Brazos River Basin Highlights Report 2014

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Introduction

For the 2014 Brazos River Basin Highlights Report, a watershed characterization type report was created. In recent Basin Highlights Reports (BHR), water quality of 14 major subwatersheds was presented. For this report, the 14 major subwatersheds are subdivided into a total of 154 smaller subwatersheds based on the USGS generated 10-digit Hydrologic Unit Codes (HUC10). These 154 subwatersheds will be characterized over three reports, the 2014, 2015, and 2016 Basin Highlights Reports. The 2014 BHR characterizes 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. 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 2014, the station is listed with a full name description.

Impairments in Watershed Description:
If an AU in the watershed is impaired in the 2012 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 companies, organizations and cities 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.
Buffalo Springs Lake-North Fork Double Mountain Fork Brazos River Watershed

Watershed Description:
The Buffalo Springs Lake-North Fork Double Mountain Fork Brazos River Watershed is 196 square miles in area.

Land Use Land Cover in Watershed (Figure 1):
There are two small cities in the Buffalo Springs Lake-North Fork Double Mountain Fork Brazos River Watershed. The more populated Lubbock is approximately 3 miles from the north western border of the watershed with three wastewater treatment plants (WWTP) in the watershed. There is a moderate amount of agriculture in the watershed with the most dominant land cover being herbaceous and shrub vegetation.
Segments in Watershed (Figure 2):

1241A_02: Upstream portion of the North Fork Double Mountain Fork Brazos River, from the confluence with Lake Buffalo Springs upstream to the confluence with Yellow House Draw.
   Monitoring Station: 11534 - NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER AT FM 835 APPROX 400 METERS EAST OF THE INTERSECTION OF LOOP 289 AND FM 835 IN LUBBOCK

A portion of 1241A_01: North Fork Double Mountain Fork Brazos River from confluence with the Double Mountain Fork of the Brazos River to Lake Ransom Canyon
   Monitoring Station: 11527 - NORTH FORK OF DOUBLE MOUNTAIN FORK OF BRAZOS RIVER IMMEDIATELY UPSTREAM OF SH 400 N SLATON

1241C_01: Buffalo Springs Lake
   Monitoring Station: 11529 - BUFFALO SPRINGS LAKE AT DAM 266 METERS N AND 597 METERS WEST OF INTERSECTION OF CARDINAL DR AND W LAKE SHORE DRIVE EAST OF LUBBOCK

Impairments in Watershed Description (Figure 2):
- Segment 1241A_02: Recreational Use – Bacteria
  There is also concern for chlorophyll a and nutrients in all three segments of the watershed. This segment is a perennial stream attributed to the presence of wastewater outfalls.

Possible Contributions if Impaired:
- Point Sources: There are three wastewater outfalls in the watershed.
- Non-point sources: Surrounding the watershed there is significant agricultural activity.

Potential non-State Agency Stakeholders:
- City of Lubbock
- City of Buffalo Springs
- City of Ransom Canyon
- Lubbock County

Actions taken if impaired:
- Segment 1241A_02 is 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.
- Possible candidate for E. coli rather than Enterococcus as an indicator for bacterial impairment.
Plum Creek-North Fork Double Mountain Fork Brazos River Watershed

Watershed Description:
The Plum Creek-North Fork Double Mountain Fork Brazos River Watershed is 427 square miles in area.

Land Use Land Cover in Watershed (Figure 3):
There are no cities in the Plum Creek-North Fork Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 4):
A portion of 1241A_01: North Fork Double Mountain Fork Brazos River from confluence with the Double Mountain Fork of the Brazos River to Lake Ransom Canyon

Impairments in Watershed Description (Figure 4):
- None
  There are concerns for chlorophyll $a$ and total phosphorus in 1214A_01.

Possible Contributions if Impaired:
  Point Sources: N/A
  
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
- Lubbock County
- Crosby County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Figure 4. Plum Creek-North Fork Double Mountain Fork Brazos River Watershed

Chlorophyll a and/or Nutrient Concern
Harvey Creek-Spring Creek Watershed

Watershed Description:
The Harvey Creek-Spring Creek Watershed is 167 square miles in area.

Land Use Land Cover in Watershed (Figure 5):
There are no cities in the Harvey Creek-Spring Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 6):
There are no classified or unclassified segments in watershed

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:
  • Crosby County
  • Garza County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Sand Creek-North Fork Double Mountain Fork Brazos River Watershed

Watershed Description:
The Sand Creek-North Fork Double Mountain Fork Brazos River Watershed is 254 square miles in area.

Land Use Land Cover in Watershed (Figure 7):
There is one city in the Sand Creek-North Fork Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 8):
A portion of 1241A_01: North Fork Double Mountain Fork Brazos River from confluence with the Double Mountain Fork of the Brazos River to Lake Ransom Canyon
  Monitoring Station: 11525 - NORTH FORK OF DOUBLE MOUNTAIN FORK OF BRAZOS RIVER IMMEDIATELY UPSTREAM OF SH 207 NORTH OF POST APPROX 2 MI N OF SH 207 AT FM 211

  Monitoring Station: 11523 - NORTH FORK DOUBLE MOUNTAIN FORK BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF US 380 EAST OF POST

Impairments in Watershed Description (Figure 8):
• None
  There are concerns for chlorophyll $\alpha$ and total phosphorus in 1214A_01.

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
• City of Post
• Crosby County

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
South Dokegood Creek Watershed

Watershed Description:
The South Dokegood Creek Watershed is 168 square miles in area.

Land Use Land Cover in Watershed (Figure 9):
There is one city in the South Dokegood Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 10):
There are no classified or unclassified segments in the watershed.

Impairments in Watershed Description (Figure 10):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Buenos
  • Garza County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Figure 5. South Dokegood Creek Watershed
Double Lakes-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Double Lakes-Double Mountain Fork Brazos River Watershed is 361.8 square miles in area.

Land Use Land Cover in Watershed (Figure 11):
There are no cities in the Double Lakes-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 12):
A portion of 1241D_01: South Fork Double Mountain Fork Brazos River upstream of confluence with North Fork Double Mountain Fork

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:
- Lynn County
- Garza County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Salt Creek-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Salt Creek-Double Mountain Fork Brazos River Watershed is 279 square miles in area.

Land Use Land Cover in Watershed (Figure 13):
There are no cities in the Salt Creek-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 14):
A portion of 1241D_01: South Fork Double Mountain Fork Brazos River upstream of confluence with North Fork Double Mountain Fork

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:
- Garza County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Salt and Double Mountain Forks of the Brazos River

Figure 14. Salt Creek-Double Mountain Fork Brazos River Watershed
Grape Creek-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Grape Creek-Double Mountain Fork Brazos River Watershed is 275 square miles in area.

Land Use Land Cover in Watershed (Figure 15):
There are two cities in the Grape Creek-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 16):
A portion of 1241D_01: South Fork Double Mountain Fork Brazos River upstream of confluence with North Fork Double Mountain Fork

1241B_01: Lake Alan Henry
   Monitoring Station 18414: LAKE ALAN HENRY 411 M SOUTH AND 74 M EAST OF DAM CENTERPOINT EAST OF POST TEXAS

Impairments in Watershed Description (Figure 16):
- 1241B_01: Fish consumption use - Mercury in edible tissue

Possible Contributions if Impaired:
   Point Sources: There are no wastewater outfalls in the watershed; point sources are unknown.
   Non-point sources: There are no known non-point sources in the watershed.

Potential non-State Agency Stakeholders:
- City of Justiceberg
- City of Fullerville
- Garza County
- Any marinas or other businesses on or that serve Lake Alan Henry

Actions taken if impaired:
- Segment 1241B_01 is 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:
- Area monitors have requested re-sampling by DSHS
Figure 7. Grape Creek-Doubble Mountain Fork Brazos River Watershed

- TCEQ Monitoring Station
- Mercury in Edible Tissue Impairment
Cooper Creek-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Cooper Creek-Double Mountain Fork Brazos River Watershed is 301 square miles in area.

Land Use Land Cover in Watershed (Figure 17):
There are no cities in the Cooper Creek-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 18):
A portion of 1241_02: Upstream portion of Double Mountain Fork Brazos River, from confluence with Lake Buffalo Springs upstream to confluence with Yellow House Draw

Impairments in Watershed Description (Figure 18):
- None

Possible Contributions if Impaired:
  - Point Sources: N/A
  - Non-point sources: N/A

Potential non-State Agency Stakeholders:
- Kent County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Rough Creek Watershed

Watershed Description:
The Rough Creek Watershed is 213 square miles in area.

Land Use Land Cover in Watershed (Figure 19):
There are no cities in the Rough Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation with developed land cover increasing due to more roads in the watershed.
Segments in Watershed (Figure 20):
There are no classified or unclassified segments in the watershed.

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:
• Scurry County

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Salt and Double Mountain Forks of the Brazos River

Figure 20. Rough Creek Watershed
Gyp Creek-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Gyp Creek-Double Mountain Fork Brazos River Watershed is 302 square miles in area.

Land Use Land Cover in Watershed (Figure 21):
There are no cities in the Gyp Creek-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation with developed land cover increasing due to more roads in the watershed.
Segments in Watershed (Figure 22):
A portion of 1241_02: Upstream portion of Double Mountain Fork Brazos River, from confluence with Lake Buffalo Springs upstream to confluence with Yellow House Draw

A portion of 1241_01: Double Mountain Fork 25 miles near Hwy 83

Impairments in Watershed Description (Figure 22):
• 1241_01: Recreational Use - Bacteria

Possible Contributions if Impaired:
Point Sources: There are no known point sources in the watershed.

Non-point sources: There are no known non-point sources in the watershed. However, herbaceous/shrub and forested areas account for approximately 74% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:
• Stonewall County
• Fisher County
• Local farmers and ranchers

Actions taken if impaired:
• Segment 1241_01 is 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:
• Possibly reassess with Enterococcus as an indicator rather than E. coli.
• Conduct a more thorough watershed evaluation.
Salt and Double Mountain Forks of the Brazos River

Figure 22. Gyp Creek-Double Mountain Fork Brazos River Watershed

Bacteria Impairment
Tonk Creek-Double Mountain Fork Brazos River Watershed

Watershed Description:
The Tonk Creek-Double Mountain Fork Brazos River Watershed is 285 square miles in area.

Land Use Land Cover in Watershed (Figure 23):
There are three cities in Tonk Creek-Double Mountain Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation with developed being the second most dominant land cover in the watershed.
Segments in Watershed (Figure 24):
1241_01: Double Mountain Fork 25 miles near Hwy 83
   Monitoring Station 12029: DOUBLE MOUNTAIN FORK BRAZOS RIVER 91 METERS DOWNSTREAM
   OF US 83 SOUTH OF ASPERMONT

Impairments in Watershed Description (Figure 24):
• 1241_01: Recreational Use – Bacteria

Possible Contributions if Impaired:

Point Sources: There are no known point sources in the watershed.

Non-point sources: There are no known non-point sources in the watershed. However, herbaceous/shrub and forested areas account for approximately 68% of the watershed which is suitable for wildlife.

Potential non-State Agency Stakeholders:
• City of Aspermont
• City of Old Glory
• City of Sagerton
• Stonewall County
• Local Farmers and Ranchers

Actions taken if impaired:
• Segment 1241_01 is 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:
• Possibly reassess with Enterococcus as an indicator rather than E. coli.
• Conduct a more thorough watershed evaluation.
Middle White River Watershed

Watershed Description:
The Middle White River Watershed is 213 square miles in area.

Land Use Land Cover in Watershed (Figure 25):
There are no cities in the Middle White River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation with >99% cover.
Segments in Watershed (Figure 26):
A portion of 1240A_01: Lower 25 miles of the White River above White River Reservoir

Impairments in Watershed Description (Figure 26):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • Crosby County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Lower White River Watershed

Watershed Description:
The Lower White River Watershed is 294 square miles in area.

Land Use Land Cover in Watershed (Figure 27):
There are no cities in the Middle White River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation. There is one reservoir in the watershed and one wastewater outfall.
Segments in Watershed (Figure 28):
A portion of 1240A_01: Lower 25 miles of the White River above White River Reservoir

1240_01: White River Lake
Monitoring Station 12027: WHITE RIVER LAKE AT DAM 146 METERS SOUTH AND 274 METERS WEST OF INTERSECTION OF CROSBY CR 245 AND FM 2794 WEST OF SPUR

1239_01: White River

Impairments in Watershed Description (Figure 28):
- 1240_01 General Use - chloride and TDS.

Possible Contributions if Impaired: as with this entire watershed the source of the dissolved solids are natural, due to the geology of the watershed.
Point Sources: N/A
Non-point sources: N/A

Potential non-State Agency Stakeholders:
- Crosby County
- Garza County
- Kent County
- Any marinas or other businesses on or that serve White River Lake

Actions taken if impaired:
- Segment 1240_01 is 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. It was noted during the 2012 meeting that in drought years White River Lake is typically at 10-15% capacity. At the 2013 meeting it was noted that White River Lake was at 2.5% capacity.

Recommendations if Impaired:
- A water quality standards review may be appropriate.
Figure 11. Lower White River Watershed

- **TCEQ Monitoring Station**
- **TDS, chloride, sulfate, chloride, TDS**
- **Wastewater Outfall**

Salt and Double Mountain Forks of the Brazos River
Headwaters South Fork Brazos River Watershed

Watershed Description:
The Headwaters South Fork Brazos River Watershed is 461 square miles in area.

Land Use Land Cover in Watershed (Figure 29):
There is one city in the Headwaters South Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 30):
A portion of 1238_03: Portion of Salt Fork Brazos River from confluence with Butte Creek in Kent County upstream to headwaters in Crosby County.

Impairments in Watershed Description (Figure 30):
- None

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Canyon Valley
- Garza County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Upper Salt Fork Brazos River Watershed

Watershed Description:
The Upper Salt Fork Brazos River Watershed is 253 square miles in area.

Land Use Land Cover in Watershed (Figure 31):
There is one city in the Upper Salt Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 32):
A portion of 1238_03: Portion of Salt Fork Brazos River from confluence with Butte Creek in Kent County upstream to headwaters in Crosby County.

Impairments in Watershed Description (Figure 32):
- None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Clairemont
- Kent County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Salt and Double Mountain Forks of the Brazos River

Figure 32. Upper Salt Fork Brazos River Watershed
Duck Creek Watershed

Watershed Description:
The Duck Creek Watershed is 378 square miles in area.

Land Use Land Cover in Watershed (Figure 33):
There are three cities in the Duck Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 34):
There are no classified or unclassified waterbodies in this watershed.

Impairments in Watershed Description (Figure 34):
• None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
• City of Spur
• City of Gilpin
• City of Girard

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Figure 34. Duck Creek Watershed
Middle Salt Fork Brazos River Watershed

Watershed Description:
The Middle Salt Fork Brazos River Watershed is 290 square miles in area.

Land Use Land Cover in Watershed (Figure 35):
There is one city in the Middle Salt Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 36):
A portion of 1238_03: Portion of Salt Fork Brazos River from confluence with Butte Creek in Kent County upstream to headwaters in Crosby County.

1238_02: Portion of Salt Fork Brazos River from confluence with Croton Creek in Stonewall County upstream to confluence with Butte Creek in Kent County.
  Monitoring Station 12023: SALT FORK BRAZOS RIVER IMMEDIATELY UPSTREAM OF US 380 EAST OF CLAIREMONT

Impairments in Watershed Description (Figure 36):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Peacock
  • Kent County
  • Stonewall County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Croton Creek Watershed

Watershed Description:
The Croton Creek Watershed is 935 square miles in area.

Land Use Land Cover in Watershed (Figure 37):
There is one city in the Croton Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Salt and Double Mountain Forks of the Brazos River

Segments in Watershed (Figure 38):
1238A_01: Croton Creek

Impairments in Watershed Description (Figure 38):
- None

Possible Contributions if Impaired:
  - Point Sources: N/A
  - Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Dickens
- Dickens County
- Kent County
- Stonewall County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Figure 38. Croton Creek Watershed
North Croton Creek Watershed

Watershed Description:
The North Croton Creek Watershed is 274 square miles in area.

Land Use Land Cover in Watershed (Figure 39):
There are no cities in the North Croton Creek Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 40):
There are no classified or unclassified segments in this watershed.

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:
  • King County
  • Stonewall County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Lower Salt Fork Brazos River Watershed

Watershed Description:
The Lower Salt Fork Brazos River Watershed is 404 square miles in area.

Land Use Land Cover in Watershed (Figure 41):
There is one city in the Lower Salt Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation.
Segments in Watershed (Figure 42):
A portion of 1238_01: Portion of Salt Fork Brazos River from confluence with Double Mountain Fork Brazos River upstream to confluence with Croton Creek in Stonewall County.
  Monitoring Station 12022: SALT FORK BRAZOS RIVER 159 METERS UPSTREAM OF US 83 NORTH OF ASPERMONT

Impairments in Watershed Description (Figure 42):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Swenson
  • City of Aspermont
  • Stonewall County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Figure 42. Lower South Fork Brazos River Watershed

TCEQ Monitoring Station
Little Croton Creek-Brazos River Watershed

Watershed Description:
The Little Croton Creek-Brazos River Watershed is 258 square miles in area.

Land Use Land Cover in Watershed (Figure 43):
There are no cities in the Little Croton Creek-Brazos River Watershed. The dominant land cover in the watershed is herbaceous and shrub vegetation. Watersheds are becoming more developed as we travel down the basin, with a 26% developed land cover in this watershed.
Segments in Watershed (Figure 44):
The upstream portion of 1208_06: Brazos River Above Possum Kingdom Lake from confluence with Lake Creek upstream to the confluence with Salt and Double Mountain Forks of the Brazos River

Impairments in Watershed Description (Figure 44):
- None

Possible Contributions if Impaired:
  - Point Sources: N/A
  - Non-point sources: N/A

Potential non-State Agency Stakeholders:
- King County
- Knox County
- Stonewall County
- Haskell County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Salt and Double Mountain Forks of the Brazos River
Dutchman Creek-Brazos River Watershed

Watershed Description:
The Dutchman Creek-Brazos River Watershed is 328 square miles in area.

Land Use Land Cover in Watershed (Figure 45):
There are six cities in the Dutchman Creek-Brazos River Watershed. The dominant land cover in the watershed is planted and cultivated land, but just barely with approximately 38% cover. Developed cover is increasing further with an approximate 33% cover in this watershed. There are two wastewater outfalls in this watershed.
Segments in Watershed (Figure 46):
The downstream portion of 1208_06: Brazos River Above Possum Kingdom Lake from confluence with Lake Creek upstream to the confluence with Salt and Double Mountain Forks of the Brazos River

Impairments in Watershed Description (Figure 46):
- None

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Benjamin
- City of Munday
- City of Knox City
- City of O’Brien
- City of Rochester
- City of Rule
- Knox County
- Haskell County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Lake Creek Watershed

Watershed Description:
The Lake Creek Watershed is 211 square miles in area.

Land Use Land Cover in Watershed (Figure 47):
There is one city and two wastewater outfalls in the Lake Creek Watershed. Both developed (44%) and planted/cultivated (46%) land has increased as compared to further upstream in the basin.
Segments in Watershed (Figure 48):
- There are no classified or unclassified segments in this watershed.

Impairments in Watershed Description (Figure 48):
- None

Possible Contributions if Impaired:
Point Sources: N/A
Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Munday
- City of Goree
- Knox County
- Haskell County
- Baylor County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Seymour Creek-Brazos River Watershed

Watershed Description:
The Seymour Creek-Brazos River Watershed is 135 square miles in area.

Land Use Land Cover in Watershed (Figure 49):
There are three cities and two wastewater outfalls in the Seymour Creek-Brazos River Watershed. The dominant land cover in the watershed is developed land.
Segments in Watershed (Figure 50):
- 1208_05: Brazos River Above Possum Kingdom Lake from confluence with Millers Creek upstream to confluence with Lake Creek
  Monitoring station 11871: BRAZOS RIVER AT US 183/US 277 AT SEYMOUR

Impairments in Watershed Description (Figure 50):
- Recreational Use – Bacteria

Possible Contributions if Impaired:
  Point Sources:
  - Wastewater outfalls

  Non-point sources:
  - Urban run-off
  - Agricultural run-off
  - Wildlife

Potential non-State Agency Stakeholders:
  - City of Seymour
  - City of Red Springs
  - City of Bomarton

Actions taken if impaired:
  - Segment 1208_05 is 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.
  - An RUAA has been conducted in segment 1208 and results have led to the recommendation is that the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if Impaired:
  - A watershed evaluation may be appropriate
Miller’s Creek Watershed

Watershed Description:
The Miller’s Creek Watershed is 341 square miles in area.

Land Use Land Cover in Watershed (Figure 51):
There are no cities in the Miller’s Creek Watershed. The dominant land cover in the watershed is herbaceous/scrub land.
Salt and Double Mountain Forks of the Brazos River

Segments in Watershed (Figure 52):
- 1208A_01: Miller's Creek Reservoir

Impairments in Watershed Description (Figure 52):
- None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
- Baylor County
- Haskell County
- Throckmorton County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Salt and Double Mountain Forks of the Brazos River

Figure 52. Millers Creek Watershed
Boggy Creek-Brazos River Watershed

Watershed Description:
The Boggy Creek-Brazos River Watershed is 458 square miles in area.

Land Use Land Cover in Watershed (Figure 53):
There are two cities in the Boggy Creek-Brazos River Watershed. The dominant land cover in the watershed is herbaceous/scrub land.
Segments in Watershed (Figure 54):
1208_04: Brazos River Above Possum Kingdom Lake from confluence with Boggy Creek upstream to confluence with Millers Creek
  Monitoring station 11870: BRAZOS RIVER 71 METERS DOWNSTREAM OF SH 79 NORTHEAST OF THROCKMORTON

Impairments in Watershed Description (Figure 54):
  • 1208_04: Recreational Use – Bacteria

Possible Contributions if Impaired:
Point Sources:
  • No known point sources in watershed

Non-point sources:
  • Half of the watershed is covered by herbaceous and shrub vegetation therefore there may be a significant amount of wildlife activity.

Potential non-State Agency Stakeholders:
  • City of Elbert
  • City of Westover
  • Baylor County
  • Throckmorton County
  • Young County

Actions taken if impaired:
  • Segment 1208_04 is 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.
  • An RUAA has been conducted in segment 1208 and results have led to the recommendation is that the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if Impaired:
  • A watershed evaluation may be appropriate.
Salt and Double Mountain Forks of the Brazos River

Figure 54. Boggy Creek Watershed

TCEQ Monitoring Station
Elm Creek Watershed

Watershed Description:
The Elm Creek Watershed is 302 square miles in area.

Land Use Land Cover in Watershed (Figure 55):
There is one city and one wastewater outfall in the Elm Creek Watershed. The dominant land cover in the watershed is herbaceous/scrub land.
Segments in Watershed (Figure 56):
- There are no classified or unclassified segments in the watershed

Impairments in Watershed Description (Figure 56):
- None

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Throckmorton
- Throckmorton County
- Young County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Fish Creek-Brazos River Watershed

Watershed Description:
The Fish Creek-Brazos River Watershed is 213 square miles in area.

Land Use Land Cover in Watershed (Figure 57):
There is one city in the Fish Creek-Brazos River Watershed. The dominant land cover in the watershed is herbaceous/scrub land.
Segments in Watershed (Figure 58):
The downstream portion of 1208_03: Brazos River Above Possum Kingdom Lake from confluence with Fish Creek upstream to confluence with Boggy Creek

Upstream portion of 1208_02: Brazos River Above Possum Kingdom Lake - portion of segment from confluence with Spring Branch upstream to confluence with Fish Creek

Impairments in Watershed Description (Figure 58):
• 1208_02: Recreational Use - Bacteria

Possible Contributions if Impaired:
Point Sources:
• No known point source contributions.

Non-point sources:
• Half of the watershed is covered by herbaceous and shrub vegetation therefore there may be a significant amount of wildlife activity.

Potential non-State Agency Stakeholders:
• City of Newcastle
• Young County

Actions taken if impaired:
• Segment 1241A_03 is 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.
• An RUAA has been conducted in segment 1208 and results have led to the recommendation is that the segment remain classified as a Primary Contact Recreation (PCR) segment.

Recommendations if Impaired:
• A watershed evaluation may be appropriate.
Headwaters Clear Fork Brazos River Watershed

Watershed Description:
The Headwaters Clear Fork Brazos River Watershed is 308 square miles in area.

Land Use Land Cover in Watershed (Figure 59):
There are two cities and one wastewater outfall in the Headwaters Clear Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous/scrub land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 60):
- Upstream portion of 1232_04: Clear Fork Brazos River from confluence with Bitter Creek upstream to end of segment
  Monitoring station 12001: CLEAR FORK BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF SH 70 NORTH OF ROBY

Impairments in Watershed Description (Figure 60):
- None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of North Roby
- City of Rotan
- Scurry County
- Fisher County
- South Central Water Company

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Linn Creek-Cottonwood Creek Watershed

Watershed Description:
The Linn Creek-Cottonwood Creek Watershed is 308 square miles in area.

Land Use Land Cover in Watershed (Figure 61):
There are three cities in the Linn Creek-Cottonwood Creek Watershed. The dominant land cover in the watershed is developed land.
Segments in Watershed (Figure 62):
There are no classified or unclassified segments in this watershed.

Impairments in Watershed Description (Figure 62):
- None

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Roby
- City of Bernecker
- City of Roscoe
- Fisher County
- Nolan County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Figure 62. Linn Creek-Cottonwood Creek Watershed
Plum Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Plum Creek-Clear Fork Brazos River Watershed is 225 square miles in area.

Land Use Land Cover in Watershed (Figure 63):
There are three cities in the Plum Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous/shrub land (43%) followed closely by developed land (41%).
Clear Fork of the Brazos River

Segments in Watershed (Figure 64):
Portion of 1232_04: Clear Fork Brazos River from confluence with Bitter Creek upstream to end of segment
  Monitoring Station 11999: CLEAR FORK BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF FM 1812 NORTHWEST OF NOODLE

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 Sylvester
  • City of Longworth
  • City of Royston
  • Fisher County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Bitter Creek-Sweetwater Creek Watershed

Watershed Description:
The Bitter Creek-Sweetwater Creek Watershed is 418 square miles in area.

Land Use Land Cover in Watershed (Figure 65):
There are four cities and three wastewater outfalls in the Bitter Creek-Sweetwater Creek Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 66):
1237_01: Lake Sweetwater
   Monitoring Station 12021: LAKE SWEETWATER MID LAKE 367 METERS AND 718 METERS WEST
   OF INTERSECTION OF NOLAN CR 250 AND FM 2035

Impairments in Watershed Description (Figure 66):
   • None

Possible Contributions if Impaired:
   Point Sources: N/A
   Non-point sources: N/A

Potential non-State Agency Stakeholders:
   • City of Escota
   • City of Tesco
   • City of Sweetwater
   • City of Maryneal
   • Nolan County
   • Fisher County
   • Jones County
   • Lone star Industries, Inc.

Actions taken if impaired:
   • N/A

Recommendations if Impaired:
   • N/A
Noodle Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Noodle Creek-Clear Fork Brazos River Watershed is 305 square miles in area.

Land Use Land Cover in Watershed (Figure 67):
There are four cities and one wastewater outfalls in the Noodle Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is developed land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 68):
Portion of 1232_04: Clear Fork Brazos River from confluence with Bitter Creek upstream to end of segment

Portion of 1232_03: Clear Fork Brazos River from confluence with Deadman Creek upstream to confluence with Bitter Creek

Impairments in Watershed Description (Figure 68):
- There are no impairments in this watershed; however there are concerns in 1232_03 based on screening levels for chlorophyll $a$ and dissolved oxygen.

Possible Contributions if Impaired:
Point Sources: N/A
Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Hawley
- City of Trent
- City of Merkel
- City of Blair
- Jones County
- Taylor County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Mulberry Creek Watershed

Watershed Description:
The Mulberry Creek Watershed is 235 square miles in area.

Land Use Land Cover in Watershed (Figure 69):
There are no cities in the Mulberry Creek Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 70):
There are no classified or unclassified segments in this watershed.

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:
• Jones County
• Taylor County

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Clear Fork of the Brazos River

Figure 70. Mulberry Creek Watershed
Elm Creek Watershed

Watershed Description:
The Elm Creek Watershed is 479 square miles in area.

Land Use Land Cover in Watershed (Figure 71):
There are eight cities in the Elm Creek Watershed. There is one reservoir in the watershed. The dominant land cover in the watershed is herbaceous/shrub land. There is however a large urban area around Abilene.
Segments in Watershed (Figure 72):
1236_01: Fort Phantom Reservoir
  Monitoring Station 12010: LAKE FORT PHANTOM HILL MID LAKE NEAR DAM 344 METERS SOUTH AND 1.23 KM EAST OF INTERSECTION OF FM 1082 AND FM 600
1236A_01: Cedar Creek
  Monitoring station 11521: LAKE KIRBY ON NORTHEAST SIDE 526 METERS SOUTH AND 619 METERS WEST OF INTERSECTION OF HARDISON LANE AND MAPLE STREET

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 Impact
  • City of Abilene
  • City of Tye
  • City of Elmdale
  • City of Caps
  • City of View
  • City of Potosi
  • City of Buffalo Gap
  • Taylor County
  • Jones County
  • Any marinas or other businesses on or that serve Lake Fort Phantom Hill

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Figure 72. Elm Creek Watershed
- Wastewater Outfall
- TCEQ Monitoring Station
Deadman Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Deadman Creek-Clear Fork Brazos River Watershed is 258 square miles in area.

Land Use Land Cover in Watershed (Figure 73):
There are no cities in the Deadman Creek-Clear Fork Brazos River Watershed. There is one wastewater outfall in the watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 74):
Portion of 1232_03: Clear Fork Brazos River from confluence with Deadman Creek upstream to conf.
With Bitter Creek
  Monitoring Station 11992: CLEAR FORK BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF FM 600 NEAR NUGENT
1232B_01: Deadman Creek from the confluence with Clear Fork Brazos, upstream to city of Abilene WWTP receiving water
  Monitoring Station 11697: DEADMAN CREEK IMMEDIATELY UPSTREAM OF BUCK NAIL RANCH ROAD 3 MILES SOUTHEAST OF NUGENT

1232B_02: Deadman Creek upstream of WWTP outfall to headwaters

Impairments in Watershed Description (Figure 74):
- 1232B_01 is impaired for Recreational Use - Bacteria
- 1232_03 also has concerns for macrobenthic community, nitrate, orthophosphorus and total phosphorus

Possible Contributions if Impaired:
Point Sources:
- There are no urban areas in this watershed, however; there is one wastewater outfall upstream of the impaired portion of the segment. This stream is perennial due to effluent from this outfall. Special studies on California Creek, Paint Creek, and Deadman Creek identified municipal discharges as a possible point source of bacteria and nutrient loadings.

Non-point sources:
- Deadman Creek primarily runs through the portion of the watershed dominated by planted/cultivated land use. Special studies on California Creek, Paint Creek, and Deadman Creek have also identified agricultural non-point pollution as a possible non-point source of nutrient loadings.

Potential non-State Agency Stakeholders:
- Jones County
- Shackleford County

Actions taken if impaired:
- Segment 1232B_01 is 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:
- A review of the standards for this segment may be conducted before a management strategy is selected, including possible revision to the water quality standards.
Chimney Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Chimney Creek-Clear Fork Brazos River Watershed is 356 square miles in area.

Land Use Land Cover in Watershed (Figure 75):
There is one city in the Chimney Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 76):
Portion of 1232_02: Clear Fork Brazos River from confluence with Hubbard Creek upstream to
confluence with Deadman Creek
  Monitoring Station 11990: CLEAR FORK BRAZOS RIVER IMMEDIATELY DOWNSTREAM OF SH 6 IN
  LUEDERS

  Monitoring Station 18766: CLEAR FORK BRAZOS RIVER AT BURKETT BEND 1.41 KM UPSTREAM
  OF PAINT CREEK CONFLUENCE

Impairments in Watershed Description (Figure 76):
• There are no impairments in this watershed; however there are concerns based on screening
  levels for chlorophyll $a$, orthophosphorus and phosphorus.

Possible Contributions if Impaired:
  Point Sources: N/A

  Non-point sources: N/A

Potential non-State Agency Stakeholders:
• City of Lueders
• Jones County
• Shackleford County
• Throckmorton County

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Upper California Creek Watershed

Watershed Description:
The Upper California Creek Watershed is 286 square miles in area.

Land Use Land Cover in Watershed (Figure 77):
There are five cities in the Upper California Creek Watershed. There are two wastewater outfalls in the watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 78):
- 1232A_02: Portion of California Creek from confluence with Thompson Creek upstream to headwaters in Fisher County.

Impairments in Watershed Description (Figure 78):
- None

Possible Contributions if Impaired:
  - Point Sources: N/A
  - Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Tuxedo
- City of Hamlin
- City of Celotex
- City of Radium
- City of McCaulley
- Sylvester McCaulley WSC
- Fisher County
- Jones County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Lower California Creek Watershed

Watershed Description:
The Lower California Creek Watershed is 257 square miles in area.

Land Use Land Cover in Watershed (Figure 79):
There are four cities in the Upper California Creek Watershed. The land cover in the watershed is split nearly evenly between developed (34%), planted/cultivated (32%), and herbaceous/shrub land (32%).
Segments in Watershed (Figure 80):
1232A_01: Portion of California Creek from confluence with Paint Creek in Haskell County upstream to confluence with Thompson Creek in Jones County.

Monitoring Station 11709: CALIFORNIA CREEK AT FM 142 EAST OF STAMFORD

Impairments in Watershed Description (Figure 80):
- 1232A_01: Recreational Use - Bacteria
- There are also concerns for chlorophyll $a$, nitrate, impaired fish community, and impaired macrobenthic community.

Possible Contributions if Impaired:
Point Sources:
- No known point sources in the watershed.

Non-point sources:
- The land cover in the watershed is split nearly evenly between developed (34%), planted/cultivated (32%), and herbaceous/shrub land (32%). Special studies on California Creek, Paint Creek, and Deadman Creek have also identified agricultural non-point pollution as a possible non-point source of nutrient loadings.

Potential non-State Agency Stakeholders:
- City of Avoca
- City of Corinth
- City of Anson
- City of Funston
- City of McCaulley
- Jones County
- Haskell County

Actions taken if impaired:
- Segment 1232A_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:
- A review of the standards may be conducted before a management strategy is selected, including the possible revision to the water quality standards. Although the stream is classified as perennial, observations by monitoring entity indicate stream is somewhat intermittent.
Upper Paint Creek Watershed

Watershed Description:
The Upper Paint Creek Watershed is 368 square miles in area.

Land Use Land Cover in Watershed (Figure 81):
There are three cities in the Upper Paint Creek Watershed. There is one reservoir in the watershed. There are four wastewater outfalls in the watershed. The dominant land cover in the watershed is planted/cultivated land (34%), followed closely by herbaceous/shrub land (33%) and then developed land (31%).
Segments in Watershed (Figure 82):
1232C_03: Paint Creek from confluence with Stink Creek upstream to headwaters in Jones County.

1232C_02: Paint Creek from headwaters of Lake Stamford upstream to confluence with Stink Creek

1235_01: Lake Stamford
   Monitoring Station 12006: LAKE STAMFORD NEAR DAM 72 METERS NORTH AND 3.41 KM EAST
   OF INTERSECTION OF LAKE SHORE SITES RD AND FM 3495

Impairments in Watershed Description (Figure 82):
• None

Possible Contributions if Impaired:
   Point Sources: N/A
   Non-point sources: N/A

Potential non-State Agency Stakeholders:
• City of Haskell
• City of Stamford
• City of Sagerton
• AEP Texas North Company
• Haskell County
• Any marinas or other businesses on or that serve Lake Stamford

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Figure 82. Upper Paint Creek Watershed

- **Wastewater Outfall**
- **TCEQ Monitoring Station**
Lower Paint Creek Watershed

Watershed Description:
The Lower Paint Creek Watershed is 155 square miles in area.

Land Use Land Cover in Watershed (Figure 83):
There are no cities in the Lower Paint Creek Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 84):
1232C_01: Paint Creek from confluence with Clear Fork Brazos River upstream to Lake Stamford

Impairments in Watershed Description (Figure 84):
- No impairments in this watershed; however there are concerns based on screening levels for chlorophyll a.

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- Haskell County
- Throckmorton County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Watershed Description:
The Foyle Creek-Clear Fork Brazos River Watershed is 305 square miles in area.

Land Use Land Cover in Watershed (Figure 85):
There is one city in the Foyle Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 86):
The upstream portion of 1232_02: Clear Fork Brazos River from confluence with Hubbard Creek upstream to confluence with Deadman Creek
   Monitoring Station: 11985 – CLEAR FORK BRAZOS RIVER AT US 283 NORTHEAST OF FORT GRIFFIN

Impairments in Watershed Description (Figure 86):
- No impairments in this watershed; however there are concerns based on screening levels for chlorophyll $a$, orthophosphorus and total phosphorus.

Possible Contributions if Impaired:
- Point Sources: N/A
- Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Fort Griffin
- Throckmorton County
- Shackelford County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Figure 86. Foyle Creek-Clear Fork Brazos River Watershed

TCEQ Monitoring Station
Chlorophyll a and/or Nutrient Concern
Kings Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Kings Creek-Clear Fork Brazos River Watershed is 206 square miles in area.

Land Use Land Cover in Watershed (Figure 87):
There is one city in the Kings Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 88):
The downstream portion of 1232_02: Clear Fork Brazos River from confluence with Hubbard Creek upstream to confluence with Deadman Creek

Impairments in Watershed Description (Figure 88):
- There are no impairments in this watershed; however there are concerns based on screening levels for chlorophyll a in segment 1232_02.

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Woodson
- Throckmorton County
- Stephens County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Bufford Creek-Clear Fork Brazos River Watershed

Watershed Description:
The Bufford Creek-Clear Fork Brazos River Watershed is 116 square miles in area.

Land Use Land Cover in Watershed (Figure 89):
There are two cities in the Bufford Creek-Clear Fork Brazos River Watershed. The dominant land cover in the watershed is developed land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 90):
• 1232_01: Clear Fork Brazos River from confluence with Brazos River, upstream to conf. With Hubbard Creek

Impairments in Watershed Description (Figure 90):
• None

Possible Contributions if Impaired:
   Point Sources: N/A
   Non-point sources: N/A

Potential non-State Agency Stakeholders:
• City of Eliasville
• City of Southbend
• Young County
• Stephens County

Actions taken if impaired:
• N/A

Recommendations if Impaired:
• N/A
Salt Prong Hubbard Creek Watershed

Watershed Description:
The Salt Prong Hubbard Creek Watershed is 147 square miles in area.

Land Use Land Cover in Watershed (Figure 91):
There is one city in the Salt Prong Hubbard Creek Watershed. There are two wastewater outfalls in the watershed. The dominant land cover in the watershed is split nearly evenly between developed land and herbaceous/shrub land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 92):
There are no classified or unclassified segments in this watershed.

Impairments in Watershed Description (Figure 92):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Albany
  • Shackelford County

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Upper Hubbard Creek Watershed

Watershed Description:
The Upper Hubbard Creek Watershed is 191 square miles in area.

Land Use Land Cover in Watershed (Figure 93):
There are no cities in the Upper Hubbard Creek Watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 94):
A portion of 1233B_01: Hubbard Creek

Impairments in Watershed Description (Figure 94):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • Shackelford County
  • Callahan County

Actions taken if Impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Lower Hubbard Creek Watershed

Watershed Description:
The Lower Hubbard Creek Watershed is 147 square miles in area.

Land Use Land Cover in Watershed (Figure 95):
There is one city in the Lower Hubbard Creek Watershed. There is one reservoir in this watershed. The dominant land cover in the watershed is developed land (49%) followed closely by herbaceous/shrub land (47%).
Clear Fork of the Brazos River

Segments in Watershed (Figure 96):
A portion of 1233B_01: Hubbard Creek

1233_02: Hubbard Creek arm of Hubbard Creek Reservoir

A portion of 1233_03: Big Sandy Creek arm of Hubbard Creek Reservoir

1233_01: Main body of Hubbard Creek Reservoir
   Monitoring Station: 12002 – HUBBARD CREEK RESERVOIR NEAR DAM 2.41 KM SOUTH AND 766 METERS WEST OF INTERSECTION OF US 183 AND STEPHENS CR 274

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:
   • Shackelford County
   • Stephens County
   • Any marinas or other businesses on or that serve Hubbard Creek Reservoir

Actions taken if impaired:
   • N/A

Recommendations if Impaired:
   • N/A
Figure 96. Lower Hubbard Creek Watershed

- TCEQ Monitoring Station
Deep Creek Watershed

Watershed Description:
The Deep Creek Watershed is 273 square miles in area.

Land Use Land Cover in Watershed (Figure 97):
There are three cities in the Deep Creek Watershed. There are two wastewater outfalls in this watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Clear Fork of the Brazos River

Segments in Watershed (Figure 98):
There are no classified or unclassified segments in this watershed.

Impairments in Watershed Description (Figure 98):
- None

Possible Contributions if Impaired:
  - Point Sources: N/A
  - Non-point sources: N/A

Potential non-State Agency Stakeholders:
- City of Moran
- City of Baird
- City of Putnam
- Callahan County
- Shackelford County

Actions taken if impaired:
- N/A

Recommendations if Impaired:
- N/A
Figure 98. Deep Creek Watershed

▲ Wastewater Outfall
Big Sandy Watershed

Watershed Description:
The Big Sandy Watershed is 358 square miles in area.

Land Use Land Cover in Watershed (Figure 99):
There are two cities in the Big Sandy Watershed. There are two wastewater outfalls in this watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 100):
A portion of 1233_03: Big Sandy Creek arm of Hubbard Creek Reservoir

1233A_01: Big Sandy Creek
  Monitoring Station 13640: BIG SANDY CREEK 213 METERS DOWNSTREAM OF THE CONFLUENCE WITH BATTLE CK 2.99 KM UPSTREAM OF FM 576 9.8 MILES SOUTHWEST OF BRECKENRIDGE

1234_01: Lake Cisco
  Monitoring Station 12005: LAKE CISCO NEAR FM 2807 1.83 KM NORTH AND 1.51 KM WEST OF INTERSECTION OF FM 2087 AND SH 6

Impairments in Watershed Description (Figure 100):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A
  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Cisco
  • City of Dothan
  • Stephens County
  • Eastland County
  • Any marinas or other businesses on or that serve Hubbard Creek Reservoir
  • Any marinas or other businesses on or that serve Lake Cisco

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A
Figure 100. Big Sandy Creek Watershed

- Wastewater Outfall
- TCEQ Monitoring Station

Clear Fork of the Brazos River
Gunsolus Creek Watershed

Watershed Description:
The Gunsolus Creek Watershed is 170 square miles in area.

Land Use Land Cover in Watershed (Figure 101):
There is one city in the Gunsolus Creek Watershed. There is one reservoir in the watershed. There is one wastewater outfall in this watershed. The dominant land cover in the watershed is herbaceous/shrub land.
Segments in Watershed (Figure 102):
There are no classified or unclassified segments in this watershed; however there is a monitoring station on Lake Daniel.

  Monitoring Station: 17941 – LAKE DANIEL IN MAIN POOL 0.4 KM UPSTREAM FROM CENTER OF DAM STRUCTURE 12.9 KM SOUTH OF BRECKENRIDGE

Impairments in Watershed Description (Figure 102):
  • None

Possible Contributions if Impaired:
  Point Sources: N/A

  Non-point sources: N/A

Potential non-State Agency Stakeholders:
  • City of Breckenridge
  • Stephens County
  • Any marinas or other businesses on or that serve Lake Daniel

Actions taken if impaired:
  • N/A

Recommendations if Impaired:
  • N/A