Central and Southeast Texas Recreational Use-Attainability Analyses Project
Bullhead Bayou (Segment 1245C) and Unnamed Tributary of Bullhead Bayou (Segment 1245D)
Basic RUAA

Results Report

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Introduction

Problem Statement

Recreational Use-Attainability Analyses (RUAAs) 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 Bullhead Bayou (Segment 1245C) and the Unnamed Tributary of Bullhead bayou (Segment 1245D). This Basic RUAA Report will provide the Texas Commission on Environmental Quality (TCEQ) Standards Group with relevant information to help determine the appropriate attainable recreational use for Segments 1245C & D. 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 as aerial imagery. Reconnaissance surveys were conducted on April 30, 2010 and provided the basis site selection for the RUAA field surveys.

2. Basic Recreational Use Attainability Analysis

The primary objective of the Bullhead Bayou and Unnamed Tributary of Bullhead Bayou RUAA was to characterize the recreational use and potential impediments to use for this stream. The RUAA field surveys were conducted on Bullhead Bayou on Independence Day holiday,

Monday, July 5, 2010, and on the Unnamed Tributary to Bullhead Bayou on Saturday, June 19, 2010 to collect information on the water body and associated uses. These 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 Bullhead Bayou (Segment 1245C) and the Unnamed Tributary of Bullhead bayou (Segment 1245D). 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.

Study Area

Description of Water Body

Bullhead Bayou (Segment 1245C) and the Unnamed Tributary of Bullhead bayou (Segment 1245D) are tributaries to Upper Oyster Creek which is located within the Brazos River Basin, immediately southwest of Houston in northern Fort Bend County. Bullhead Bayou, Segment 1245C, is an unclassified segment by the TCEQ and is approximately 9.6 miles in length. Segment 1245C begins at the confluence with Steep Bank Creek in Fort Colony, and continues upstream to its headwaters in Pecan Grove in Fort Bend County. The Unnamed Tributary of Bullhead Bayou, Segment 1245D, is an unclassified segment by the TCEQ and is approximately 1.6 miles in length. Segment 1245D is a tributary to Bullhead Bayou in Fort

Bend County. Segments 1245 C & D are highly modified ditches used primarily for flood control purposes. Bullhead Bayou (Segment 1245C) and the Unnamed Tributary of Bullhead bayou (Segment 1245D) are on Texas' 303(d) list for geometric mean values that exceed the bacteria criteria associated with recreation uses.

Environmental Features and Population Characteristics

The climate in the Upper Oyster Creek watershed is classified as subtropical, which is defined as having hot, humid summers and dry winters. The urban areas (urban mixed and residential) occupy 24 percent of land cover within the watershed. Other land uses include rangeland at 9.5 percent, forest at 7.2 percent, and water at 3.2 percent (TCEQ, 2007).

The population of the Upper Oyster Creek watershed in 2000 was estimated to be 96,273 people (31,573 households), with an overall average population density of 877 persons per square mile (U.S. Census Bureau, 2000). The population of Fort Bend County is estimated by the U.S. Census Bureau to have increased approximately 6 percent per year since the 2000 census, so the current watershed population may exceed 125,000 (TCEQ, 2007).

Watershed Characterization

Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou are within the Upper Oyster Creek Watershed. The Upper Oyster Creek watershed is within the upper portion of the Gulf Coast Prairies and Marshes ecoregion, an area characterized as containing nearly level, un-dissected plains with native vegetation types composed of tall grass prairie and post oak savanna. The elevation of the area is approximately 80 feet above mean sea level (TCEQ, 2007). The riparian zone of Segments 1245C & D is moderately impacted by development with residential areas comprising the primary land use.

Permitted Discharges (Municipal, Industrial, Stormwater)

Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou are affected by storm water runoff from agricultural, industrial, and urban areas. Under TPDES, the TCEQ has issued three permits to discharge treated wastewater to the Segment 1245C watershed (Figure 1). These permits are held by: the City of Sugar Land (1), the Texas Department of Criminal Justice (1), and Pecan Grove (1).

Potential Nonpoint Sources

Potential sources of nonpoint source pollution in the watershed include municipal point source discharges, on-site sewage facilities, and runoff from agriculture and domesticated animals. For any urban collection and treatment system, sanitary sewer overflows and WWTF bypasses are possible sources of bacteria loadings to receiving waters.

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 April 30, 2010. A total of eighteen perspective sites on Bullhead Bayou were visited (Table 1). Of these, six were chosen for field survey sites (Table 2). A total of five perspective sites on the Unnamed Tributary to Bullhead Bayou were visited (Table 1). Of these, three were chosen for field survey sites (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 June 18, 2010.

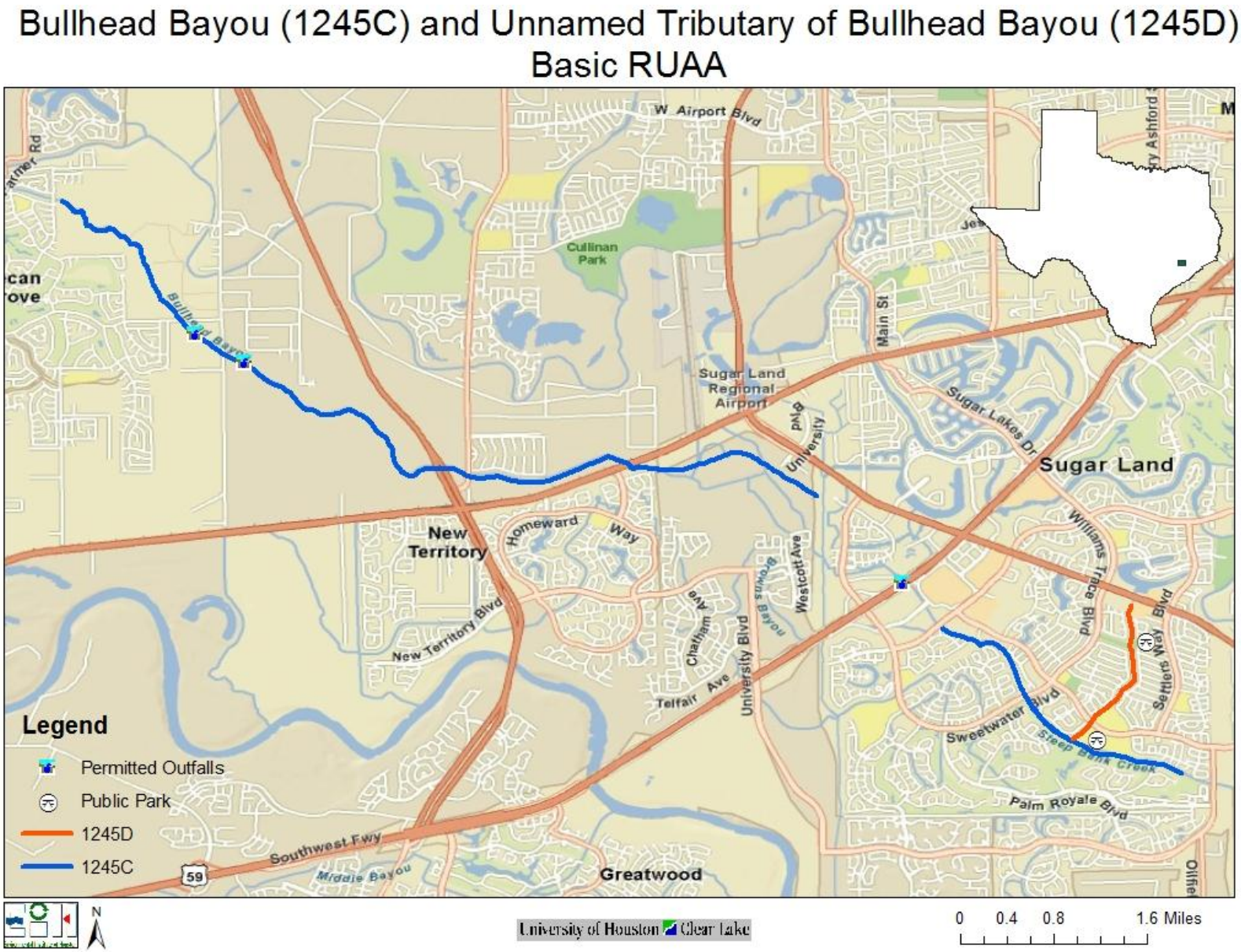

Figure 1. TCEQ permitted outfalls, and public parks adjacent to Bullhead Bayou Segment 1245C and the Unnamed Tributary to Bullhead Bayou, Segment 1245D.

Methodologies

RUAA Survey Site Selection and Descriptions

The target density of survey sites should be approximately three (3) sites per every five (5) miles of stream (Texas Commission on Environmental Quality (TCEQ) 2009). During the 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 six (6) survey sites were established for Bullhead Bayou, Segment 1245C, and three (3) for Unnamed Tributary of Bullhead Bayou, Segment 1245D, (Table 2 & Figure 2). These sites were chosen based on public access potential and also providing sufficient spatial coverage throughout the segment. 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 access obstacles along Segments 1245C & D. Review of these resources resulted in reconnaissance site selection. The subsequent reconnaissance site visits confirmed the limited public access along Segments 1245C & D. Figure 3 photograph was taken at field survey site 3 and is a good representation of the general site conditions found along Bullhead Bayou Segment 1245C. Figure 4 photograph was taken at field survey site 3 and is a good representation of the general site conditions found along the Unnamed Tributary of Bullhead Bayou Segment 1245D.

Sampling Methods

RUAAs 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 Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou since they are un-classified water bodies (Segment 1245C & D). RUAA surveys were conducted during the normal warm season and periods when people would be most likely to 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 Bullhead Bayou (Segment 1245C) were conducted on Independence Day Holiday, Monday, July 5, 2010. RUAA field surveys for the Unnamed Tributary of Bullhead Bayou (Segment 1245D) were conducted on Saturday, June 19, 2010. More specific procedures can be found in *TCEQ's RUAA Procedures Document, May 2009.*

Table 1. Site reconnaissance for Basic RUAA on Bullhead Bayou Segment 1245C and Unnamed Tributary to Bullhead Bayou Segment 1245D. * = Not chosen as a sampling site because of proximity to other field survey site that was determined to have a higher likelihood of recreational use due to physical attributes, and access to the water. BB = Bullhead Bayou and UT = Unnamed Trib. of Bullhead Bayou

Segment	Recon Site	Description	Latitude	Longitude	Public Access	Water Access	Recommended Site
1245C	BB-1	Colonel Ct Dr at Bullhead Bayou	N/A	N/A	Private Property	N/A	No
	BB-2	Plantation Dr at Bullhead Bayou	29.62416	-95.71848	Little bridge with shopping center nearby	Gentle banks	Yes
	BB-3	Harlem Rd at Bullhead Bayou	29.62103	-95.71410	Ditch but no shoulder (near site 2)	Easy slopes	No
	BB-4	SH 99 A at Bullhead Bayou	N/A	N/A	Private Property	N/A	No
	BB-5	SH 99 B at Bullhead Bayou	N/A	N/A	Private Property	N/A	No
	BB-6	SH 99 C at Bullhead Bayou	29.60693	-95.68766	Pull off road; possible drive down	Gentle slope	Yes
	BB-7	FM 1464 at Bullhead Bayou	29.60583	-95.68356	Side of road; walk down ditch from right bank, Combine with site 6	Easy slope bank	* No
	BB-8	Auckland Dr at Bullhead Bayou	29.60593	-95.67417	Park at subdivision, Combine with Site 6	Relatively easy slope	* No
	BB-9	US 90 at Bullhead Bayou	29.60695	-95.66370	Parking lot at gas station; shopping center	Easy slope	Yes
	BB-10	Montessori atBullhead Bayou	N/A	N/A	Combine with Site 9	N/A	* No
	BB-11	Flanagan Rd at Bullhead Bayou	N/A	N/A	Road not built yet… under construction	N/A	No
	BB-12	University Blvd at Bullhead Bayou	29.60634	-95.64513	Through Hilton parking lot then drive dirt path to bridge	Moderately steep slopes	Yes
	BB-13	Lexington Blvd at Bullhead Bayou	29.58699	-95.62500	Through shopping center; small dirt parking spot	Steep bank	Yes
	BB-14	Greencove Ln at Bullhead Bayou	29.58398	-95.61738	Subdivision parking; paved walking entrance to site, Combine with site 13	Relatively steep slope	* No
	BB-15	Sweetwater Blvd B at Bullhead Bayou	29.57730	-95.61398	Golf course or administration school building parking lot, Combine with site 17	Moderately steep slope but levels near stream	* No
	BB-16	Hickory Run Dr at Bullhead Bayou	29.57454	-95.61134	Golf course; subdivision parking, , Combine with site 17	Steep slope that levels at stream	* No
	BB-17	First Colony Athletic Park at Bullhead Bayou	29.57264	-95.60785	Park parking	Moderately steep slope but levels near stream	Yes
	BB-18	Mesquite Dr at Bullhead Bayou	29.57041	-95.59875	Park in entrance to WWTP, Combine with site 17	Moderate slope	* No
1245D	UT-1	SH 6 at Unnamed Trib	29.58964	-95.60182	Shopping center parking on both sides of bank, Combine with site UT-2	Moderately easy slope	* No
	UT-2	Mesquite Park at Unnamed Trib	29.58455	-95.60173	Subdivision parking; children's park; foot bridge	Moderately steep slope	Yes
	UT-3	Green Fields Dr at Unnamed Trib	29.57918	-95.60281	Pedestrian walkway; subdivision parking by bridge	Moderately easy slope; pedestrian path on bridge	Yes
	UT-4	Pecan Ridge Dr at Unnamed Trib	29.57698	-95.60494	Subdivision parking lot, Combine with site UT-3	Moderately steep slope	* No
	UT-5	Austin Pkwy at Unnamed Trib	29.57521	-95.60660	Athletic park parking; First Colony Conf. Center; subdivision	Moderately steep bank	Yes

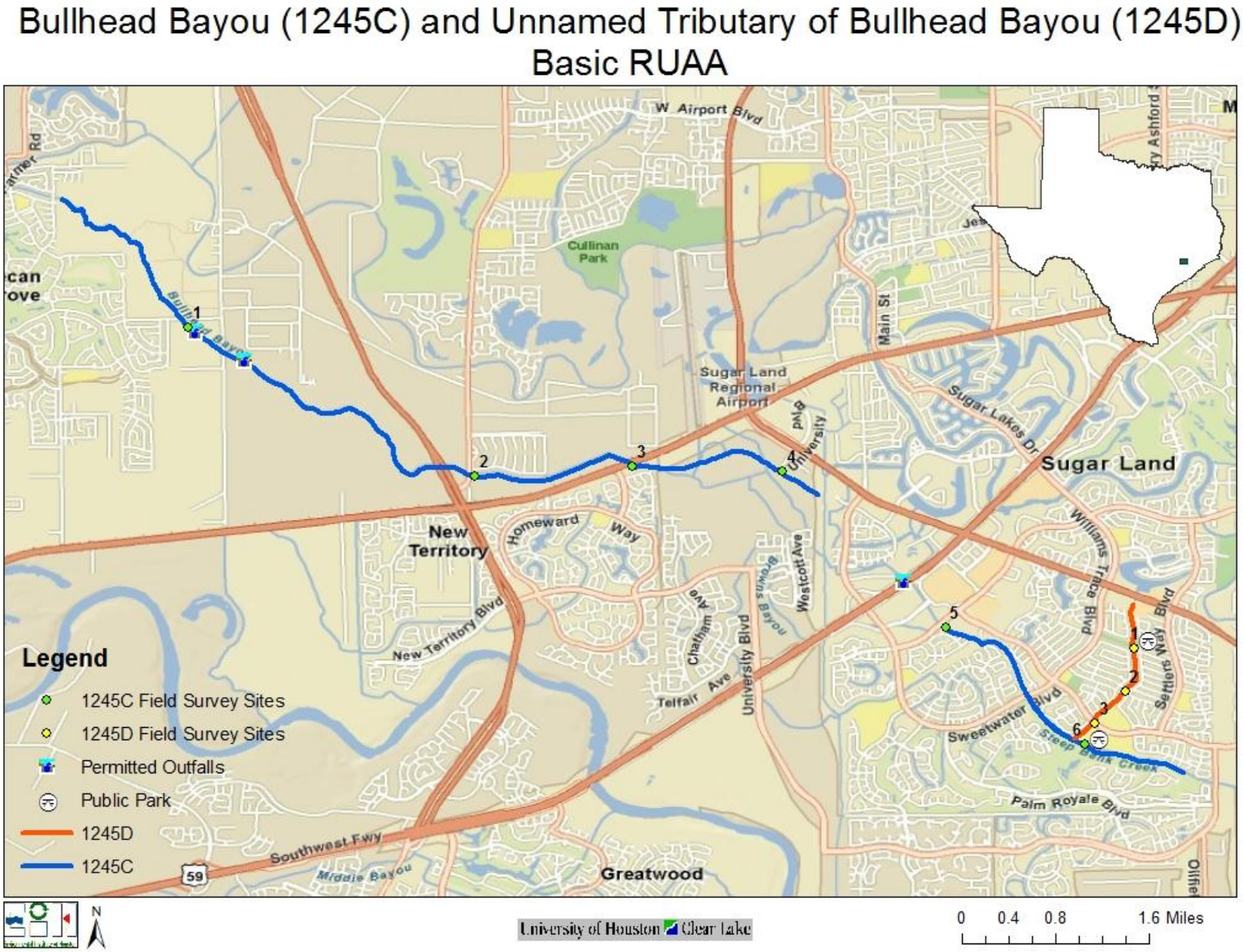

Figure 2. Basic RUAA survey sites on Bullhead Bayou, Segment 1245C, and Unnamed Tributary of Bullhead Bayou, Segment 1245D, selections based on river mile/assessment units, accessibility, and recreational features.

Table 2. Survey sites for the Basic RUAA Survey on Bullhead Bayou, Segment 1245C and the Unnamed Tributary of Bullhead Bayou, Segment 1245D (corresponding to Figure 2 and Table 1) BB = Bullhead Bayou and UT = Unnamed Trib. of Bullhead Bayou

Segment	Recon Site	Field Survey Site	Description	Latitude	Longitude	Approx. River Mile
1245C	BB-2	1	Plantation Dr at Bullhead Bayou	29.62416	-95.71848	8.10
	BB-6	2	SH 99 C at Bullhead Bayou	29.60573	-95.68310	5.20
	BB-9	3	US 90 at Bullhead Bayou	29.60695	-95.66370	3.94
	BB-12	4	University Blvd at Bullhead Bayou	29.60634	-95.64513	2.73
	BB-13	5	Lexington Blvd at Bullhead Bayou	29.58699	-95.62500	2.40
	BB-17	6	First Colony Athletic Park at Bullhead Bayou	29.57264	-95.60785	0.80
1245D	UT-2	1	Mesquite Park at Unnamed Trib	29.58455	-95.60173	0.98
	UT-3	2	Green Fields Dr at Unnamed Trib	29.57918	-95.60281	0.58
	UT-5	3	Austin Pkwy at Unnamed Trib	29.57521	-95.60660	0.22

Figure 3. Picture of field survey site 3, showing the general representation of the physical conditions seen on Bullhead Bayou, Segment 1245C.

Figure 4. Picture of field survey site 3, showing the general representation of the physical conditions seen on the Unnamed Tributary of Bullhead Bayou, Segment 1245D.

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.

Due to impediments affecting stream access, complete field survey methods were not possible at some locations on Bullhead Bayou. Impediments to stream access, such as fences or culverts, 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 six sample sites on Bullhead Bayou on Monday, July 5, 2010 and the three sample sites on the Unnamed Tributary of Bullhead Bayou on Saturday, June 19, 2010. All field data sheets are attached (Appendix 2). The approx. 9.6 miles of Bullhead Bayou Segment 1245C were evaluated with a total of six

basic field surveys, and the approx. 1.6 miles of the Unnamed Tributary of Bullhead Bayou were evaluated with a total of three basic field surveys. A summary of the physical evaluation, flow and recreational uses is provided below.

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 thalweg depth of Bullhead Bayou was 0.4m and the average width was 4.2m. The average thalweg depth of the Unnamed Tributary of Bullhead Bayou was 0.2m and the average width was 2.9m. The average secchi tube reading taken at the Bullhead Bayou field survey sites was 0.4m and at the Unnamed Tributary of Bullhead Bayou was 0.3m (Table 3). The stream flow at Bullhead Bayou was 4.0 cubic feet per second (cfs) and at the Unnamed Tributary of Bullhead Bayou was 0.2cfs.

The riparian zone for Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou can be described as a mowed/maintained corridor (Table 4). The dominant substrate along the Bayous was generally composed of mud/clay.

Recreational Uses

Based on the field surveys, there was no observed recreation on Bullhead Bayou (Segment 1245C), and only non-contact recreation was observed on the Unnamed Tributary of Bullhead Bayou (Segment 1245D) in the form of bicycling. Staff observed evidence of recreational use (graffiti, children's toys, and an abandoned cooler) on both Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou (Table 5, Figure 5, & Appendix 5). There were noted impediments along Bullhead Bayou that could limit the recreation including: culvert, fence, low bridge, and thick vegetation (Table 5, Figure 5, & Appendix 5).

Table 3. Physical parameters from the Basic Recreational Use Attainability Analyses field surveys conducted on Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou, Segments 1245C & D.

Segment	Field Survey Site	Site Description	Air Temperature (°C)	Water Temperature (°C)	Average Depth (m)	Average Width (m)	Stream Flow (cfs)	Secchi (m)
1245C	1	Plantation Dr at Bullhead Bayou	34.4	28.0	0.2	2.6	0.87	0.24
	2	SH 99 at Bullhead Bayou	31.6	29.0	0.4	4.0	1.80	0.25
	3	US 90 at Bullhead Bayou	36.2	31.0	0.4	2.5	4.10	0.49
	4	University Blvd at Bullhead Bayou	31.4	30.0	0.5	6.0	6.04	0.39
	5	Lexington Blvd at Bullhead Bayou	37.2	29.0	0.6	8.0	10.98	0.90
	6	First Colony Athletic Park at Bullhead Bayou	33.8	30.0	0.2	1.8	0.27	0.08
		Total Average	**34.1**	**29.5**	**0.4**	**4.2**	**4.0**	**0.4**
1245D	1	City Park at Mesquite Dr at Unnamed Trib of Bullhead Bayou	33.4	28.0	0.2	1.9	0.19	0.32
	2	Greens Field Dr at Unnamed Trib of Bullhead Bayou	33.1	34.0	0.2	5.8	0.13	0.21
	3	First Colony Park at Unnamed Trib of Bullhead Bayou	35.3	35.0	0.2	1.1	0.16	0.26
		Total Average	**33.9**	**32.3**	**0.2**	**2.9**	**0.2**	**0.3**

Table 4. Physical Characteristics of Riparian Zone and Dominant substrate of the field survey sites sampled during the Basic Recreational Use Attainability Analyses on Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou, Segments 1245C & D.

Segment	Field Survey Site	Site Description	Left Bank Riparian Zone	Right Bank Riparian Zone	Domninant Primary Substrate
1245C	1	Plantation Dr. at Bullhead Bayou	Mowed/maintained corridor	Mowed/maintained corridor	Mud/Clay
	2	SH99 at Bullhead Bayou	Mowed/maintained corridor	Mowed/maintained corridor	Mud/Clay
	3	US 90 at Bullhead Bayou	Mowed/maintained corridor	Mowed/maintained corridor	Mud/Clay
	4	University Blvd at Bullhead Bayou	Mowed/maintained corridor	Mowed/maintained corridor	Mud/Clay
	5	Lexington Blvd at Bullhead Bayou	Mowed/maintained corridor	Mowed/maintained corridor	Mud/Clay
	6	First Colony Athletic Park at Bullhead Bayou	Forest	Mowed/maintained corridor	Silt
1245D	1	City Park at Mesquite Dr at Unnamed Trib of Bullhead Bayou	Urban-Mowed/maintained corridor	Urban-Mowed/maintained corridor	Silt
	2	Greens Field Dr at Unnamed Trib of Bullhead Bayou	Urban-Mowed/maintained corridor	Urban-Mowed/maintained corridor	Mud/Clay
	3	First Colony Park at Unnamed Trib of Bullhead Bayou	Urban-Mowed/maintained corridor	Urban-Mowed/maintained corridor	Mud/Clay

Table 5. Recreational uses observed and documented on Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou, Segments 1245C & D, for the Basic Recreational Use Attainability Analyses.

Segment	Field Survey Site	Site Description	Impediments	Evidence	Observed
1245C	1	Plantation Dr. at Bullhead Bayou	Culvert, Fence	Remnants of Kid's play	
	2	SH99 at Bullhead Bayou	Low Bridge		
	4	University Blvd at Bullhead Bayou	Thick Vegetation		
	5	Lexington Blvd at Bullhead Bayou		Graffiti	
	6	First Colony Athletic Park at Bullhead Bayou			Maintenance workers near water
1245D	1	Mesquite Dr at Unnamed Trib of Bullhead Bayou		Graffiti	Bicycling
	2	Greens Field Dr at Unnamed Trib of Bullhead Bayou		Children's toys	Bicycling
	3	First Colony Park at Unnamed Trib of Bullhead Bayou		Abandoned Cooler	Bicycling

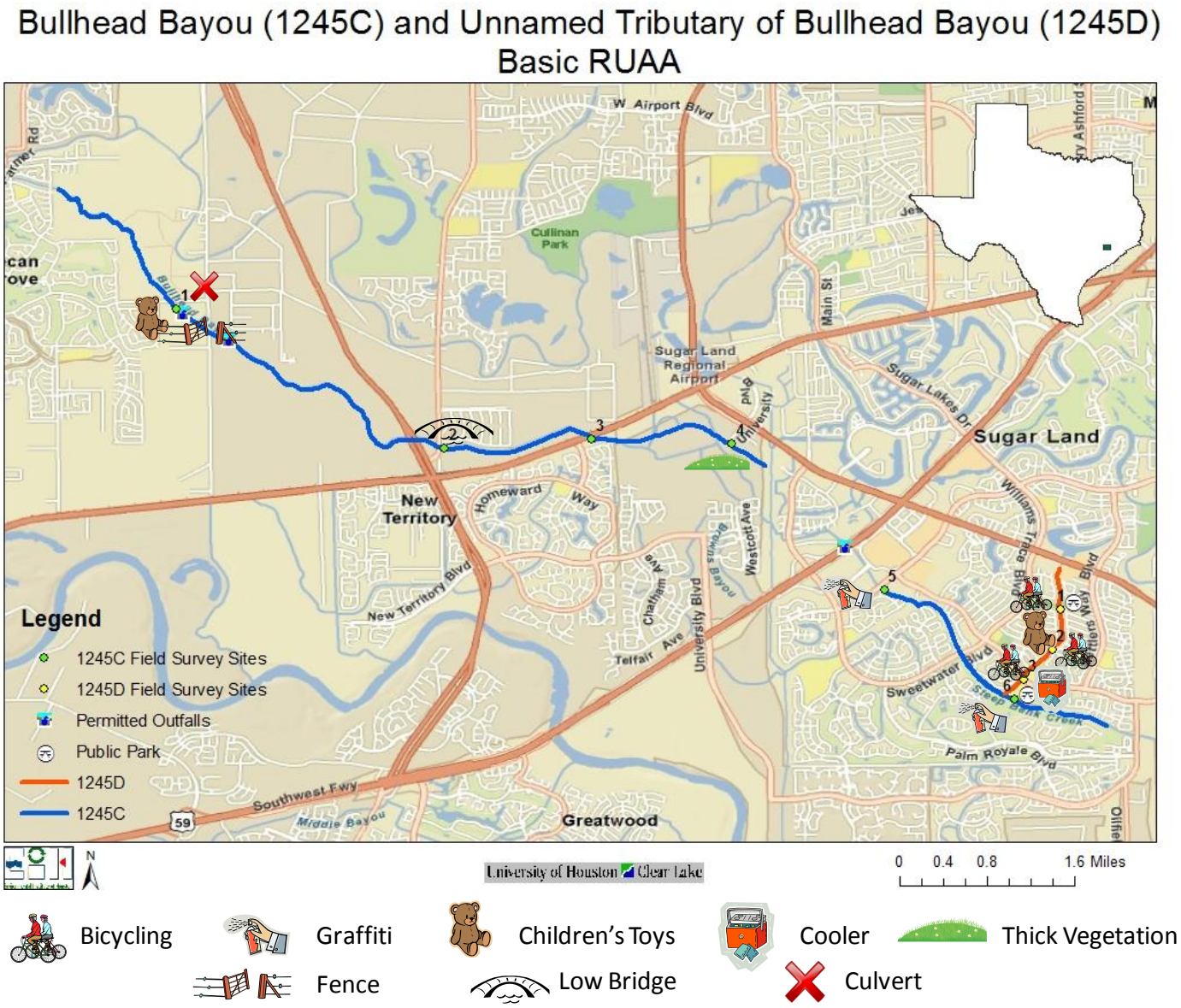

Figure 5. Basic RUAA survey sites on Bullhead Bayou and the Unnamed Tributary of Bullhead Bayou, Segments 1245C & D, with depictions of observed recreational uses, evidence of recreational uses, and impediments. Locations are approximate. See Appendix 5: Google Earth Interactive Map for exact locations of uses, evidence, and impediments.

Summary

Six (6) field surveys on Bullhead Bayou (Segment 1245C) and three (3) field surveys on the Unnamed Tributary of Bullhead Bayou (Segment 1245D) were completed in this RUAA to evaluate whether the existing and/or attainable recreational uses of the segments might be different than the current presumed recreational use designation. 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.

While Segments 1245C & D had several impediments to recreational use, such as fence culvert, low water bridge, and thick vegetation, the RUAA documented non-contact recreation activities. During the field surveys, staff did not observe any instances of primary or secondary contact recreation on Bullhead Bayou (Segment 1245C) or the Unnamed Tributary of Bullhead Bayou (Segment 1245D). Staff did observe non-contact recreation in the form of bicycling at all of the Unnamed Tributary of Bullhead Bayou (Segment 1245D) field survey sites. Also observed was evidence of recreation activities in the form of children's toys, graffiti, and abandoned cooler at a number of the field survey sites on each segment. The average thalweg depth for segment 1245C was 0.4m and for segment 1245D was 0.2m. The average width for segment 1245C and 1245D was 4.2m and 2.9m respectively. The average flow of segment 1245C during the field survey was 4.0cfs and at segment 1245D was 0.2cfs. Two (2) public recreation areas in the form of maintained parks were found on the Unnamed Tributary of Bullhead Bayou as part of this Basic RUAA survey. Basic RUAA summary analysis indicates that non-contact recreation activities occur on Bullhead Bayou (Segment 1245C) and the Unnamed Tributary of Bullhead Bayou (Segment 1245D).

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1245C 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: *Bullhead Bayou*
Segment No. or Nearest Downstream Segment No.: *1245C*
Classified?: *No*
County: *Fort Bend*

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? *0.4* 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

1245D 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: *Unnamed Tributary of Bullhead Bayou*
Segment No. or Nearest Downstream Segment No.: *1245D*
Classified?: *No*
County: *Fort Bend*

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? *0.2* 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