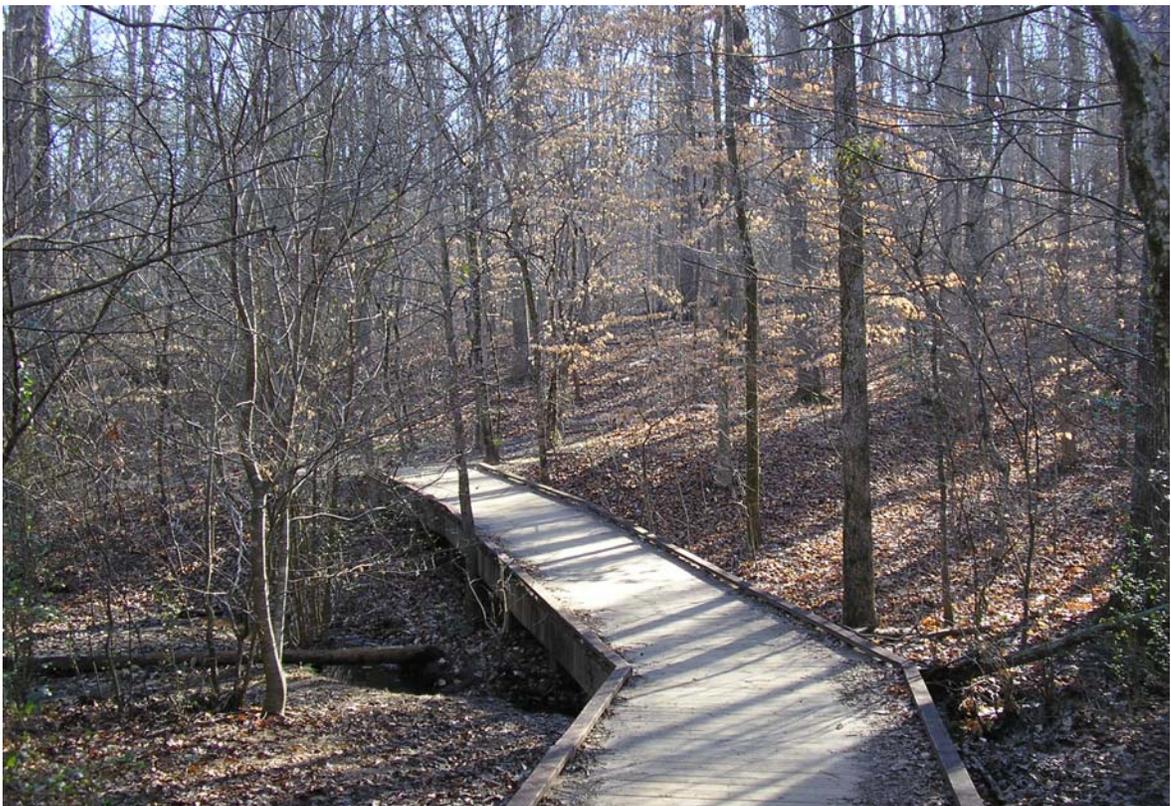




Environmental Assessment

Lower Roswell Road Improvements: Multi-Use Trail Facility and Entrance Improvements



**Chattahoochee River National Recreation Area –
Gold Branch Unit**
Cobb County, Georgia

March 2012

**U.S Department of the Interior
National Park Service**

Environmental Assessment

**Construction of a Multi-Use Trail and Realignment of the Entrance Drive at the
Gold Branch Unit
of
Chattahoochee River National Recreation Area
Cobb County, Georgia**

Summary

The Chattahoochee River National Recreation Area (CRNRA) has prepared this Environmental Assessment (EA) to evaluate several alternatives for improving conditions for visitor use, experience, and safety along the park's Gold Branch Unit. CRNRA will decide whether a Special-Use Permit (SUP) should be issued to Cobb County, Georgia for the construction of a non-motorized recreational access route along Lower Roswell Road within the CRNRA's Gold Branch Unit, and the relocation of the Unit's entrance and driveway for safer vehicular access. This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and NPS Director's Order 12 guidelines for implementing NEPA. The EA evaluates the impacts of proposed project alternatives on the natural environment, cultural and historic resources, and public use and experience. The EA (i) presents the alternatives considered during the NEPA process, (ii) identifies and analyzes the anticipated effects of the proposed alternatives on the environment, and (iii) documents the public consultation and coordination conducted during the planning process.

The primary goal of the proposed project is the expansion of non-motorized public access and recreational opportunities within the jurisdiction of the CRNRA and Cobb County, Georgia. The proposed project would provide connectivity between the Cobb County trail system and a separately proposed trail for Willeo Road that would begin at the Fulton County line. This objective is consistent with authorizing legislation for the CRNRA which authorizes the park to work cooperatively with State, local, and private entities "to establish a series of linear corridors linking existing units of the recreation area and to protect other open spaces of the Chattahoochee River corridor" (U.S. Public Law 106-154 of 1999). The proposed project represents a key opportunity to advance linkage among CRNRA and multiple municipally owned landholdings in support of a regional system of continuous trails, parks and green spaces in the north Metro Atlanta area.

CRNRA's Gold Branch Unit is unique in that it offers an undisturbed, natural setting for recreational activity and enjoyment in the midst of a rapidly growing major metropolitan city. Currently, there is a parking lot for visitors driving to the Gold Branch Unit, but facilities that offer safe access for pedestrians and other users of non-motorized transportation are not available.

This project would improve approximately 2.9 miles of Lower Roswell Road with turn lanes, new curb and gutter, bike lanes, and a non-motorized recreation route. The non-motorized recreation route would be either a multi-use trail or a pedestrian sidewalk. Approximately 0.75 miles of parkland would be needed at the western edge of the Unit along Lower Roswell Road for this non-motorized recreation route. The non-motorized recreation route would become part of the larger Cobb County Trail Plan, and within this system, provide access to the Unit to a broader population base and range of visitors.

Additionally, the existing entrance to Gold Branch Unit from Lower Roswell Road would be replaced by a new entrance situated to the north of the current entrance across from Asheforde Drive. Lower Roswell Road itself would be improved with a left turn lane into the Unit, providing safer access for motorists and other users.

The project alternatives were evaluated in terms of severity and duration of impacts to the natural environment, cultural resources, recreation and visitor experience, and public safety. Three alternatives are being considered for this project:

- Alternative A - No Action Alternative;
- Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail along the western side of Gold Branch Unit, construction of a pedestrian sidewalk on the Cobb County side of Lower Roswell Road, relocation Gold Branch Unit’s entrance, and roundabout at the intersection of Willeo Road and Timber Ridge road; and
- Alternative C - Sidewalk Alternative – Construct pedestrian sidewalk along both the western side of Gold Branch Unit and the Cobb County side of Lower Roswell Road, relocation Gold Branch Unit’s entrance, and roundabout at the intersection of Willeo Road and Timber Ridge road.

Alternative B (Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance) is the Preferred Alternative. It was chosen as the Preferred Alternative because it would expand the use of CRNRA facilities, increase connectivity to neighboring communities, and increase cooperative efforts with local agencies. Under Alternative B, an eight-foot wide multi-use trail would be constructed on parkland and the Unit’s entrance replaced. This alternative would achieve the greatest benefit to visitors and the public. Alternative C (Sidewalk Alternative – Construction of sidewalks on both sides of the road and relocation of the Unit’s entrance) would consist of a five-foot sidewalk on parkland limited to use by pedestrian visitors only, as well as replacement of the Unit’s entrance. Although no construction activities would occur under the No Action Alternative, safety, connectivity and use of alternate forms of transportation would not occur resulting in the continued use of the existing driveway entrance, limited means of access for pedestrians and transportation other than a motorized vehicle, and limited cooperation and connectivity with local agencies (Cobb County).

Note Regarding Public Comment

Comment submissions on this document are accepted by mail (Superintendent, CRNRA, 1978 Island Ford Parkway, Sandy Springs, GA 30350), electronic mail (chat_superintendent@nps.gov), or through the NPS Planning, Environment and Public Comment (PEPC) website (<http://parkplanning.nps.gov>). Please be aware that your entire comment, including your personal identifying information, may be made publicly available. While you can ask to have your identity withheld, we cannot guarantee that we will be able to do so. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives of organizations or businesses, available for public inspection.

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1. Purpose and Need

The CRNRA would undertake a federal action in issuing a Special-Use Permit to Cobb County, Georgia to construct a non-motorized recreational access route along Lower Roswell Road on park property and replace the existing Unit entrance in the park's Gold Branch Unit. The purpose of the proposed project is the expansion of non-motorized public access and recreational opportunities within the jurisdiction of the CRNRA and Cobb County, Georgia to enhance visitor use and safety. Specifically, the objective of the proposed project is to provide connectivity within the greater Chattahoochee River corridor between the Cobb County trail system and a separately proposed trail for Willeo Road that would begin at the Fulton County line. This objective is consistent with authorizing legislation for the CRNRA which authorizes the park to work cooperatively with state, local, and private entities "to establish a series of linear corridors linking existing units of the recreation area and to protect other open spaces of the Chattahoochee River corridor" (U.S. Public Law 106-154 of 1999). The proposed project represents a key opportunity to advance linkage among CRNRA and multiple municipally owned landholdings in support of a regional system of continuous trails, parks and green spaces in the north Metro Atlanta area.

The proposed project would address several goals in the "Final General Management Plan/Environmental Impact Statement" (September 2009) including:

- Expand use of the CRNRA facilities to visitors,
- Increase connectivity to neighboring communities through trail linkages, and
- Increase cooperative efforts with local agencies to enhance the level of connectivity.

A non-motorized recreation route connecting Cobb County with CRNRA's Gold Branch Unit and the City of Roswell's trail system would provide safe public access that currently does not exist. There is currently no safe access for non-motorized transportation users as there are no paths along Lower Roswell Road. The road shoulder is a steep, grassed slope. Visitors walking to the Unit are forced to walk along the edge of the road without benefit of designated pedestrian improvements such as striped crosswalks, sidewalks, or a trail. The construction of a sidewalk would provide pedestrian only access, while construction of a multi-use trail would provide for a wide variety of non-motorized access, including walking, running, rollerblading, and cycling, to the Gold Branch Unit and larger regional trail systems. As only walking and running is allowed on trails within Gold Branch Unit, cyclists and others may use the paved driveway, and park their equipment in the parking lot while enjoying the primitive trails on foot.

The non-motorized recreation access route (either a multi-use trail or a pedestrian sidewalk) is a component of a project to be constructed by Cobb County that involves new curb and gutter, storm drainage, and turn lanes along approximately 2.9 miles of Lower Roswell Road from Johnson Ferry Road to the intersection with Timber Ridge and Little Willeo Roads. A roundabout would be constructed at the intersection of Lower Roswell, Timber Ridge, and Little Willeo Road. The non-motorized recreation route would extend along the entire length of improvements on Lower Roswell Road, and 0.75 mile would be constructed along parkland.

There is a need to provide a safer, more efficient access for visitors driving to the Unit because the current alignment of the entrance drive makes entering and exiting difficult. The horizontal alignment of Lower Roswell Road near the existing driveway is at a slightly lower elevation than the driveway. The elevation difference, and vegetation adjacent to the driveway, hinders sight distance for visitors exiting onto Lower Roswell Road. The vegetation also makes the entrance difficult to see as the Unit is approached from Lower Roswell Road. Finally, the lack of a dedicated turning lane for southbound traffic on Lower Roswell Road into the Unit also creates an unsafe condition as vehicles stop in the travel lane waiting to turn. The existing location of the entrance approximately 200 feet from Asheforde Drive results in conflicting left turn movements between the Unit and the subdivision served by Asheforde Drive. Realigning the entrance across from Asheforde Drive and adding a dedicated left turn lane for southbound traffic on Lower Roswell Road would improve sight distance issues and

provide a safer approach for vehicles entering and exiting the Unit. Striped crosswalks would be included in the improvements.

2. Purpose and Significance of the CRNRA

The CRNRA was authorized by congress in 1978 “to lead the preservation and protection of the 48-mile Chattahoochee River corridor from Buford Dam to Peachtree Creek, and its associated natural and cultural resources, for the benefit and enjoyment of the people” (NPS 2009). The CRNRA includes the Chattahoochee River and adjacent land areas identified in 15 units along this 48- mile stretch of river. The park was expanded from the original 6,800 acres to the current 10,000 acres in 1999 and is located within portions of Forsyth, Gwinnett, Cobb, and Fulton Counties.

Numerous recreational opportunities are available within the various units of the CRNRA, including hiking, biking, horseback riding, fishing, and boating. Because the CRNRA is located within and surrounded by the metropolitan Atlanta area, there is convenient access to the many recreational opportunities for a large visitor base. However, the location also subjects the CRNRA to pressures from a rapidly growing urban city. The effects of these pressures include encroachment from development surrounding the park, and effects to land and water quality from area development and growth.

3. Project Background, Previous Planning, and Scoping

3.1 Project Background

One of the unique features of the CRNRA is that as an urban park, it offers convenient access to recreational activities and enjoyment of undisturbed green space in the midst of a growing metropolitan area. The Gold Branch Unit (i.e. Unit) is located in the eastern portion of Cobb County, adjacent to Fulton County (Figure 1). The cities of Alpharetta, Marietta, Roswell, and Smyrna are within minutes of the Unit. Unincorporated areas of the county adjacent to the Unit include dense residential development. Development along Lower Roswell Road consists of single family residences and subdivisions.

As Cobb County and surrounding areas continue to grow, CRNRA seeks to balance preservation of the natural and cultural elements with convenient and safe access for visitors to the Unit as well as the regional trail system beyond the Unit. Recent construction has provided improved infrastructure and facilities for visitors and includes a pervious-surface parking lot, improved and updated visitor signage, a paved driveway from Lower Roswell Road to the parking lot, and replacement of timber retaining walls along the driveway with more stable concrete retaining walls. In addition, the Unit contains approximately four miles of trails. A map of the Gold Branch Unit is shown in Figure 2. Even with the improvements to facilities and infrastructure within the Unit for the driving public, means for safe alternative forms of recreation and convenient access are not available. A proposed non-motorized recreational access route would provide such alternatives to accessing the Unit.

3.2 Previous Planning

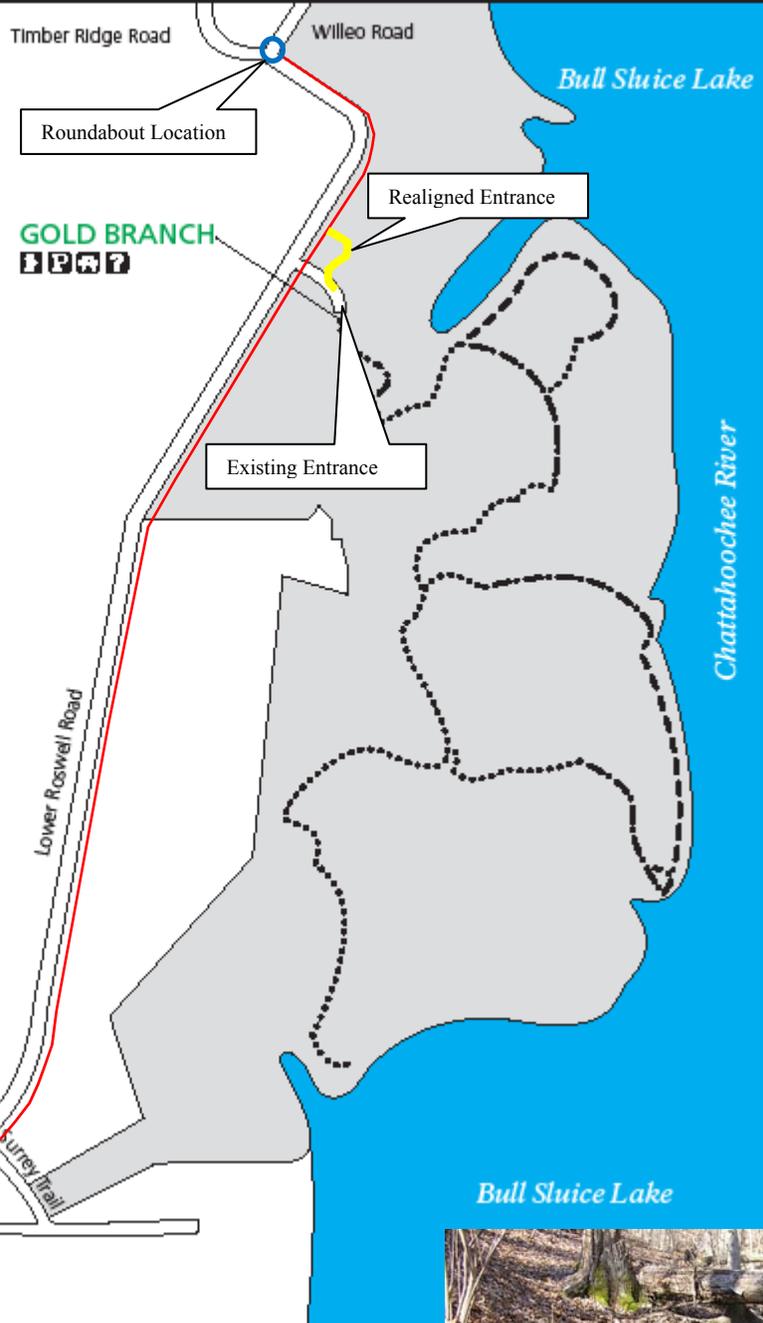
The NPS attempts to balance preservation of cultural and natural resources, while providing recreational opportunities, education, and enjoyment of these resources to the public. The proposed non-motorized recreational access route and entrance improvements for the Unit would provide additional and safe opportunities for visitors by connecting the Unit with other sidewalk and trail sections on Lower Roswell Road and in local residential areas, thereby promoting access to a larger population. For visitors driving to the Unit, the improved entrance provides safer entrance and exit.



Figure 1
Vicinity Map

Chattahoochee River

National Park Service
U.S. Department of the Interior
Chattahoochee River
National Recreation Area
Georgia



North

0 1/8 1/4
scale in miles

LEGEND

- Hiking Trail (easy)
- - - - Hiking Trail (moderate)
- - - - Hiking Trail (difficult)
- 👤 Hiking trailhead
- ▭ Park Boundary
- 🅓 Parking
- 🐕 Pets on leash
- 🍃 Picnic area
- 👤 Visitor Information



Source: NPS

EXPERIENCE YOUR AMERICA

Figure 2
Gold Branch Unit

Federal regulations and guidance documents provide direction for the planning process. Regulations and guidance documents used in preparation of this EA include:

- National Environmental Policy Act (NEPA) of 1969;
- Regulation of the Council on Environmental Quality (40 CFR 1508.9);
- National Park Service’s Director’s Order (DO) – 12 (Conservation Planning, Environmental Impact Analysis, and Decision-making).

The *Final General Management Plan/Environmental Impact Statement* (2009) (hereafter: General Management Plan) specifies resource conditions and visitor experiences to be achieved in the CRNRA. The plan also provides the foundation for decision-making and preparation of more specific resource plans regarding park management. In the General Management Plan each unit of the CRNRA is placed within one of six zones: Natural Area Recreation Zone, Natural Zone, Developed Zone, River Zone, Historic Resource Zone, and Rustic Zone. The Gold Branch Unit is designated as a Natural Zone. Allowable activities within the Natural Zone designation include hiking, picnicking, fishing, canoeing, rafting, and kayaking. Under the proposed project, activities associated with this existing designation would be maintained in the Gold Branch Unit proper.

A non-motorized recreation route, new entrance, and driveway re-alignment project promotes visitor safety while providing alternative ways to access the Unit, improving visitor safety, connectivity, and traffic concerns. The placement of the non-motorized route along the Lower Roswell Road corridor aligns the trail on land that has been previously disturbed by the construction of Lower Roswell Road, thereby protecting the Unit from fragmentation and maintaining the attributes offered by the Natural Zone. The connectivity provided by the proposed project meets the park’s goals of 1) expanded use of CRNRA facilities, 2) increased connectivity to neighboring communities through trail linkages, and 3) increased cooperative efforts with local agencies to enhance the level of connectivity. Without this project, connectivity between Cobb and Fulton counties would remain limited and the public’s reliance on motorized vehicles for transportation would be sustained.

3.3 Scoping

Scoping is a process required by NEPA to involve interested parties and stakeholders in the environmental process. There are two types of scoping: internal and external. Internal scoping is an interdisciplinary approach with NPS staff to define issues, alternatives, and data needs for the proposed project. Results of this internal scoping were relayed to the project design team and Cobb County during early coordination meetings. External scoping, or public involvement, involves the presentation of information for the proposed project in open forum to allow for comment and input in the process. A summary of scoping and results of these efforts is included in Appendix A of the EA.

4. Issues and Impact Topics

4.1 Impact Topics Considered for the EA

Issues and concerns affecting this proposal were identified from past NPS planning efforts, and input from environmental groups, and state and federal agencies. The major issues are the conformance of this proposal with the CRNRA Management Plan.

Specific impact topics were developed for discussion focus, and to allow comparison of the environmental consequences of each alternative. These impact topics were identified based on federal laws, regulations, and Executive Orders; 2001 NPS Management Policies; and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics from further consideration.

The following impact topics merit consideration in this EA:

Air Quality: The federal Clean Air Act of 1970 requires the NPS to meet federal, state, and local air pollution standards, as well as protects the Unit from adverse pollution impacts. Air quality in the Atlanta Metropolitan area will continue to be effected by growth of the area. Any alternatives to driving, such as the trail, or that improves travel efficiency, such as with the entrance, could contribute to improving air quality. Temporary impacts to air quality may occur during the construction phase from construction equipment or traffic congestion. The effects to air quality are analyzed in this EA.

Archaeological Resources and Historic Structures: Section 106 of the National Historic Preservation Act of 1966 and NPS Management Policies are two of several regulations and guidance documents that specify procedures to identify and protect cultural resources within the Unit. Gold Branch Unit is not listed in the National Register of Historic Places (1976) and a review of existing information on previously identified historic properties revealed that no National Register of Historic Places (NR) listed properties, properties pending NR nomination, National Historic Landmarks, or bridges determined eligible for inclusion in the NR in the updated Georgia Historic Bridge Survey were identified in the vicinity of the project. The effect to archaeological resources and historic resources are analyzed in the EA.

Geology: NPS Policies require the protection of geologic features and the natural topographic landscape. Impacts to the geology within the Unit would occur as a result of slopes for construction of the trail and relocation of the driveway and improvement to the entrance. The effect to geology is addressed in the EA.

Introduce/Promote Non-native Species: NPS Executive Order 13112, *Invasive Species* (1999) requires the parks “to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.” Construction activities are known to introduce non-native species onto new lands by transporting seeds and plant matter in mud and debris caught on the equipment. Trails and roadways are also known vectors of non-native species because of the inherent use of these systems by the public who unknowingly introduces non-native species from seed and plant matter stuck on clothing, shoes, equipment, and vehicles. Because of the inherent risk of the introduction of non-native species during construction and trail use, non-native species are addressed in this EA.

Park Operations: The construction and maintenance of the trail would be conducted by Cobb County. Cobb County would also construct the new driveway and entrance improvements. However maintenance of the driveway and entrance would be conducted by CRNRA personnel. The effect to park operations is addressed in the EA.

Prime and Unique Farmlands and Soils: Prime and unique farmlands are defined as lands that afford the best combination of physical and chemical properties to produce crops, or are used for specific high value food or crops. The Natural Resource Conservations Service (NRCS) maintains information for prime farmland in Cobb County. Although farming currently does not occur within the Gold Branch Unit, the Unit and surrounding area was historically farmland. NPS Policy requires the protection of soil resources and maximization of efforts to prevent erosion, physical removal, or contamination of the soils. Coordination with the NRCS has determined that no prime and unique farmland exists within the proposed project area.

According to Soil Survey from the Natural Resources Conservation Service (NRCS) for Cobb County the Unit consists of three different soil associations; Cartecay-Toccoa association, Gwinnett-Pacolet-Musella association, and Madison-Gwinnett-Cecil association. Construction of the road shoulder to support the trail would require ground disruption within the Unit. Also, realignment of the driveway would occur in previously undisturbed areas. Effects to farmland and soils are addressed in this EA.

Scenic and Aesthetic Values / Concerns: The undisturbed landscape within a large urbanized region is one of the most popular aspects of the Gold Branch Unit. The effect of the trail and entrance improvements to scenic and aesthetic values is analyzed in this EA.

Terrestrial Ecological Species: *National Park Service 2006 Management Policies* (NPS 2006), Section 4.4.2, “Management of Native Plants and Animals,” provides guidance on management of vegetation and wildlife. Clearing of vegetation from construction areas within the Unit would occur. Construction activities and noise could impact wildlife in the project area. The lasting impact of additional visitors could also impact wildlife. Therefore, terrestrial ecological species are discussed in this EA.

Threatened, Endangered, Candidate Species, and Species of Special Concern: This impact topic includes all species provided protection under the Endangered Species Act of 1973, Migratory Bird Treaty Act of 1918, Executive Order 13186 of 2001, Bald Eagle Protection Act of 1940, as well as state laws and policies. No federally listed threatened or endangered species or critical habitat was identified within the immediate project area. However, two federally protected bird species have been noted just north of the project area in the past two years. Suitable habitat exists for a federal candidate species within the maintained Georgia Power easement that transects the Unit and the road shoulder. Through correspondence with the Georgia Department of Natural Resources (GA DNR) Natural Heritage Program, the Georgia aster (*Symphotrichum georgianum*) was identified as occurring within a three mile radius of the proposed project area. Similarly, a 2010 annual field survey by CRNRA personnel identified 260 Georgia aster plants within the Unit. Further discussion for Threatened, Endangered, Candidate Species, and Species of Special Concern is included in the EA.

Urban Quality/Transportation: The trail would provide an alternative access to vehicular transportation to the Unit. The effects of alternatives to transportation are further analyzed in this EA.

Visitor Safety: Safety for visitors is a concern for the CRNRA. The proposed alternatives improve convenience and safety for visitors. Visitor safety is addressed in the EA.

Visitor Use, Understanding, and Appreciation: The 1916 Organic Act and *National Park Service 2006 Management Policies* (NPS 2006) include guidance and requirements to allow for public enjoyment and understanding of the scenic, cultural, and natural resources within the Unit. The proposed improvements would affect the accessibility of the Unit’s resources and approved activities. The impact on visitor use and understanding are further analyzed in this EA.

Water Resources: *National Park Service 2006 Management Policies* (NPS 2006), Section 4.6, “Water Resource Management,” requires protection of water quality consistent with the provisions of the Clean Water Act (CWA) of 1977. The CWA is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation’s waters and to prevent, control, and abate water pollution. Erosion and sedimentation during construction could impact water quality if proper installation of Best Management Practices (BMPs) is not followed. Improper placement and design of stormwater flow devices could lead to erosion and sedimentation. Therefore, water resources are discussed in this EA. EO 11990, *Wetland Protection*, directs the park to minimize impacts on the natural resources of wetlands. The provisions of EO 11988 of May 24, 1977, *Floodplain Management*, direct the park to minimize impacts on the natural resources of floodplains. There are water resources within the vicinity of the project. Therefore, floodplains and wetlands are discussed further in this EA.

Soundscape: In accordance with *National Park Service 2006 Management Policies* (NPS 2006) and DO-47, *Sound Preservation and Noise Management*, the park strives to preserve the natural soundscape. Since construction activities have the potential to disrupt natural sound regimes, soundscape is discussed further in this EA.

4.2 Impact Topics Dismissed from Detailed Analysis

Climate Change: A growing body of scientific research published in peer-reviewed journals and synthesized by groups, such as the Intergovernmental Panel on Climate Change and the U.S. Climate Change Science Program, depicts a global climate that is changing. Research also shows that human activities, especially emissions of greenhouse gases into the atmosphere, contribute to this changing climate. Emissions of GHG would be temporary and minor during construction; however, the park's long-term carbon footprint would not change detectably and; therefore, the proposed project's contribution to climate change would not be measurable. Therefore, climate change is dismissed from further discussion in this EA.

Environmental Justice: Presidential Executive Order 12898 requires federal agencies to identify and address disproportionate impacts of programs, policies, and activities on minority and low-income populations. A trail and entrance improvements would not result in disproportionate health or environmental effects on minorities or low-income populations. Therefore this topic was dismissed from further discussion in the EA.

Lightscape: In accordance with *National Park Service 2006 Management Policies* (NPS 2006), the NPS strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human-caused light. The CRNRA strives to limit the use of artificial outdoor lighting to that which is necessary for security and human safety. The park also strives to ensure that all outdoor lighting is shielded to the maximum extent practicable to keep light on the intended subject and out of the night sky. The proposed project would not introduce any additional light sources to the park. Therefore, lightscape is dismissed from further discussion in this EA.

Socioeconomic Environment: The trail and entrance improvements would not directly impact local or regional social, economic, or demographic elements for local populations. Although the alternatives would improve Unit accessibility, it would not result in increase in residential, commercial, or retail development or opportunities. The area in the vicinity of the Unit is well developed, and therefore the proposed projects would not result in population shifts to the area around the Unit. Changes to the socioeconomic environment are not further analyzed in the EA.

Utilities: The proposed construction would not result in a temporary or permanent disruption or impact to utilities. The trail and entrance improvements would not include pedestrian lighting. A discussion of impacts to utilities has been eliminated from further discussion in the EA.

Wilderness Lands and Values: There are no proposed or designated wilderness areas, or areas eligible for wilderness designation in areas considered for the trail and entrance improvements. A further analysis of impacts is not included in the EA.

5. Proposed Actions and Alternatives

5.1 Introduction

Alternatives assessed in the EA include: the No Action Alternative and two Action Alternatives to address the purpose and need for the proposed project. The Action Alternatives are described in further detail in Section 5.3. The Action Alternatives were developed based on public comment, input from CRNRA staff, and coordination with stakeholders and other local, state, and federal agencies.

In addition to the Action Alternatives, alternatives that were dismissed from further consideration in the EA are described in further detail in Section 5.8.

5.2 Alternative A – No Action Alternative

CEQ regulations (40 CFR 1502.14) require the assessment of the No Action Alternative in NEPA documents. The No Action Alternative describes the action of continuing current management and conditions. It does not imply or direct discontinuing the current action or removing existing uses, developments, or facilities. The No Action Alternative provides a baseline for comparing the management direction and environmental consequences of the other action alternatives and must be considered in every EA.

Under this alternative there would be no non-motorized access facilities to provide safe alternative to driving to the Unit, and improved connectivity from the Unit to the surrounding community would not be realized. The No Action Alternative would not meet the Purpose and Need of the project. The No Action Alternative would fail to:

- Expand use of the CRNRA facilities to visitors,
- Increase connectivity to neighboring communities through trail linkages, and
- Increase cooperative efforts with local agencies to enhance the level of connectivity.

5.3 Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance.

This alternative would construct an eight-foot wide multi-use trail on the east side of Lower Roswell Road on park property and a five-foot wide sidewalk on the west side of Lower Roswell Road on Cobb County property. The limits of the project would be from Davidson Road to the intersection with Timber Ridge Road and Willeo Road. In addition to the trail and sidewalk, four-foot bike lanes would be constructed adjacent to the roadway travel lanes. The trail and sidewalk would be separated from the traveled roadway and bike lanes by two-foot wide curb and gutter and a 1.5-foot wide grass strip. This alternative would provide improved, safer pedestrian access to the Unit. It would also provide connectivity of the recreational opportunities within the Unit to adjacent residential areas, and become a component of the Cobb County trail system and nearby City of Roswell bike lane network. Alternative B would impact 3.44 acres of park land along Lower Roswell Road. Of this amount approximately 0.17 acre would be hard surface of the trail.

A new vehicle entrance would be constructed approximately 200 feet north of the existing location, across from Asheforde Drive. A southbound left turn lane would be placed on Lower Roswell Road, opposing the northbound Asheforde Drive left turn lane, in order to provide turning motorists refuge from through traffic. Turning radii would also be increased to 24 feet, allowing for safer turns into and out of the relocated paved driveway lined by two-foot grass shoulders. The new driveway would connect to the existing driveway approximately 200 feet east of the current entrance, and just west of recently constructed concrete retaining walls on both sides of the driveway. This alignment would avoid impacting the new retaining walls and a large oak tree located along the existing driveway. Approximately 140 feet of the existing driveway between Lower Roswell Road and the new driveway would be demolished, graded and planted with native vegetation. This alternative would provide safe access by eliminating conflicting traffic movements from Lower Roswell Road into the Unit.

To improve the operational efficiency of the intersection of Lower Roswell Road, Timber Ridge Road, and Willeo Road a roundabout is proposed. The roundabout construction would require placement of fill material onto existing road slopes to provide a safe road shoulder. Portions of this fill would be located within the 100 year floodplain of Willeo Creek, and a wetland identified west of Willeo Road. As a result of these impacts to the floodplain, a Statement of Findings for Floodplains has been prepared.

Because the Gold Branch Unit is designated as a natural zone in CRNRA’s General Management Plan, allowing only pedestrian hiking on its primitive trails, Alternative B would include the placement of a bicycle weir and signage to prevent inadmissible activities within the unit itself.

5.4 Alternative C – Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

This alternative would construct five-foot wide pedestrian-only sidewalks on both sides of Lower Roswell Road from Davidson Road to the intersection with Timber Ridge Road and Willeo Road. In addition to the two pedestrian sidewalks, four-foot bike lanes would be constructed adjacent to the roadway travel lanes. Sidewalks would be separated from the travel roadway by two-foot wide curb and gutter and a 1.5-foot wide grass strip. This alternative would provide improved, safer pedestrian access to the Unit. It would provide connectivity to the recreational opportunities within to pedestrians. This alternative does not offer the suite of recreational opportunities and access afforded by a multi-use trail. Alternative C would impact 3.22 acres of park land along Lower Roswell Road. Of this amount approximately 0.07 acre would be hard surface of the sidewalk.

A new vehicle entrance would be relocated approximately 200 feet north of the existing location, across from Asheforde Drive. A southbound left turn lane would be placed on Lower Roswell Road, opposing the northbound Asheforde Drive left turn lane, in order to provide turning motorists refuge from through traffic. Turning radii would also be increased to 24 feet, allowing for safer turns into and out of the relocated paved driveway lined by two-foot grass shoulders. The new driveway would connect to the existing driveway approximately 200 feet east of the current entrance, and just west of recently constructed concrete retaining walls on both sides of the driveway. This alignment would avoid impacting the new retaining walls and a large oak tree located along the existing driveway. Approximately 140 feet of the existing driveway between Lower Roswell Road and the new driveway would be demolished, graded and planted with native vegetation. This alternative would provide a safe access by eliminating conflicting traffic movements from Lower Roswell Road into the Unit.

To improve the operational efficiency of the intersection of Lower Roswell Road, Timber Ridge Road, and Willeo Road a roundabout is proposed. The roundabout construction would require placement of fill material onto existing road slopes to provide a safe road shoulder. Portions of this fill would be located within the 100 year floodplain of Willeo Creek, and a wetland identified west of Willeo Road.

5.5 Environmentally Preferable Alternative

In accordance with DO-12, the NPS is required to identify the environmentally preferable alternative in all environmental documents, including EAs. The environmentally preferable alternative is defined by the CEQ as “the alternative that will promote the national environmental policy as expressed in Section 101 of NEPA, which considers:

- Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assuring for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- Preserving important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choices;
- Achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
- Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (NEPA, section 101).”

Generally, these criteria mean the environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources (Federal Register, 1981).

Alternative B is the environmentally preferable alternative. This alternative would succeed in maximizing visitor safety and the range of beneficial uses by providing safe, healthful choices for multiple users (walkers, runners, cyclists, etc.). The expansion of beneficial uses would not cause environmental degradation. Although the construction footprint would require removal of approximately 1.57 acres of woody vegetation within the Unit, the limits of construction are adjacent to Lower Roswell Road, minimizing disturbance and avoiding fragmentation of the Unit. Natural Zone designations of the Gold Branch Unit would continue to be maintained within the Unit's primitive trail system. Among the alternatives, Alternative B most achieves a balance between population and resource use that permits high standard of living through the creation of improved access and connectivity. While Alternative C would somewhat advance safety and beneficial uses, it would only go so far as to benefit one particular user group (i.e. pedestrians). Alternative A – No Action Alternative would maintain the unsafe and limited access currently in place and thus would fail to achieve a balance between population and resource use.

5.6 Sustainable Design for the Preferred Alternative

The NPS has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to:

- Design Park facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity,
- To construct and retrofit facilities using energy-efficient materials and building techniques,
- To operate and maintain facilities to promote their sustainability, and
- To illustrate and promote conservation principles and practices through the sustainable design and ecologically sensitive use.

Essentially, sustainability is living within the environment with the least impact on the environment. To the extent practicable, the preferred alternative subscribes to and supports the practice of sustainable planning, design, and use. The multi-use trail would be constructed along the previously disturbed shoulder of Lower Roswell Road. Confining construction of the trail along the road shoulder minimizes the amount of impacts to resources and avoids causing fragmentation and disturbance of the Unit, while providing easier and safer access and connectivity for alternative means of transportation. The improved vehicle entrance would provide safety while minimizing impacts from the construction footprint to vegetation, soils, and natural resources. Building materials for the multi-use trail, vehicle entrance and driveway would be selected to provide the longest life for the intended use, thereby reducing cost, operation, and resources needed for maintaining the facilities. Trail materials would be selected to provide the broadest use for all non-motorized users. Hard surfaces, such as asphalt and concrete, are impervious and cause increased run-off as compared with pervious surfaces; however, they are anticipated to last longer and provide the best substrate for diverse uses like walking, running, cycling, and rollerblading.

5.7 Mitigation Measures for the Preferred Alternative

Best Management Practices and mitigation measures would be used to prevent or minimize potential adverse effects associated with the preferred action alternative. These practices and measures would be incorporated as conditions into project construction documents and contracts to ensure execution. Avoidance of impacts to resources from construction of the preferred alternative would occur where possible. Best Management Practices and mitigation measures would include, but not be limited to:

1. Slopes constructed within the Unit will be reseeded using native grasses and vegetation.
2. Prior to construction, Cobb County would develop a landscape plan for Lower Roswell Road. Cobb County will coordinate with natural resource staff at CRNRA to discuss the selection of native plant species and native grass seed mixes for use in all areas disturbed during construction of the trail and realignment of the driveway. A graphic of the preliminary landscape plan and plant list for the entrance

are included in Appendix E.

3. Barrow fill will be stripped of topsoil prior to use in the project area. Stripping of topsoil off of borrow fill has been selected as the best option to reduce the occurrence of weed seed introduction. This stripping serves general construction practices as well, as the topsoil primarily consists of organic plant matter that would continue to decay and thus provide poor structural support for the trail, entrance, and driveway. Most inherent weed seeds would likely be contained in the topsoil; avoiding its use limits invasive seed introduction.
4. Construction zones would be delimited with construction fence, silt fence, or similar material prior to construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone. No machinery or equipment would access areas outside the construction limits.
5. All equipment would be inspected and cleaned before arrival to site to minimize the introduction of exotic invasive plant material and wildlife.
6. Construction equipment and materials would be stored in designated staging areas.
7. All equipment would be maintained in a clean and well-functioning state to avoid or minimize contamination from fluids and fuels. Prior to starting work each day, all machinery would be inspected for leaks (e.g., fuel, oil, and hydraulic fluid) and all necessary repairs would be made before the commencement of work.
8. Prior to the start of construction, a hazardous spill plan would be required from the contractor stating what actions would be taken in the case of a spill and preventive measures to be implemented. Hazardous spill clean-up materials would be on site at all times. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with machinery (e.g., fuel, oil, and hydraulic fluid) used in project implementation.
9. Contractors would be required to properly maintain construction equipment (i.e., mufflers and brakes) to minimize noise. Construction vehicle engines would not be allowed to idle for extended periods of time.
10. Material and equipment hauling would comply with all legal load restrictions. Load restrictions on park roads are identical to state load restrictions with such additional regulations as could be imposed by the park Superintendent.
11. All tools, equipment, barricades, signs, surplus materials, and rubbish would be removed from the project work limits upon project completion.
12. To minimize erosion resulting from construction-related ground disturbance, the contractor would be required to control erosion prior to, during, and following ground-disturbing activities. Standard erosion-control measures would be used to minimize soil erosion and would comply with current Georgia Soil and Water Conservation Commission (GSWCC) Green Book practices, the Georgia Erosion and Sedimentation Act of 1975, Georgia Erosion and Sedimentation Act (amended 2000), Redwoods Amendment of March 27, 1978 (General Authorities Act), and NPS Management policies.
13. Best Management Practices for erosion and sediment control, as determined by NPS, would be implemented by the contractor to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. Erosion barriers would be installed, inspected, and maintained regularly to ensure effectiveness. The primary measure used to control storm water runoff would be the installation of temporary silt fencing. Silt fences are made of synthetic fabric and are placed in drainage contours to trap sediments generated during construction. Silt fencing fabric would be inspected daily during project work and weekly after project completion, until removed. Accumulated sediments would be removed

when the fabric is estimated to be approximately 75 percent full. Silt removal would be accomplished in such a way as to avoid introduction of silt into the Chattahoochee River.

14. Regular site inspections would be conducted to ensure that erosion-control measures are properly installed and functioning effectively.
15. Special status vegetation would be flagged for avoidance.
16. No archaeological sites or isolated finds were identified during the Phase I archaeological survey of the preferred alternative. If archaeological features are encountered during construction, work would cease immediately and the DNR Historic Preservation Division, park Superintendent, and park Cultural Resources Specialist would be notified. Procedures would be followed, as per DO-28 and found in the guiding regulations in 36 CFR 800.13. No further action would take place until the NPS provides clearance.
17. During and after construction activities, soils would be stabilized with specially designed fabrics, certified straw, or other materials; and disturbed areas would be re-vegetated with native species as soon as possible after construction, with measures taken to avoid the introduction of invasive species.
18. Fifteen storm water drains would be constructed along the trail adjacent to the Unit. New curb and gutter along Lower Roswell Road would have a vertical drop from the incoming pipe that crosses beneath Lower Roswell Road which would allow stormwater to leave the storm drain system on a 1.0% grade on the outfall pipe at the bottom of the proposed slope. This will result in lower velocities for the outfalling stormwater that will minimize erosion and sedimentation. For example, a flow of 2.0 cubic feet per second (cfs) in an 18 inch diameter pipe will have a velocity of 4.6 feet per second (fps). By comparison, if the pipe followed the 2:1 (50%) fill slope, the 2.0 cfs would produce a velocity of 18.2 fps or if the usual maximum grade for fill slopes of a 10% grade would be used, the velocity of 10.4 fps would result. These storm drains would have outfall pipes placed below ground level. Although the number and size of the drop pipes would vary at each outlet, a typical design is shown in Figure 3.
19. At the outfall of each storm drain, the outlet apron would be comprised of 18 inch diameter river rock to further reduce the velocity of the stormwater and minimize erosion and sedimentation. The area around the outfall and placed river rock will be enhanced as necessary with vegetation to further dissipate outfall velocity and stabilize the surrounding soils. The natural stone also preserves the natural landscape and aesthetic values of the Unit.

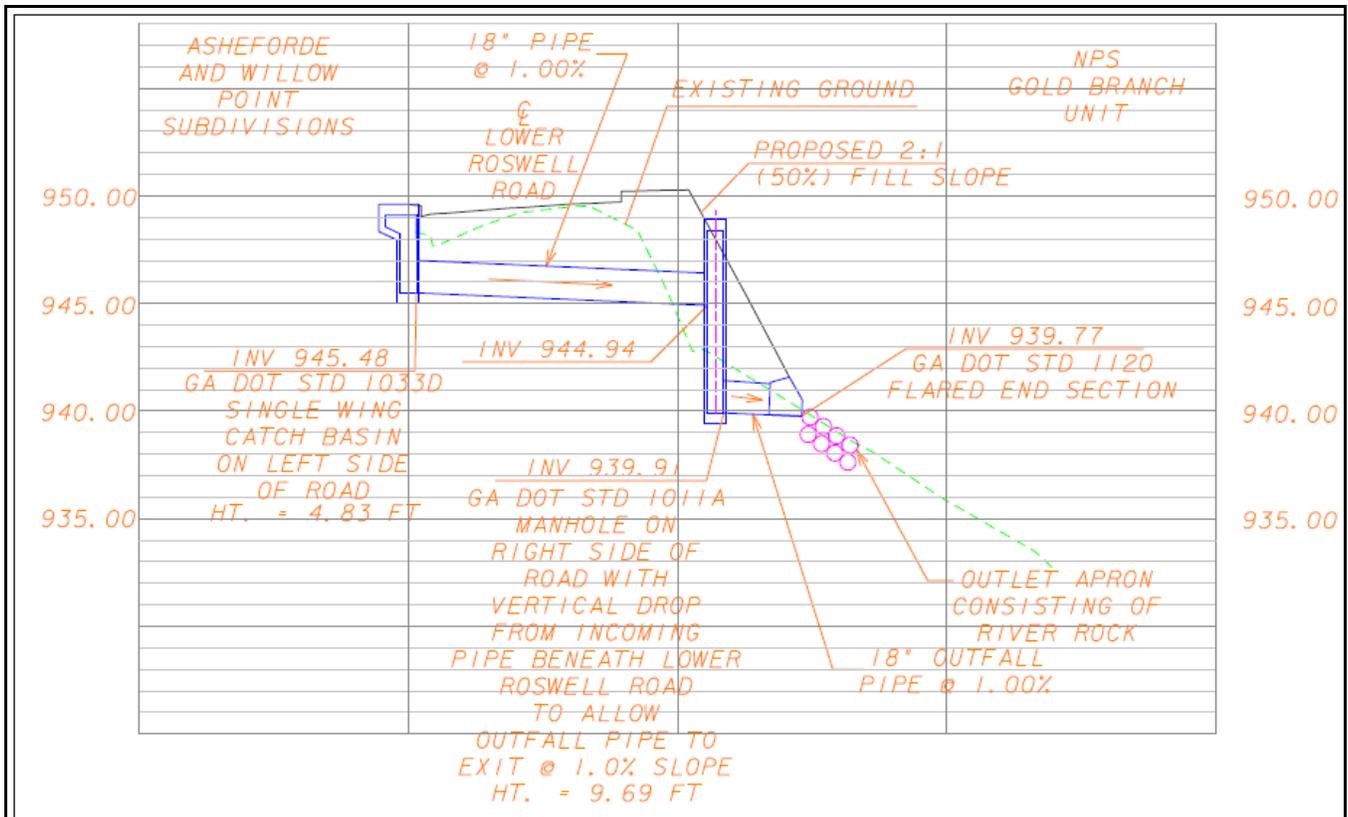


Figure 3
 Typical Design – Stormwater Drainage Structure and Outfall

5.8 Alternatives Dismissed From Further Consideration

Several other alternatives arose throughout the planning process as possible options for this project, but were removed from consideration. The following section briefly describes the other alternatives considered that were dismissed from further consideration.

Two alternatives were considered for construction of a multi-use trail, but were removed from further consideration. The first dismissed alternative pertaining to a multi-use trail would have constructed the trail parallel to the Chattahoochee River, fully within the boundaries of the Unit. The CRNRA Management Plan designates the Gold Branch Unit as a “Natural Zone,” precluding off-road cycling and hardened trails. This alternative would severely compromise the stated management policy and zone designation allowances of the CRNRA and was therefore dismissed from further consideration. A second alternative pertaining to a multi-use trail was developed as a result of public meetings as part of scoping efforts. This alternative would have constructed the multi-use trail on the west side of Lower Roswell Road, across from the Unit. This alternative was suggested to lessen impacts to the Unit. However, the available area to construct an eight-foot wide trail is constrained by the existing road alignment, residential development, and a large rock outcrop on the west side of Lower Roswell Road at the north end of the project.

With additional development on the west side of Lower Roswell Road, construction costs would increase due to additional required right-of-way necessary to construct the trail. This alternative would also result in safety concerns for pedestrians accessing the Unit. Because the access trail would be across the road from the Unit, a pedestrian crossing would be required at the Unit entrance. Line-of-sight limitations along Lower Roswell Road

in this area would make it difficult for motorists to see pedestrians crossing the road. Also, the preferable location for a pedestrian crossing is at traffic signals to ensure that oncoming traffic stops for pedestrians. Traffic volume along Lower Roswell Road at the entrance to the Unit does not warrant installation of a traffic signal. For these reasons mid-block pedestrian crossings (e.g. not located at a signal) are not preferable locations. Because of these safety concerns, locating the trail across the road from the Unit was dismissed from further consideration.

Two additional alternatives for vehicle entrance improvements were considered. The first would relocate the vehicle entrance approximately 200 feet south of the existing location. This alternative called for a southbound left turn deceleration lane to be placed on Lower Roswell Road immediately after the back end of the northbound Asheforde Drive left turn lane in order to provide turning motorists refuge from through traffic. This alternative would minimize the conflicting turning movements along Lower Roswell Road between the Unit entrance and the Asheforde Drive intersection. However, a back-to-back turn lane configuration along Lower Roswell Road of this nature would require a larger disturbance footprint to the park Unit than opposing left turns as described in by the Preferred Alternative, resulting in increased impacts to the CRNRA. The second alternative considered for the vehicle entrance would improve the existing entrance at the current location. The apron at the intersection would be widened to allow motorists an easier turning movement into and out of the Unit. This alternative would not allow for a dedicated left turn lane into the Unit, and the current safety and traffic flow concerns on Lower Roswell Road would remain.

Since this alternative would not substantially improve safety by eliminating the conflicting turning movements between the Unit entrance and the Asheforde Drive intersection, it was therefore dismissed from further consideration.

5.9 Construction Cost Comparison

Many factors and elements are involved when estimating construction costs, including labor, materials, insurance, and availability of contractors. Most of these factors are not fixed costs, and fluctuation in labor costs, availability and cost of materials, and a contractors work load usually impact construction costs. Although not a primary consideration in selecting a preferred alternative, a comparison of approximate construction cost is included in the EA as part of the assessment process in the interest of fiscal transparency.

Table 1
Construction Cost Comparison

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance.	\$310,000.00
Alternative C – Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.	\$200,000.00

Note: US Dollars; Estimates as of October 2010

Alternative C is more cost effective than Alternative B because less material would be required to construct the two pedestrian sidewalks (five feet) as compared with the wider multi-use trail (eight feet) and sidewalk (five feet).

6. Environmental Consequences and Impact Analysis

6.1 Introduction

This section describes the environmental consequences associated with the trail and entrance alternatives. It is organized by the impact topics initially described in Section 4 of this document. The anticipated effects of each alternative are analyzed for each impact topic. This format allows for a standardized comparison of the alternatives.

This analysis is based on review of existing literature and NPS studies, information provided by managers within the CRNRA, professional judgments and staff insights, and public input.

6.2 Methodology

NEPA requires consideration of the type, intensity, duration and context of any impacts to the human and natural environment; an analysis of cumulative effects of the proposed project along with all past, present and foreseeable future actions by any entity; and a detailed description of measures that would be taken to mitigate for impacts. NPS policy also requires that “impairment” of resources be evaluated in environmental documents. The impairment determination of the Preferred Alternative will be provided once a final decision is made with regard to these alternatives.

6.3 Definitions Used in Impact Assessment

Potential impacts are described in terms of type (i.e., direct versus indirect), intensity, duration, context and impairment. The following general definitions were used to evaluate the context, intensity, duration, and cumulative nature of potential impacts associated with project alternatives. The criteria are applied to each resource impact topic retained for consideration. A summary is provided in Table 2 and supported in detail in sections 6.4.1 through 6.4.14.

Direct versus Indirect Impacts

Direct effects are impacts caused by the alternative(s) at the same time and in the same location as the action. Indirect effects are impacts caused by the alternative(s) that occur later in time or farther in distance than the action, but are still reasonably foreseeable. An indirect impact could occur as a cascading effect of the alternative.

Impact Intensity

Impacts can be either adverse or beneficial. Impact intensity is applied for the degree to which a resource would be adversely affected by an action. Impact intensities are quantified as none, negligible, minor, moderate, or major.

None –no mechanism exists for impact to occur according to the resource condition and project specifications.

Negligible – impact to the resource or discipline is barely perceptible, not detectable if measured with appropriate methods, and confined to a small portion of the project area.

Minor – impact to the resource or discipline is perceptible and measurable, and is localized to a portion of the project area.

Moderate – impact is detectable and could have appreciable effect on the resource or discipline within the project area.

Major – impact would have a substantial, highly noticeable influence on the resource or discipline on a larger scale.

Duration

For the purposes of this EA, the duration of impacts are classified into one of two time frames:

Short-term/Temporary – Impacts occur only during construction or last less than one year,
Long-term/Permanent – Impacts that will last longer than one year.

Context

Context is the setting within which an impact is analyzed, such as the locality, region, affected interests, or society as a whole. This EA evaluates the intensity of impacts within the local context (i.e. the Unit and areas adjacent to the Unit along Lower Roswell Road and the Chattahoochee River), and the regional context consisting of a broader area outside of the Unit that includes Cobb County and the Metropolitan Atlanta area.

Cumulative Effects

Unlike direct impacts which are an effect caused by an action and occur at the same place and time, an indirect effect is caused by an action later in time or farther removed in distance, but is still reasonably foreseeable. Cumulative impacts are defined as the impact on the environment which results from the incremental impact of the action when added to past, present, and reasonably foreseeable future actions. A cumulative impacts discussion is included at the end of each impact topic discussion.

Impairment of the Park Resources or Values

In addition to determining the environmental consequences of the preferred and other alternatives, the 2006 NPS *Management Policies* and DO-12 require analysis of potential effects to determine if actions would impair the park's resources. Although Congress has given NPS management discretion to allow certain impacts within parks, that discretion is limited by statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Although any impact to a park resource may constitute impairment, it is more likely to constitute impairment if the affected resource is:

1. Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
2. Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park;
or,
3. Identified as a goal in the park's Master Plan or General Management Plan or other relevant NPS planning documents.

6.4 Impact Analysis

The impact analysis section contains a detailed assessment of project alternatives under each impact topic selected for further analysis. Table 2 contains a summary of impacts for project alternatives included in the EA.

Table 2
Summary Comparison of Potential Environmental Effects

No.	Impact Topic	Alternative A – No Action Alternative	Alternative B – Multi-use Trail Alternative	Alternative C – Sidewalk Alternative
1	<i>Air Quality</i>	Indirect, Adverse, Negligible, Long-term impacts would be expected.	Direct, Adverse, Negligible, Short-term impacts AND Indirect, Beneficial, Long-term impacts would be expected.	Direct, Adverse, Negligible, Short-term impacts AND Indirect, Beneficial, Long-term impacts would be expected.
2	<i>Archaeological Resources and Historic Structures</i>	No impacts would occur to archaeological resources and historic structures.	No impacts would occur to archaeological resources and historic structures.	No impacts would occur to archaeological resources and historic structures.
3	<i>Geology and Topography</i>	No impacts to geology and topography would occur.	Direct, Adverse, Moderate, Long-term would be expected due to construction of the trail and entrance shoulders within the Unit boundary.	Direct, Adverse, Moderate, Long-term would be expected due to construction of the sidewalk and entrance shoulders within the Unit boundary.
4	<i>Introduce/Promote Non-native Species</i>	Indirect, Adverse, Negligible, Long-term impacts of non-native plant species would continue to be expected.	Direct and Indirect, Adverse, Moderate, Long-term impacts of non-native species introduction would be expected.	Direct and Indirect, Adverse, Moderate, Long-term impacts of non-native species introduction would be expected.
5	<i>Unit Operations</i>	No impact to Unit operations would occur.	Direct, Adverse, Minor, Short-term impacts would occur during construction activities.	Direct, Adverse, Minor, Short-term impacts would occur during construction activities.
6	<i>Scenic and Aesthetic Values and Concerns</i>	No impacts to the scenic and aesthetic values and concerns would occur.	Direct, Adverse, Moderate, Short-term impacts would occur from construction activities AND Direct, Beneficial, Long-term impacts would occur due to re-vegetation and landscaping.	Direct, Adverse, Moderate, Short-term, impacts would occur from construction activities AND Direct, Beneficial, Long-term impacts would occur due to re-vegetation and landscaping.
7	<i>Prime and Unique Farmlands and Soils</i>	There would be no impact to prime and unique farmlands and soils.	There would be no impact to prime and unique farmlands and soils.	There would be no impact to prime and unique farmlands and soils.
8	<i>Terrestrial Ecological Species</i>	Indirect, Adverse, Minor, Long-term impacts would continue to occur to terrestrial species due to vehicular traffic on Lower Roswell Road adjacent to the Unit.	Direct and Indirect, Adverse, Moderate, Long-term impacts would occur to vegetation AND Direct and Indirect, Adverse, Minor, Short-term impacts to wildlife would result.	Direct and Indirect, Adverse, Moderate, Long-term impacts would occur to vegetation AND Direct and Indirect, Adverse, Minor, Short-term impacts to wildlife would result.

No.	Impact Topic	Alternative A – No Action Alternative	Alternative B – Multi-use Trail Alternative	Alternative C – Sidewalk Alternative
9	<i>Threatened, Endangered, and Candidate Species</i>	There would be no effect to threatened, endangered, or candidate species.	Indirect, Adverse, Negligible, Long-term impacts would occur to protected species. No species were identified within the construction area. A small proportion of the total area of the Unit would experience increased impact. There would be No Effect to threatened, endangered, or candidate species.	Indirect, Adverse, Negligible, Long-term impacts would occur to protected species. No species were identified within the construction area. A small proportion of the total area of the Unit would experience increased impact. There would be No Effect to threatened, endangered, or candidate species.
10	<i>Transportation</i>	Direct, Adverse, Moderate, Long-term impacts would continue to occur. There would be no alternative to vehicular transportation.	Direct, Beneficial, Long-term impacts would occur, resulting from improved traffic movement and non-motorized alternatives to accessing the Unit.	Direct, Beneficial, Long-term impacts would occur, resulting from improved traffic movement and improved pedestrian access to the Unit.
11	<i>Visitor Safety</i>	Indirect, Adverse, Moderate, Long-term impacts to visitor safety would be expected to continue.	Direct, Beneficial, Long-term impacts would be due to safer vehicular access and traffic movement and a designated multi-use trail for non-motorized visitors.	Direct, Beneficial, Long-term impacts would be due to safer vehicular access and traffic movement and a sidewalk for pedestrian visitors.
12	<i>Visitor Use, Understanding, & Appreciation</i>	Indirect, Adverse, Minor, Long-term impact are expected to continue from limiting access to the site to motorized visitors.	Direct, Adverse, Minor, Short-term impacts to visitor use, understanding and appreciation would be limited to the duration of construction activities at the Unit AND Direct, Beneficial, Long-term impacts would result from increase in access and opportunity for non-motorized visitors.	Direct, Adverse, Minor, Short-term impacts to visitor use, understanding and appreciation would be limited to the duration of construction activities at the Unit AND Direct, Beneficial, Long-term impacts would result from increase in access and opportunity for pedestrian visitors.

No.	Impact Topic	Alternative A – No Action Alternative	Alternative B – Multi-use Trail Alternative	Alternative C – Sidewalk Alternative
13	<i>Water Resources, Wetlands and Floodplains</i>	There would be no impact to water resources, wetlands or floodplains.	Direct, Adverse, Minor, Short-term impacts to water resources would result from construction activities. Indirect, Adverse, Negligible, Long-term impacts to water resources would occur from the addition of impervious surfaces. Direct, Adverse, Minor, Long-term impacts to wetlands, and floodplains would result from ground disturbance from construction activities, stormwater runoff from the addition of impervious surface area, and the placement of fill.	Direct, Adverse, Minor, Short-term impacts to water resources would result from construction activities. Indirect, Adverse, Negligible, Long-term impacts to water resources would occur from the addition of impervious surfaces. Direct, Adverse, Minor, Long-term impacts to wetlands, and floodplains would result from ground disturbance from construction activities, stormwater runoff from the addition of impervious surface area, and the placement of fill.
14	<i>Soundscape</i>	There would be no impact to the existing soundscape.	Direct, Adverse, Negligible to Minor, Short-term impacts to the soundscape would occur from construction activities.	Direct, Adverse, Negligible to Minor, Short-term impacts to the soundscape would occur from construction activities.

6.4.1 Air Quality

Affected Environment

The 1990 Clean Air Act amendments and guidelines, issued by the Environmental Protection Agency (US EPA), set forth guidelines to be followed for attainment of the National Ambient Air Quality Standards (NAAQS). Nonattainment areas currently do not meet air quality standards or are maintenance areas that have previously violated air quality standards but currently meet them and have an approved maintenance plan. On January 5, 2005, the US EPA designated a 20+ county metro Atlanta nonattainment area for fine particulate matter, (PM_{2.5}). PM_{2.5} is one of the components of smog. Cobb County, which includes the location of the Gold Branch Unit, is located within this nonattainment area.

In addition to PM_{2.5}, Mobile Source Air Toxics (MSAT) is a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted into the air when the fuel evaporates or passes through the engine unburned. Other air toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

Alternative A - No Action Alternative

No construction activities would be undertaken in the project area, and as such, not short-term impacts to air quality in the immediate area would result. The current volume of vehicular traffic presents the Unit with Indirect,

Adverse, Negligible, Long- term impacts, and these would continue under the current management of the project area.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Alternative B would involve construction activities in the project area including the use of heavy machinery powered by combustible fuels. This would involve Direct, Adverse, Negligible, Short-term impacts limited to the duration of construction activities.

Alternative B provides opportunities for multiple types of non-motorized uses on the proposed multi-use trail along Lower Roswell Road as well as access to the Unit and its pedestrian trail system. Cyclists and other visitors may use the entrance driveway to access the Unit and a parking lot with bike racks for those who wish to access the pedestrian trail system. In the long-term, the multi-use trail will help prevent further degradation of the local air quality by encouraging the use of non-motorized forms of transportation. Regardless of alternatives provided to driving to the Unit, there would be adverse impacts to air quality resulting from population growth of the area. With Alternative B, a reduction of vehicle trips would benefit air quality in the long-term as compared to the No Action Alternative. By providing alternative visitor use options, Alternative B would result in Indirect, Beneficial, Long-term impacts.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Alternative C would involve construction activities in the project area including the use of heavy machinery powered by combustible fuels. Although the impact area would be slightly less than that of Alternative B, the effects from construction would not be discernible from Alternative B. Thus, Alternative C would involve Direct, Adverse, Negligible, Short-term impacts limited to the duration of construction activities.

Alternative C provides opportunities for pedestrians to use the proposed sidewalk along Lower Roswell Road as well as access to the Unit and its pedestrian trail system. In the long-term, this will help prevent further degradation of the local air quality by encouraging pedestrian activity, though this benefit to air quality is expected to be less than that of Alternative B. Regardless of alternatives provided to driving to the Unit, there would be adverse impacts to air quality resulting from population growth of the area. With Alternative C, a minor reduction of vehicle trips would benefit air quality in the long-term as compared to Alternative A: No Action Alternative. By providing a pedestrian alternative to vehicle access to the Unit, Alternative C would result in Indirect, Beneficial, Long-term impacts.

Cumulative Impacts

Population growth and ongoing development activities are anticipated in Cobb County and surrounding areas, which will negatively affect air quality at the local and regional scales. The CRNRA has provided parking spaces for visitors accessing the Gold Branch Unit by vehicle, and there are no plans to increase parking capacity. Taking these foreseeable future regional issues into account, alternatives to driving proposed under both action alternatives would be negligibly beneficial to air quality in the long-term. The length, location, and type of non-motorized facilities proposed by the project alternatives would allow for access to the Unit from a broader population base, and would provide important non-motorized connectivity to a regional system of existing, planned, and programmed trails and sidewalks among CRNRA, Cobb and Fulton counties.

Conclusion

Although considered beneficial, both alternatives would result in Indirect, Negligible, Long-term impacts to air quality. Construction activities would result in limited Direct, Adverse, Negligible, Short-term impacts.

6.4.2 Archaeological Resources and Historic Structures

Affected Environment

Section 106 procedures in compliance with the National Historic Preservation Act (NHPA) of 1966 require federal agencies to determine the effect of their actions on historic properties and to provide state historic preservation offices (SHPOs) and other interested parties the opportunity to review and comment on these actions' anticipated effects to cultural resources.

No resources within the Area of Potential Effect (APE) for the proposed trail and entrance were identified as potentially eligible for the National Register of Historic Places (NR). The review of existing information on previously identified historic properties revealed that no NR listed properties, properties pending NR nomination, National Historic Landmarks, or bridges determined eligible for inclusion in the NR in the updated Georgia Historic Bridge Survey (GHBS) were identified within the APE. Review of existing information also revealed that no resources 50 years old or older were identified within the APE in the 2007 Georgia Department of Natural Resources (DNR) Cobb County survey.

In February of 2010, the proposed project areas were field surveyed for historic properties. As a result of those efforts, no properties listed in or considered eligible for listing in the NR were identified.

The SHPO has concurred that no eligible resources would be impacted by the proposed improvements (see Appendix B for a copy of the SHPO concurrence and History Survey letter report).

A review of the Georgia Archaeological Site Files (GASF) at the University of Georgia in Athens showed that 15 sites are located within a 1 kilometer (km) radius of the project area. The proposed project would have no effect on these sites as they are outside the APE of the present undertaking. In addition to the file search, the area of the proposed alternatives was field surveyed for potential archaeological sites within the APE in April and May 2010. The field survey included shovel testing. No archaeological sites or isolated finds were identified during the field survey. Based on the results of the survey efforts, no further archaeological investigations are necessary unless the proposed project extends beyond the APE. The SHPO has concurred with these findings (see the Appendix B for SHPO Concurrence and documentation).

Alternative A - No Action Alternative

There would be no impacts to the Unit's cultural environment including historic structures and archaeological resources because there would be no construction activities and introduction of new features.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit's entrance. (Preferred Alternative)

No resources were identified within the APE of either the proposed multi-use trail or vehicle entrance improvements; therefore, no impacts to the Unit's cultural environment including historic structures and archaeological resources are anticipated under Alternative B.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

No resources were identified within the APE of either the proposed sidewalk or vehicle entrance improvements on park property ; therefore, no impacts to the Unit's cultural environment including historic structures and archaeological resources are anticipated under Alternative C.

Cumulative Impacts

The areas for the proposed alternatives consist largely of previously disturbed locations due to construction to Lower Roswell Road and the existing vehicle entrance. No archaeological or historic resources were identified within areas considered for the alternatives.

Conclusion

No resources potentially eligible for the NR were identified within the project areas for either Alternative. Although there may be resources beyond the APE, the proposed alternatives would not impact cultural resources within the Unit.

6.4.3 Geology and Topography

Affected Environment

Topography in the area of the proposed project varies. The vehicle entrance drive is level, but shoulders on either side of the drive at the intersection with Lower Roswell Road were constructed by grading at the time that the original entrance drive was constructed. Road shoulders along Lower Roswell Road beginning at the Unit's vehicle entrance and proceeding north drop down into the Unit. These shoulders were constructed at the time that Lower Roswell Road was constructed. Continuing north from the Unit's entrance on Lower Roswell Road, the slope of the road shoulder gradually levels out to approximately the same elevation as the road. Generally, from the entrance to the Unit north to the intersection of Lower Roswell Road and Timber Ridge Road the elevation of the area decreases as it transitions to the floodplain of the Chattahoochee River.

The CRNRA is contained entirely in the Piedmont province of the Appalachian Highlands District, a transition topographically and ecologically located between the Coastal Plain and the southern Appalachian Mountains. It forms, in part, the dividing line between these two physiographic provinces. Underlying the upland terrestrial portions of CRNRA is geology comprised of deeply weathered crystalline rock. The area has moderately strong relief, and elevation ranges from about 700 to 1,000 feet. The CRNRA's entire 48-mile-long corridor runs along the Brevard Fault Zone, which forms the Chattahoochee River channel. The Brevard Fault is a major Southeastern geologic feature. Formed approximately 300-500 million years ago in the Appalachian Orogeny, it stretches for more than 320 miles between Alabama and North Carolina. The steep and rocky Palisades section of the CRNRA is generally considered to be the best location along the entire Brevard Fault Zone to view and study this major geologic feature.

Within CRNRA, the Chattahoochee River flows between two subsections of the Piedmont Province, the Central Upland District and the Gainesville Ridge District. The Central Upland District contains low, linear ridges, separated by broad, open valleys. Streams flowing through this section are generally transverse to the structure and occupy valleys 150-200 feet below the ridge crests. To the south and east, lies the Gainesville Ridge District. It contains low, parallel ridges with narrow valleys, with lower relief than the uplands. The Piedmont province consists mainly of ancient sedimentary rocks, with intrusions of igneous rocks --all subject to repeated stress. Rocks have been fractured, faulted, and folded by earth processes. The consolidated rocks include metamorphosed sedimentary rocks and crystalline igneous rocks. Rocks in the CRNRA zone are primarily schist, granite, and gneiss. The Brevard Fault Zone or lineament, a fractured zone of one-half to two miles wide, follows along the river. Much of the Recreation Area falls into this fractured zone (Kunkle and Vana-Miller 2000).

Alternative A - No Action Alternative

There would be no impact to geologic or topographic formations within the Unit because construction of a trail, sidewalks, and entrance improvements would not occur.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit's entrance. (Preferred Alternative)

Construction activities would impact 3.44 acre of park land, of which 0.17 acre would be the hard surface of the trail. Activities within this area would consist of construction activities, installation of the trail, and placement of fill dirt to construct an adequate, safe shoulder. Figures in Appendix C show the relationship between the existing road, proposed trail, Unit boundary, and construction zone required.

The new slopes would be reseeded with native vegetation and grasses. Specialized drainage features would be installed on park land to minimize the effects of stormwater runoff by dissipating the velocity and energy of the water with vertical drops. Natural stone would be placed at these outflow locations to prevent erosion and capture sedimentation. Implementation of these designs would reduce erosion and sedimentation that could negatively affect topography and soils in the Unit. Direct, Adverse, Moderate Long-term impacts to geology and topography within the Unit are anticipated under Alternative B, due primarily to placement of fill, addition of hard (impervious) surfaces, and installation of drainage outfalls.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Although a sidewalk would be narrower than the multi-use trail (approximately five feet, versus eight feet), construction activities for the sidewalk would impact 3.22 acre of park land along Lower Roswell Road, of which 0.07 acre would be the hard surface of the sidewalk. Activities within this area would consist of construction activities, installation of the sidewalk and placement of fill dirt to construct an adequate, safe shoulder. Figures in Appendix C show the relationship between the existing road, proposed trail, Unit boundary, and construction zone required.

The new slopes would be reseeded with native vegetation and grasses. Specialized drainage features would be installed on park land to minimize the effects of stormwater runoff by dissipating the velocity and energy of the water with vertical drops. Natural stone would be placed at these outflow locations to prevent erosion and capture sedimentation. Implementation of these designs would reduce erosion and sedimentation that could negatively affect topography and soils in the Unit. Direct, Adverse, Moderate Long-term impacts to geology and topography within the Unit are anticipated under Alternative B, due primarily to placement of fill, addition of hard (impervious) surfaces, and installation of drainage outfalls.

Cumulative Impacts

The areas for the proposed alternatives consist largely of areas that have already been disturbed from construction of Lower Roswell Road and the existing entrance. However, under both action alternatives, disturbance would occur to narrow strips of park property, and this would represent new disturbance. Alternative B would impact slightly more area than Alternative C. In addition to hard surfaces, much of the anticipated impact consists largely of new fill dirt to construct shoulders to support the non-motorized access route, new entrance, and driveway. Though relatively limited in scale, this small amount of affected area, taken together with existing trail system in the Unit represents one of a number of incremental impacts to this part of the park geology. Another consideration involves a foreseeable increase in visitation to the Unit as a result of improved and broadened access. If visitor attendance increases, the Gold Branch Unit may incur further impacts to geology and topography as a result of greater foot traffic and erosion of the existing pedestrian trail system. Cumulatively, these past, present, and future actions could result in negative impacts to the geology and topography of the Unit.

Conclusion

Both action alternatives would entail construction activities on park property, which would be expected to cause Direct, Adverse, Moderate Long-term impacts to geology and topography. Due to the existing topography of the project area, fill dirt would be required to construct slopes that support the non-motorized access route and driveway. Regardless of the alternative selected, new slopes would be reseeded with native vegetation and grasses to reduce erosion and sedimentation. In addition, outflows from specialized drainage features necessary to control stormwater would minimize the effects to geology of runoff by dissipating the velocity and energy of the water with vertical drops and include placement of natural stone to reduce erosion and sedimentation but would increase the effect to geology in the immediate area through their installation.

6.4.4 Introduce/Promote Non-native Species

Affected Environment

Invasive species are a major resource management concern. They disrupt native ecosystems, displace native plant and wildlife, and degrade biological and cultural resources. An estimated 42 percent of the threatened or endangered species listed under the Endangered Species Act are at risk because of competition with or predation by exotic species, second only to habitat destruction as a primary cause of listing. Invasive species are also known to reduce food sources for wildlife, alter fire regimes, and disrupt pollination and dispersal relationships. In addition, invasive species pose a significant economic threat. Over 2.6 million acres of national parks are infested with non-native species and NPS considers invasive species one of the most significant land management concerns. All parks are mandated by Executive Order 13112 of 1999 to “prevent the introduction of invasive species and provide for their control and to minimize [their] economic, ecological, and human health impacts” Due to its urban influence, the park contains a variety of non-native plants, many of which are considered invasive.

Alternative A - No Action Alternative

Although construction of a multi-use trail, sidewalk, and entrance improvements would not occur, the project area currently experiences effects of non-native plant species as major roads like Lower Roswell Road are known to serve as invasion vectors for these species. Indirect, Adverse, Negligible, Long-term impacts of non-native plant species would continue to be expected under the current scenario in the project area.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Construction activities are known to introduce non-native species onto new lands primarily by disturbing ground and transporting seeds and plant matter in mud and debris caught on the equipment. In addition to ground disturbance, fill dirt needed during the construction process would be expected to be a likely source of non-native seeds that could be introduced to the project area. Trails and roadways are also known vectors of non-native species because they are areas entailing repeated disturbance along their stretches due to inherent use of these systems by the public who also introduce non-native species from seed and plant matter stuck on clothing, shoes, equipment, and vehicles. Direct and Indirect, Adverse, Moderate, Long-term impacts of non-native species introduction would be expected under Alternative B.

Adherence to the BMPs listed in this document (see section 5.7 Mitigations Measures for the Preferred Alternative) will minimize the introduction of non-native species from construction activities, equipment, and vehicles. The fill dirt used to support the multi-use trail, new entrance and driveway will be acquired from local sources to decrease the potential for the introduction of non-native species that could be new to the local area. All areas of construction disturbance, including the slopes created by adding fill dirt, will be re-vegetated with native plant species. These native species will help to prevent the spread of non-natives through competition for space, sunlight, and nutrients. This proposed project lies parallel and adjacent to an existing roadway and is bisected by a Georgia Power easement. By taking advantage of an existing disturbance vector (Lower Roswell Road) for the multi-use trail location, this project minimizes additional long-term impacts from this source that might otherwise be expected (compared with a trail constructed in an undisturbed area, for example).

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Construction activities are known to introduce non-native species onto new lands primarily by disturbing ground and transporting seeds and plant matter in mud and debris caught on the equipment. In addition to ground disturbance, fill dirt needed during the construction process would be expected to be a likely source of non-native seeds that could be introduced to the project area. Trails and roadways are also known vectors of non-native species because they are areas entailing repeated disturbance along their stretches due to inherent use of these systems by the public who also introduce non-native species from seed and plant matter stuck on clothing, shoes,

equipment, and vehicles. Direct and Indirect, Adverse, Moderate, Long-term impacts of non-native species introduction would be expected under Alternative C.

Adherence to the BMPs listed in this document (see section 5.7 Mitigations Measures for the Preferred Alternative) will minimize the introduction of non-native species from construction activities, equipment, and vehicles. The fill dirt used to support the sidewalk, new entrance and driveway will be acquired from local sources to decrease the potential for the introduction of non-native species that could be new to the local area. All areas of construction disturbance, including the slopes created by adding fill dirt, will be re-vegetated with native plant species. These native species will help to prevent the spread of non-natives through competition for space, sunlight, and nutrients. This proposed project lies parallel and adjacent to an existing roadway and is bisected by a Georgia Power easement. By taking advantage of an existing disturbance vector (Lower Roswell Road) for the pedestrian sidewalk location, this project minimizes additional long-term impacts from this source that might otherwise be expected (compared with a trail constructed in an undisturbed area, for example).

Cumulative Impacts

The introduction of non-native species has the potential to lead to required on-going management of these species and to cumulative impacts to native vegetation and wildlife. Direct and Indirect, Adverse, Moderate, Long-term impacts of non-native species introduction would be anticipated under both action alternatives. However, the proposed non-motorized access route would follow an existing roadway that is already a known vector for non-native species. Therefore, cumulative impacts from the introduction of non-native species would be unlikely to result in appreciable increase in adverse effects compared with the Alternative A: No Action Alternative. An anticipated increase in visitor use to the Unit could provide additional opportunity for non-native species introduction, though this possibility would be difficult to assess quantitatively.

Conclusion

Construction activities and a new trail, sidewalk and entrance will increase the potential for the introduction of non-native species through soil disturbance during construction, addition of fill dirt. However, use of BMPs and revegetation with native plant species would minimize the impacts to the Unit from non-native species introduction.

6.4.5 Park Operations

Affected Environment

The Gold Branch Unit is open for day-use 30 minutes before sunrise to 30 minutes after sunset, year around. CRNRA staff maintains and operates the Unit along with the other land Units and 48 miles of the Chattahoochee River. Park staff provide the full scope of functions and activities to accomplish management objectives, performing duties that include resource protection and management, law enforcement, emergency services, public health and safety, visitor services, interpretation and education, utilities, and fee collection. As of 2011, there were 35 full-time employees at CRNRA.

The Unit is accessible primarily by vehicles from Lower Roswell Road. A pervious-surface parking lot serves approximately four miles of hiking trails. The Unit does not provide amenities such as restroom facilities, river access, or picnic areas.

Alternative A - No Action Alternative

No construction activities would occur that would cause interruption or impact to park operations under Alternative A.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Construction activities would impact 3.44 acres of park land along Lower Roswell Road, of which 0.17 acre would be the hard surface of the trail. After completion, Cobb County would provide all necessary maintenance for the multi-use trail on both a routine and as-needed basis.

The newly constructed Unit entrance and driveway would be secured during construction to prevent visitor access in the construction zone. However, the existing entrance would remain open during construction to allow continued use of the Unit. Once completed, access would be allowed through the new entrance drive and the existing entrance would then be secured for removal and restoration. The new driveway would be maintained by Park staff, but would not require additional effort or changes to operations.

Anticipated impacts to park operations would be Direct, Adverse, Minor, and Short-term. These impacts would be limited to the duration of construction activities providing for public safety.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

Construction activities would impact 3.22 acres of park land along Lower Roswell Road, of which 0.07 acre would be the hard surface of the sidewalk. After completion, Cobb County would provide all necessary maintenance for the multi-use trail on both a routine and as-needed basis.

The newly constructed Unit entrance and driveway would be secured during construction to prevent visitor access in the construction zone. However, the existing entrance would remain open during construction to allow continued use of the Unit. Once completed, access would be allowed through the new entrance drive and the existing entrance would then be secured for removal and restoration. The new driveway would be maintained by Park staff, but would not require additional effort or changes to operations.

Anticipated impacts to park operations would be Direct, Adverse, Minor, and Short-term. These impacts would be limited to the duration of construction activities providing for public safety.

Cumulative Impacts

There is no on-site CRNRA staff at the Unit; maintenance, operations, and security are conducted by CRNRA staff serving all the Units within the Park. As construction proceeds, additional safety and security requirements could be identified that would incrementally increase the cumulative level of impact to park operations, though this is not anticipated. If park attendance by visitors were to increase in the long run as a result of enhanced access to the Unit, adjustments to park operations and personnel may be required by CRNRA. In particular, if the non-motorized access were to lead to visitors engaging in activities that are not allowed (such as bicycle use) within Gold Branch Unit trails, this would cause a foreseeable impact to park operations in terms of increased need for resource management, additional Unit trail maintenance, and enforcement of Natural Zone designation activity stipulations.

Conclusion

During construction activities, anticipated impacts to park operations would be Direct, Adverse, Minor, and Short-term. Maintenance of the non-motorized access route under Alternatives B and C would be conducted by Cobb County. Maintenance of the new Unit entrance and driveway would not require additional effort or personnel than currently required.

6.4.6 Scenic and Aesthetic Value and Concerns

Affected Environment

The Unit is mostly an undisturbed mixed hardwood/pine forest with primitive hiking trails. It has been designated a Natural Zone in the General Management Plan allowing activities that include hiking, picnicking, fishing, scientific research, canoeing, rafting, kayaking, and habitat restoration. The Plan states that existing facilities

would be maintained, with no new facilities developed, except for the construction of new primitive hiking trails. No paved trails are allowed. A Georgia Power easement transects this Unit and provides the only early successional habitat in the Unit. The Chattahoochee River makes up the eastern boundary.

The Unit is bordered by residential development on all sides. Lower Roswell Road lies adjacent to the west and north sides of the Unit, across which are residential subdivisions. Residential development also comprises areas adjacent to the south end of the Unit. Riverside Drive, recreational parks, and residential development are located east of the river. Forest environment serves as a visual buffer between development surrounding the Unit and the primitive trails located in the interior of the Unit.

The amount of woody vegetation to be cleared for construction of the trail or sidewalk is approximately 1.57 acres of upland mixed hardwood/pine forest parallel to Lower Roswell Road and outside of the roadside management area that is currently maintained by the county for safety concerns. The cleared vegetation would be kept to a minimum to preserve the scenic and aesthetic values provided by the natural landscape. The placement of a non-motorized recreation route along Lower Roswell Road provides the user with scenic vistas and views found in the Unit.

Alternative A - No Action Alternative

There would be no impacts to the scenic and aesthetic values of the Unit because construction of new hard surface structures would not occur.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Construction activities for the multi-use trail would impact 3.44 acres of park land along Lower Roswell Road, of which 0.17 acre would be the hard surface of the trail. No trees larger than six inches diameter at breast height (dbh) would be removed unless they are situated in a manner that conflicts with the multi-use trail or the construction. The amount of cleared vegetation would be kept to a minimum and would vary along the length of the Unit; clearing would occur in designated areas following the construction plans in Appendix C.

The view of the project area from Lower Roswell Road would be impacted during construction activities entailing Direct, Adverse, Moderate, Short-term impacts. Construction activities would occur along the roadway. Additionally, the Unit entrance would be moved to a different location, and the existing entrance pavement and a portion of the driveway (approximately 125 linear feet) would be removed. The scenic and aesthetic values within the Unit would not be greatly affected. Primitive hiking trails are located within the interior of the Unit and the dense forested environment provides a visual buffer between these existing hiking trails and the proposed project area where construction would occur.

Following construction activities, slopes constructed by fill material would be reseeded with native plant species, and the area of impact landscaped with native vegetation. The re-vegetation and landscaping of the front entrance and multi-use trail with native plant species will entail impacts that are Direct, Beneficial, and Long-term.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Vegetation would be cleared within construction limits for the sidewalk. Sidewalk construction activities would require 3.22 acres of park land along Lower Roswell Road, of which 0.07 acre would be the hard surface of the sidewalk. No trees larger than six inches diameter at breast height (dbh) would be removed unless they are situated in a manner that conflicts with the multi-use trail or the construction.. The amount of vegetation cleared would be kept to a minimum and would vary along the length of the Unit; clearing would occur in designated areas following the construction plans in Appendix C.

The view of the project area from Lower Roswell Road would be impacted during construction activities entailing Direct, Adverse, Moderate, Short-term impacts. Construction activities would occur along the roadway. Additionally, the Unit entrance would be moved to a different location, and the existing entrance pavement and a portion of the driveway (approximately 125 linear feet) would be removed. The scenic and aesthetic values within the Unit would not be greatly affected. Primitive hiking trails are located within the interior of the Unit and the dense forested environment provides a visual buffer between these existing hiking trails and the proposed project area where construction would occur.

Following construction activities, slopes constructed by fill material would be reseeded with native plant species, and the area of impact landscaped with native vegetation. The re-vegetation and landscaping of the front entrance and multi-use trail with native plant species will entail impacts that are Direct, Beneficial, and Long-term.

Cumulative Impacts

Construction of the non-motorized recreation route, new entrance, and driveway would occur along the periphery of the Unit. The existing dense mixed hardwood/pine forest within the Unit would act as a visual buffer between the trails in the Unit and the multi-use trail or sidewalk. The multi-use trail or sidewalk would provide scenic vistas and views of the natural landscape of the Unit to users.

Conclusion

Both Alternatives B and C would require removal of 1.57 acres of vegetation for construction. The areas of construction disturbance would be landscaped and re-vegetated with native seed mixes and plant species. The Unit's forest environment would continue to provide a visual buffer between users of the Unit's hiking trails and the proposed improvements. Scenic vistas and views of the Unit would be readily accessible to users of the trail or sidewalk. The pavement of the existing entrance and initial 125 feet of driveway would be removed and landscaped with native vegetation. The overall appearance of the Unit's entrance would be similar to the existing condition, with a single access to the Unit.

6.4.7 Prime and Unique Farmland and Soils

Affected Environment

Several soil types within and immediately adjacent to CRNRA have been classified by the Natural Resources Conservation Service (NRCS) as "prime farmlands." Prime farmlands are those "whose values derives from their general advantage as cropland due to soil and water conditions." Prime farmland soil has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oil seed crops and is available for these uses (i.e., it is not urban or developed land nor is it under water). The park contains an estimated total of 384.4 acres of Prime and unique farmland soils. Not surprisingly, many of these soils are in the Chattahoochee River floodplain and were historically farmed. The area of the proposed trail and existing entrance driveway consist of fill material brought in for construction of Lower Roswell Road. Areas beyond the slope of Lower Roswell Road within the Unit, and areas for the proposed relocation of the driveway entrance would contain soils mapped in the NRCS Soil Survey for Cobb County, Georgia.

According to the NRCS Update for the Soil Survey of Cobb County, Georgia (May 1996), the Gold Branch Unit consists of three different soil associations. Along the Chattahoochee River the soil type is classified as Cartecay-Toccoa association. These soils are somewhat poorly drained to well-drained, are nearly level and subject to frequent flooding.

Further into the Unit from the river, soil types fall into two associations: Gwinnett-Pacolet-Musella association and Madison-Gwinnett-Cecil association. The Gwinnett-Pacolet-Musella association and well-drained soils with a red, dark-red, or dusky-red appearance. These soils have a clayey to loamy subsoil and are located mainly on hilly uplands. Soils of the Madison-Gwinnett-Cecil association are also well-drained and red to dark-red in appearance, with clayey subsoil located on fairly broad to narrow ridge tops.

Coordination with the NRCS was initiated to determine impacts from the proposed project to farmland protection, NRCS watershed dams, and project area. According to correspondence received from the NRCS (July 28, 2011, see Appendix B) the project is located within a US Bureau of the Census urban area (Atlanta, GA 03817) and is therefore exempt from further assessment to ascertain impacts in accordance with the Farmland Protection Policy Act. Furthermore, the NRCS indicated there are no watershed dams constructed in accordance with the Flood Control Act of 1944 or Watershed Protection and Flood Prevention Act, or easements related to the Wetland Reserve Program or the Farm and Ranch Land Protection Program. No prime or unique farmlands were identified in areas for the proposed alternatives.

Alternative A - No Action Alternative

The No Action Alternative would have no impacts on soils or prime farmland. The trail and improved entrance drive would not be constructed.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Construction of the multi-use trail, new entrance, and driveway would primarily involve introduction of new soils from fill material rather than removal of existing soils for construction. There would be several areas along Lower Roswell Road where soil would be removed, but they are unlikely to contain any native soils as these areas were previously filled to create the road bed.

Prior to and during construction, BMPs would be implemented to minimize erosion. Erosion control devices would be inspected on a regular basis to assess their effectiveness, and would be removed at the conclusion of construction or when no longer necessary. Permanent erosion control designs and actions would include specialized outflow structures to mediate stormwater flow and placement of natural stone to prevent erosion at outflow into the Unit. Also, new slopes would be replanted and seeded with native species to prevent future erosion. There would be no impact to prime and unique farmland soils under Alternative B.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Construction of the pedestrian sidewalk, new entrance, and driveway would primarily involve introduction of new soils from fill material rather than removal of existing soils for construction. There would be several areas along Lower Roswell Road where soil would be removed, but they are unlikely to contain any native soils as these areas were previously filled to create the road bed.

Prior to and during construction, BMPs would be implemented to minimize erosion. Erosion control devices would be inspected on a regular basis to assess their effectiveness, and would be removed at the conclusion of construction or when no longer necessary. Permanent erosion control designs and actions would include specialized outflow structures to mediate stormwater flow and placement of natural stone to prevent erosion at outflow into the Unit. Also, new slopes would be replanted and seeded with native species to prevent future erosion. There would be no impact to prime and unique farmland soils under Alternative C.

Cumulative Impacts

The area under consideration for the proposed alternatives has been previously disturbed, and consists of fill material brought in for construction of Lower Roswell Road and the existing Unit entrance. During construction, the areas of easement within the Unit would be cleared of vegetation. Erosion control devices would be installed and inspected during construction. After construction, slopes would be replanted and seeded with native species. Specialized outflow structures would mediate stormwater flow and placement of natural stone would prevent erosion at outflow into the Unit. These steps would reduce but not eliminate soil erosion and sedimentation. Foreseeable future impacts could result from increase in usage of the Unit, causing increased soil compaction. Since prime and unique farmlands were not identified in areas considered for construction, or in adjacent areas within the Unit, cumulative impacts are not anticipated.

Conclusion

No prime or unique farmland was identified in areas considered for proposed construction of the non-motorized recreation route, new entrance, and driveway. There would be no impact to prime and unique farmland soils.

6.4.8 Terrestrial Ecological Species

Affected Environment

Areas for construction of alternatives are characterized into two distinct land use types: approximately 10 percent is considered maintained right-of-way, and the remaining 90 percent is considered mixed hardwood/pine forest.

The maintained right-of-way includes the Georgia Power utility easement and road shoulder. Georgia Power policy is to regularly mow their easement, approximately every three years. Plant species in the area of the proposed alternatives within the maintained right-of-way consist of:

- goldenrod (*Solidago canadensis*), broomsedge (*Andropogon virginicus*), fescue grass (*Festuca arundinacea*), barnyard grass (*Dactylis glomerata*), sow thistle (*Sonchus oleraceus*), loblolly pine (*Pinus taeda*), *Rubus* spp.

The mature (25- to 40- years old) mixed hardwood/pine forest primarily consists of the following species:

Overstory

- southern red oak (*Quercus falcata*), northern red oak (*Quercus rubra*), loblolly pine (*Pinus taeda*), shortleaf pine (*Pinus echinata*), white oak (*Quercus alba*), pignut hickory (*Carya glabra*), American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), blackgum (*Nyssa sylvatica*), tulip poplar (*Liriodendron tulipifera*), southern magnolia (*Magnolia grandiflora*), water oak (*Quercus nigra*)

Mid-story

- white basswood (*Tilia americana* var. *heterophylla*), painted buckeye (*Aesculus sylvatica*), devil's walking stick (*Aralia spinosa*), roundleaf greenbrier (*Smilax rotundifolia*), red mulberry (*Morus rubra*)

Herbaceous-layer

- trillium (*Trillium cuneatum*), mayapple (*Podophyllum peltatum*), poison ivy (*Toxicodendron radicans*), Christmas fern (*Polystichum acrostichoides*)

In addition to the plant species listed above, six invasive plant species were identified including Mimosa (*Albizia julibrissin*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), Chinese wisteria (*Wisteria sinensis*), multiflora rose (*Rosa multiflora*), and kudzu (*Pueraria montana*). Planting and seeding of slopes and areas disturbed during construction with native plants and grasses, as well as measures during and after construction to prevent the spread of invasive species, would be in accordance with *Re-vegetation Standard for CRNRA*, September 2010 (a copy is included in the Appendix A).

In addition to vegetation, the Unit provides habitat for a wide variety of birds, mammals, reptiles, and amphibians. The park has developed a study plan to initiate an avian inventory; however, no inventory has yet been conducted. However, a listing of bird species observed in CRNRA is reported in Georgia Power's *Wildlife and Botanical Resources Study Report*. As many as 189 bird species, including neotropical migrant songbirds, raptors, waterfowl, and shorebirds use diverse wetland and upland habitats in the park. Of particular note are the diversity of ducks and sandpipers that use the Chattahoochee River during seasonal migrations, the variety of birds of prey (hawks, kites, eagles, falcons) that use the area, the use of the Morgan Falls impoundment by sandhill crane (*Grus canadensis*), and the reported sighting of the bald eagle (*Haliaeetus leucocephalus*) and federally endangered whooping crane (*Grus americana*) in the park (see section 6.4.9 Threatened, Endangered, Candidate Species, and Species of Special Concern for a discussion on special status species).

Common species of mammals in the park include deer, raccoon, opossum, bats, squirrels, eastern cottontail rabbits, short-tailed shrew, pine vole, deer mouse, and chipmunk. The presence of coyotes has also been reported in the Unit. A field inventory of small mammals in the park was completed in 2004 by the University of North Carolina at Wilmington for the NPS Southeast Coast Inventory and Monitoring Program. In addition, a summer bat survey was conducted in the park in 2004 by the U.S. Department of Agriculture Forest Service and Clemson University for the Inventory and Monitoring Program. Species lists will be published and available from the park upon data certification (NPS 2009).

A complete list of reptiles and amphibians known or presumed to be present in the park was compiled by the NPS Southeast Coast Inventory and Monitoring Program. A total of 23 amphibian species and 40 reptile species are documented in the park including snakes, lizards, turtles, frogs, and salamanders. Examples of these amphibian and reptile species include eastern worm snake (*Carphophis amoenus*), rat snake (*Elaphe obsoleta*), slender glass lizard (*Ophisaurus attenuatus*), green anole (*Anolis carolinensis*), snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), American toad (*Bufo americanus*), Fowler's toad (*Bufo fowleri*), spotted salamander (*Ambystoma maculatum*), and marbled salamander (*Ambystoma opacum*).

Alternative A - No Action Alternative

Indirect, Adverse, Minor, Long-term impacts would continue to occur to terrestrial species due to vehicular traffic on Lower Roswell Road adjacent to the Unit.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit's entrance. (Preferred Alternative)

Direct and Indirect, Adverse, Moderate, Long-term activities would impact vegetation with construction of Alternative B. Construction activities for the multi-use trail would impact 3.44 acres of park land along Lower Roswell Road, of which 0.17 acre would be the hard surface of the trail. While no trees larger than six inches dbh would be removed outside of the trail footprint and immediate construction zone, clearing of all other vegetation would occur. The disturbance of soil would provide an ideal substrate for the introduction and proliferation of invasive plant species that could then become problematic within the Unit, potentially causing ecological shifts in the abundance of native terrestrial plant and animals. To minimize this risk, unpaved areas impacted by construction activities for the multi-use trail, new entrance, and driveway would be replanted and seeded with native species. The pavement of the existing entrance and approximately 125 feet of the existing driveway would be removed and revegetated with native plant species.

Both Direct and Indirect, Adverse, Minor, Short-term impacts to wildlife would result from displacement and disturbance due to construction activities and the existence of a trail along Lower Roswell Road in Alternative B.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

Direct and Indirect, Adverse, Moderate, Long-term impacts would occur to vegetation with construction of Alternative B. Construction activities for this alternative would impact 3.22 acres of park land along Lower Roswell Road, of which 0.07 acre would be hard surface of the sidewalk. While no trees larger than six inches dbh would be removed, clearing of all other vegetation would occur. The disturbance of soil would provide an ideal substrate for the introduction and proliferation of invasive plant species that could then become problematic within the Unit, potentially causing ecological shifts in the abundance of native terrestrial plant and animals. To minimize this risk, unpaved areas impacted by construction activities for the multi-use trail, new entrance, and driveway would be replanted and seeded with native species. The pavement of the existing entrance and approximately 125 feet of the existing driveway would be removed and re-vegetated with native plant species.

Both Direct and Indirect, Adverse, Minor, Short-term impacts to wildlife would result from displacement and disturbance due to construction activities and the existence of a sidewalk along Lower Roswell Road in Alternative C.

Cumulative Impacts

The proposed action alternatives would require disturbance of terrestrial species and habitat within the Unit. A separately proposed multi-use trail in Fulton County on the north end of the project area is anticipated in the future. Cumulatively, these two projects would translate to additional impact to terrestrial species through clearance of vegetation, and disturbance from construction activities on a scale somewhat larger than that of this proposed project alone. To mitigate for such impacts, this proposed project would include restoration of native vegetation in areas where soils must be disrupted. Approximately 1.57 acres of woody vegetation would be removed for construction of the trail. Choosing to construct a non-motorized recreation route along Lower Roswell Road also minimizes the overall cumulative impacts of the project's activities in the long-term. Foreseeable future actions may include increased visitation to the Unit, which would entail greater impact to terrestrial species, though this is only anticipated to be a significant issue if visitation were to increase dramatically.

Conclusion

Both action alternatives would result in Direct and Indirect, Adverse, Moderate, Long-term impacts to vegetation and Direct and Indirect, Adverse, Minor, Short-term impacts to wildlife.

6.4.9 Threatened, Endangered, Candidate Species, and Species of Special Concern

Affected Environment

The Gold Branch Unit consists of either mixed hardwood/pine forests or maintained right-of-way. To determine if species afforded protection under the Endangered Species Act of 1973, Migratory Bird Treaty Act of 1918, Bald Eagle Protection Act of 1940, the Georgia Wildflower Preservation Act of 1973, and the Georgia Endangered Species Act existed within areas for the proposed alternatives, state and federal agencies were contacted and field surveys conducted in March and November 2010 for the presence of protected species and suitable habitat. The current (May 2004) listing of federally protected species in Cobb County was researched. In addition the GA DNR was contacted for known occurrences of state and federally protected species within three miles of the project area (see the Appendix B for the GA DNR response dated August 14, 2007). The CRNRA provided a List of Known Occurrences of Protected Species and Georgia Natural Heritage Program Watch List Species Within the CRNRA and/or 3-Mile Radius (2009). The list is included in Appendix B. Finally, CRNRA personnel were contacted for known occurrences of protected species.

Of particular note are the diversity of ducks and sandpipers that use the Chattahoochee River during seasonal migrations, many of which are protected under the Migratory Bird Treaty Act of 1918, administered by the US Fish and Wildlife Service (USFWS). The following protected birds have been observed in the vicinity of the project area: sandhill crane (*Grus canadensis*), bald eagle (*Haliaeetus leucocephalus*) and federally endangered whooping crane (*Grus americana*).

Table 3 lists the plant and aquatic species identified from information research and field surveys conducted for Cobb County for the action alternatives. The plant species potentially occurring within the project area of the proposed alternatives are discussed below. Because there is no suitable habitat for aquatic species within the limits of the action alternatives, no discussion has been included.

Bay Star-vine

The bay star-vine is a deciduous, woody vine that twines up to the crowns of trees or trailing along the ground, and sometimes large clumps of leaves form a ground cover, resembling a sprawling Virginia creeper (*Parthenocissus quinquefolia*). The leaves are ovate to elliptic, with sparsely toothed margins and are sweet-smelling when crushed. The leaves are alternate, but are close together on the slower growing secondary branchlets. Both male and female flowers occur on the same plant and droop on long, delicate flower stalks arising from the leaf axils of mature vines. The 9-12 petals are greenish outside and crimson-colored within. The fruit is an aggregate of red berries on an axis that elongates during ripening. The flowering period is from May to

June and the fruiting period is from July to August. The bay star-vine is found twining over understory trees and shrubs in rich, forested bottomlands and adjacent lower slopes. Sometimes older vines occur on trunks of overstory trees, or sprawl along the ground forming patches rooted in the litter, especially near mountain laurel (*Kalmia latifolia*) thickets. The bay star-vine range is scattered in the Southeast, on the Coastal Plain from Mississippi Embayment in Arkansas and Tennessee, south to Louisiana and east to northeastern North Carolina; on the Piedmont Plateau of Georgia; and disjunct on the Cumberland Plateau of south central Kentucky.

Michaux's Sumac

Michaux's sumac, also known as dwarf sumac, is a diminutive shrub (< 3 feet tall) characterized by hairy young twigs and hairy evenly serrated leaves with 7-13 leaflets. The flowering period is June to August. The deep red fruits usually last through October. The species is known to form dense colonies in rocky, open woods, predominantly in areas where high concentrations of magnesium occur within the soil. The range of the dwarf sumac includes the Piedmont and Upper Coastal Plain from Georgia, North Carolina, South Carolina, and Virginia. It is known from five counties in Georgia. The species was last seen in Cobb County in 1900.

White Fringeless Orchid

The white fringeless orchid perennial herb, approximately 20 inches tall at maturity, is characterized by its loosely flowered terminal cluster (raceme) from which a pure white bilaterally symmetrical flower emerges during late-July through August. A distinguishing point of the flower is a prominent spur. The white fringeless orchid typically occurs in red maple-blackgum swamps along sandy damp stream margins, or on seepy, rocky, sparsely vegetated slopes. The distributional range of white fringeless orchid is throughout the southeastern US and includes Mississippi, Alabama, Georgia, Tennessee, Kentucky, North Carolina, South Carolina, and Virginia. The species is found within the Cumberland Plateau, Coastal Plain, Piedmont, and Blue Ridge provinces. In Georgia, the species is recorded in seven counties from the Cumberland Plateau, Piedmont, and Blue Ridge provinces.

Georgia Aster

The Georgia aster is a fall blooming (October to mid-November) perennial herb that is distinguished by its 2-inch diameter flowering head composed of dark purple ray flowers surrounding white disk flowers with purple tips. This perennial herb grows from a rhizome and is 16-32 inches tall by fall. The Georgia aster typically prefers dry open woods, roadsides, and other openings and is thought to be a relict species of the post oak-savanna communities that existed in the region prior to fire suppression. The range of the species is from south-central North Carolina to central Georgia and west to central Alabama. Sixty (60) populations are known to exist within this range.

Suitable habitat occurs within the maintained Georgia Power right-of-way within the Unit for the proposed alternatives. Personnel with the CRNRA were aware of a known location near the proposed project for the multi-non-motorized recreation route. The areas for proposed alternatives were surveyed in November 2010 (during the flowering season; October to mid-November). Two populations of Georgia aster were found; however, both populations are located more than 150 feet from the limits of proposed construction and are not in danger of impacts from construction activities or the existence of a non-motorized recreation route at this proximity.

Table 3
Protected Species in Cobb County, October 2011

Species	Identification Source				Status	Species Present	Habitat Present
	USFWS	GA DNR	NPS	Field Survey			
<i>Plant Species</i>							
Bay Star-vine (<i>Schisandra glabra</i>)		√			ST	No	No
Michaux's Sumac (<i>Rhus michauxii</i>)	√	√			FE	No	No
White Fringeless Orchid (<i>Platanthera integrilabia</i>)	√				FC	No	No
Georgia Aster (<i>Symphyotrichum georgianum</i>)	√		√	√	FC	Yes	Yes
<i>Aquatic Species</i>							
Gulf Moccasinshell Mussel (<i>Medionidus penicillatus</i>)	√				FE	No	No
Cherokee Darter (<i>Etheostoma scotti</i>)	√				FT	No	No
Shine-rayed Pocketbook Mussel (<i>Hamiota subangulata</i>)		√			FE	No	No
Chattahoochee Crayfish (<i>Cambarus howardi</i>)		√			SE	No	No
Bluestrip Shiner (<i>Cyprinella callitaenia</i>)		√			SR	No	No
Highscale Shiner (<i>Notropis hypsilepis</i>)		√			SR	No	No
Delicate Spike (<i>Elliptio arctata</i>)		√			SE	No	No

* FE=Federally Endangered, FT=Federally Threatened, FC=Federal Candidate, SE=State Endangered, ST=State Threatened, SR=State Rare

Alternative A - No Action Alternative

There would be no impacts to habitat for state- or federally- listed species within the Unit because construction activities would not occur.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit's entrance. (Preferred Alternative)

Construction activities would impact 3.44 acres of park land along Lower Roswell Road, of which 0.17 acre would be the hard surface of the trail. The Georgia Power easement and areas adjacent to Lower Roswell Road where the construction would take place is potentially suitable habitat for Georgia aster. Two populations of Georgia aster were identified in the Unit, but both populations are located more than 150 feet from the limits of construction and are not in danger of being negatively affected by construction activities or the existence of a multi-use trail.

No other listed species, species of concern, or potentially suitable habitat were identified in the area of impact for the proposed project. Impact to state or federally protected species, or species of concern would be Indirect, Adverse, Negligible, and Long-term.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

Construction activities would impact 3.22 acres of park land along Lower Roswell Road, of which 0.07 acre would be the hard surface of the sidewalk. The Georgia Power easement and areas adjacent to Lower Roswell Road where the construction would take place is potentially suitable habitat for Georgia aster. Two populations of Georgia aster were identified in the Unit, but both populations are located more than 150 feet from the limits of construction and are not in danger of being negatively affected by construction activities or the existence of a pedestrian sidewalk.

No other listed species, species of concern, or potentially suitable habitat were identified in the area of impact for the proposed project. Impact to state or federally protected species, or species of concern would be Indirect, Adverse, Negligible, and Long-term.

Cumulative Impacts

Residential growth of the surrounding areas has put pressure on species inhabiting the Unit. With limited facilities and development in the Unit as well as limitations on permitted activities, the Unit and the Chattahoochee River adjacent to the Unit provide important habitat for protected species. The proposed alternatives would occur at the western periphery of the Unit, in areas previously disturbed with construction of Lower Roswell Road. No protected species were identified within areas to be impacted directly by construction of the non-motorized recreation route, new Unit entrance, and driveway. The strip of park land proposed for the non-motorized recreation route could provide suitable habitat for Georgia aster, although no species were found to be present there. Even with increased visitation to the Unit as a result of alternatives, only indirect negligible impacts are anticipated for the protected species identified.

Conclusion

Impacts to state or federally listed threatened, endangered, candidate, or species of concern would be Indirect, Adverse, Negligible, and Long-term. No protected species were identified within areas to be impacted directly by construction of the non-motorized recreation route, new Unit entrance, and driveway. Shoulders along Lower Roswell Road and the Georgia Power easement are suitable habitat for Georgia aster. However, no individual species were identified within construction limits of Alternatives B and C based on field surveys conducted during the flowering season. The closest patches of Georgia aster are located over 150 feet from proposed construction limits. Areas within the Unit that may be potentially suitable habitat for other protected species would not be impacted by the proposed alternatives.

Coordination with the USFWS for a determination of effect to listed Threatened and Endangered Species was initiated on February 1, 2012 (refer to correspondence in Appendix B). The USFWS has concurred with a finding of No Effect to federally listed threatened, endangered, candidate, or species of concern. Correspondence from USFWS is included in Appendix B.

6.4.10 Transportation

Affected Environment

Lower Roswell Road is parallel to the western side of the Gold Branch Unit, and runs north to south between Roswell and Marietta, Georgia. The two-lane roadway is important to the transportation network of east Cobb County, and provides a commuter route for residents living along Lower Roswell Road to jobs, schools, and businesses in these two cities. In addition, this north-south corridor provides access to recreational opportunities along the Chattahoochee River including the CRNRA, the Chattahoochee Nature Center, and Roswell's Riverside Park.

The section of Lower Roswell Road adjacent to the Unit connects to major arterial roadways to the north and south, including Johnson Ferry Road and SR 120/Marietta Highway to the west and north, and SR 9/Roswell Road to the east. Traffic counts collected from the Cobb County Department of Transportation (CCDOT) on Lower Roswell Road from 2007 (source: CCDOT <http://gis.cobbcountyga.gov/>) indicate an Annual Daily Traffic

(ADT) volume of 21,600 vehicles. Most of this volume can be attributed to morning and afternoon commuter traffic.

Transportation facilities within the Unit consist of an approximately 0.12 mile entrance drive that terminates at a 32-space pervious concrete parking lot constructed within the Georgia Power utility easement. The parking lot includes two handicap spaces. The entrance drive also provides Georgia Power access to the utility easement, and Cobb County Water Department personnel access to a monitoring station located within the power line easement. The driveway is approximately 16 feet wide, and widens to approximately 40 feet at Lower Roswell Road to allow for simultaneous left and right turning movements. There is no traffic signal for the entrance, and no dedicated turn lanes from Lower Roswell Road into the Unit.

There are no sidewalks or trails along Lower Roswell Road adjacent to the Park; pedestrian access from the surrounding area is only available along the grassed road shoulder. There are no visible indications (i.e. worn path in the grass shoulder) of a large volume of pedestrian use. A posted speed limit of 40 miles per hour (mph) coupled with an absence of curb and gutter or other features to separate pedestrians from the traveled roadway makes use of the shoulder unsafe, and therefore underutilized.

Alternative A - No Action Alternative

Under the No Action Alternative, no improvements to the Unit entrance would be made. Site distance on Lower Roswell Road would remain deficient. No dedicated turn lanes would be constructed, resulting in continued problems with traffic movements for driving visitors to the Unit along Lower Roswell Road. Safe, non-motorized alternatives to accessing the Unit or the greater regional trail systems in Cobb and Fulton Counties and CRNRA would remain unrealized. Direct, Adverse, Moderate, Long-term impacts would continue to occur.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Impacts to transportation would be Direct, Beneficial, and Long-term. Current non-motorized use of the Unit consists primarily of pedestrians from neighboring private residential developments. Construction of the trail would provide safe access to pedestrians and other non-motorized users to a broader population base by providing connectivity to existing trails, pathways, and routes. The multi-use trail would be separated from Lower Roswell Road by a two-foot wide curb and gutter and 1.5 ft. grass strip. Figure 4 depicts the proposed design and orientation of the Alternative B.

An eight-foot wide multi-use trail would allow for a variety of recreational use, including walkers, runners, rollerbladers, and cyclists who may not feel comfortable using the four-foot bicycle lanes proposed in the footprint of Lower Roswell Road (e.g. parents with small children or inexperienced cyclists). Although cycling is not permitted within Gold Branch Unit, visitors cycling to the Unit would be allowed to park bicycles in the existing parking lot and use the primitive trail system on foot.

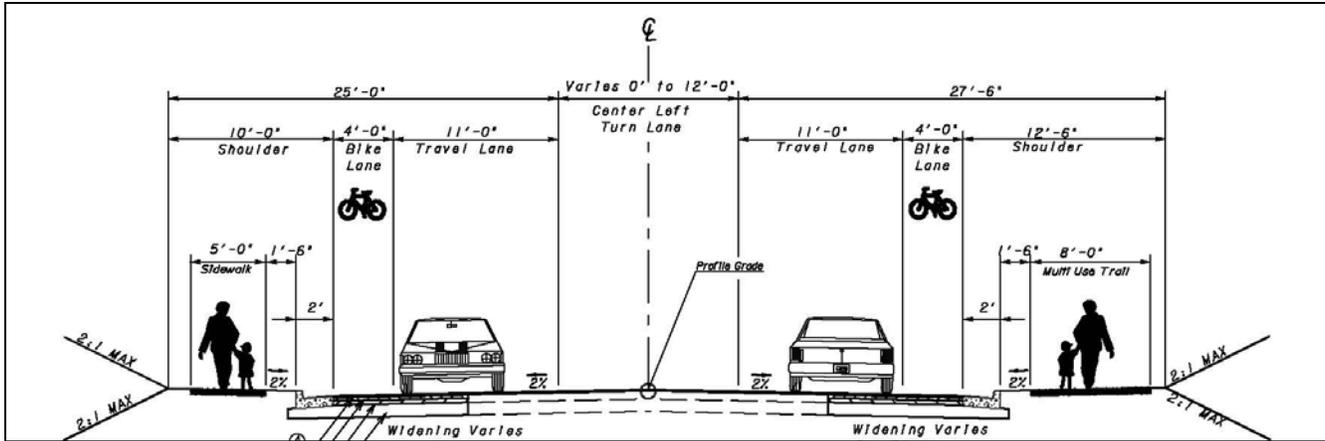


Figure 4

Typical Section - *Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)*

Currently, left turning traffic into the Unit blocks southbound traffic. Alternative B would include a short left turn lane for southbound traffic, reducing the potential for collisions and rear-end crashes. The new drive would be approximately 250 feet long, designed to utilize as much of the existing drive as possible. They would connect at a point to avoid damaging two recently constructed concrete retaining walls. The new design would accommodate trucks that occasionally access the power line easement and monitoring station. Alignment of the new entrance has been designed to have a minimal impact compared to that of a straighter driveway constructed directly from the new entrance to the parking lot, a distance of approximately 550 feet. Finally, the section of the existing driveway between the current entrance and the proposed driveway would be removed, replanted and reseeded with native species, and allowed to restore naturally. A roundabout would be constructed to improve the operational and transportation efficiency at the intersection of Lower Roswell Road, Timber Ridge Road, and Willeo Road.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Impacts to transportation would be Direct, Beneficial, and Long-term. Construction of a sidewalk would provide a safe pedestrian route for area residential developments. Sidewalks would be separated from the traveled roadway by two feet of curb and gutter and a 1.5 foot grass strip. However, construction of sidewalks would limit the users to pedestrians, when compared to that of the multi-use trail (five-foot wide sidewalks compared to an eight-foot wide trail) that offers access to other alternate means of transportation like bicyclists and rollerbladers. Alternative C would limit some uses, such as inexperienced or young child cyclists who are not comfortable using the four-foot bicycle lane adjacent to the travelled roadway.

Currently, left turning traffic into the Unit blocks southbound traffic. Alternative B would include a short left turn lane for southbound traffic, reducing the potential for collisions and rear-end crashes. The new drive would be approximately 250 feet long, designed to utilize as much of the existing drive as possible. They would connect at a point to avoid damaging two recently constructed concrete retaining walls. The new design would accommodate trucks that occasionally access the power line easement and monitoring station. Alignment of the new entrance has been designed to have a minimal impact compared to that of a straighter driveway constructed directly from the new entrance to the parking lot, a distance of approximately 550 feet. Finally, the section of the existing driveway between the current entrance and the proposed driveway would be removed, replanted and seeded with native species, and allowed to restore naturally. A roundabout would be constructed to improve the operational and transportation efficiency at the intersection of Lower Roswell Road, Timber Ridge Road, and Willeo Road.

Cumulative Impacts

Lower Roswell Road is a heavily used vehicular corridor that provides connectivity between Marietta and Roswell, Georgia. The heavy volume of traffic is considered a safety concern for visitors driving to the Unit. The proposed improvements would include a left turn lane for southbound traffic, taking these vehicles out of the through traffic flow and reducing potential accidents. Construction of a non-motorized recreation route would provide an alternative to driving, thereby reducing the number of cars turning into the Unit. A multi-use trail proposed under Alternative B would provide safe pedestrian access as well as alternative non-motorized transportation use to a broader population base by connecting existing trails, pathways, and routes.

Conclusion

Although vehicular access to the Unit would remain under all alternatives considered, Alternatives B and C would encourage non-motorized access. While both Alternatives would provide safe pedestrian access, construction of a multi-use trail under Alternative B would allow for broader use, enabling access by a greater diversity of visitors. Relocating the Unit entrance across from the Asheforde subdivision would create a safer and more desirable alignment that includes a left turn lane for southbound traffic into the Unit. The new driveway alignment has been designed to minimize impact to the Unit by utilizing the majority of the existing driveway, while maintaining a safe design for vehicular use. The impacts from the installation of a multi-use trail (Alternative B) would be Direct, Beneficial, and Long-term, while the impacts from the installation of a pedestrian sidewalk (Alternative C) would be Direct, Beneficial, and Long-term.

6.4.11 Visitor Safety

Affected Environment

There are no traffic control devices or designs, such as traffic signals or turn lanes, to control access into the Unit. The entrance to the Unit from Lower Roswell Road is currently difficult to see due to dense vegetation at the road shoulder and vertical curve of Lower Roswell Road when approaching the entrance from either direction. There are no existing facilities (crosswalks, traffic lights, etc.) along Lower Roswell Road to provide safe access for pedestrians.

The entrance is gated and locked by CRNRA personnel between sunset and sunrise. When open, the Unit is patrolled by CRNRA Park Rangers and local law enforcement agencies.

Alternative A - No Action Alternative

Indirect, Adverse, Moderate, Long-term impacts to visitor safety would be expected to continue. There would be no enhancements to improve the Unit entrance for motorists, and no safe access for pedestrians.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Direct, Beneficial, Long-term impacts would be due to safer vehicular access and traffic movement and a designated multi-use trail for non-motorized visitors. Construction of the multi-use trail would provide safe access to pedestrians and other non-motorized visitors using alternative means of transportation. The location and length of the trail and sidewalks on Lower Roswell Road, and system of existing and programmed sidewalks and trails in the area extends the trail to a larger segment of the population and potential visitors to the Unit. The multi-use trail would become part of the larger Cobb County Trail Plan, which consists of a network of sidewalks and trails throughout the county. The trail and sidewalk would be separated from the road by curb and gutter and a grass strip, creating a buffer separation between the traveled road and pedestrian facilities.

Relocation of the Unit entrance across from Asheforde Drive would improve safety, access, and visibility. A dedicated left turn lane for southbound traffic on Lower Roswell Road would be constructed, moving left turning traffic out of the through lanes and lessening the possibility of collisions.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Direct, Beneficial, Long-term impacts would be due to safer vehicular access and traffic movement and a sidewalk for pedestrian visitors. Construction of the pedestrian sidewalks would provide safe access to pedestrian visitors to the Unit. The location and length of the sidewalks on Lower Roswell Road, and system of existing and programmed sidewalks in the area extends use to local residential communities. The sidewalks would become part of the larger Cobb County Trail Plan, which consists of a network of sidewalks and trails throughout the county. The sidewalks would be separated from the road by curb and gutter and a grass strip, creating a buffer separation between the traveled road and pedestrian facilities.

Relocation of the entrance drive across from Asheforde Drive would improve safety, access, and visibility. A dedicated left turn lane for southbound traffic on Lower Roswell Road would be constructed, moving left turning traffic out of the through lanes and lessening the possibility of collisions.

Cumulative Impacts

The shoulder of Lower Roswell Road is currently the only path available for non-motorized users and does not provide safe access.. Sight distance on Lower Roswell Road, signage at the Unit entrance, and lack of a dedicated left turn lane are safety concerns for visitors driving to the Unit. The proposed Alternatives would provide safer pedestrian and vehicular access by offering a multi-use trail, sidewalks, and a new entrance drive alignment that increases safety for the visitor as well as the public commuters that travel Lower Roswell Road. Providing safer access to the Unit may increase visitation. No other reasonably foreseeable impacts to visitor safety would occur.

Conclusion

Both action alternatives would provide Direct, Beneficial, Long-term impacts to visitor safety since there are currently no sidewalks or trails along Lower Roswell Road. Both alternatives would expand access to a larger segment of the population and potentially increase visitation to the Unit. Entrance enhancements would improve the visibility to the entrance from Lower Roswell Road. The left turn lane for southbound traffic on Lower Roswell Road would remove these vehicles from through lanes, and reduce the possibility of collisions.

6.4.12 Visitor Use, Understanding, and Appreciation

Affected Environment

The Gold Branch Unit, as with many of the Units of the CRNA, represents a natural setting in the midst of an urban area characterized by development and rapid growth. The setting provides recreational opportunities associated with a natural environment, such as hiking and boating. Activities within the Unit include hiking, and picnicking, and boating along the eastern side of the Unit in the Chattahoochee River. There are approximately four miles of groomed and marked trails. There are no boat ramps, and overnight camping is prohibited.

Because of emphasis on the serene setting and preservation of the natural environment, facilities are limited. The only facilities in the Unit consist of the asphalt driveway, pervious concrete parking lot, and informational kiosk and sign boards. The Unit is not staffed with full-time, on-site personnel.

Alternative A - No Action Alternative

Indirect, Adverse, Minor, Long-term impact are expected to continue from limiting access to the site to motorized visitors.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Direct, Beneficial, Long-term impacts would result from increase in access and opportunity for non-motorized visitors. Alternative B would foreseeably contribute to an increase in visitor use of the Unit. It would not, however, add features or facilities within the Unit to enhance visitor experience. The multi-use trail and improved

entrance would impact visitor experience beneficially by providing safer experience in accessing the Unit. Although cycling is encouraged as a means to access the Unit, cycling on trails is not permitted within the Natural Zone. Cyclists are allowed to use the existing drive, and may park bicycles in the parking lot.

There would be Direct, Adverse, Minor, Short-term impacts to visitor use, understanding and appreciation limited to the duration of construction activities and noise at the Unit. Long-term impacts would be beneficial from the improved connectivity with the Cobb County trail system, improved access for non-motorized forms of transportation, and safer entrance driveway realignment. The 3.44 acres of park land required for construction, of which 0.17 would be hard surface of the trail, are on the periphery of the Unit, protecting the Unit's mixed hardwood/pine forest and other natural resources. The forest also provides a visual buffer for trail users in the interior of the Unit to these new facilities. Visitors would not greatly experience adverse visual impacts to the serene, natural environment enjoyed within the Gold Branch Unit.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

Direct, Beneficial, Long-term impacts would result from increase in access and opportunity for pedestrian visitors. Alternative C would foreseeably contribute to a small increase in visitor use of the Unit. It would not, however, add features or facilities within the Unit to enhance visitor experience. The sidewalk and improved entrance would impact visitor experience beneficially by providing safer experience in accessing the Unit.

There would be Direct, Adverse, Minor, Short-term impacts to visitor use, understanding and appreciation limited to the duration of construction activities and noise at the Unit. Long-term impacts would be beneficial from the improved connectivity with the Cobb County trail system, improved access for pedestrian recreation, and safer entrance driveway realignment. Construction limits for the sidewalk would require 3.22 acre of land within the Unit, of which 0.07 acre would be the hard surface of the sidewalk. The construction limits are on the periphery of the Unit, protecting the Unit's mixed hardwood/pine forest and other natural resources. The forest also provides a visual buffer for trail users in the interior of the Unit to these new facilities. Visitors would not greatly experience adverse visual impacts to the serene, natural environment enjoyed within the Gold Branch Unit.

Cumulative Impacts

As residential development and growth have increased in the surrounding area, the use and enjoyment of natural, serene environments has increased. The natural areas along the CRNRA have also become learning environments for how natural environments grow and thrive in a rapidly changing urban landscape. Entrance improvements and non-motorized recreation route construction will provide safer opportunities for a larger segment of the public to access the Unit and enjoy the natural setting. Improved access to the Unit could increase visitation, placing additional pressure on existing facilities, and increasing the need for additional facilities such as hiking trails. Increased visitation could affect the serenity and peacefulness that currently make the Unit desirable and unique.

Conclusion

Under both action alternatives, there would be Direct, Adverse, Minor, Short-term impacts to visitor use, understanding and appreciation limited to the duration of construction activities and noise at the Unit. Alternative B would also entail Direct, Beneficial, Long-term impacts as a result of an increase in access and opportunity for non-motorized visitors. Alternative C would entail Direct, Beneficial, Long-term impacts as a result of an increase in access and opportunity for pedestrian visitors only.

6.4.13 Water Resources, Wetlands and Floodplains

Affected Environment

The Unit is comprised of 363 acres of relatively intact forested land with one small tributary to the Chattahoochee River. The facilities are minimal and the parking lot is constructed of a pervious surface. The natural landscape and topography of the Unit buffers the river and stream from stormwater runoff from surrounding roads and

residential developments. There is a 12 acre wetland area within the 35-foot stream buffer. Floodplain areas comprise the riparian area along the river.

Water Resources

Many of the tributaries to the Chattahoochee River within the CRNRA flow through urban or suburban areas, which can produce excessive amounts of nonpoint runoff. Storm water runoff carries sediment and pollutants from construction sites and impervious surfaces such as roads, parking lots, driveways, and rooftops. Sediment particles can also carry pesticides, herbicides, metals, grease, and oil into receiving streams and the Chattahoochee River. Surface waters relevant to the project area include Willeo Creek and four unnamed tributaries to the creek. One of the unnamed tributaries is an un-buffered state water, two are intermittent streams, and one is a perennial stream. Willeo Creek, a perennial stream and is located north of the northern terminus of the proposed project. The creek flows west to east, and into the Chattahoochee River approximately 800 feet east of Willeo Road. The four unnamed tributaries are located west of Willeo Road. The four unnamed tributaries are not on the current Clean Water Act 303(d) listing of impaired waters in Georgia. Willeo Creek is listed on the current 303(d) list due to fecal coliform.

Wetlands

Wetlands can provide a variety of functions, including wildlife habitat, groundwater recharge or discharge, sediment and shoreline stabilization, flood storage, nutrient removal, sediment and toxicant retention and production export, and also aesthetic and recreational value. NPS Director's Order (DO) 77-1, *Wetland Protection*, establishes NPS policies, requirements, and standards for implementing EO 11990, *Protection of Wetlands* (43 *Federal Register* 6030). EO 11990 was issued in 1977 in order "to avoid to the extent possible the long- and short- term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." According to the Cowardin et al. 1978 method used by NPS for delineating wetlands, areas are classified as wetland when they meet *any* one of the following three criteria: 1) the presence of hydric soils, 2) hydrophytic vegetation, and 3) a hydrologic regime that is conducive to a wetland environment, such as permanent or periodic inundation at mean water depths less than 6.6 feet. The interaction of hydrology, vegetation, and soil results in the development of characteristics unique to wetlands.

All NPS actions with the potential to have any type of adverse impact on wetlands must comply with D.O. 77-1, and those actions that involve placing dredged or fill material in wetlands or other "waters of the U.S." must also comply with Section 404 of the Clean Water Act (CWA). Section 404 of the CWA prohibits the discharge of dredged or fill material into wetlands, streams, and other waters of the United States unless a permit is issued by the United States Army Corps of Engineers (USACE). When there is a proposed discharge, all appropriate and practicable steps must first be taken to avoid and minimize impacts on aquatic resources.

Wetlands were delineated using the Cowardin method (to address NPS-specific wetland protection requirements), which also meets the narrower 1987 USACE method (used for CWA 404 permitting application purposes). Two wetlands were identified in the area at the terminus of the multi-use trail and roundabout. One wetland is located west and south of Willeo Creek. The second wetland is located east and south of Willeo Creek. Figure 7 depicts the proposed construction of the trail and roundabout with stream and wetland resource impacts identified.

Floodplains

Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters. The living and nonliving parts of natural floodplains interact with each other to create dynamic systems in which each component helps to maintain the characteristics of the environment that supports it. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and diversification of plants and animals. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain. The 100-year floodplain is the area defined as having a 1 percent chance of inundation by a flood event in a given year. DO 77-

2: *Floodplain Management* and NPS Executive Order (EO) 11988 require the protection and preservation of the natural resources and functions of floodplains; the avoidance of long and short term environmental effects associated with the occupancy and modification of floodplains; avoidance of direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks; and the restoration, when practicable, of natural floodplain values previously affected by land use activities within floodplains. The determination of floodplain typically involves consultation of FEMA Flood Insurance Rate Maps (FIRMS) which contain enough information to determine the relationship of the project to nearby floodplains. The December 16, 2008, FEMA FIRM Panel No. 13067C0132G for Cobb County, Georgia, shows that the project area is within floodplain Zone AE (see Figure 6).

Alternative A - No Action Alternative

There would be no change to the existing conditions, and therefore no additional impacts to water resources in the Unit. Water Resources would continue to experience Indirect, Adverse, Negligible, Short- and Long- term impacts from existing runoff from impervious surfaces in the surrounding area.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit’s entrance. (Preferred Alternative)

Direct, Adverse, Minor, Short-term impacts would occur from construction activities associated with the multi-use trail. Disturbed soil and stormwater runoff generated from construction activities would carry sediment and pollution into surface waters during storm events. The use of silt fencing, erosion barriers, and other BMPs would reduce the effect of stormwater flow on surface waters. Indirect, Adverse, Negligible, Long-term impacts to water resources would occur from the addition of impervious surface for Alternative B. The installation of stormwater outfall features that include vertical drops would release water from pipes set just below ground level to limit the velocity and impact from stormwater flow. Natural river rock placed in the apron and the addition of berms planted with native riparian plant species on either side of the outfalls would mimic the natural system of a stream.

Direct, Adverse, Minor, Short- and Long-term impacts to wetlands, and floodplains would result due to ground disturbance from construction activities, stormwater runoff from the addition of impervious surface area for the trail, and fill placed in a wetland area adjacent to NPS property and in an NPS floodplain area adjacent to the construction activities.

Because fill will be placed in a wetland, a CWA Section 404 permit would be required from the USACE Savannah District. The permit would authorize the discharge of dredged or fill material into waters of the United States, including wetlands, during the proposed construction activities for Alternative B. All construction activities would adhere to USACE permit conditions as well as NPS specific requirements. The terminus of the multi-use trail on Lower Roswell Road includes a roundabout that would require placement of fill for shoulders on the west side of Willeo Road, within a wetland. Total impacts would be approximately 1,500 square feet (0.036 acre). Impacts include approximately 214 square feet of permanent impact from fill for the installation of guardrails for the proposed roundabout, and 1,300 square feet of temporary impacts from an area approximately 12 feet wide by 107 feet long for hand installation of orange barrier fencing to demarcate limits of construction, and installation of erosion control devices. Impacts would be minimized by utilizing 2:1 slopes, and placement of fill to existing shoulders. In addition, approximately 81 linear feet of a stream that flows under Timber Ridge Road and south into Willeo Creek would be impacted. These impacts would be due to extending the existing culvert, and armoring the downstream side with rip-rap. Culvert extension would be required due to alignment of Timber Ridge Road with the proposed roundabout. Stream impacts would be minimized by utilizing the existing culvert to the extent possible, avoiding relocation of the stream. Armoring of the downstream flow at the culvert would reduce scouring and erosion. Neither the stream or wetland impacts would require purchase of mitigation credits. Cobb County has obtained a Nationwide Permit 14 from the USACE for the stream and wetland impacts in compliance with Section 404 of the Clean Water Act. The permit was authorized by the USACE on December 3, 2010. A copy of the authorization is included in Appendix B.

Construction of the roundabout would impact approximately 3,867 square feet of the 25-foot vegetated buffer of streams on the west side of Willeo Road. Cobb County obtained a Stream Buffer Variance in compliance with GA DNR regulations. The variance was issued by GA DNR on April 5, 2011, and a copy is included in Appendix B.

In terms of NPS wetland protection procedures, Alternative B is considered an “excepted” action. While the project must still implement avoidance and minimization of wetland impacts; the preparation of a formal Wetlands Statement of Findings document and the requirement for wetland loss compensation are not necessary. DO 77-1’s corresponding procedural manual, *NPS Wetland Protection Procedures*, section 4.2.1 states that an action may be “excepted” if the action impacts 0.01 acres or less and the fill footprint needed in the wetlands is due to the deviation of a structure’s configuration for safety measures. The roundabout provides the safest and most efficient design for the intersection causing the least disturbance to the surrounding landscape. The placement of fill into the wetland is the minimum amount needed to safely secure and stabilize the guardrails and impacts less than 0.01 acre of wetland. The utilization of 2:1 slopes stabilizes the existing shoulder and minimizes potential impacts from runoff. NPS Wetland Protection requirements identify certain conditions and best management practices (BMPs) that must be met in order for this exception to be valid: Impacts to hydrology and fluvial processes and fauna may have only negligible to minor effects, erosion and sedimentation controls must be implemented, and revegetation of the area should be carried out with only native plant species. The best management practices outlined in Section 5.7 fulfill these NPS wetland requirements. Therefore, because Alternative B meets all requirements of Procedural Manual 77-1: *Wetland Protection*, no Wetland Statement of Findings or wetland loss compensation would be required for implementing Alternative B.

Alternative B would involve approximately 1,540 square feet of fill material placed within the 100-year floodplain of Willeo Creek, 746 square feet of which would be within the floodplain located within the Unit’s boundary. The fill is necessary to provide sufficient shoulder width for installation of safety guardrail needed for the road. The added fill would also stabilize the shoulder, reducing erosion potential. Impacts to the floodplain would be minimized by using 2:1 slopes, placement of the fill onto the existing shoulder, and not extending the slope further beyond the current toe of slope. DO 77-2, *Floodplain Management*, and NPS Executive Order (EO) 11988 requires Federal agencies “to preserve floodplain values and minimize potentially hazardous conditions associated with flooding”. In accordance with DO 77-2, FEMA Flood Insurance Rate maps were consulted and the determination was made that fill for the proposed project would be placed into the 100-year floodplain of Willeo Creek under this alternative. The December 16, 2008, FEMA FIRM Panel No. 13067C0132G for Cobb County, Georgia, shows that the project area is within floodplain Zone AE (see Figure 6). To comply with DO 77-2, flood conditions and associated hazards must be quantified and effective actions to mitigate the hazards taken. A *Floodplain Statement of Findings* (February 2012) has been prepared in conjunction with this EA (Appendix D).

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit’s entrance.

Construction of the roundabout to correct operational deficiencies at the intersection of Lower Roswell Road, Timber Ridge Road, and Willeo Road would be undertaken in both action alternatives, regardless of the non-motorized alternative selected. The roundabout location and design would not change, regardless of whether a multi-use trail or sidewalk is constructed. The same impacts to floodplains, streams, and wetlands described under Alternative B associated with the roundabout segment of the proposed project would also occur with Alternative C.

Direct, Adverse, Minor, Short-term impacts to Water Resources would occur from construction activities associated with the sidewalk. Disturbed soil and stormwater runoff generated from construction activities would carry sediment and pollution into surface waters during storm events. The use of silt fencing, erosion barriers, and other BMPs would reduce the effect of stormwater flow on surface waters. Indirect, Adverse, Negligible, Long-term impacts to water resources would occur from the addition of impervious surface Alternative C. The

installation of stormwater outfall features that include vertical drops would release water from pipes set just below ground level to limit the velocity and impact from stormwater flow. Natural river rock placed in the apron and the addition of berms planted with native riparian plant species on either side of the outfalls would mimic the natural system of a stream.

Direct, Adverse, Minor, Long-term impacts to wetlands, and floodplains would result from ground disturbance from construction activities, stormwater runoff from the addition of impervious surface area for the trail, and fill placed in a wetland area adjacent to NPS property and in an NPS floodplain area adjacent to the construction activities.

Because fill will be placed in a wetland, a CWA Section 404 permit would be required from the USACE Savannah District. The permit would authorize the discharge of dredged or fill material into waters of the United States, including wetlands, during the proposed construction activities for Alternative C. All construction activities would adhere to USACE permit conditions as well as NPS specific requirements. The terminus of the multi-use trail on Lower Roswell Road includes a roundabout that would require placement of fill for shoulders on the west side of Willeo Road, within a wetland. Total impacts would be approximately 1,500 square feet (0.036 acre). Impacts include approximately 214 square feet of permanent impact from fill for the installation of guardrails for the proposed roundabout, and 1,300 square feet of temporary impacts from an area approximately 12 feet wide by 107 feet long for hand installation of orange barrier fencing to demarcate limits of construction, and installation of erosion control devices. Impacts would be minimized by utilizing 2:1 slopes, and placement of fill to existing shoulders. In addition, approximately 81 linear feet of a stream that flows under Timber Ridge Road and south into Willeo Creek would be impacted. These impacts would be due to extending the existing culvert, and armoring the downstream side with rip-rap. Culvert extension would be required due to alignment of Timber Ridge Road with the proposed roundabout. Stream impacts would be minimized by utilizing the existing culvert to the extent possible, avoiding relocation of the stream. Armoring of the downstream flow at the culvert would reduce scouring and erosion. Neither the stream or wetland impacts would require purchase of mitigation credits. Cobb County has obtained a Nationwide Permit 14 from the USACE for the stream and wetland impacts in compliance with Section 404 of the Clean Water Act. The permit was authorized by the USACE on December 3, 2010. A copy of the authorization is included in Appendix B.

Construction of the roundabout would impact approximately 3,867 square feet of the 25-foot vegetated buffer of streams on the west side of Willeo Road. Cobb County obtained a Stream Buffer Variance in compliance with GA DNR regulations. The variance was issued by GA DNR on April 5, 2011, and a copy is included in Appendix B.

In terms of NPS wetland protection procedures, Alternative C is considered an “excepted” action. While the project must still implement avoidance and minimization of wetland impacts; the preparation of a formal Wetlands Statement of Findings document and the requirement for wetland loss compensation are not necessary. DO 77-1’s corresponding procedural manual, *NPS Wetland Protection Procedures*, section 4.2.1 states that an action may be “excepted” if the action impacts 0.01 acres or less and the fill footprint needed in the wetlands is due to the deviation of a structure’s configuration for safety measures. The roundabout provides the safest and most efficient design for the intersection causing the least disturbance to the surrounding landscape. The placement of fill into the wetland is the minimum amount needed to safely secure and stabilize the guardrails and impacts less than 0.01 acre of wetland. The utilization of 2:1 slopes stabilizes the existing shoulder and minimizes potential impacts from runoff. NPS Wetland Protection requirements identify certain conditions and best management practices (BMPs) that must be met in order for this exception to be valid: Impacts to hydrology and fluvial processes and fauna may have only negligible to minor effects, erosion and sedimentation controls must be implemented, and revegetation of the area should be carried out with only native plant species. The best management practices outlined in Section 5.7 fulfill these NPS wetland requirements. Therefore, because Alternative C meets all requirements of Procedural Manual 77-1: *Wetland Protection*, no Wetland Statement of Findings or wetland loss compensation would be required for implementing Alternative C.

Alternative C would involve approximately 1,540 square feet of fill material placed within the 100-year floodplain of Willeo Creek, 746 square feet of which would be within the floodplain located within the Unit's boundary. The fill is necessary to provide sufficient shoulder width for installation of safety guardrail needed for the road. The added fill would also stabilize the shoulder, reducing erosion potential. Impacts to the floodplain would be minimized by using 2:1 slopes, placement of the fill onto the existing shoulder, and not extending the slope further beyond the current toe of slope. DO 77-2, *Floodplain Management*, and NPS Executive Order (EO) 11988 requires Federal agencies "to preserve floodplain values and minimize potentially hazardous conditions associated with flooding". In accordance with DO 77-2, FEMA Flood Insurance Rate maps were consulted and the determination was made that fill for the proposed project would be placed into the 100-year floodplain of Willeo Creek under this alternative. The December 16, 2008, FEMA FIRM Panel No. 13067C0132G for Cobb County, Georgia, shows that the project area is within floodplain Zone AE (see Figure 6). To comply with DO 77-2, flood conditions and associated hazards must be quantified and effective actions to mitigate the hazards taken. A *Floodplain Statement of Findings* (February 2012) has been prepared in conjunction with this EA (Appendix D).

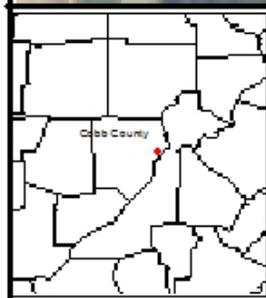
Cumulative Impacts

Increasing residential development in the area surrounding Gold Branch Unit are expected to result in large areas of impervious surfaces to the region, which will substantially increase stormwater flow to the Chattahoochee River causing erosion and sedimentation as well as potential flooding events. A strip of pervious surface added to Lower Roswell Road and construction of the roundabout under the proposed action alternatives is not expected to accelerate this likely future condition.

Impacts from past, present, or future activities to water resources, wetlands and floodplains would be minimized by the use of BMPs during construction, the planting of native vegetation after construction, the installation of specialized stormwater catchment structures, and the undisturbed natural environment within the Unit.

Conclusion

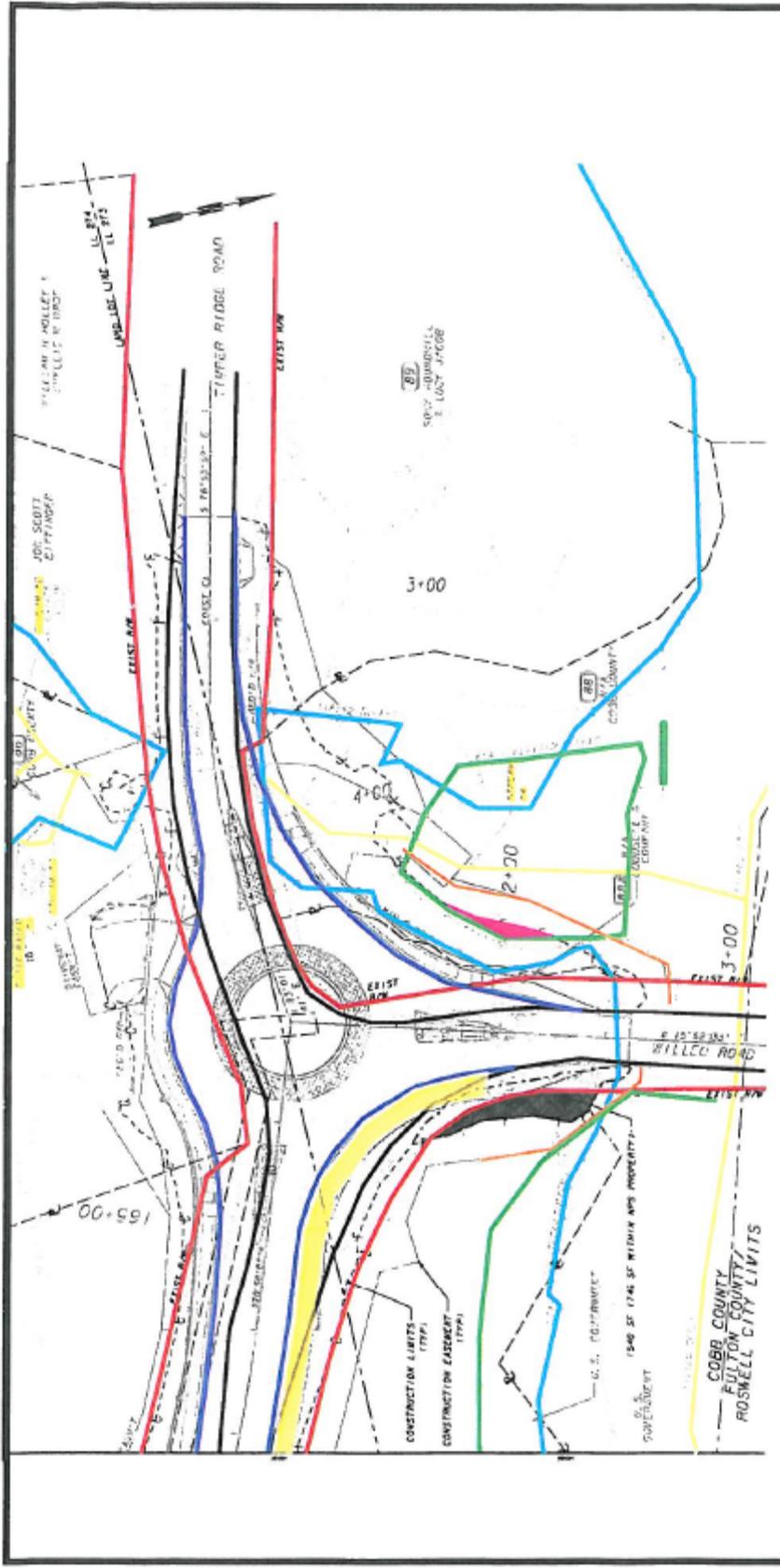
Construction activities would result in Direct, Adverse, Minor, Short-term impacts, but, Indirect, Adverse, Negligible, Long-term effects would also occur to water resources from the addition of impervious surfaces. These impacts would be minimal as a result of the correct usage and placement of BMPs, stormwater catchment structures, and the undisturbed natural environment of the Unit. Direct, Adverse, Minor, Long-term impacts to wetlands and floodplains would result from activities within wetlands and floodplain and the placement of fill into these areas.



**Figure 5
Floodplain Location**

Source: Federal Emergency Management Agency
 Flood Rate Insurance Map
 Cobb County, Panel No. 13067C 0132G,
 December 16, 2008

Not To Scale



Source: Gresham, Smith and Partners
Not to Scale

Figure 2
Resources Near Roundabout Construction

Legend

— Existing Edge of Pavement	— Proposed Edge of Pavement
— Stream Centerline	— Park Boundary/ Existing Right-of-Way
— Stream Buffer	— Fill Within 100-Year Floodplain in Gold Branch Unit
— Wetland Buffer	— Wetland Impact
— Orange Barrier Fencing	
— Multi-use Trail	

6.4.14 Soundscape

Affected Environment

The Gold Branch Unit is designated as a Natural Zone in CRNRA's General Management Plan. The Unit lies between the Chattahoochee River to the east and Lower Roswell Road to the west and north. Lower Roswell Road is a heavily used vehicular route that contributes significant levels of ambient noise to portions of the Unit. Along the river, the soundscape is sometimes interrupted by individuals in motorboats with megaphones that can be heard coaching scullers through the Unit. Aircraft can also be heard overhead. Apart from these occasional interruptions, the Unit provides a serene, natural experience to visitors with a soundscape consisting of rustling leaves, calling of birds, and the occasional voices of hikers.

Alternative A - No Action Alternative

There would be no impact to the existing soundscape as construction activities would not occur.

Alternative B – Multi-use Trail Alternative – Construction of a multi-use trail and sidewalk, and relocation of the Unit's entrance. (Preferred Alternative)

Direct, Adverse, Negligible to Minor, Short-term impacts to the soundscape would occur from construction activities, limited to the duration of the activities.

Alternative C - Sidewalk Alternative – Construction of sidewalks on both sides of the road, and relocation of the Unit's entrance.

Direct, Adverse, Negligible to Minor, Short-term impacts to the soundscape would occur from construction activities, limited to the duration of the activities.

Cumulative Impacts

The proposed action alternatives would create noise during construction activities. Vehicular traffic along Lower Roswell Road is another main source of continuous impact to the soundscape of the project area.

Conclusion

The soundscape would be directly adversely impacted during the construction phase of the proposed project; however, impacts would be short-term, and negligible to minor in magnitude. The proposed project would not impact natural ambient sound in the long-term.

7. Consultation and Coordination

7.1 List of Agencies and Organizations

Patty Wissinger - Chattahoochee River National Recreation Area
Rick Slade – Chattahoochee River National Recreation Area
Paula Capece – Chattahoochee River National Recreation Area
Allyson Read - Chattahoochee River National Recreation Area
Richard Lutz - Chattahoochee River National Recreation Area
Dr. David W. Morgan – Southeast Archaeological Center, National Park Service
Dan Wallace – USDA Natural Resource Conservation Service
Karen Anderson-Cordova – Georgia Department of Natural Resources, Historic Preservation Division
Katrina Morris – Georgia Department of Natural Resources, Wildlife Resource Division
Bryan Ricks – Cobb County Department of Transportation
Pete Pattavina – US Fish and Wildlife Service

7.2 Preparers

Josh Earhart, NEPA Specialist, Edwards-Pitman Environmental, Inc.
Jill Brown, NEPA Specialist, Edwards-Pitman Environmental, Inc.
Rick Filer, Senior Ecologist, Edwards-Pitman Environmental, Inc.
Kevin Thomas, Senior Ecologist, Edwards-Pitman Environmental, Inc.
Heidi Schneider, Senior Ecologist and Permit Specialist, Edwards-Pitman Environmental, Inc.
Dr. Lynn Pietak, Archaeology P.I., Edwards-Pitman Environmental, Inc.
Alana Hise, Archaeologist, Edwards-Pitman Environmental, Inc.
Grant Hudson, Senior Architectural Historian, Edwards-Pitman Environmental, Inc.