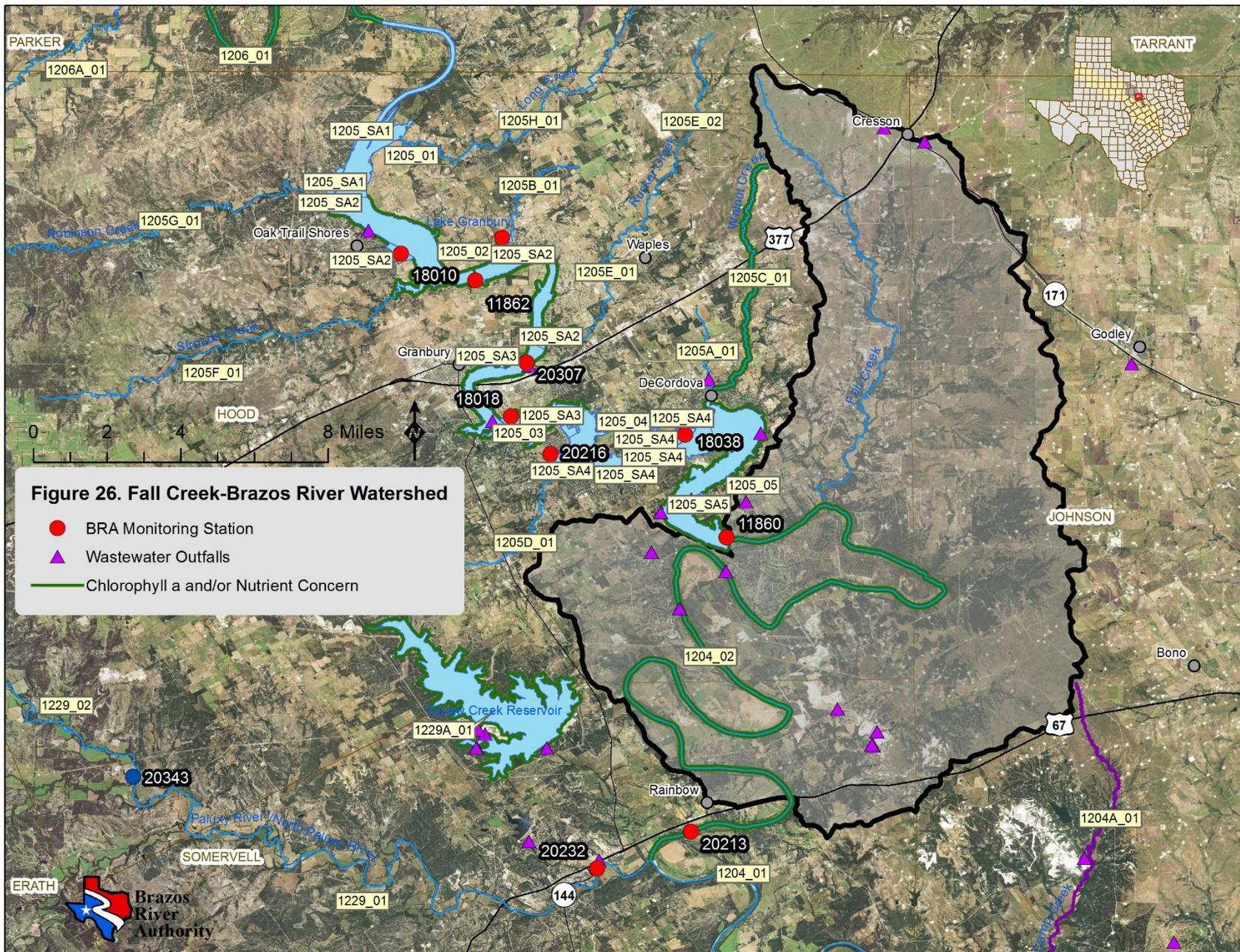
- City of Rainbow
- City of Cresson
- Hood County
- Somervell County
- Johnson County
- Any businesses or marinas that serve Lake Granbury

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



Segments in Watershed (Figure 28):

- 1229_01: Paluxy River/North Paluxy River, from confluence with Brazos River near Glen Rose in Somervell County upstream to confluence with Richardson Creek in Hood County
Monitoring Station: 20232 - PALUXY RIVER LOW WATER CROSSING OFF VAN ZANDT ROAD NEAR SH 144 IN GLEN ROSE
- 1229_02: Paluxy River/North Paluxy River, from confluence with Richardson Creek upstream to confluence with North/South Paluxy Fork in Erath County
- 1229_03: Paluxy River/North Paluxy River, from the confluence with Paluxy/South Paluxy Fork upstream to confluence with Rough Creek in Erath County
- 1229A_01: Squaw Creek Reservoir

Impairments in Watershed Description (Figure 28):

- None
There is a concern for total phosphorus in 1229A_01.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

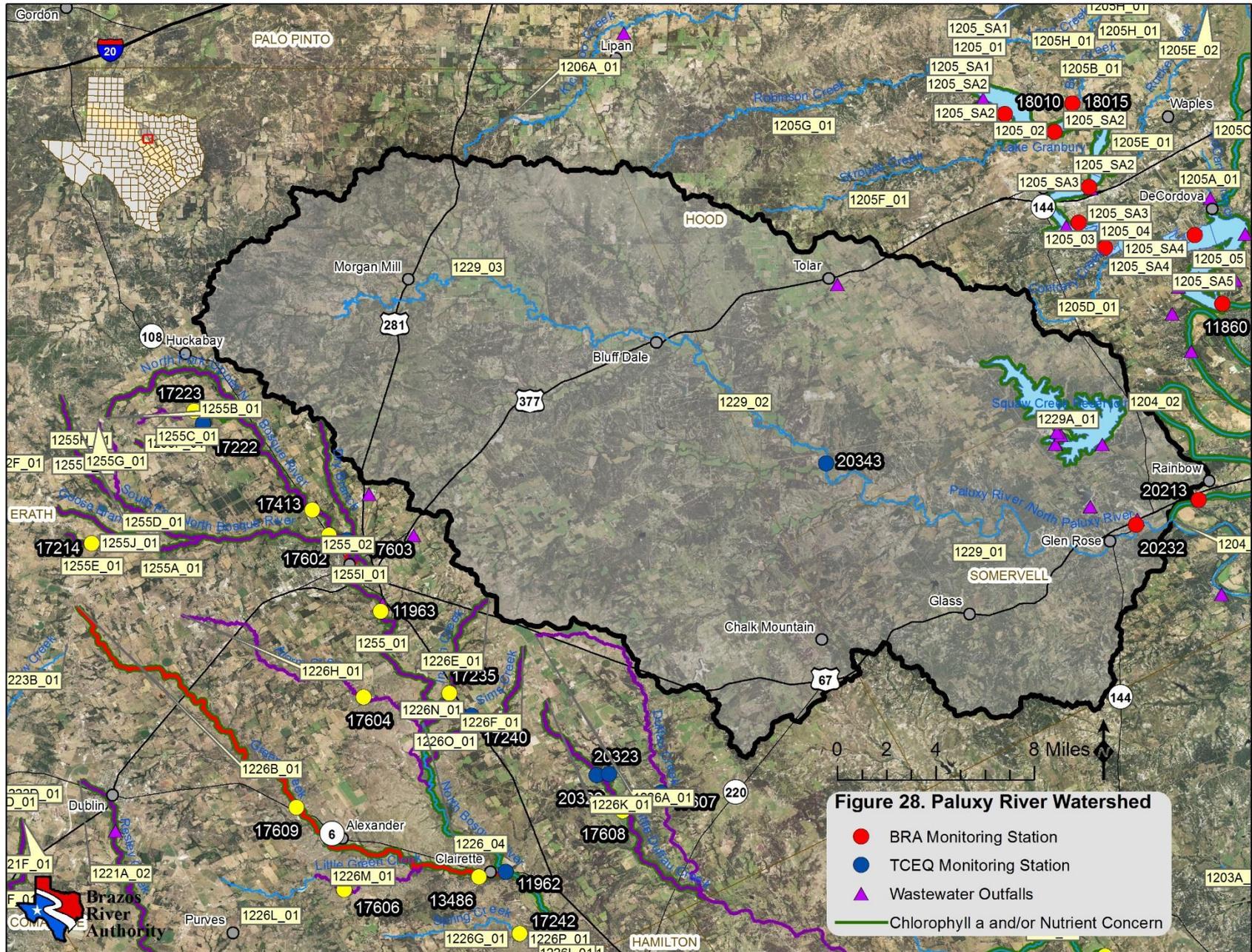
- City of Morgan Mill
- City of Rainbow
- City of Bluff Dale
- City of Tolar
- City of Chalk Mountain
- City of Glass
- City of Glen Rose
- City of Rainbow
- Any businesses or marinas that serve Squaw Creek Reservoir

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



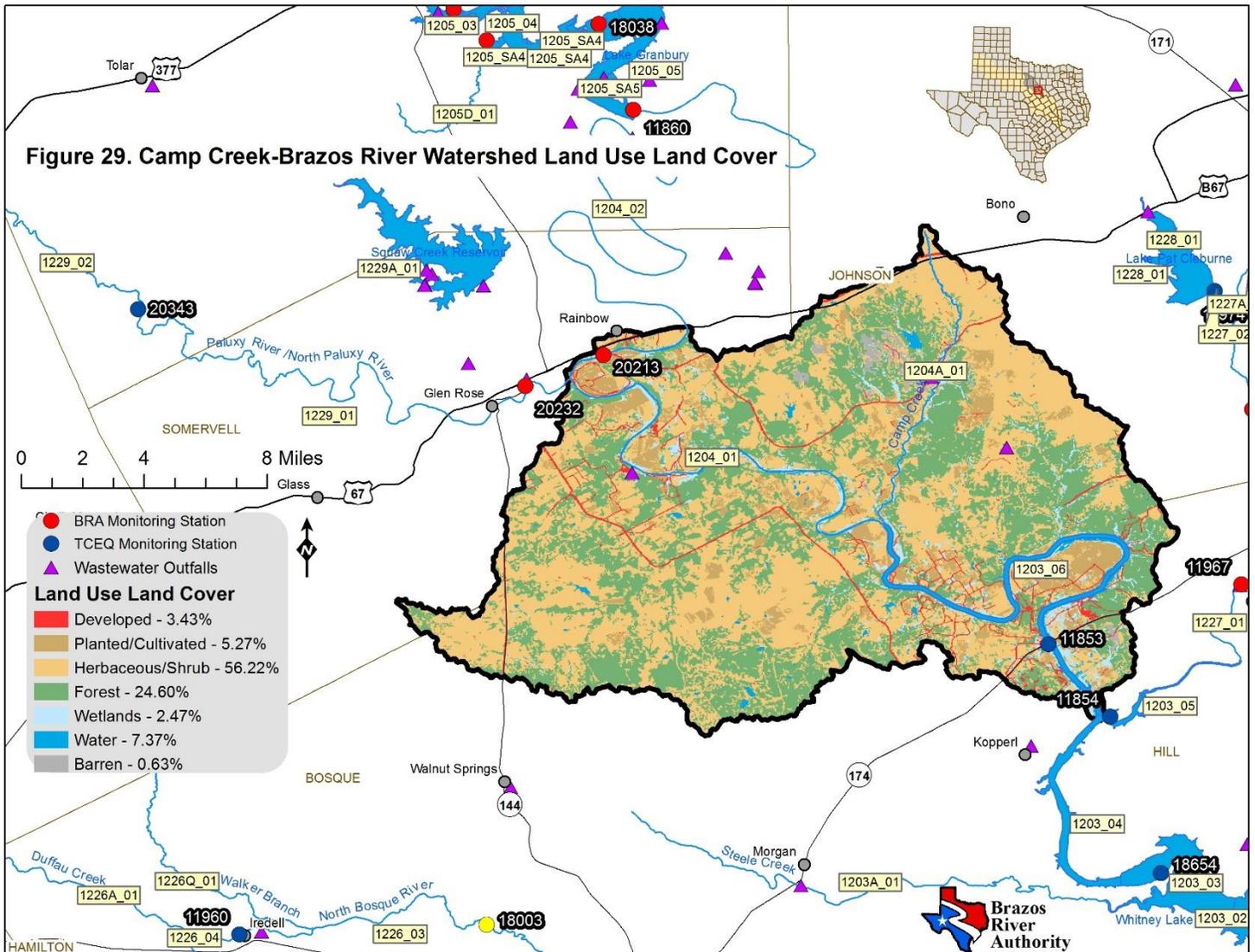
Camp Creek- Brazos River Watershed

Watershed Description:

The Camp Creek-Brazos River Watershed is 204 square miles in area.

Land Use Land Cover in Watershed (Figure 29):

There is one city and three wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount forested upland and a smaller amount of planted/cultivated land.



Segments in Watershed (Figure 30):

- 1203_06: Lake Whitney, Brazos River Arm
Monitoring Station: 11853 - LAKE WHITNEY AT SH 174, 150 METERS NORTH AND 339 METERS EAST OF INTERSECTION OF SH 174 AND BOSQUE CR 1185 NORTHEAST OF MORGAN
- 1204_01: Brazos River below Lake Granbury, from the confluence with Camp Creek upstream to the confluence with the Paluxy River in Somervell County
- 1204_02: Brazos River below Lake Granbury, from the confluence with the Paluxy River upstream to DeCordova Bend Dam in Hood County
Monitoring Station: 20213 BRAZOS RIVER 20 METERS OFF NORTH BANK AT FM 200 NORTHEAST OF GLEN ROSE
- 1204A_01: Camp Creek

Impairments in Watershed Description (Figure 30):

- 1204A_01: Recreational Use - bacteria

There are concerns for chlorophyll-*a* and impaired habitat in 1204_02. There are also concerns for chlorophyll-*a* in 1203_05 and 1203_06.

Possible Contributions if Impaired:

Point Sources: There are three wastewater outfalls.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 80% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

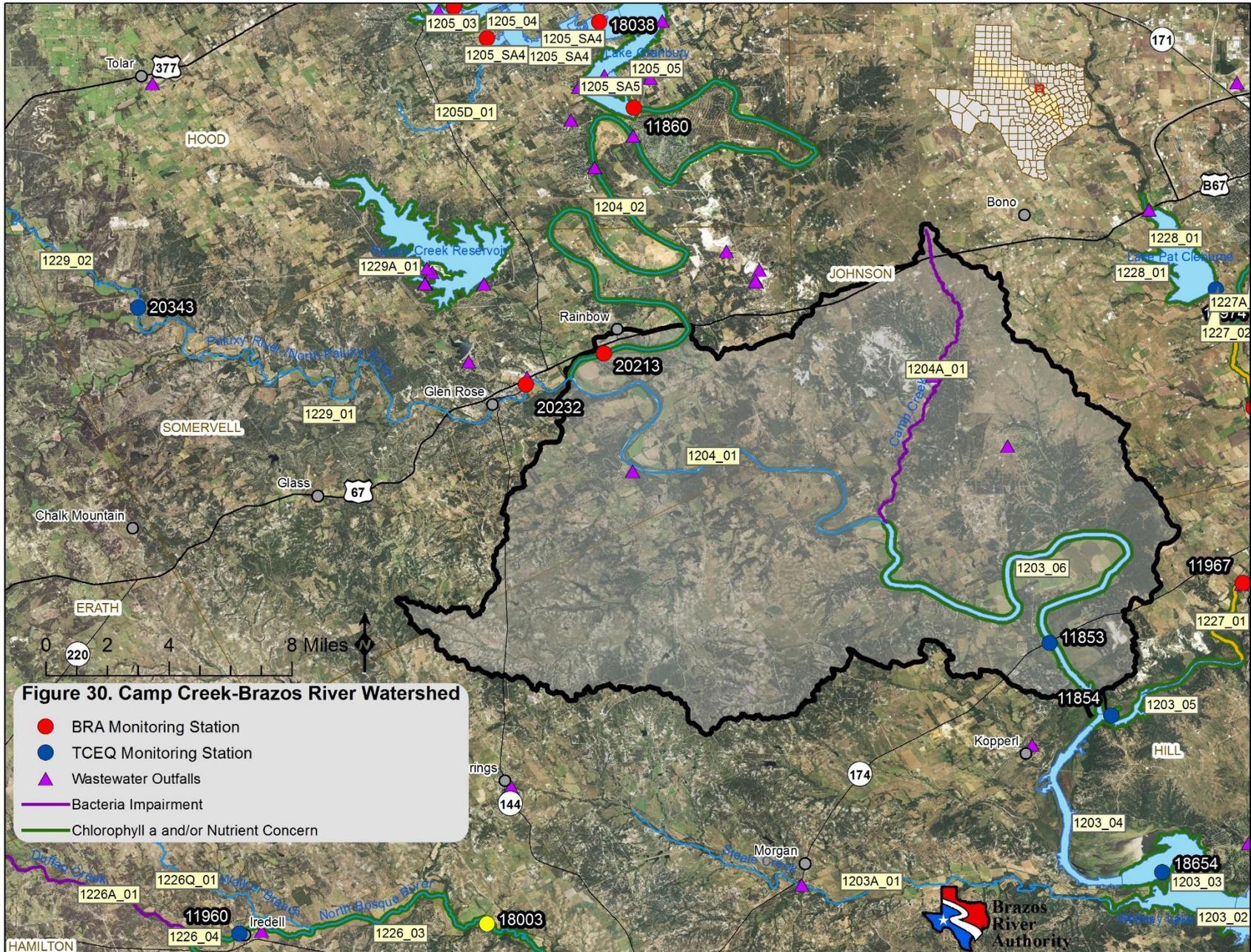
- City of Rainbow
- Somervell County
- Johnson County
- Bosque County
- Any businesses or marinas that serve Lake Whitney

Actions taken if impaired:

- An [RUAA](#) has been completed for 1204A_01. The report was put out for public comment ending January 12, 2015. TCEQ is in the process of making a recommendation as to what category of recreational use is appropriate for this segment.

Recommendations if impaired:

- Await TCEQ recommendation before a management strategy is selected.



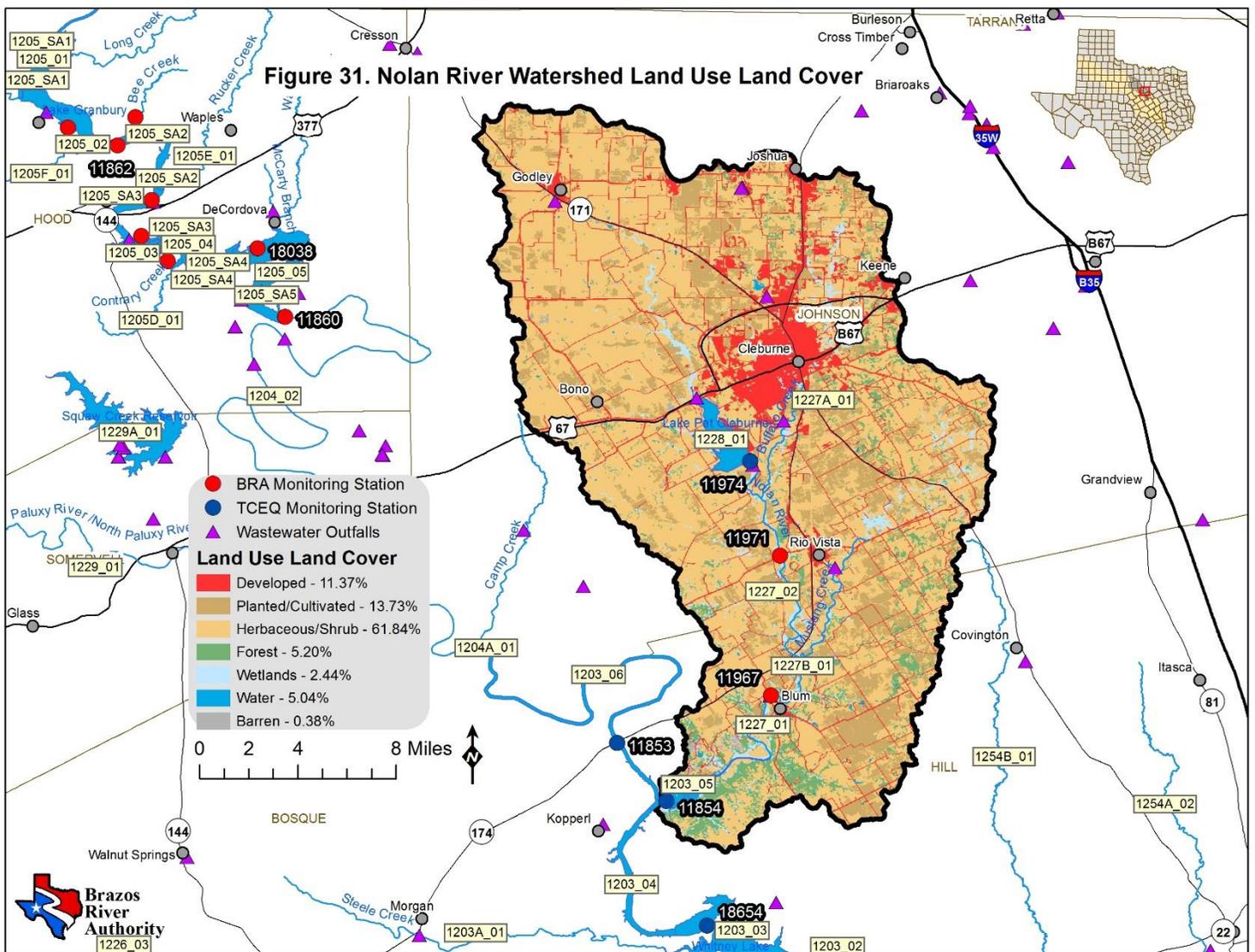
Nolan River Watershed

Watershed Description:

The Nolan River Watershed is 318 square miles in area.

Land Use Land Cover in Watershed (Figure 31):

There are seven cities and eight wastewater outfall in the watershed. Dominant landcover includes herbaceous/shrubland, with smaller amounts of planted/cultivated land and developed land. Lake Pat Cleburne lies entirely within this watershed. A portion of Lake Whitney lies within the watershed.



Segments in Watershed (Figure 32):

- 1203_05: Lake Whitney, Nolan River Arm
Monitoring Station: 11854 - LAKE WHITNEY NOLAN RIVER ARM IMMEDIATELY UPSTREAM OF NOLAN RIVER CONFLUENCE WITH THE BRAZOS RIVER
- 1227_01: Nolan River, from confluence with Lake Whitney upstream to confluence with Mustang Creek in Hill County
Monitoring Station: 11967 - NOLAN RIVER 75 METERS UPSTREAM OF FM 933 IN BLUM
- 1227_02: Nolan River, from confluence with Mustang Creek in Hill County upstream to confluence with Lake Pat Cleburne Dam in Johnson County
Monitoring Station: 11971 - NOLAN RIVER IMMEDIATELY UPSTREAM OF FM 916 WEST OF RIO VISTA
- 1227A_01: Buffalo Creek
- 1227B_01: Mustang Creek
- 1228_01: Lake Pat Cleburne
Monitoring Station: 11974 - PAT CLEBURNE RESERVOIR MID LAKE NEAR DAM 115 METERS SOUTH AND 334 METERS WEST OF INTERSECTION OF LAKESHORE DRIVE AND SOUTH NOLAN RIVER ROAD

Impairments in Watershed Description (Figure 32):

- 1227_01: Impairments for total dissolved solids, sulfate and concerns for chlorophyll-*a*
- 1227_02: Impairments for total dissolved solids, sulfate and concerns for chlorophyll-*a*, nitrate and total phosphorus

There are concerns for nitrate and total phosphorus in 1227A_01. There are also concerns for chlorophyll-*a* in 1203_05 and 1228_01.

Possible Contributions if Impaired:

Point Sources: There are six cities and eight wastewater outfalls. The ground water in the watershed contains dissolved solids which is used by industry in the area. The local municipal waste water treatment cannot remove the naturally occurring dissolved solids and thus discharges them to the Nolan River.

Non-point sources: Herbaceous/shrubland is dominant in the watershed which is suitable for wildlife. Agricultural activity in the watershed could contribute to runoff. Ground water in the watershed contains naturally occurring dissolved solids.

Potential non-State Agency Stakeholders:

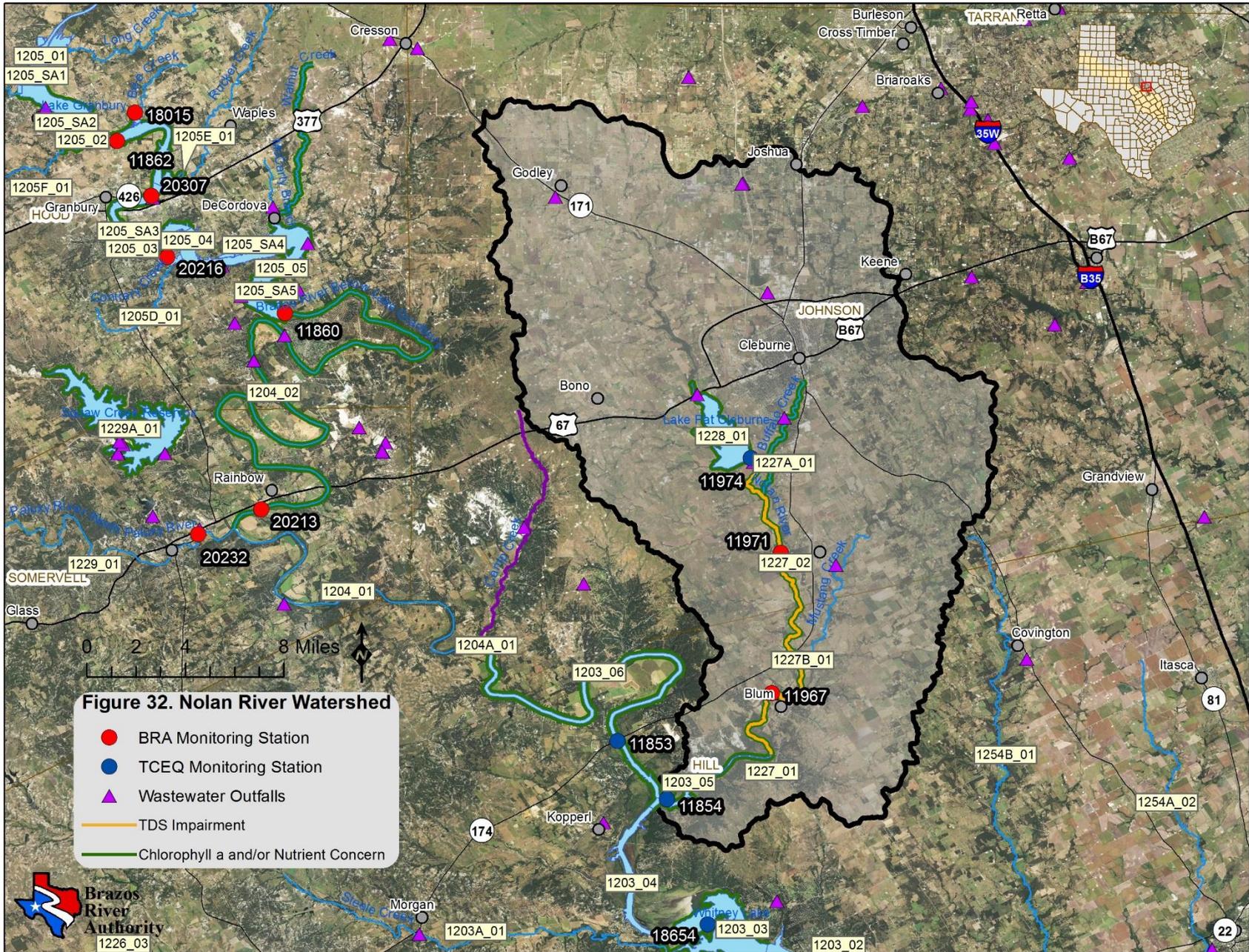
- City of Godley
- City of Bono
- City of Cleburne
- City of Rio Vista
- City of Blum
- City of Keene
- City of Joshua
- Johnson County
- Bosque County
- Any businesses or marinas that serve Lake Whitney or Lake Pat Cleburne

Actions taken if impaired:

- A Texas Water Quality Standards (WQS) review for total dissolved solids and sulfate is underway for segments 1227_01 and 1227_02. EPA approval of 2010 WQS is pending.

Recommendations if impaired:

- Await EPA review and approval of water quality standards before a management strategy is selected.



Segments in Watershed (Figure 34):

- 1203_01: Lake Whitney, portion near dam
Monitoring Station: 11851 - LAKE WHITNEY NEAR DAM 598 METERS NORTH AND 450 METERS EAST OF INTERSECTION OF SH 22 AND BOSQUE CR 1812
- 1203_02: Lake Whitney, main body of lake
Monitoring Station: 11855 - LAKE WHITNEY NEAR FM 1713, 187 METERS NORTH AND 1.67 KILOMETERS WEST OF INTERSECTION OF FM 1713 AND SHARON STREET NORTHWEST OF WHITNEY
- 1203_03: Lake Whitney, Steele Creek arm
Monitoring Station: 18654 - LAKE WHITNEY WEST OF STEELE CREEK PARK NEAR MIDPOINT OF PENINSULA 985 METERS NORTH AND 1.07 KILOMETERS EAST OF INTERSECTION OF BOSQUE CR 1304 AND UNNAMED PARK ROAD TO CAMPGROUNDS CAMS 0723
- 1203_04: Lake Whitney, riverine portion east of Morgan
- 1203_05: Lake Whitney, Nolan River Arm
- 1203A_01: Steele Creek

Impairments in Watershed Description (Figure 34):

- None
There are concerns for depressed dissolved oxygen in 1203_01 and concerns for chlorophyll-*a* in 1203_03 and 1203_05.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

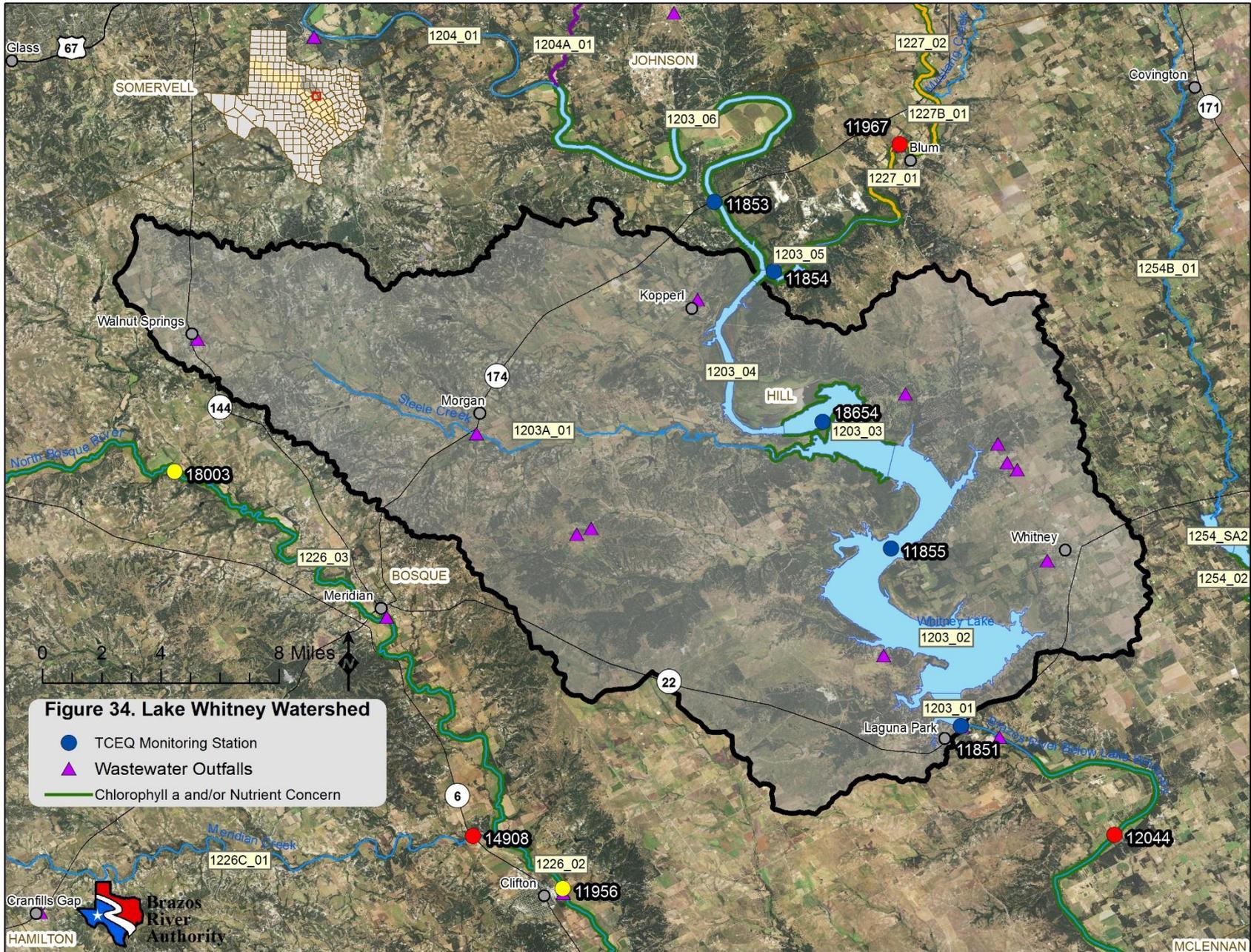
- City of Walnut Springs
- City of Morgan
- City of Kopperl
- City of Whitney
- City of Laguna Park
- Bosque County
- Any businesses or marinas that serve Lake Whitney

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



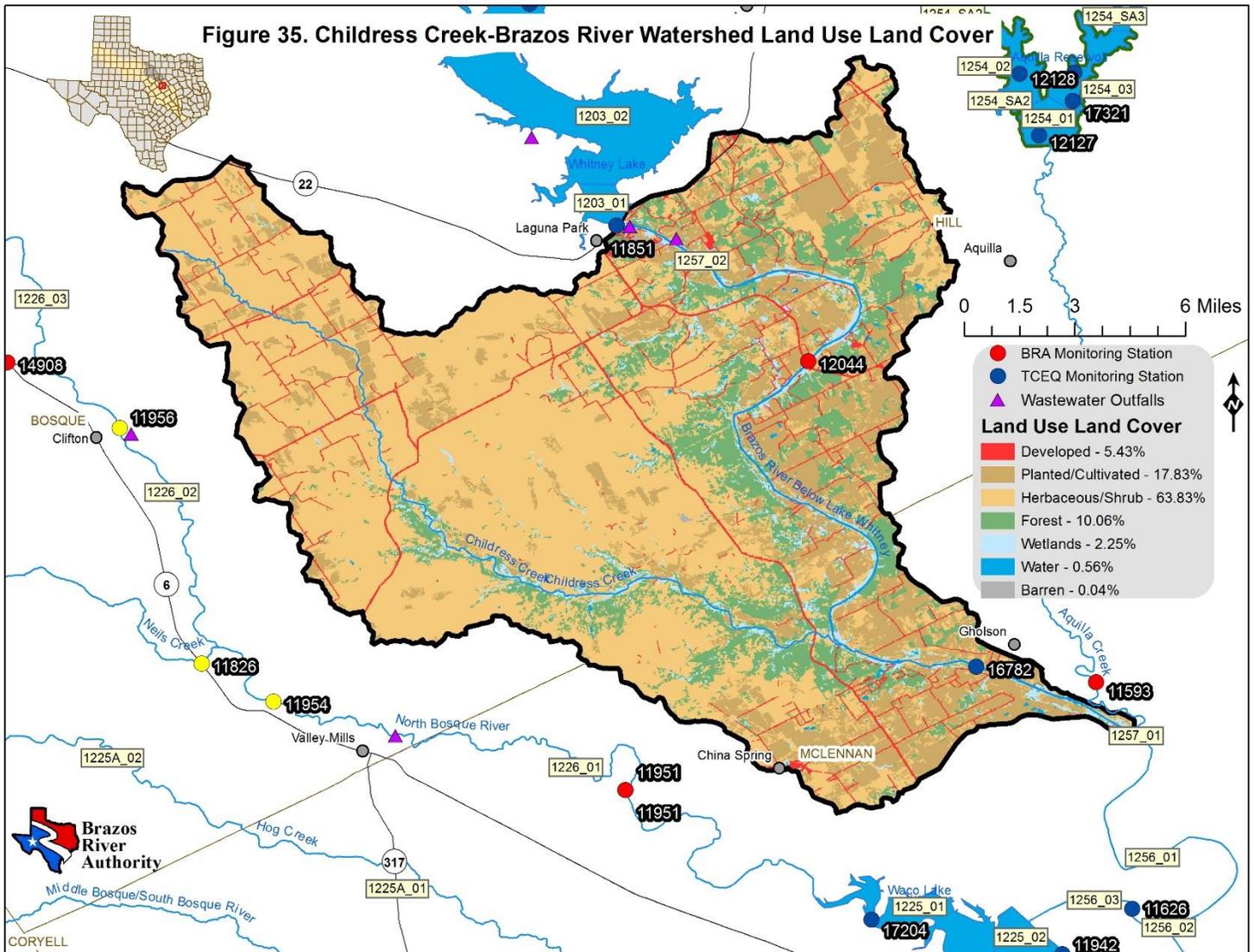
Childress Creek-Brazos River Watershed

Watershed Description:

The Childress Creek-Brazos River Watershed is 210 square miles in area.

Land Use Land Cover in Watershed (Figure 35):

There is one city and there are two wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of planted/cultivated land and a smaller amount of forested upland.



Segments in Watershed (Figure 36):

- Childress Creek
- 1257_01: Brazos River below Lake Whitney, from confluence with Aquilla Creek upstream to confluence with Coon Creek
- 1257_02: Brazos River below Lake Whitney, from confluence with Coon Creek upstream to Lake Whitney Dam

Impairments in Watershed Description (Figure 36):

- None
- There is a concern for chlorophyll-*a* 1257_01.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

- City of China Springs
- McLennan County
- Bosque County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



Figure 36. Childress Creek-Brazos River Watershed

- BRA Monitoring Station
- TCEQ Monitoring Station
- ▲ Wastewater Outfalls
- Chlorophyll a and/or Nutrient Concern

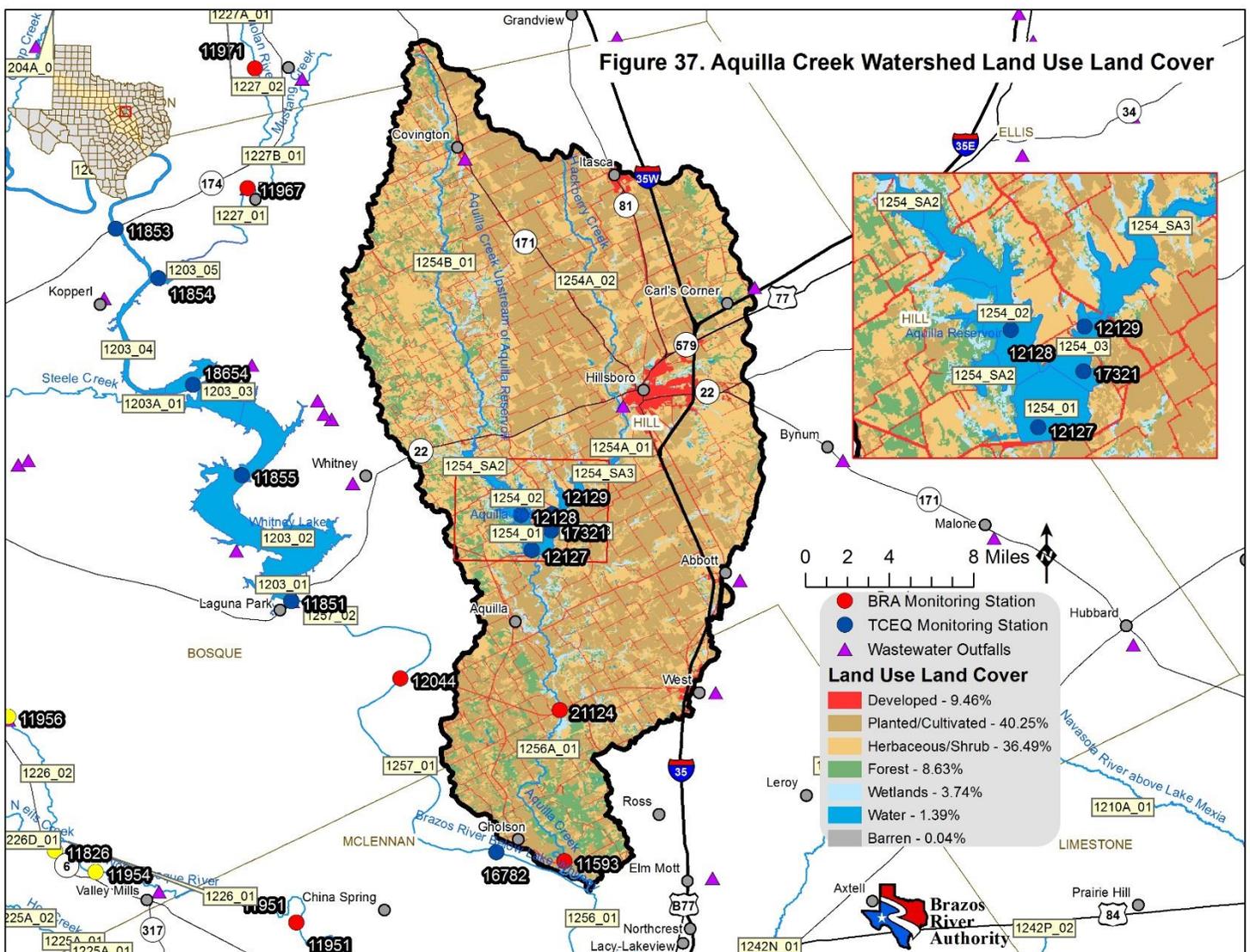
Aquilla Creek Watershed

Watershed Description:

The Aquilla Creek Watershed is 409 square miles in area.

Land Use Land Cover in Watershed (Figure 37):

There are eight cities in the watershed. There are three wastewater outfalls in the watershed. Dominant landcover includes planted/cultivated land and herbaceous/shrubland, with a smaller amount of forested upland and developed land.



Segments in Watershed (Figure 38):

- 1254_01: Aquilla Reservoir, south end of reservoir near dam
Monitoring Station: 12117 - AQUILLA RESERVOIR AT DAM 717 METERS NORTH AND 1.46 KILOMETERS EAST OF INTERSECTION OF HILL CR 2316 AND HILL CR 2315
- 1254_02: Aquilla Reservoir, Aquilla Creek arm on the west
Monitoring Station: 12128 - AQUILLA RESERVOIR IN AQUILLA CREEK ARM 94 METERS SOUTH AND 1.7 KILOMETERS WEST OF INTERSECTION OF FM 3440 AND HILL CR 2437
- 1254_03: Aquilla Reservoir, Hackberry Creek arm on the east
Monitoring Stations:
12129 - AQUILLA RESERVOIR HACKBERRY CREEK ARM 330 METERS EAST OF INTERSECTION OF FM 3440 AND HILL CR 2437, 7.3 MILES SOUTHWEST OF DOWNTOWN HILLSBORO
17321 - AQUILLA RESERVOIR 350 METERS NORTH AND 1.21 KILOMETERS WEST OF INTERSECTION OF FM 310 AND CR 2440, 272 METERS OFF EAST SHORE AT RAW WATER INTAKE SOUTH OF DAIRY HILL BOAT RAMP
- 1254A_01: Hackberry Creek, from the confluence with Aquilla Reservoir upstream to the confluence with Little Hackberry Creek in Hill County
- 1254A_02: Hackberry Creek, from the confluence with Little Hack berry Creek upstream to headwaters in Hill County
- 1254B_01: Aquilla Creek upstream of Aquilla Reservoir
- 1256A_01: Aquilla Creek
Monitoring Stations:
21124 - AQUILLA CREEK AT FM 2114/COUNTY LINE ROAD NORTH OF WACO
11593 - AQUILLA CREEK IMMEDIATELY UPSTREAM OF FM 933 NORTHWEST OF WACO
- 1254_SA2: Aquilla reservoir, transition zone areas associated with Aquilla Creek arm of lake
- 1254_SA3: Aquilla Reservoir, transition zone areas associate with Hackberry arm of lake

Impairments in Watershed Description (Figure 38):

- None
- There are concerns for nitrate in 1254_01 and 1254_02. There are also concerns for nitrate and arsenic in sediment in 1254_03. Segment 1254A_01 possesses concerns for depressed dissolved oxygen, nitrate and ammonia.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

- City of Covington
- City of Itasca
- City of Carl's Corner
- City of Hillsboro
- City of Abbot
- City of Aquilla
- City of Gholson
- City of West

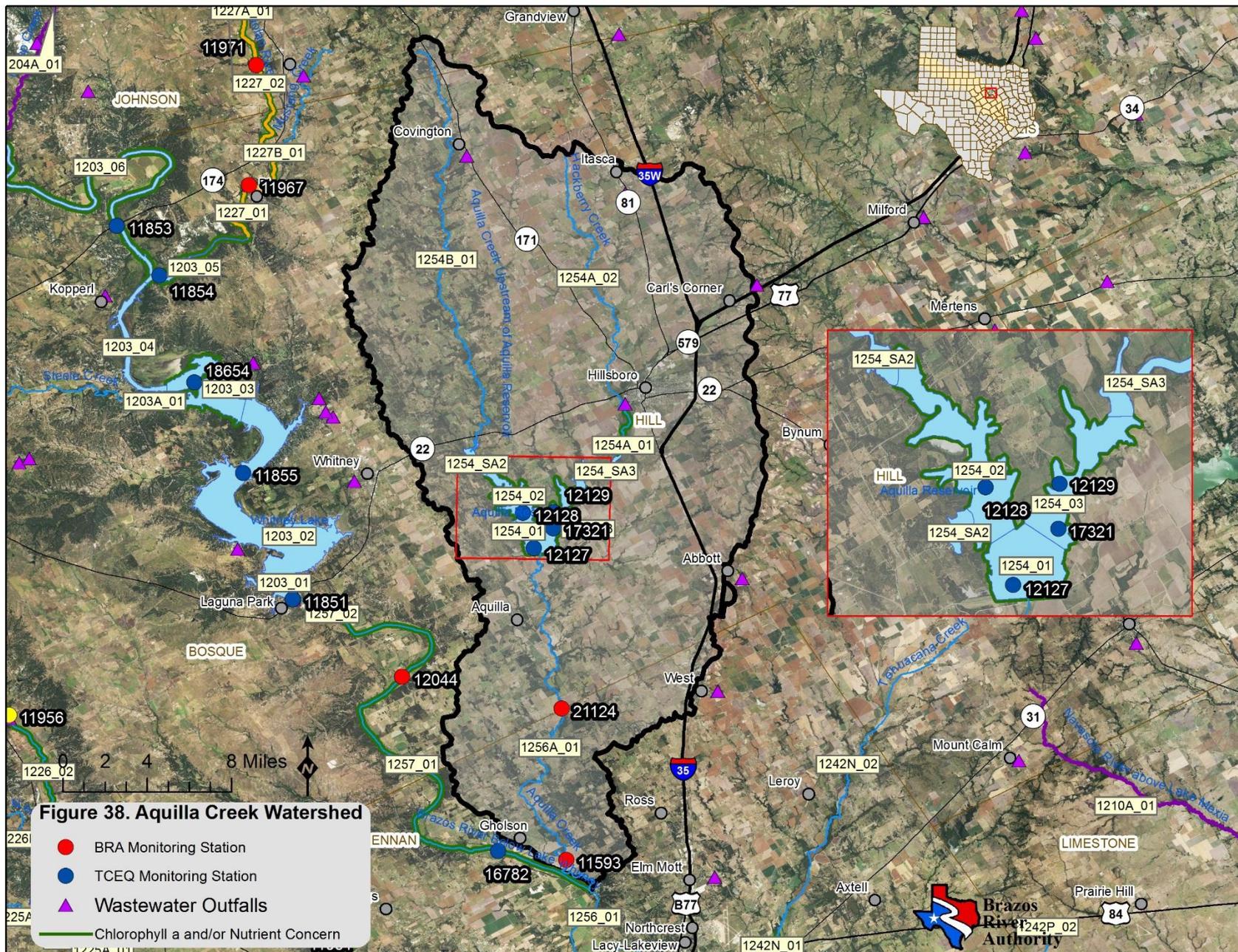
- Johnson County
- Bosque County
- McLennan County
- Any marinas or businesses that serve Aquilla Reservoir

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



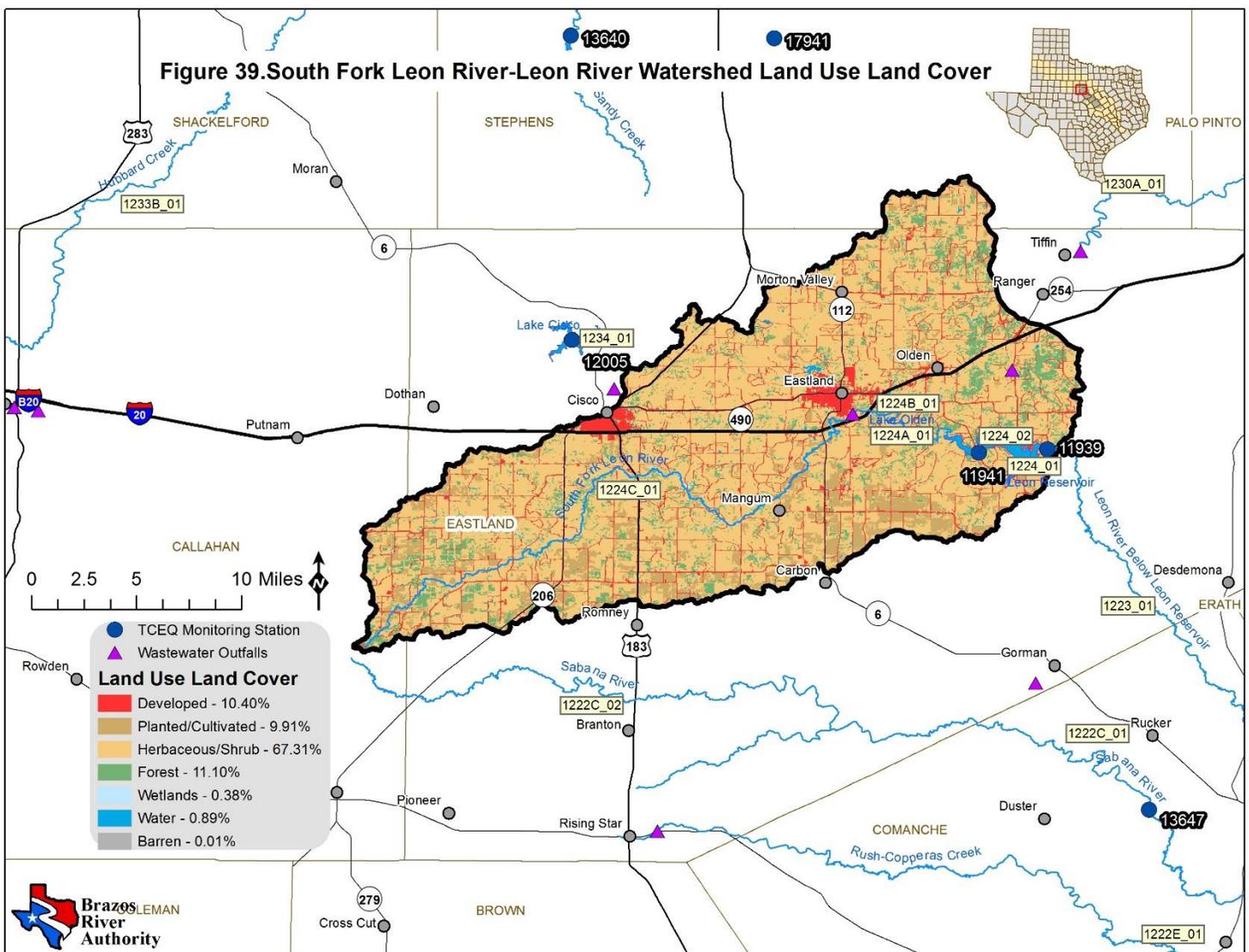
South Fork Leon River-Leon River Watershed

Watershed Description:

The South Fork Leon River-Leon River Watershed is 323 square miles in area.

Land Use Land Cover in Watershed (Figure 39):

There are four cities in the South Fork Leon River Watershed. There is one reservoir in the watershed. There are two wastewater outfalls in this watershed. The dominant land cover in the watershed is herbaceous/shrub land, with smaller amounts of forested upland, developed land, and planted/cultivated land.



Segments in Watershed (Figure 40):

- 1224_01: Portion near dam Leon Reservoir
Monitoring Station: 11939 – LEON RESERVOIR NEAR DAM 42 METERS SOUTH AND 28 METERS EAST OF NORTHERN EDGE OF DAM
- 1224_02: Headwater portion Leon Reservoir
Monitoring Station: 11941 – LEON RESERVOIR AT HEADWATER NEAR FM 2214 405 METERS SOUTH AND 188 METERS EAST OF INTERSECTION OF EASTLAND CR 463 AND FM 2214
- 1224A_01: Lake Olden
- 1224B_01: Leon River Above Leon Reservoir
- 1224C_01: South Fork Leon River

Impairments in Watershed Description (Figure 40):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

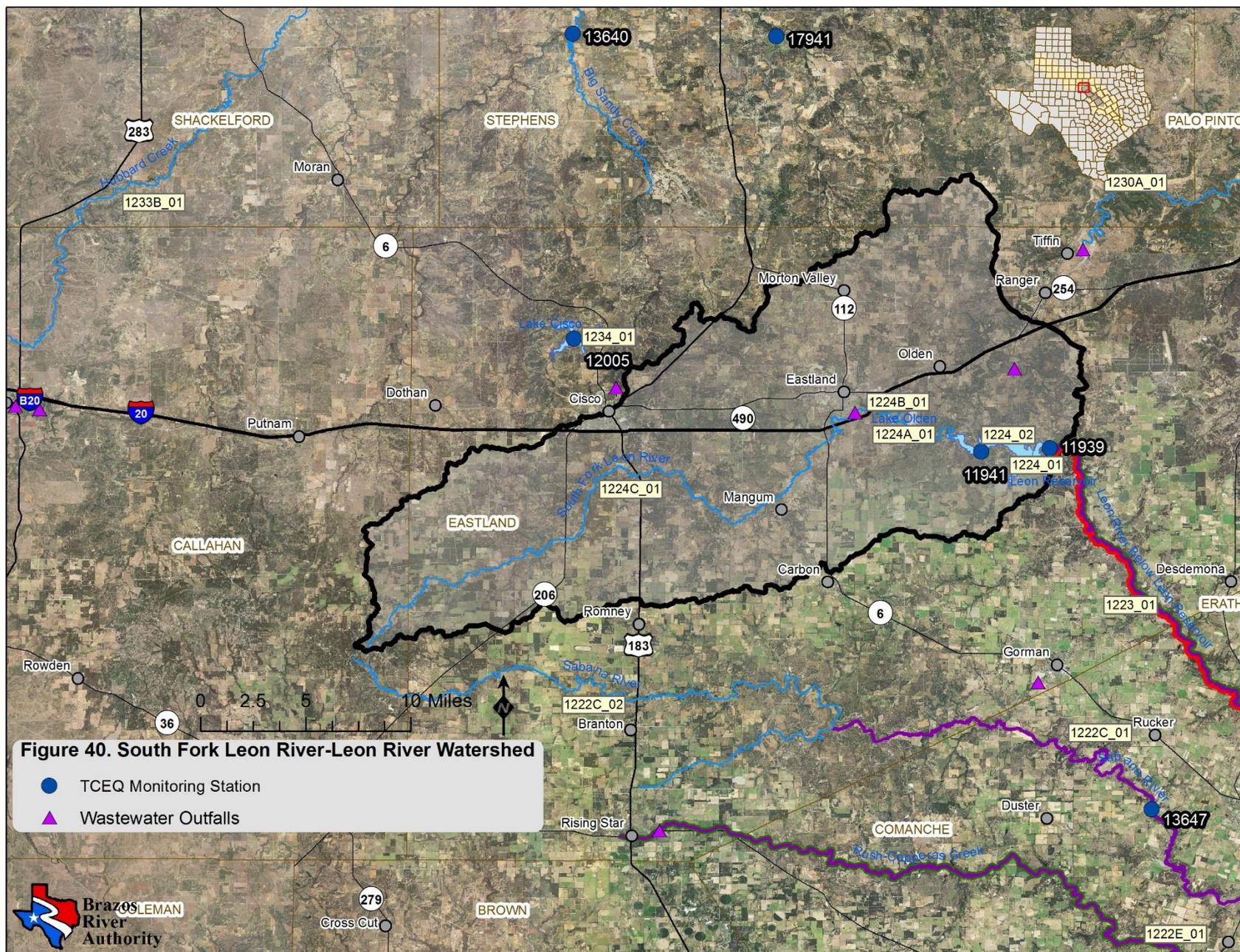
- City of Morton Valley
- City of Olden
- City of Eastland
- City of Magnum
- Eastland County
- Any marinas or other businesses on or that serve Leon Reservoir

Actions taken if impaired:

- N/A

Recommendations if Impaired:

- N/A



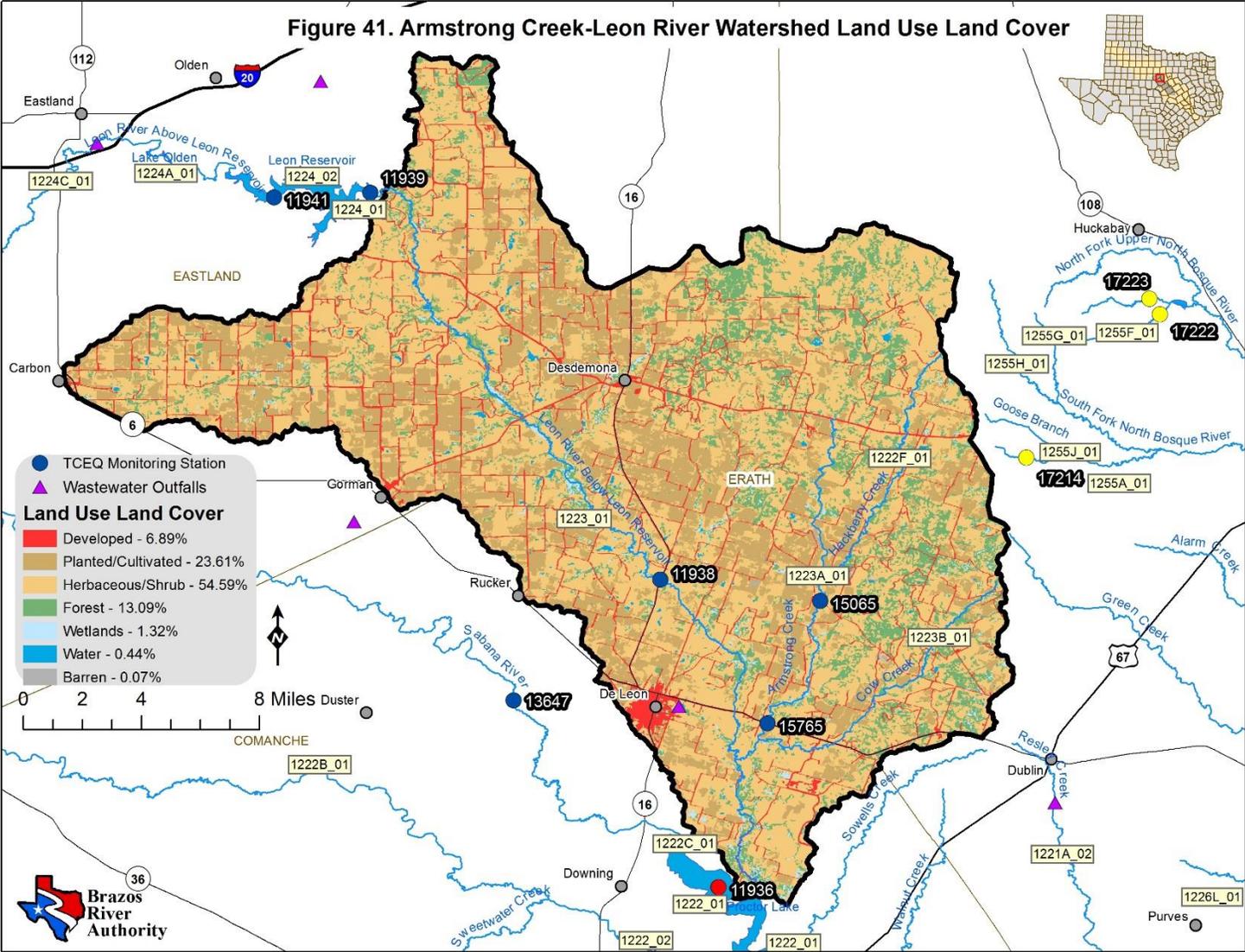
Armstrong Creek-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 41):

There are two cities and one wastewater outfall in this watershed. The dominant land cover in the watershed is herbaceous/shrub land with a moderate amount of planted/cultivated land and a smaller amount of forested upland. A portion of Lake Proctor lies within this watershed.



Segments in Watershed (Figure 42):

- 1222_01: Lake Proctor, Sabana River arm
- 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
- 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 42):

There are concerns for chlorophyll *a* in 1222_01. There are also concerns for depressed dissolved oxygen and bacteria in 1222F_01.

- 1223_01: Aquatic Use – Dissolved Oxygen and Recreational Use – Bacteria

There is also a concern for chlorophyll-*a* in 1223_01.

- 1223A_01: Recreational Use – Bacteria

There is also a concern for chlorophyll-*a* in 1223A_01 and a concern for bacteria in 1223B_01.

Possible Contributions if Impaired:

Point Sources: Two cities and one municipal wastewater outfall are within the Armstrong Creek-Leon River Watershed.

Non-point sources: There is significant agricultural activity within the watershed as well as possible wildlife contributions.

Potential non-State Agency Stakeholders:

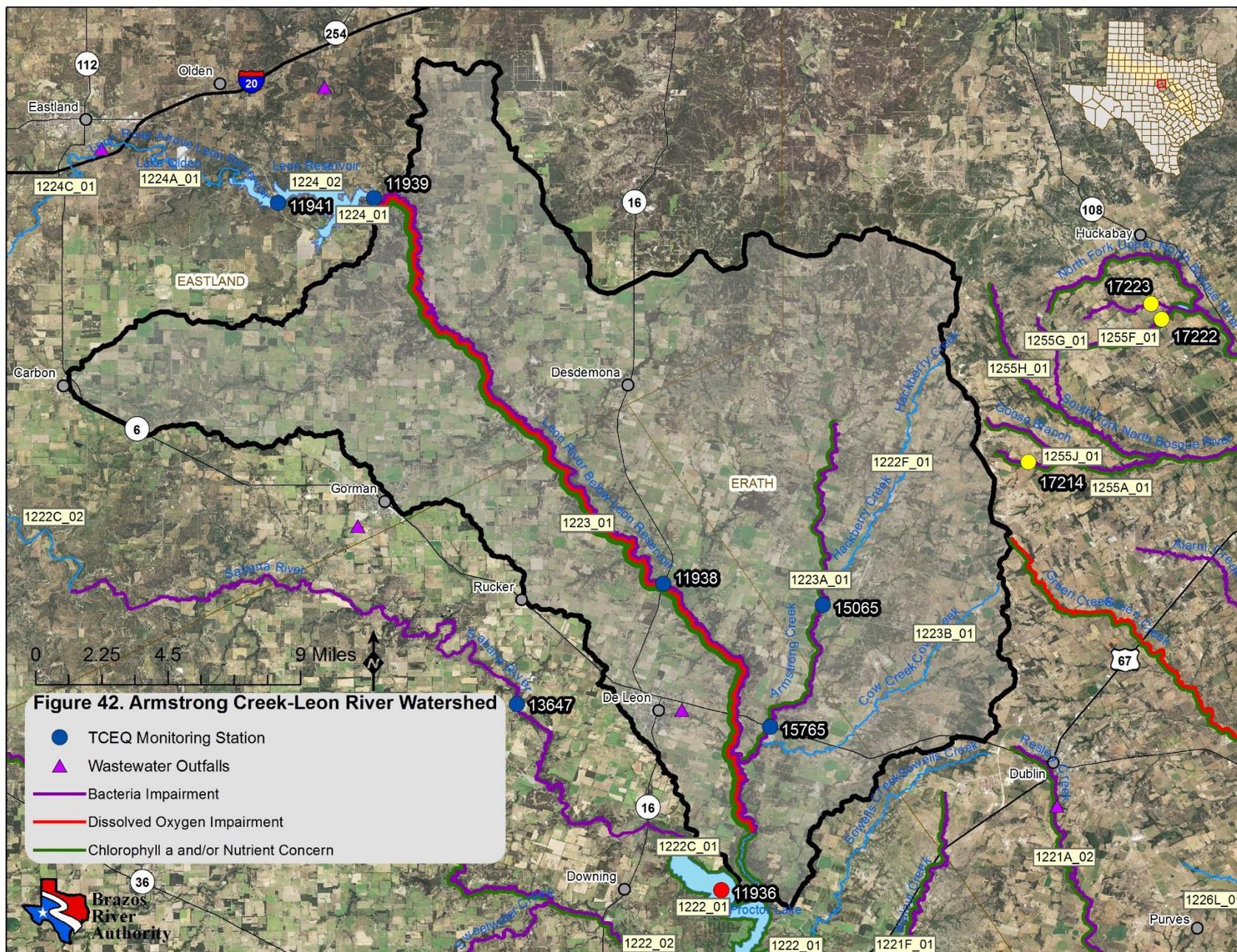
- City of Desdamona
- City of DeLeon
- Eastland County
- Comanche County
- Erath County

Actions taken if impaired:

- RUAs have been completed for segments 1223_01 and 1223A_01 and the [report](#) is under review by TCEQ.

Recommendations if Impaired:

- Await TCEQ review of 1223_01 and 1223A_01 RUAA report and recommendation before a management strategy is selected.
- Collect 24 hour D.O. data for segment 1223_01.



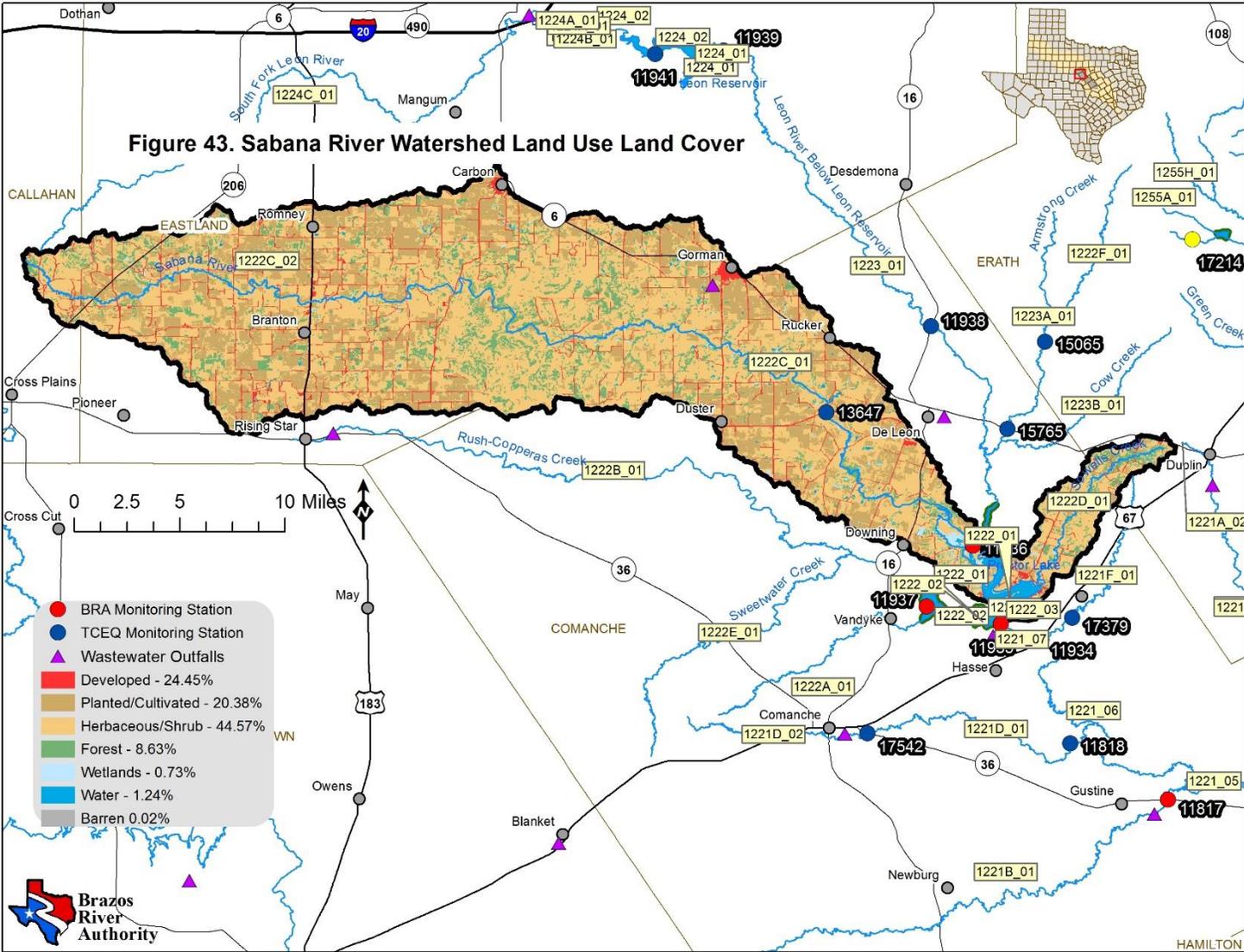
Sabana River Watershed

Watershed Description:

The Sabana River Watershed is 170 square miles in area.

Land Use Land Cover in Watershed (Figure 43):

There are six cities and one wastewater outfall in the watershed. The upstream portion of Lake Proctor lies within the watershed. The dominant land cover is herbaceous/shrub land, with a moderate amount of planted/cultivated land as well as developed land.



Segments in Watershed (Figure 44):

- 1222_01: Lake Proctor
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
- 1222C_02: Sabana River from confluence with Elm Creek in Eastland upstream to headwaters in Callahan County
- 1222D_01: Sowell's Creek

Impairments in Watershed Description (Figure 44):

- 1222C_01 and 1222D_01: Recreational Use – Bacteria
There are concerns for chlorophyll-*a* in 1222_01.

Possible Contributions if Impaired:

Point Sources: There are six cities and one municipal wastewater outfall in this watershed.

Non-point sources: There is a significant amount of agricultural activity within the watershed as well as possible wildlife contributions.

Potential non-State Agency Stakeholders:

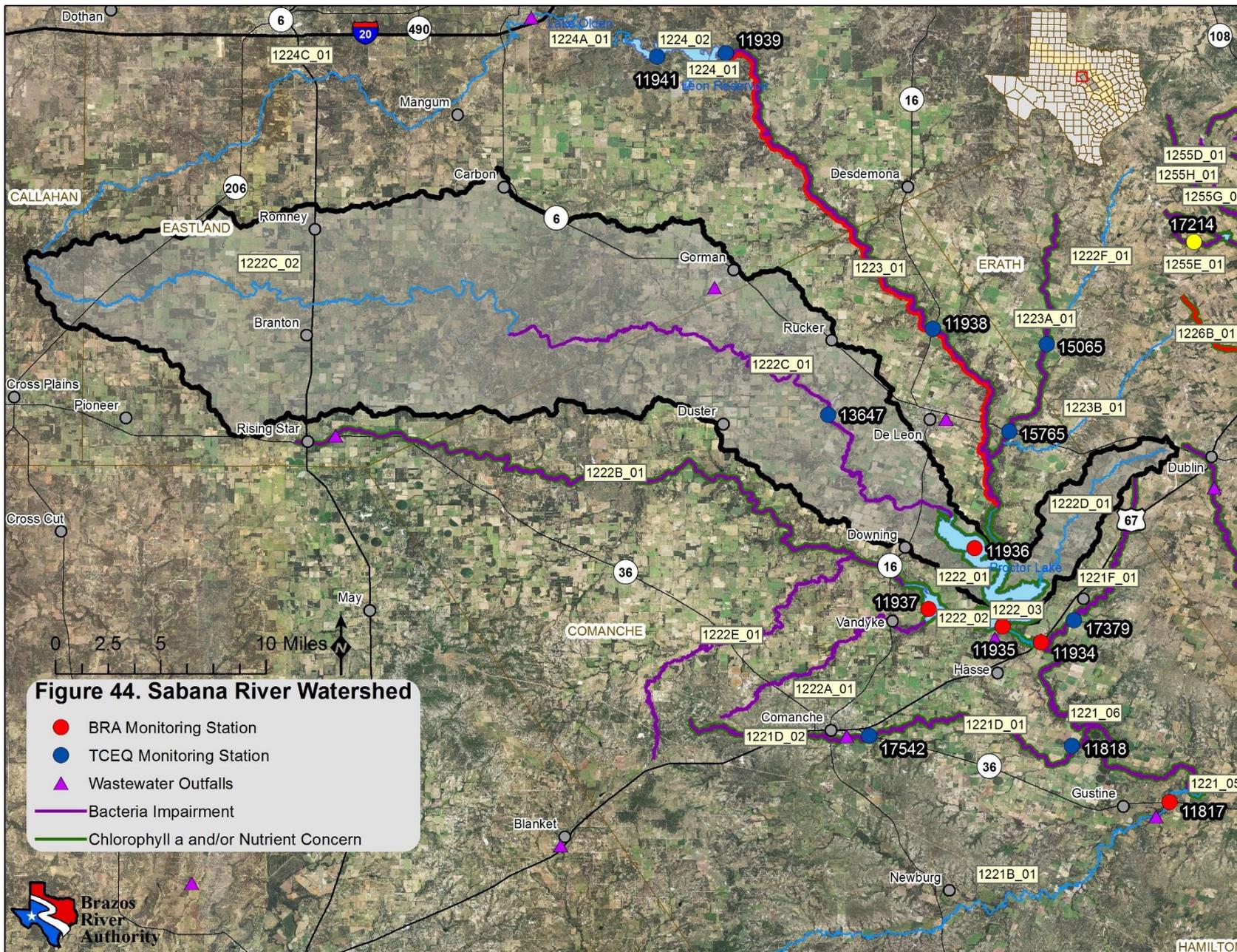
- City of Romney
- City of Branton
- City of Carbon
- City of Gorman
- City of Rucker
- City of Duster
- Callahan County
- Eastland County
- Comanche County
- Erath County
- Any marinas or other businesses on or that serve Lake Proctor

Actions taken if impaired:

- Segment 1222C_01 is currently on the WAP table for discussion and evaluation. Input from regional water quality monitors is obtained during yearly coordinated monitoring meetings.

Recommendations if impaired:

- Continue routine monitoring of station 13647.
- Conduct a more thorough watershed evaluation.

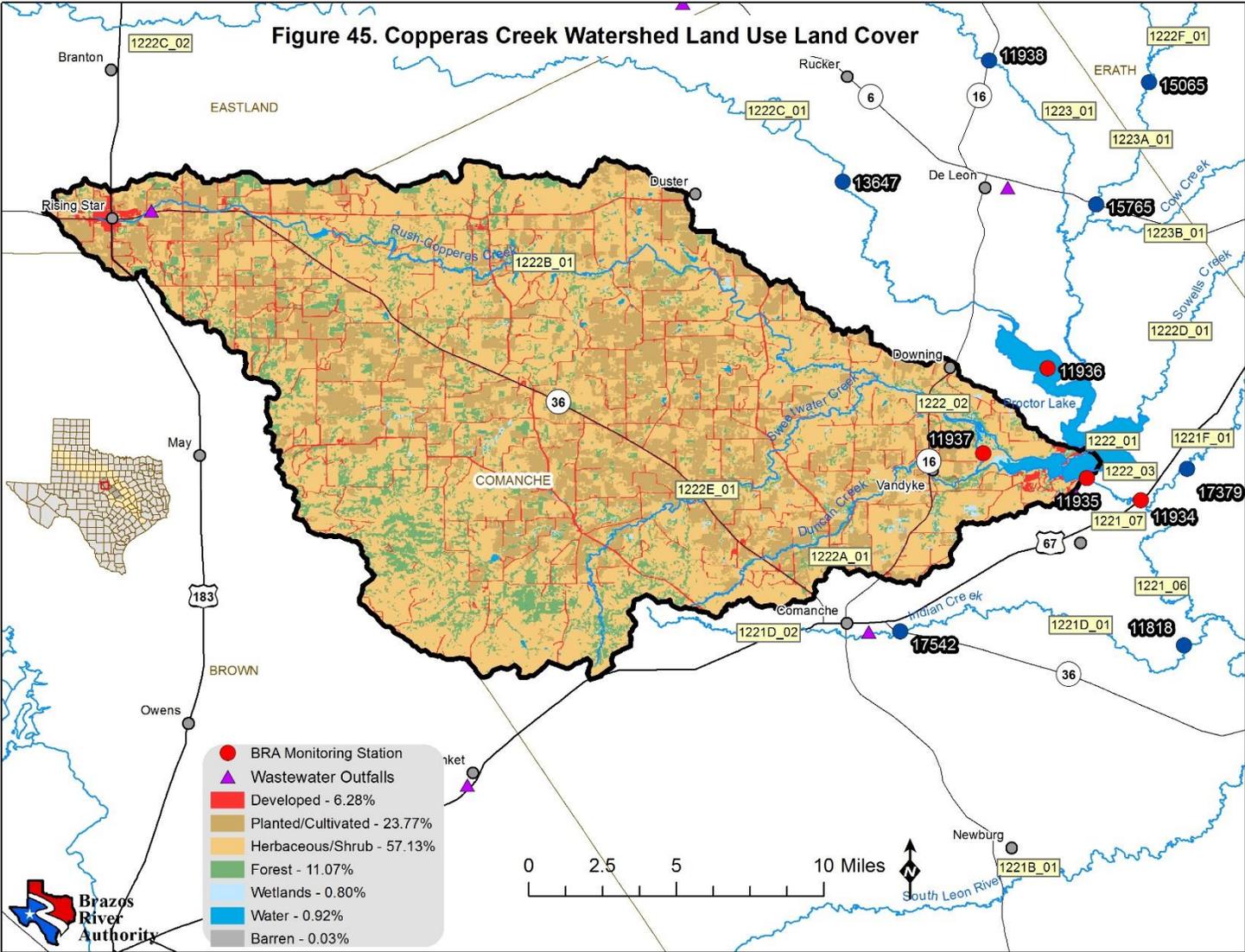


Copperas Creek Watershed

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

Land Use Land Cover in Watershed (Figure 45):
The biggest cities within the watershed are Rising Star, Downing, and Vandyke.

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



Segments in Watershed (Figure 46):

- 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
- 1222A_01: Duncan Creek
- 1222B_01: Rush-Copperas Creek
- 1222E_01: Sweetwater Creek

Impairments in Watershed Description (Figure 46):

- 1222A_01, 1222B_01, 1222E_01: Recreational Use—Bacteria
There are concerns for chlorophyll-*a* in 1222_02, 1222_03, 1222A_01 and 1222B_01. There is also a concern for depressed dissolved oxygen in 1222A_01.

Possible Contributions if Impaired:

Point Sources: There are three cities and one municipal wastewater outfall in this watershed.

Non-point sources: There is significant agricultural activity within the watershed as well as possible wildlife contributions.

Potential non-State Agency Stakeholders:

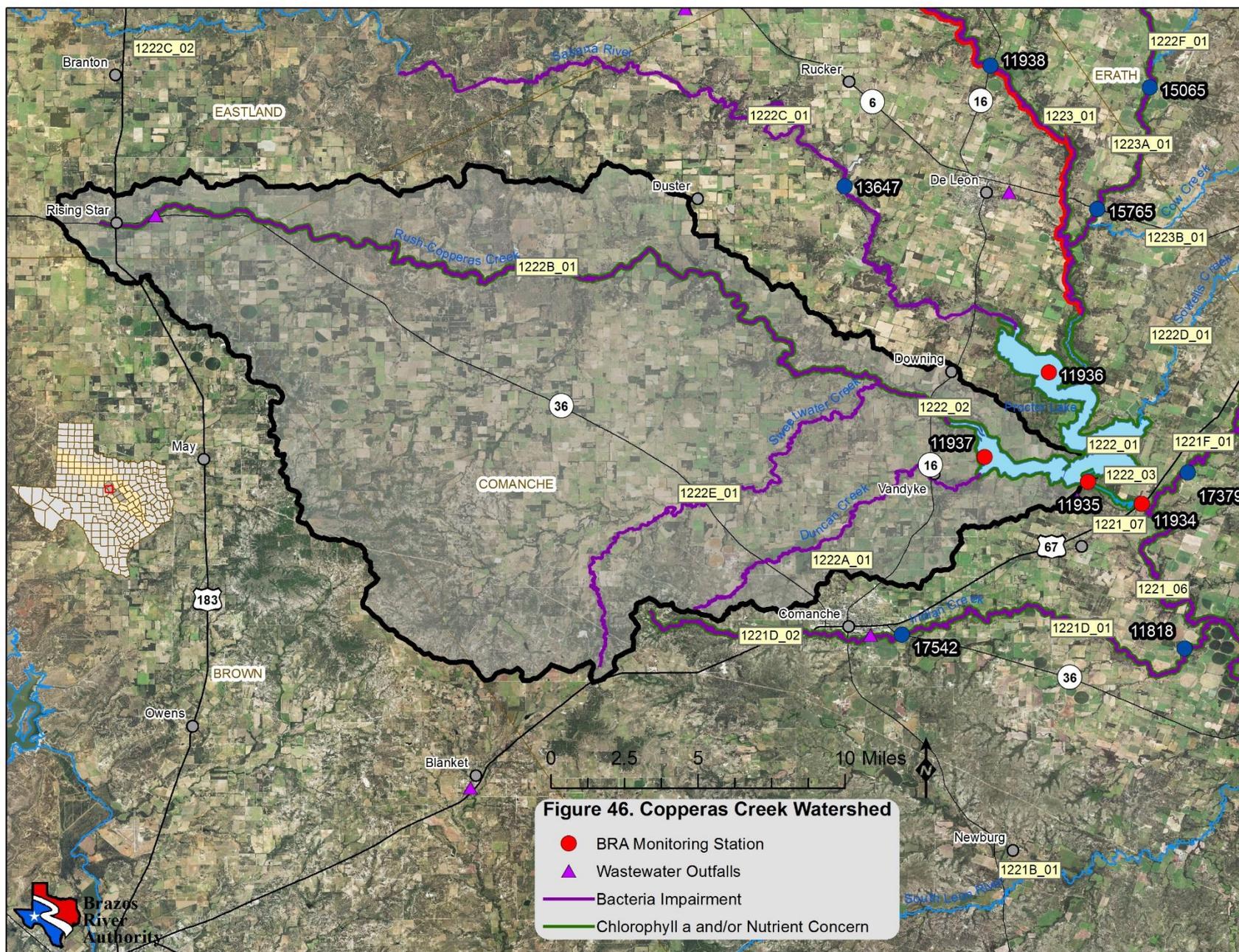
- City of Rising Star
- City of Vandyke
- City of Downing
- Eastland County
- Comanche County
- Brown County
- Any marinas or other businesses on or that serve Lake Proctor

Actions taken if impaired:

- RUAA fieldwork is complete and a [report](#) is under review by TCEQ for 1222A_01 and 1222E_01.
- An [RUAA](#) has been completed for 1222B_01. The report was put out for public comment ending January 12, 2015. TCEQ is in the process of making a recommendation as to what category of recreational use is appropriate for this segment.

Recommendations if Impaired:

- Await TCEQ review of 1221A_01 and 1222E_01 RUAA report and recommendation before a management strategy is selected.
- Await TCEQ recommendation of recreational use for 1222B_01 before a management strategy is selected.



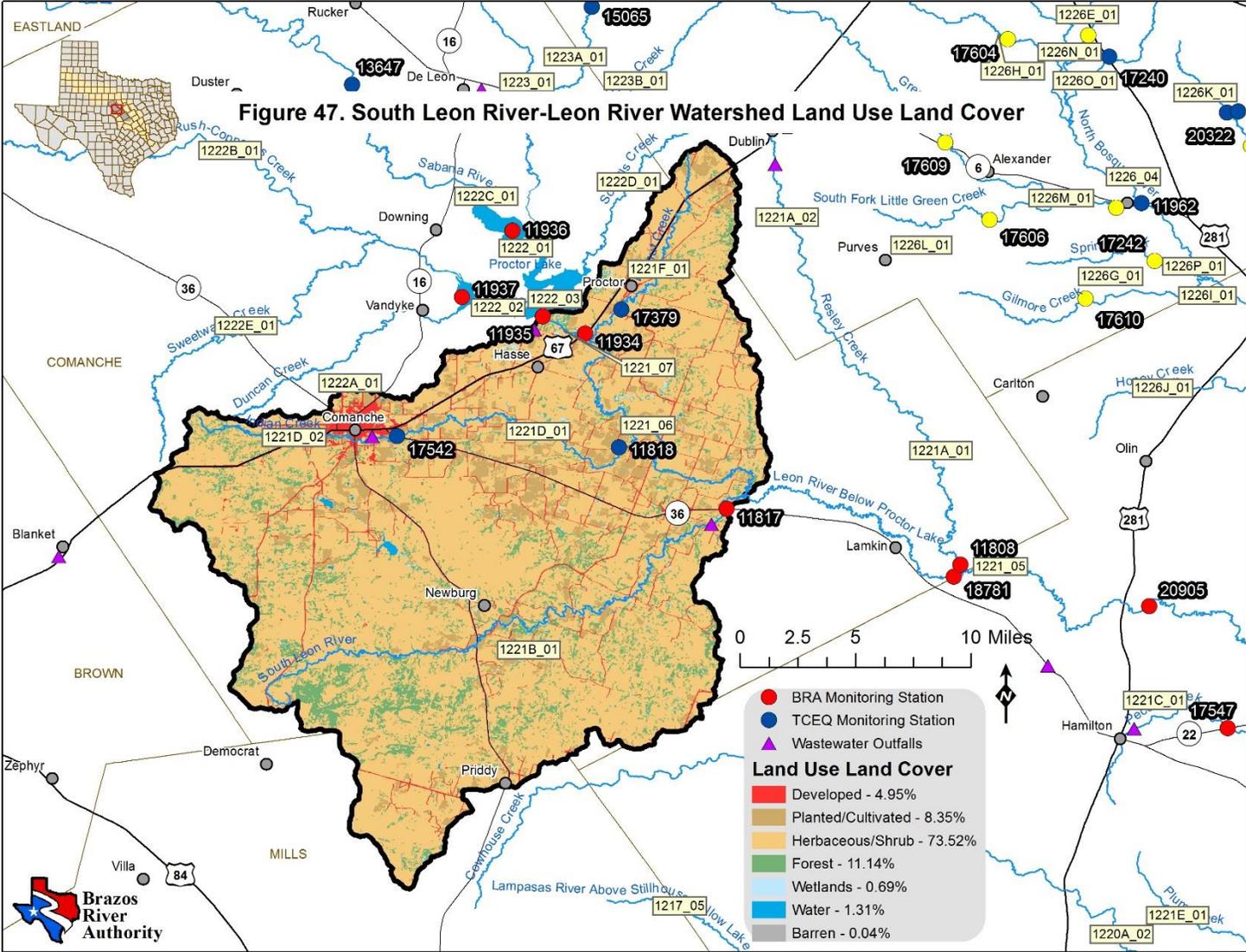
South Leon River-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 47):

There are six cities and two wastewater outfalls in the watershed. The dominant land cover is herbaceous/shrubland, with a smaller amount of forested upland.



Segments in Watershed (Figure 48):

- 1221_06: Leon River Below Lake Proctor, from confluence with South Leon Creek upstream to confluence with Walnut Creek
- 1221_07: Leon River Below Lake Proctor, from confluence with Walnut Creek upstream to Lake Proctor
 - Monitoring Stations:
 - 11935 - LAKE PROCTOR MEAR DAM FLOODGATE 911 METERS NORTH AND 940 METERS EAST OF INTERSECTION OF FM 2861 AND COMANCHE CR 418C
 - 11934 - LEON RIVER IMMEDIATELY DOWNSTREAM OF US 67/ US 377 DOWNSTREAM OF LAKE PROCTOR
- 1221B_01: South Leon River
 - Monitoring Station: 11817 - SOUTH LEON RIVER 20 M DOWNSTREAM OF SH 36 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
- 1221F_01: Walnut Creek
 - Monitoring Station: 17379 - WALNUT CREEK AT FM 1476 SOUTH OF PROCTOR

Impairments in Watershed Description (Figure 48):

- 1221_06, 1221D_01, 1221D_02, 1221F_01: Recreational Use—Bacteria
There are concerns for chlorophyll-*a* in 1221_06, 1221_07, 1221D_01, 1221D_02 and 1221F01. There are also concerns for depressed dissolved oxygen in 1221_07 and 1221D_01. There is a concern for impaired habitat in 1221B_01 and a concern for nitrate in 1221D_02.

Possible Contributions if Impaired:

Point Sources: There are six cities and two municipal wastewater outfalls within the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 86% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

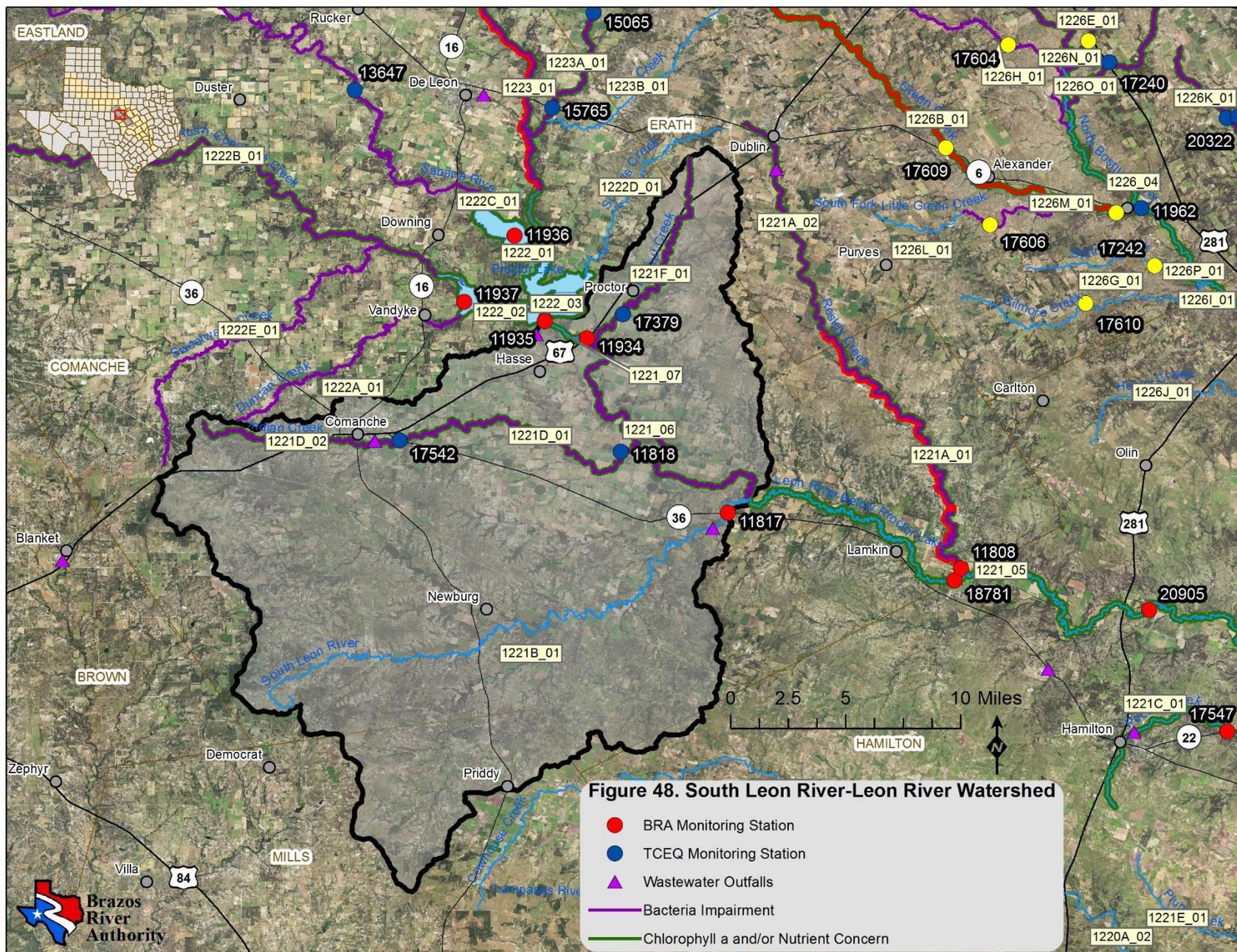
- City of Comanche
- City of Hasse
- City of Proctor
- City of Gustine
- City of Newburg
- City of Priddy
- Comanche County
- Erath County
- Mills County

Actions taken if impaired:

- The [Leon River Watershed Protection Plan](#) addresses issues in segment 1221.
- An [RUAA](#) has been conducted in segment 1221 and results have led to the recommendation that the recreational use of the segment remain classified as a Primary Contact Recreation (PCR) segment.
- RUAs have also been completed for [1221D_01, 02](#) and [1221F_01](#). Results have led to the recommendation that the recreational use of these segments be revised to secondary contact recreation 2 (SCR 2) segments. EPA approval of SCR 2 for 1221F_01 has been granted.

Recommendations if impaired:

- Await EPA review and approval of revised recreational use for 1221D_01 before a management strategy is selected.
- Reassess 1221F_01 under the new recreational use criteria.



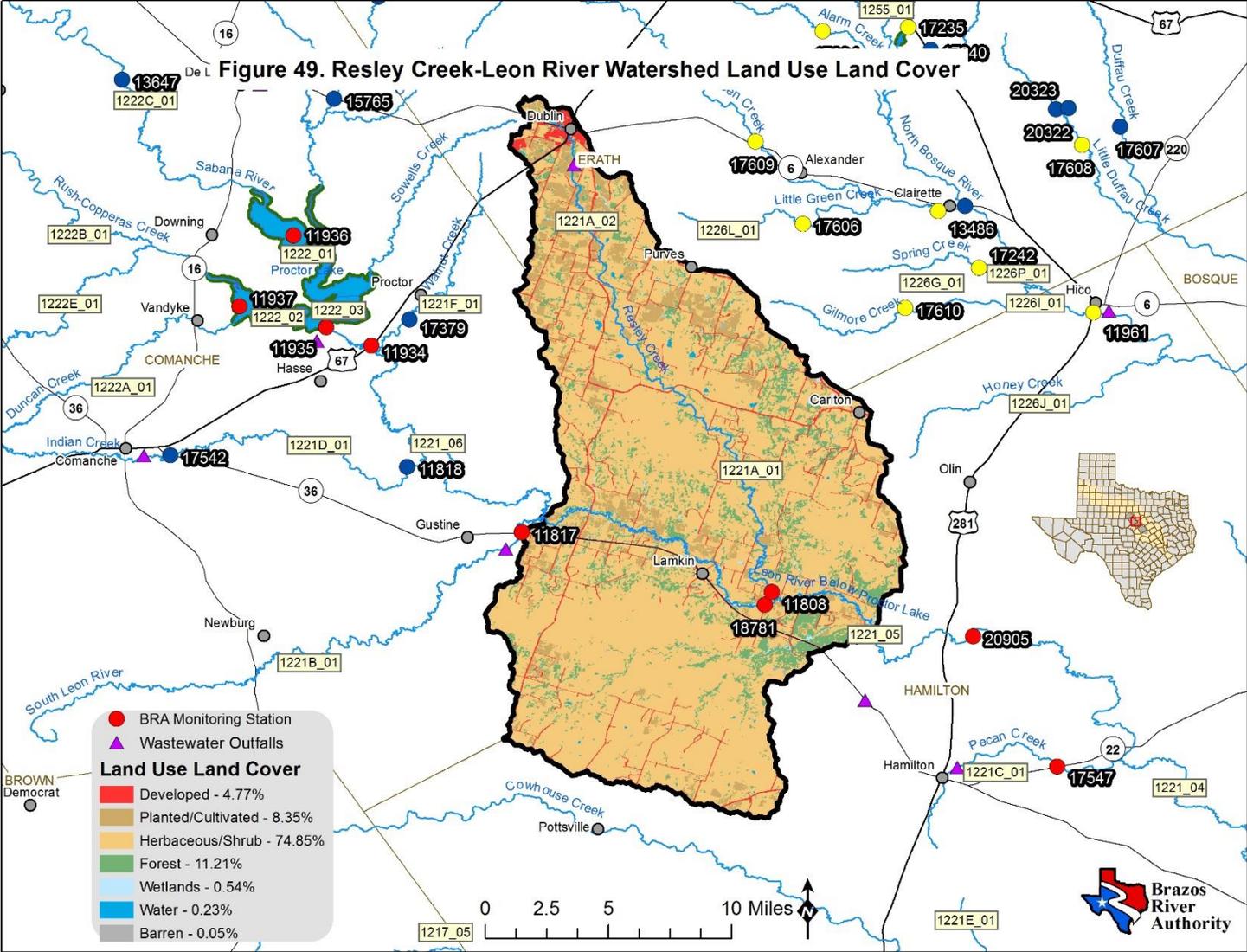
Resley Creek-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 49):

There are four cities and one municipal wastewater outfall in the watershed. The dominant land cover is herbaceous/shrub, with a smaller amount of forested upland.



Segments in Watershed (Figure 50):

- 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: 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 50):

- 1221A_01: Recreational Use—Bacteria; General Use—Depressed Dissolved Oxygen
 - 1221A_02: Recreational Use—Bacteria
- There are concerns chlorophyll-*a* in 1221A_01 and 1221A_02. There are also concerns for chlorophyll-*a* and dissolved oxygen in 1221_05.

Possible Contributions if Impaired:

Point Sources: There are four cities and one municipal wastewater outfall in the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 86% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

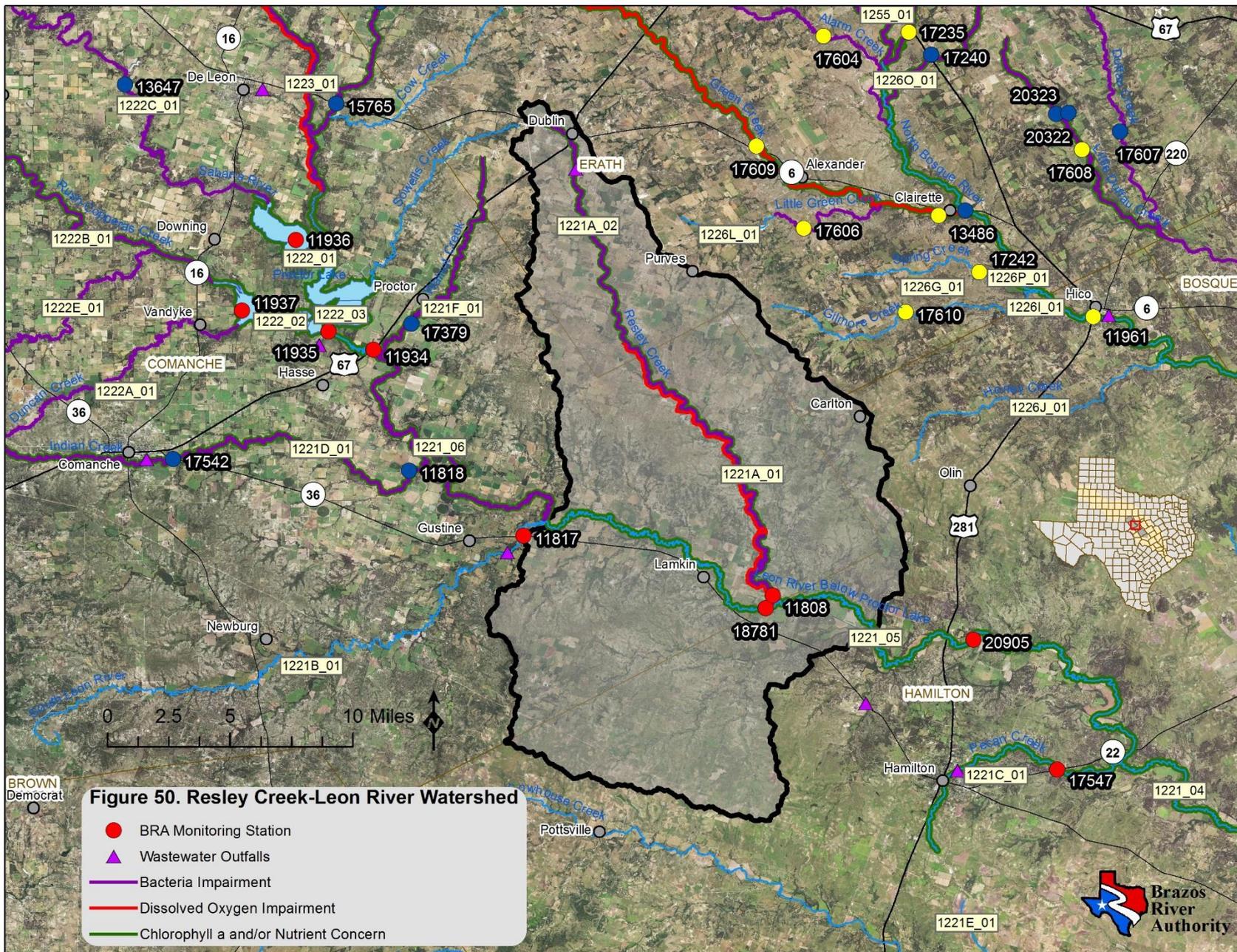
- City of Dublin
- City of Purves
- City of Carlton
- City of Lamkin
- Comanche County
- Erath County
- Hamilton County

Actions taken if impaired:

- The [Leon River Watershed Protection Plan](#) addresses issues in segment 1221 and many of its tributaries.
- An [RUAA](#) has been conducted in segment 1221 and results have led to the recommendation that the recreational use of the segment remain classified as a Primary Contact Recreation (PCR) segment.
- RUAs have also been completed for [1221A_01 and 02](#). Results have led to the recommendation that the recreational use of these segments be revised to secondary contact recreation 2 (SCR 2) segments. EPA approval of SCR 2 for 1221A_01 and _02 has been granted.

Recommendations if impaired:

- Await EPA review and approval of revised recreational use of these segments before a management strategy is selected.



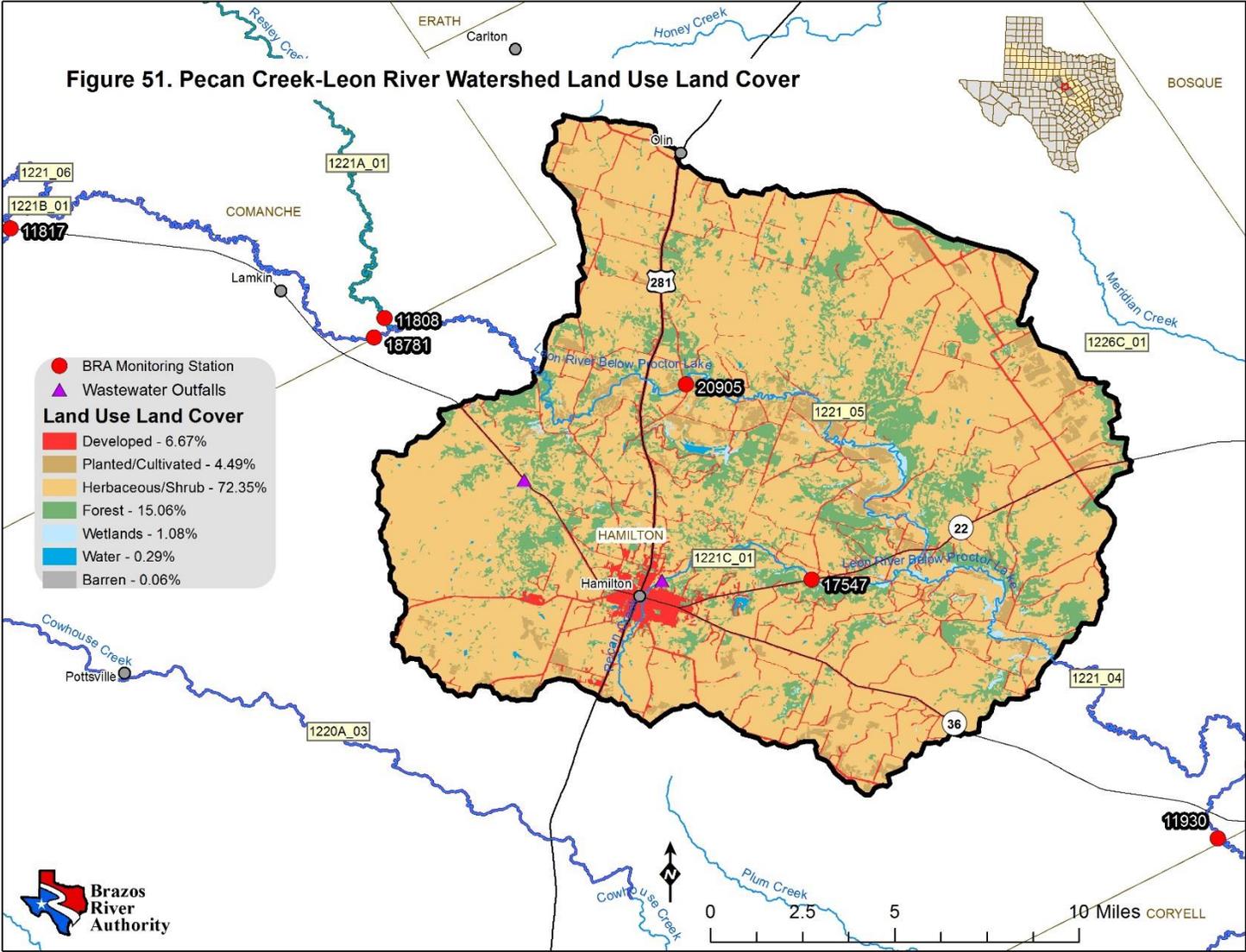
Pecan Creek-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 51):

There is one city and two wastewater outfalls in the watershed. The dominant land cover is herbaceous/shrub, with a smaller amount of forested upland.



Segments in Watershed (Figure 52):

- 1221_04: Leon River below Lake Proctor, from the confluence with Plum Creek upstream to the confluence with Pecan Creek
- 1221_05: Leon River below Lake Proctor, from the confluence with Pecan Creek upstream to confluence with South Leon Creek
Monitoring Station: 20905 - LEON RIVER AT HAMILTON CR 203 NORTH OF HAMILTON
- 1221C_01: Pecan Creek
Monitoring Station: 17547 - PECAN CREEK AT SH 22 EAST OF HAMILTON

Impairments in Watershed Description (Figure 52):

- None
- There are concerns for chlorophyll *a* in 1221_04, 1221_05 and 1221C_01. There are also concerns for depressed dissolved oxygen in 1221_04 and 1221_05.

Possible Contributions if Impaired:

Point Sources: There is one city and there are two wastewater outfalls in the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 87% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

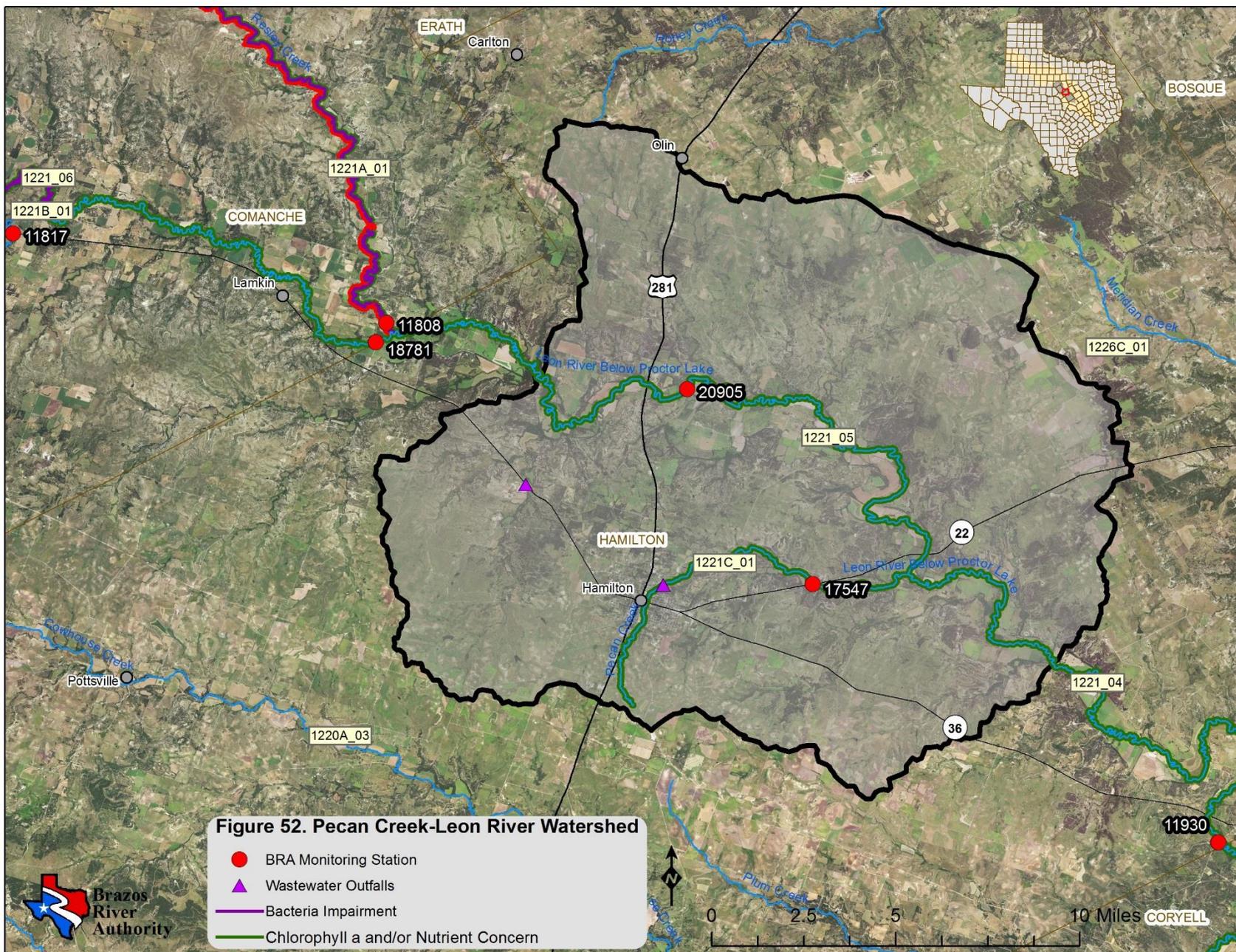
- City of Hamilton
- Hamilton County

Actions taken if impaired:

- Although there are no impaired segments in the watershed, there is an active WPP for segments in this watershed. The [Leon River Watershed Protection Plan](#) addresses issues in segment 1221 and many of its tributaries.
- An [RUAA](#) has been conducted in segment 1221 and results have led to the recommendation that the recreational use of the segment remain classified as a Primary Contact Recreation (PCR) segment.
- An [RUAA](#) has been conducted in segment 1221C_01 and results have led to the recommendation that the recreational use of the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if impaired:

- N/A



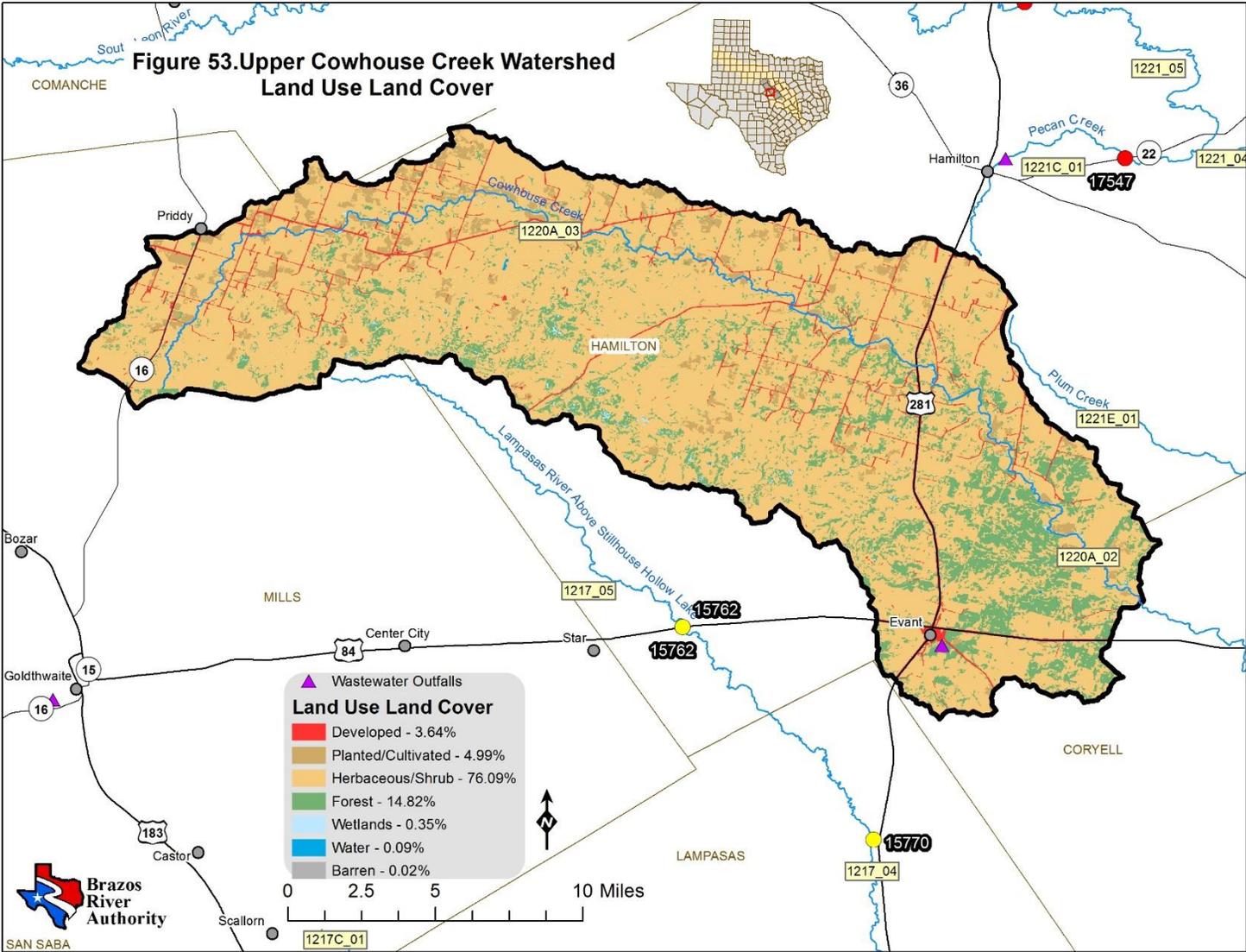
Upper Cowhouse Creek Watershed

Watershed Description:

The Upper Cowhouse Creek Watershed is 264 square miles in area.

Land Use Land Cover in Watershed (Figure 53):

There are three cities and one wastewater outfall in the watershed. The dominant land cover is herbaceous/shrub, with a smaller portion of forested upland.



Segments in Watershed (Figure 54):

- The upstream portion of 1220A_02: Cowhouse Creek, middle portion of water body
- 1220A_03: Cowhouse Creek, upstream portion of water body

Impairments in Watershed Description (Figure 54):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

- City of Pottsville
- City of Ewant
- City of Priddy
- Mills County
- Hamilton County
- Coryell County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A

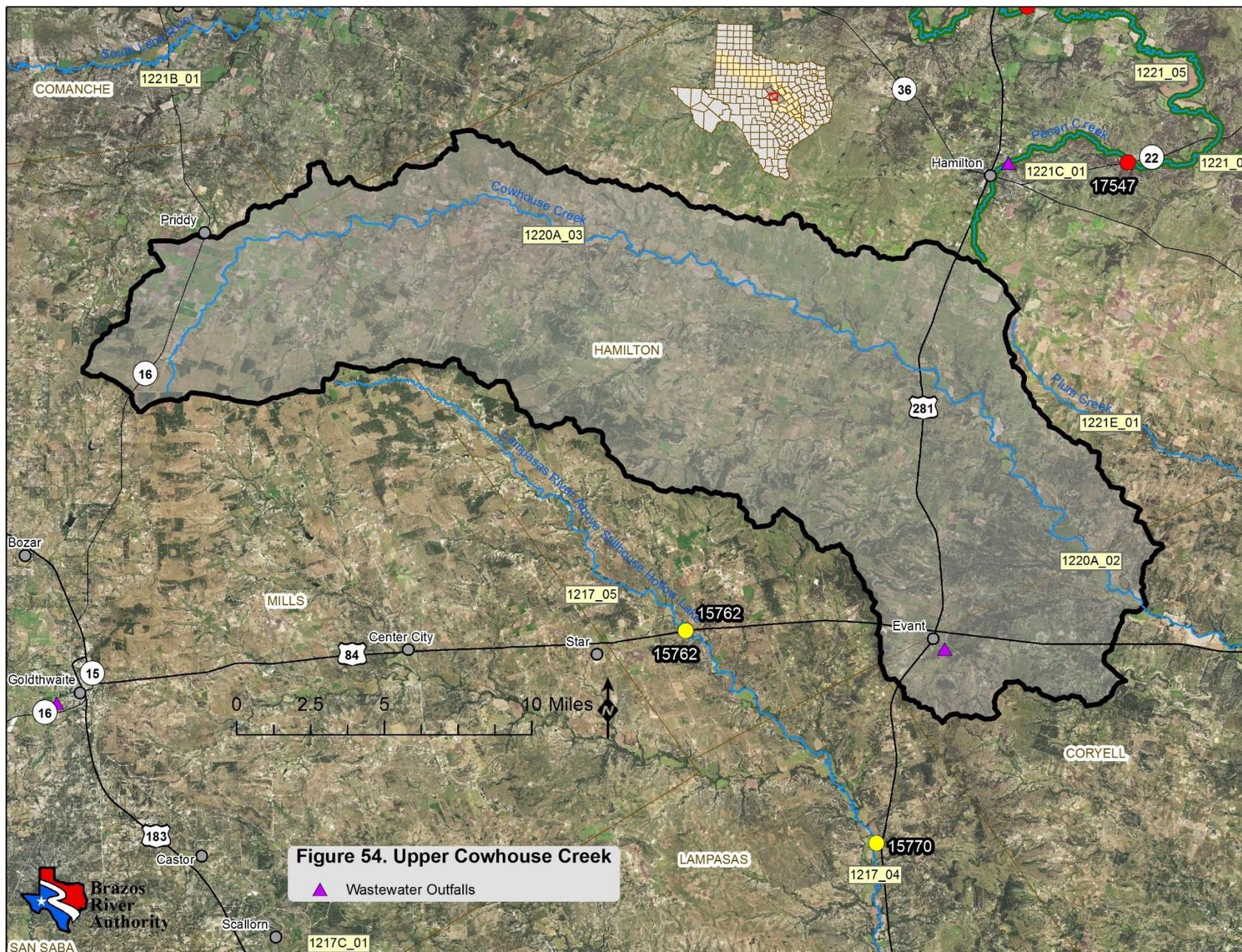


Figure 54. Upper Cowhouse Creek
▲ Wastewater Outfalls

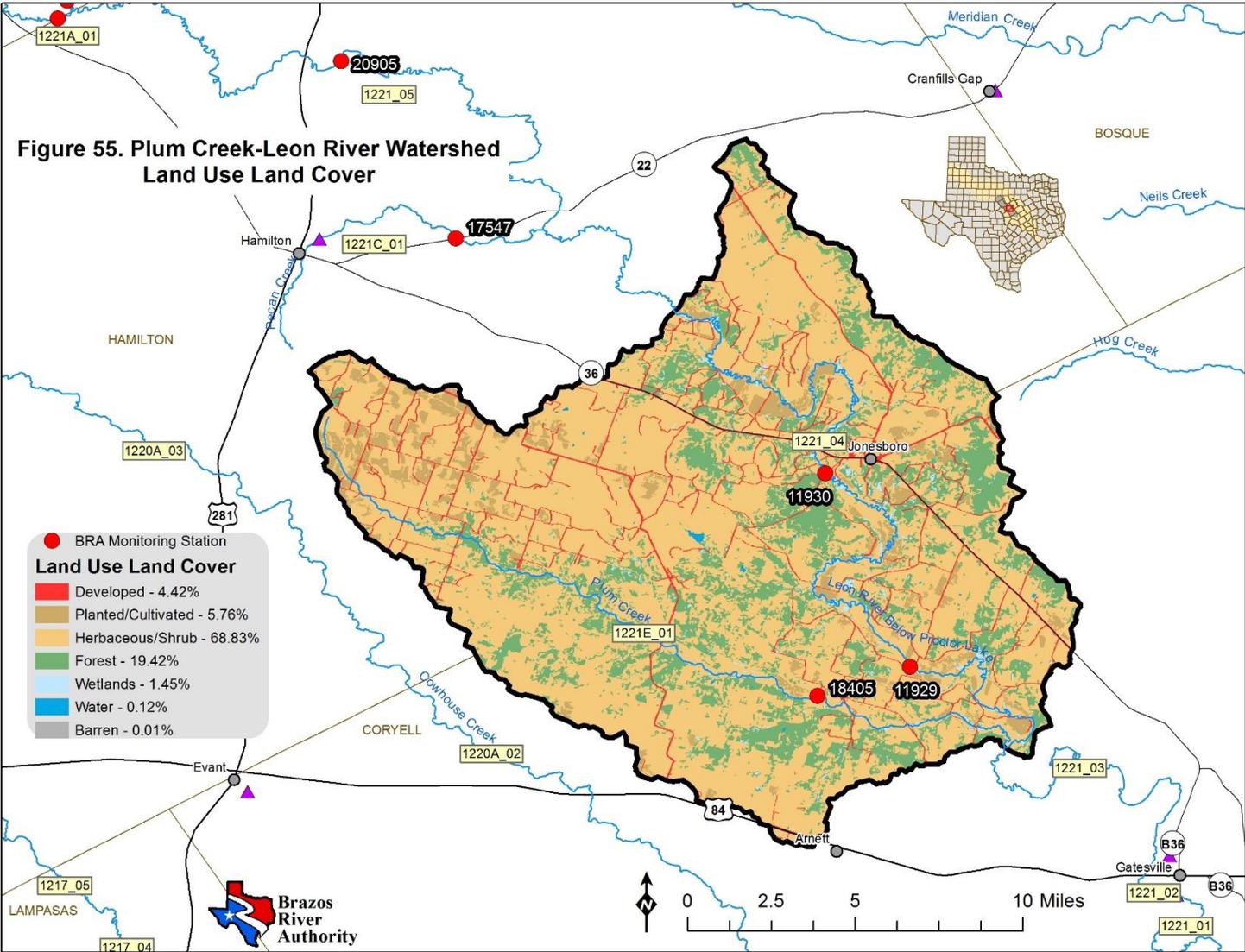
Plum Creek-Leon River Watershed

Watershed Description:

The Plum Creek-Leon River Watershed is 210 square miles in area.

Land Use Land Cover in Watershed (Figure 55):

There is one city in the watershed. The dominant land cover is herbaceous/shrub land, with a moderate portion of forested upland.



Segments in Watershed (Figure 56):

- The downstream portion of 1221_04: Leon River below Lake Proctor, from the confluence with Plum Creek upstream to the confluence with Pecan Creek
- 1221E_01: Plum Creek

Impairments in Watershed Description (Figure 56):

- None

There are concerns for chlorophyll *a* and depressed dissolved oxygen in 1221_04.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

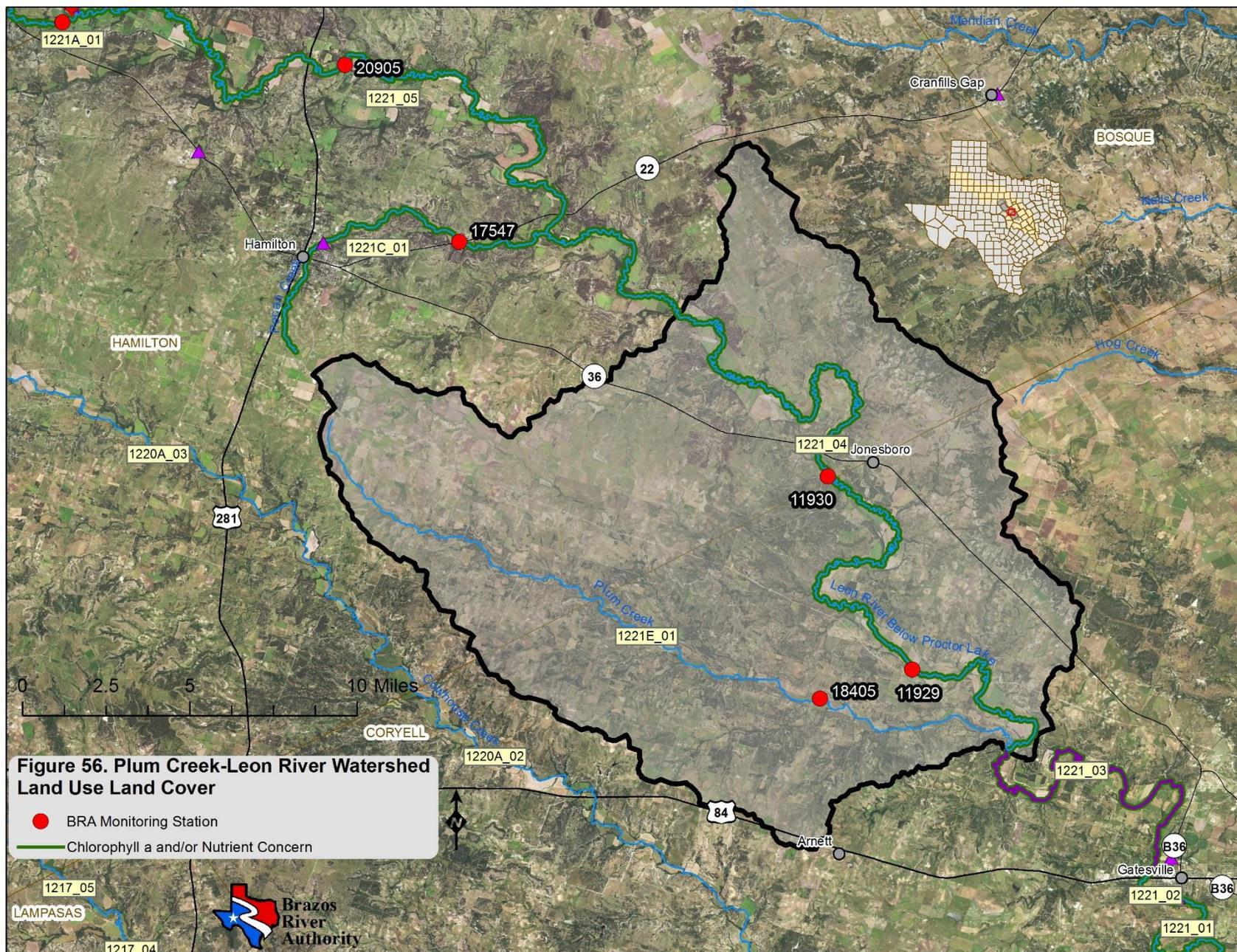
- City of Jonesboro
- Hamilton County
- Coryell County

Actions taken if impaired:

- Although there are no impaired segments in the watershed, there is an active WPP for segments in this watershed. The [Leon River Watershed Protection Plan](#) addresses issues in segment 1221 and many of its tributaries.

Recommendations if impaired:

- N/A



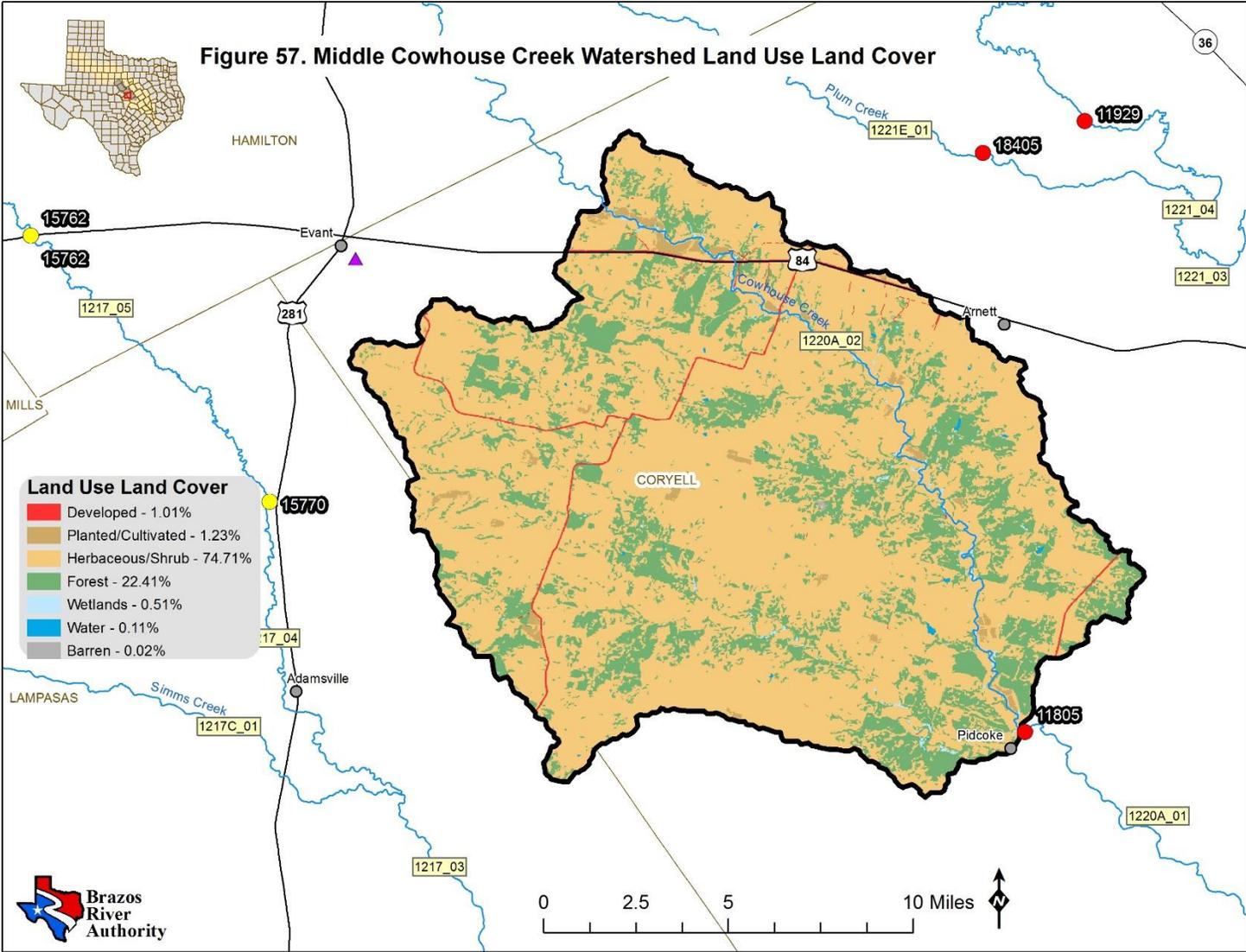
Middle Cowhouse Creek Watershed

Watershed Description:

The Middle Cowhouse Creek Watershed is 191 square miles in area.

Land Use Land Cover in Watershed (Figure 57):

There is one city in the watershed. The dominant land cover is herbaceous/shrub, with a smaller portion of forested upland.



Segments in Watershed (Figure 58):

- 1220A_02: Cowhouse Creek, middle portion of water body

Impairments in Watershed Description (Figure 58):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

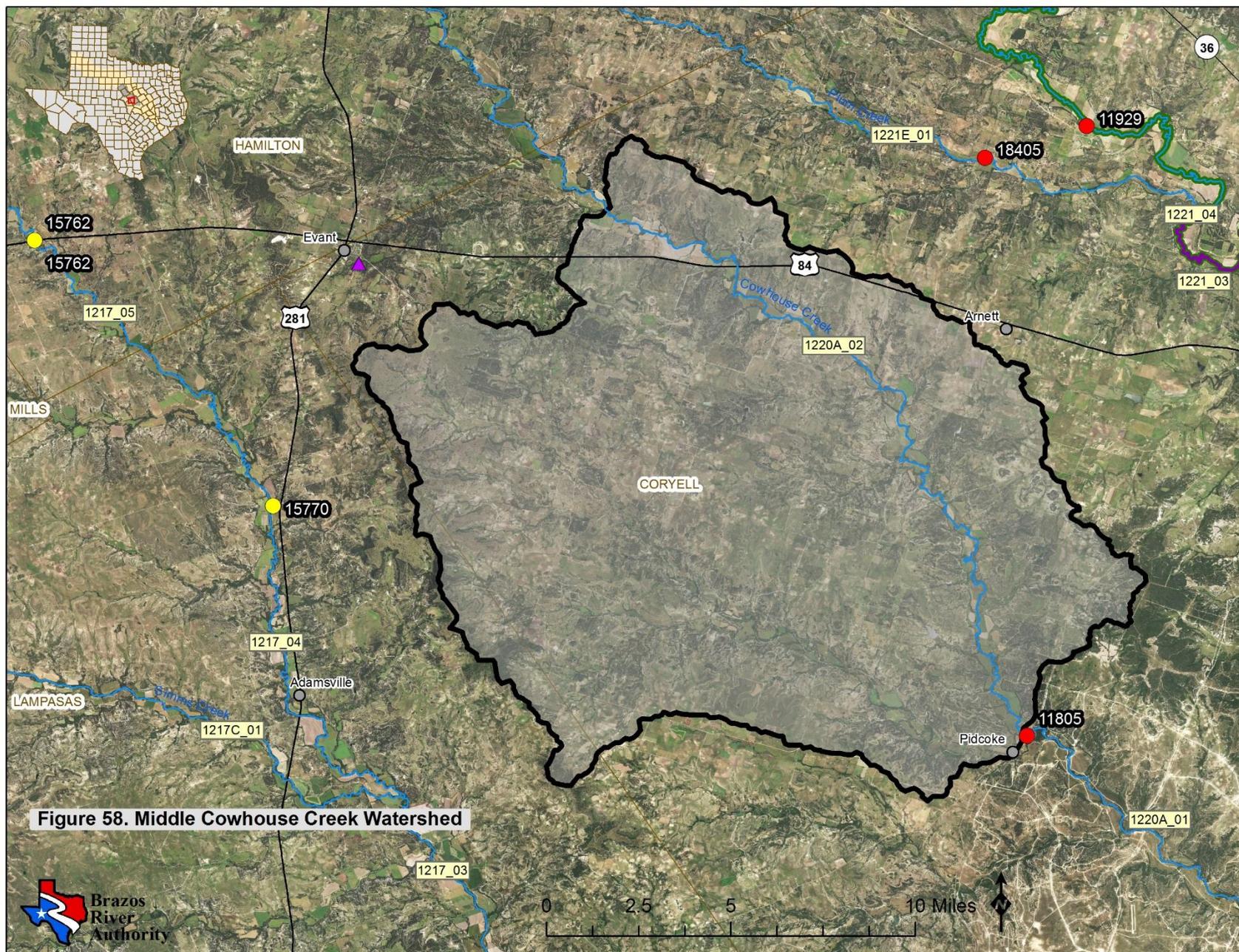
- City of Pidcoke
- Coryell County
- Lampasas County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



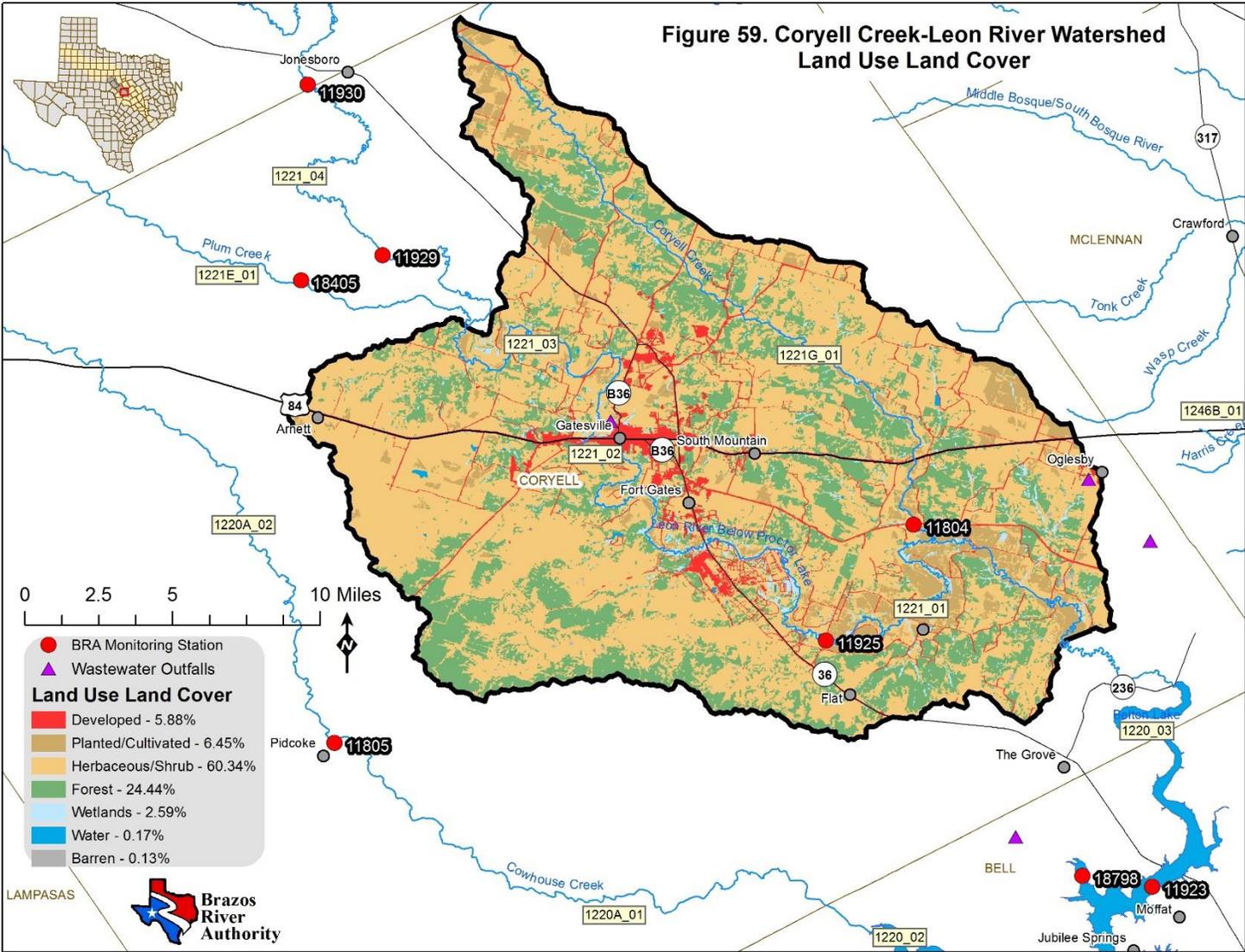
Coryell Creek-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 59):

There are seven cities and three wastewater outfalls in the watershed. The dominant land cover is herbaceous/shrub land, with a moderate amount of forested upland.



Segments in Watershed (Figure 60):

- The upstream portion of 1221_01: Leon River Below Proctor Lake, from confluence with Lake Belton upstream to confluence with unnamed tributary (MHD RC 12070201005989) in Coryell County
Monitoring Station: 11925 - LEON RIVER IMMEDIATELY DOWNSTREAM OF FM 1829 SOUTHEAST OF NORTH FORT HOOD
- 1221_02: Leon River Below Proctor Lake, from confluence with unnamed tributary (MHD RC 12070201005989) upstream to confluence with Stillhouse Branch in Coryell County
- 1221_03: Leon River Below Proctor Lake, from confluence with Stillhouse Creek upstream to confluence with Plum Creek
- 1221G_01: Coryell Creek
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 60):

- 1221_03: Recreational Use—bacteria
There are concerns for chlorophyll-*a* in 1221_01 and 1221_03. There is also a concern for depressed dissolved oxygen in 1221_01 as well as concerns for nitrate and total phosphorus in 1221_02.

Possible Contributions if Impaired:

Point Sources: There are six cities and three municipal wastewater outfalls within the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 87% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

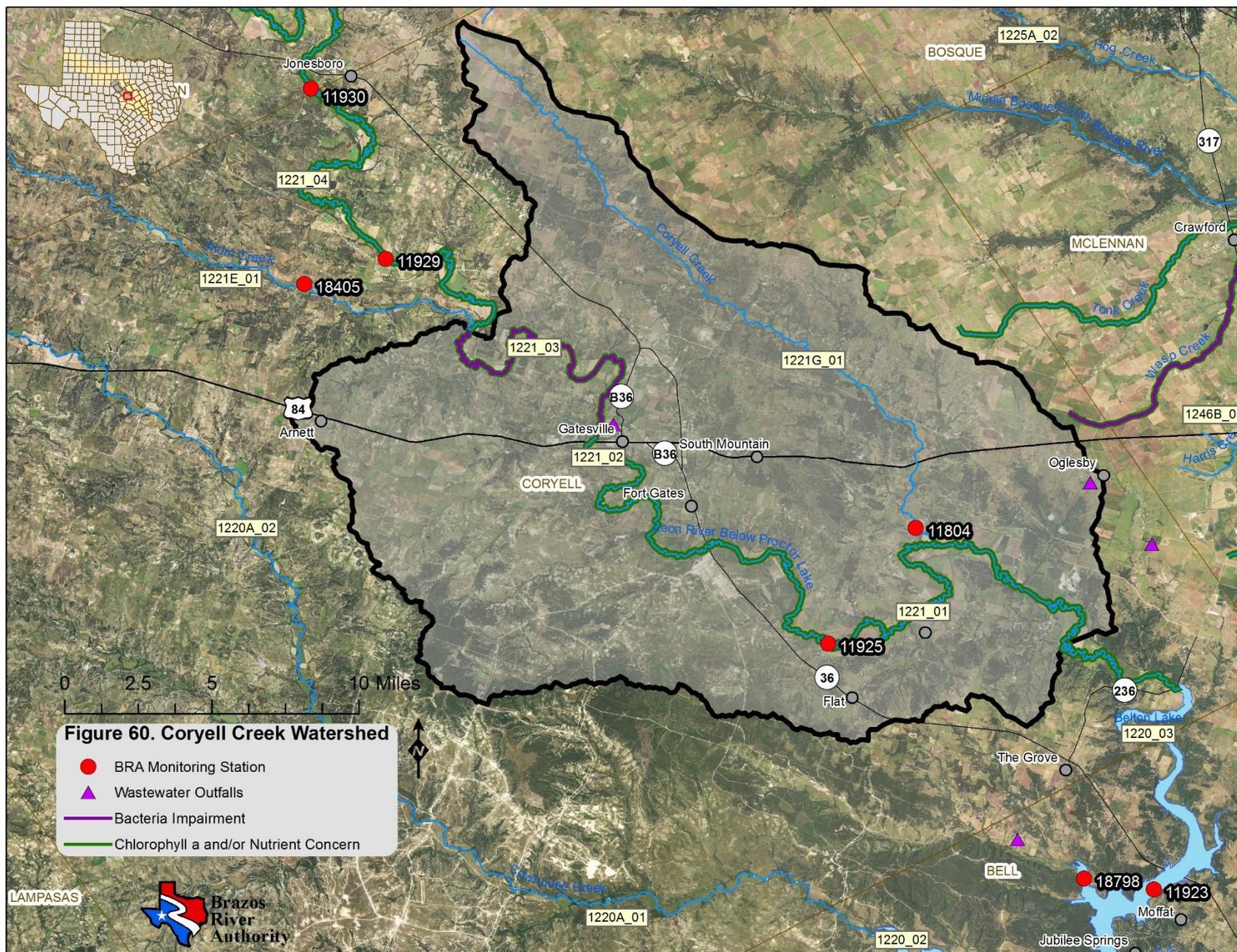
- City of Arnett
- City of Gatesville
- City of South Mountain
- City of Fort Gates
- City of Flat
- City of Leon Junction
- City of Oglesby
- Fort Hood Military Base
- Coryell County

Actions taken if impaired:

- The [Leon River Watershed Protection Plan](#) addresses issues in segment 1221.
- An [RUAA](#) has been conducted in segment 1221 and results have led to the recommendation that the recreational use of the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if impaired:

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



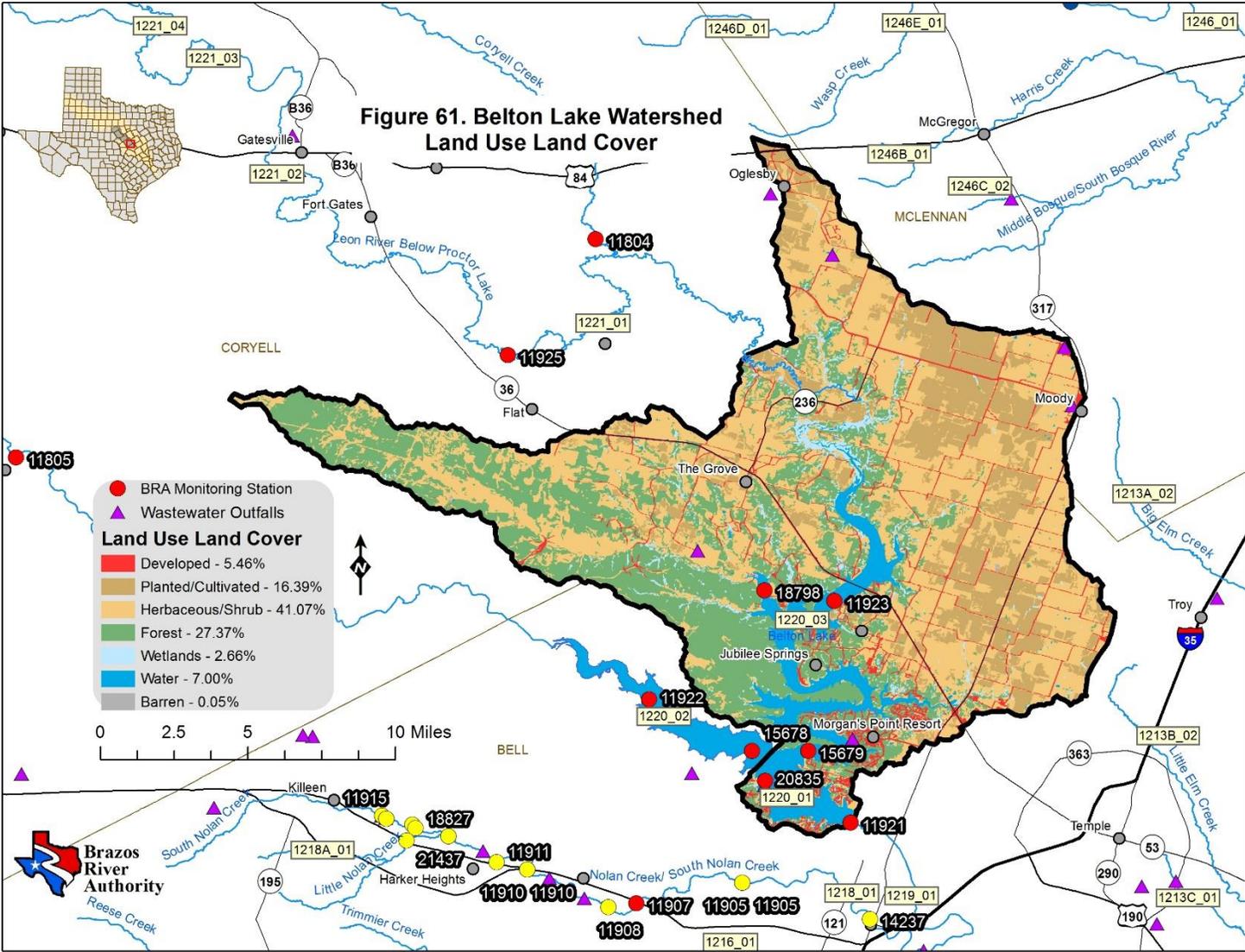
Belton Lake Watershed

Watershed Description:

The Belton Lake Watershed is 220 square miles in area.

Land Use Land Cover in Watershed (Figure 61):

There are six cities and six wastewater outfalls in the watershed. A large portion of Lake Belton lies within the watershed. The dominant land cover is herbaceous/shrub land, with a moderate amount of forested upland and planted/cultivated land.



Segments in Watershed (Figure 62):

- 1220_01: Lake Belton, portion of lake near dam
Monitoring Stations:
20835 - BELTON LAKE 629 METERS NORTH AND 157 M EAST OF THE BOAT RAMP AT WESTCLIFF PARK
11921 - BELTON RESERVIOR NEAR DAM 81 METERS NORTH AND 17 METERS WEST OF SOUTHERN EDGE OF DAM
- 1220_03: Lake Belton, Leon River arm
Monitoring Stations:
15679 - BELTON LAKE 1.11 KILOMETERS NORTH AND 265 METERS WEST OF INTERSECTION OF FM 2305 AND WOODLAND POINT ROAD USGS SITE EC 310829097294301
11923 - BELTON RESERVOIR LEON RIVER ARM NEAR HEADWATERS 626 METERS NORTH AND 288 METERS WEST OF INTERSECTION OF KUIKENDALL RD AND MCGREGOR PARK RD
18798 - BELTON LAKE IN OWL CREEK ARM 313 METERS NORTH AND 265 METERS WEST OF BOAT RAMP AT OWL CREEK PARK
- The downstream portion of 1221_01: Leon River Below Proctor Lake, from confluence with Lake Belton upstream to confluence with unnamed tributary (MHD RC 12070201005989) in Coryell County

Impairments in Watershed Description (Figure 62):

- None
There are concerns for chlorophyll-*a* and depressed dissolved oxygen in 1221_01.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

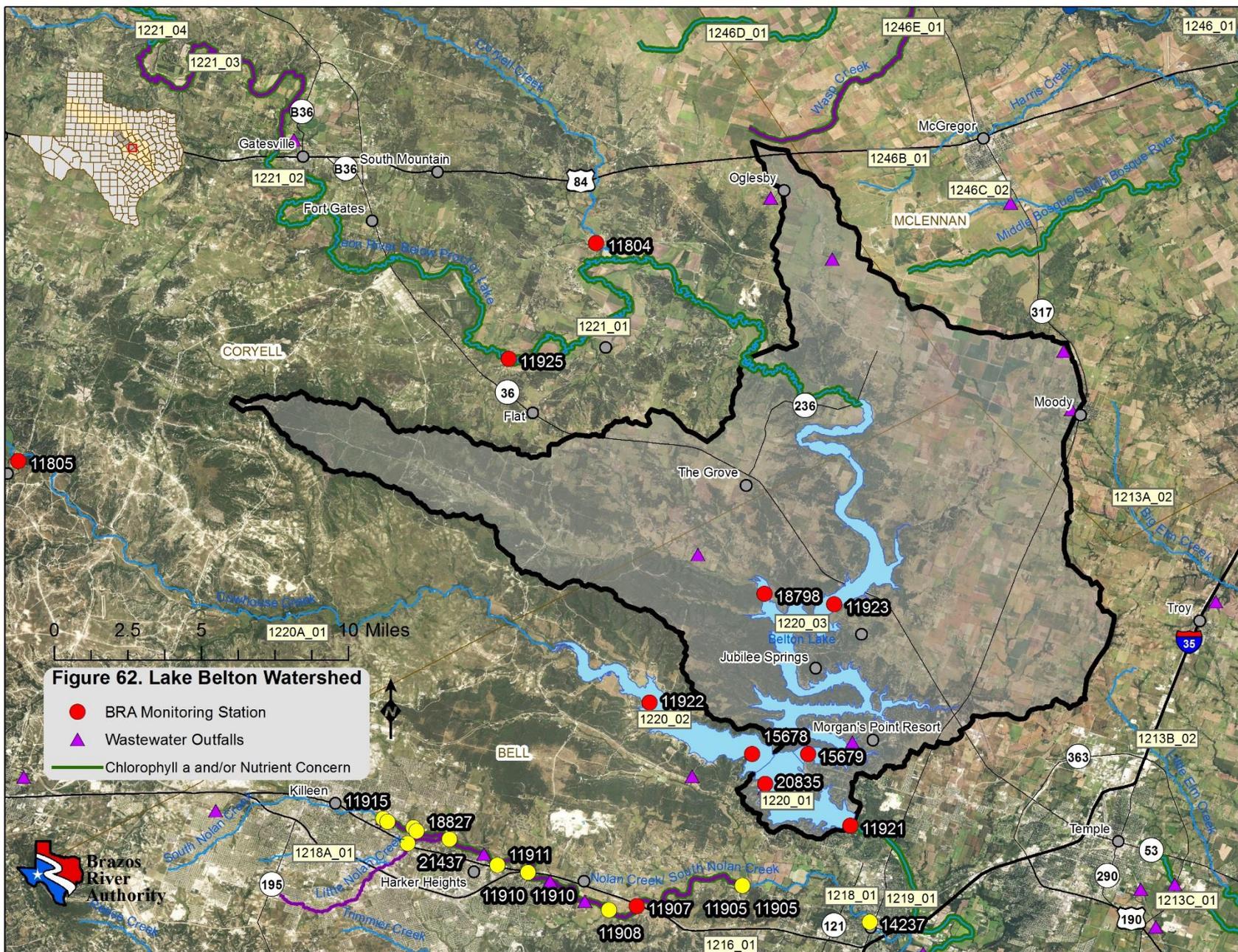
- City of Gatesville
- City of Moody
- City of The Grove
- City of Moffat
- City of Jubilee Springs
- City of Morgan's Point Resort
- Fort Hood Military Base
- Coryell County
- Bell County
- McLennan County
- Any marinas or other businesses on or that serve Lake Belton

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



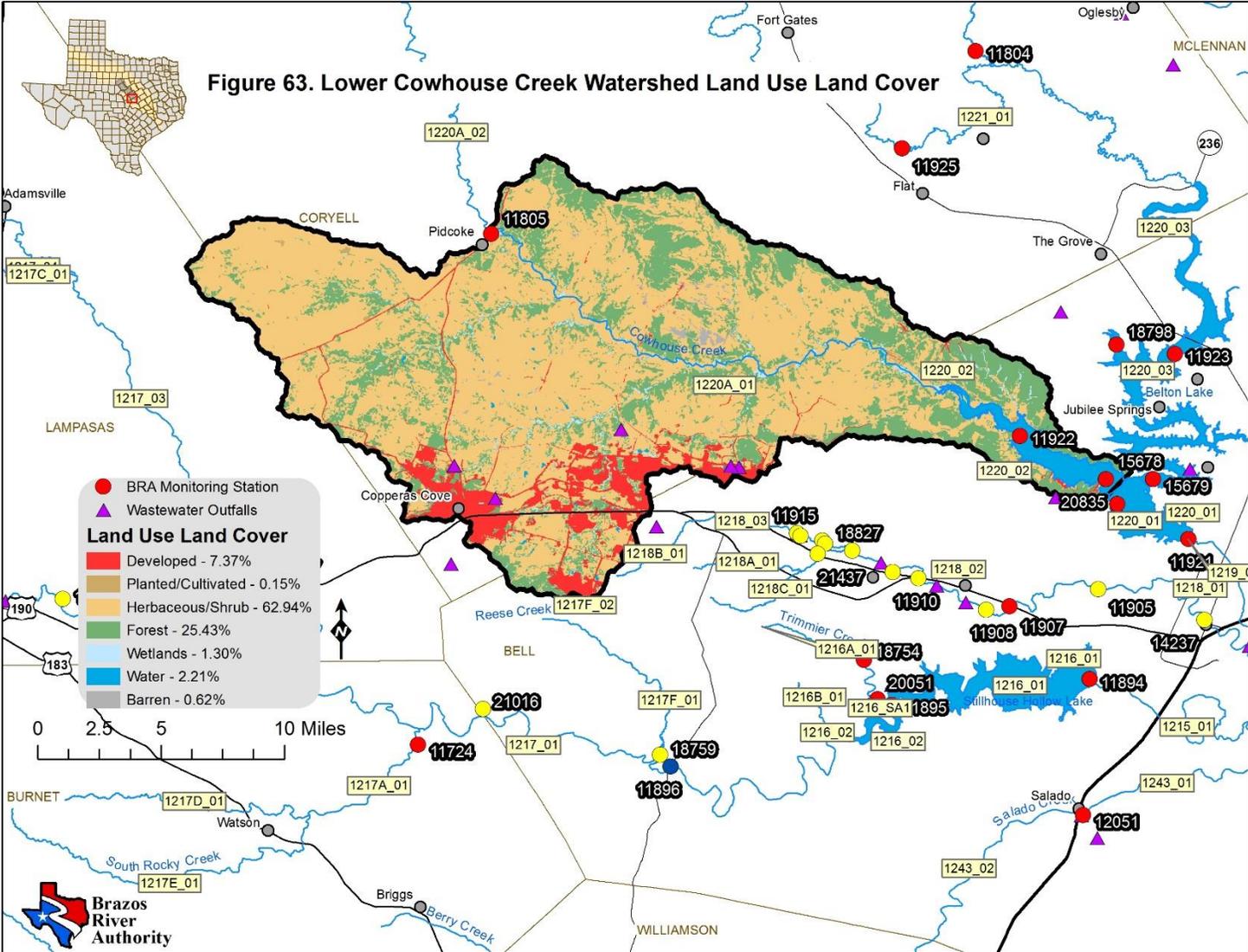
Lower Cowhouse Creek Watershed

Watershed Description:

The Lower Cowhouse Creek Watershed is 272 square miles in area.

Land Use Land Cover in Watershed (Figure 63):

There are two cities and five wastewater outfalls in the watershed. An arm of Lake Belton lies within the watershed. The dominant land cover is herbaceous/shrub, with a moderate amount of forested upland and a smaller amount of developed land.



Segments in Watershed (Figure 64):

- 1220_02: Lake Belton, Cowhouse Creek arm
Monitoring Stations:
11922 - BELTON RESERVOIR COWHOUSE CREEK ARM 88 METERS NORTH AND 954 METERS EAST OF INTERSECTION OF NOLAN CREEK AND LIBERTY HILL RD
15678 - BELTON LAKE 2.11 KILOMETERS NORTH AND 1.70 KILOMETERS EAST OF FORT HOOD MILITARY RES RC AND NOLAN ROAD USGS SITE CC 310829097312201
- 1220A_01: Cowhouse Creek, downstream portion of water body
- Downstream portion of 1220A_02: Cowhouse Creek, middle portion of water body
Monitoring Station: 11805 - COWHOUSE CREEK 71 METERS DOWNSTREAM OF FM 116 SOUTHWEST OF GATESVILLE

Impairments in Watershed Description (Figure 64):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

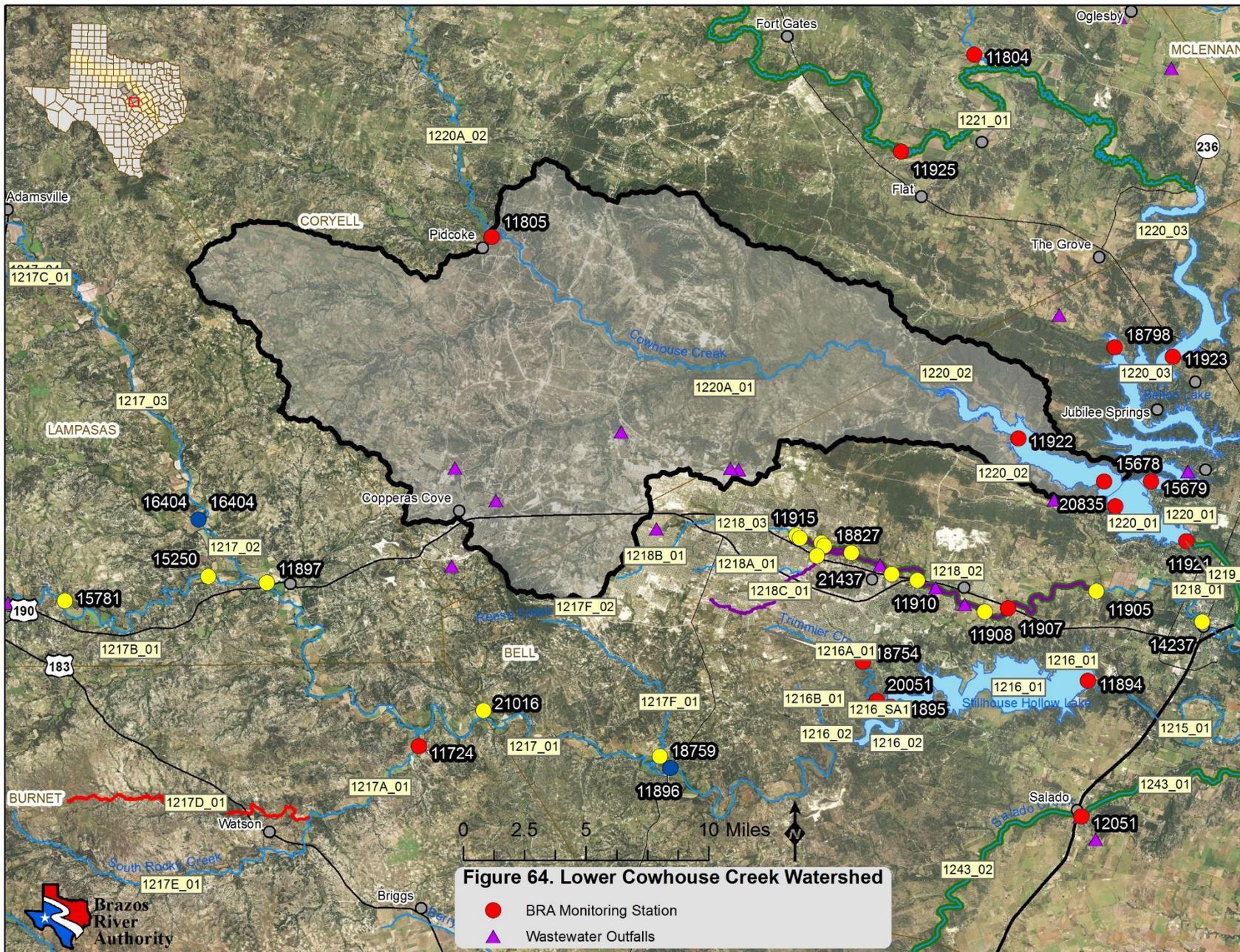
- City of Copperas Cove
- City of Pidcoke
- Fort Hood Military Base
- Coryell County
- Bell County
- Lampasas County
- Any marinas or other businesses on or that serve Lake Belton

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



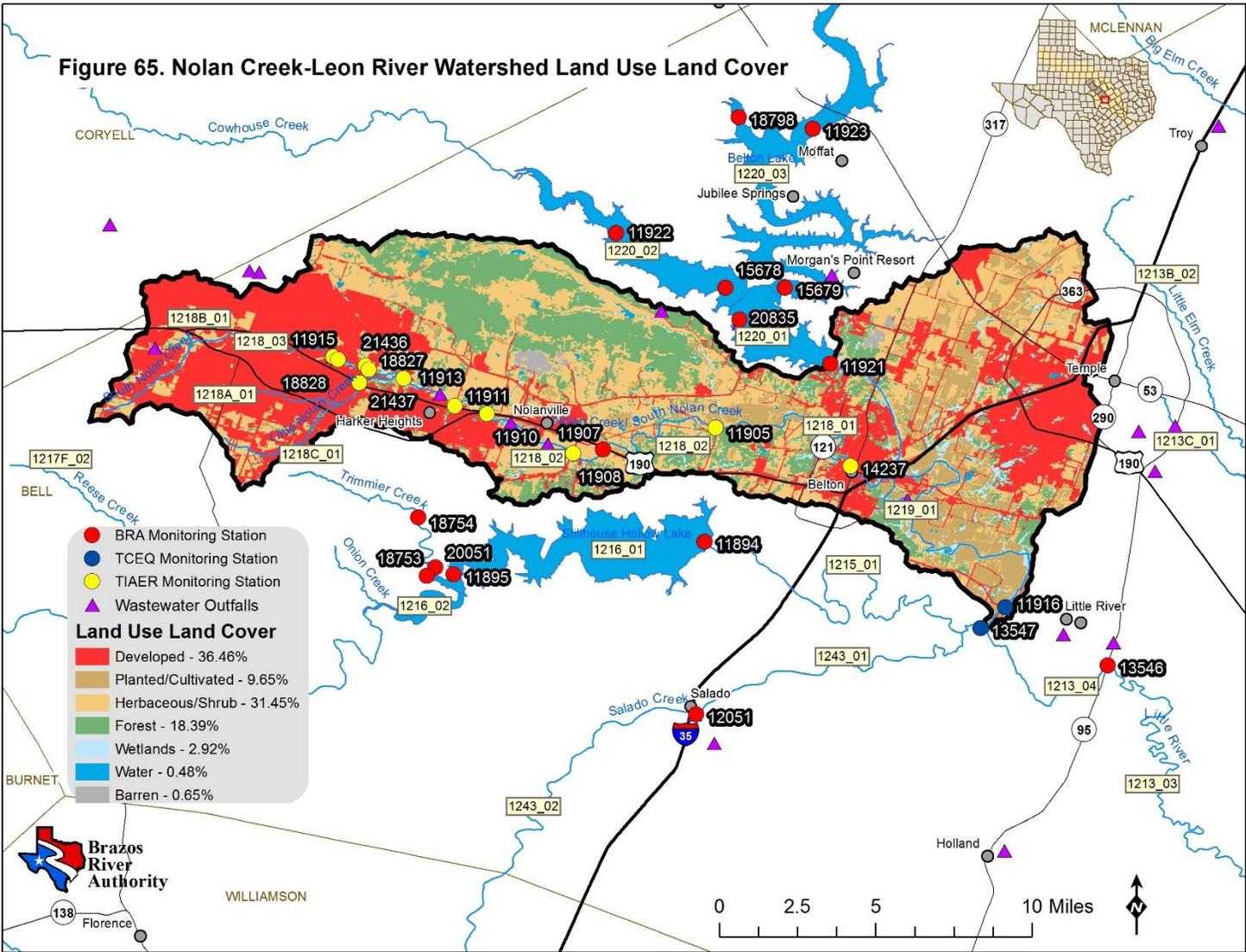
Nolan Creek-Leon River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 65):

There are five cities and seven wastewater outfalls within the watershed. Dominant landcover includes developed land and herbaceous/shrub land, with a moderate amount of forested upland and a smaller amount of planted/cultivated land.



Segments in Watershed (Figure 66):

- 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
Monitoring Station: 14237 - 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 Stations:
11915 - NOLAN CREEK 200 METERS UPSTREAM OF BELL COUNTY WCID 1 WWTP OUTFALL AT CONFLUENCE WITH UNNAMED TRIBUTARY
18828 - SOUTH NOLAN CREEK 20 METERS UPSTREAM OF 38THST/FM 2410 AND 64 METERS DOWNSTREAM OF BELL COUNTY WCID 1 WWTP OUTFALL
21436 - LONG BRANCH 116 METERS UPSTREAM OF CONFLUENCE WITH SOUTH NOLAN CREEK AND 191 METERS DOWNSTREAM OF THE BNSF RAILROAD IN KILLEEN
18827 - SOUTH NOLAN CREEK AT TWIN CREEK DRIVE 200 METERS DOWNSTREAM OF LONG BRANCH CONFLUENCE
11911 - NOLAN CREEK IMMEDIATELY DOWNSTREAM OF FM 3219
11910 - NOLAN CREEK AT US 190 EAST OF HARKER HEIGHTS
11908 - NOLAN CREEK IMMEDIATELY DOWNSTREAM OF NOLANVILLE RD SOUTHEAST OF NOLANVILLE NEAR US 190
11907 - NOLAN CREEK IMMEDIATELY UPSTREAM OF US 190 EAST OF NOLANVILLE
11905 - NOAN CREEK IMMEDIATELY DOWNSTREAM OF BACKSTRUM CROSSING NEAR FM 93
- 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 UPSTREAM OF THE CONFLUENCE WITH SOUTH NOLAN CREEK IN KILLEEN
- 1219_01: Leon River below Lake Belton
Monitoring Station: 11916 LEON RIVER AT FM 436 WEST OF LITTLE RIVER

Impairments in Watershed Description (Figure 66):

- 1218_02: Recreational Use—bacteria
There are concerns for nitrate and total phosphorus in 1218_02 and 1219_01. There is also a concern for bacteria in 1218A.
- 1218C_01: Recreational Use—bacteria

Possible Contributions if Impaired:

Point Sources:

- There are four cities and seven wastewater outfalls making up large developed areas in both the western and eastern portion this watershed. Approximately 36% of the watershed is developed.

Non-point sources:

- There is a fair amount of planted/cultivated crops primarily in the eastern portion of the watershed.
- Herbaceous/shrub and forested areas account for approximately 50% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

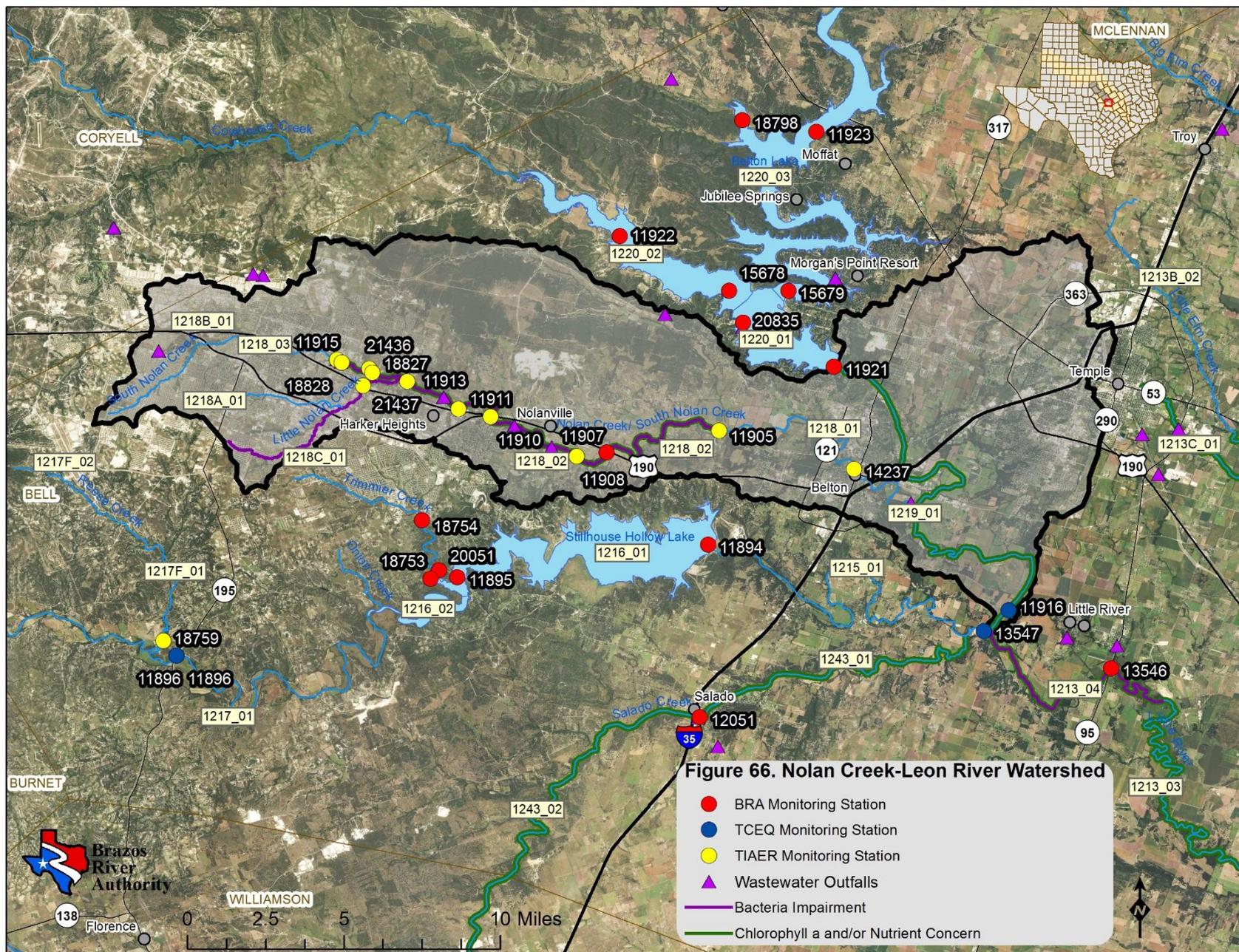
- City of Killeen
- City of Harker Heights
- City of Nolanville
- City of Belton
- City of Temple
- Fort Hood Military Base
- Bell County
- Coryell County

Actions taken if impaired:

- TCEQ, the City of Killeen and TIAER have begun a project to address water quality issues in 1218_02 and 1218C_01. Through watershed characterization, the [Nolan Creek: Watershed Based Planning and Assessment](#) project intends to identify causes and sources of pollution in the Nolan Creek/South Nolan Creek watershed and develop an information/education strategy to provide sufficient information to develop a watershed protection plan or TMDL.
- RUAA fieldwork is complete and a [report](#) is under review by TCEQ for 1218.

Recommendations if impaired:

- Await findings of the Nolan Creek: Watershed Based Planning and Assessment project before a management strategy is selected.
- Await TCEQ review of 1218 RUAA report and recommendation before a management strategy is selected.



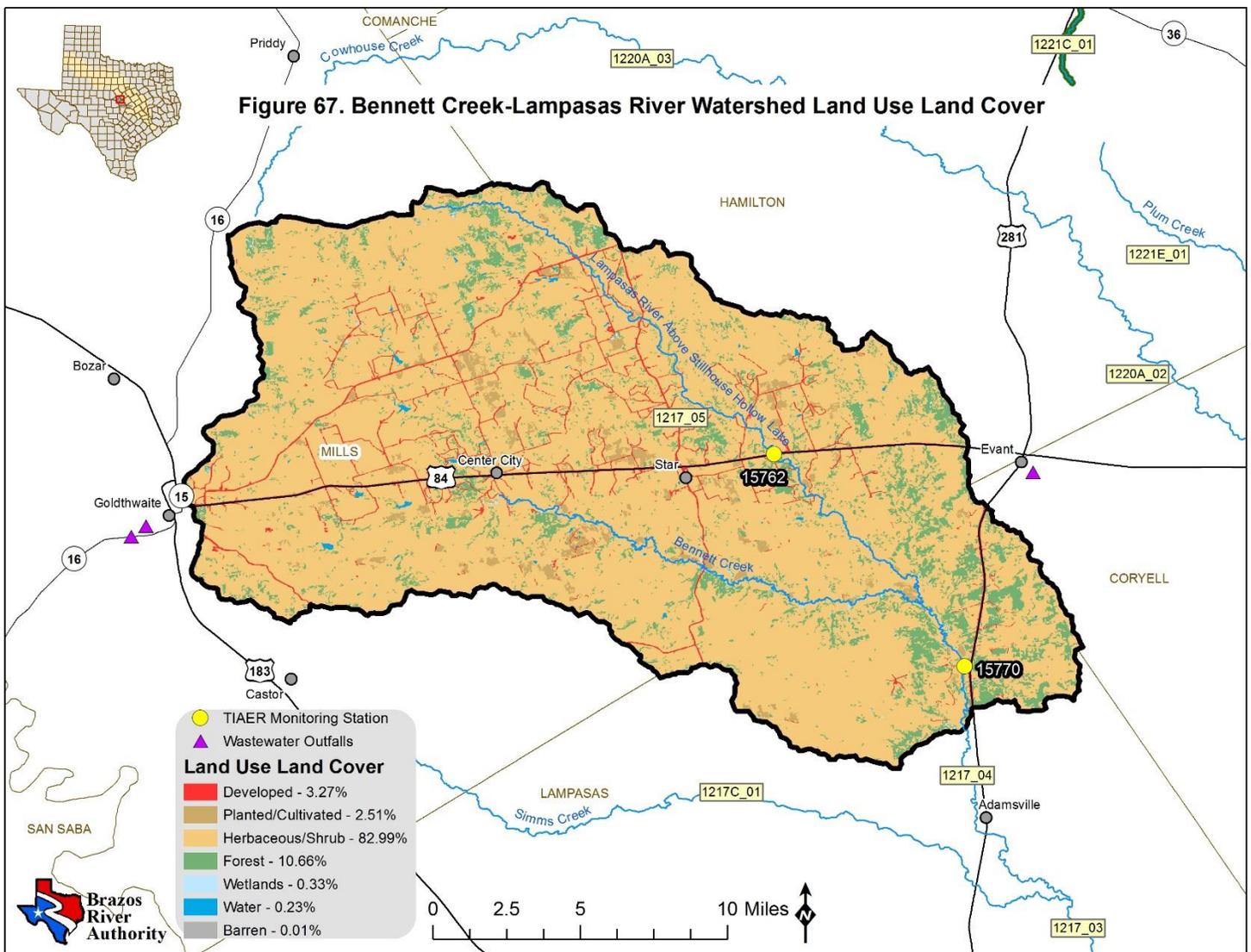
Bennett Creek-Lampasas River Watershed

Watershed Description:

The Bennett Creek-Lampasas River Watershed is 308 square miles in area.

Land Use Land Cover in Watershed (Figure 67):

There are two cities within the watershed. The majority of land in the watershed is herbaceous/shrubland, with a smaller amount of forested upland.



Segments in Watershed (Figure 68):

- The upstream portion of 1217_04: Lampasas River above Stillhouse Hollow Lake, 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 KILOMETERS NORTH OF ADAMSVILLE
- 1217_05: Lampasas River above Stillhouse Hollow Lake, from confluence with Bennett Creek upstream to headwaters in Mills County
Monitoring Station: 15762 - LAMPASAS RIVER IMMEDIATELY UPSTREAM OF US 84, 7 MILES NORTHWEST OF EVANT

Impairments in Watershed Description (Figure 68):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

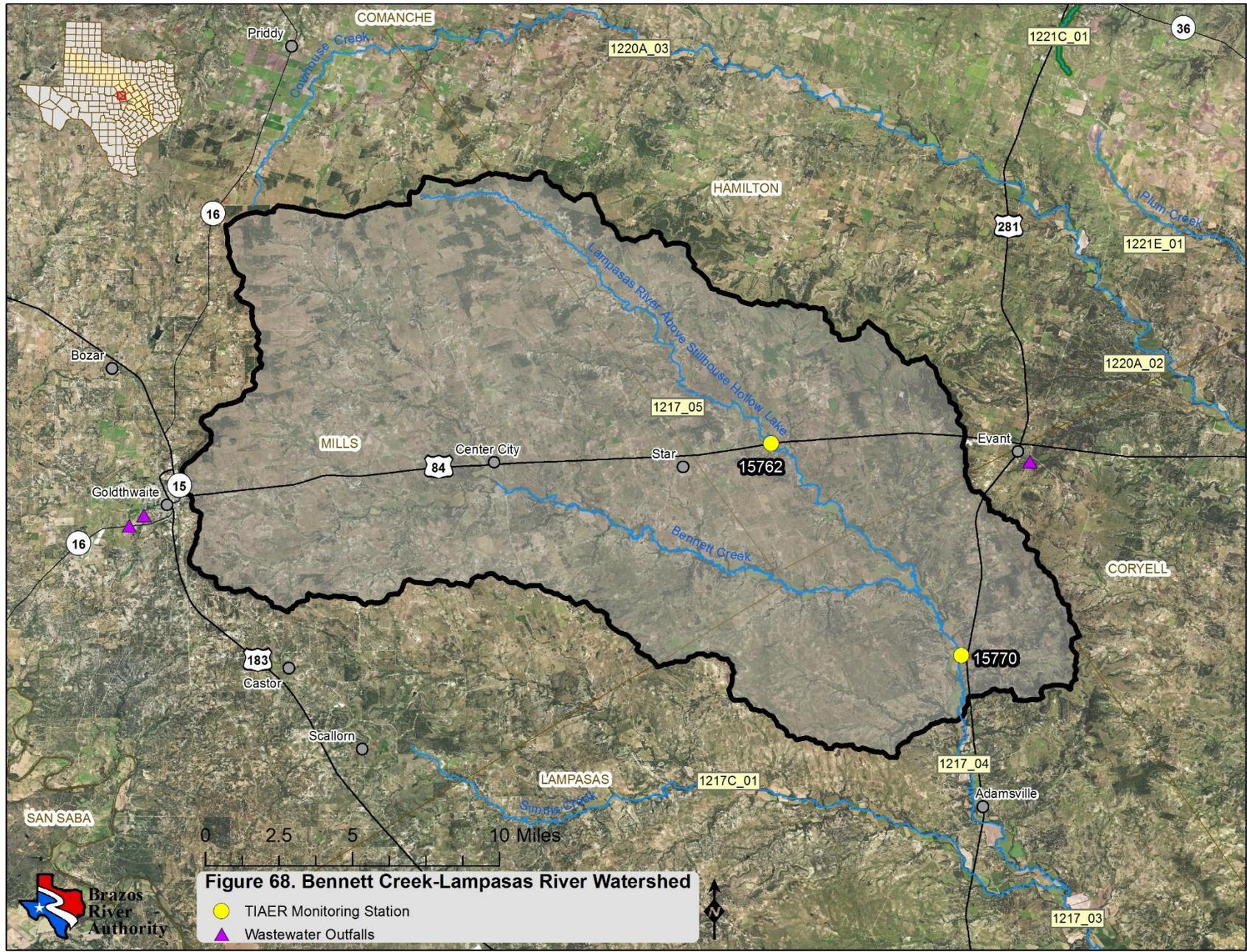
- Center City
- City of Star
- Hamilton County
- Mills County
- Lampasas County
- Coryell County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



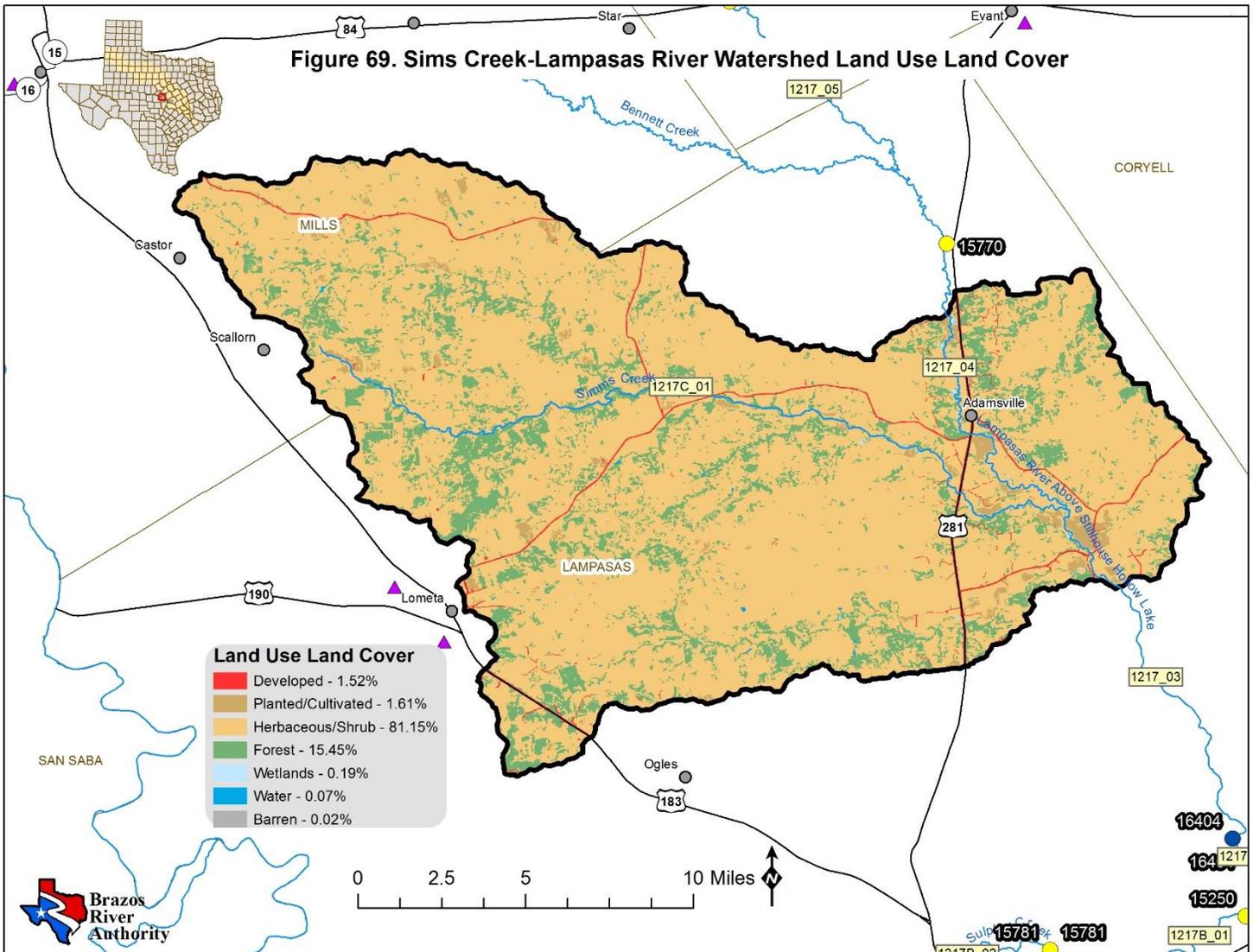
Sims Creek-Lampasas River Watershed

Watershed Description:

The Sims Creek-Lampasas River Watershed is 255 square miles in area.

Land Use Land Cover in Watershed (Figure 69):

There is one city within the watershed. The majority of land in the watershed is herbaceous/shrubland, with a smaller portion of forested upland.



Segments in Watershed (Figure 70):

- 1217C_01: Sims Creek
- The upstream portion of 1217_03: Lampasas River above Stillhouse Hollow Lake, from confluence with Lucy Creek upstream to confluence with Sims Creek in Lampasas County
- 1217_04: Lampasas River above Stillhouse Hollow Lake, from confluence with Simms Creek upstream to confluence with Bennett Creek in Lampasas County

Impairments in Watershed Description (Figure 70):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

- City of Adamsville
- City of Lometa
- Mills County
- Lampasas County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A

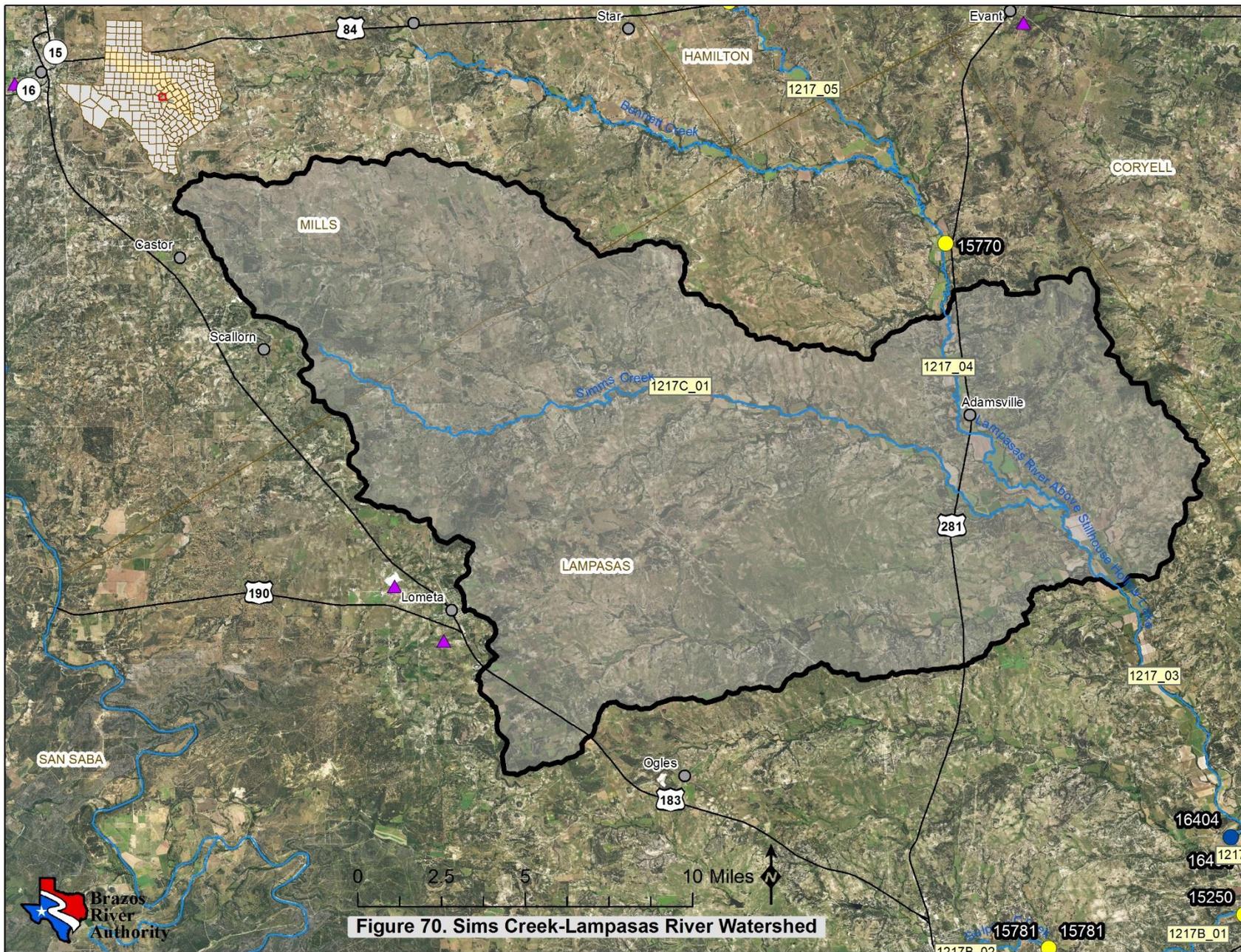


Figure 70. Sims Creek-Lampasas River Watershed

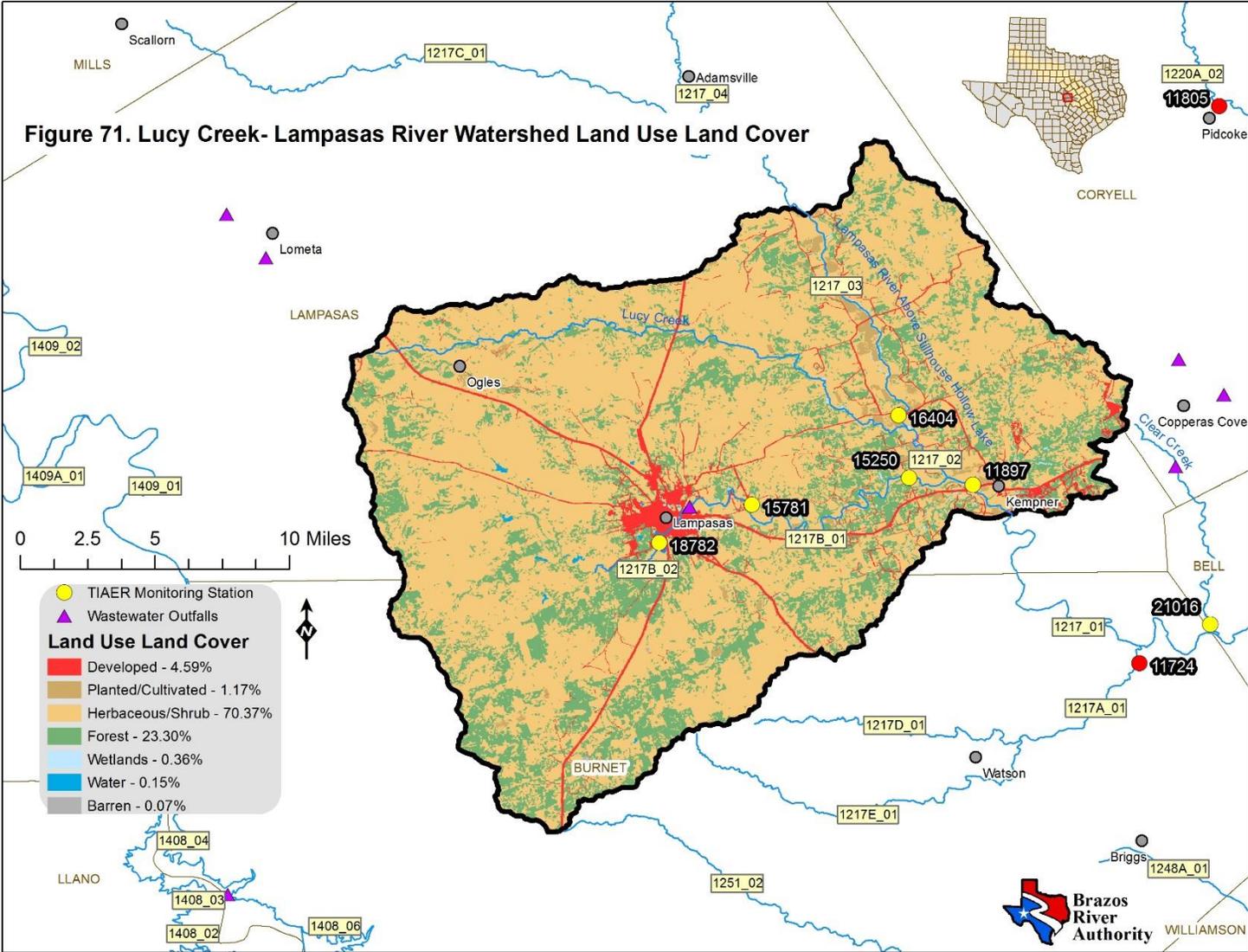
Lucy Creek Watershed

Watershed Description:

The Lucy Creek Watershed is 348 square miles in area.

Land Use Land Cover in Watershed (Figure 71):

There are three cities and one wastewater outfall within the watershed. The majority of land in the watershed is herbaceous/shrubland, with a moderate portion of forested upland.



Segments in Watershed (Figure 72):

- Lucy Creek
- Upstream portion of 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
- 1217_02: Lampasas River above Stillhouse Hollow Lake, from confluence with Mesquite Creek upstream to confluence with Lucy Creek
Monitoring Station: 11897 LAMPASAS RIVER 256 METERS UPSTREAM OF US 190 NEAR KEMPNER
- 1217_03: Lampasas River above Stillhouse Hollow Lake, from confluence with Lucy Creek upstream to confluence with Sims Creek
Monitoring Station: 16404 LAMPASAS RIVER AT FM 2313 APPROXIMATELY 7 MILES NORTHWEST OF KEMPNER
- 1217B_01: Sulphur Creek (unclassified water body), from confluence with the Lampasas River upstream to confluence with Burleson Creek in the city of Lampasas
Monitoring Stations:
18782 - SULPHUR CREEK AT NARUNA RD IN LAMPASAS
15781 - SULPHUR CREEK AT LAMPASAS CR 3010 FORMERLY KNOWN AS CR 7 AND 4 KILOMETERS EAST OF LAMPASAS
15250 - SULPHUR CREEK IMMEDIATELY DOWNSTREAM OF LAMPASAS CR 3050 FORMERLY KNOWN AS CR 8 AND 6.5 KILOMETERS EAST OF CITY OF LAMPASAS AND 1.4 KILOMETERS NORTH OF US 190
- 1217B_02: Sulphur Creek (unclassified water body), from the confluence with Burleson Creek upstream to the confluences with Donalson Creek and Espy Branch west of Lampasas

Impairments in Watershed Description (Figure 72):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

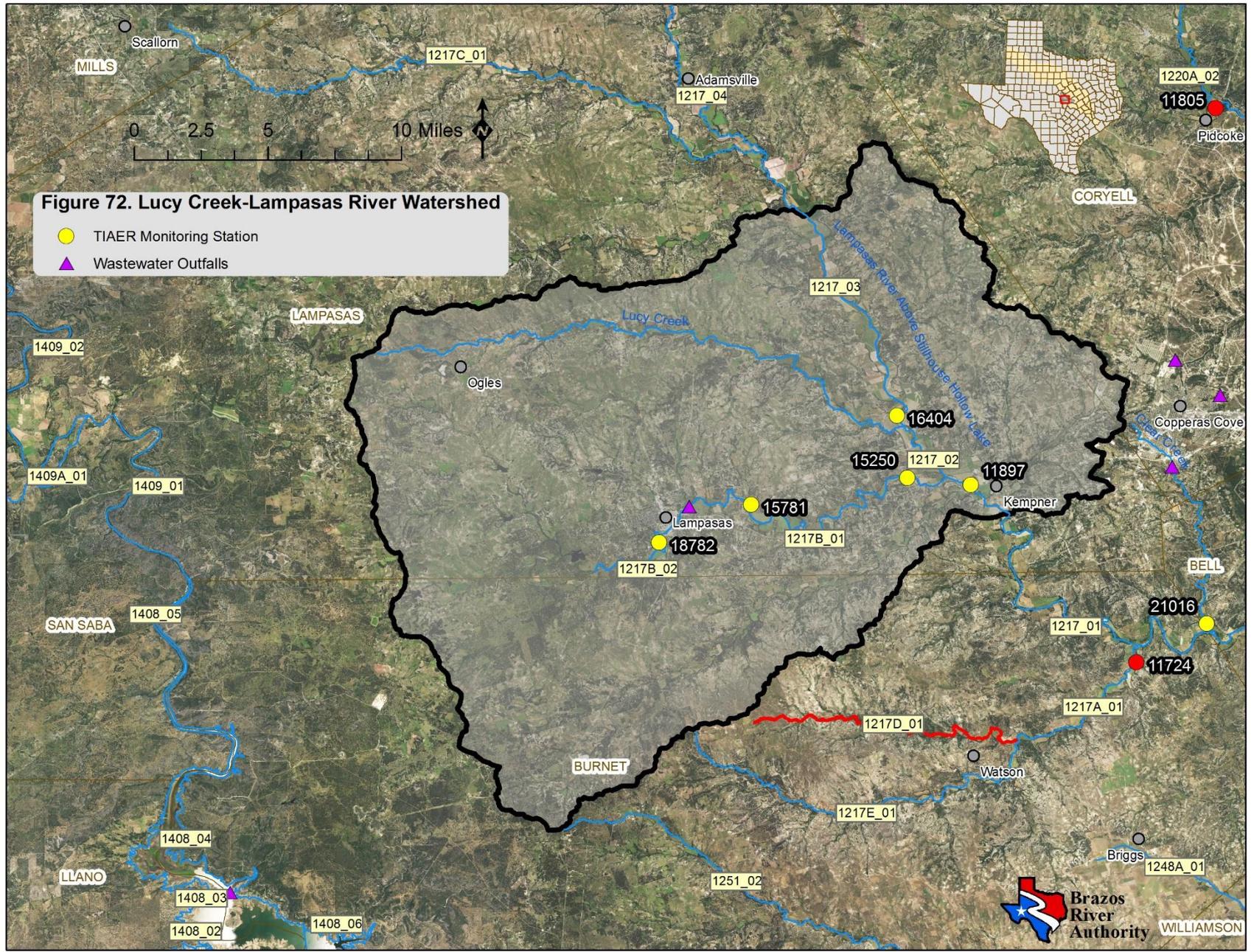
- City of Ogles
- City of Lampasas
- City of Kempner
- Lampasas County
- Coryell County
- Burnet County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



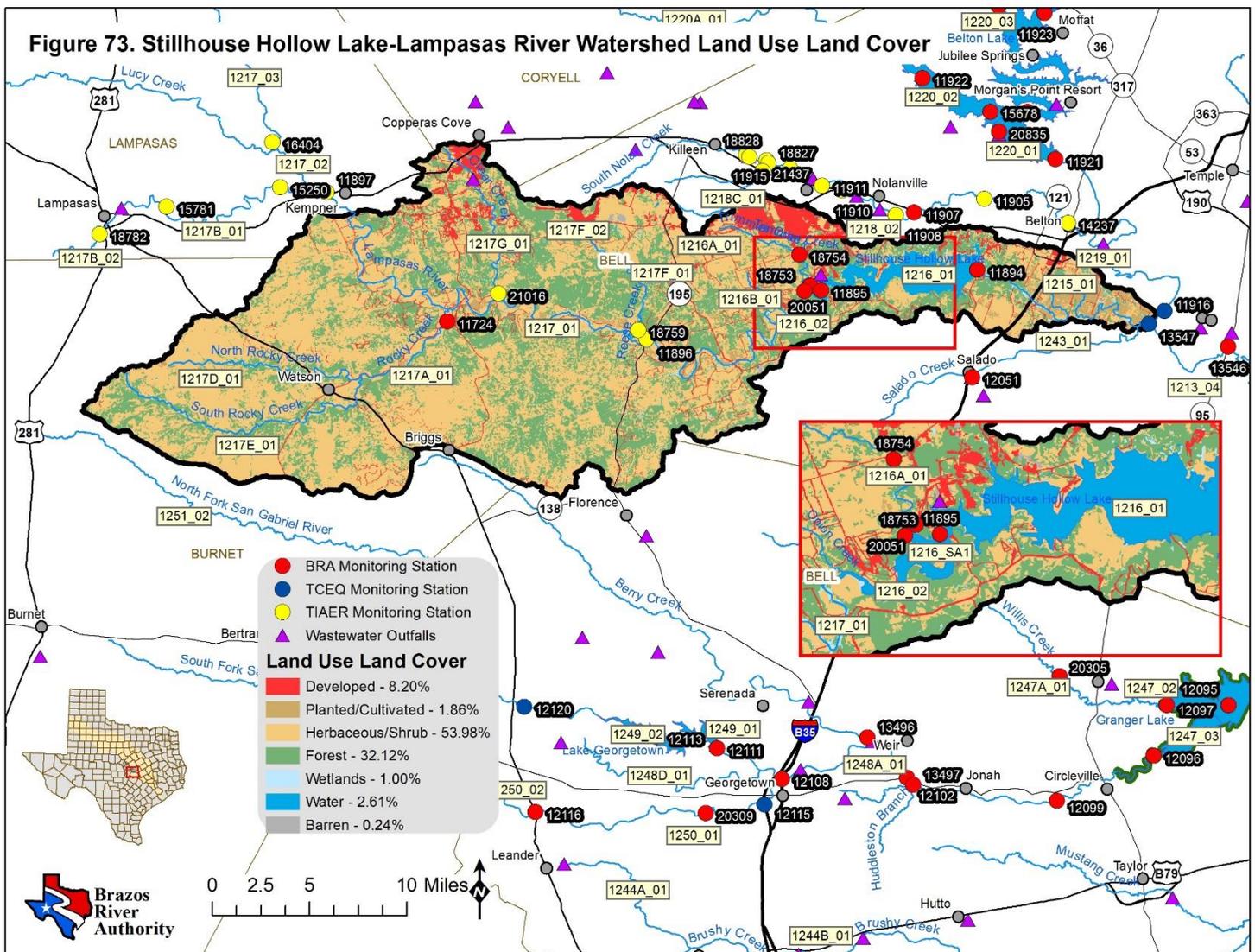
Stillhouse Hollow Lake Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 73):

There is one city and there are two wastewater outfalls in the watershed. The dominant landcover is herbaceous/shrubland, with a moderate amount of forested upland and a smaller amount of developed land. Stillhouse Hollow Lake is entirely within this watershed.



Segments in Watershed (Figure 74):

- 1215_01: Lampasas River below Stillhouse Hollow Lake
Monitoring Station: 13547 - LAMPASAS RIVER IMMEDIATELY DOWNSTREAM OF DICE GROVE RD SOUTHWEST OF FORT GRIFFIN
- 1216_01: Stillhouse Hollow Lake, main body of lake
Monitoring Stations:
18753 - STILLHOUSE HOLLOW LAKE IN TRIMMIER CREEK COVE NEAR CONFLUENCE OF LITTLE TRIMMIER CREEK 310 METERS S AND 462 METERS EAST OF SCHRADER DR END
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
Monitoring Station: 20051 - STILLHOUSE HOLLOW LAKE IN PLEASANT BRANCH COVE 4.28 KILOMETERS DOWNSTREAM OF CHAPARRAL RD CROSSING
- 1216A_01: Trimmier Creek
Monitoring Station: 18754 - TRIMMIER CREEK IMMEDIATELY UPSTREAM OF CHAPARRAL RD WEST OF FM 3481
- 1216B_01: Onion 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
- 1217A_01: Rocky Creek
Monitoring Station: 11724 - ROCKY CREEK AT FM 963 APPROXIMATELY 1.26 KILOMETERS UPSTREAM OF LAMPASAS RIVER NEAR OAKALLA
- 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
- 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

Impairments in Watershed Description (Figure 74):

- 1217D_01: Aquatic Life Use—depressed dissolved oxygen
There is a concern for impaired macrobenthic community in 1216A_01 and there is a concern for nitrate in 1217G_01.

Possible Contributions if Impaired:

Point Sources: There is one city and there are two wastewater outfalls within the watershed.

Non-point sources: Herbaceous/shrub and forested areas account for approximately 86% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

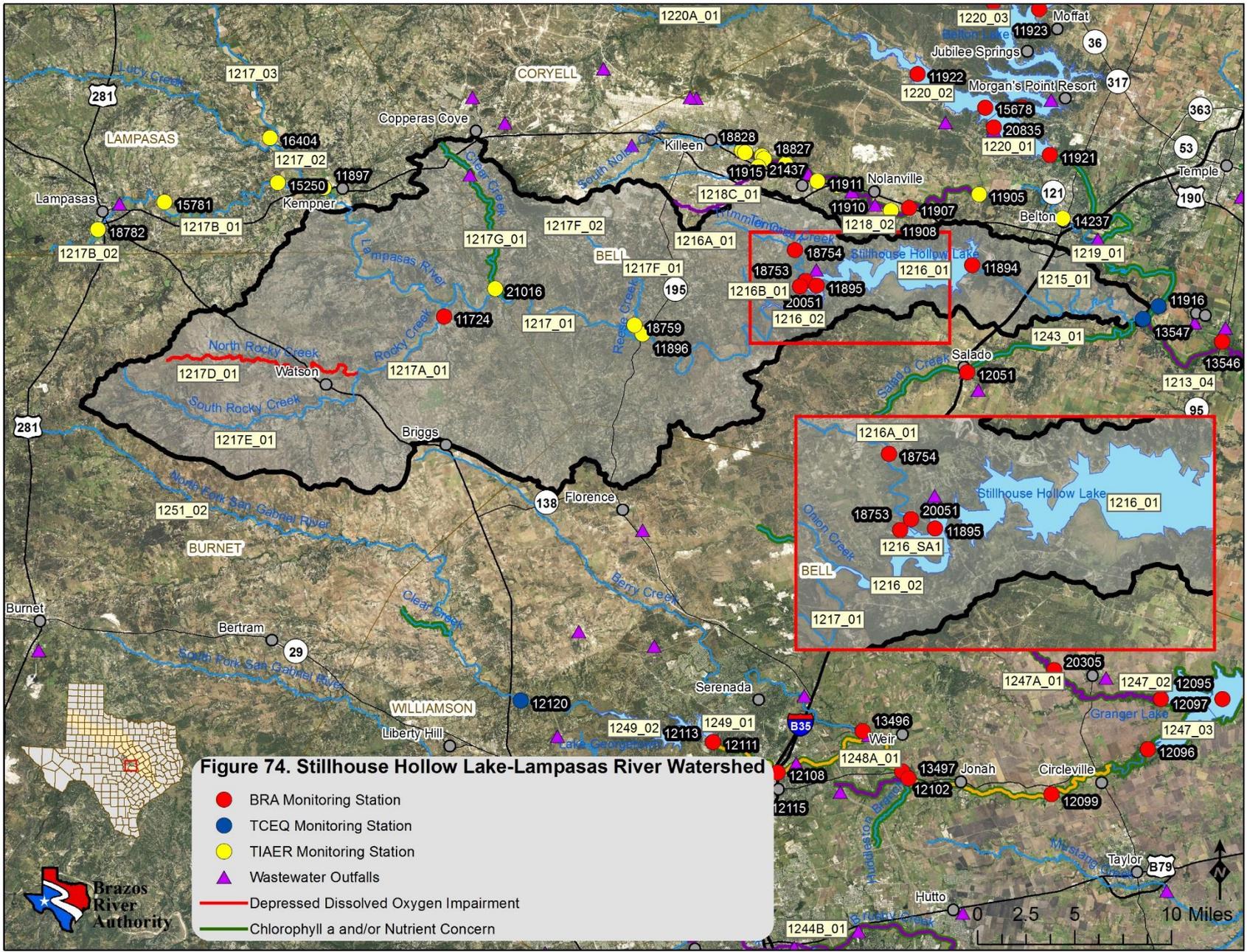
- City of Watson
- Fort Hood Military Base
- Burnet County
- Lampasas County
- Bell County
- Coryell County
- Williamson County
- Any marinas or other businesses on or that serve Stillhouse Hollow Reservoir

Actions taken if impaired:

- 1217D_01 was approved by the EPA in 2011 to be classified as having and being assessed against an intermediate level of aquatic life use.

Recommendations if impaired:

- More current data should be collected in 1217D_01 to be used in assessing the segment using the newly approved criteria.



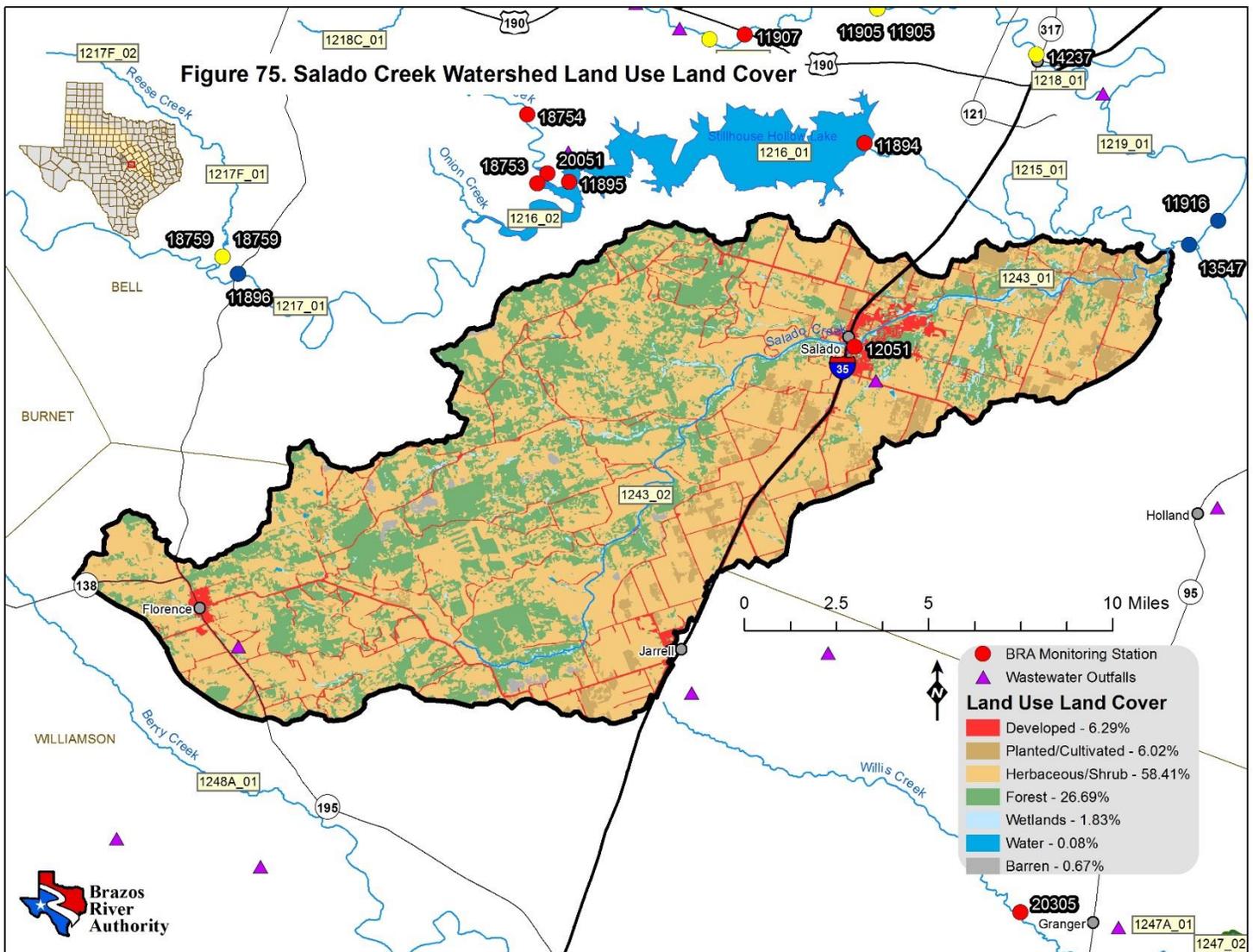
Salado Creek Watershed

Watershed Description:

The Salado Creek Watershed is 173 square miles in area.

Land Use Land Cover in Watershed (Figure 75):

There are two cities and three wastewater outfalls in the watershed. The dominant landcover is herbaceous/shrubland, with a moderate amount of forested upland.



Segments in Watershed (Figure 76):

- 1243_01: Salado Creek, from confluence with Lampasas River upstream to unnamed tributary (NHD RC 12070203003968) just downstream of Stagecoach outfall
Monitoring Station: 12051 SALADO CREEK 75 METERS DOWNSTREAM OF FM 2268 IN SALADO
- 1243_02: Salado Creek, from confluence with unnamed tributary (NHD RC 12070203003968) upstream to confluence with North/South Forks Salado Creek in Williamson County

Impairments in Watershed Description (Figure 76):

- None
There is a concern for nitrate in 1243_01 and 1243_02.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

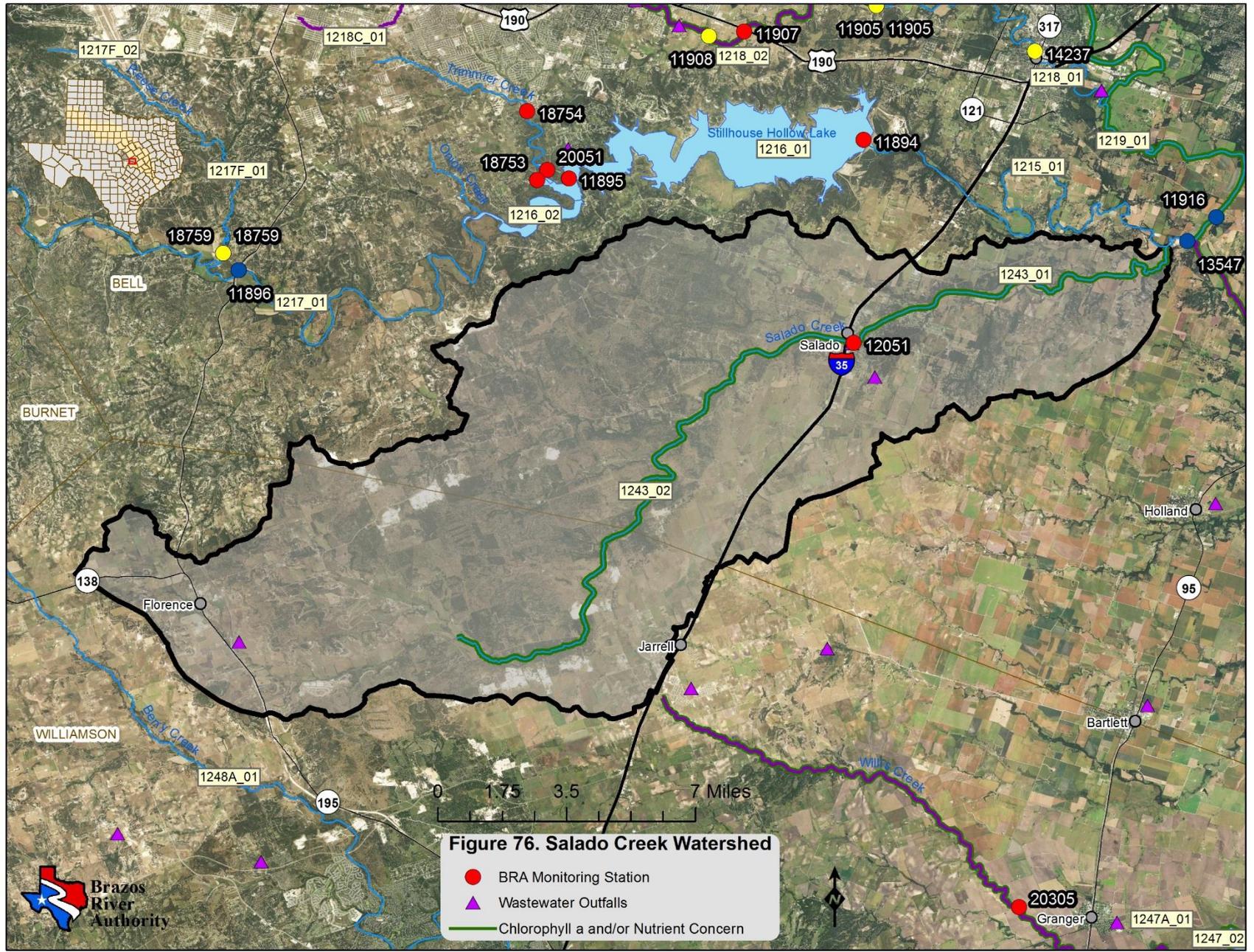
- City of Florence
- City of Salado
- Bell County
- Williamson County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



Segments in Watershed (Figure 78):

- Upstream portion of 1226_04: North Bosque River, from confluence with Duffau Creek in Bosque County upstream to a point immediately upstream of Indian Creek confluence (end of segment) in Erath County.
Monitoring Station: 11962 - NORTH BOSQUE RIVER IMMEDIATELY UPSTREAM OF THE OLD ABANDONED TXDOT SH6 BRIDGE 2.7 KILOMETERS WEST AND 920 METERS NORTH TO THE INTERSECTION OF SH 6 AND US 281 IN ERATH COUNTY CAMS 0725
- 1226B_01: Green Creek
Monitoring Stations:
17609 - GREEN CREEK 0.6 KILOMETERS UPSTREAM OF SH 6, 3.3 KILOMETERS NORTHWEST OF ALEXANDER
13486 - GREEN CREEK AT ERATH CR 269 IN CLAIRETTE
- 1226E_01: Indian Creek
Monitoring Station: 17235 - INDIAN CREEK 563 METERS DOWNSTREAM OF US 281, 9.9 KILOMETERS SOUTHEAST OF STEPHENVILLE
- 1226F_01: Sims Creek
Monitoring Station: 17240 - SIMS CREEK 116 METERS UPSTREAM OF US 281, 13 KILOMETERS SOUTHEAST OF STEPHENVILLE
- 1226H_01: Alarm Creek
Monitoring Station: 17604 - ALARM CREEK AT FM 914, 1.79 KILOMETERS DOWNSTREAM OF ERATH CR 251, 7.2 KILOMETERS SOUTH OF STEPHENVILLE
- 1226L_01: South Fork Little Green Creek
- 1226M_01: Little Green Creek
Monitoring Station: 17606 - LITTLE GREEN CREEK IMMEDIATELY DOWNSTREAM OF FM 914, 573 METERS UPSTREAM OF CONFLUENCE WITH BLACK SPRING BRANCH 3.2 KILOMETERS SOUTH OF ALEXANDER
- 1226N_01: Indian Creek Reservoir
- 1226O_01: Sims Creek Reservoir
- 1255A_01: Goose Branch
- 1255_01: Upper North Bosque River, from confluence with Indian Creek upstream to confluence with Dry Branch in Erath County
Monitoring Station: 11963 - NORTH BOSQUE RIVER AT ERATH CR 454, 6.0 KILOMETERS WEST OF US 281 AND 3.3 KILOMETERS DOWNSTREAM OF US 377/67 IN STEPHENVILLE
- 1255_02: Upper North Bosque River, from confluence with Dry Branch upstream to confluence with North/South Forks North Bosque River in Erath County
Monitoring Station: 17226 - NORTH BOSQUE RIVER AT FM 8 IMMEDIATELY NORTHEAST OF STEPHENVILLE
- 1255B_01: North Fork Upper North Bosque River
Monitoring Station: 17413 - NORTH FORK UPPER NORTH BOSQUE RIVER IMMEDIATELY DOWNSTREAM OF SH 108, 1.6 KILOMETERS NORTHWEST OF STEPHENVILLE
- 1255C_01: Scarborough Creek
Monitoring Station: 17222 - SCARBOROUGH CREEK AT ERATH CR 423, 11.3 KILOMETERS NORTHWEST OF STEPHENVILLE CAMS 0726
- 1255D_01: South Fork North Bosque River
Monitoring Station: 17602 - SOUTH FORK NORTH BOSQUE RIVER AT SH 108, 230 METERS UPSTREAM OF CONFLUENCE WITH NORTH FORK NORTH BOSQUE RIVER NORTH OF STEPHENVILLE
- 1255E_01: Unnamed Tributary of Goose Branch

Monitoring Station: 17214 - UNNAMED TRIBUTARY OF GOOSE BRANCH AT UNNAMED RD NEAR ERATH CR 297, 2.29 KILOMETERS UPSTREAM OF CONFLUENCE WITH GOOSE BRANCH SOUTH OF FM 8 NORTHWEST OF STEPHENVILLE

- 1255F_01: Unnamed Tributary of Scarborough Creek
Monitoring Station: 17723 - UNNAMED TRIBUTARY OF SCARBOROUGH CREEK AT ERATH CR 423, 12 KILOMETERS NORTHWEST OF STEPHENVILLE
- 1255G_01: Woodhollow Branch
- 1255H_01: South Fork Upper North Bosque River Reservoir
- 1255I_01: Dry Branch
Monitoring Station: 17603 - DRY BRANCH NEAR COLLEGE FARM RD 1 KILOMETER UPSTREAM OF THE CONFLUENCE WITH THE NORTH BOSQUE RIVER NORTHEAST OF STEPHENVILLE
- 1255J_01: Goose Branch Reservoir
- 1255K_01: Scarborough Creek Reservoir

Impairments in Watershed Description (Figure 78):

There are concerns for chlorophyll-*a* and impaired macrobenthic community in 1226_04.

- 1226B_01: Aquatic Life Use—depressed dissolved oxygen

There is a concern for chlorophyll-*a* in 1226B_01.

- 1226E_01: Recreational Use—bacteria

There are concerns for chlorophyll-*a* and nitrate in 1226E_01.

- 1226F_01: Recreational Use—bacteria

There is a concern for chlorophyll-*a* in 1226F_01.

- 1226H_01: Recreational Use—bacteria

There is a concern for chlorophyll-*a* in 1226H_01.

- 1226M_01: Recreational Use—bacteria

There are concerns for ammonia, chlorophyll-*a* and total phosphorus in 1226N_01. There are also concerns for chlorophyll-*a* and depressed dissolved oxygen in 1226O_01.

- 1255_01: Recreational Use—bacteria

There are concerns for chlorophyll-*a* and nitrate in 1255_01.

- 1255_02: Recreational Use—bacteria, Aquatic Life Use—depressed dissolved oxygen

There is a concern for chlorophyll-*a* in 1255_02.

- 1255A_01: Recreational Use—bacteria

There are concerns for ammonia, chlorophyll-*a*, nitrate and total phosphorus in 1255A_01.

- 1255B_01: Recreational Use—bacteria

There is a concern for chlorophyll-*a* in 1255B_01.

- 1255C_01: Recreational Use—bacteria

There are concerns for chlorophyll-*a* and total phosphorus in 1255C_01.

- 1255D_01: Recreational Use—bacteria

There is a concern for chlorophyll-*a* in 1255D_01.

- 1255E_01: Recreational Use—bacteria

There are concerns for ammonia, nitrate and total phosphorus in 1255E_01.

- 1255F_01: Recreational Use—bacteria

- 1255G_01: Recreational Use—bacteria

There is a concern for depressed dissolved oxygen in 1255H_01.

- 1255I_01: Recreational Use—bacteria

There is a concern total phosphorus in 1255I_01. There are concerns for ammonia, chlorophyll-*a* and total phosphorus in 1255J_01. There are also concerns for chlorophyll-*a* and total phosphorus in 1255K_01.

Possible Contributions if Impaired:

Point Sources: There five cities and five wastewater outfalls within the watershed.

Non-point sources:

- There is a fair amount of cultivated crops in the watershed. Runoff from agriculture and ranchland could provide contributions.
- Herbaceous/shrub and forested areas account for approximately 73% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

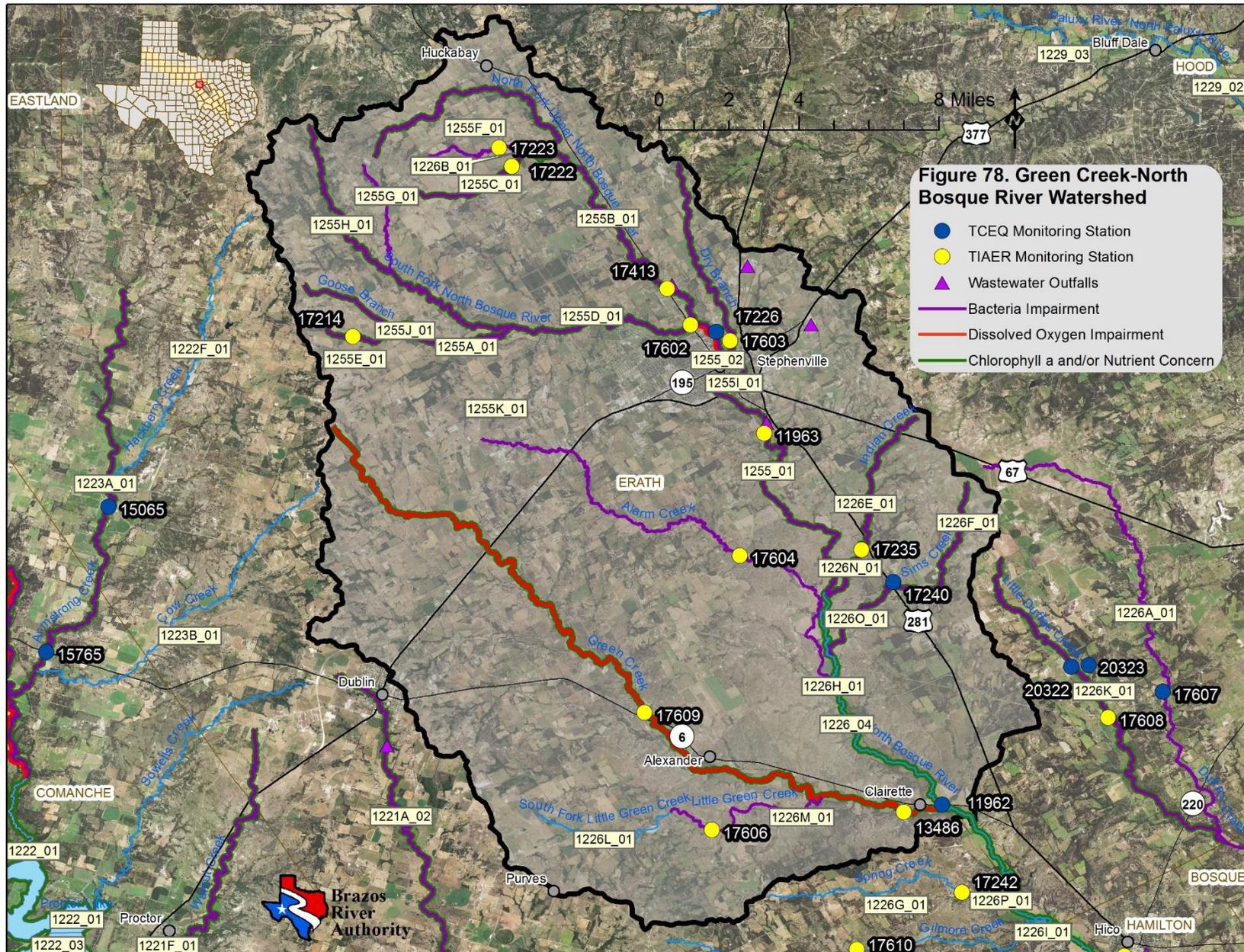
- City of Huckabay
- City of Stephenville
- City of Alexander
- City of Clairette
- City of Purves
- Erath County

Actions taken if impaired:

- RUAs have been completed for segments 1226E, 1226F, 1255, 1255A, 1255B, 1255C, 1255E, 1255F and 1255G. The [report](#) is under review by TCEQ.
- Additional 24-hr dissolved oxygen data has been scheduled for collection in 2015 and 2016 for 1255_02.

Recommendations if impaired:

- Perform a use attainability analysis (UAA) on 1226B to determine whether the existing standards are appropriate.
- Await TCEQ review of 1226E, 1226F, 1255, 1255A, 1255B, 1255C, 1255E, 1255F and 1255G RUA report and recommendation before a management strategy is selected.
- Reassess segment with additional dissolved oxygen data.
- Complete RUAs on segments 1226H_01, 1226M_01, 1255D_01 and 1255I_01.



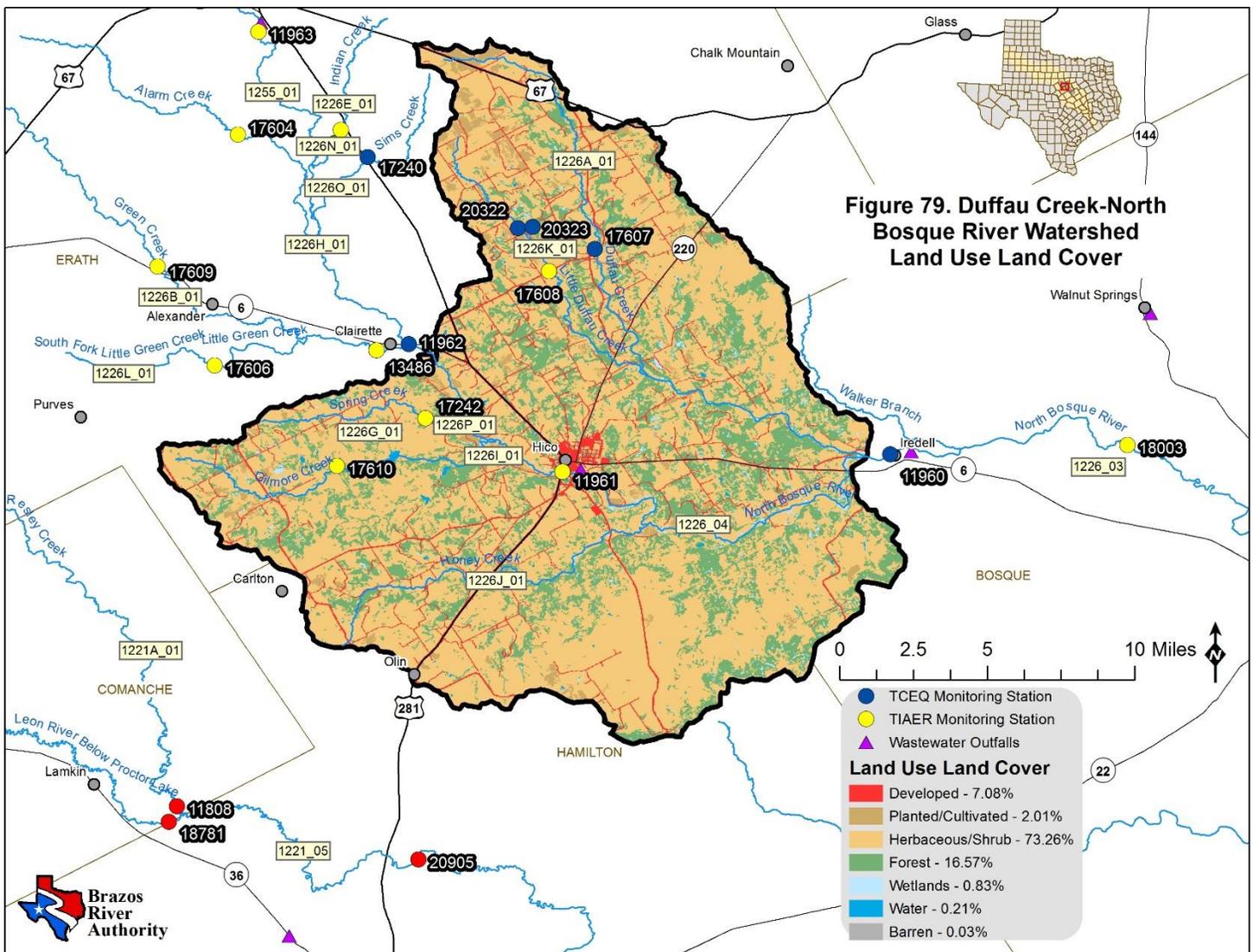
Duffau Creek-North Bosque River Watershed

Watershed Description:

The Duffau Creek-North Bosque River Watershed is 262 square miles in area.

Land Use Land Cover in Watershed (Figure 79):

There are two cities and one wastewater outfall in the watershed. The dominant landcover is herbaceous/shrubland, with a moderate amount of forested upland.



Segments in Watershed (Figure 80):

- Downstream portion of 1226_04: North Bosque River, from confluence with Duffau Creek in Bosque County upstream to a point immediately upstream in Indian Creek confluence (end of segment) in Erath County
Monitoring Station: 11961 - NORTH BOSQUE RIVER AT WALNUT STREET/US 281 NEAR HICO
- 1226A_01: Duffau Creek
Monitoring Station: 17607 DUFFAU CREEK FM 2481, 8.41 KILOMETERS UPSTREAM OF LITTLE DUFFAU CREEK IMMEDIATELY NORTHEAST OF DUFFAU
- 1226G_01: Spring Creek
Monitoring Station: 17242 SPRING CREEK AT ERATH CR 27, 4.4 KILOMETERS SOUTHEAST OF CLAIRETTE
- 1226I_01: Gilmore Creek
Monitoring Station: 17610 GILMORE CREEK 147 METERS DOWNSTREAM OF ERATH CR 293, 330 METERS DOWNSTREAM OF CONFLUENCE WITH WOLF PRONG CREEK 5.7 KILOMETERS NORTHEAST OF CARLETON
- 1226J_01: Honey Creek
- 1226K_01: Little Duffau Creek
Monitoring Stations:
20322 - LITTLE DUFFAU CREEK APPROXIMATELY 3.0 KILOMETERS UPSTREAM OF FM 1824 NORTHWEST OF DUFFAU TX CAMS ID 0728
20323 - UNNAMED TRIBUTARY OF LITTLE DUFFAU CREEK APPROXIMATELY 1.4 KILOMETERS UPSTREAM FROM THE CONFLUENCE OF LITTLE DUFFAU CREEK NORTHWEST OF DUFFAU TX CAMS ID 0765
17608 - LITTLE DUFFAU CREEK AT FM 1824, 9.5 KILOMETERS UPSTREAM OF CONFLUENCE WITH DUFFAU CREEK 2 KILOMETERS WEST OF DUFFAU
- 1226P_01: Spring Creek Reservoir

Impairments in Watershed Description (Figure 80):

There are concerns for chlorophyll-*a* and impaired macrobenthic community in 1226_04.

- 1226A_01: Recreational Use—bacteria
- 1226K_01: Recreational Use—bacteria

There are concerns for nitrate and total phosphorus in 1226K_01.

Possible Contributions if Impaired:

Point Sources: There are two cities and one wastewater outfall.

Non-point sources: Herbaceous/shrub and forested areas are the dominant land cover accounting for approximately 90% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

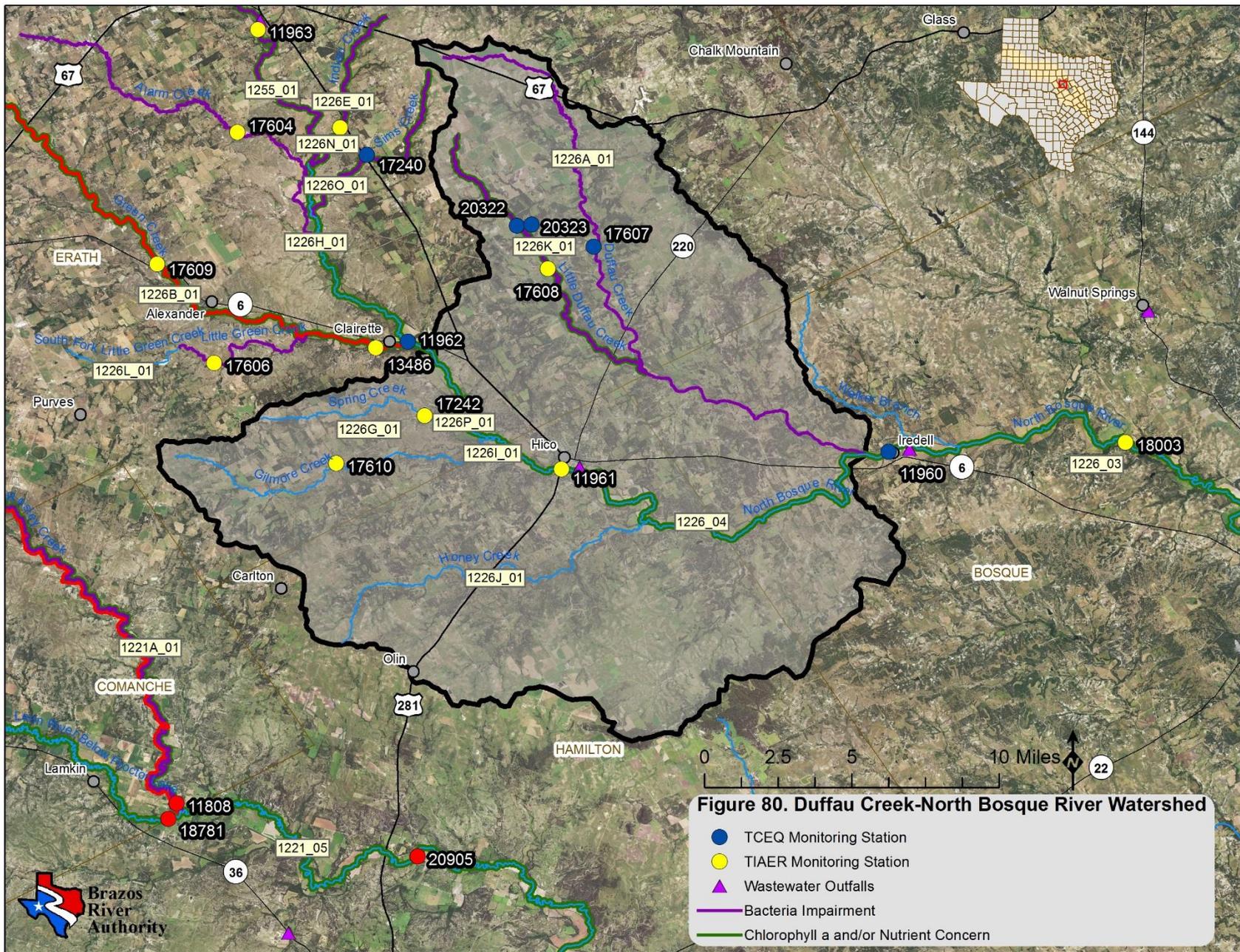
- City of Hico
- City of Olin
- Erath County
- Hamilton County
- Bosque County

Actions taken if impaired:

- An RUAA has been completed for segment 1226K. The [report](#) is under review by TCEQ.

Recommendations if impaired:

- Await TCEQ review of 1226K RUAA report and recommendation before a management strategy is selected.



Segments in Watershed (Figure 82):

- 1226_03: North Bosque River, from confluence with Meridian Creek upstream to confluence with Duffau Creek in Bosque County
Monitoring Stations:
11960 - NORTH BOSQUE RIVER 185 METERS UPSTREAM OF FM 216 IN IREDELL
18003 - NORTH BOSQUE RIVER AT BOSQUE CR 2371, 3.42 KILOMETERS DOWNSTREAM OF CONFLUENCE WITH EAST BOSQUE RIVER 9.8 KILOMETERS WEST OF THE CITY OF IREDELL
- 1226C_01: Meridian Creek
Monitoring Station: 14908 - MERIDIAN CREEK AT SH 6. 2.5 MILES NORTHWEST OF CLIFTON
- 1226Q_01: Walker Branch

Impairments in Watershed Description (Figure 82):

- None
There is a concern for chlorophyll-*a* in 1226_03.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

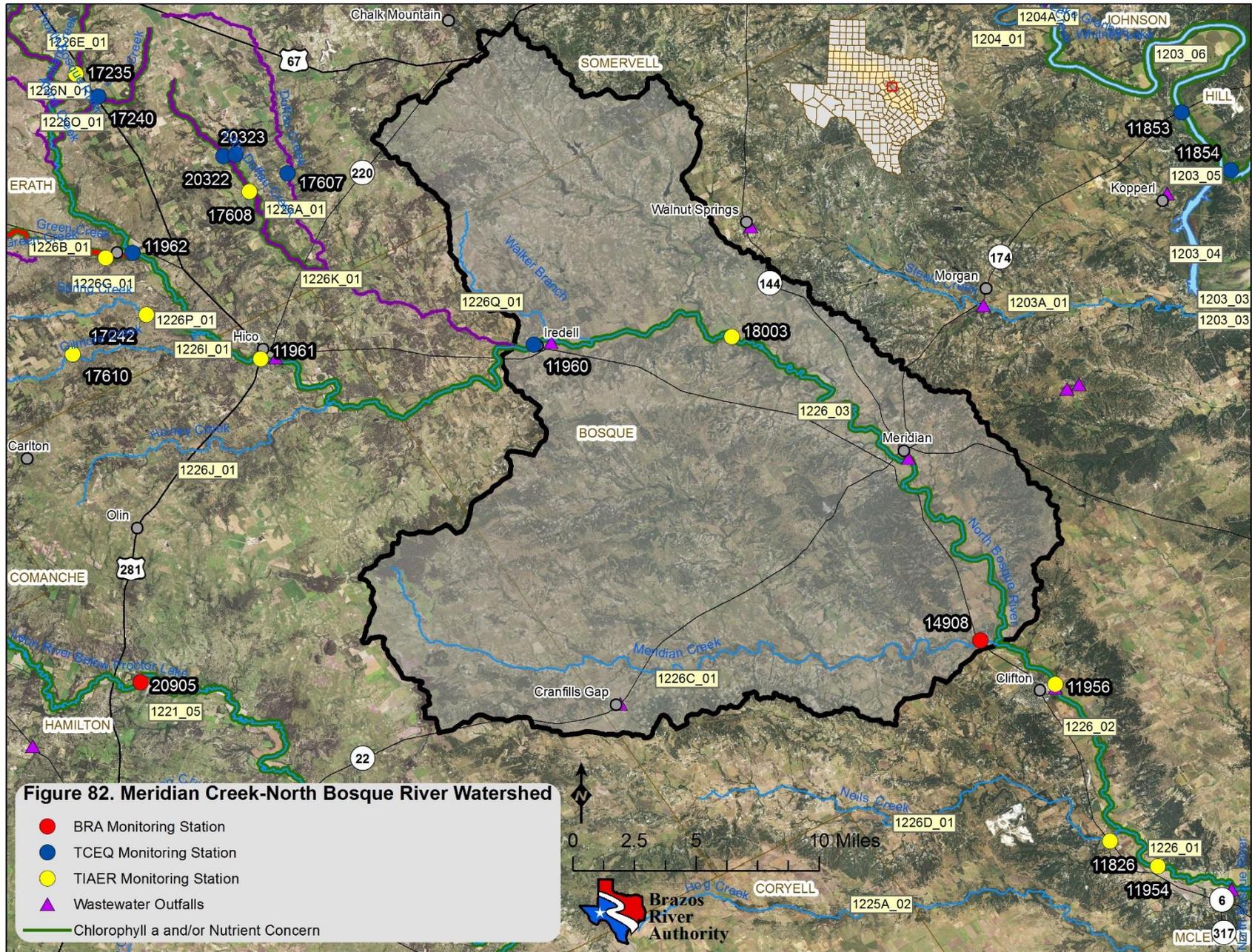
- City of Iredell
- City of Meridian
- City of Cranfills Gap
- Erath County
- Somervell County
- Hamilton County
- Bosque County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



Segments in Watershed (Figure 84):

- The upstream portion of 1225_01: Lake Waco, North Bosque River arm of lake
Monitoring Station: 17204 LAKE WACO NORTH BOSQUE ARM AT BUOY 486 METERS NORTH AND 40 METERS EAST OF INTERSECTION OF NORTH SPEEGLEVILLE RD AND SUNDOWN DR
- 1226_01: North Bosque River: from confluence with Lake Waco in McLennan County upstream to confluence with Neils Creek in Bosque County
Monitoring Stations:
11954 - NORTH BOSQUE RIVER IMMEDIATELY UPSTREAM OF RIVER RD NEAR SH 6 WEST OF VALLEY MILLS
11951 - NORTH BOSQUE RIVER AT COOPERS CROSSING RD WEST OF CHINA SPRING
- 1226_02: North Bosque River, from confluence with Neils Creek upstream to confluence with Meridian Creek in Bosque County
Monitoring Station: 11956 - NORTH BOSQUE RIVER AT FM 219 NORTHEAST OF CLIFTON
- 1226D_01: Neils Creek (unclassified water body)
Monitoring Station: 11826 NEILS CREEK AT SH 6 SOUTHEAST OF CLIFTON

Impairments in Watershed Description (Figure 84):

- None

There is a concern for chlorophyll-*a* in 1226_01 and 1226_02. There is also a concern for depressed dissolved oxygen in 1226_02.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

- City of Clifton
- City of Valley Mills
- Hamilton County
- Bosque County
- Coryell County
- McLennan County
- City of Waco
- Any marinas or other businesses on or that serve Waco Lake

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A

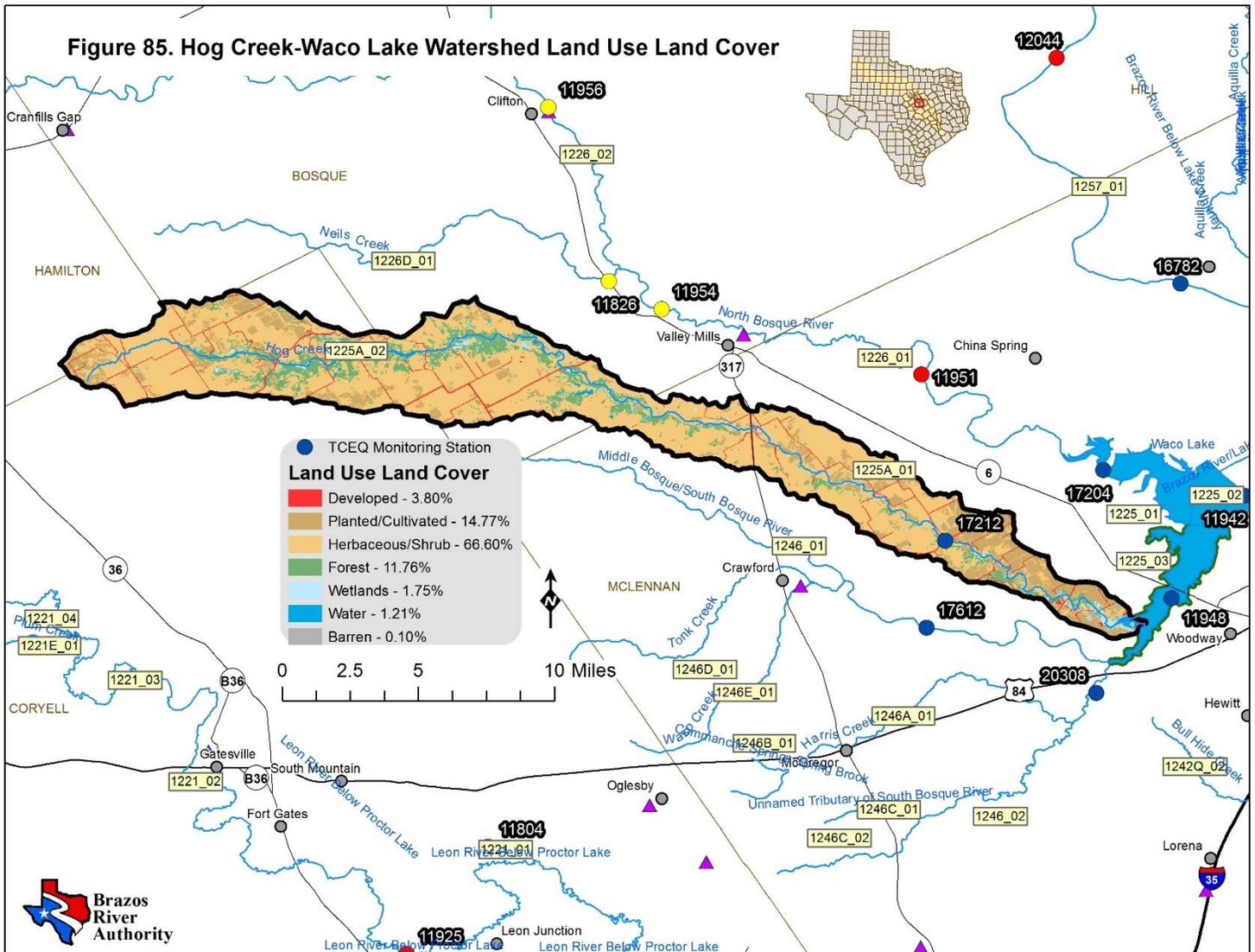
Hog Creek-Lake Waco Watershed

Watershed Description:

The Hog Creek-Lake Waco Watershed is 90 square miles in area.

Land Use Land Cover in Watershed (Figure 85):

There are no cities or wastewater outfalls. The dominant landcover is herbaceous/shrub land, with a moderate amount of planted/cultivated land and a smaller portion of forested upland.



Segments in Watershed (Figure 86):

- The upstream Hog Creek arm portion of 1225_03: Middle/South Bosque River arm of lake
- 1225A_01: Hog Creek, from confluence with Live Oak Creek downstream to Lake Waco
Monitoring Station: 17212 - HOG CREEK AT FM 185 APPROXIMATELY 14.5 KILOMETERS UPSTREAM OF LAKE WACO
- 1225A_02: Hog Creek, from its confluence with Live Oak Creek upstream to headwaters

Impairments in Watershed Description (Figure 86):

- None

Possible Contributions if Impaired:

Point Sources: N/A

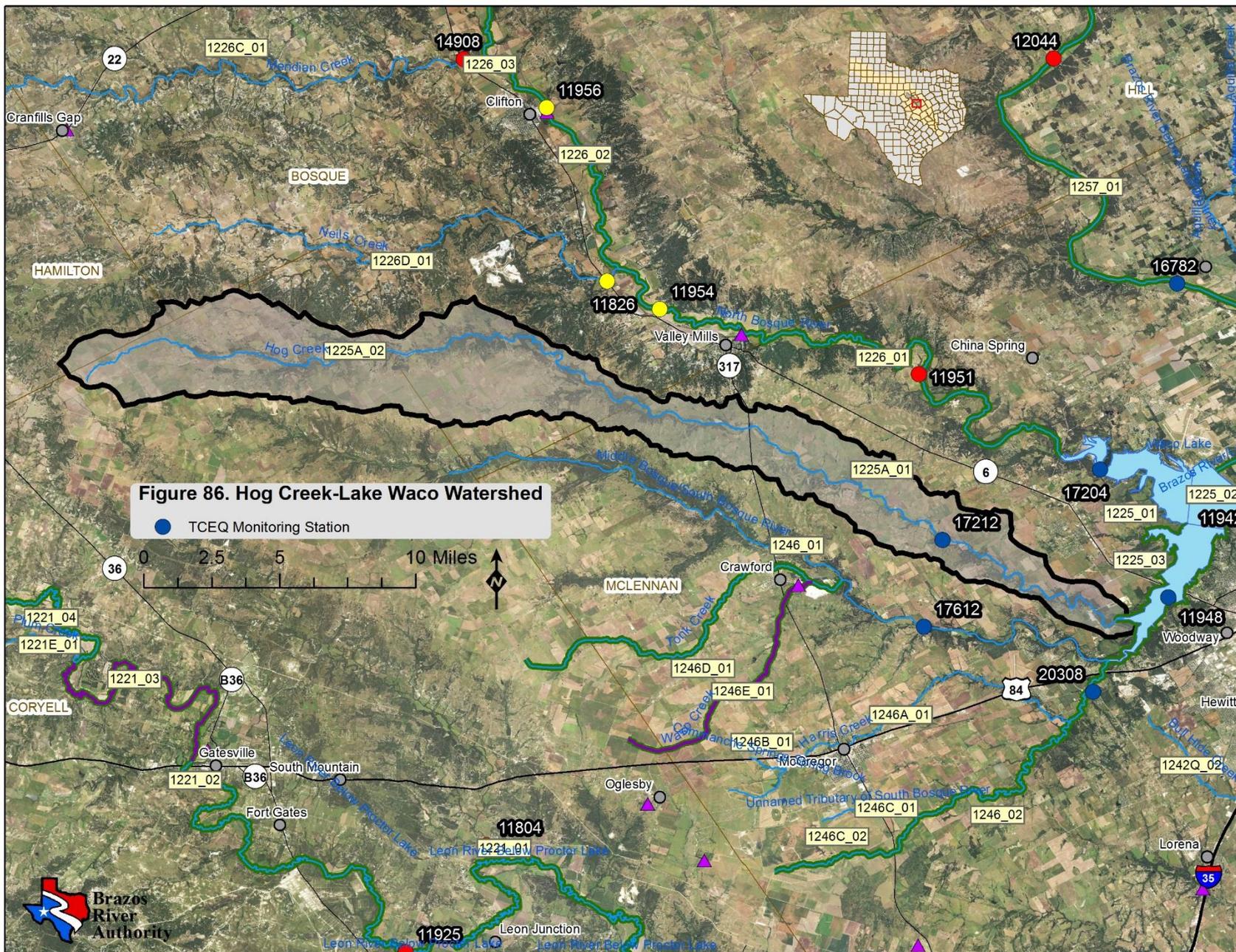
Non-point sources: N/A

Potential non-State Agency Stakeholders:

- Hamilton County
- Coryell County
- Bosque County
- McLennan County
- City of Waco
- Any marinas or other businesses on or that serve Waco Lake

Actions taken if impaired: N/A

Recommendations if impaired: N/A



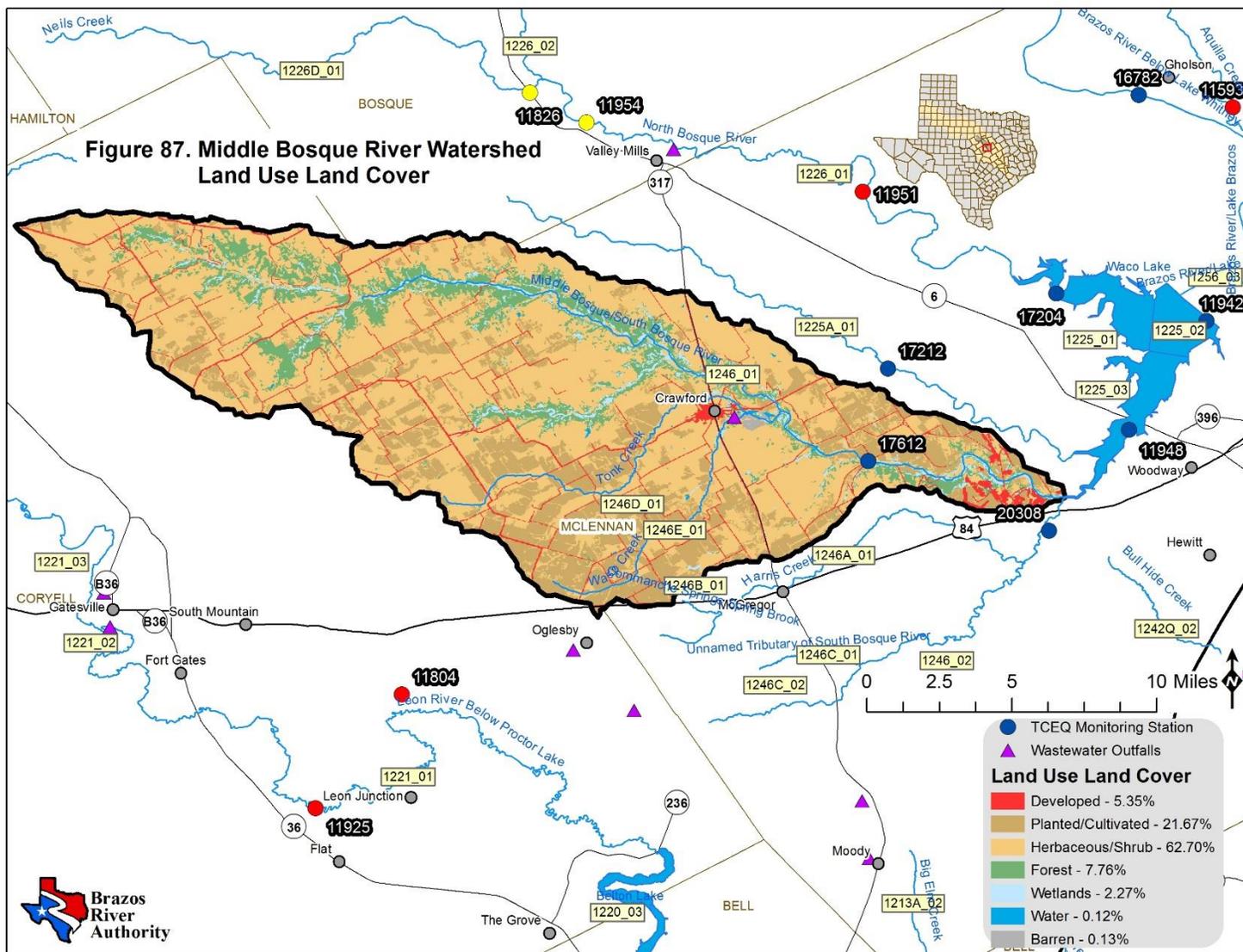
Middle Bosque River Watershed

Watershed Description:

The Middle Bosque River Watershed is 199 square miles in area.

Land Use Land Cover in Watershed (Figure 87):

There is one city and one wastewater outfall in the watershed. The dominant landcover is herbaceous/shrubland, with a moderate amount of planted/cultivated land, and a smaller portion of forested upland.



Segments in Watershed (Figure 88):

- 1246_01: Middle Bosque/South Bosque River
Monitoring Station: 17612 MIDDLE BOSQUE/SOUTH BOSQUE RIVER MIDDLE FORK AT FM 3047/NEW WINDSOR PKWY 303 METERS DOWNSTREAM OF CONFLUENCE WITH PECAN CREEK
- 1246D_01: Tonk Creek
- 1246E_01: Wasp Creek

Impairments in Watershed Description (Figure 88):

- 1246E_01: Recreational Use—bacteria
There are concerns for nitrate in 1246D_01 and 1246E_01.

Possible Contributions if Impaired:

Point Sources: There are two cities and one wastewater outfall within the watershed.

Non-point sources:

- There is a fair amount of cultivated crops (approximately 22%) in the watershed. Runoff from agriculture and ranchland could provide contributions.
- Herbaceous/shrub and forested areas are the dominant landcover accounting for approximately 70% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:

- City of Crawford
- Bosque County
- Coryell County
- McLennan County
- City of Waco
- Any marinas or other businesses on or that serve Waco Lake

Actions taken if impaired:

- An RUAA has been completed for segment 1246E. The [report](#) is under review by TCEQ.

Recommendations if impaired:

- Await TCEQ review of 1246E RUAA report and recommendation before a management strategy is selected.

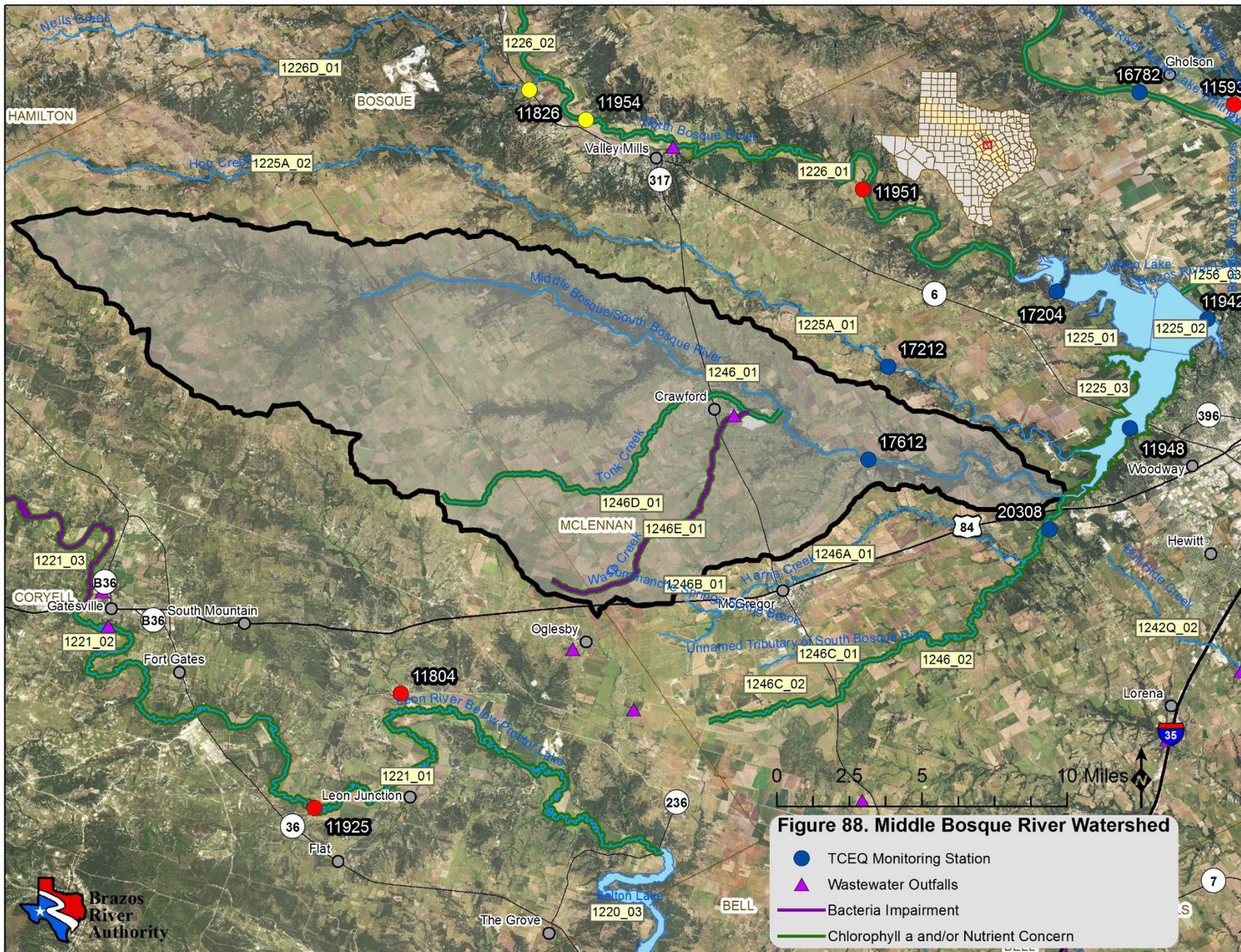


Figure 88. Middle Bosque River Watershed

- TCEQ Monitoring Station
- ▲ Wastewater Outfalls
- Bacteria Impairment
- Chlorophyll a and/or Nutrient Concern

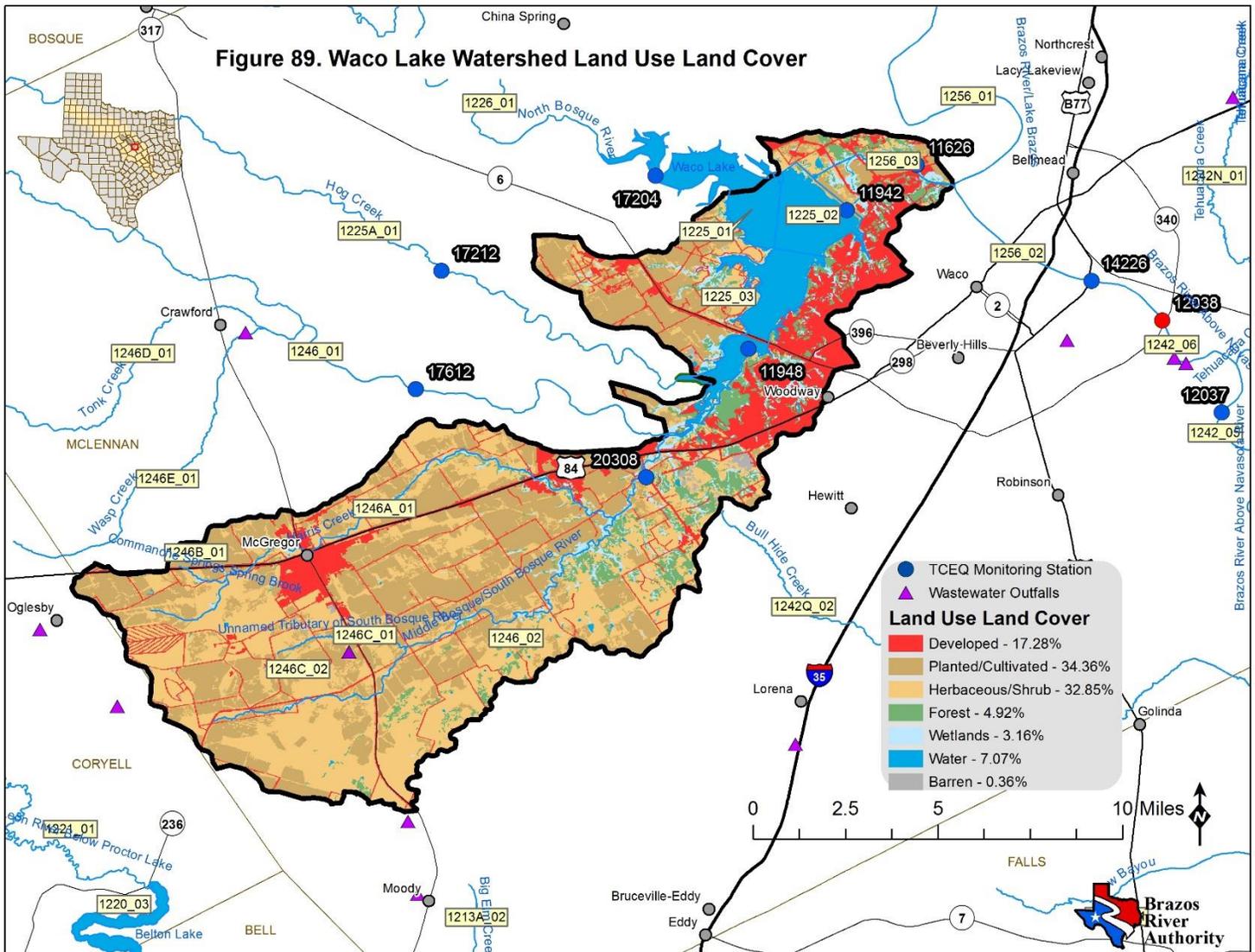
Lake Waco Watershed

Watershed Description:

The Lake Waco Watershed is 132 square miles in area.

Land Use Land Cover in Watershed (Figure 89):

There are three cities and one wastewater outfall in the watershed. The dominant landcover types are herbaceous/shrubland and planted/cultivated land, with a moderate amount of developed land and a smaller portion of open water and forested upland. A large portion of Lake Waco lies within the watershed.



Segments in Watershed (Figure 90):

- 1225_01: Lake Waco, North Bosque River arm of lake
- 1225_02: Lake Waco, portion of lake near dam
Monitoring Station: 11942 - LAKE WACO NEAR DAM 378 METERS SOUTH AND 696 METERS WEST
OF INTERSECTION OF LAKE SHORE DRIVE AND MACARTHUR DRIVE
- 1225_03: Lake Waco, Middle/South Bosque River arm of lake
Monitoring Station: 11948 - LAKE WACO MIDDLE AND SOUTH BOSQUE ARM NEAR SH 6, 106 METERS SOUTH AND 1.28 KILOMETERS WEST OF INTERSECTION OF SH 6 AND FISH POND RD
- 1246_02: Middle Bosque/South Bosque River, entire South Bosque River
Monitoring Station: 20308 - SOUTH BOSQUE RIVER AT FM 2837, 110 METERS UPSTREAM OF THE SOUTHERN PACIFIC RAILROAD
- 1246A_01: Harris Creek
- 1246B_01: Comanche Springs Spring Brook
- 1246C_01: Unnamed tributary of South Bosque River (unclassified water body), from confluence with South Bosque River to 1.0 kilometers above SH 317 south of McGregor (locally known as Sheep Creek)
- 1246C_02: Unnamed tributary of South Bosque River (unclassified water body), from 1.0 kilometers above SH 317 upstream to headwaters in McLennan County
- 1256_03: Brazos River/Lake Brazos, Bosque River portion of segment
Monitoring Station: 11626 - BOSQUE RIVER 190 METERS UPSTREAM OF LAKE SHORE DRIVE

Impairments in Watershed Description (Figure 90):

There are concerns for nitrate in 1246_02 and 1225_03. There is also a concern for depressed dissolved oxygen in 1256_03.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

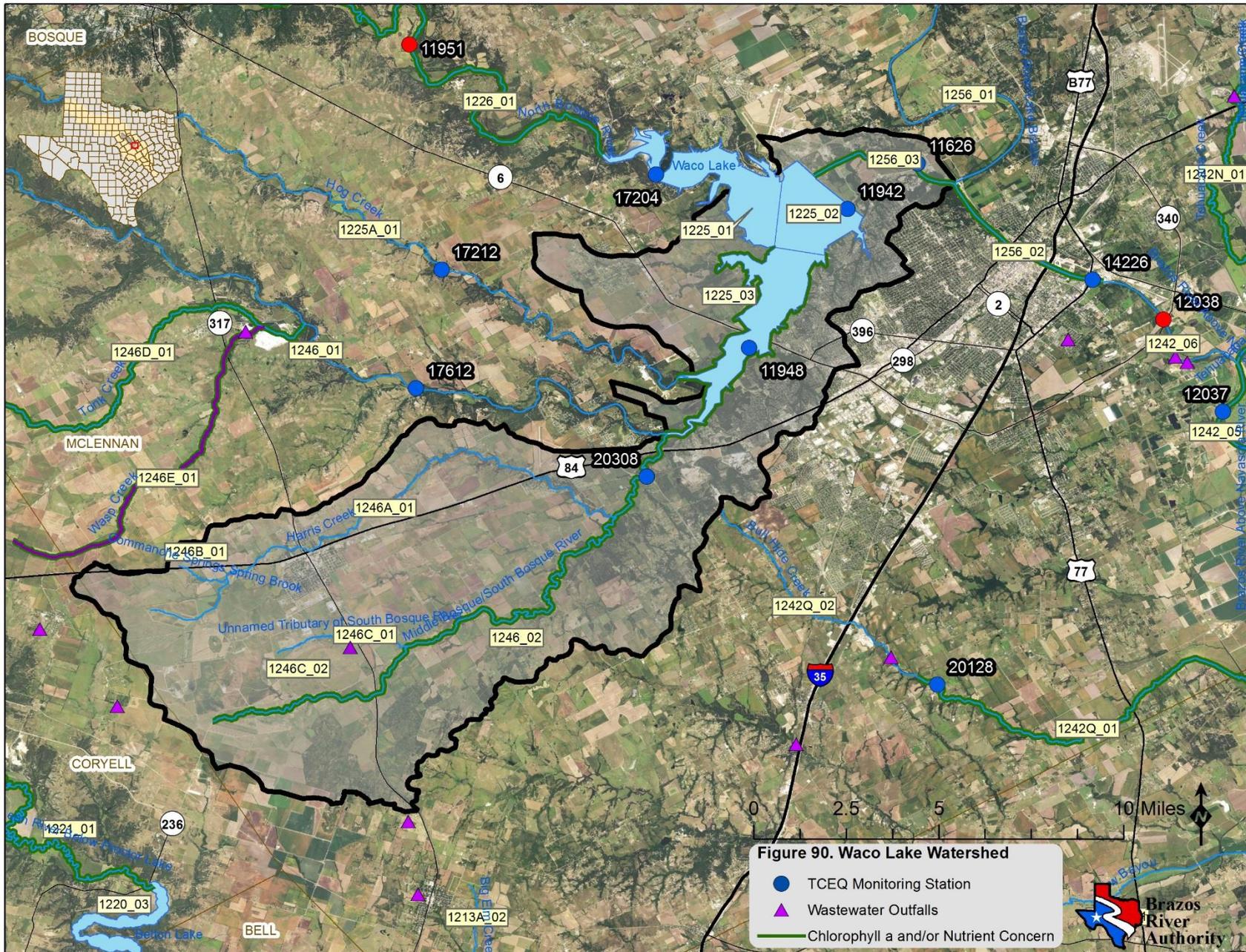
- City of McGregor
- City of Waco
- City of Woodway
- Coryell County
- McLennan County
- Any marinas or other businesses on or that serve Lake Waco

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



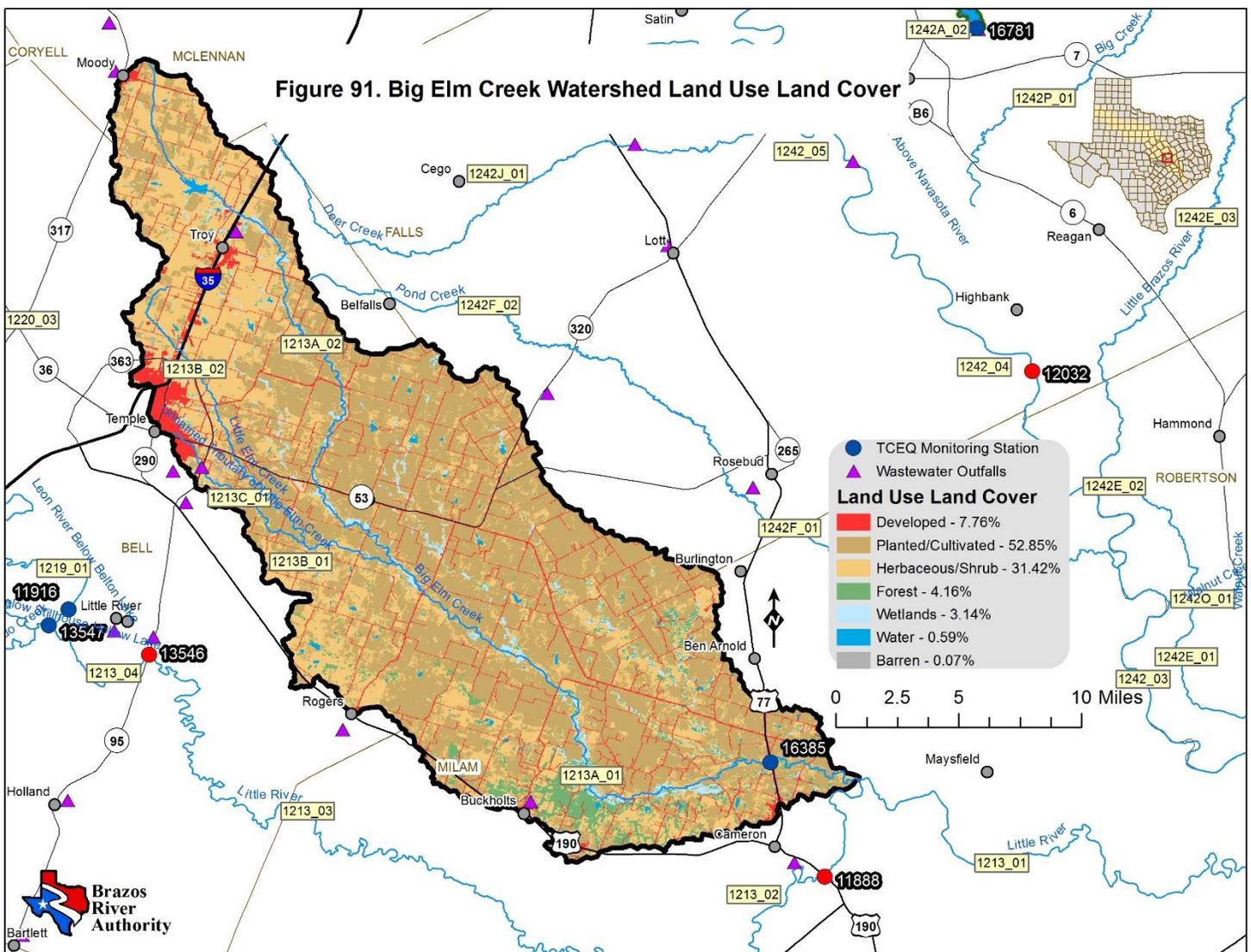
Big Elm Creek Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 91):

There are six cities and three wastewater outfalls in the watershed. Dominant landcover includes planted/cultivated land, with a moderate amount of herbaceous/shrubland.



Segments in Watershed (Figure 92):

- 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
- 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 92):

- 1213A_01: Recreational Use—bacteria
There are concerns for depressed dissolved oxygen and nitrate in 1213B_01 and concerns for impaired habitat and nitrate in 1213C_01.

Possible Contributions if Impaired:

Point Sources: There are six cities and three wastewater outfalls.

Non-point sources:

- Over 50% of the watershed is made up of planted/cultivated crops. Runoff from agriculture and ranchland could provide contributions.
- Herbaceous/shrubland could provide contributions from wildlife with a coverage of approximately 35%.

Potential non-State Agency Stakeholders:

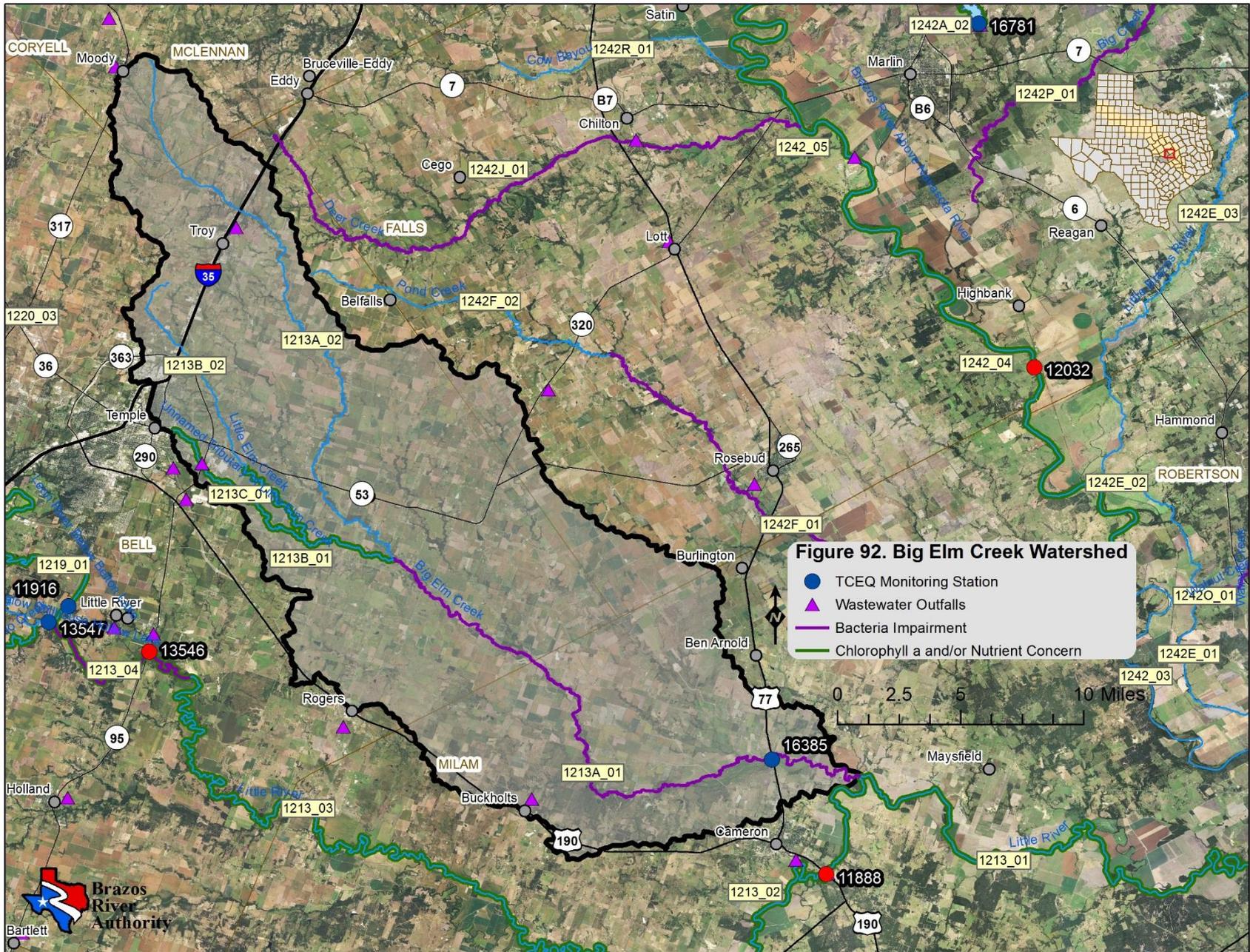
- City of Troy
- City of Temple
- City of Seaton
- City of Rogers
- City of Buckholts
- City of Moody
- McLennan County
- Bell County
- Falls County
- Milam County

Actions taken if impaired:

- Texas Water Resources Institute (TWRI) will begin a project in FY2016 to address water quality issues in 1213, 1213A and 1214.

Recommendations if impaired:

- Perform an RUAA on segment 1213A_01.
- Await findings of TWRI project before a management decision is made.



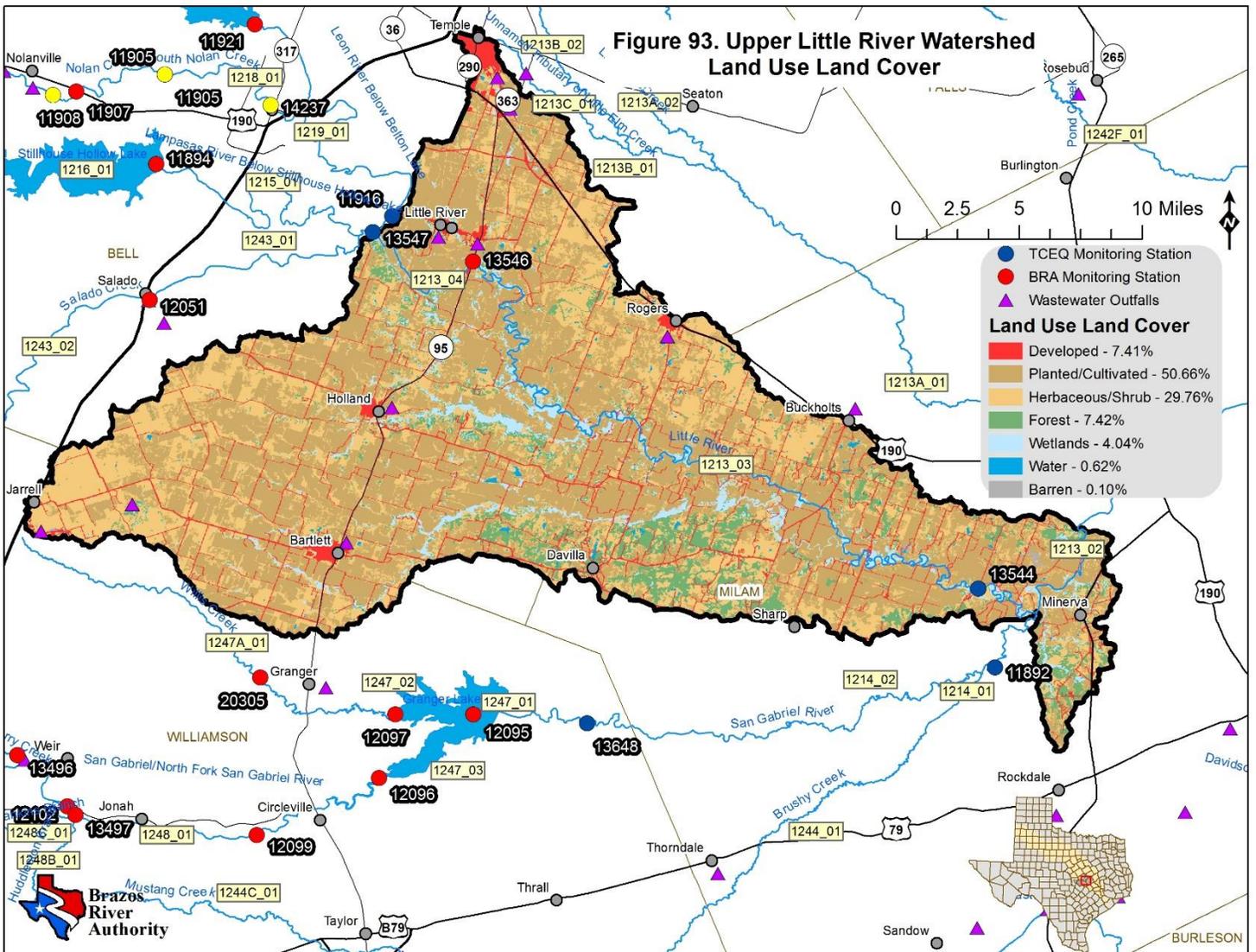
Upper Little River Watershed

Watershed Description:

The Upper Little River Watershed is 398 square miles in area.

Land Use Land Cover in Watershed (Figure 93):

There are nine cities and nine wastewater outfalls in the watershed. Dominant landcover includes planted/cultivated land, with a moderate amount of herbaceous/shrubland.



Segments in Watershed (Figure 94):

- 1213_02: Little River, from the City of Cameron WWTP receiving water upstream to the confluence with the San Gabriel River
- 1213_03: Little River, from confluence with San Gabriel River upstream to confluence with Boggy Creek
Monitoring Station: 13544 - LITTLE RIVER IMMEDIATELY DOWNSTREAM OF FM 1600 SOUTHWEST OF CAMERON
- 1213_04: Little River, from confluence with Boggy Creek upstream to confluence with Leon and Lampasas Rivers
Monitoring Station: 13546 - LITTLE RIVER IMMEDIATELY DOWNSTREAM OF SH 95 NEAR LITTLE RIVER ACADEMY

Impairments in Watershed Description (Figure 94):

- 1213_04: Recreational Use—bacteria
There are concerns for nitrate in 1213_02, 1213_03 and 1213_04.

Possible Contributions if Impaired:

Point Sources: There are nine cities and nine wastewater outfalls.

Non-point sources: Over 50% of the watershed is dominated by planted/cultivated land which could provide contributions from runoff. There is also a fair amount (approximately 37%) of herbaceous/shrubland in the watershed which could provide contributions from wildlife as well.

Potential non-State Agency Stakeholders:

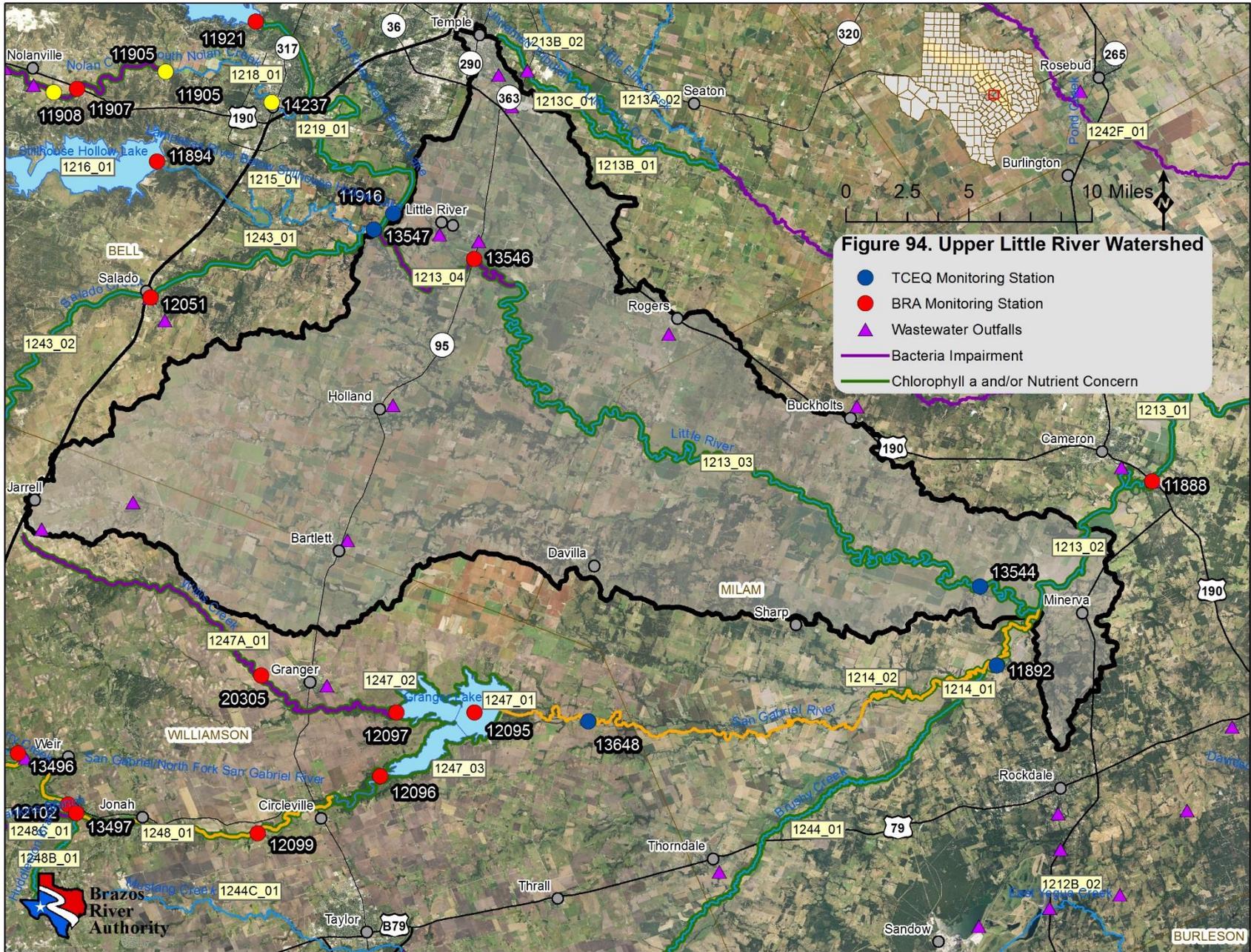
- City of Little River-Academy
- City of Temple
- City of Holland
- City of Bartlett
- City of Jarrell
- City of Davilla
- City of Rogers
- City of Buckholts
- City of Minerva
- Bell County
- Williamson County
- Milam County

Actions taken if impaired:

- Texas Water Resources Institute (TWRI) will begin a project in FY2016 to address water quality issues in 1213, 1213A and 1214.

Recommendations if impaired:

- Await findings of TWRI project before a management decision is made.



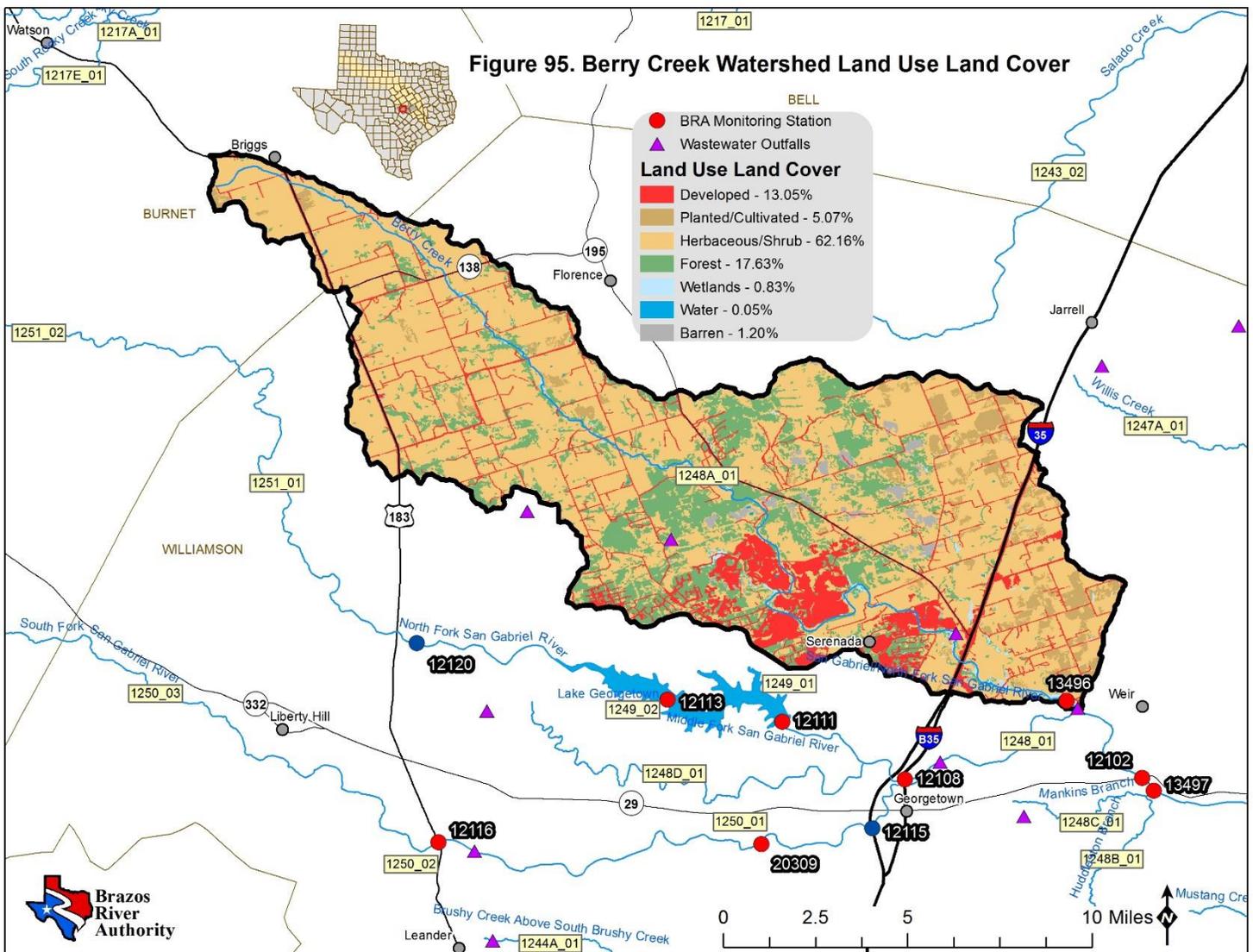
Berry Creek Watershed

Watershed Description:

The Berry Creek Watershed is 126 square miles in area.

Land Use Land Cover in Watershed (Figure 95):

There is one city and three wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with smaller amounts of developed land and forested upland.



Segments in Watershed (Figure 96):

- 1248A_01: Berry Creek
Monitoring Station: 13496 - BERRY CREEK IMMEDIATELY DOWNSTREAM OF FM 971, 2
MILES EAST OF IH 35

Impairments in Watershed Description (Figure 96):

- None

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

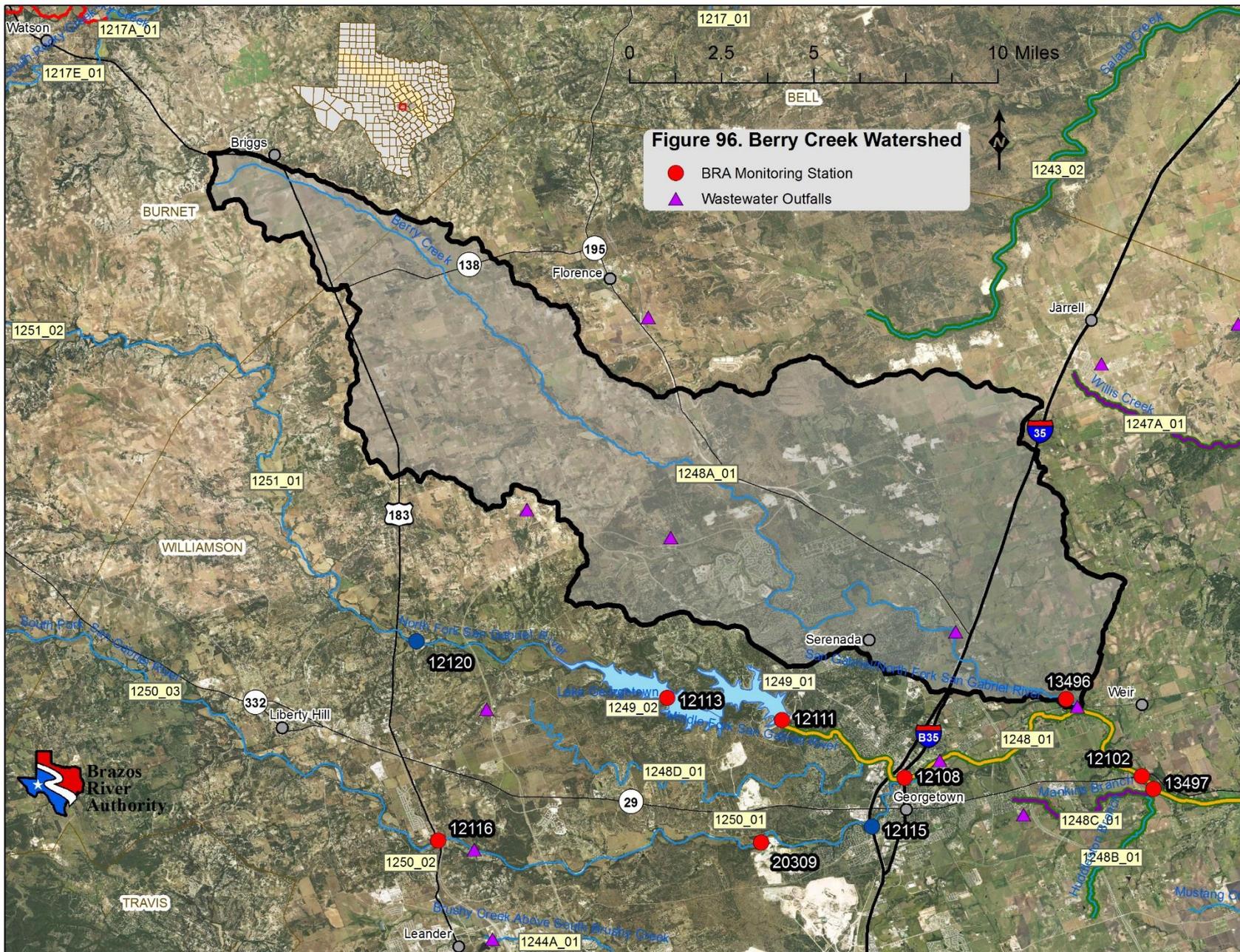
- City of Serenada
- Burnet County
- Williamson County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



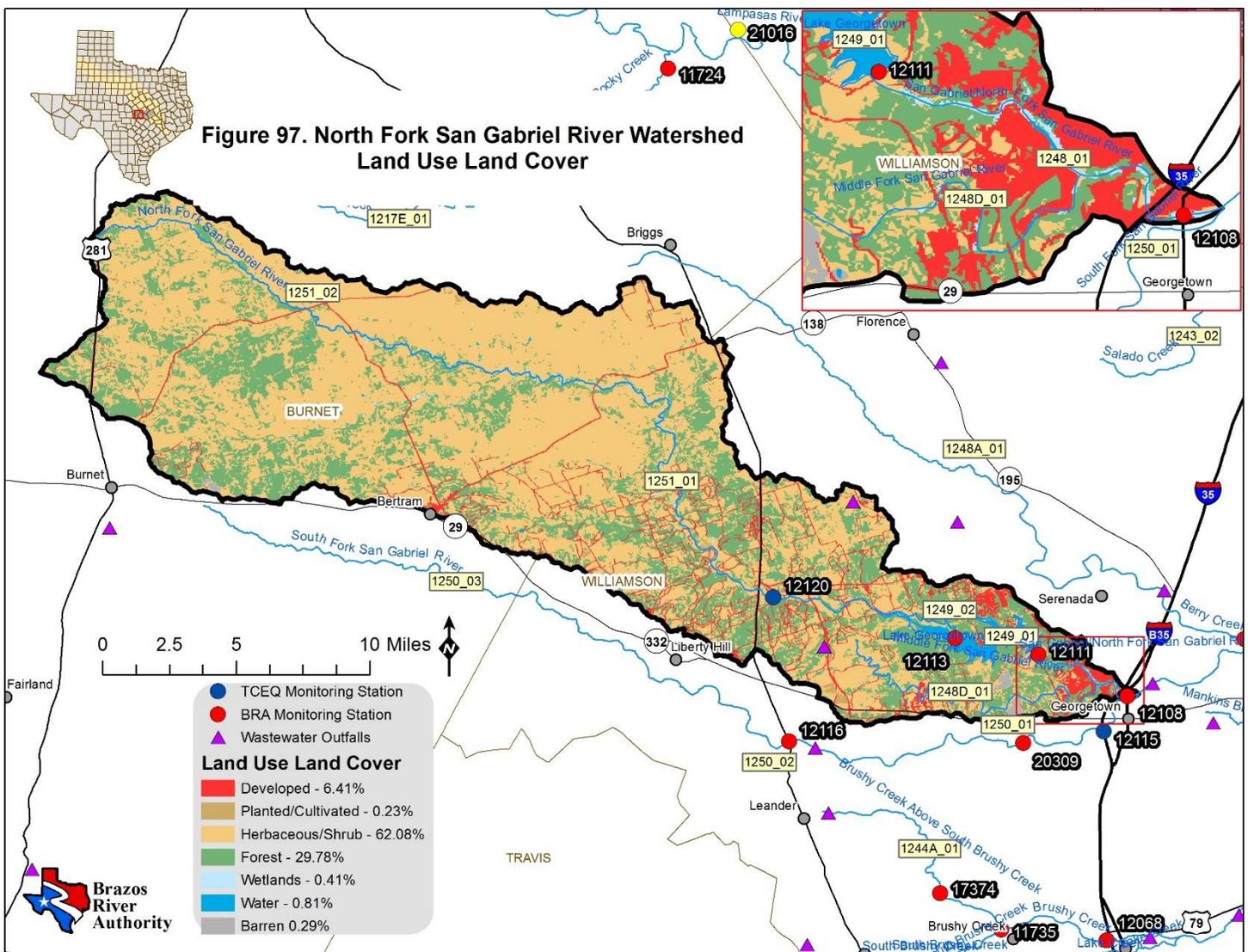
North Fork San Gabriel River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 97):

There are two cities and two wastewater outfalls in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of forested upland. Lake Georgetown lies entirely within this watershed.



Segments in Watershed (Figure 98):

- 1248_01: San Gabriel/North Fork San Gabriel River
Monitoring Station: 12108 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER NORTH FORK IMMEDIATELY DWNSTREAM OF IH 35 IN GEORGETOWN
- 1248D_01: Middle Fork San Gabriel River
- 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
- 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 98):

- 1248_01: General Use—total dissolved solids and chloride
There is also a concern for nitrate in 1248_01.

Possible Contributions if Impaired:

Point Sources: There are two cities and two wastewater outfalls within the watershed.

Non-point sources: There is a high rate of development and construction activities occurring either in the river channel itself or immediately adjacent to 1248.

Potential non-State Agency Stakeholders:

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

Actions taken if impaired:

- A request for revision of the standard from 350 mg/L to 400 mg/L total dissolved solids (TDS) in segment 1248_01 was sent to the EPA on April 23, 2014. TCEQ is awaiting EPA approval of the new standard. If approved, the TDS impairment could be removed.

Recommendations if impaired:

- Await EPA approval of revised standards.
- There is a high rate of development and construction activities occurring either in the river channel itself or immediately adjacent to 1248_01. A more thorough watershed evaluation may be appropriate.

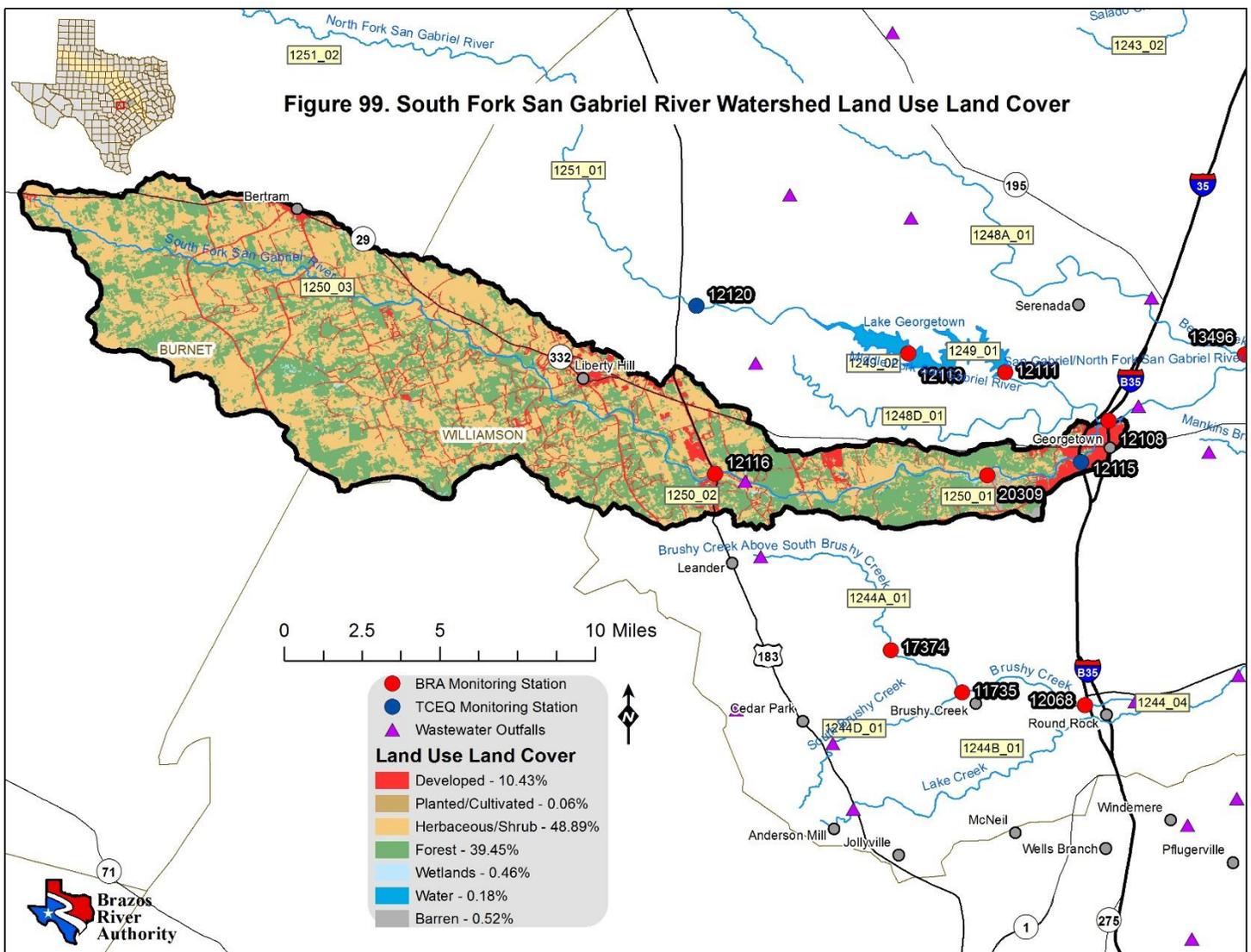
South Fork San Gabriel River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 99):

There are three cities and one wastewater outfall in the watershed. Dominant landcover includes herbaceous/shrubland, with a moderate amount of forested upland and a smaller amount of developed land.



Segments in Watershed (Figure 100):

- 1250_01: South Fork San Gabriel River, from confluence with the San Gabriel River upstream to confluence with unnamed tributary (NHD RC 12070205002995)
Monitoring Stations:
20309 - SOUTH FORK SAN GABRIEL RIVER 1.44 KILOMETERS NORTH AND 1.80 KILOMETERS WEST OF THE INTERSECTION OF WEIRD RANCH RD AND LEANDER RANCH RD / RR 2243 AT WEIR PIT ROCK QUARRY IN WILLIAMSON COUNTY
12115 - SOUTH FORK SAN GABRIEL RIVER AT IH 35 IN GEORGETOWN
- 1250_02: South Fork San Gabriel River, from confluence with unnamed tributary (NHD RC 12070205002995) upstream to unnamed tributary (NHD RC 12070205002505)
Monitoring Station: 12116 - SOUTH FORK SAN GABRIEL RIVER AT US 183
- 1250_03: South Fork San Gabriel River, from the confluence with unnamed tributary (NHD RC 12070205002505) upstream to headwaters of water body

Impairments in Watershed Description (Figure 100):

- None
There is a concern for depressed dissolved oxygen in 1250_03.

Possible Contributions if Impaired:

Point Sources: N/A

Non-point sources: N/A

Potential non-State Agency Stakeholders:

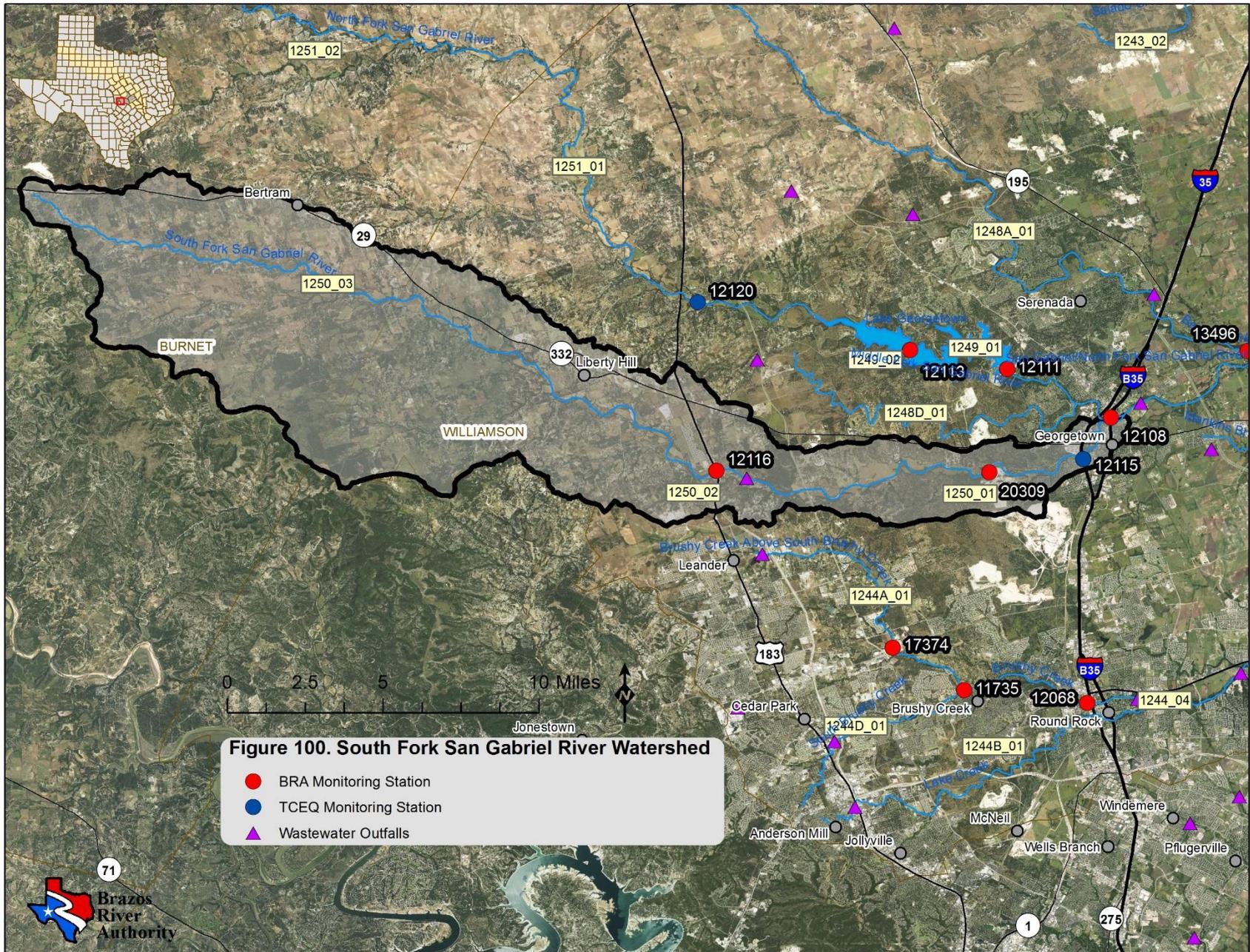
- City of Liberty Hill
- City of Georgetown
- Burnet County
- Williamson County
- Travis County

Actions taken if impaired:

- N/A

Recommendations if impaired:

- N/A



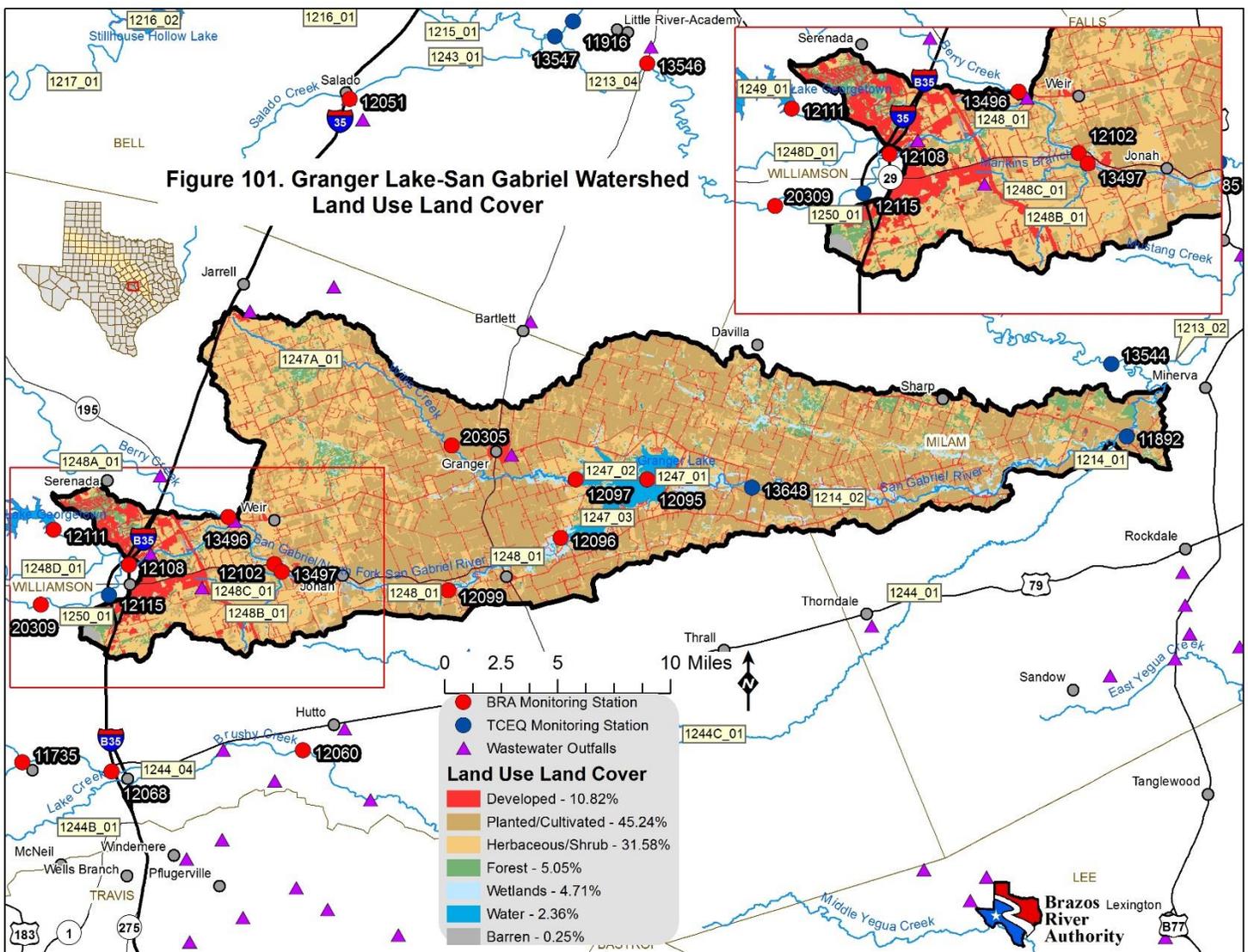
Granger Lake-San Gabriel River Watershed

Watershed Description:

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

Land Use Land Cover in Watershed (Figure 101):

There are seven cities and four wastewater outfalls in the watershed. Dominant landcover includes planted/cultivated land, with a moderate amount of herbaceous/shrubland and a smaller amount of developed land. Lake Granger lies entirely within this watershed.



Segments in Watershed (Figure 102):

- 1214_01: San Gabriel River, from confluence with Little River upstream to confluence with Alligator Creek
Monitoring Station: 11892 SAN GABRIEL RIVER AT 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 LANEPOR AND 7.5 MILES NORTHWEST OF THRALL
- 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
- 1248_01: San Gabriel/North Fork San Gabriel River
Monitoring Stations:
12102 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER IMMEDIATELY DOWNSTREAM OF SH 29 EAST OF GEORGETOWN
12099 - SAN GABRIEL/NORTH FORK SAN GABRIEL RIVER AT WILLIAMSON CR 366, 4.84 KILOMETERS UPSTREAM OF SH 95
- 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
- The downstream portion on 1250_01: South Fork San Gabriel River, from the confluence with the North Fork San Gabriel River in Williamson County to the most upstream crossing of SH 29 in Burnet County

Impairments in Watershed Description (Figure 102):

- 1214_01: General Use—chloride, sulfate
There are also concerns for nitrate and total phosphate in 1214_01.
- 1214_02: General Use—chloride, sulfate
There is also a concern for bacteria in 1214_02
There are concerns for nitrate in 1247_01, 1247_02 and 1247_03.
- 1247A_01: Recreational Use—bacteria
There is also a concern for nitrate in 1247A.
- 1248_01: General Use—chloride and TDS
There is also a concern for nitrate 1248_01.
There are concerns for bacteria and nitrate in 1248B_01.
- 1248C_01: Recreational Use—bacteria
There are also concerns for impaired habitat, nitrate and total phosphorus in 1248C_01.

Possible Contributions if Impaired:

Point Sources: There are seven cities and four wastewater outfalls within the watershed.

Non-point sources: Approximately 11% of the watershed is developed allowing for municipal and urban runoff contribution. Agricultural activity accounting for approximately 45% of the watershed could contribute to runoff as well.

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:

- Texas Water Resources Institute (TWRI) will begin a project in FY2016 to address water quality issues in 1213, 1213A and 1214.
- RUAA fieldwork is complete and a [report](#) is under review by TCEQ for 1247A and 1248C.
- A request for revision of the standard from 350 mg/L to 400 mg/L total dissolved solids (TDS) in segment 1248_01 was sent to the EPA on April 23, 2014. TCEQ is awaiting EPA approval of the new standard. If approved, the TDS impairment could be removed.

Recommendations if impaired:

- Await findings of TWRI project before a management decision is made.
- The source of the dissolved solids impairments in segment 1214 is currently. A more thorough watershed evaluation may be appropriate.
- Await EPA approval of revised standards.
- Await TCEQ review of 1247A and 1248C RUAA report and recommendation before a management strategy is selected.
- There is a high rate of development and construction activities occurring either in the river channel itself or immediately adjacent to 1248. A more thorough watershed evaluation may be appropriate.

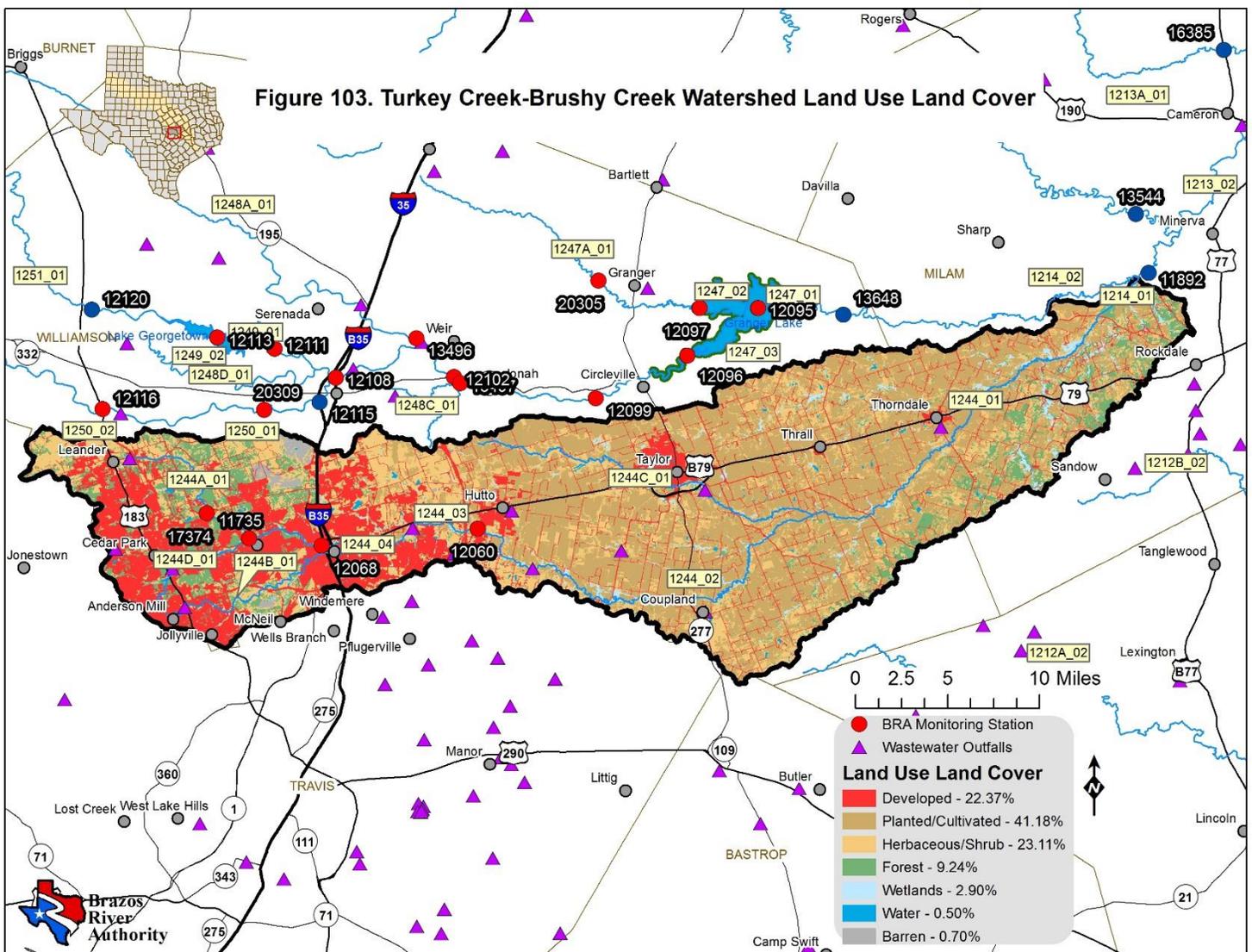
Turkey Creek-Brushy Creek Watershed

Watershed Description:

The Turkey Creek-Brushy Creek Watershed is 519 square miles in area.

Land Use Land Cover in Watershed (Figure 103):

There are 12 cities and 13 wastewater outfalls in the watershed. Dominant landcover includes planted/cultivated land, with a moderate amount of herbaceous/shrubland and developed land and also a smaller amount of forested upland.



Segments in Watershed (Figure 104):

- 1244_01: Brushy Creek, from confluence with San Gabriel upstream to confluence with Mustang Creek
- 1244_02: Brushy Creek, from confluence with Mustang Creek upstream to confluence with Cottonwood Branch
- 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 DOWNSTREAM OF CHISOLM TRAIL RD
- 1244A_01: Brushy Creek above South Brushy Creek (unclassified water body)
Monitoring Station: 17374 BRUSHY CREEK 226 METERS UPSTREAM OF FM 1431/EAST WHITESTONE BLVD EAST OF CEDAR PARK
- 1244B_01: Lake Creek
- 1244C_01: Mustang Creek
- 1244D_01: South Brushy Creek
Monitoring Station: 11735 SOUTH BRUSHY CREEK IMMEDIATELY UPSTREAM OF BRUSHY CREEK ROAD/WILLIAMSON CR 174

Impairments in Watershed Description (Figure 104):

There are concerns for nitrate, total phosphorus and bacteria in 1244_01.

- 1244_03: Recreational Use—bacteria
There are also concerns for nitrate, total phosphate in 1244_03.
- 1244_04: Recreational Use—bacteria

Possible Contributions if Impaired:

Point Sources: There are 12 cities and 13 wastewater outfalls.

Non-point sources: concentrated in the western, upstream portion, approximately 33% of the watershed is developed allowing for municipal and urban runoff contribution.

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

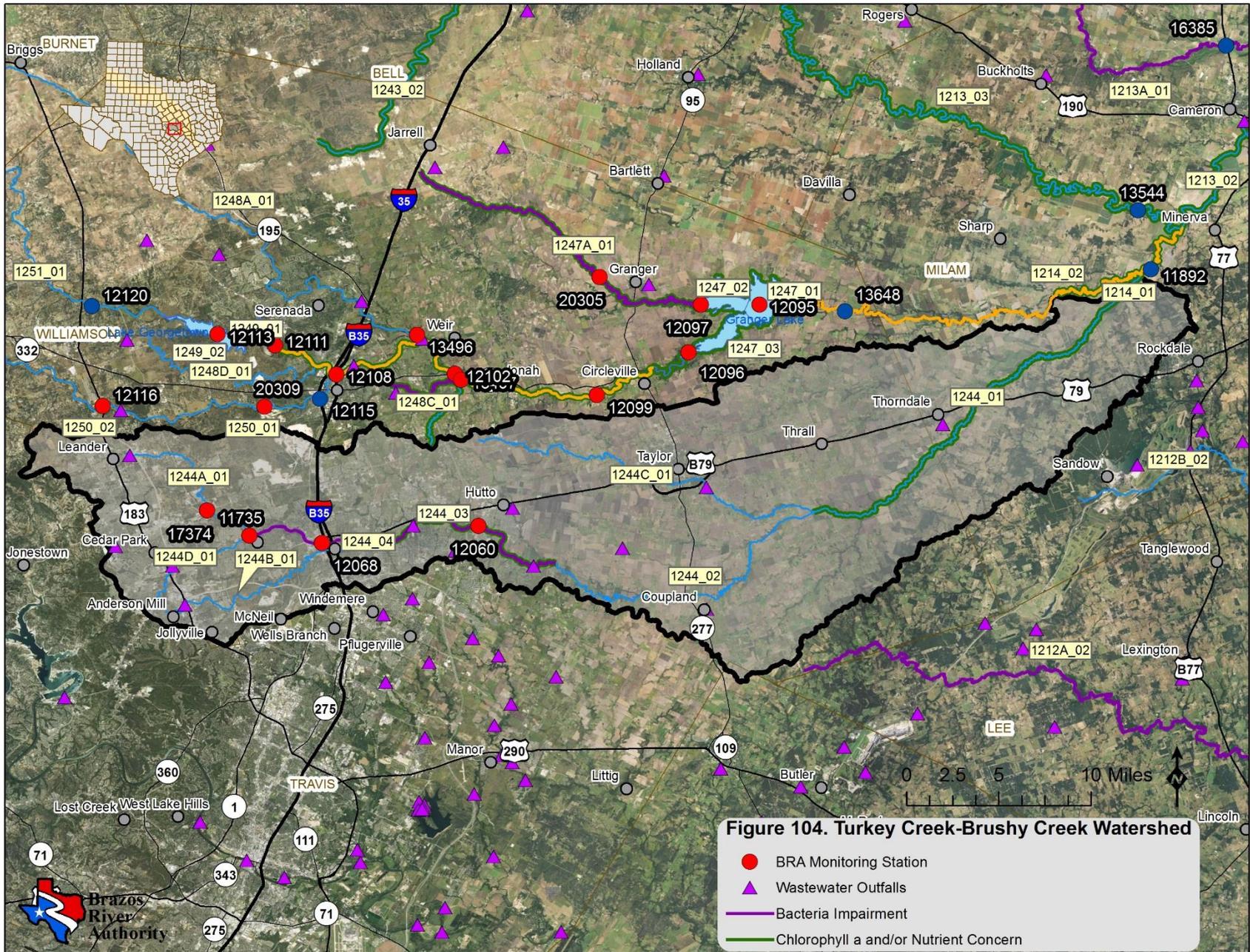
- Milan County
- Bastrop County

Actions taken if impaired:

- An [RUAA](#) has been conducted in segment 1244 and results have led to the recommendation that the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if impaired:

- Continue routine monitoring of the established long-term stations in this watershed.
- Conduct a more thorough watershed evaluation.



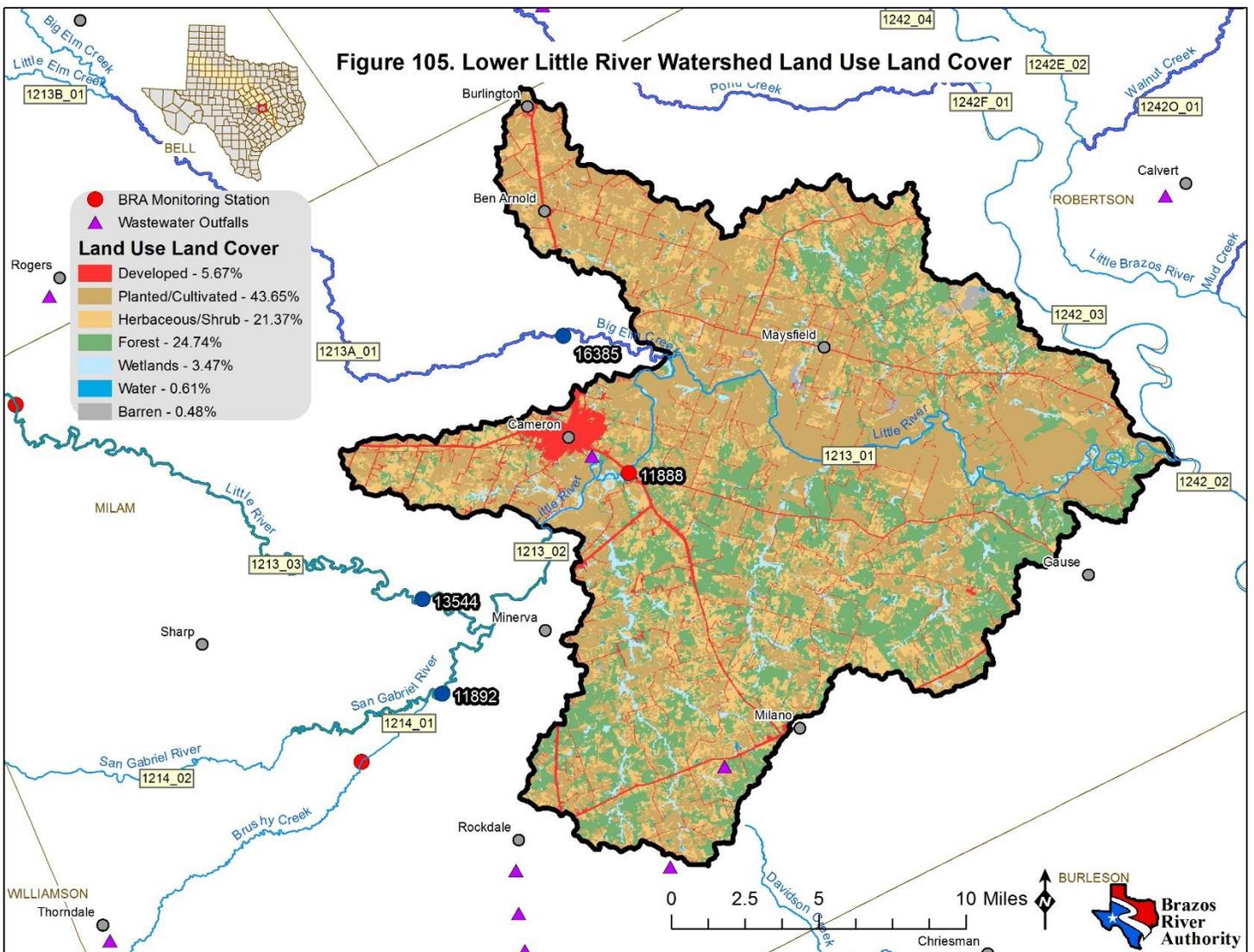
Lower Little River Watershed

Watershed Description:

The Lower Little River Watershed is 281 square miles in area.

Land Use Land Cover in Watershed (Figure 105):

There are five cities in the watershed. There is one municipal wastewater outfall and one private wastewater outfall in the watershed. Dominant landcover includes planted/cultivated land, with a moderate amount of herbaceous/shrubland and forested upland.



Segments in Watershed (Figure 106):

- 1213_01: Little River, from the confluence with the Brazos River upstream to the confluence with City of Cameron WWTP receiving water
Monitoring Station: 11888 LITTLE RIVER AT US 77 BRIDGE SOUTHEAST OF CAMERON
- The downstream portion of 1213_02: Little River, from the City of Cameron receiving water upstream to the confluence with the San Gabriel River

Impairments in Watershed Description (Figure 106):

- None

There are concerns for chlorophyll-*a* and nitrate in 1213_01. There are also concerns for nitrate in 1213_02.

Possible Contributions if Impaired:

Point Sources: There are five cities and two wastewater outfalls within the watershed.

Non-point sources: Agricultural activity could contribute to runoff. Herbaceous/shrubland could provide contributions from feral hogs and wildlife.

Potential non-State Agency Stakeholders:

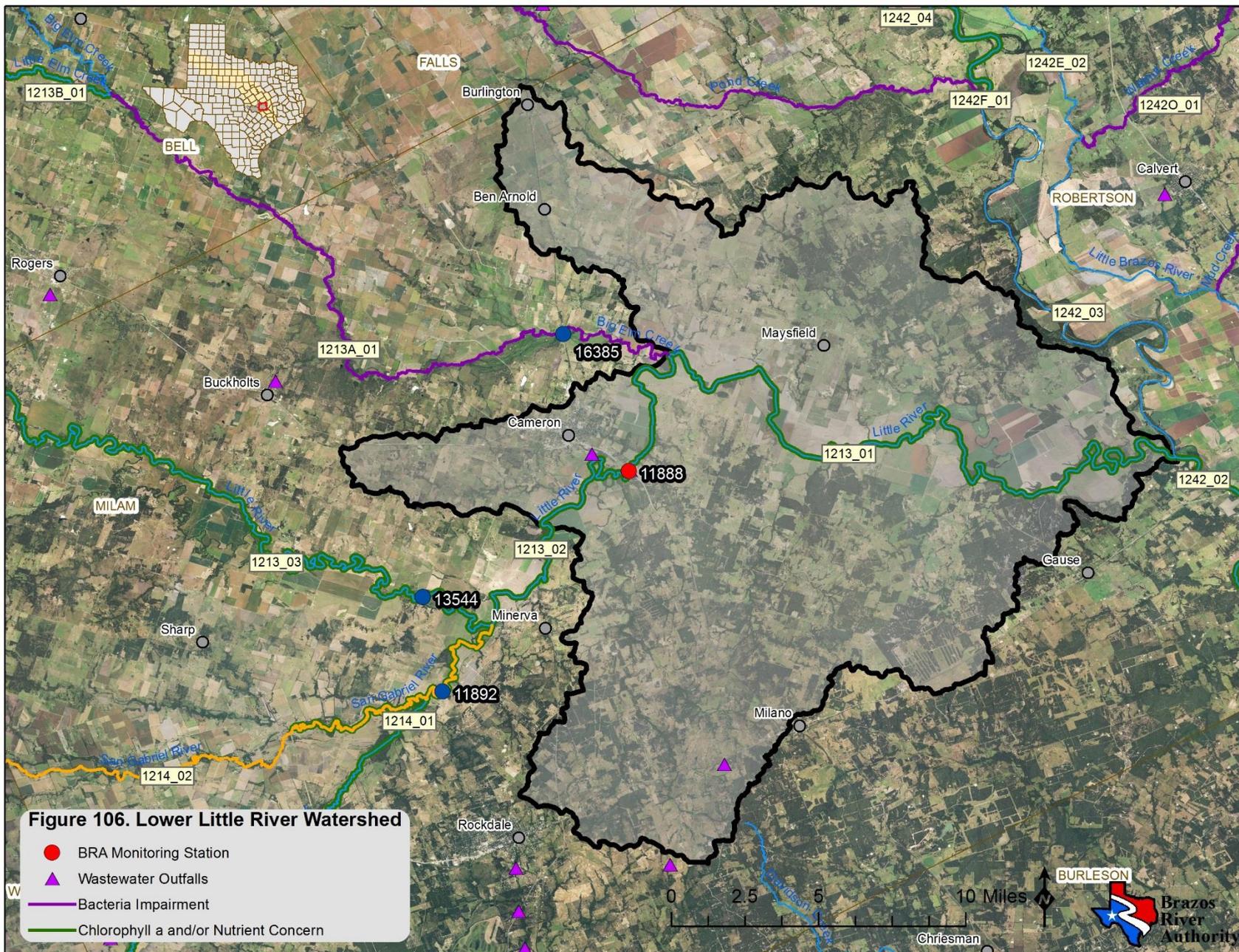
- City of Burlington
- City of Ben Arnold
- City of Maysfield
- City of Cameron
- City of Milano
- Falls County
- Milam County

Actions taken if impaired:

- N/A

Recommendations if Impaired:

- N/A



Brazos River Basin Highlights Report 2015



Brazos River
Authority



Brazos River Authority
4600 Cobbs Drive
Waco, TX 76710

Phone (254) 761-3100 www.brazos.org