

**DRAFT ENVIRONMENTAL ASSESSMENT
 PIPER DRIVE PROPOSED STORMWATER
 INFRASTRUCTURE UPGRADE
 CHATTAHOOCHEE RIVER DRAINAGE
 DEKALB COUNTY, GEORGIA**

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1.0. PURPOSE AND NEED FOR THE PROPOSED ACTION.

Piper Drive is located in the Valley Brook Estates subdivision. This subdivision was constructed prior to the 1970's, and the old structure at this location is failing and inadequately sized to handle the storm flows experienced in the area. The proposed action consists of stormwater infrastructure upgrade at the Piper Drive culvert location to provide additional stormwater capacity at the road crossing and catch basin inlet.

2.0. AUTHORITY.

The proposed action is being conducted under the authority of Section 219 of the Water Resources and Development Act (WRDA) of 1992, as amended, in subsection "c (2) *Atlanta, Georgia. – A combined sewer overflow treatment facility for the City of Atlanta, Georgia.*" In 1996, this authority was "*modified to include watershed restoration and development in the regional Atlanta watershed, including Big Creek and Rock Creek*" and to provide "(e) *AUTHORIZATION OF APPROPRIATIONS FOR CONSTRUCTION ASSISTANCE. – They are authorized to be appropriated for providing construction assistance under this section – (5) \$25,000,000 for the project described in subsection(c) (2).*"

3.0. DESCRIPTION OF THE PROPOSED ACTION.

The Corps has identified has five (5) undersized CMP cross drains of varying sizes and a few conveyance system runs in Valley Brook Estates that have reached their anticipated life expectancy (four sites covered in the May 2010 EA). The culvert at 3086 Piper Drive includes a 30-inch corrugated metal pipe lined with polyvinyl chloride (PVC) at the lower elevations and a 24-inch corrugated metal pipe at higher elevation. This location will require 87 feet of culvert replacement, with approximately 27 feet underneath the pavement of Piper Drive and 60 feet underneath the right of way for Piper Drive. The project also provides for approximately 50 feet of bank shaping/rock stabilization upstream or downstream of the enlarged culvert with an adequate amount of stone material to accomplish the work if needed to provide a transition zone between the new upgraded structure and the adjacent stream. The desired results will provide upgraded flow capacity at the Piper Drive cross drain and the adjoining system.

DeKalb County, GA

Proposed DeKalb County, GA Drainage Infrastructure Projects

May 13, 2009

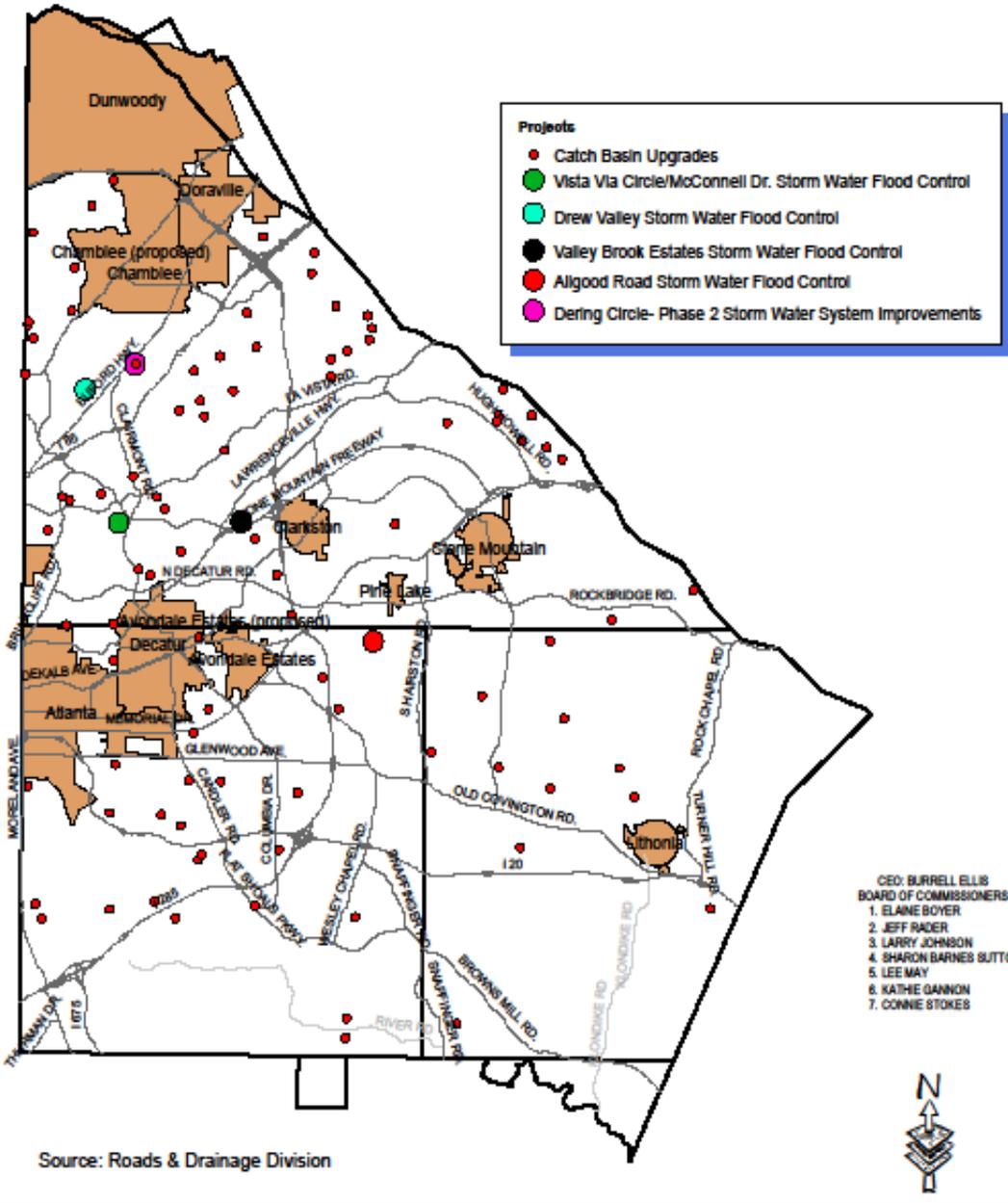


Figure 1. DeKalb County Proposed Drainage Project Locations (Allgood Road included in separate environmental documentation)

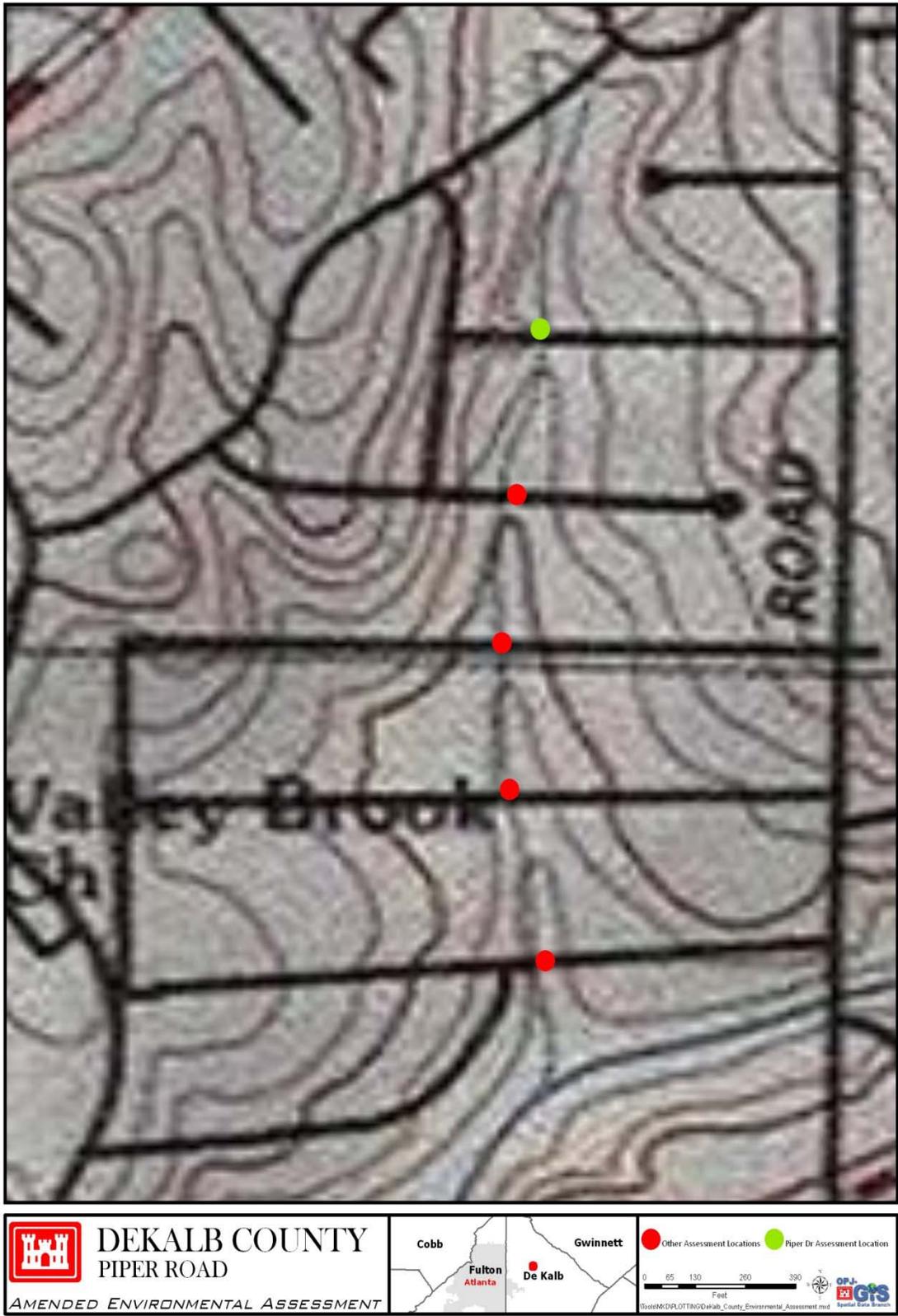


Figure 2. Valley Brook Estates Topographic Map Showing Piper Drive Location



	DEKALB COUNTY PIPER ROAD <i>AMENDED ENVIRONMENTAL ASSESSMENT</i>	 <p>Cobb Fulton Atlanta De Kalb Gwinnett</p>	<p> Other Assessment Locations  Piper Dr Assessment Location</p> <p>0 65 130 260 390 Feet</p> <p> OP&I GIS Spatial Data Branch</p>
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Figure 3. Valley Brook Estates Aerial Photo Showing Piper Drive Location

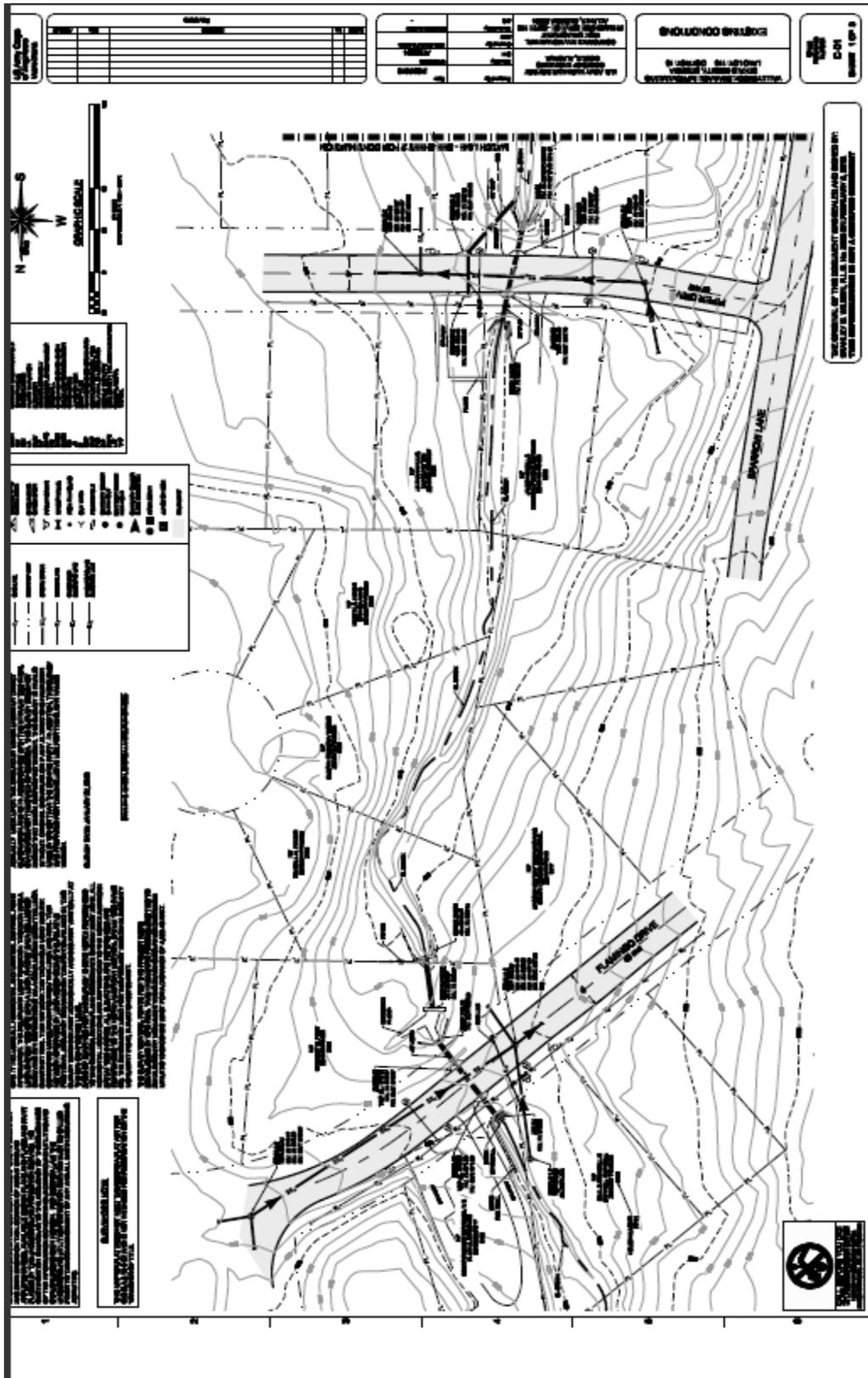


Figure 4. Piper Drive Site Plans

4.0. **ALTERNATIVES TO THE PROPOSED ACTION.**

4.1. **No Action.** The No Action alternative was considered and would involve no upgrade to be completed at the proposed Piper Drive location. This alternative avoids the monetary cost associated with the upgrade of the proposed site. However, upgrading the proposed location would decrease the chance of flooding to the surrounding community. Without the upgrade the risk of flooding would continue and pose a risk to structures in the neighborhood around the Piper Drive site.

5.0. **AFFECTED ENVIRONMENT.**

5.1. **General.** DeKalb County is in the northwestern part of Georgia and has a land area of 268.7 square miles. It is included in the five-county core of the Atlanta-Sandy Springs-Marietta, Georgia, metropolitan statistical area. It is bordered on the west by Fulton County and contains a portion of the City of Atlanta. DeKalb is primarily a suburban county. The proposed Piper Drive site in the Valley Brook Estates subdivision is located within the Chattahoochee River Basin area of DeKalb County.



Photo 1. Piper Drive Culvert Site



Photo 2. Piper Drive Culvert Site

5.2. Climate. The climate for the area is classified as Humid Subtropic and is characterized by short, mild winters and long, hot summers. Rainfall in this area of Georgia averages 50-plus inches of rain annually. The high annual rainfall and the high percentage of developed impervious surface within DeKalb County necessitate functional stormwater infrastructure within the county.

5.3. Topography. The topography of the area is generally characterized by rolling hills. Elevations range from 1,683 feet at the top of Stone Mountain to 640 feet in the southeastern part of the county.

5.4. Soils. In general, the upland soils found in this area are well drained with a loamy surface layer and clayey subsoil. The floodplain areas are loamy throughout and poorly too well-drained.

5.5. Streams/Wetlands. Surface water streams within DeKalb County are divided into those in the northern part of the county that flows into Peachtree and Nancy Creeks, and ultimately drain into the Chattahoochee River, and the southern part of the county that drains into the South River and ultimately into the Ocmulgee and Altamaha Rivers – with the Chattahoochee and Altamaha basins roughly separated by the CSX Railroad. The Piper Drive drainage/culvert project area that is addressed in this EA is located within the Chattahoochee River drainage. There are several ponds and lakes located throughout the county, along with scattered riparian wetlands. These wetlands tend to be rather small and have been affected in their function and value by the high level of urban development within the county. The area around the proposed Piper Drive site is an established pre-1970 subdivision with a narrow vegetative buffer. The stream at the Piper

Drive drainage/culvert project location is a small water body that is located in a highly impacted urban environment and is subject to a “flashy” hydrology caused by the significant increase in impervious surface within the developed watershed. The subdivision and stormwater drainage facilities were constructed prior to the 1970’s. According to the Georgia Environmental Protection Division, the proposed road/drainage maintenance and repair are exempt from the state’s stream buffer variance regulations (personal communication, Jan Sammons, Georgia Environmental Protection Division, 22 April 2010).

5.6. **Flora.** The proposed upgrade location is located in residential area. The predominant flora around the upgrade location consists mainly of grassed lawns.

5.7. **Fauna.** Due to the fact that the upgrade location is located in highly disturbed area it would not prove to be suitable habitat for species other than those that have adapted to urban settings such as raccoons, opossums, rabbits, gray squirrels, etc. Species populations are limited in the area immediately surrounding the project. Aquatic organisms within the stream at the Piper Drive location appear to have been significantly impacted by the surrounding urbanization of the watershed. Some tolerant species of small-bodied fish, reptiles, and amphibians are present in the stream.

5.8. **Endangered and Threatened Species.** The U.S. Fish and Wildlife Service (FWS) have listed species as endangered or threatened in the DeKalb County area. Table 1 on the following page has a listing of species as found on the FWS website:

http://www.fws.gov/athens/endangered/counties/dekalb_county.html).

The Bald Eagle is included in the following list, this species has since been delisted; however, it is still protected under the Bald and Golden Eagle Protection Act. The state of Georgia has also listed several species in the DeKalb County area as threatened or endangered; these species are listed on the next page.

Table 1 – List of Federal and state Endangered and Threatened Species within DeKalb County, Georgia

Species	Federal Status	State Status	Habitat
Bird			
Bald eagle <i>Haliaeetus leucocephalus</i>	T	E	Inland waterways and estuarine areas in Georgia.
Fish			
Bluestripe shiner <i>Cyprinella callitaenia</i>	No Federal Status	T	Brownwater streams
Plant			
Bay star-vine <i>Schisandra glabra</i>	No Federal Status	T	Twining on subcanopy and understory trees/shrubs in rich alluvial woods
Black-spored quillwort <i>Isoetes melanospora</i>	E	E	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed.
Flatrock onion <i>Allium speculae</i>	No Federal Status	T	Seepy edges of vegetation mats on outcrops of granitic rock
Granite rock stonecrop <i>Sedum pusillum</i>	No Federal Status	T	Granite outcrops among mosses in partial shade under red cedar trees
Indian olive <i>Nestronia umbellula</i>	No Federal Status	T	Dry open upland forests of mixed hardwood and pine
Piedmont barren strawberry <i>Waldsteinia lobata</i>	No Federal Status	T	Rocky acedic woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods
Pool Sprite, Snorkelwort <i>Amphianthus pusillus</i>	T	T	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed

Due to the fact that the Piper Drive proposed site is located in a highly disturbed area, the Corps has determined that no suitable habitat exists for these species in the Valley Brook Estates drainage/culvert upgrade locations. The Corps has coordinated this finding with the U.S. Fish and Wildlife Service (USFWS), Athens office. USFWS stated that they concurred that the species listed under the Endangered Species Act would not be affected and that no further coordination regarding threatened and endangered species would be required.

5.9. Cultural Resources. Field reconnaissance investigations have shown that the proposed stormwater infrastructure upgrade locations areas have all been previously disturbed and are located in residential neighborhoods. The Corps has determined that no significant archeological sites are located within the proposed Piper Drive project area.

5.10. Noise. The predominant ambient sounds in the vicinity of the site are those that are associated with moving traffic and other common urban noise sources.

5.11. Air Quality. Data taken from the EPA website (www.epa.gov) indicates that in 2008 there were 13 days that the air was classified as unhealthy for sensitive groups or unhealthy.

5.12. Water Quality. DeKalb County crosses two watersheds, the Upper Chattahoochee and Upper Ocmulgee. The 303(d) list of impaired waters for these watersheds list 4 impaired waters for the Upper Ocmulgee and 10 impaired waters for the Upper Chattahoochee.

5.13. Environmental Justice/Protection of Children. On February 11, 1994, the President issued Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. The EO is designed to focus federal attention on the environmental and human health conditions in minority and low-income communities with the goal of achieving environmental justice. The EO is also intended to promote nondiscrimination in federal programs substantially affecting human health and the environment. The EO states that federal activities, programs, and policies should not produce disproportionately high and adverse impacts on minority and low-income populations. Listed in Table 2 on the next page you will find some demographic characteristics of the DeKalb County area.

Table 2 – Demographic Characteristics of DeKalb County

Data Category	DeKalb County	Georgia
Population		
2000	666,036	8,186,812
2008	739,956	9,685,744
Percent change	11.10%	18.30%
Persons per square mile	2,484.60	141.4
Age		
Under 18	24.00%	26.30%
Over 65	8.60%	10.10%
Race		
White	40.20%	65.40%
Black	53.70%	30.00%
Native American	0.40%	0.40%
Asian	4.20%	2.90%
Pacific Islander	0.10%	0.10%
Two or more races	1.40%	1.30%
Hispanic	10.40%	8.00%
Language other than English spoken at home	17.40%	9.90%
Education		
High School Graduates	85.10%	78.60%
Four-college degree	36.30%	24.30%
Persons per household	2.62	2.65
Income		
Median household	\$54,708	\$50,834
Per capita	\$23,968	\$21,154
Persons below poverty	15.60%	14.70%

Source: U.S. Census Bureau: State and County Quick Facts. Last Revised 23 February 2010

On April 21, 1997, the President issued Executive Order (EO) 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. To the extent permitted by law and appropriate, and consistent with the federal agencies’ mission, federal agencies shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. The existing environmental risks to children in DeKalb County include health hazards from flooding due to the inadequately sized drainage system currently in place.

5.14. Hazardous, Toxic, and Radiological Wastes. Valley Brook Estates is somewhat of a lower income neighborhood with smaller homes and is more densely populated than many other neighborhoods within DeKalb County. While the area is largely residential, there are nearby areas where large shopping areas, gas stations, etc. come within one-half mile or so of the subject site. Existing area maps were reviewed and area residents were interviewed that confirmed that these drainage structures have been in place prior to the 1970’s. The actions associated with drainage/culvert replacements in DeKalb County are occurring on existing rights-of-way at very old existing drainage structure locations, therefore, these actions will occur at previously

disturbed sites that have been impacted by multiple incidents of flooding. All sites are within the Federal Emergency Management Agency (FEMA) flood zone. An Environmental Site Assessment (ESA) was conducted in April 2010 for the drainage enhancements being performed at rights-of-way sites throughout DeKalb County, including the Piper Drive site. The Environmental Site Assessment (ESA) was conducted generally according to ASTM E 1527 - 00 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process) to determine whether hazardous, toxic, radiological substances were stored, disposed of, or released to the environment that may impact the areas proposed for drainage improvements at culvert crossings and specific areas that experience flooding located throughout DeKalb County. There is no indication that there has been storage, release, treatment or disposal of hazardous substances or petroleum products on or around the Piper Drive subject properties. There is no indication of environmental degradation or stressed vegetation. While the waterways do not show signs of environmental contamination, such as stressed vegetation, dead areas or dumping; the rare observation of fish and wildlife indicate the biological health of these streams is less than optimum.

6.0. **ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION.**

6.1. **General.** The impacts associated with stormwater infrastructure upgrade at the Piper Drive site within Valley Brook Estates is discussed in the following paragraphs.

6.2. **Topography.**

6.2.1. **Proposed Action.** The stormwater infrastructure upgrade of the proposed Piper Drive location would not include any significant excavation or fill. Therefore, the proposed action would not have any major environmental consequences on the topography of the site.

6.2.2. **No Action Alternative.** Under the no action alternative no effects to topography would occur and it would remain in its present state.

6.3. **Soils.**

6.3.1. **Proposed Action.** The Piper Drive stormwater infrastructure upgrade location is located in a previously disturbed location, so the activities to upgrade and repair the drainage/culvert structures would have a short-term, localized minor affect on soils. Minimal excavation and/or fill would be involved with the upgrade of the proposed location. Implementing best management practices would ensure that the proposed action would only have minor and temporary impacts to the existing soils and erosion would be controlled and minimized.

6.3.2. **No Action Alternative.** Under the no action alternative no impacts to soils would occur and they would remain in their present state and only be affected by natural conditions.

6.4. **Streams/Wetlands.**

6.4.1. **Proposed Action.** A drainage/culvert replacement design that does not create a rise in the water surface upstream or downstream of the road crossing is proposed and FEMA clearance for

the work will be obtained prior to construction. FEMA coordination is required for the entire project where there is work in a regulated floodway. If the base flood elevation is increased due to the proposed project, the design/construction contractor is responsible for obtaining all the necessary Federal and State clearances prior to construction of the project. Stream bed and bank protection will be provided at those locations as required. The contractor shall determine the impact of the proposed storm water improvement design on structures, property, sedimentation, and erosion. In the event the proposed storm water improvement design results in increased downstream water surfaces or velocities, the Contractor shall coordinate with the Mobile District and shall design measures required to prevent any damage induced by construction of the proposed work. This design shall be in accordance with the applicable Federal, State or local requirements.

Although the Corps does not issue regulatory permits to itself, this project has been evaluated and otherwise complies with the terms and conditions of Nationwide Permit Number 3 (NWP #3). This is a minor activity, not having significant impacts on wetlands or waters of the U.S. (as otherwise discussed within this EA). Therefore, it would comply with Corps Regulatory Program Nationwide Permit Number 3, for minor activities having minimal adverse impacts. NWP #3 is specifically for repair, rehabilitation, or replacement of currently existing and serviceable structures. Also based on NWP #3, the proposed activities would not be put to different uses than those intended for the existing structures, e.g., drainage and conveyance systems within the project sites located in DeKalb County. A 404(B)(1) Evaluation Report for this Piper Drive drainage/culvert site has been prepared to further describe the effects of the proposed Federal action upon wetlands and waters of the U.S. (Appendix A). Additional environmental analysis has been performed by the Corps on the NWP program in the form of an EA and Finding of No Significant impact. Copies of these documents can be found on the following webpage: <http://www.regulations.gov> (Docket Identification Number COE-2006-0005)

6.4.2. No Action Alternative. Under the no action alternative no impacts to streams or wetlands would occur.

6.5. Flora.

6.5.1. Proposed Action. The Piper Drive stormwater infrastructure upgrade site is in a previously disturbed area, predominately grassed lawns. The proposed action would have short-term and localized adverse impacts to these vegetated areas.

6.5.2. No Action Alternative. Under the no action alternative the condition of flora would remain in its present condition.

6.6. Fauna.

6.6.1. Proposed Action. Most wildlife in the vicinity of the proposed Piper Drive location have adapted to the development of the area. A minor adverse impact to local fauna will occur during construction, but no long-term significant impacts are expected to occur due to the proposed action.

If the Piper Drive site does not have other buried infrastructure such as sewer and water lines, the design/construction contractor will include appropriate fish and aquatic organism passage considerations, such as those listed in the Savannah District's Nationwide Permit Regional Conditions for work in stream systems. For example, the replacement culvert invert elevation must not provide a barrier to fish and aquatic organism movements or induce increased stream channel instability upstream or downstream of the structure. In areas where other buried infrastructure prohibits this level of embedment, the replacement drainage/culvert structure will be installed at least as deep as the structure being replaced. The existing Piper Drive structure does appear to be a barrier to fish and aquatic organism passage at low flow conditions, but not at higher flows experienced after rainfall events and periods of increased baseflow. Guidance on Savannah District's Nationwide Permit Regional Conditions for work in stream systems can be found at the following web site location
<http://www.sas.usace.army.mil/regulatory/regulatory.html>.

6.6.2. No Action Alternative. Under the no action alternative no impacts to wildlife species would occur.

6.7. Endangered and Threatened Species.

6.7.1. Proposed Action. There is no evidence of any endangered and threatened species at the proposed Piper Drive location. Therefore, the Corps has determined that the proposed action would not affect any endangered or threatened species or designated critical habitat. In accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), comments were provided by USFWS through email correspondence with Robin Goodloe, USFWS, Athens Field Office for Piper Drive on August 27, 2010. USFWS concurred with our determination that these projects would have no significant adverse effects on fish and wildlife resources, and "not likely to adversely affect" any federally listed endangered or threatened species or critical habitats.

6.7.2. No Action Alternative. Under the no action alternative no impacts to endangered or threatened species would occur.

6.8. Cultural Resources.

6.8.1. Proposed Action. Pursuant to the requirements contained in Section 106 of the National Historic Preservation Act, the Corps considered the effects of the proposed action on historic properties. Field reconnaissance investigations have shown that the proposed Piper Drive upgrade location has been previously disturbed and is in a residential neighborhood. Based on the above information, the Corps has determined that no significant archeological or historic sites are located within the proposed project area; hence the proposed project activities would not adversely affect archeological or historic sites. The Corps findings for Valley Brook Estates subdivision and other DeKalb County Section 219 projects were coordinated with the Georgia SHPO and appropriate tribes by letters dated March 23, 2010. A letter of concurrence dated May 7, 2010 was received from the Georgia SHPO.

6.8.2. **No Action Alternative.** Under the no action alternative no impacts to cultural resources would occur.

6.9. **Noise.**

6.9.1. **Proposed Action.** Noise levels in the immediate vicinity of the proposed project would increase during the operation of vehicles and equipment. The construction noise levels at the site would be increased for several weeks, with the noise generated during normal business hours. After the proposed project is complete, noise levels should decrease to the normal level currently found in the area. This temporary increase in noise would not have a significant adverse impact to the surrounding area.

6.9.2. **No Action Alternative.** Under the no action alternative, noise levels currently generated in the project area would remain the same.

6.10. **Air Quality.**

6.10.1. **Proposed Action.** The proposed activities would cause some temporary increases in exhaust and dust emissions from vehicles and equipment operation. Exhaust emission increases would be minor and not adversely impact the local air quality. The proposed action would not adversely impact air quality in the area.

6.10.2. **No Action Alternative.** Under the no action alternative the annual air emissions and the air quality in the area would not be affected and remain at current levels presently found in the area.

6.11. **Water Quality.**

6.11.1. **Proposed Action.** The proposed action will cause a temporary localized adverse affect to water quality in the Piper Drive construction area; however the pre-construction conditions will resume shortly after completion of the drainage/culvert upgrade.

6.11.2. **No Action Alternative.** Under the no action alternative there would be no change in water quality in the area.

6.12. **Environmental Justice/Protection of Children.**

6.12.1. **Proposed Action.** The proposed upgrade would not disproportionately affect minority or low-income populations. The proposed action would have beneficial impacts to the local community of DeKalb County by decreasing potential flooding hazards. Beneficial impacts to children would be realized by the proposed action in reducing the potential for flooding in the Valley Brook Estates community. This should decrease the potential of possible hazards to children in DeKalb County. Therefore, the proposed action would have a positive impact on the community and is compliant with both executive orders.

6.12.2. **No Action Alternative.** Under this alternative potential adverse impacts to children would continue. This alternative would not eliminate the hazards present from the risk of potential flooding that could occur during storm events.

6.13. **Hazardous, Toxic, and Radiological Wastes.**

6.13.1. **Proposed Action.** The Piper Drive project site does not have any known hazardous, toxic, and radiological waste concerns; therefore, the proposed action will not create any adverse effects on these types of wastes.

6.13.2 **No Action Alternative.** Under the no action alternative there would be no effect on hazardous, toxic, and radiological wastes in the area.

6.14. **Cumulative Effects Summary.** Cumulative effects are the environmental impacts that result from the incremental impacts of the action when combined with other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes the other actions. This section analyzes the proposed action as well as any connected, cumulative, and similar existing and potential actions occurring in the area surrounding the site.

The potential direct environmental and socioeconomic impacts associated with the proposed Piper Drive action are insignificant. The proposed stormwater infrastructure upgrade would serve the Valley Brook Estates area of DeKalb County in a more efficient and environmentally beneficial manner, particularly in conjunction with the other four culvert/drainage upgrades within this subdivision located downstream of Piper Drive. However, if not implemented, the flooding induced by the aged and undersized conveyance system would continue to create a hazard for residents. The proposed action is not the result of any planned or future development and is designed to accommodate existing structures and not induce future development. Therefore, no adverse cumulative effects are expected from the proposed action.

7.0. **AGENCIES AND INDIVIDUALS CONSULTED.**

7.1. A public notice (Public Notice NO. FP10-DK02-6) has been published on September 03, 2010, to notify interested individuals and agencies of the proposed action and that notice and supporting environmental documents have been posted on the USACE, Mobile District webpage. The agencies notified include the following:

- a. U.S. Environmental Protection Agency, Region IV, Atlanta, Georgia
- b. U.S. Department of the Interior, Fish and Wildlife Service, Athens, Georgia
- c. Georgia State Historic Preservation Officer, Atlanta, Georgia
- d. Georgia Department of Natural Resources, Wildlife Resources Division, Atlanta, Georgia
- e. Georgia Department of Natural Resources, Environmental Protection Division, Atlanta, Georgia

On May 21, 2010; Georgia Department of Natural Resources issued Water Quality Certification for this project. Through email correspondence dated July 15, 2010, with Keith Parsons of the Georgia Department of Natural Resources it was determined that the proposed project modification to include culvert replacement at Piper Drive in DeKalb County is found to be consistent with the conditions of the existing certification issued May 21, 2010. No further coordination is required.

Following the close of comment period a summary of the public/agency coordination will be summarized in the Final EA.

APPENDIX A

SECTION 404(B)(1) EVALUATION REPORT

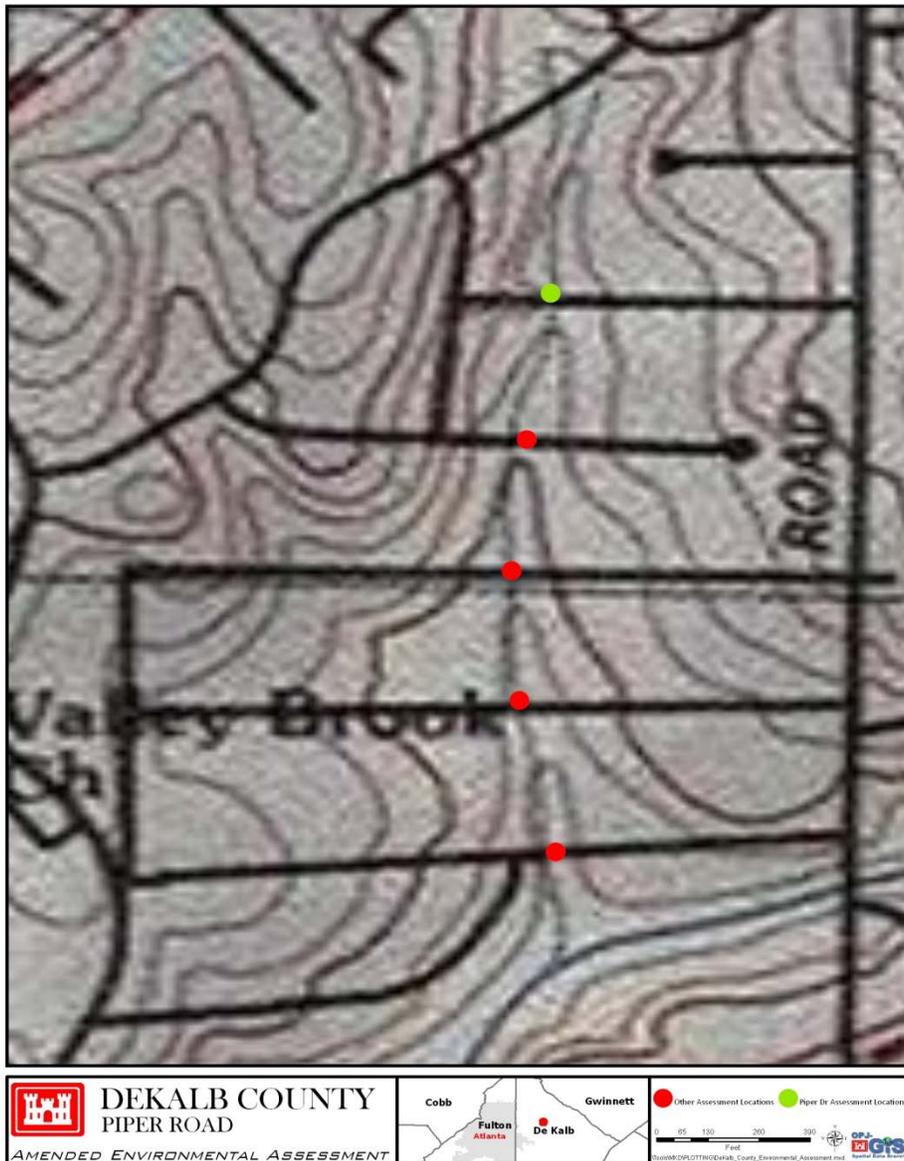
**DRAFT SECTION 404(B) (1) EVALUATION
PIPER DRIVE
PROPOSED STORMWATER INFRASTRUCTURE UPGRADE
CHATTAHOOCHEE RIVER DRAINAGE
DEKALB COUNTY, GEORGIA**

1. PROJECT DESCRIPTION:

a. Location. DeKalb County, Georgia

A culvert/drainage site located at Piper Drive within the Valley Brook Estates Subdivision is proposed for upgrade (Figure 1). Valley Brook Estates is within DeKalb County and the Chattahoochee River Basin.

Figure 1: Location Map



b. General Description. Valley Brook Estates has five (5) undersized corrugated metal pipe (CMP) cross drains of varying sizes and a few conveyance system runs that have reached their anticipated life expectancy (four sites covered in the May 2010 EA). The culvert at 3086 Piper Drive includes a 30-inch CMP lined with polyvinyl chloride (PVC) at the lower elevations and a 24-inch CMP at higher elevation. This location will require 87 feet of culvert replacement, with approximately 27 feet underneath the pavement of Piper Drive and 60 feet underneath the right of way of Piper Drive. The project also provides for approximately 50 feet of bank shaping/rock stabilization upstream or downstream of the enlarged culvert with an adequate amount of stone material to accomplish the work if needed to provide a transition zone between the new upgraded structure and the adjacent stream. The desired results will provide upgraded flow capacity at the Piper Drive cross drains and the adjoining system.

c. Authority and Purpose. The proposed action is being conducted under the authority of Section 219 of the Water Resources and Development Act (WRDA) of 1992, as amended, in subsection “c (2) *Atlanta, Georgia. – A combined sewer overflow treatment facility for the City of Atlanta, Georgia.*” In 1996, this authority was “*modified to include watershed restoration and development in the regional Atlanta watershed, including Big Creek and Rock Creek*” and to provide “(e) *AUTHORIZATION OF APPROPRIATIONS FOR CONSTRUCTION ASSISTANCE. – There are authorized to be appropriated for providing construction assistance under this section – (5) \$25,000,000 for the project described in subsection(c) (2).*”

d. General Description of Dredge or Fill Material.

(1) General Characteristic of Material. The fill material for the drainage and culvert replacement consists of CMP, clean fill dirt, concrete, and riprap-size quarry stone. The material proposed for removal at the same location consists of CMP, fill material, stone, and concrete.

(2) Quantity of Material. A cross drain would be removed, as well as onsite fill material would be excavated from the existing culvert location and utilized as backfill. If required, a small quantity of clean fill material, stone, and concrete will have to be utilized as part of the infrastructure upgrade. The amount of fill material would be minimal due to the fact that a large portion of the material removed would be used to return the area back to its original condition once the new culvert is in place.

(3) Source of Material. Fill materials will be excavated from the existing culvert location and utilized as fill for the replacement culvert. If required, a small quantity of clean fill material, stone, and concrete will have to be utilized as part of the infrastructure upgrade.

e. Description of the Proposed Discharge Site.

(1) Location. The discharge sites would be the existing drainage/culvert location.

Aerial photographs as well as some typical site photographs are shown in the Environmental Assessment. Additional materials (e.g., fill dirt, concrete, and riprap stone) needed would be brought in from a clean, designated offsite location. The construction footprint of the drainage/culvert site include an area 50 feet on either side of the culvert being replaced, to accommodate streambank shaping/stabilization work to provide a transition zone between the streams and the new structure. Listed below is a brief description of the proposed work to be accomplished.

(2) Size. The size of the drainage/culvert upgrade area is given in the above paragraph.

(3) Type of Site. The disposal site is at a previously disturbed location at culvert and drainage areas along roadways within subdivisions constructed pre-1970.

(4) Type of Habitat. The proposed stormwater infrastructure upgrade site has been previously disturbed and is located in a residential neighborhood. Aquatic organisms within the stream at the location appear to have been significantly impacted by the surrounding urbanization of the watersheds. Valley Brook Estates consist mainly of landscaped lawns, dwellings, storage buildings, and paved roadways. Very limited riparian vegetation exists along the streams and drainage features where the drainage/culvert upgrade is proposed.

(5) Timing and Duration of Discharge. The proposed work is scheduled to begin in the fall of 2010, and will take approximately 2 months at the site.

f. Description of Disposal Method. Material will be placed in the designated area using land-based heavy equipment.

II. Factual Determinations:

a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Substrate elevation and slope would remain unaffected as no additional fill would be added to the site. Conditions would be returned to approximate pre-project elevations and slopes. Engineering modeling has been performed to assure that new drainage/culvert design would not cause an increase in flood elevations or stream stability upstream or downstream of the culvert location.

(2) Sediment Type. Existing sediment/substrate at the upgrade locations consists of a variety of substrates including sand, CMP, concrete, and rock. Material placed at these sites would be from the same source as the disposal site and not significantly different.

(3) Dredged/Fill Material Movement. Materials placed at this location would be placed in a manner so as not to erode. Fill materials would remain in place based on use of standard engineering stabilization measures.

(4) Physical Effects on the Benthos. During construction there would be a short-term negative localized impact on benthos in the immediate project area. Following construction the benthic invertebrates would recolonize the area from contiguous populations within a matter of weeks.

(5) Actions Taken to Minimize Impacts (Subpart H). Construction Best Management Practices would be implemented at each site in order to minimize impacts to the stream and drainage courses.

b. Water Circulation, Fluctuation, and Salinity Determinations.

(1) Salinity. Not applicable.

(2) Water Chemistry. Water chemistry would not be significantly impacted.

(3) Clarity. Water clarity would be temporarily decreased in the vicinity of the upgrade activities due to short-term localized turbidity increases. These impacts would be eliminated upon completion of the activity.

(4) Color. Color would not be significantly impacted.

(5) Taste. Taste would not be significantly impacted.

(6) Dissolved Gas Levels. Dissolved gas levels would not be significantly impacted.

(7) Nutrients. Nutrient levels would not be significantly impacted.

(8) Eutrophication. Eutrophication would not be significantly impacted.

c. Water Circulation, Fluctuation, and Salinity Gradient Determinations:

(1) Current Patterns and Circulation.

(a) Current Patterns and Flow. The proposed stormwater infrastructure upgrade would allow greater storm flow capacity at the location. During construction there would be a short-term disruption in flow patterns, but application of sound engineering principles and best management practices will minimize these effects. Following construction the current patterns and flow will return to near preconstruction levels, with the increased capability to properly handle stormwater flow events.

(b) Velocity. The upgrade would allow for the culvert/drainage area to better handle storm events. The larger size of the replacement culvert at the site would decrease the velocity of water through the culvert and drainage structure. The infrastructure upgrade would decrease the chance of flooding to the surrounding community.

(2) Stratification. There would be no impacts on water stratification.

(3) Hydrologic Regime. Engineering modeling has been performed and shown that there would be no impacts on the hydrologic regime upstream or downstream of the structures (no flood elevation increases with the culvert upgrades).

(4) Normal Water Level Fluctuations. As demonstrated in the engineering modeling, there would be no increase on water level elevations in these areas. After completion, these culvert and drainage structures will improve the capability to handle stormwater flow events.

(5) Salinity Gradients. Not applicable.

d. Suspended Particulate/Turbidity Determinants.

(1) Expected Changes in Suspended Particulate and Turbidity Levels in Vicinity of Disposal Sites. A temporary increase in suspended particulates and turbidity levels would occur during time upgrade activities are conducted. These impacts would cease when the activities are completed.

(2) Effects on Chemical and Physical Properties of the Water Column.

(a) Light Penetration. Increases in suspended solids concentrations would be nominal and temporary. No significant impacts to light penetration are anticipated.

(b) Dissolved Oxygen. The proposed activities would have minimal effects on dissolved oxygen levels.

(c) Toxic Metals and Organics. No activities or processes resulting in toxic metal or organics contamination are part of this project.

(d) Pathogens. There would be no significant impacts on pathogen levels.

(e) Aesthetics. The local area at the construction site would be adversely impacted during the upgrade activities. Aesthetics would return to pre-project conditions upon completion of the activities.

(3) Effects on biota. No significant impacts to biota are anticipated.

(a) Primary Production, Photosynthesis. Temporary, localized impacts to primary production or photosynthesis levels may result from turbidity plumes generated by the upgrade activities. These effects would be localized and temporary.

(b) Suspension/Filter Feeders. Suspension/filter feeders may be temporarily affected during the upgrade process. These effects would subside upon completion of the operation and not be significantly affected by this action.

(c) Sight Feeders. Sight-dependent species may be temporarily affected during the upgrade process. These effects would subside upon completion of the operation and not be significantly affected by this action.

(4) Actions taken to Minimize Impacts (Subpart H). Construction Best Management Practices would be implemented at each site in order to minimize impacts.

e. Contaminant Determinations.

f. Aquatic Ecosystem and Organism Determinations.

(1) Effects on plankton. Plankton would not be significantly affected by the proposed project.

(2) Effects on Benthos. No significant impacts would result from this project. Destruction of benthic communities within the immediate culvert/drainage upgrade reach of stream during construction would rapidly recolonize following completion of the site upgrade.

(3) Effects on nekton. Nekton would not be significantly affected by this project. If the Piper Drive site does not have other buried infrastructure such as sewer and water lines, the design/construction contractor will include appropriate fish and aquatic organism passage considerations, such as those listed in the Savannah District's Nationwide Permit Regional Conditions for work in stream systems. For example, the replacement culvert invert elevation must not provide a barrier to fish and aquatic organism movements or induce increased stream channel instability upstream or downstream of the structure. In areas where other buried infrastructure prohibits this level of embeddedness, the replacement drainage/culvert structure will be installed at least as deep as the structure being replaced. The existing Piper Drive structure does appear to be a barrier to fish and aquatic organism passage at low flow conditions, but not at higher flows experienced after rainfall events and periods of increased baseflow. Guidance on Savannah District's Nationwide Permit Regional Conditions for work in stream systems can be found at the following web site location <http://www.sas.usace.army.mil/regulatory/regulatory.html>.

(4) Effects on Aquatic Food Web. This project would pose no significant impacts to the aquatic food web.

(5) Effects on Special Aquatic Sites. The streams located near the drainage/culvert project location are small ephemeral to perennial water bodies that are located in a highly impacted urban environment and are subject to a “flashy” hydrology caused by the significant increase in impervious surface within these developed watersheds. According to the Georgia Environmental Protection Division, the proposed road/drainage maintenance and repair are exempt from the state’s stream buffer variance regulations (personal communication, Jan Sammons, Georgia Environmental Protection Division, 22 April 2010).

Although the Corps does not issue regulatory permits to itself, the project have been evaluated and otherwise comply with the terms and conditions of Nationwide Permit Number 3 (NWP #3). This is a minor activity, not having significant impacts on wetlands or waters of the U.S. (as otherwise discussed within the EA). Therefore, it would comply with Corps Regulatory Program Nationwide Permit Number 3, for minor activities having minimal adverse impacts. NWP #3 is specifically for repair, rehabilitation, or replacement of currently existing and serviceable structures. Also based on NWP #3, the proposed activities would not be put to different uses than those intended for the existing structures, e.g., drainage and conveyance systems within the project sites located in DeKalb County. Additional environmental analysis has been performed by the Corps on the NWP program in the form of an EA and Finding of No Significant impact. Copies of these documents can be found on the following webpage: <http://www.regulations.gov> (Docket Identification Number COE-2006-0005)

(a) Sanctuaries and Refuges. No sanctuaries or refuges would be affected by this project.

(b) Wetlands. No wetland vegetation would be affected by this project.

(c) Mud Flats. No mud flats would be affected by this project.

(d) Vegetated Shallows. No vegetated shallows would be affected by this project.

(e) Coral Reefs. Not applicable.

(f) Riffle and Pool Complexes. Minimal effects would occur to riffle or pool complexes within this project location.

(6) Threatened and Endangered Species. The U.S. Fish and Wildlife Service (FWS) have listed species as endangered or threatened in the DeKalb County area. Below is a listing of species as found on the FWS website (http://www.fws.gov/athens/endangered/counties/dekalb_county.html):

List of Federal and state Endangered and Threatened Species Within DeKalb County, Georgia

Species	Federal Status	State Status	Habitat
Bird			
Bald eagle <i>Haliaeetus leucocephalus</i>	T	E	Inland waterways and estuarine areas in Georgia.
Fish			
Bluestripe shiner <i>Cyprinella callitaenia</i>	No Federal Status	T	Brownwater streams
Plant			
Bay star-vine <i>Schisandra glabra</i>	No Federal Status	T	Twining on subcanopy and understory trees/shrubs in rich alluvial woods
Black-spored quillwort <i>Isoetes melanospora</i>	E	E	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed.
Flatrock onion <i>Allium speculae</i>	No Federal Status	T	Seepy edges of vegetation mats on outcrops of granitic rock
Granite rock stonecrop <i>Sedum pusillum</i>	No Federal Status	T	Granite outcrops among mosses in partial shade under red cedar trees
Indian olive <i>Nestronia umbellula</i>	No Federal Status	T	Dry open upland forests of mixed hardwood and pine
Piedmont barren strawberry <i>Waldsteinia lobata</i>	No Federal Status	T	Rocky acedic woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods
Pool Sprite, Snorkelwort <i>Amphianthus pusillus</i>	T	T	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed

The Bald Eagle is included in the following list, this species has since been delisted; however, it is still protected under the Bald and Golden Eagle Protection Act. The state of Georgia has also listed several species in the DeKalb County area as threatened or endangered as shown on the above list.

There is no evidence of any endangered and threatened species at the proposed location. Therefore, the Corps has determined that the proposed action would not adversely impact any endangered or threatened species or designated critical habitat. The Corps has coordinated this finding with the FWS as part of the public/agency review of this action. FWS supports concurrence with the Corps finding (email communication, Robin Goodloe, FWS, Athens Field Office, August 27, 2010).

(7) Other Wildlife. Only minor impacts to species of wildlife tolerant of urban environments are anticipated.

(8) Actions to Minimize Impacts. Construction Best Management Practices would be implemented at each site in order to minimize impacts on the aquatic ecosystem and organisms.

g. Proposed Fill Site Determination.

(1) Mixing Zone Determination. State water quality requirements would be utilized for this project; therefore, turbidity outside the limits of the mixing zone shall not exceed the ambient turbidity by more than 50 Nephelometric Turbidity Units.

(a) Depth of water at the disposal site. Normal water depth at the drainage/culvert upgrade is less than 1 foot deep.

(b) Current velocity, direction, and variability at the disposal site. The proposed construction activities would not significantly affect the current velocity, variability and direction within the subject location.

(c) Degree of turbulence. Turbulence at the proposed location is minimal and would not be impacted by the proposed project.

(d) Stratification attributable to cause such as obstructions, salinity or density profiles at the disposal site. Not applicable.

(e) Discharge vessel speed and direction, if appropriate. Not applicable.

(f) Rate of discharge. Not applicable.

(g) Ambient concentration of constituents of interest. Not applicable.

(h) Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities. Not applicable.

(i) Number of discharge actions per unit of time. Not applicable.

(2) Determination of Compliance with Applicable Water Quality Standards. On May 21, 2010; Georgia Department of Natural Resources issued Water Quality Certification for this project. Through email correspondence dated July 15, 2010, Keith Parsons of the Georgia Department of Natural Resources determined that the proposed project modification to include culvert replacement at Piper Drive in DeKalb County is found to be consistent with the conditions of the existing certification issued May 21, 2010. No further Water Quality Certification coordination is required with that agency.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supply. This project would have no impacts on municipal or private water supplies.

(b) Recreation and Commercial Fisheries. The proposed project would have no impact on recreational and commercial fisheries.

(c) Water Related Recreation. Not applicable.

(d) Aesthetics. Aesthetics would be temporarily impacted, but would return to normal when the project is complete.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas Research Sites, and Similar Preserves. Not applicable.

(f) Other Effects. Not applicable.

(4) Determination of Cumulative Effects on the Aquatic Ecosystem. No significant cumulative effects on the aquatic ecosystem would be incurred by construction of the proposed drainage/culvert upgrade at Piper Drive.

(5) Determination of Secondary Effects on the Aquatic Ecosystem. No secondary effect on the aquatic ecosystem is anticipated.

III. Findings of Compliance or Noncompliance with the Restrictions on Discharge.

a. Adaptation of Section 404(b) (1) Guidelines to the Evaluations. No significant adaptations of the guidelines were made relative to this evaluation.

b. Consideration of the Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse impacts on the Aquatic Ecosystem. The proposed activity represents the least environmentally damaging practicable alternative.

c. Compliance with State Water Quality Standards. The planned disposal of excavated material would not violate any applicable State water quality standards.

d. Compliance with Applicable Toxic Effluent Standard or Prohibition under Section 307 of the Clean Water Act. The fill material would not violate the toxic standards of Section 307 of the Clean Water Act.

e. Compliance with Endangered Species Act. The proposed activities would not affect the continued existence of any federally listed endangered or threatened species or their critical habitat. In accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), comments were provided by USFWS through email correspondence with Robin Goodloe, USFWS, Athens Office. The USFWS concurs with our determination that this project would have no significant adverse effects on fish and wildlife resources, and is “not likely to adversely affect” federally listed endangered or threatened species or critical habitats.

f. Compliance with Specific Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act. Not applicable.

g. Evaluation of Extent of Degradation of the Waters of the United States. The proposed fill plan is specified as complying with the requirements of these guidelines. The proposed activity would not contribute to significant degradation of waters of the United States. Nor would it result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing; life stages of organisms dependent upon the aquatic ecosystem; ecosystem diversity, productivity and stability; or recreational, aesthetic or economic values.

h. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem.

(1) Locations, times and duration of the project have been selected to minimize potential adverse impacts to the aquatic ecosystem.

(2) An interdisciplinary team has evaluated the site, and project design altered per their recommendation.

(3) Appropriate construction best management practices will be implemented to minimize environmental impacts.

i. On the Basis of the Guidelines, the proposed Disposal Site for the Discharge of Dredged Material. The drainage/culvert upgrade site at Piper Drive within the Chattahoochee River Basin area of DeKalb County, Georgia is specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem.

DATE: _____

Steven J. Roemhildt
Colonel, Corps of Engineers
District Commander

APPENDIX B

GEORGIA DEPARTMENT OF NATURAL RESOURCES – HISTORIC PRESERVATION DIVISION – FINDING OF “NO HISTORIC PROPERTIES AFFECTED”



HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

MEMORANDUM

TO: Thomas Birchett
Archaeologist
Department of the Army
US. Army Engineer District
Mobile District Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628

FROM: Elizabeth Shirk *MCKB*
Environmental Review Coordinator
Historic Preservation Division

RE: Finding of "No Historic Properties Affected"

PROJECT: **Section 219: Stormwater Infrastructure Improvements, Five Locations,
DeKalb County
Federal Agency: COE
HP-100409-002**

COUNTY: DeKalb

DATE: May 7, 2010

The Historic Preservation Division (HPD) has reviewed the information received concerning the above-referenced project. Our comments are offered to assist federal agencies and their project applicants in complying with the provisions of Section 106 of the National Historic Preservation Act, as amended.

Please note that our current address is 254 Washington Street, NW, Ground Floor, Atlanta, GA 30334

Based on the information submitted, HPD has determined that no historic properties or archaeological resources that are listed in or eligible for listing in the National Register of Historic Places will be affected by this undertaking. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE), however, at this time it has been determined that they will not be impacted by the above-referenced project. Furthermore, any changes to this project as proposed will require further review by our office for compliance with Section 106.

If we may be of further assistance, please do not hesitate to contact Elizabeth Shirk, Environmental Review Coordinator, at (404) 651-6624, or Michelle Volkema, Environmental Review Specialist, at (404) 651-6546. Please refer to the project number assigned above in any future correspondence regarding this project.

ES:mcv

cc: Allison Duncan, ARC