Project Report

A Shoreline Assessment of the Upper Fish River

Prepared by:
The Alabama Coastal Foundation

For:
The Mobile Bay National Estuary Program

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Introduction

In 2008, the Alabama Coastal Foundation (ACF) received a grant from the Mobile Bay National Estuary program (MBNEP) to conduct a shoreline assessment to gauge the relative health of the upper reaches of the Fish River in Baldwin County, AL.

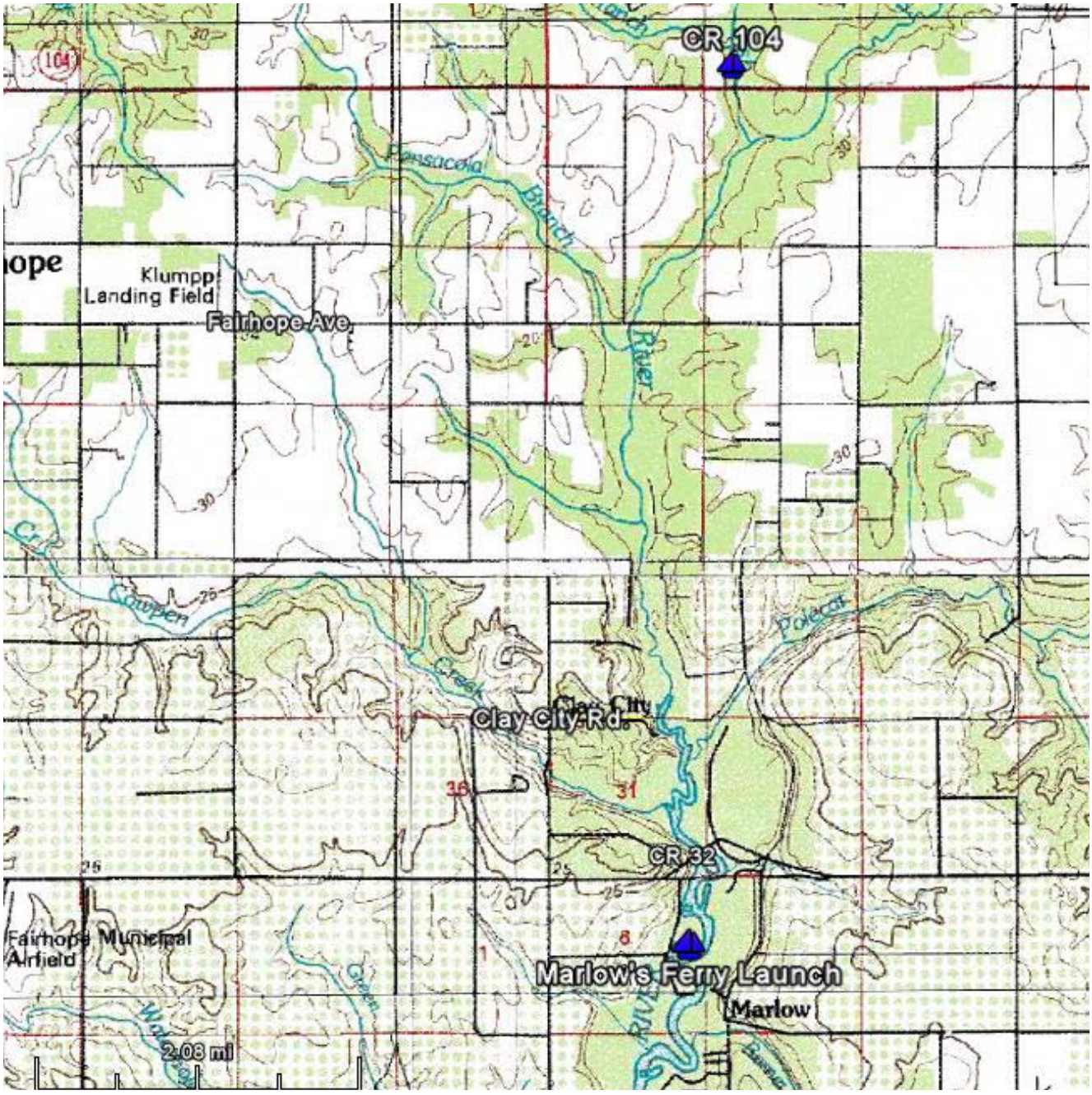
The data generated as a result of this assessment can be used in multiple areas, including: environmental management, long-range planning, education and outreach activities and recreational planning in the area.

A primary objective of this project was to educate the public as well as community leaders about Fish River and the pressures it faces. The data can be used in the long-term to protect valuable habitat by identifying areas suitable for preservation, restoration or recreational use, and will provide decision-makers the tools needed to make sound policy decisions regarding the future growth and development of the areas surrounding Fish River.

Several parameters were evaluated in the course of the assessment, including: water quality, stream and bank characteristics, and the plant community. Each of these areas was considered to evaluate the overall health of the shoreline. The project also sought to identify potential sources of pollution, including evidence of illegal dumping, sedimentation and erosion, septic system failure or other discharge sources. A central objective of this assessment was to generate a product that is useful to local decision-makers.

The study took place on May 2, 2009 and the data collected is compiled in this report.

Figure 1: Overview of Study Area



Pre-Project Activities

This type of large-scale volunteer project, not unlike the successful volunteer clean-up days that occur in the area, provides citizens the opportunity to make a solid connection to the environment and our natural resources. It reinforces the knowledge that the things we do have an impact on the watershed. And perhaps most importantly, volunteer projects such as this assessment show local decision makers that conservation issues are important to their constituents, which lays a foundation for future decision-making that takes into account the environmental impacts of planning and development.

The Fish River Shoreline Assessment Project was originally scheduled to take place on Saturday, March 28th. In early March, over 1,000 landowners in the immediate Fish River area received postcards notifying them of the FRSA project and inviting them to participate (Appendix C).

On Tuesday, March 17th, ACF held a volunteer training session at Big Daddy's Grill on the Lower Fish River south of CR-32. Over thirty attendees ranging in age from teenagers to grandparents learned the purpose and methods of the project. Attendees were trained in the use of Shoreline Assessment Packets (SAP), which included the following:

-Map of entire study area with Grid Numbers
-Map of smaller sections with Grid Numbers, launch sites, and logjams
-Invasive species identification card
-Invasive species supplemental card
-Shoreline Assessment Form
-Points of Interest Key
-Points of Interest Data Sheet
-GPS coordinates of flags
-cardboard flat for bearing down
-pen
-phone numbers for ACF staff in case of emergency

After receiving general project instructions and information about identifying areas of erosion, sedimentation and safety considerations, ACF Board Member and owner of Wetland Resources, Inc., Gena Todia led the group in an invasive species identification course.

On March 23rd, ACF staff and a community volunteer paddled upstream from Marlow's Ferry south of CR-32 to obtain GPS coordinates to plug into maps in order to generate grids of comparable and manageable sizes, assign difficulty ratings, and to conduct a general assessment of the project area.

On March 25th, ACF staff and volunteers paddled downstream from CR-104 to CR-48, noting GPS coordinates of logjams, assigning difficulty ratings, and conducting a general assessment of the project area. A third trip was planned for Friday, during which flags were to be placed to mark grids for ease of assessment. Unfortunately, heavy rainfall two days before the scheduled assessment date led to rapid river rise and flooding that forced the project to be postponed.

On April 30th, ACF staff and two volunteers divided into groups of two, with one group paddling from CR-104 to the Highland Drive put-in and the other group putting in at Highland Drive and paddling to Marlow's Ferry. Both groups placed flags marking grid locations and noted any obstacles present with GPS coordinates. Maps and assessment sheets were modified to reflect changes in the position and size of log jams present.

Project Activities

The Fish River Shoreline Assessment was conducted on Saturday, May 2, 2009 from 7:30AM until 2:00PM. Two members of the community offered their homes as launch sites, both located south of CR-48. Additional launch sites were bridge crossings at CR-104 and CR-32, Bohemian Park at CR-48, and Marlow's Ferry south of CR-32. Over thirty volunteers convened at Bohemian Park on CR-48 to receive materials and instructions from ACF Executive Director Bethany Kraft and ACF Board Member Gena Todia. Volunteers included landowners and kayakers, biologists and retirees, adult siblings and a family of four. Kraft briefed volunteers on safety protocol and distributed the SAP, explaining the purpose and methods of the project as well as giving an overview of use of the SAP. Todia then gave a brief lecture on the recognition of ten common invasive exotic plant species and followed with a question-and-answer session.

After signing in and receiving their packets, volunteers launched canoes and kayaks from public launch sites as well as private residences that were volunteered by owners for the project. Volunteers were in teams of at least two and covered one to six grids, chosen by them based on skill level and difficulty rating. Teams dispersed to launch sites at approximately 9am and all returned safely to check out at the Bohemian Park staging area by 2pm. Many volunteers took photos and GPS to further document their findings and provided them to ACF digitally before leaving.

Data Gathered

The volunteers gathered a wide range of valuable information. At the CR-104 bridge crossing, channel width was approximately 20 feet with a significant flow rate. Land adjacent to channel on the northern and mid ranges of the study area

is largely wooded with minimal view of residences, but evidence of use such as furniture, occasional erosion control measures, and litter. The southern range of the study area is significantly developed with raised residences, many with retaining walls separating them from the channel.

Figure 2: Study Area From County Road 104 South to Bohemian Park (County Road 48)

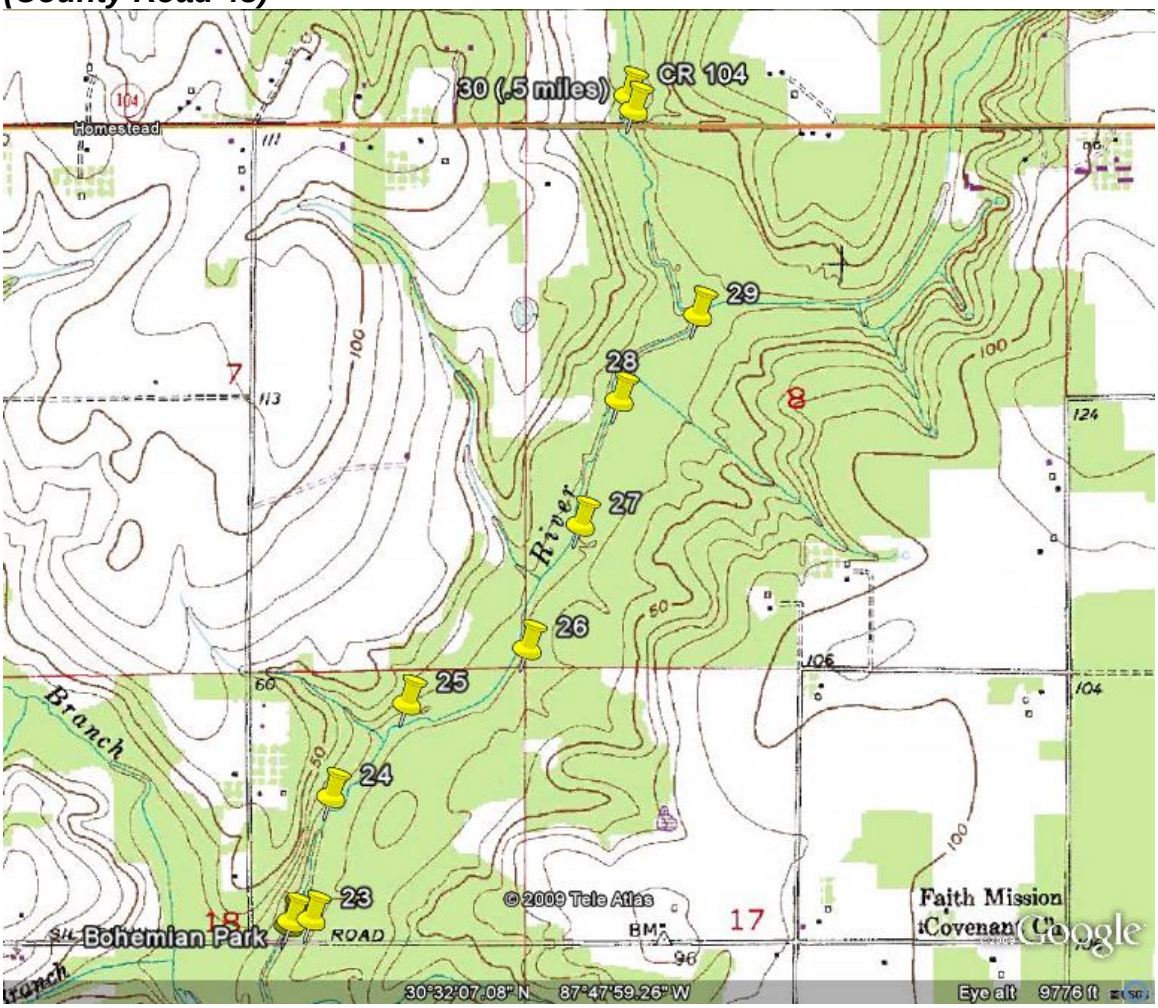


Figure 3: Study Area From Bohemian Park (CR 48) to Grid 5

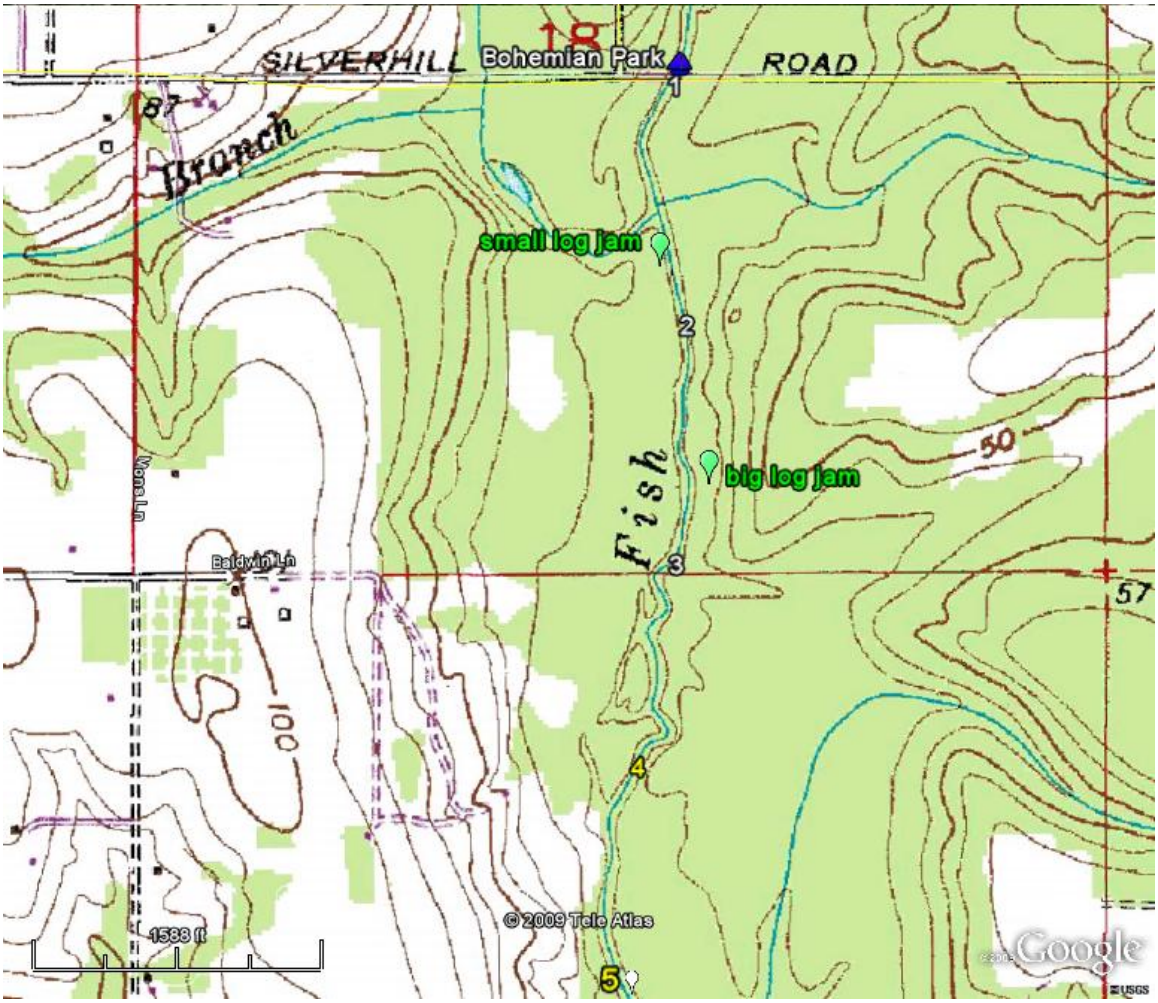


Figure 4: Study Area Grids 5-8

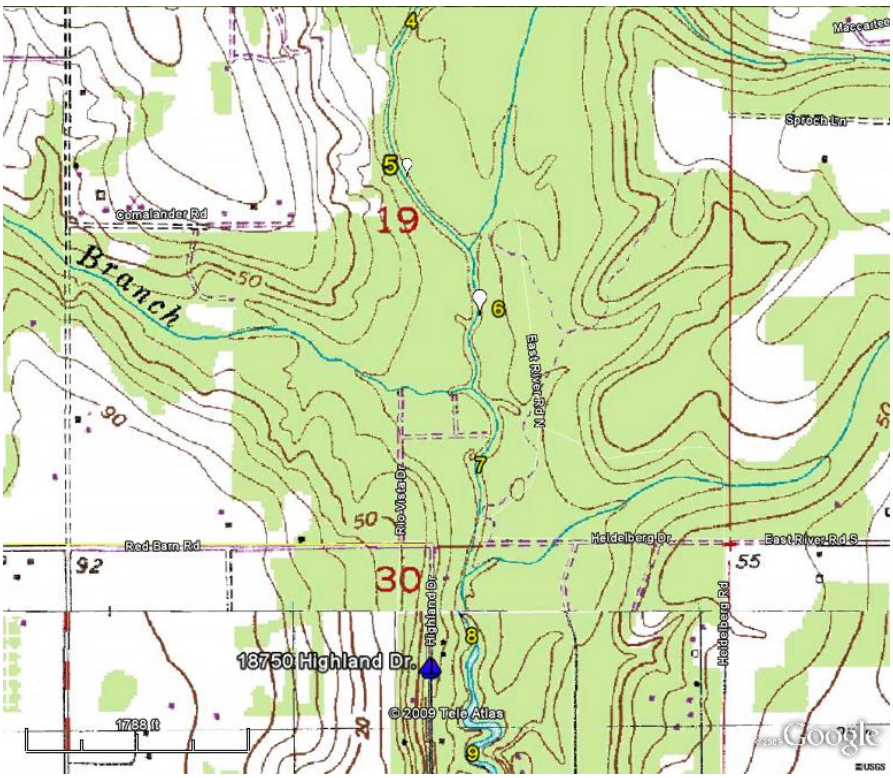


Figure 5: Study Area Grids 9-13

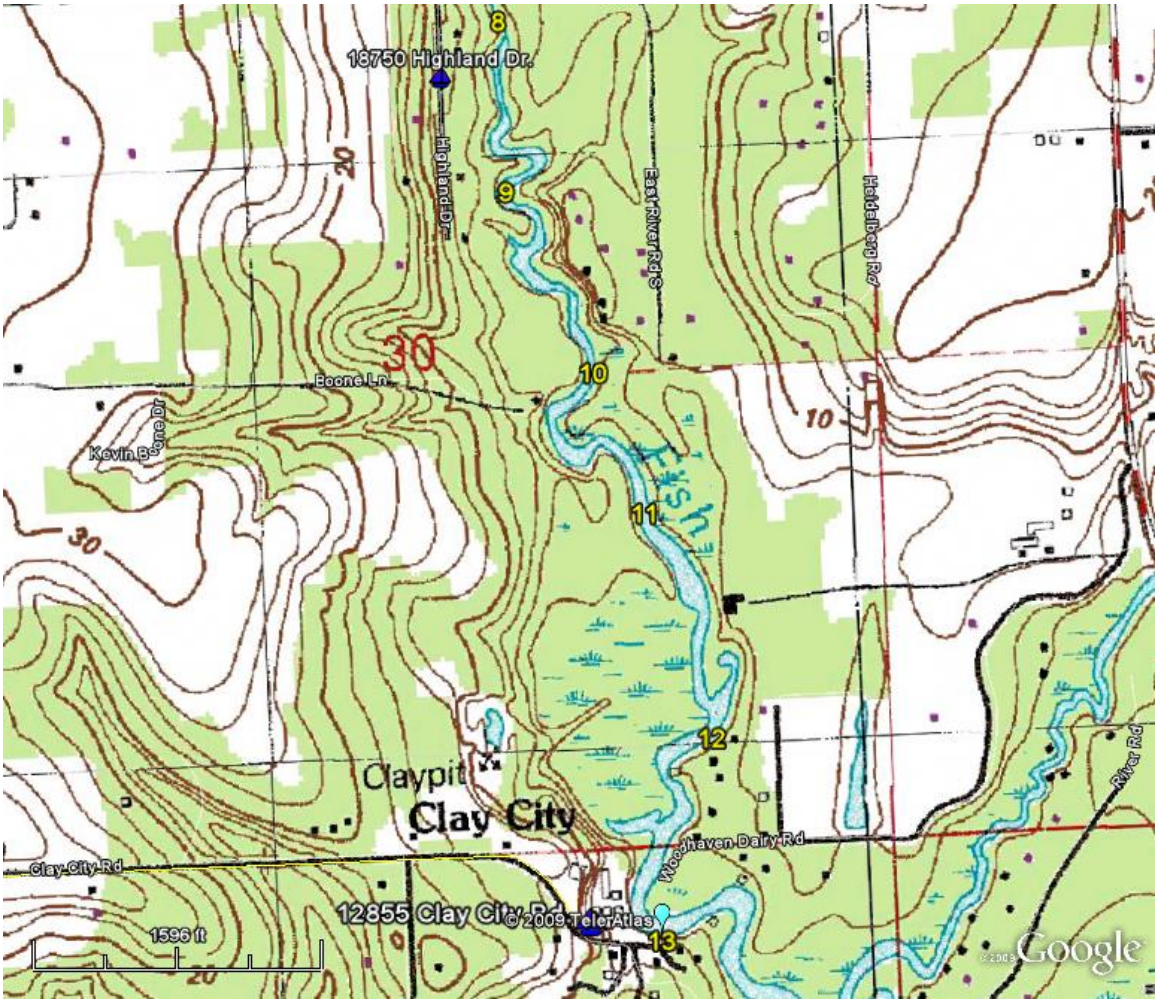


Figure 6: Study Area Grids 13-19

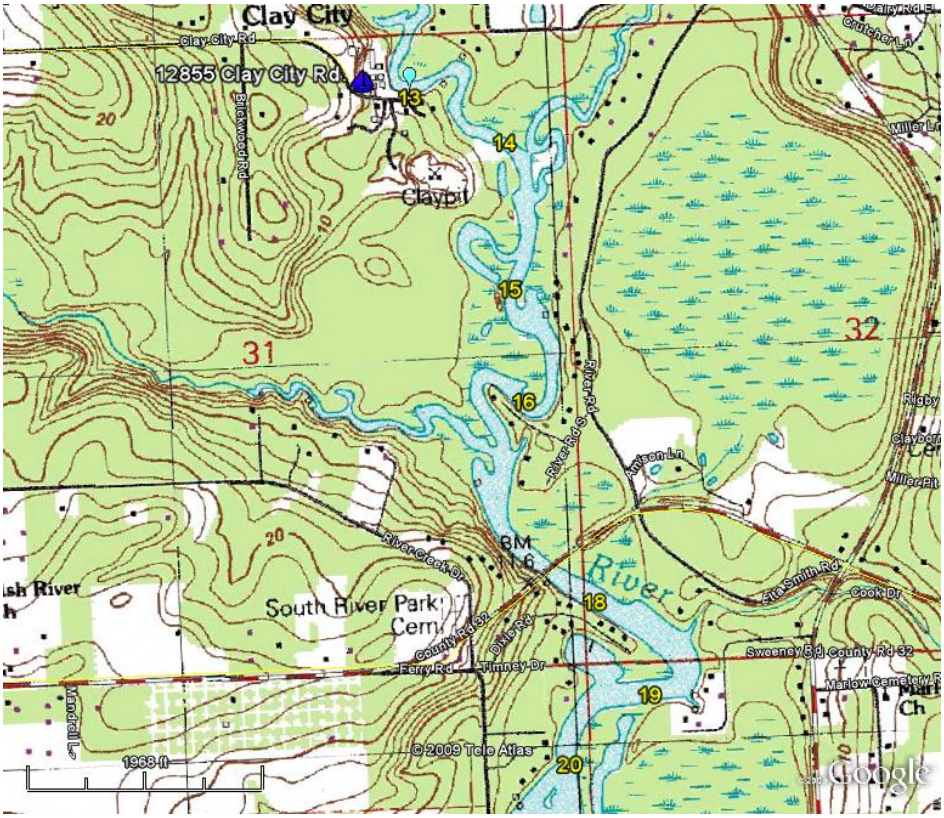
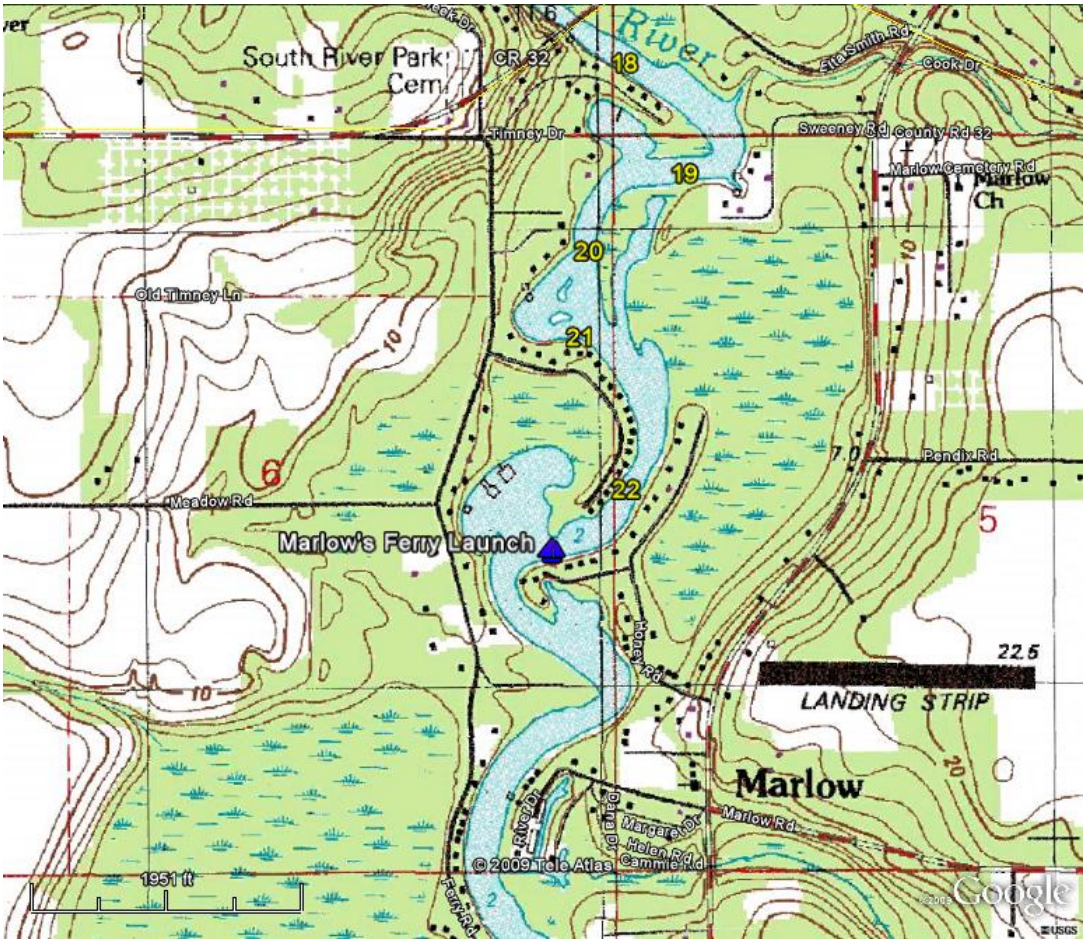


Figure 7: Study Area Grids 18-22



Summary of Data Collected

Weather Conditions on May 2: Clear to Partly Cloudy

General Observations and Recommendations

The data presented in this report was collected over the course of one day by volunteers. All volunteers were trained in the use of the data assessment sheets and the identification of invasive plant species; however, there may be variations in the accuracy and quality of the observations due to the volunteer nature of the project, although we have tried to clarify and verify data when it was unclear.

In general terms, the study area above Bohemian Park is more vegetated than the areas south of County Road 48, where homes, docks, bulkheads and riprap dominate the landscape. However, perhaps due to the relatively inaccessible nature of the river in that area, volunteers observed a number of areas of concern, including areas of obvious construction disturbances with a complete lack of erosion control measures. Additionally, the narrower channel in the upper reaches of the study area makes log and debris jams more prevalent.

Areas of debris and jams partially or fully blocking the channel are noted in the data sheets below, however, it is important to note that these jams are subject to extensive movement.

The two largest areas of debris are located just south of Bohemian Park- one of these jams is so large that it is impossible to continue down the river without a major portage.

The following recommendations are based on staff and volunteer observations as well as information gained from local landowners in the watershed.

Recommendation 1: Undertake an outreach and education campaign for homeowners on the portion of the Upper Fish River north of Bohemian Park to provide information about homeowner Best Management Practices, nonpoint source pollution prevention and septic system maintenance. Even among the more knowledgeable residents, there is a lack of understanding how an individual can negatively impact water quality.

Recommendation 2: Based on conversation with volunteers who reside on the river, there is a lack of understanding and knowledge about Fish River and watersheds in general. Several residents commented that they had never looked so closely at their own back yard. Based on this information, we recommend pursuing additional community volunteer activities in the watershed to encourage a sense of connection and stewardship for our water resources. Activities could include demonstration projects, tree plantings, clean up days and additional shoreline assessments on other tributaries or stretches of Fish River.

Recommendation 3: Invasive species are abundant throughout the study area. Information on invasive plant species was particularly interesting to residents and volunteers. Native plant workshops and invasive species removal days are 2 ways to encourage this interest in plants and help control the spread of invasive exotics in the watershed.

Recommendation 4: Many areas of construction and land clearing activities along the upper reaches of the river seem to be lacking erosion control measures and/or project oversight. We recommend that ADEM or other agency with regulatory authority travel the upper Fish River by boat to observe conditions which may be contributing to erosion and sedimentation.

Conclusion

Although not as scientific in nature as some studies currently taking place in the watershed, the Fish River Shoreline Assessment provided a snap shot in time of the health of the river and areas of concern. Perhaps more importantly, it engaged watershed residents and other volunteers in an active learning project that brought to light gaps in knowledge that ACF, the NEP and other organizations can work to address in the coming years in the Fish River area. It is our hope that this assessment is the first among many in the Mobile Bay Watershed that will work to address on-the-ground water quality concerns.

Over the course of the study, we have identified the following changes/improvements that will be incorporated in future projects:

- Use larger flags to mark the grid locations
- Borrow enough GPS units to make sure that every group has at least one.
- Provide written instruction on finding grid locations
- Provide a short training on using GPS units
- Focus on identifying large stands of invasive plant species
- Continue to hone and improve the data assessment sheet and make watershed-specific changes as necessary
- Make attending a pre-project volunteer training mandatory

Appendix A: Summary of Data Collected by Grid

Grid 1 and Grid 2

Water: clear
Algae: not present
Fish: absent

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: no
Barriers Present: yes

Points of Interest:

2 large log jams dominate the first two grids below Bohemian Park. The second is almost insurmountable and requires a large portage.

Grid 3

Water: clear
Algae: not present
Fish: absent

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: no
Barriers Present: yes

Points of Interest:

GPS: N 3030943, W 8748352
Description: I6 - Chinese Privet

GPS: N 3030909, W 8748350
Description: Boat Launch

GPS: N 3030820, W 8748556
Description: I6 - Chinese Privet; I3 – Japanese Honeysuckle

Grid 4

Water: clear
Algae: not present
Fish: moderately abundant

Vegetative Cover

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 30-70%	**Right Bank:** 30-70%

Land Uses Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: yes
Discharge: yes
Odor: no
Barriers Present: yes – 30°30.63.4

Points of Interest:

GPS: N30°30.692, W087°48.601
Description: I6 - Chinese Privet on Left and Right banks, obstruction on river

GPS: N30°30692, W 087°48.601
Description: I5 - Popcorn Trees – Left bank
I6 - Chinese Privet

GPS: N30°30.634, W87°48.591
Description: I6 - Chinese Privet
Outfall - Right bank

GPS: N30°30.634, W87°48.591
Description: E2 - Moderate erosion present
I5 - Popcorn Trees
I6 - Chinese Privet

Grid 5

Water: clear
Algae: present everywhere - spotty
Fish: present, scantily abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Use Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: yes
Discharge: no
Barriers Present: yes – N 30°30.442, W 87°48.469

Points of Interest:

GPS: N 30°30.442, W 87°48.469
Description: S3 – sewage smell, no visible signs

Distance from Observer: 2 feet, both banks
GPS: N 30°33.551, W 87°48.533
Description: I6 – Chinese Privet

Distance from Observer: 20 feet, left bank
GPS: N 30°33°30.522, W 87°48.486
Description: CS3 - Sediment Fence in Disrepair
E2 - Moderate Erosion of Bank

Distance from Observer: na, left bank
GPS: N 30°30.519, W 87°48.485
Description: Outfall – clear, no odor

Distance from Observer: 2 feet, left bank
GPS: N 30° 30.516, W 87° 48.484
Description: E3 – Moderate erosion of bank - 3 board steps

Distance from Observer: na, left bank
GPS: N 30°30.488, W 87°48.468
Description: Boat Launch - concrete ramp;
Dock present
R1 – Bulkhead
E2 – Moderate Erosion of Bank

Distance from Observer: na, left bank
GPS: N 30°30.485, W 87°48.466
Description: R2 – Rip Rap
I5 – Popcorn Tree on right bank

Distance from Observer: na, island in center of river
GPS: N 30°30.461, W 87°48.490
Description: I5 - Popcorn Trees
I6 - Chinese Privet
I7 - Cogon Grass

Distance from Observer: na, left bank
GPS: N 30°30.431, W 87°48.465
Description: E2 – Moderate Erosion of Bank
I7 - Cogon Grass

Grid 6

Water: clear
Algae: present in spots on logs
Fish: absent

Vegetative Cover

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

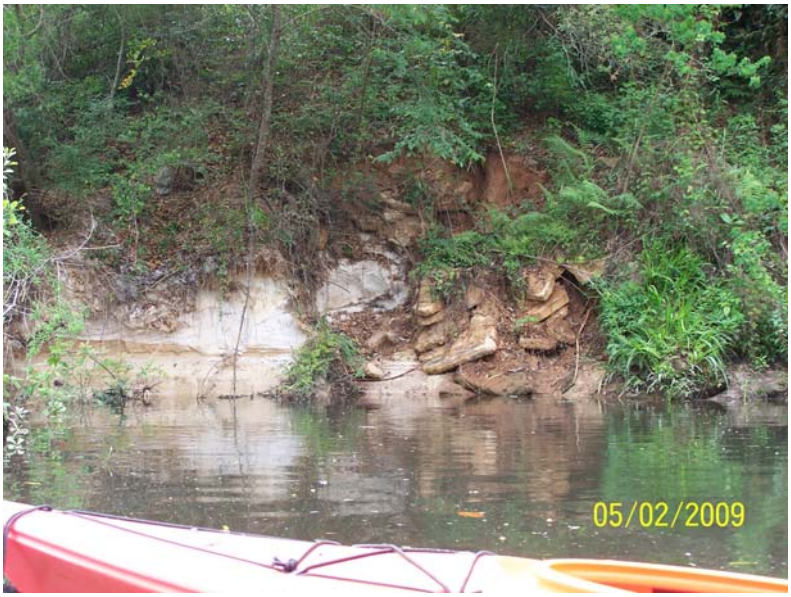
Land Uses Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: yes
Discharge: yes
Odor: no
Barriers: yes – Partial Barrier at N 30° 30.291, W 87° 48.449
Partial Deadfall at N30° 30.192, W87° 48.463

Points of Interest:

Distance from Observer: na
GPS: N 30°30.291, W 87°48.449
Description: I5 – Popcorn Trees; I6 – Chinese Privet

Distance from Observer: na
GPS: N30°30.192, W87°48.463
Description: I5 – Popcorn Trees; I7 - Cogongrass

Distance from Observer: na, left bank
GPS: N30° 30.334, W87° 48.470
Description: E2 - moderate erosion of bank
I5 - Popcorn Trees; I6 - Chinese Privet; I7 - Cogongrass – residential large yard



Distance from Observer: na, right bank
GPS: N 30 30.336, W 87 48.472
Description: Outfall-clear discharge

Distance from Observer: na, left bank
GPS: N 30° 30.270, W 87° 48.431
Description: R1 - Bulkhead; E2 – Moderate erosion present

Distance from Observer: na, left bank
GPS: N 30° 30.240, W 87° 48.441
Description: E1 – Severe erosion of bank

Grid 7

Water: tea color
Algae: not present
Fish: absent

Vegetative Cover

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected; wooded areas; residential
Outfalls: yes
Discharge: yes
Odor: no
Barriers Present: yes

Points of Interest:

Distance from Observer: 0
GPS: N 30°30.191
Description: logs and debris, can get through with difficulty

Distance from Observer: 10 feet, left bank
GPS: N 30°30.172
Description: I5 – Popcorn Tree

Distance from Observer: 15 ft., left bank
GPS: N 30°30.161
Description: hurricane debris

Distance from Observer: 25 ft., right bank
GPS: N 30°30.157
Description: Outfall – no odor, clear trickle
E1 – Severe erosion of bank

Distance from Observer: 10 ft., left bank
GPS: N 30°30.108
Description: CS3 – Utility/power lines break

Distance from Observer: 10 ft., left bank
GPS: N 30°30.136
Description: Trail, Garbage – about 24 beer cans picked up – foot trail led to bank

Distance from Observer: 10 ft., right and left bank
GPS: N 30°30.089
Description: I6 - Chinese Privet

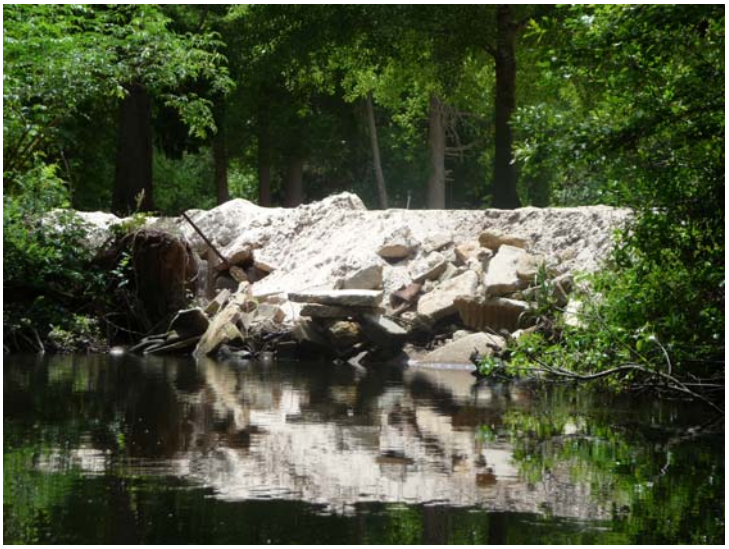
Distance from Observer: 20 ft., right bank
GPS: N 30°30.069
Description: Dock present,
E1 – Severe erosion of bank- residential

Distance from Observer: 10 ft., left bank
GPS: N 30°30.056
Description: Garbage – beer cans picked up
E2 – Moderate Erosion of Bank

Distance from Observer: 10 ft., right bank
GPS: N 30°30.055
Description: E2 - Moderate erosion of bank – residential

Distance from Observer: 10 ft., right bank
GPS: N 30°30.011
Description: R1 – concrete; E1 – Severe erosion of bank; I6 – Chinese Privet

Distance from Observer: 10 – 120 ft.
GPS: N 30°30.001
Description: E1 severe erosion of bank – near residential site/trailer park, concrete blocks near waterline
CS1- Construction Activity at 120 ft.— cut logs



Distance from Observer: 15 ft., left bank
GPS: N 30°29.993
Description: I6 – Chinese Privet

Grid 8

Name(s): Carol Furman and Mark Bernasconi

Water: tea
Algae: not present
Fish: absent – very few minnows

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 30-70%	**Right Bank:** 30-70%
25 ft back to 50 ft back:	**Left Bank:** 30-70%	**Right Bank:** 30-70%

**NOTE – "If residential, then less than 30%"

Land Uses Observed: roads, landfills, undeveloped/unprotected, wooded areas, residential
Outfalls: yes
Discharge: no
Barriers Present: no

Points of Interest:

Distance from Observer: 10 ft., right bank
GPS: 30°29.932
Description: E1 – severe erosion of bank; bench area, residential

Distance from Observer: 10 ft., right bank
GPS: 30°29.929
Description: E1 – severe erosion of bank; residential

Distance from Observer: 20 ft., right bank
GPS: 30°29.906
Description: E1 – severe erosion of bank; screened porch, room

Distance from Observer: 10 – 25 ft., both banks
GPS: 30°29.895
Description: CS3 – sediment fence in disrepair: highland put-in; G2 - metals; G3 – paper/styrofoam; G4 – at log jam-didn't block passage; O2 – outfall: no odor, no flow, old

Distance from Observer: 30 ft., right bank
GPS: 30°29.856
Description: R1 – bulkhead E1 – severe erosion of bank

Distance from Observer: 35 ft., left bank
GPS: 30°29.852
Description: E1 – severe erosion of bank

Distance from Observer: na
GPS: 30°29.829
Description: I6 – Chinese Privet

Distance from Observer: 15 ft., right bank
GPS: 30°29.824
Description: D – collapsed dock

Distance from Observer: 15 ft., right bank
GPS: 30°29.804
Description: CS1 – exposed, disturbed soils; R1 – bulkhead, backfill with sand and concrete, clear-cut behind

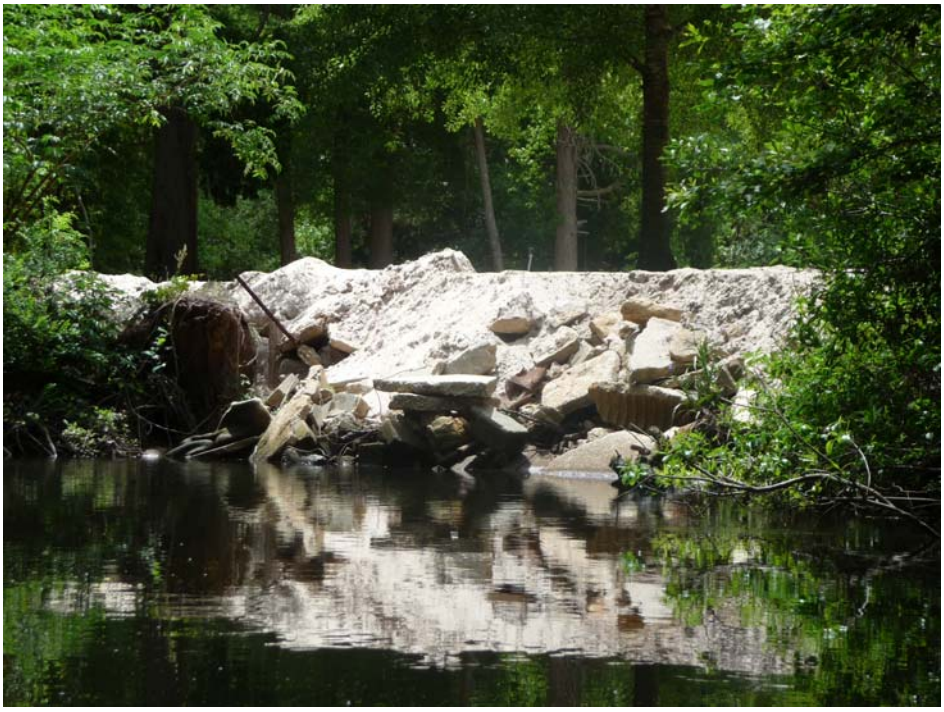
Distance from Observer: 20 ft., left bank
GPS: 30°29.802
Description: R1 – bulkhead, residential

Distance from Observer: 15 ft., left bank
GPS: 30°29.789
Description: R1 – bulkhead, concrete

Distance from Observer: 10 ft., right bank
GPS: 30°29.766
Description: E1 – severe erosion of bank

Distance from Observer: 15 ft., both banks
GPS: 30°29.724
Description: D – dock (left bank); G4 – bench in tree (right bank)

Distance from Observer: 25 ft.
GPS: 30°29.703
Description: G2 – metal drum; G4 – concrete blocks; T- trail, to house; D- dock, floating; E1 – severe erosion of bank



Distance from Observer: 30 ft., left bank
GPS: 30°29.623
Description: G4 – plastic raft – retrieved!

Distance from Observer: 25 ft., right bank
GPS: 30°29.620
Description: E2 – moderate erosion of bank, clearing

Distance from Observer: 25 ft., right bank
GPS: 30°29.586
Description: E1 – severe erosion of bank, residential; I5 – Popcorn Tree on left bank

Distance from Observer: 40 ft., right bank
GPS: 30°29.580
Description: E1 – severe erosion of bank, residential; I5 – Popcorn Trees on both banks

Distance from Observer: 25 ft., left bank
GPS: 30°29.587
Description: D – dock, dilapidated

Grid 9

Name(s): Jenni and Michael Zimlich

Water: clear
Algae: not present
Fish: abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: wooded areas, little residential
Outfalls: no
Discharge: no
Odor: no
Barriers Present: no

Points of Interest:

Distance from Observer: left bank
GPS: N 30°29.721, W 87°48.418
Description: S4 – Pet Waste: Decomposing dog with spike collar

Grid 10

Name(s): Jenni & Michael Zimlich

Water: clear
Algae: not present
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected; wooded areas
Outfalls: no
Discharge: no
Odor: no
Barriers Present: yes – pine tree at N 30°29.578, W 87°48.409

Points of Interest:

Distance from Observer: na, right bank
GPS: N 30°29.578, W 48.409
Description: Fallen pine tree in middle of river; E1 – severe erosion of bank

Distance from Observer: na, right bank
GPS: N 30°29.599, W 87°48.463
Description: CS3 – sediment fence in disrepair, exposed wires; E1 – severe erosion of bank

Grid 11

Name(s): Jenni & Michael Zimlich

Water: clear
Algae: not present
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: residential; wooded areas
Outfalls: no
Discharge: no
Odor: no
Barriers Present: no

Points of Interest:

Distance from Observer: na
GPS: N 30°29.215, W 87°48.284
Description: E2 – moderate erosion of bank

Distance from Observer: na
GPS: N 30°29.324, W 87°48.276
Description: I2 - Kudzu

Distance from Observer: na; left bank
GPS: N 30°29.424, W 87°48.281
Description: I5 – Popcorn Tree; bamboo

Distance from Observer: na; left bank
GPS: N 30°29.467, W 87°48.304
Description: I9 – Coral Ardisia

Distance from Observer: na; left bank
GPS: N 30°29.462, W 87°48.295
Description: Big log jam impeding the flow of the river; lots of trash

Grid 12

Name(s): Jenni & Michael Zimlich

Water: clear
Algae: not present
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: wooded areas; residential
Outfalls: yes
Discharge: no
Odor: no
Barriers Present: na

Points of Interest:

Distance from Observer: na, left bank
GPS: N 30°29.250, W 87°48.318
Description: log snag

Distance from Observer: na, left bank
GPS: N 30°29.242, W 87°48.312
Description: erosion behind dilapidated seawall; no silt fence

Distance from Observer: na, left bank
GPS: N 30°29.242, W 87°48.312
Description: G2 – rusted drums in water

Distance from Observer: na, right bank
GPS: N 30°29.229, W 87°48.361
Description: CS1 – exposed, disturbed soils, recent land stripping on bank

Distance from Observer: na, left bank
GPS: N 30°29.166, W 87°48.375
Description: snag

Distance from Observer: na, right bank
GPS: N 30°29.154, W 87°48.383
Description: outfall

Distance from Observer: na, right bank
GPS: N 30°29.145, W 87°48.333
Description: abundant bamboo

Distance from Observer: na
GPS: N 30°29.202, W 87°48.383
Description: snag

Distance from Observer: na, right bank
GPS: N 30°29.202, W 87°48.383
Description: river splits – area of great concern

Distance from Observer: na, right bank
GPS: N 30°29.237, W 87°48.385
Description: erosion

Distance from Observer: na, right bank
GPS: N 30°29.247, W 87°48.412
Description: E1 – severe erosion of bank

Distance from Observer: na, left bank
GPS: N 30.29.283, W 87°48.412
Description: CS1 – exposed, disturbed soils; E1 – severe erosion, major issue: land clearing, pier present that crosses river to other piece of land

Distance from Observer: na
GPS: N 30.29.272, W 87°48.421
Description: pipes

Grid 13

Name(s): Jenni & Michael Zimlich

Water: clear
Algae: present in spots on rocks
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: homes, residential, wooded areas
Outfalls: no
Discharge: no
Odor: no
Barriers Present: no

Points of Interest:

Distance from Observer: na, right bank
GPS: N 30°29.048, W 87°48.187
Description: E2 – moderate erosion of bank, just south of 14 flag

Distance from Observer: na, right bank
GPS: N 30°29.063, W 87°49.199
Description: I6 – Chinese Privet

Grid 14

Name(s): Chris Gamard

Water: clear, green
Algae: present in spots on rocks, on stream bank
Fish: moderately abundant, “and turtles”

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential
Outfalls: no
Discharge: no
Odor: no
Barriers Present: no, just logs/trees along banks

Points of Interest: “No major problem spots/points of interest in this grid”

Grid 15

Name(s): Chris Gamard

Water: clear, green
Algae: present in spots on rocks, on streambank
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** less than 30%	**Right Bank:** 100%
25 ft back to 50 ft back:	**Left Bank:** less than 30%	**Right Bank:** 100%

Land Uses Observed: roads, undeveloped/unprotected, wooded areas, residential
Outfalls: no
Discharge: no
Odor: no
Barriers Present: no

Points of Interest:

Distance from Observer: na, left bank
GPS: na – "the length of grid"
Description: R1 – bulkhead, "largely residential with extensive bulkheads;" R2 – rip rap

Distance from Observer: 3 ft., right bank
GPS: N 30.4857, W 87.8057
Description: G4 – abandoned 35-ft boat decaying in water

Distance from Observer: 2 ft., right bank
GPS: N 30.4861, W 87.8063
Description: O1 – outfall, large drainage pipe at old Clay City

Grid 16

Name(s): Outward Bound

Water: brown
Algae: not present
Fish: na

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 30-70%	**Right Bank:**
25 ft back to 50 ft back:	**Left Bank:** 30-70%	**Right Bank:**

Land Uses Observed: roads, wooded areas, residential
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: 10 ft., left bank
GPS: na
Description: B – boat launch: concrete boat ramp, 20 yards from bend to south in river

Distance from Observer: left bank
GPS: na
Description: D – private dock, 15 yards from ramp

Distance from Observer: left bank
GPS: na
Description: D – private dock, 40 yards from first dock

Grid 17

Name(s): Outward Bound

Water: brown
Algae: not present
Fish: absent, “we saw one and a lot of fishermen”

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 30-70%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential, roads
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: both banks
GPS: na
Description: County Rd 32 bridge – concrete trestle, 46 ft. tall

Distance from Observer: 10 ft
GPS: na
Description: G4 - tires

Distance from Observer: right bank
GPS: na
Description: raised porch 30 yards upstream from bridge

Distance from Observer: right bank
GPS: na
Description: D - raised porch and dock (residential)

Distance from Observer: right bank
GPS: na
Description: screened, dilapidated building

Distance from Observer: right bank
GPS: na
Description: D - small dock with raised porch

Grid 18

Name(s): Outward Bound

Water: brown
Algae: not present
Fish: absent

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 30-70%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 30-70%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential, private boat ramps, power line
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: 10 ft., left
GPS: na
Description: D – dock 100 yds after 32 bridge

Distance from Observer: 10 ft., left
GPS: na
Description: D - dock, 20 yds after first dock; B – boat launch: adjacent downstream boat ramp

Distance from Observer: 10 ft., left
GPS: na
Description: D - dock, 10 yds from last dock

Distance from Observer: 10 ft., left
GPS: na
Description: D - dock, 20 yds from last dock

Distance from Observer: 10 ft., left
GPS: na
Description: 150 yds of retaining wall on private properties, dotted with above ramps and docks. Make of rocks (50 yds) and wood (100 yds).

Grid 19

Name(s): Gary and Pat Gover

Water: green
Algae: on stream bank
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-70%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-70%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential
Outfalls: na
Barriers Present: no

Points of Interest:

Distance from Observer: shoreline, left side
GPS: N 30°28.291, W 87°47.985
Description: I3 – Japanese Honeysuckle

Distance from Observer: 15 ft, left side
GPS: N 30°28.291, W 87°47.985
Description: I5 – Popcorn Tree

Distance from Observer: 10 ft, left side
GPS: N 30°28.291, W 87°47.983
Description: I5 – Popcorn Tree; I6 – Chinese Privet; I8 – Wild Taro; and *Colocasia esclenta*

Grid 20

Name(s): Gary and Pat Gover

Water: brown
Algae: on stream bank
Fish: na

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-70%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-70%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: left bank
GPS: na
Description: I8 – Wild Taro

Distance from Observer: right bank, shoreline
GPS: na
Description: I5 – Popcorn Tree; I8 – Wild Taro; D- Dock: 40, 25, 60?

Distance from Observer: right bank
GPS: na
Description: silt fence down behind island

Grid 21

Name(s): Catherine Kiser, Gigi Pate, Jennifer Kozlowski, and Jason Saucier

Water: clear, brown
Algae: moss present in spots on rocks, on bulkhead on stream bank
Fish: occasional mullet, gar

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-50%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 30-50%

Land Uses Observed: undeveloped/unprotected, roads, protected/conservation land, wooded areas, residential
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: 3 ft, left bank
GPS: 1 and 2 on map
Description: 1 – island with cypress, magnolia, myrtle; 2 - dock and natural vegetation

Distance from Observer: 10 ft, left bank
GPS: na
Description: houses with docks – grass lawns and bulkheads; Popcorn trees; Privet

Distance from Observer: right bank
GPS: na
Description: bulkhead and rip rap, entire shoreline between grids 21 and 22

Distance from Observer: right bank
GPS: na
Description: I5 – Popcorn Tree at conservation area – A on map

Distance from Observer: right bank
GPS: na
Description: I9 – Coral Ardisia under boathouse stairs – B on map

Grid 22

Name(s): Catherine Kiser, Gigi Pate, Jennifer Kozlowski, and Jason Saucier

Water: clear, brown
Algae: on bulkheads, on stream bank
Fish: na

Vegetative Cover:
Stream edge to 25 ft back: **Left Bank:** less than 30% **Right Bank:** 30-50% in residential, 70-100% downstream
25 ft back to 50 ft back: **Left Bank:** less than 30% **Right Bank:** 30-50% in residential, 70-100% downstream

Land Uses Observed: roads, undeveloped/unprotected, wooded areas, residential, commercial (Big Daddy's Grill)
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: left bank
GPS: na
Description: houses with bulkheads and lawn; Chinese wisteria/Virginia creeper

Distance from Observer: left bank
GPS: na
Description: I8 – Wild Taro at empty lot; I5 – Popcorn Tree

Distance from Observer: left bank
GPS: na
Description: tallow trees

Distance from Observer: left bank
GPS: na
Description: fern and Popcorn tree, potato vine

Distance from Observer: left bank
GPS: na
Description: empty lot with abundant Wild Taro

Distance from Observer: 20 ft., left bank
GPS: na
Description: beach with rock

Distance from Observer: left bank
GPS: na
Description: park/boat launch; outflow – stormwater from parking lot; Popcorn trees

Distance from Observer: 5 ft, left bank
GPS: na
Description: bulkhead; wisteria, taro, bamboo

Distance from Observer: right bank
GPS: na – at flag 22, undeveloped lot
Description: I3 – Japanese Honeysuckle; I6 – Chinese Privet; I8 – Wild Taro; Mimosa; Asiatic jasmine growing along bulkhead on adjacent property as well.

Distance from Observer: right bank
GPS: na – C on map
Description: restaurant; fuel on dock pump; marina with about 20 slips

Grid 23

Name(s): Jennifer Kozlowski & Jason Saucier (sign to Marlow's Ferry)

Water: brown
Algae: on stream bank/bulkhead
Fish: occasional mullet jump – water too deep/brown to see

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** na	**Right Bank:** 30-70%
25 ft back to 50 ft back:	**Left Bank:** na	**Right Bank:** 30-70%

Land Uses Observed: roads, undeveloped/unprotected, wooded areas, residential
Outfalls: no
Barriers Present: no

Points of Interest:

Distance from Observer: right bank
GPS: na – D on map
Description: undeveloped land on right bank just downstream of Big Daddy's; I6 – Chinese Privet; I8 – Wild Taro; I5 – Popcorn Tree; Bamboo

Distance from Observer: right bank
GPS: na – E on map
Description: bulkhead washout, erosion behind a residential lot

Grid 24

Name(s): Jaime Miller, Jay Miller, Jonathan Smith

Water: clear
Algae: present in spots on rocks; on stream bank
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas, residential
Outfalls: yes
Discharge: no
Odor: no
Barriers Present: yes

Points of Interest:

Distance from Observer: right bank
GPS: 1 on map
Description: down tree

Distance from Observer: left bank
GPS: 2 on map
Description: down tree/logjam

Distance from Observer: right bank
GPS: 3 on map
Description: fallen tree/debris

Distance from Observer: na
GPS: na
Description: E2 – moderate erosion; G2 - metals; I5 – Popcorn Tree; I8 – Wild Taro; possible air potato; CS3 – sediment fence in disrepair

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NO DATA from 25, 26, 27

Grid 28

Name(s): Aileen and Brent Trotter

Water: brown
Algae: present in spots on rocks, on stream bank
Fish: absent

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 30-70%	**Right Bank:** 30-70%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas
Outfalls: no
Barriers Present: yes – N 30°32.161, W 87°47.968

Points of Interest:

Distance from Observer: na – both banks
GPS: na
Description: I6 – Chinese Privet

Distance from Observer: along shore, both banks
GPS: N 30.53458, W 87.80010
Description: E2 – moderate erosion of right bank; I6 – Chinese Privet; I4 – Japanese Climbing Fern on left bank

Distance from Observer: na
GPS: N30°32.161, W 87°47.968
Description: log blockage

Distance from Observer: both banks
GPS: N 30°32.153, W 87°47.981
Description: I5 – Popcorn Tree (right bank); I6 – Chinese Privet (both banks); I9 – Coral Ardisia (right bank)

Grid 29

Name(s): Homer Singleton and Parker Sweet

Water: clear
Algae: present in spots on rocks – swift current, but moderate green algae
Fish: na

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: undeveloped/unprotected, wooded areas
Outfalls: no
Barriers Present: yes

Points of Interest:

Distance from Observer: both banks at 104 bridge
GPS: N 30°3244, W 87°4753
Description: I6 – Chinese Privet; I4 – Japanese Climbing Fern; I3 – Japanese Honeysuckle; alligator weed; tallow; E2 – moderate erosion of bank; large trash

Distance from Observer: na
GPS: N 30°3241, W 87°4753
Description: E2 – moderate erosion of bank

Distance from Observer: 10 ft., right bank
GPS: N 30°3215
Description: E1 – severe erosion of bank

Distance from Observer: na
GPS: N 30°3238, W 87°4752
Description: fallen tree

Distance from Observer: 5 ft., left bank
GPS: N 30°32’15.3, W 87°47’55.9
Description: E3 – mild erosion of bank, exposed roots, sandy banks; I6 – Chinese Privet; I5 – Popcorn Tree: huge, overhanging river from east bank

Distance from Observer: 10 ft., left bank
GPS: N 30°32'17.9, W 87°47'55.4
Description: E1- severe erosion of bank: bank gullied through more than 15 ft., trees washed out, lots of exposed roots; I6 – Chinese Privet: omnipresent throughout areas 29-30

Distance from Observer: 5 ft., left bank
GPS: N 30°32'19.6, W 87°47'53.7
Description: E3 – mild erosion of bank: normal silt deposits on inside of bend are mostly eroded away; I6 – Chinese Privet: omnipresent

Distance from Observer: 10 ft., left bank
GPS: N 30°32'21.3, W 87°47'53.8
Description: E1 – severe erosion of bank: shallow sandy slope on outside bend in the river, remnant of failed erosion control device present; I6 – Chinese Privet: omnipresent; I5 – Popcorn Tree

Distance from Observer: na
GPS: N 30°32'21.7, W 87°47'505
Description: E2 – moderate erosion of bank: chunks of sandy embankment on inside at bend falling off into river on east side of small island

Grid 30

Name(s): Homer Singleton and Parker Sweet

Water: clear
Algae: present in spots on rocks, on stream bank
Fish: moderately abundant

Vegetative Cover:

Stream edge to 25 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%
25 ft back to 50 ft back:	**Left Bank:** 70-100%	**Right Bank:** 70-100%

Land Uses Observed: wooded areas, undeveloped/unprotected, residential
Outfalls: no
Barriers Present: yes – log jam/fallen trees at N 30°32'30.3, W 87°47'49.4

Points of Interest:

Distance from Observer: east bank
GPS: N 30°32.725, W 87°47.885 – PI#1 on map
Description: E3 – mild erosion of bank in areas of Hwy 104 bridge; I4 – Japanese Climbing Fern; I3 – Japanese Honeysuckle; I6 – Chinese Privet; green algae abundant; signs of ATV use around bridge on east bank (tracks); S4 – Pet waste

Distance from Observer: 5-10 ft., west bank
GPS: N 30°32'26.1, W 87°47'48.1 – PI#2 on map
Description: E2/E3 – moderate to mild erosion of bank: eroded to sandy shelf approx 5 ft. from water's edge - mild gullying; I6 – Chinese Privet: omnipresent.

Distance from Observer: west bank
GPS: N 30°32'29.0, W 87°47'48.9 – PI#3 on map
Description: E2 – moderate erosion of bank: white silt flowering down bank, remnants of failed silt fence; I6 – Chinese Privet: omnipresent

Distance from Observer: 15 ft., west bank
GPS: N 30°32'30.6, W 87°47'50.9 – PI#4 on map
Description: E3 – mild erosion of bank: survey stakes visible, signs of trees cut, no erosion control measures in place, red clay washout gully; I6 – Chinese Privet: omnipresent

Distance from Observer: 20 ft., west bank
GPS: N 30°32'32.8, W 87°47'51.4 – PI#5 on map
Description: E3 – mild erosion of bank: erosion of west bank on outside of bend, lots of tree roots visible; I6 – Chinese Privet: omnipresent; I5 – Popcorn Tree: large, on east bank

Distance from Observer: east bank
GPS: N 30°32'39.1, W 87°47'52.7 – PI#6 on map
Description: E2 – moderate erosion of bank: sandy embankment on inside bend, typical inside bend sandbar eroded to depth of 8-12 feet from bank outwards approx 12-15'. I6 – Chinese Privet: omnipresent

Appendix B: Fish River Shoreline Assessment Form

Date _____
Name _____ Phone _____
Address _____
Email _____Team Captain Name _____

Grid Number: _____ Other Location Information: _____
When making an observation of a point of interest, please indicate the **Time,** the latitude **(N)** and longitude (**W-Degrees, Minutes, Seconds or decimals**), a **description** of the observation, the viewing direction, general distance away, and note the picture ID if you took a **picture**. The general location of the point of interest should also be indicated on your map with a star if possible.

1. Weather Conditions ___clear ___cloudy __rain _____other

2. Water color ___clear ___oily ____green ___muddy ___brown _____other

3. Are algae present? __Not present ___Present in spots on rocks ___On streambank ____Everywhere

4. Do you see any fish? ___Absent _____Moderately Abundant _____Abundant

5. Looking downstream, how much of the stream bank (both sides) is covered by plants, trees, etc.?

Stream edge to 25 feet back from stream

Left Bank		**Right Bank**	
Less than 30% covered	_____	Less than 30% covered	_____
30%-70% covered	_____	30%-70% covered	_____
70%-100% covered	_____	70%-100% covered	_____

25 back from stream to 50 feet back from stream (if applicable)

Left Bank		**Right Bank**	
Less than 30% covered	_____	Less than 30% covered	_____
30%-70% covered	_____	30%-70% covered	_____
70%-100% covered	_____	70%-100% covered	_____

6. What land uses have you observed?

What are the land uses visible from the river? (*check all that apply and circle the dominant land use types*.)

___ Industrial	___ Parking lots	___ Golf courses
___ Roads	___ Protected/Conservation land	___ Agricultural
___ Landfills	___ Undeveloped/Unprotected	___ Residential
___ Railroads	___ Wastewater treatment plants	___ Park/ Ball fields
___ Junkyards	___ Wooded areas	___ Institutional
___Other *(describe)*	___ Commercial	

7. Did you observe any pipes or other outfalls emptying directly into or near the river? __Yes ___No
If yes, did you observe a discharge? _Yes __No Did it have an odor? ___Yes __No

8. Are there any barriers in the river, such as woody debris? _____Yes ___No
List the barriers here and mark their approximate location on your map.

_____ _____ _____

Key

OUTFALLS
O1, O2, O3...number in order of observation

EROSION
E1= Severe erosion of bank – little or no vegetation present
E2= Moderate erosion of bank – some vegetation present, but evidence of erosion
E3= Mild erosion of bank – little or no areas without vegetative cover
E4= No evidence of bank erosion

GARBAGE (Note: if trash is found, please pick it up and place in the bag provided)
G1= Toxic (oil cans, paint, antifreeze containers, etc.)
G2= Metals
G3= Paper/Styrofoam
G4= Other

SEWAGE / BACTERIA SOURCES
S1=Presence of toilet paper, objectionable floatables
S2 = Bird/waterfowl waste
S3 = Sewage smell, no visual signs
S4= Pet waste

INVASIVE SPECIES (See attached Photo Key for plant identification)
I1= Phragmites
I2= Kudzu
I3= Japanese Honeysuckle
I4= Japanese Climbing Fern
I5= Popcorn Tree
I6= Chinese Privet
I7= Cogongrass
I8 = Wild Taro
I9= Coral Ardisia

ACCESS POINTS
D = Dock
B = Boat Launch
T= Trail

CONSTRUCTION SITE
CS1= Exposed, disturbed soils
CS2= Negligible sediment introduction
CS3= Sediment Fence in Disrepair

OTHER
R1= Bulkhead R2 = Rip Rap

Points of Interest Data Sheet

When making an observation of a point of interest, please indicate the latitude **(N)** and longitude (**W) in Degrees, Minutes, Seconds or decimals**, a **description** of the observation, the viewing direction, general distance away, and note the picture ID (example: P1, P2). The general location of the point of interest should also be indicated on your map in the approximate location with the appropriate code from the key – this is especially important if you do not have a GPS.

Distance From Observer _____ Left or Right Bank (circle)
GPS Coordinates: _____ Photo ID _____
Item Description (use key provided and add detail as needed)

Distance From Observer _____ Left or Right Bank (circle)
GPS Coordinates: _____ Photo ID _____
Item Description (use key provided and add detail as needed

Distance From Observer _____ Left or Right Bank (circle)
GPS Coordinates: _____ Photo ID _____
Item Description (use key provided and add detail as needed)

Distance From Observer _____ Left or Right Bank looking downstream (circle)
GPS Coordinates: _____ Photo ID _____
Item Description (use key provided and add detail as needed)

Distance From Observer _____ Left or Right Bank looking downstream (circle)
GPS Coordinates: _____ Photo ID _____
Item Description (use key provided and add detail as needed)

Appendix C: Postcard Sent to Residents

-

Help the Alabama Coastal Foundation Assess the Health of Fish River!

March 28, 2009

You know what makes Fish River such a great place to live and play, and the Alabama Coastal Foundation (ACF) is committed to keeping it that way! On **March 28**, volunteers will take to Fish River by canoe and kayak to assess the relative health of the river. The data collected will be used to **protect valuable habitat** by identifying areas suitable for preservation, restoration or recreational use, and will provide decision-makers the tools they need to make sound policy decisions. Be on the lookout for paddlers on that day – we would love for you to participate as well.

Sound like fun? Join us for a **volunteer training session** at 6:30PM on March 17th at Big Daddy's and on March 28th at 7:30AM for the shoreline assessment. Bring your canoe and/or kayak, as well as GPS units and a camera if you have them. For more information about this and other projects, visit www.joinacf.org or call the ACF office at 990-6002. Hope to see you there!

**The Fish River project is sponsored by a grant from the Mobile Bay National Estuary Program.*