

**Central and Southeast Texas Recreational Use-Attainability Analyses Project
Wickson Creek (Segment 1209E) Basic RUAA**

Results Report

Contract No. 582-9-90440
EIH Technical Report # 10-013

Prepared by:
George Guillen & Jenny Wrast
University of Houston-Clear Lake

Principal Investigator

George Guillen



Environmental Institute of Houston
University of Houston Clear Lake
2700 Bay Area Blvd
Houston, Texas 77058

October 8, 2010

PREPARED IN COOPERATION WITH THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

The preparation of the report was financed through grants from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality

Federal Grant #07-09 106 Categorical Water Pollution Control 98665304 (State USAS Grant #998807)

Federal Grant #09-11 106 Categorical Water Pollution Control 98665305 (State USAS Grant #998810)

TCEQ Contact:
Amanda Ross
Total Maximum Daily Load Team
Texas Commission on Environmental Quality
P.O. BOX 13087
Austin, Texas 78711-3087
512-239-6646
aross@tceq.state.tx.us

Table of Contents

| | |
|--|----|
| Introduction..... | 5 |
| Problem Statement | 5 |
| Objectives | 5 |
| 1. Reconnaissance and Site Selection..... | 5 |
| 2. Basic Recreational Use Attainability Analysis | 5 |
| 3. Public Participation | 6 |
| Study Area | 6 |
| Description of Water Body | 6 |
| Environmental Features and Population Characteristics | 7 |
| Watershed Characterization | 7 |
| Permitted Discharges (Municipal, Industrial, Stormwater) | 7 |
| Potential Nonpoint Sources..... | 7 |
| Site Reconnaissance Summary | 8 |
| Methodologies..... | 11 |
| RUAA Survey Site Selection and Descriptions..... | 11 |
| Sampling Methods | 15 |
| Field Survey Descriptions..... | 16 |
| Results..... | 17 |
| Physical Evaluation and Flow..... | 17 |
| Recreational Uses..... | 17 |
| Summary..... | 21 |
| Literature Cited..... | 22 |
| RUAA Summary Form..... | 23 |

List of Figures

| | |
|--|----|
| Figure 1. Basic RUAA reconnaissance sites on Wickson Creek, Segment 1209E | 10 |
| Figure 2. Basic RUAA survey sites on Wickson Creek, Segment 1209E, selections based on river mile/assessment units, accessibility, and recreational features | 13 |
| Figure 3. Pictures from field survey sites 2, 5, and 10 depicting the various physical attributes observed along Wickson Creek, Segment 1209E..... | 14 |
| Figure 4. Basic RUAA survey sites on Wickson Creek, Segment 1209E, with depictions of observed evidence of recreational uses, and impediments.. | 20 |

List of Tables

| | |
|--|----|
| Table 1. Site reconnaissance for Basic RUAA on Wickson Creek, Segment 1209E..... | 9 |
| Table 2. Survey sites for the Basic RUAA Survey on Wickson Creek, Segment 1209E (corresponding to Figure 2 and Table 1)..... | 12 |
| Table 3. Physical parameters from the basic recreational use attainability analysis field surveys conducted on Wickson Creek, Segment 1209E..... | 18 |
| Table 4. Physical characteristics of Riparian Zone and Dominant Substrate of the field survey sites sampled during the Basic Recreational Use Attainability Analysis on Wickson Creek, Segment 1209E | 18 |
| Table 5. Observed evidence of recreational use and Impediments to recreational use documented on Wickson Creek, Segment 1209E, for the Basic Recreational Use Attainability Analysis. | 19 |

Appendices

Appendix 1 Contact Information Forms and Supporting Documents

Appendix 2 Field Data Sheets

Appendix 3 Photographic Record

Appendix 4 Weather Condition Summary

Appendix 5 Google Earth Interactive Map

Introduction

Problem Statement

Recreational Use-Attainability Analyses (RUAA) are scientific assessments that are used to determine existing and attainable recreational use for a water body and determine if that use might be different than the presumed recreational use, as specified in the Clean Water Act. In September, 2009 a Basic RUAA was initiated on Wickson Creek, Segment 1209E. This Basic RUAA Report will provide the Texas Commission on Environmental Quality (TCEQ) Standards Group with relevant information to help determine the appropriate attainable recreation use for Wickson Creek. The completion of this Basic RUAA consisted of several important interrelated components including 1) reconnaissance and site selection, 2) Basic RUAA and 3) public outreach. The objectives of each component are listed below.

Objectives

1. Reconnaissance and Site Selection

The primary objective of this phase is to select survey sites that would be accessible to users and most likely characterize recreational uses in the watershed. This was accomplished primarily with the input of local, state and regional agency staff familiar with the watershed, as well examination of aerial imagery. An initial stakeholder meeting occurred on March 9, 2010 at the Navasota Center, Navasota TX. Reconnaissance surveys were conducted on January 14, 2010 and provided the basis for site selection for discussion in this meeting.

2. Basic Recreational Use Attainability Analysis

The primary objective of the Wickson Creek RUAA was to characterize the recreational use and potential impediments to use for this stream. The RUAA field surveys were conducted on the weekend of May 29, 2010, to collect information on the water body and associated uses.

During these dates, field surveys were conducted at selected sites with the highest probability of detecting recreation use. The objective was to document and characterize observed use, site conditions (hydrology, physical attributes), and weather during the survey the RUAA field surveys.

3. Public Participation

The objective of the public participation phase of the Basic RUAA was to solicit as much information from various watershed stakeholders including agency staff, citizens, recreational user groups, and other interested parties on the historical and current recreational uses in Wickson Creek. This included soliciting information on recreational uses by sending out emails to key organizations and staff familiar with the watershed. The stakeholder contact list is provided in Appendix 1. In addition, on March 9, 2010 a stakeholder meeting was held to gather information on the watershed including likely recreational access points.

Study Area

Description of Water Body

Wickson Creek is a tributary to the Navasota River watershed, which is located within the Brazos River Basin. Segment 1209E is an unclassified segment by the TCEQ and is approximately 33.2 miles in length. Segment 1209E begins at the confluence with an unnamed first order tributary (approximately 1.3 km upstream of Reliance Road crossing) and continues to the confluence with an unnamed first order tributary approximately 15 meters upstream of Dilly Shaw Road (TCEQ, 2008). Wickson Creek flows through flat terrain with local shallow dissections. Its clay and sandy loam soil supports live oak, mesquite, and hackberry, with some grasses (Handbook of Texas online, 2010). Wickson Creek is on the state's 303(d) list for

geometric mean values that exceed the bacteria criteria associated with primary recreation uses (TCEQ, 2008).

Environmental Features and Population Characteristics

The climate in the Navasota River Watershed is classified as having hot, humid summers and mild winters. Wickson Creek has been disturbed by human activities that have altered both the land use and vegetation cover of the watershed. These activities include the construction of roads and in-stream sewer lines, conversion of land for agriculture, and the building of commercial businesses and residential neighborhoods. The area can be described as rural with a very sparse population density.

Watershed Characterization

The Navasota River watershed traverses flat to rolling terrain with local shallow depressions, surfaced by clay and sandy loams that support water-tolerant hardwoods, conifers, and grasses. The riparian zone is minimally impacted by development. The watershed of Wickson Creek is predominantly rural with agriculture being the primary land use.

Permitted Discharges (Municipal, Industrial, Stormwater)

Wickson Creek is affected by storm water runoff from agricultural, industrial, and urban areas. Under TPDES, the TCEQ does not have any issued permits to discharge treated wastewater to the segment 1209E watershed.

Potential Nonpoint Sources

Potential sources of nonpoint source pollution in the watershed include on-site sewage facilities and runoff from agricultural lands. For any urban collection and treatment system, sanitary sewer overflows are possible sources of bacteria loadings to receiving waters. Wickson

Creek (Segment 1209E) watershed can be described as rural with no permitted waste water treatment facilities (WWTF). This fact suggests that there are potentially a high number of on-site sewage facilities (OSSFs or septic systems) in use in the watershed. OSSFs require routine repairs and maintenance to avoid failures causing potential leaks or overflows. Poorly maintained OSSFs are a potential source of bacteria loadings into Wickson Creek watershed.

Directly adjacent to Wickson Creek there are agriculture grazing tracts. These tracts at times provide livestock with direct access to the creek. Potential direct access was witnessed at reconnaissance sites 3, 4, 5, 6, & 8. Direct contact with agriculture grazing is a potential non-point source for Wickson Creek.

Site Reconnaissance Summary

Perspective sites were chosen based on public access and documented uses from the stakeholder response to the request for information e-mail which is included in Appendix 1. Initial reconnaissance surveys were conducted on January 14, 2010. A total of fourteen perspective sites were visited (Figure 1, Table 1). Two were on private property making them inaccessible and not recommended as survey locations. Recon sites 9 and 10 were in close proximity to each other. Access to site 9 was much more dangerous with blind corners, fast-moving traffic, and no shoulders, and made site 10 to be the better choice between the two. The remaining eleven sites were accessible and chosen for field survey sites (Figure 2, Table 2). Site suggestions were submitted to TCEQ as part of the Quality Assurance Project Plan's (QAPP) Monitoring Plan, which was approved by TCEQ on May 27, 2010.

Table 1. Site reconnaissance for Basic RUAA on Wickson Creek, Segment 1209E

| Recon Site # | Description | Latitude | Longitude | Public Access | Water Access | Recommended Site? |
|--------------|-------------------------------------|----------|-----------|--|--|-------------------|
| 1 | Bickham Cemetary Rd @ Wickson Creek | 30.83450 | -96.37153 | can park on side of road | very small banks | Yes |
| 2 | Francis Rd @ Wickson Creek | 30.82520 | -96.36824 | can park on side of road | only water downstream, fence across upstream | Yes |
| 3 | Dick Elliot Rd @ Wickson Creek | 30.81283 | -96.36588 | can park on side of road | low banks at road | Yes |
| 4 | FM974 @ Wickson Creek | 30.79820 | -96.36943 | can park on side of road | low banks | Yes |
| 5 | Wilcox Ln @ Wickson Creek | 30.76178 | -96.34874 | can park on side of road | gentle slopes, little vegetation | Yes |
| 6 | Dilly Shaw Tap Rd @ Wickson Creek | 30.75699 | -96.33890 | can park on side of road | easy slopes | Yes |
| 7 | SH21 @ Wickson Creek | 30.74179 | -96.31737 | can park on side of road | easy slopes, especially left | Yes |
| 8 | Old Reliance Rd. @ Wickson Creek | 30.72637 | -96.28580 | can park on upstream side right or left bank | a little steep but manageable | Yes |
| 9 | FM 1179 @ Wickson Creek | 30.72132 | -96.25084 | can park off Grassbur Rd - downstream, left bank | fenced all sides to bridge, no access | No |
| 10 | Grassbur Rd @ Wickson Creek | 30.72106 | -96.25241 | can park on downstream right bank at gate | easy enough banks at bridge | Yes |
| 11 | C-6 Ranch Road @ Wickson Creek | N/A | N/A | Private | N/A | No |
| 12 | Elmo Weeden Rd. @ Wickson Creek | 30.68826 | -96.22154 | can park on road | steep, possibly manageable | Yes |
| 13 | Weeden Loop @ Wickson Creek | 30.65682 | -96.20679 | can park on side of road | manageable but steep | Yes |
| 14 | Unnamed road @ Wickson Creek | 30.65038 | -96.19971 | Private | N/A | No |

Wickson Creek (Segment 1209E) Basic RUAA

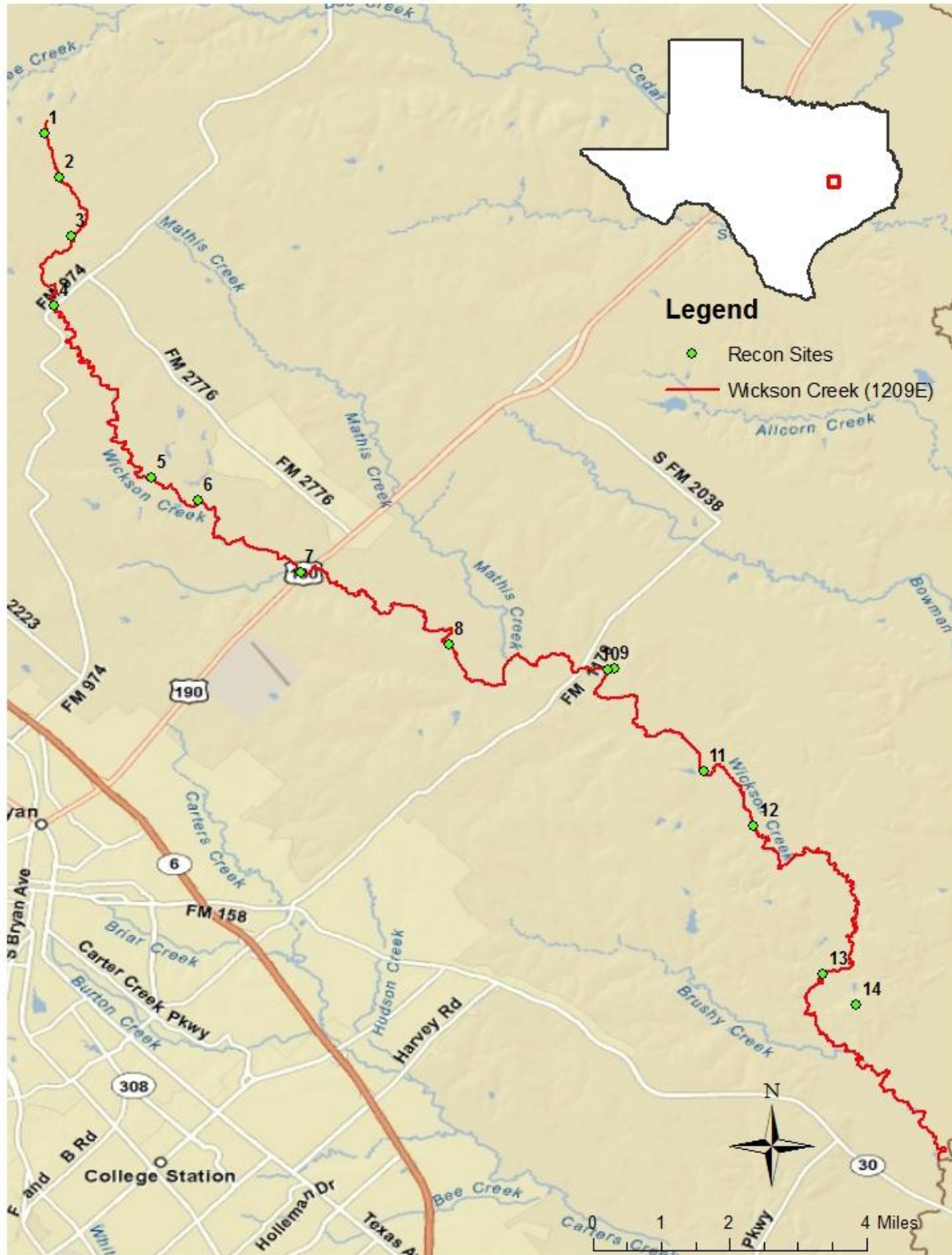


Figure 1. Basic RUAA reconnaissance sites on Wickson Creek, Segment 1209E. Recon site number 14 is marked at the entrance to the private property.

Methodologies

RUAA Survey Site Selection and Descriptions

Wickson Creek flows through mostly rural areas held by largely private property owners. The target density of survey sites should be approximately three (3) sites per every five (5) miles of stream (TCEQ 2009). During our study, survey sites were established in areas where the water body is accessible to the public and has the highest potential for recreational use (road crossings, public lands/parks located near the water body, and populated areas). A total of eleven (11) survey sites were established (Table 2 & Figure 2). These sites were chosen based on public access potential and also providing sufficient spatial coverage throughout the segment. In portions where the recommended three (3) sites per every five (5) miles of stream was not possible, supplementary information was gathered through coordination with local authorities, and using topographic maps and aerial photos.

Every effort was made to obtain supplementary recreational use information about the entire length of the segment, including areas other than the selected sites in this Basic RUAA. Topographic maps and aerial imagery were used to provide the needed geographic information about potential recreational opportunities, potential access points, and potential access obstacles along the Wickson Creek. Review of these resources resulted in reconnaissance site selection. The subsequent reconnaissance site visits confirmed the limited public access along the Wickson Creek. Fences, gates, and no trespassing signage are common public access limitations on the segment and resulted in less than three (3) sites for every five (5) miles of stream. Figure 3 depicts the range of variability of physical attributes found along Wickson Creek.

Table 2. Survey sites for the Basic RUAA Survey on Wickson Creek, Segment 1209E (corresponding to Figure 2 and Table 1)

| Recon Site # | Field Survey Site # | Description | Latitude | Longitude | Approx. river mile |
|---------------------|----------------------------|-------------------------------------|-----------------|------------------|---------------------------|
| 1 | 1 | Bickham Cemetary Rd @ Wickson Creek | 30.83450 | -96.37153 | 32.1 |
| 2 | 2 | Francis Rd @ Wickson Creek | 30.82520 | -96.36824 | 31.1 |
| 3 | 3 | Dick Elliot Rd @ Wickson Creek | 30.81283 | -96.36588 | 30.0 |
| 4 | 4 | FM974 @ Wickson Creek | 30.79820 | -96.36943 | 28.5 |
| 5 | 5 | Wilcox Ln @ Wickson Creek | 30.76178 | -96.34874 | 23.9 |
| 6 | 6 | Dilly Shaw Tap Rd @ Wickson Creek | 30.75699 | -96.33890 | 23.0 |
| 7 | 7 | SH21 @ Wickson Creek | 30.74179 | -96.31737 | 20.7 |
| 8 | 8 | Old Reliance Rd. @ Wickson Creek | 30.72637 | -96.28580 | 17.4 |
| 10 | 9 | Grassbur Rd @ Wickson Creek | 30.72106 | -96.25241 | 14.2 |
| 12 | 10 | Elmo Weeden Rd. @ Wickson Creek | 30.68826 | -96.22154 | 9.8 |
| 13 | 11 | Weeden Loop @ Wickson Creek | 30.65682 | -96.20679 | 5.0 |

Wickson Creek (Segment 1209E) Basic RUAA

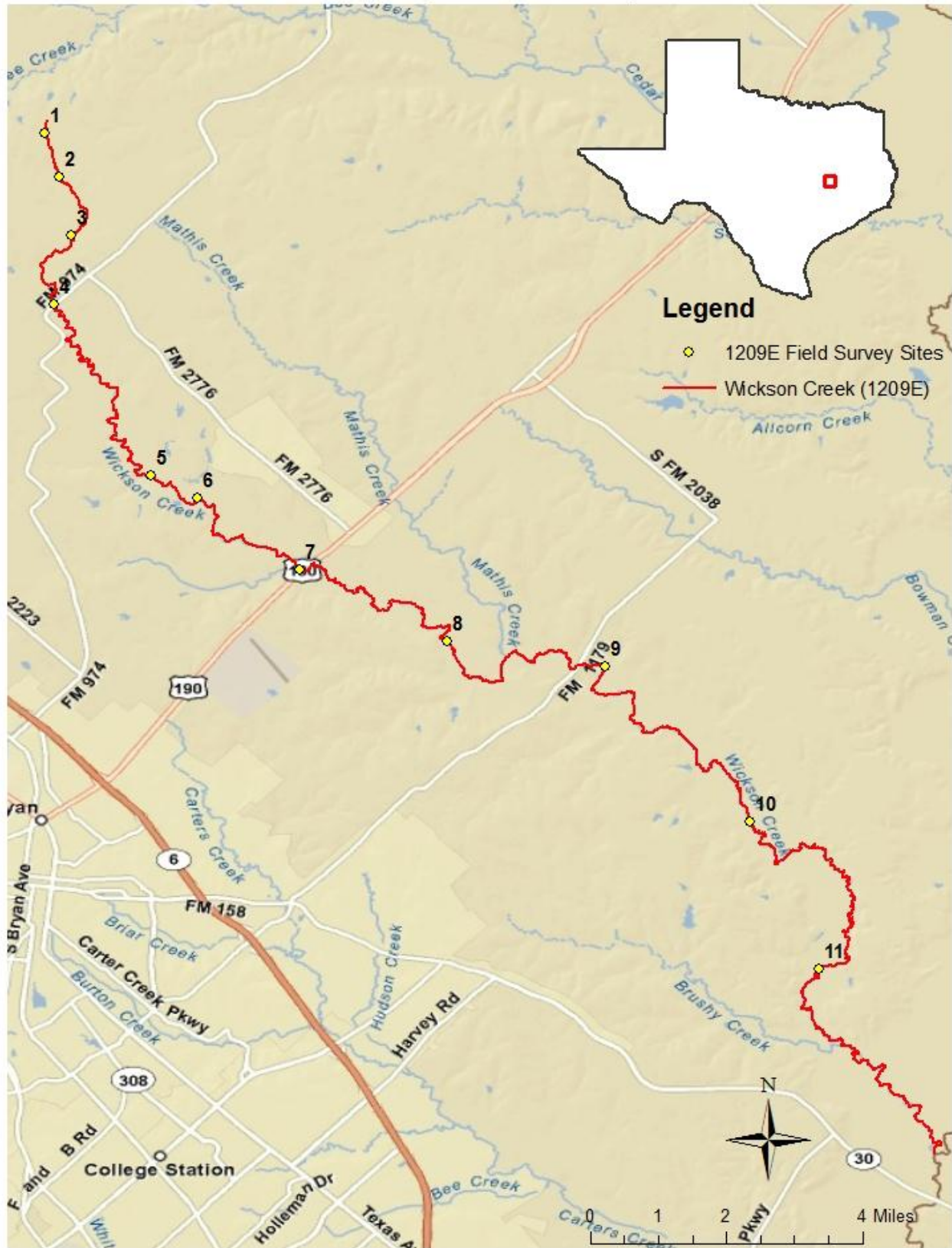


Figure 2. Basic RUAA survey sites on Wickson Creek, Segment 1209E, selections based on river mile/assessment units, accessibility, and recreational features



Figure 3. Pictures from field survey sites 2, 5, and 10 depicting the various physical attributes observed along Wickson Creek, Segment 1209E.

Sampling Methods

RUAAAs are used to identify and assign attainable uses and criteria to individual water bodies. Applicable uses and associated criteria are defined in the Texas Surface Water Quality Standards (TSWQS). Until recently, Texas had two recreation use categories in the 2000 TSWQS: contact and noncontact recreation. These recreation use categories were expanded to include more categories: primary contact, and secondary contact recreation (1 & 2). Primary contact recreation consists of recreational activities involving a significant risk of ingestion of water including: wading by children, swimming, water skiing, diving, and surfing. Secondary contact recreation 1 is considered water recreation activities not involving a significant risk of water ingestion: including fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity. Secondary contact recreation 2 follows the same definition as secondary contact recreation 1, except that it occurs less frequently due to (1) physical characteristics of the water body and/or (2) limited public access.

According to TCEQ agency guidance, a Basic RUAA must be conducted on Wickson Creek since it is an unclassified water body (Segment 1209E). RUAA Surveys were conducted during the normal warm season and periods when people would be most likely use the water body for contact recreational purposes. RUAA Surveys were also conducted during optimal sampling conditions that are representative of the normal flow conditions of the stream and are not storm-influenced. RUAA field surveys for Wickson Creek (Segment 1209E) were conducted on Saturday and Sunday, May 29 and 30, 2010. Weather conditions for these days and the previous 30 days can be found in Appendix 4. More specific procedures can be found in *TCEQ's RUAA Procedures Document, May 2009*.

Field Survey Descriptions

A Basic RUAA field survey begins with marking off a 300 meter (m) reach of the waterway, flagging every 30m. Sites with public accessibility limitations may not be fully assessed in this way. In instances such as these, a laser range finder was used to document the length of the stream reach that could be observed. A flow measurement (where possible) was then taken within the 300m stream reach. If the waterbody is wadeable, a depth measurement was taken every 30m and width measurements were taken at the widest, narrowest, and average width points within the 300m reach. Pictures are taken to document the survey at 30, 150, and 300m facing upstream, right bank, downstream, and left bank (Appendix 3). Air temperature, water temperature, and secchi depth were also recorded at an easily accessible location. Finally the Basic RUAA datasheets were completed to document any recreational uses, signs of recreational use, impeding conditions, or other field notes taken during the field survey. The depth measurements for the sites that were considered non-wadeable were taken from the bridge at the deepest point accessible.

Due to impediments affecting stream access, complete field survey methods were not possible at some locations on Wickson Creek. Impediments to stream access, such as steep banks fences, log jams, and overgrown banks, at times limited the field survey team's ability to survey the complete 300m stretch of stream. In each case where this was a factor, the impediments were documented on the field data sheet and documenting pictures of these conditions were taken (Appendix 3). Specific impediments causing access constraints for each site can be found in Appendices 2 and 5.

Results

The field survey site visit was completed on each of the 11 sample sites on Saturday and Sunday, May 29 and 30, 2010. All field data sheets are attached (Appendix 2).

Physical Evaluation and Flow

During the field surveys, the air and water temperatures fell within the range of acceptable temperatures for sampling described in the TCEQ procedures manual (Table 3). The average depth of Wickson Creek was 0.69m and the average width is 4.19m. The average secchi tube reading taken at the field survey sites was 0.31m (Table 3). Field survey site 1 was dry, and there was no notable flow for sites 2-5 and site 8. The flow was taken at the remaining field survey site was 0.12 cubic feet per second (cfs). As seen in Table 3, the width and depth varied from relatively narrow and shallow to relatively deep and wide. It is evident that some portions can have episodes of have much higher flow and water levels due to the erosion along the banks exposing tree roots and the size and location of the debris littering the waterway.

Wickson Creek riparian zone can be generalized as mainly forest and pasture (Table 4). The dominant substrate along the creek was generally composed of mainly mud/clay with gravel sand and silt documented.

Recreational Uses

During the field surveys, there was no observed recreation on Wickson Creek (Segment 1209E). There was evidence of recreational use observed (foot paths/prints and graffiti) at field survey site 9 (Table 5, Figure 4, & Appendix 5). There were many noted impediments at every survey site along Wickson Creek that could limit recreation including: private property, steep slopes, fences, debris in the water, culverts, and log jams (Table 5, Figure 4, & Appendix 5).

Table 3. Physical parameters from the basic recreational use attainability analysis field surveys conducted on Wickson Creek, Segment 1209E * = creek was dry, ** = too shallow to take secchi reading

| Site # | Site Description | Air | Water | Average Depth (m) | Average Width (m) | Stream Flow (cfs) | Secchi Tube (m) | |
|----------------------|-------------------------------------|--------------------------------|---------------------|----------------------|----------------------|----------------------|--------------------|--|
| | | Temperature (°C) | Temperature (°C) | | | | | |
| 1 | Bickham Cemetary Rd | 36.5 | * | * | * | * | * | |
| 2 | Francis Rd @ Wickson Creek | 36.5 | 31.0 | 0.30 | 1.52 | 0.00 | ** | |
| 3 | Dick Elliot Rd at Wickson Creek | 30.0 | 25.0 | 0.26 | 3.65 | 0.00 | ** | |
| 4 | FM 974 at Wickson Creek | 32.0 | 28.0 | 0.73 | 2.53 | 0.00 | Clear to Bottom | |
| 5 | Wilcox Ln at Wickson Creek | 33.0 | 30.0 | 0.73 | 8.50 | 0.00 | 0.30 | |
| 6 | Dilly Shaw Tap Rd. at Wickson Creek | 34.5 | 29.0 | 1.25 | 1.52 | 0.17 | 0.26 | |
| 7 | SH 21 @ Wickson Creek | 28.0 | 26.0 | 0.59 | 3.66 | 0.27 | 0.58 | |
| 8 | Old Reliance Rd @ Wickson Creek | Unable to access, Road Closure | | | | | | |
| 9 | Grassbur Rd @ Wickson Creek | 27.0 | 25.0 | 1.10 | 9.14 | 0.00 | 0.18 | |
| 10 | Elmo Weeden Rd at Wickson Creek | 25.0 | 25.0 | 0.64 | 1.98 | 0.31 | 0.21 | |
| 11 | Weeded Loop @ Wickson Creek | 34.0 | 26.0 | 0.59 | 5.25 | 0.47 | 0.31 | |
| Total Average | | 31.7 | 27.2 | 0.69 | 4.19 | 0.14 | 0.31 | |

Table 4. Physical characteristics of Riparian Zone and Dominant Substrate of the field survey sites sampled during the Basic Recreational Use Attainability Analysis on Wickson Creek, Segment 1209E

| Site # | Site Description | Left Bank | Right Bank | Dominant |
|--------|-------------------------------------|--------------------------------|---------------|-------------------|
| | | Riparian Zone | Riparian Zone | Primary Substrate |
| 1 | Bickham Cemetary Rd | Forest | Forest | Gravel |
| 2 | Francis Rd @ Wickson Creek | Forest | Forest | Gravel |
| 3 | Dick Elliot Rd at Wickson Creek | Forest | Forest | Mud/Clay |
| 4 | FM 974 at Wickson Creek | Pasture | Pasture | Mud/Clay |
| 5 | Wilcox Ln at Wickson Creek | Pasture | Pasture | Mud/Clay |
| 6 | Dilly Shaw Tap Rd. at Wickson Creek | Forest/Urban | Forest/Urban | Mud/Clay |
| 7 | SH 21 @ Wickson Creek | Forest | Forest | Mud/Clay |
| 8 | Old Reliance Rd @ Wickson Creek | Unable to access: road closure | | |
| 9 | Grassbur Rd @ Wickson Creek | Forest | Forest | Mud/Clay |
| 10 | Elmo Weeden Rd at Wickson Creek | Forest | Forest | Sand |
| 11 | Weeded Loop @ Wickson Creek | Pasture | Forest | Silt |

Table 5. Observed evidence of recreational use and Impediments to recreational use documented on Wickson Creek, Segment 1209E, for the Basic Recreational Use Attainability Analysis. No recreation was observed during the Basic RUAA field surveys. See Appendix 5: Google Earth Interactive Map for exact locations of evidence and impediments.

| Site # | Site Description | Impediments | Evidence |
|---------------|--------------------------------------|---|----------------------------|
| 1 | Bickham Cemetary Rd at Wickson Creek | Fence, Culvert | |
| 2 | Francis Rd at Wickson Creek | Culvert, Private property | |
| 3 | Dick Elliot Rd at Wickson Creek | Fence, Culvert, Private property | |
| 4 | FM 974 at Wickson Creek | Fence, Culvert | |
| 5 | Wilcox Ln at Wickson Creek | Fence | |
| 6 | Dilly Shaw Tap Rd. at Wickson Creek | Fence, Water control structure | |
| 7 | SH 21 at Wickson Creek | Rip rap | |
| 8 | Old Reliance Rd at Wickson Creek | Unable to access: road closure | |
| 9 | Grassbur Rd at Wickson Creek | Low bridge, Fence | Foot path/prints, Graffiti |
| 10 | Elmo Weeden Rd at Wickson Creek | Fence | |
| 11 | Weeden Loop at Wickson Creek | Fence, Log Jam, Steep Slope, Private Property | |

Wickson Creek (Segment 1209E) Basic RUAA

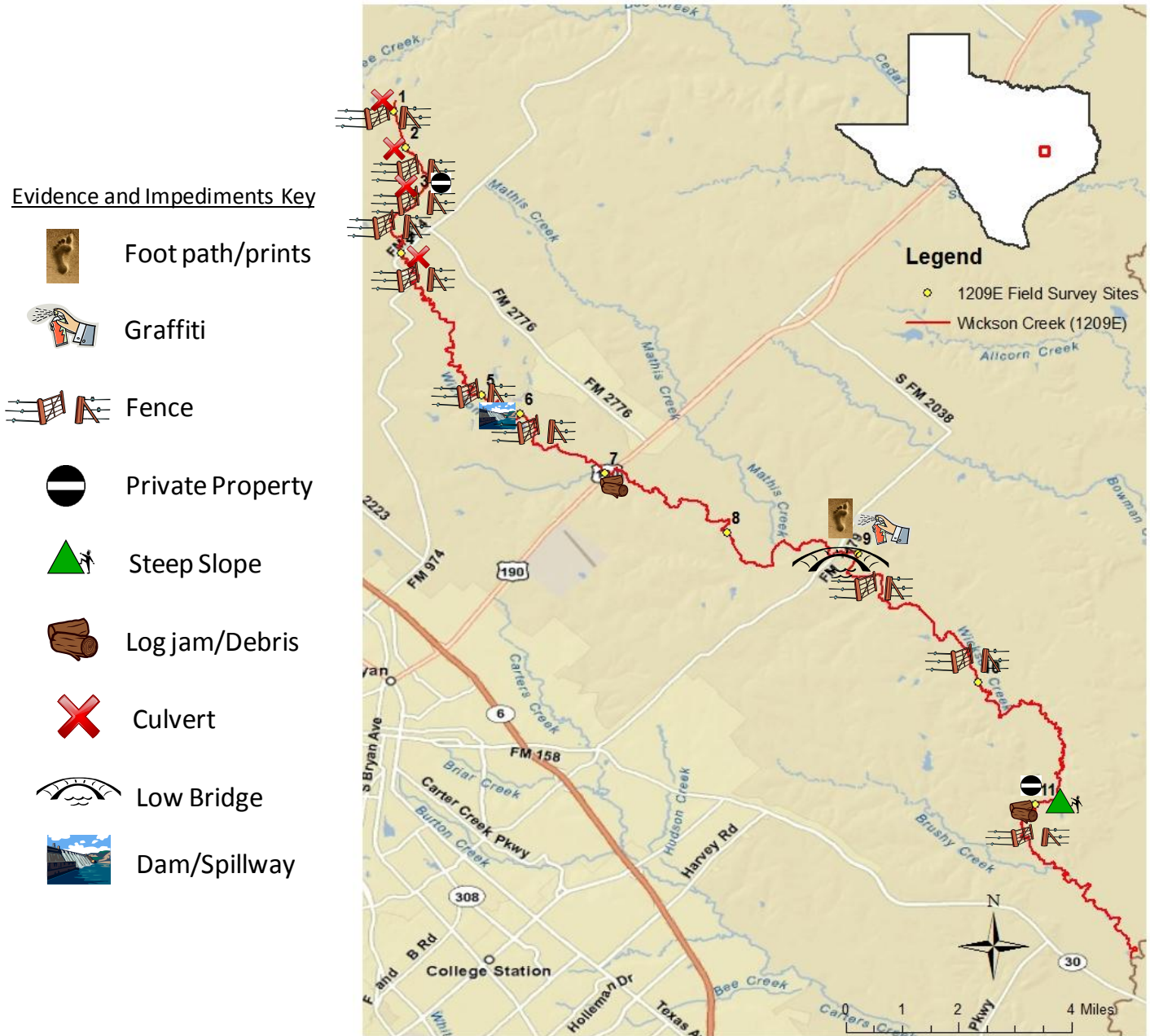


Figure 4. Basic RUAA survey sites on Wickson Creek, Segment 1209E, with depictions of observed evidence of recreational uses, and impediments. Locations are approximate. See Appendix 5: Google Earth Interactive Map for exact locations of evidence and impediments.

Summary

Ten (10) field surveys were completed on Wickson Creek (Segment 1209E) during this basic RUAA to evaluate whether the existing and/or attainable recreational uses of the creek might be different than the current presumed recreational uses. Important data collected in this RUAA included general stream characteristics, observations and evidence of recreational use, surrounding conditions that promote recreation, and surrounding conditions that impede recreation, including channel obstructions.

Numerous impediments to recreational uses were also noted during the field surveys, including but not limited to fences and log jams. During the field surveys, staff did not observe any form of recreation on Wickson Creek. Staff did observe evidence of human presence (foot prints/paths, graffiti) at one site. No primary contact recreation was documented during this Basic RUAA. The average thalweg depth was 0.69m and the average width was 4.19m. The average flow was 0.12cfs over the span of Wickson Creek. No public recreation areas in the form of maintained parks were found as part of this RUAA. Basic RUAA summary analysis indicates that non-contact recreation activities occur on Cedar Creek (Segment 1209G).

Literature Cited

Handbook of Texas Online. 2010. Texas State Historical Association (TSHA) web resource:
<http://www.tshaonline.org>.

Texas Commission on Environmental Quality (TCEQ). 2008. Texas 303(d) list (March 19, 2008). TCEQ, Austin, Texas.

Texas Commission on Environmental Quality (TCEQ). 2009. Recreational Use-Attainability Analyses (RUAAs) Procedures for a Comprehensive RUAA and a Basic RUAA Survey. TCEQ, Austin, Texas.

RUAA Summary Form**RUAA Summary**

This form should be filled out after RUAA data collection is completed. Use the Contact Information Form, Field Data Sheets from all sites, Historical Information Review, and other relevant information to answer the following questions on the water body.

Name of water body: Wickson Creek

Segment No. or Nearest Downstream Segment No.: 1209E

Classified?: No

County: Brazos

1. Observations on Use

a. Do primary contact recreation activities occur on the water body?

frequently seldom not observed or reported unknown

b. Do secondary contact recreation 1 activities occur on the water body?

frequently seldom not observed or reported unknown

c. Do secondary contact recreation 2 activities occur on the water body?

frequently seldom not observed or reported unknown

d. Do noncontact recreation activities occur on the water body?

frequently seldom not observed or reported unknown

2. Physical Characteristics of Water Body

a. What is the average thalweg depth? 0.69 meters

b. Are there substantial pools deeper than 1 meter? yes no N/A

c. What is the general level of public access?

easy moderate very limited

3. Hydrological Conditions (Based on Palmer Drought Severity Index)

Mild-Extreme Drought Incipient dry spell Near Normal Incipient wet spell Mild-Extreme Wet