DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO ATTENTION OF:

CESAM-PD-EI **19 November 2013**

PROPOSED RIVERWALK WALKING TRAIL FOR THE CITY OF BAINBRIDGE, DECATUR COUNTY, GEORGIA

Interested persons are hereby notified that the United States Army Corps of Engineers (USACE), Mobile District intends to update the master plan for Bainbridge Bypass Park in Bainbridge, Georgia. The recipient of this notice is requested specifically to review the proposed action as it may impact federal lands. We also ask your comment on any other potential impact.

DESCRIPTION OF THE PROPOSED ACTION: The City of Bainbridge is proposing to build a walking trail parallel to the Flint River through City maintained parks leased from the USACE. To complete a 1.3 mile loop around the Boat Basin, an 830 linear feet branch trail will extend across the northeast side of the Boat Basin, connecting the proposed River Trail with the existing trail near the newly constructed mega-ramp site. The trail will be ten (10) feet wide and surfaced with asphalt cement pavement. For security, the trail will be lit with security lights. A post and cable barrier will be constructed along the side of the trail to prevent motorized vehicle usage of the walking trail.

The EA for this project is available for review at the USACE Mobile District webpage: http://www.sam.usace.army.mil/Missions/PlanningEnvironmental/EnvironmentalAssessments.aspx.

CORRESPONDENCE: Correspondence concerning this notice should refer to Proposed Riverwalk Walking Trail For The City Of Bainbridge, Decatur County, Georgia and should be directed to the Commander, U.S. Army Engineer District, Mobile, Post Office Box 2288, Mobile, Alabama 36628, Attention: CESAM-PD-EI (Mr. Matthew Horton) within 15 calendar days from the date of this notice. Mr. Matthew Horton may be contacted at telephone number (251) 694-4636 or e-mail address matthew.w.horton@usace.army.mil for additional information.

CURTIS M. FLAKES
Chief, Planning and Environmental Division

DRAFT

ENVIRONMENTAL ASSESSMENT

PROPOSED RIVERWALK WALKING TRAIL FOR THE CITY OF BAINBRIDGE, GEORGIA FLINT RIVER DECATUR COUNTY, GEORGIA

Table of Contents

1.0 INTRODUCTION....4
- 1.1 Location....4
- 1.2 Proposed Action....4
- 1.3 Purpose and Need for the Proposed Action....4
- 1.4 Authority....6

2.0 ENVIRONMENTAL SETTING WITHOUT THE PROJECT....6
- 2.1 General Environmental Setting....6
- 2.2 Significant Resource Description....7
  - 2.2.1 Water Quality....7
    - 2.2.1.1 Surface Water....7
    - 2.2.1.2 Ground Water....7
  - 2.2.2 Fishery Resources....8
  - 2.2.3 Wildlife Resources....8
  - 2.2.4 Wetlands....8
  - 2.2.5 Endangered Species....10
  - 2.2.6 Historic and Archeological Resources....12
  - 2.2.7 Navigation....12
  - 2.2.8 Recreation....12
  - 2.2.9 Socioeconomic Resources....13
  - 2.2.10 Hazardous and Toxic Materials....13
  - 2.2.11 Soils and Slope....13
  - 2.2.12 Flood Plain....16
  - 2.2.13 Prime and Unique Agricultural Lands....16
  - 2.2.14 Noise....18
  - 2.2.15 Air Quality....18
  - 2.2.16 Coastal Barrier Resources Act/Coastal Barrier Improvement Act..18
  - 2.2.17 Airport Runway Clear Zone....18
  - 2.2.18 Livestock Area....18

3.0 DESCRIPTION OF THE RECOMMENDED PLAN....21

4.0 ENVIRONMENTAL IMPACT OF THE RECOMMENDED PLAN.....22
4.1 Biological and Physical Impacts.....22
4.2 Land Use Changes.....22
4.3 Historic and Archeological Resources.....22
4.4 Endangered and Threatened Species.....22
4.5 Recreation.....22
4.6 Air Quality.....22
4.7 Water Quality.....23
4.8 Wetlands.....23
4.9 Flood Plain Impacts.....23
4.10 Noise Impacts.....23
4.11 Aesthetics.....23
4.12 Socioeconomic Resources.....23
4.13 Environmental Justice and Protection of Children.....23
4.14 Prime and Unique Farmland.....23
4.15 Hazardous and Toxic Materials.....23
4.16 Navigation.....23
4.17 Cumulative Impacts.....24

5.0 ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS WHICH WOULD BE INVOLVED SHOULD THE RECOMMENDED PLAN BE IMPLEMENTED.....24

6.0 ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED.....24

7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.....24

8. ALTERNATIVES TO THE RECOMMENDED PLAN.....24

9. COORDINATION.....25

10. REFERENCES.....25
11. PREPARER.....25

12. LIST OF FIGURES
Figure 1.1.-1 Location Map.....5
Figure 2.2.4-1 Wetlands Inventory Map.....9
Figure 2.2.11-1 Soils Map.....15
Figure 2.2.12-1 Flood Plain Map.....17

13. APPENDICES

Appendix A	Master Plan for the Boat Basin Park, Bypass Park, and Access Park dated 05/12/11.
Appendix B	Photographs of the Existing Environment at the Proposed Trail Areas
Appendix C	"Phase I Archaeological Survey of the Bainbridge Riverwalk," New South Associates, Inc.
Appendix D	"Prime and other Important Farmlands, Decatur County," USDA
Appendix E	"Natural Resources of Concern," USFWS

1.0 INTRODUCTION

This Environmental Assessment (EA) is prepared for the City of Bainbridge to analyze the environmental impacts from the proposed walking trails as shown on the City of Bainbridge's *Master Plan for Boat Basin Park, Bypass Park, and Access Park, dated 5/12/11,* (see Appendix A to view the Plan). This analysis is to determine if the proposed action will have a significant impact on the environment.

1.1 Location

The City of Bainbridge (county seat of Decatur County) is a town of 12,000 people located in the southwest corner of Georgia. Figure 1.1-1 is a location map of Bainbridge, Georgia.

1.2 Proposed Action

The proposed action is to build a walking trail parallel to the Flint River through City maintained parks leased from the U.S. Army Corps of Engineers. The proposed walking trail is shown on the City of Bainbridge's *Master Plan for Boat Basin Park, Bypass Park, and Access Park, dated 5/12/11 (see Appendix A).*

The Riverwalk Walking Trail will begin at the Railway Bridge at Cheney Griffin Park and extend through the Bypass Park to the Access Park. The trail will be located between Hatcher Street and the Flint River. The trail will pass in front of the Chamber of Commerce building and cross over the canal (which connects the Boat Basin to the Flint River) via a replacement bridge. The former bridge was removed in 1995. After crossing the canal, the trail will run parallel to the Boat Basin Road and terminate at the existing walking trail at the Fish Pond. To complete a 1.3 mile loop around the Boat Basin, an 830 linear feet branch trail will extend across the northeast side of the Boat Basin, connecting the proposed River Trail with the existing trail near the newly constructed mega-ramp site. Appendix A has the Master Plan that shows the location of the proposed Riverwalk Walking Trail.

The trail will be ten (10) feet wide and surfaced with asphalt cement pavement. For security, the trail will be lit with security lights. A post and cable barrier will be constructed along the side of the trail to prevent motorized vehicle usage of the walking trail.

Per the State of Georgia's buffer requirements for State Waters, there will be no construction within twenty-five (25) feet of the normal flow line of the Flint River or the Boat Basin.

1.3 Purpose and Need for the Proposed Action

The City of Bainbridge has four adjoining parks along the east bank of the Flint River that they maintain. The northern most park, Cheney Griffin Park, they own. The other three parks, the Bypass Park, the Access Park, and the Boat Basin Park, are on property that is leased from the U.S. Army Corps of Engineers. These four parks have a total river frontage of 3.3 miles.

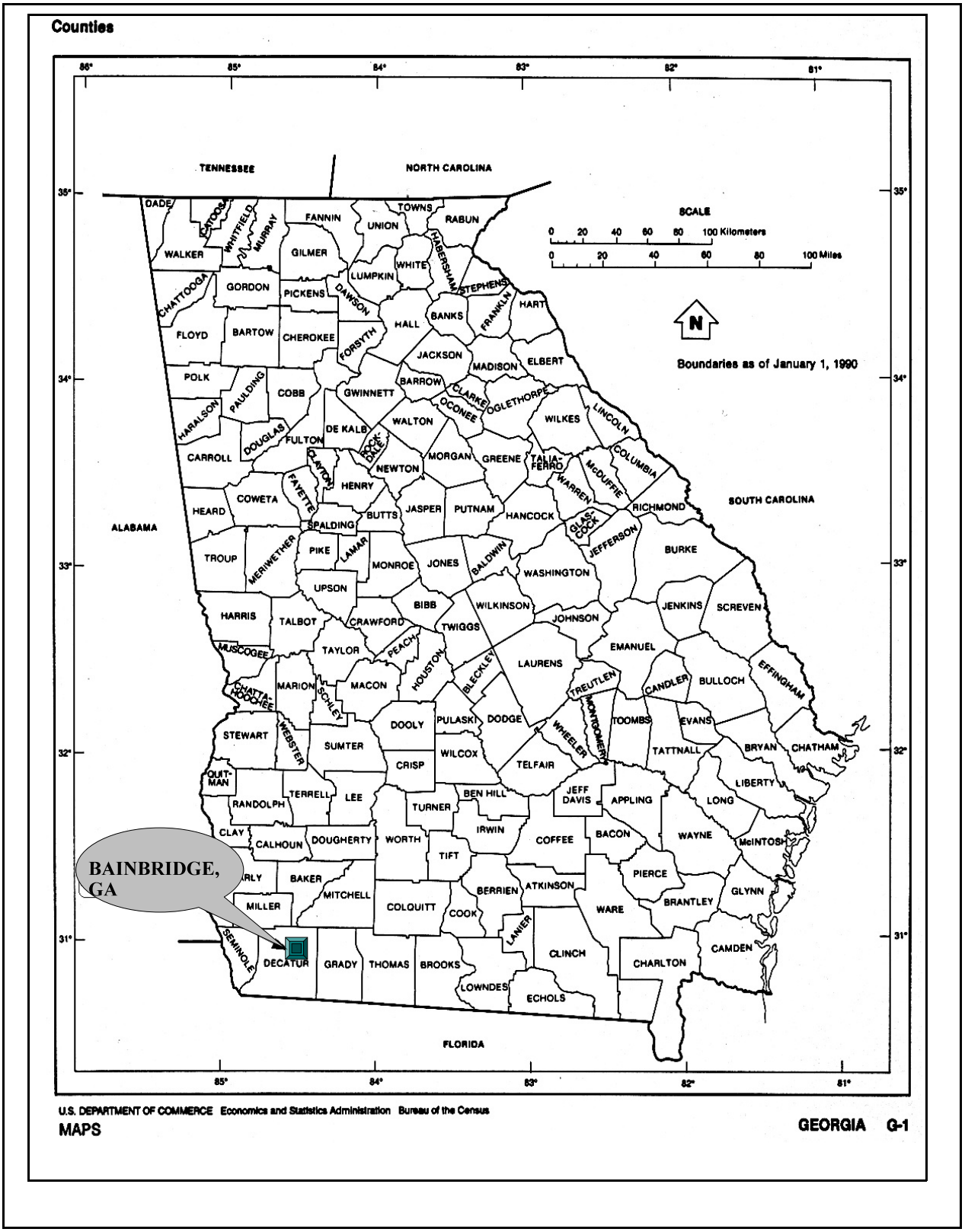


Figure 1.1-1 Location Map

While the four parks are well connected for vehicular traffic, they are not connected for pedestrian traffic. In addition to the goal of connecting the four parks together for pedestrian traffic, it is the goal of the City to extend the sidewalks from the old commercial downtown to Cheney Griffin Park which will allow pedestrian traffic between all four river parks and the downtown.

The southern most park, the Boat Basin Park, has a 3.4 mile asphalt walking trail that is very popular and heavily used by approximately 3.5 percent of the population of Bainbridge. This unlit walking trail is through a wooded flood plain and is only subject to one conflict with vehicular traffic, the trail crossing of College Street near Cox Avenue.

The Bypass Park and the Access Park are also used by walkers and cross country runners but they are forced to walk and run on Hatcher Street, a paved two lane road. While troublesome and dangerous for the athletes and average citizen, it is especially dangerous for the senior citizens. There is a Senior Citizen's Center on Water Street adjacent to the Cheny Griffin Park. The senior citizens make a morning walk through Cheney Griffin Park and down Hatcher Road through the Bypass Park and Access Park with a return along the same route. It is dangerous and sometimes impossible for them to step off the paved road onto the soft sandy shoulder (some of them use walkers).

In summary, there is a need for safe walking trails that connects the four parks along the Flint River. These trails will be used by walkers and runners of all ages and abilities.

1.4 Authority

The development of the walking trails is on property leased from the United States which subjects it to the National Environmental Policy Act. This Environmental Assessment (EA) was prepared as part of the National Environmental Policy Act to assist the U.S. Army Corps of Engineers in determining if there will be significant environmental effects/impacts.

2.0 ENVIRONMENTAL SETTING WITHOUT THE PROJECT

2.1 General Environmental Setting

The proposed location for the walking trail is within a recreational park(s) system that includes:

- Four (4) miles of walking trails.
- Thirteen (13) boat ramps.
- Eight hundred (800) feet of floating docks.
- An amphitheatre.
- Seven (7) picnic shelters.
- Visitor Center/Chamber of Commerce
- RV Campground (85 sites with restrooms & bathhouse).
- Campground (14 sites with restrooms & bathhouse).
- Beach and swimming area with restrooms
- Fish Pond
- Sixteen (16) baseball/softball fields

- Two (2) football/soccer fields
- Five (5) basketball courts
- Sixteen (16) tennis courts with clubhouse.
- Boardwalk with observation platform over the river.
- Livestock area.
- Train display.
- Sawmill display.

The land classification and vegetation of the study area can be characterized as urban-park with scattered oak, sweet-gum, and loblolly pine. The under-story is centipede and/or bermuda grass. Picnic pavilions are found throughout the area with vehicular traffic creating dirt worn paths around the pavilions and up to the river bank. The Boat Basin Park also contains a livestock area where livestock grazes on the under-story.

The boat basin and canal connecting the basin to the river were dug as a borrow pit for fill dirt in the construction of the Highway 84-Bypass. The basin was excavated down to the lime rock of the aquifer and the basin's water is groundwater that flows out of the basin, through the canal, and into the Flint River. While the basin is shallow with an average depth of two feet, it supports very little aquatic vegetation like cattails which typically occur at water depths of three feet or less. The lack of cattails or other aquatic vegetation is attributed to a lime rock or hard bottom with little or no sediment.

Appendix B contains photographs of the areas where the proposed trail would be constructed.

2.2 Significant Resource Description

2.2.1 Water Quality

Water quality includes both surface and groundwater.

2.2.1.1 Surface Water

The surface body of water that the storm water from the Boat Basin Parks drains to is the Flint River. The Flint River begins near Atlanta's Hartfield Airport and merges just below Bainbridge with the Chattahoochee River to form the Apalachicola River. The drainage area of the Flint River above Bainbridge is 7,570 square miles. USGS data for the Flint River at Bainbridge, http://waterdata.usgs.gov/usa/nwis/uv?02356000, shows the following:

- Mean discharge is 8,140 cubic feet per second.
- Minimum recorded discharge is 1,190 cubic feet per second.
- Maximum recorded discharge is 108,000 cubic feet per second.
- Mean velocity is 0.785 feet per second.

The Georgia Environmental Protection Division's 2012 Draft 305(b)/303(d) List of Waters for the State of Georgia, http://www.gaepd.org/Documents/305b.html, shows that the Flint River - Reach R0311300080801, which encompasses the park area, is supporting it's designated use of fishing.

2.2.1.2 Ground Water

The park area lies within the Dougherty Plain which lies within the East Coastal Plain. The aquifer that the City of Bainbridge withdraws drinking water from is the Floridian Aquifer. The water movement within the aquifer in Bainbridge is towards the nearest surface water (Flint River) and/or towards the southwest and the Jim Woodruff Dam on Lake Seminole. The potentiometric surface of the Floridian Aquifer in Bainbridge is 80 feet.

2.2.2 Fishery Resources

The Georgia Department of Natural Resources' website for the lower Flint River, htttp://www.georgiawildlife.com/Fishing/LowerFlint, list the following species of fish for anglers: Largemouth Bass, Shoal Bass, Hybrid Bass, White Bass, Striped Bass, Catfish, Bream, and Alabama Shad.

2.2.3 Wildlife Resources

The area in and around the City of Bainbridge supports at least 350 invertebrate, fish, and wildlife species. Species found within the three parks along the river include species that are commonly found in urban areas along with species not commonly associated with human activities. Commonly encountered animals include squirrels (gray, fox, and flying), song birds (including migratory), rabbits, raccoons, opossum, mice, fox (red and gray), whitetail deer, skunks, armadillos, alligators, bobcat, coyote, turtles, snakes, wading birds, migratory waterfowl, osprey, hawks, owls, and wild turkey. Commonly found snakes in Bainbridge include the Ringneck Snake (very common under leaf litter), the Rat Snake, the Corn Snake, the Pine Snake, the King Snake, the Brown Water Snake, the Banded Water Snake, the Water Moccasin, the Timber Rattlesnake, and the Eastern Diamond Back Rattlesnake.

2.2.4 Wetlands

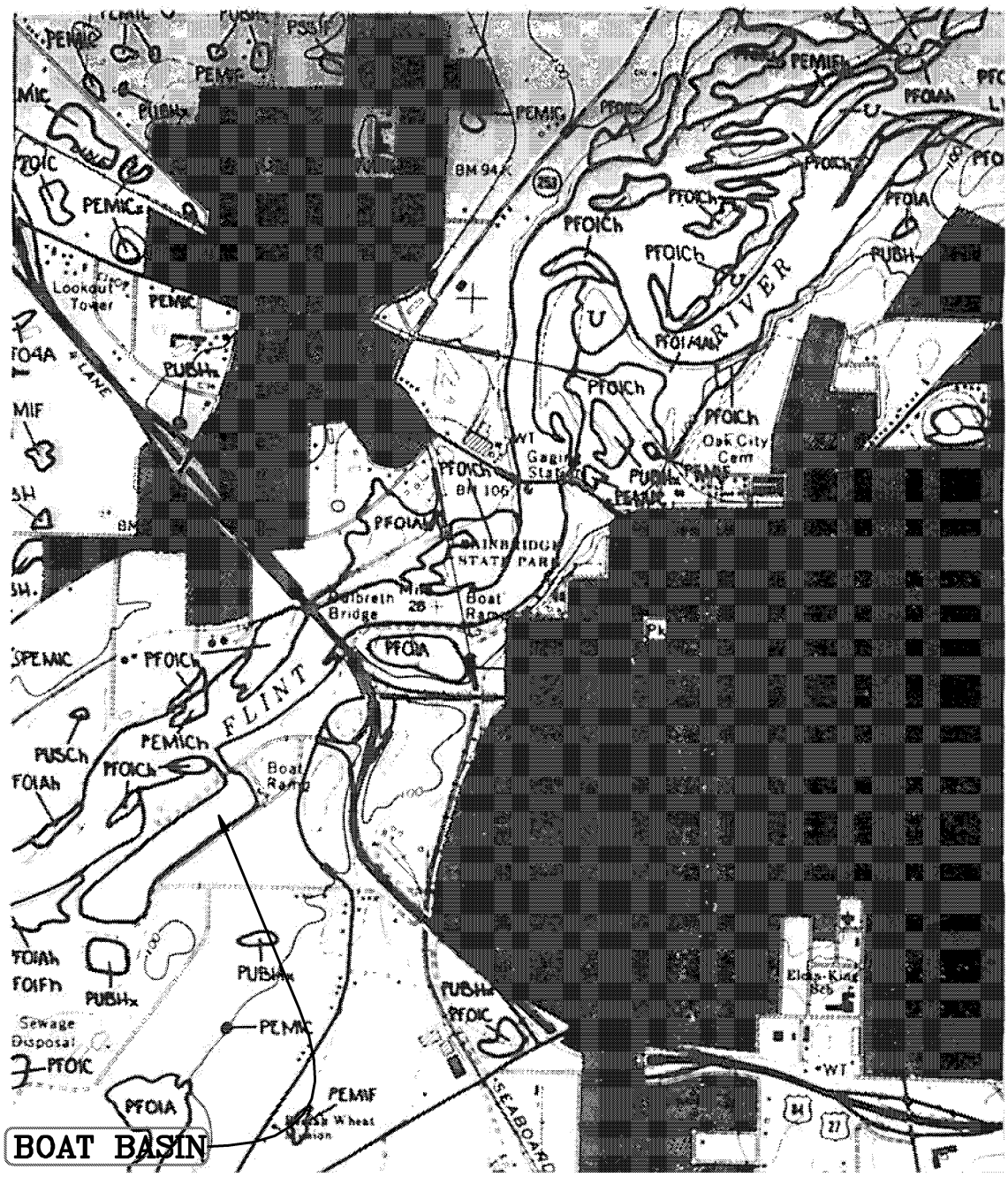
Hydrology that causes permanent or periodic inundation, or soil saturation for a significant period during the growing season is what creates wetlands. There are three factors (all three have to be met) for an area to be delineated as a wetland. These factor are:

1. Hydrology, where the soil is inundated are saturated for more than 12.5 percent of the growing season. Areas that are inundated or saturated for 5 percent to 12.5 percent of the growing season can be either wetlands or uplands depending on soil and vegetation.

2. Soil is hydric. A hydric soil is a soil that is saturated long enough during the growing season to develop anaerobic conditions.

3. The area has a prevalence of hydrophytic vegetation.

Figure 2.2.4-1 is a copy of the 1994 U.S. Department of the Interiors's "National Wetlands Inventory" map of Bainbridge at a 1:24,000 scale. The map shows that the location of the proposed walking trail is not within a wetland area.



DEPARTMENT OF THE INTERIOR'S
NATIONAL WETLANDS INVENTORY MAP
(1994)

Figure 2.2.4-1 Wetlands Inventory Map

While the Wetlands Inventory Map provides a general analysis of the wetland areas near the trail, a more detailed indicator of hydrology and wetland status is provided by the United States Geological Survey (USGS) river gauge on the Calhoun Street Bridge in Bainbridge (Gauge No. 02356000). The gauge height of zero (0) at Gauge 02356000 equals an elevation of 57.63 feet (1988 Vertical Datum). The elevation of the ground that the proposed trail is on ranges from 83 feet to 90 feet (25.37 feet to 32.37 feet on the USGS river gauge).

The growing season for Bainbridge is 245 days (5 years in 10) with a first frost date of November 12 (5 years in 10) and a last freezing date of March 12 (5 years in 10). Using the past ten years data for the river gauge height for the Flint River at the Calhoun Street Bridge during the growing season. The Flint River has not flooded the elevations of the trail study area for the past ten years during the growing season. The median daily water level for the past sixty-eight (68) years reveals no flooding during the growing season. The trail study area does not contain wetlands.

2.2.5 Endangered Species

Special status species are those species that are listed as threatened, endangered, or candidates as such by the U.S. Fish and Wildlife Service (USFWS). The USFWS list of Federally protected species that are known to or believed to occur in Decatur County are shown in Table 2.2.5-1.

Group	Name	Status
Birds	Red-cockaded woodpecker *(Picoides borealis)*	Endangered
Clams	Fat three-ridge *(Amblema neislerii)*	Endangered
Clams	Purple bankclimber *(Elliptoideus sloatianus)*	Threatened
Clams	Oval Pigtoe *(Pleurobema pyriforme)*	Endangered
Clams	Shinyrayed pocketbook *(Lampsilis subangulata)*	Endangered
Clams	Gulf moccasinshell *(Medionidus penicillatus)*	Endangered
Reptiles	Eastern indigo snake *(Drymarchon corais couperi)*	Threatened
Reptiles	Gopher tortoise *(Gopherus polyphemus)*	Candidate
Conifers and Cycads	Florida torreya *(Torreya taxifolia)*	Endangered
Flowering Plants	Fringed campion *(Silene polypetala)*	Endangered

Table 2.2.5-1 Federally Protected Species

Federally Listed Birds

Red-cockaded Woodpecker

The habitat of the red-cockaded woodpecker is large expanses of mature open pine forest of longleaf, slash, or loblolly pine. The pines are large and mature, 80 to 120 years old for longleaf pines and

70 to 100 years old for loblolly pines. The Red-cockaded woodpeckers are very social birds that live in small family groups in clusters of 1 to 20 or more trees on 3 to 60 acres. Each family group needs about 200 acres of old pine forest to support them.

The study area habitat of oak and sweet gum with scattered loblolly pines (urban park) does not and would not support a family group of red-cockaded woodpeckers.

Federally Listed Clams

Federally listed clams includes the Fat three-ridge mussel, the purple bank climber mussel, the oval pigtoe mussel, the shinyrayed pocketbook mussel, and the gulf moccasinshell mussel. These five mussels are limited to the Apalachicola-Chattahoochee-Flint (ACF) River basins and/or neighboring river basins; The shinyrayed pocketbook mussel and the purple bank climber mussel are also found in the Ochlocknee River basin while the oval pigtoe mussel is also found in the Econfina, Ochlocknee, and Suwannee River basins.

Stream channels are the preferred habitat of these mussels. The shinyrayed pocketbook mussel is often found at the interface of a stream channel and the sloping bank; this is a transitional zone of current velocity and sediment particle size.

The USFWS Critical Habitat Portal, http://criticalhabitat.fws.gov, shows that the critical habitat range for the above five mussels ends on the Flint River at the Big Slough junction (north side of Bainbridge) and resumes downstream of the Jim Woodruff Dam on the Apalachicola River. The Flint River adjacent to the study area is not shown as a critical habitat for these five mussels.

Federally Listed Plants

The Federal list of protected plant species includes the Florida torreya, the fringed campion, and the American chaffseed.

The Florida torreya (also known as stinking cedar and gopherwood) is an easily recognized tree of the yew family. It does not exist in the study area.

The fringed campion is a not so easily recognizable ground cover, except in the Spring when its pale pink blossoms are visible. The areas of the Parks where the proposed trails would be built are regularly mowed and the only ground cover is lawn grasses.

Reptiles

Gopher Tortoise

The gopher tortoise is a terrestrial turtle that is a common species found in Decatur County. Its presence in an area is indicated by easily seen and recognized burrow openings.

There are no gopher tortoise burrow openings within the areas that the proposed trails would be constructed.

Eastern Indigo Snake
The eastern indigo snake is the longest snake in North America, reaching a length of 8 ½ feet. The coloration is iridescent blue-black. Georgia's Department of Natural Resources (DNR) reports that the indigo snake utilizes a wide range of habitats during the course of a year. During the warmer months, they are often found in wetland areas feeding on frogs and other snakes. Their forage area in the summer is up to 2,000 acres. As winter approaches, the indigos concentrate in upland sand ridges where stump holes and gopher tortoise burrows are used as winter retreats. Georgia's DNR considers habitat loss due to farming, construction, forestry, and pasture to be the major threat to this species. Over collection by the pet trade is also threat because the indigo tends to be a docile snake to humans.

Due to the level of development observed in proximity to the proposed trail, there is not adequate habitat for the Eastern Indigo snake.

2.2.6 Historic and Archeological Resources
The *Phase I Archaeological Survey of the Bainbridge Riverwalk*, by New South Associates, Inc. (Appendix C), shows that two previously recorded sites (9DR197 and 9DR208 are not located within the construction area of the proposed trail. They did locate a new archaeological site (9DR23) as being located within the construction zone of the proposed trail but they recommend that it not be included in the National Register of Historic Places because it appears to be a 1940s era trash dump with little archaeological potential.

2.2.7 Navigation
The Flint River adjacent to the study area is a navigable water with inland port facilities on the opposite river bank.

There is recreational boat traffic from the mega-ramps inside the Boat-basin to the Flint River with additional traffic along the river. A canal connects the Boat basin to the Flint River. A pedestrian bridge use to cross the canal but was removed in 1995 due to maintenance issues and was not replaced.

2.2.8 Recreation
Recreational facilities found in the Parks that the trail would constructed in include:

- Four (4) miles of walking trails.
- Thirteen (13) boat ramps.
- Eight hundred (800) feet of floating docks.
- An amphitheatre.
- Seven (7) picnic shelters.
- RV Campground (85 sites with restrooms & bathhouse).
- Campground (14 sites with restrooms & bathhouse).
- Beach and swimming area with restrooms
- Fish Pond
- Sixteen (16) baseball/softball fields

- Two (2) football/soccer fields
- Five (5) basketball courts
- Sixteen (16) tennis courts with clubhouse.
- Boardwalk with observation platform over the river.
- Livestock area.

2.2.9 Socioeconomic Resources

The web address, http://quickfacts.census.gov/qfd/states/13/1304896.html, has the 2010 Census results for the City of Bainbridge and the State of Georgia. In comparing Bainbridge to the State of Georgia, the following trends can be determined:

- Population growth is behind the State's growth rate.
- The percentage of persons over 65 is slightly higher.
- The percentage of females is slightly higher.
- The percentage of white persons is less.
- The percentage of black persons is higher.
- The percentage of asian persons is less.
- The percentage of latino persons is less.
- Education levels are less.
- Travel time to work is less.
- Home ownership is less with less than half the population owning their home..
- House value is 25% less.
- Median household income is 50% less.
- Poverty rate is greater with 26.3% of the population at or below the poverty level.
- Percentage of firms owned by women is slightly higher.

2.2.10 Hazardous and Toxic Materials

The Environmental Protection Agency's Resource Conservation and Recovery Information System (RCRIS), http://www.rtknet.org/db/tri/tri.php?citystate=BAINBRIDGE%2C+GA, does not list the study area in their data bases for toxic releases, spills and accidents, risk management, hazardous waste, or harzardous waste - violations and permits.

2.2.11 Soils and Slope

Soils are a critical resource to access because they:

1. Show the structural support capability that exists.
2. Shows the erodibility of the soil on the project site.
3. Shows where hydric soils exist.

Figure 2.2.11-1 is a soils map taken from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey site. The NRCS map shows that ninety-nine (99) percent of the study area is Bigbee (BgB) soil with one (1) percent of the study area (near the Fish Pond) on Hornsville-Wahee (HwA) complex soil.

<u>Bigbee Series</u>

The NRCS classifies Bigbee as a loamy fine sand that rarely floods and is found on 0 to 5 percent slopes. It is a highly permeable hydro-group "A" soil with a permeability rate of 6.0 to 20 inches per hour. It has a Unified Engineering classification of SM, SP-SM and is non-plastic. NRCS considers it unsuitable for an unpaved path or trail because it is too sandy. It is, however, considered good for road fill. The soil erodibility factor "K" value is 0.17 which is in the lower range of the erosion potential scale.

Hornsville-Wahee Complex

Hornsville and Wahee soils are often geographically associated with each other and are found on the terraces of larger streams. The slope of the topography is 0 to 2 percent.

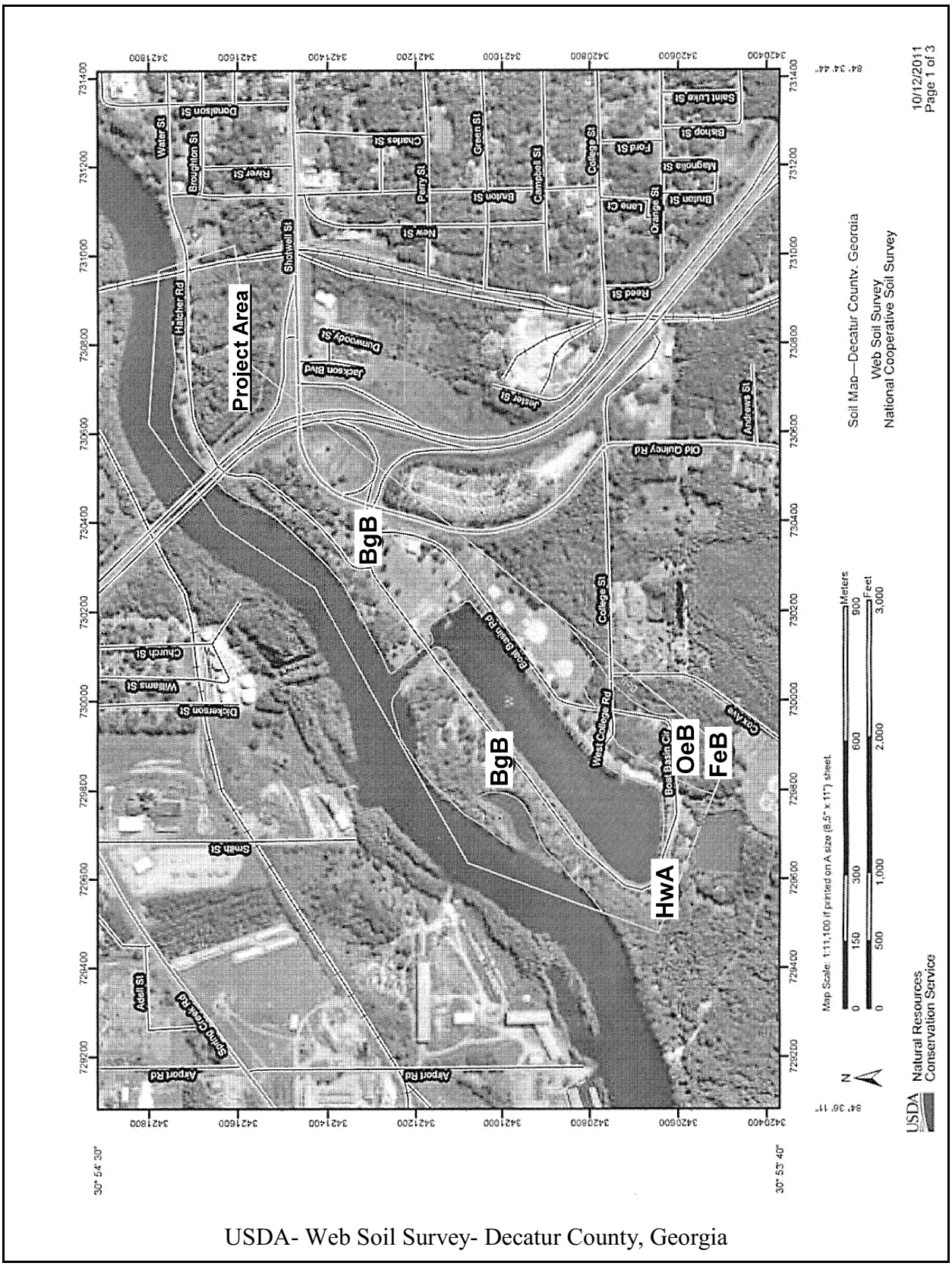
Hornsville is a hydro-group "C" soil with a permeability of 0.02 to 0.06 inches per hour. The Wahee series is a hydro-group "D" soil with a permeability of 0.06 to 0.2 inches per hour. Both soil types are considered to have a flood frequency of none to rare.

The Unified Engineering classification of Hornsville and Wahee soils is SM, SC, CL, and CH. The suitability of the Hornsville soil for an unpaved trail is *"slight"*, while the suitability of Wahee is *"severe"* due to wetness. There suitability for roadfill are: Hornsville, fair; Wahee, poor. The soil erodibility factor "K" value is 0.28 for both the Hornsville and Wahee soils which is in the low range.

Soils Summary

In summary, the majority of the soils in the study area are:

1. Soils that flood rarely.
2. Are highly permeable, very sandy.
3. Are suitable for paved trails but not unpaved trails, very sandy.
4. Have a low erodibility factor.
5. Slope of topography is flat.



USDA- Web Soil Survey- Decatur County, Georgia

Figure 2.2.11-1 Soils Map

2.2.12 Flood Plain

The study area is within the 100 year flood plain per the FEMA Flood Plain Map 13087C0175E, effective date September 25, 2009. The 100 year flood elevation ranges from 91.3 feet to 93.0 feet over the study area. Figure 2.2.12-1 is a copy of the FEMA Flood Plain Map for the study area.

2.2.13 Prime and Unique Agricultural Lands

Prime Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be crop land, pasture land, range land, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farm lands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farm lands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Unique Farmland

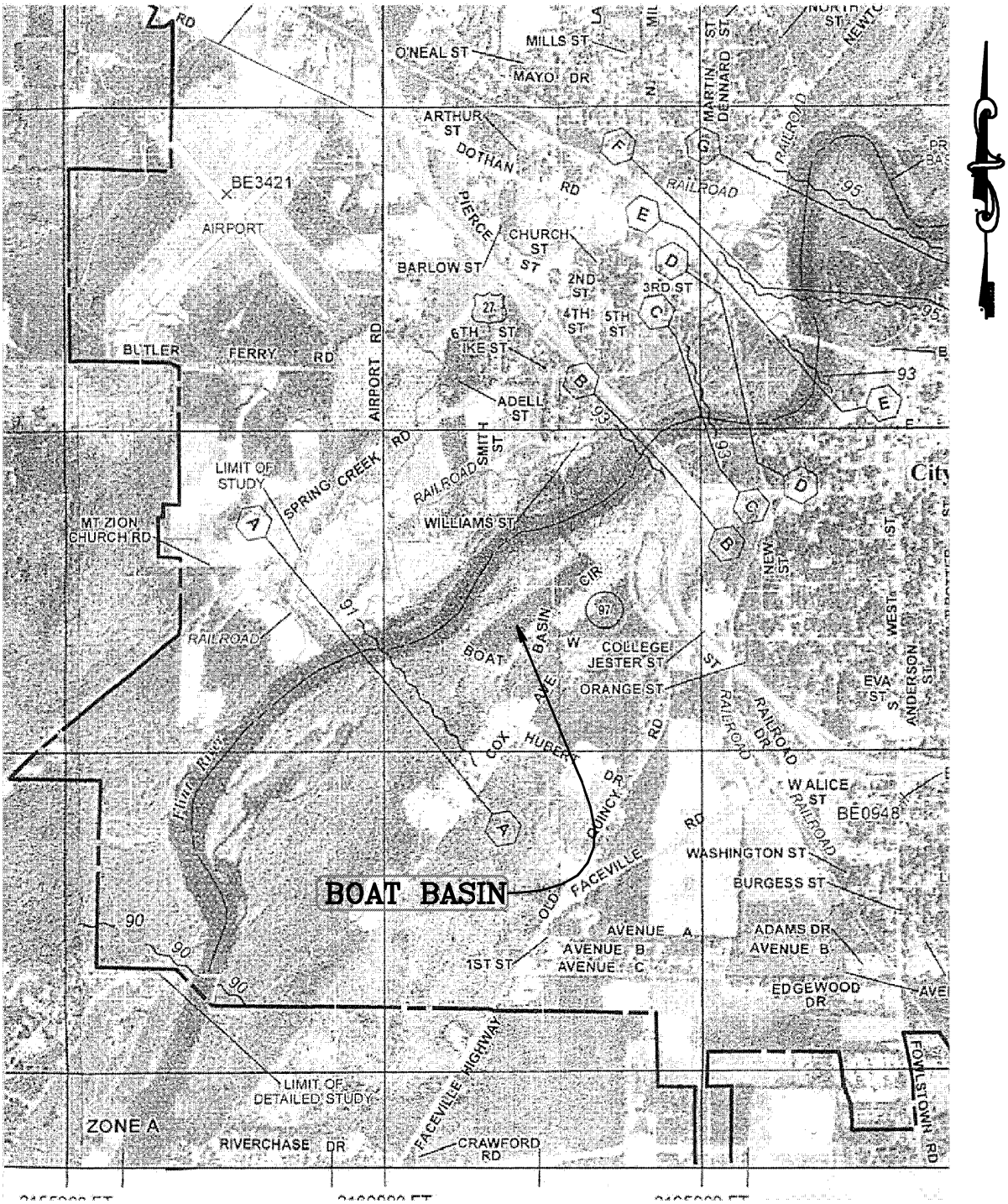
Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.

Specific characteristics of unique farmland.

1. Is used for a specific high-value food or fiber crop.
2. Has a moisture supply that is adequate for the specific crop. The supply is from stored moisture, precipitation, or a developed irrigation system.
3. Combines favorable factors of soil quality, growing season, temperature, humidity, and air.

Additional Farmland of Statewide Importance

This is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some States, addition farmlands of statewide importance may include tracts of land that have been designated for agriculture by State law.



FEMA FLOOD PLAIN MAP
13087C0175E (09/25/2009)

Figure 2.2.12.-1 Flood Plain Map

Additional Farmland of Local Importance
In some local areas there is concern for certain additional farmlands for the production of food, feed, fiber, forage, and oilseed crops, even though these lands are not identified as having national or statewide importance. Where appropriate, these lands are to be identified by the local agency or agencies concerned. In places, additional farmlands of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Appendix D is the USDA NRCS list of soils for Decatur County that would constitute Prime, Unique, and land that is of Statewide importance. There are no local ordinances designating additional farmland of local importance.

The soils in the study area are Bigbee and the Hornsville-Wahee complex. These soils are not on the NRCS list of soils for *Prime and Other Important Farmlands.*

2.2.14 Noise
The Noise Pollution and Abatement Act of 1972 is a Federal Statute regulating noise pollution. As part of the NEPA process, the potential impact of the noise created by the walking trails will have on the environment must be evaluated. Noise could have an impact on wildlife, the economy, minorities, and other resources.

The major sources of noise in the study area are:
- Railroad traffic and switching of cars.
- Truck traffic on Highway 84
- Boat engines.

2.2.15 Air Quality
The study area is not in a non-attainment for violations of the Federal air quality standards area.

2.2.16 Coastal Barrier Resources Act/Coastal Barrier Improvement Act
The study area is not located on the coast and this act does not apply.

2.2.17 Airport Runway Clear Zone
The nearest airport to the study area is the Decatur County Industrial Park Airport which is six miles northwest of the park. There is an abandoned airport one mile to the northwest which shows up on topographic maps but this site is now the Commodore Industrial park with portions of the runway removed.

The study area does not lie within an airport clear zone.

2.2.18 Livestock Area

This section will address the impact that the existing livestock area has on the environment of the Flint River. In 1986, the City of Bainbridge placed goats in a fenced 13.17 acre area of the Boat Basin Park for target grazing of the underbrush to provide a clear view of the Flint River and to

reduce the maintenance requirements of men and machinery. While not a new concept, the University of Georgia College of Agriculture & Environmental Sciences is promoting and using goats and sheep along the banks of the Tanyard Creek and Oconee River in Athens, Georgia, for the same reasons. http://www.caes.uga.edu/applications/gafaces/?public=viewStory&pk_id=4390.

To protect the goats from coyotes and dogs, the City added a donkey. Over the years, additional animals were added; the livestock area currently has 33 goats, 12 emus, and 2 donkeys.

Density of Livestock

The University of Florida's Center for Subtropical Agroforestry, http://sfrc.ifas.ufl.edu/cstaf/cstaffactsheetgoats.pdf, recommends a stocking rate of 12 goats per acre for maximal gain of the goats without compromising forage production in a mixed woodland/pasture. For the 13.17 acres Boat Basin livestock area, this would equate to 158 goats before the forage production would be compromised. The City has never reached or come close to a livestock amount of 158 in the area. To ensure that the animal population remains manageable and the feed bill remains within the City's budget, the City periodically sales off portions of the animals.

Supplemental care and feed that the City provides the animals include:

- A 300 pound mixture of sweet feed and whole corn per month.
- Two bales of hay per month, March-November.
- Three bales of hay per month, December-February.
- Over seeding of area with rye grass every October.
- Bi-annual worming.

The total annual cost to the City for feed and worm medicine in 2012 was $1,252.

The Clean Water Act defines Concentrated Animal Feeding Operations as point sources of pollution and therefore subject to NPDES permit regulations. Georgia defines Concentrated Animal Feeding Operations as feeding operations containing more than 300 animal units. The Boat Basin livestock area has less than 300 animal units and therefore does not meet the definition of a Concentrated Animal Feeding Operation.

Possible Environmental Impacts

The grazing of the animals and the manure generated could have an impact on the Flint River from a bacterial fecal coliform perspective (manure) and from a turbidity perspective (erosion). York & Associates Engineering, Inc. sampled the water in the river at three locations via grab samples. The first location was 335 feet upstream of the livestock area. Being upstream of the livestock area, this upstream location provided a background level of the river. The second sample location was twenty-five feet downstream of the livestock area. The third sample location was 1,300 feet downstream of the livestock area. There were a total of four sampling events made. The first two sampling events were made during dry weather and the last two sampling events were made within 45 minutes of rainfall events that were greater than half inch (early bands of Tropical Storm Andrea). Table 2.2.18-1 shows the results of these samples. The fecal coliform tests/counts were made at the City of Bainbridge's Waste Water Treatment Plant, a State Certified Laboratory. The turbidity tests were

made by York & Associates Engineering, Inc. using a LaMotte 2020 Turbidimeter.

Location	***Sample #***	***Date***	***Time***	***Fecal Coliform (# of Colonies 100 ml)***	***Turbidity (NTU EPA)***
335' Upstream	1	5/20/2013	0835	20	n/a
25' Downstream	2	5/20/2013	0940	40	n/a
1,300' Downstream	3	5/20/2013	0947	30	n/a
335' Upstream	4	5/21/2013	1002	26	n/a
25' Downstream	5	5/21/2013	1007	16	n/a
1,300' Downstream	6	5/21/2013	1011	28	n/a
335' Upstream	7	6/5/2013	1455	228	1.2
25' Downstream	8	6/5/2013	1501	512	2.9
1,300' Downstream	9	6/5/2013	1505	68	1.1
335' Upstream	10	6/6/2013	1703	96	2.6
25' Downstream	11	6/6/2013	1708	64	2.5
1,300' Downstream	12	6/6/2013	1712	24	3.6

Table 2.2.18-1 Surface Water Quality Results

Fecal Coliform

The State of Georgia assesses its water bodies for compliance with water quality standards established by the Federal Clean Water Act, http://rules.sos.state.ga.us/docs/391/3/6/03.pdf.

The Flint River at the Boat Basin Park has a designated use of "Fishing." The use classification water quality standards for fecal coliform bacteria, as stated in the *State of Georgia's Rules and Regulations for Water Quality Control*, Chapter 391-3-6-.03(6)(c)(iii) (GA EPD), are: *"Bacteria: For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 ml based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 ml (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 ml in lakes and reservoirs and 500 per 100 ml in free flowing freshwater streams..."*

The fecal coliform geometric mean for the sample location 335 feet upstream of the livestock area was 58 colonies per 100 ml. The geometric mean for the sample location 25 feet downstream of the livestock area was 68 colonies of fecal coliform per 100 ml. The geometric mean for the sample location 1,300 feet downstream of the livestock area was 34 colonies of fecal coliform per 100 ml. The manure and runoff from the livestock area does not have a significant impact on the background level of fecal coliform in the Flint River nor does it exceed the Water Quality Standard for it's designated us of "Fishing."

Turbidity

With regards to turbidity, Chapter 391-3-.03(5)(d) states, *"All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity. The upstream appearance of a body of water shall be as observed at a point immediately upstream of a turbidity-causing man-made activity. That upstream appearance shall be compared to a point which is located sufficiently downstream from the activity so as to provide an appropriate mixing zone. For land disturbing activities, proper design, installation, and maintenance of best management practices and compliance with issued permits shall constitute compliance with Paragraph 391-3-6-.03(5)(d)."*

The water upstream and downstream of the livestock area was very clear for these sampling events with only very minor variations in the Nephelometric Turbidity Units (NTU). If this were a construction site, Georgia EPD's Permit No. GAR 10001, Appendix B, would allow a NTU value of 50 from the site after a rainfall event of ½ inch or greater, http://www.gaepd.org/Files_PDF/techguide/wpb/FINAL_StormWater_NPDES_Permit_StandAlone_GAR100001_Y2008.pdf

Summary

The fecal coliform or turbidity that the livestock in the Livestock area adds to the Flint River is insignificant and does not violate the Federal Clean Water Act.

3.0 DESCRIPTION OF THE RECOMMENDED PLAN

The proposed action is to build a walking trail parallel to the Flint River through City maintained parks leased from the U.S. Army Corps of Engineers. The proposed walking trail is shown on the

City of Bainbridge's *Master Plan for Boat Basin Park, Bypass Park, and Access Park (dated 5/12/11).*

The Riverwalk Walking Trail will begin at the Railway Bridge at Cheney Griffin Park and extend through the Bypass Park to the Access Park. The trail will be located between Hatcher Street and the Flint River. The trail will pass in front of the Chamber of Commerce building and cross over the canal (which connects the Boat Basin to the Flint River) via a bridge. After crossing the canal, the trail will run parallel to the Boat Basin Road and terminate at the existing walking trail at the Fish Pond. To complete a 1.3 mile loop around the Boat Basin, an 830 linear feet branch trail will extend across the northeast side of the Boat Basin, connecting the proposed River Trail with the existing trail near the newly constructed mega-ramp site. Appendix A has the Master Plan that shows the location of the proposed Riverwalk Walking Trail.

The trail will be ten (10) feet wide and surfaced with asphalt cement pavement. For security, the trail will be lit with security lights. A post and cable barrier will be constructed along the side of the trail to prevent motorized vehicle usage of the walking trail.

Per the State of Georgia's buffer requirements for State Waters, there will be no construction within twenty-five (25) feet of the normal flow line of the Flint River or the Boat Basin.

4.0 ENVIRONMENTAL IMPACT OF THE RECOMMENDED PLAN

4.1 Biological and Physical Impacts

The proposed trail will be constructed on property that is currently used for:

- Parking along the river.
- Lawn.
- Grazing.

The trail will have no negative impact but will eliminate the existing erosion that is occurring.

4.2 Land Use Changes

The current use of the study area is urban park and the trail will fit into that land use.

4.3 Historic and Archeological Resources

There are no archaeological or historical sites of significance where the trails would be constructed.

4.4 Endangered and Threatened Species

Due to the lack of habitat, the proposed project has no potential to effect any known threatened and endangered species.

4.5 Recreation

The trail would benefit the recreation of exercise in the parks.

4.6 Air Quality

The trail would not decrease the existing air quality.

4.7 Water Quality
By eliminating the vehicular traffic parking at the bank of the river, the bank erosion will be eliminated and the water quality will be improved.

4.8 Wetlands
The proposed trail will not be built within any wetland areas. Additionally, **a** twenty-five (25) feet "stream buffer" will be maintained between the construction of the project and State Waters.
The proposed bridge at the Boat basin would be built over wetlands.

4.9 Flood Plain Impacts
The proposed trail would be constructed to the same surface elevations that currently exist. The trail would not add any fill to the flood plain and increase the 100 year flood plain elevation; nor would it divert and increase flood hazards to other lands.

4.10 Noise Impacts
Pedestrians walking or running on the proposed trail will add no significant noise to the area.

4.11 Aesthetics
The construction of the walking trails would fit in with the aesthetics of an urban park and make no significant change to the visual environment.

4.12 Socioeconomic Resources
The construction of the trail would continue to fit within the use of a park and would have no negative impact on the socioeconomic life of the community.

4.13 Environmental Justice and Protection of Children
The proposed trail would be constructed in an existing park and not through any neighborhoods or housing. Being a public trail, usage of the trail would not be exclusive to anyone. The proposed trail would have no negative impact on minorities or low income populations. The trail would benefit the health of all, including minorities and children.

4.14 Prime and Unique Farmland
The proposed trail is not on property that is prime or unique farmland.

4.15 Hazardous and Toxic Materials
There is no record or knowledge of hazardous or toxic material within the parks. The proposed trail would not add hazardous or toxic material to the environment.

4.16 Navigation
The trail would have no negative impact on navigation on the Flint River. The replacement bridge that would be constructed across the canal connecting the Boat basin to the Flint river would require that the bridge be permitted through Section 10 of the Rivers and Harbors Act. Bridge construction plans would be submitted to the U.S. Coastguard and the U.S. Army Corps of Engineers for approval and permitting to ensure there would be no negative impact to the recreational boat traffic entering

and leaving the Boat basin.

4.17 Cumulative Impacts

The cumulative impact of the trail would be positive for the environment. The river bank erosion would be eliminated by the prevention of vehicles from driving up to the bank edge. The impact on the community would be positive from the aspects of safety, physical exercise, health, recreation, and aesthetics.

5.0 ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS WHICH WOULD BE INVOLVED SHOULD THE RECOMMENDED PLAN BE IMPLEMENTED

Irreversible and irretrievable commitments of resources involved in the proposed construction of the trail has been considered; no irreversible or irretrievable commitments of resources are anticipated or expected.

6.0 ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The construction process of the trail could cause short term turbidity on surface waters. The construction process would be mitigated by the use of a 25 feet stream buffer and other erosion and sediment control practices commonly used in construction. The long term turbidity of surface waters will be improved by the paved trail and the elimination of vehicular traffic up to the river bank.

7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed trail would continue man's short term and long term relationship of using the land as an urban park. The trail would be another feature within the park's framework of outdoor activities.

8. ALTERNATIVES TO THE RECOMMENDED PLAN

No Action Alternative

If the trail is not constructed, the study area will continue to be utilized as it currently is. The current use is parking for picnics, relaxing, fishing, and viewing of the river. Long term erosion of the river bank will continue. Walkers and runners will continue to be in conflict with vehicular traffic on Hatcher Street. There would be no hard surface pedestrian (ADA compliant) connection of the four River Parks.

Minimum Development Alternative

The minimum development alternative would be to provide dirt paths for walkers to use. No barrier cable to limit access would be installed nor security lighting. The paths would be limited to the worn width needed for a single user, approximately two feet in width. With the soft deep sandy soil conditions that exist, the trail usage would be limited to walkers and mountain bike riders.

Americans with disabilities, runners, skaters, and narrow tire bike riders would find the trail unusable. With no security lighting, the trail usage would be limited to daylight hours only which would limit the usage during the summer because of the heat.

9. COORDINATION

10. References

Kwader, Thomas and Wagner, Jeffry R, Ground Water Resources of the Dougherty Plain, Southwest Georgia, (Prepared for Decatur County, October 1980).

http://georgiawildlife.com/rare_species_profiles, Georgia Department of Natural Resources, Rare Species Descriptions, Habitat, Range, Threats, and other data.

http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm, U.S. Department of Agriculture, Natural Resources Conservation Service, Soils Map, Soils Descriptions and Properties.

11. Preparer

This Environmental Assessment was prepared by:

James York, P.E., L.S.
York & Associates Engineering, Inc.
308 E. Water Street
Bainbridge, GA 39817