DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
100 WEST OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3640

REPLY TO
ATTENTION OF

MARCH 21 2012

Regulatory Division
SAS-2011-00550

PUBLIC NOTICE
Savannah District

The Savannah District has received a Request For Match Funding for the preservation of the "Chandler Farm" Tract through use of In-Lieu Fee funds from the Georgia Land Conservation Center, as follows:

Application Number: SAS-2011-00550

Applicant: Mr. Hans Neuhauser
Georgia Land Conservation Center
Attention: Mr. Hans Neuhauser
380 Meigs Street
Athens, Georgia 30601

Agent: Ms. Laura Hall
Athens Land Trust
685 North Pope Street
Athens, Georgia 30606

Location of Proposed Work: The project site is located south of Georgia Highway 72, and north of the South Fork Broad River approximately 2 miles east of the City of Comer, Madison County, Georgia (Latitude 34.0211, Longitude -83.0592). Additionally, the project is located in the Savannah River Watershed, in USGS Hydrologic Unit 03060104.

Description of Work Subject to the Jurisdiction of the US Army Corps of Engineers: The applicant proposes to preserve approximately 68 acres of land, including approximately 10.68 acres of wetland, by purchasing a conservation easement. In-Lieu Fee funds will be used for 25% of the total easement price, with 50% of funding coming from USDA NRCS Farm and Ranchland Protection Program Funds and 25% of funding coming from landowner donation. The tract proposed for preservation also includes approximately 2,128 linear feet of the north bank of the South Fork Broad River and approximately 2,729 linear feet of an unnamed intermittent/ephemeral tributary to the South Fork Broad River.

Geographic Service Area: The proposed preservation would provide mitigation for previously authorized unavoidable impacts to waters of the United States within the Savannah River Watershed under Section 404 of the Clean Water Act as well as mitigation for EPA enforcement actions. The permits that are proposed to fund this project impacted approximately 0.28 acre of wetland and 529 linear feet of stream.

Oversight: Oversight of this In-Lieu Fee project will be by a group of Federal and State agency representatives collectively referred to as the Interagency Review Team (IRT). The IRT shall be chaired by the Savannah District, US Army Corps of Engineers and is comprised of representatives from the US Environmental Protection Agency, US Fish and Wildlife Service, National Marine Fisheries Service, and the Georgia Department of Natural Resources Environmental Protection Division. The applicant has proposed easement monitoring and posting of boundaries, annual monitoring inspections, and five years of water quality monitoring. It will be the responsibility of the Athens Land Trust, with oversight from the IRT, to assure that monitoring occurs and water quality is being maintained at levels consistent with results of baseline data.

Authority: A public notice regarding the proposed use of In-Lieu Fee funds for providing compensatory mitigation is required pursuant to 33 CFR parts 325 and 332 and 40 CFR part 230, "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule" published in the Federal Register on April 10, 2008.

Consideration of Public Comments: The US Army Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Native American Tribes; and any other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the US Army Corps of Engineers to determine whether to approve, modify, condition, or deny this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the overall public interest of the proposed activity.

Comment Period: Anyone wishing to comment on this proposal should submit comments in writing to the Commander, US Army Corps of Engineers, Savannah District, Attention: Mr. William Rutlin, Regulatory Specialist, Coastal Branch, 100 West Oglethorpe Avenue, Savannah, Georgia 31401-3640, no later than 30 days from the date of this notice. Please refer to the applicant's name and the application number in your comments.

If you have any further questions concerning this matter, please contact William Rutlin, Regulatory Specialist, Coastal Branch at (912) 652-5893.

Enclosures
1. Burton Chandler Project Request for Matching Funding-14 pages
2. Supplemental Credit, Baseline Monitoring, and Monitoring Information-2 pages
3. Chandler Property Plant communities and habitats-2 pages
4. Burton Chandler Property Aerial Photograph-1 page
5. Burton Chandler project Flood Map-1 page
6. Burton Chandler Property Wetlands Delineation Map-1 page
7. Vegetation Zones Map-1 page
8. Mitigation Calculation Map-1 page
9. Mitigation Worksheets-3 pages
10. Chandler Farm Sources of Funds-2 pages

SAS-2011-00550

Burton Chandler Project
Request for Match Funding

Submitted by:

Athens Land Trust, Inc.

In Partnership with:

USDA Natural Resource Conservation Service

Georgia Department of Natural Resources

Georgia Wetlands and Streams Fund

For consideration of funding on:

Burton Chandler Farm
Madison County, GA

June 16, 2011

1. **Project Location and Description:**

The Burton Chandler project is a 68-acre portion of a 500-acre farm located along the South Fork of the Broad River, south of Carlton in Madison County, GA and adjacent to Watson Mill State Park (see appendices for Map). The proposed 68-acre tract includes 29 acres of wetland and buffers, 38 acres of 100-year floodplain, as well as river frontage along the South Fork of the Broad River.

The location of the property is 740 1st Street, Carlton, GA 30627, in Madison County. Site coordinates are 34 deg 01' 18.11" N 83 deg 03'37.55" W. The river basin is Savannah River Basin and the primary service area is Upper Savannah Watershed. The 8 digit hydrologic unit code is 30360104.

The current owner of the tract is Seven Generations, LLC with members Burton (Chip) Chandler and Douglas Foppe. The landowners are very willing to protect this property, which is managed as a working forest. For many years Mr. Chandler has purchased adjacent parcels with the goal of protecting hundreds of acres along the South Fork of the Broad River near Watson Mill State Park.

2. **Project Significance:**

The property, being adjacent to Watson Mill State Park, not only contributes to water quality protection and plant and animal habitat preservation for the Park, but also provides a buffer for the viewshed for the public. Preservation of the Broad River has been a focus of many groups for some time. This river is and has been considered a 'clean river' and is popular for much recreational activity, including swimming, canoeing, fishing and hiking. There are quite a few groups focused on the preservation of this Watershed including: Broad River Watershed Association, Chattooga Conservancy and the Savannah Riverkeeper, county-based soil and erosion control efforts, and private landowners—specifically in Madison County along this area of the South Fork and Broad Rivers.

The preservation of this tract provides important functions for this watershed. This property contains 2000 feet along the South Fork of the Broad River and contains a 29-acre wetland and buffer. This section of the River is well used by boaters that might put in at the Watson Mill State Park or the Bridge upstream.

From this property, the South Fork of the Broad River flows into the Broad River only 6.8 miles downstream from this property. The Broad River then flows for another 25 miles before entering Lake Russell and then into the Savannah River. This tract also contains a small creek that flows directly into the river. All of these riparian areas will have 100-200 foot riparian buffers that will preserve existing vegetation and prohibit disturbance of natural features. Preservation of these riparian buffers will prevent accelerated stream bank erosion and channel instability. Having this large of a riparian buffer will help filter contaminants before runoff enters the creeks and river during storm events. In addition, this landowner has done ecological management and land

stewardship that could serve as a model for other agricultural and working forest landowners in the area.

The river provides residents with an array of recreational activities including boating and fishing. The river supports a variety of fish including bass, catfish, and, as of last year, the robust redhorse. There is a lot of focus from planning, environmental groups, canoe outposts, citizen groups to preserve the undeveloped remaining properties along the South Fork of the Broad River and the Broad River. Sections of the Broad River, including in Madison County (where the property is located), have been designated high priority waters by the Georgia Department of Natural Resources Wildlife Resources Division (as part of Georgia's Wildlife Action Plan) containing high priority species and aquatic community stream.

The headwaters of the Broad River basin begin along the eastern slopes of the Blue Ridge Mountains (Blue Ridge Physiographic province) and flow southeast through the foothills and piedmont (Inner Piedmont physiographic province).

The Broad River is among the last free-flowing rivers in Georgia, with numerous shoals and mild rapids snaking through farmlands and bounded by bluffs up to 200 feet high. It flows south from its headwaters in Banks and Stephens Counties through Madison and Elbert Counties to its confluence with the Savannah River at the Clarks Hill/Strom Thurmond Reservoir. The Broad River is critical to the health and economic well-being of the citizens of northeast Georgia. It provides drinking water for the cities of Royston and Franklin Springs and it is an industrial and agricultural water supply for the region.

The National Park Service recognized 99 miles of the Broad River as being pristine enough to qualify as part of the Federal Wild and Scenic Rivers System. In 1976, the Georgia Department of Natural Resources, recognizing its good environmental condition, proposed that the Broad River be designated an environmental corridor. Additionally, in 1993, the Georgia Department of Community Affairs designated the Broad River a Regionally Important Resource (RIR) initializing the development of a resource management strategy. The Broad River Watershed is also part of the Conservation Security Program (CSP) run by the Natural Resources Conservation Service (NRCS). The CSP is a program to promote the conservation and improvement of soil, water, air, energy, plant and animal life, as well as other conservation purposes and it rewards high levels of environmental stewardship. Further, there is in place for the South Fork of the Broad River a Tier 2 TDML Implementation Plan, to improve water quality standards in Georgia. The NRCS also runs the Environmental Quality Incentives Program (EQUIP), a program to protect ground and surface water, erosion control, air quality, wildlife habitat and plant health, in the area.

There are many conservation projects undertaken in the area. For example, in 2001 the US Fish & Wildlife Service Division of Bird Habitat Conservation granted the Broad River Watershed Association a grant to protect seasonally inundated bottomland riparian wetlands along the Broad River, protecting the wood duck, mallard, Canada goose and many migratory and resident songbird species. The Broad River Watershed Association is a land trust dedicated to the protection and management of the Broad River and its Watershed in northeast Georgia.

This landowner owns approximately 500 acres and 318 acres were preserved with a conservation easement in 2004 that is held by the Georgia Land Trust. This 68-acre project helps contribute to a much larger conservation effort on this property and to the landowner's ability to purchase and preserve additional adjacent tracts.

This property is adjacent to the Watson Mill State Park which contains 1020 acres and the historic covered bridge. The bridge is on the National Register of Historic Places and was built in 1885. William Bartram made a brief excursion into Georgia in June 1775 and did some exploring along the Broad River. Meriwether Lewis also has links with the Broad River, having honed his exploration and wilderness survival skills and gained first-hand knowledge about Native Americans while living beside the river.

3. Preservation Criteria:

The goal of Athens Land Trust is to protect the general habitats for the following areas within this 68-acre tract: the significant forested wetland, the river area, the creek area, and the buffer along Watson Mill State Park. The goal of the easement is to protect these general habitats rather than specific plant, wildlife or aquatic species. It is the general overall health of these habitats and ecosystems being preserved by the conservation easement. It is ascertained that by prohibiting certain uses and land management with the conservation easement, the water quality as well as plant, animal and aquatic species will be protected. The following activities will be prohibited by the conservation easement for the wetland, riparian buffers and natural forest areas: food plots, agricultural equipment, farm roads, construction, structures, improvements, land disturbance, and disturbance and removal of vegetation and animal habitats.

Secondly our goal is for the scenic protection of the forest and river area for the community and users of the State Park, fisherman and boaters.

a) The resources to be preserved provide important physical, chemical, or biological functions for the watershed. This property contains unique features; the fact that this property is adjacent to the Watson Mill State Park contributes greatly to public benefit for the preservation of important scenic views and extending habitat protection from both the river and State Park. The park is used frequently by the community. The property contains substantial frontage along the South Fork of the Broad River with a large area of forested wetland containing many important wetland species. The wildlife on this property can include many important species including: great blue herons, wood ducks, deer, turkeys, bobcats, foxes, beavers, otters, muskrats, quail, dove, mallards, turtles, crayfish and many others. Among the rare and endangered species that live in the watershed is the Shoal Lily (*Hymenocallis occidentalis*), which grows on rocks in and around the river.

Open Water and Buffer: This section of the South Fork of the Broad River is part of a canoeing and kayaking corridor for the public. Many of these boaters enter the river at the Watson Mill State Park and continue downstream (past this property) and several miles further until they reach the bridge on Lexington Rd, Carlton, for an easy takeout point. In addition there is a 21.6-mile canoe trip from GA 22 to GA 77 at the confluence with Broad River.

Aquatic habitat diversity: In the Broad River there are 108 fish species representing 36 families. The GA DNR stocks approximately 203,000 catchable trout in the basin. The state endangered Robust Redhorse is currently being stocked in the Broad River.

b) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. Having the riparian buffer preserved will contribute to the protection of the native plant species; the landowner also does burn management, which helps with native species success and reproduction. The wildlife is also enhanced by the native plant species because these species in particular provide food, shelter and habitat for many indigenous wildlife species like turkey, songbirds, herons, and egrets. The many aquatic species benefit from cleaner water and habitat providing spawning grounds and nurseries for fisheries, extending and linking wildlife habitats, slowing soil erosion and water runoff, aiding recharge of groundwater, and filtering pollution. This property is managed using ecological principals for forestry; the landowner will be required to have a conservation plan with the NRCS to guide management.

c) The resources are under threat of destruction or adverse modifications: Resources for this river corridor are under threat: The Broad River Watershed is in better condition than many Piedmont rivers, but its threats are not taken lightly by its residents. Agricultural non-point source pollution, effluent from septic systems, landfill leachate, litter, construction in the floodplain, riverbank erosion, destruction of the vegetative buffer, lack of tributary protection, and poorly planned development all pose threats to the river. Additionally, lack of public access to the river encourages trespassing, which contributes to the degradation of river banks and destruction of vegetation. Carlton Georgia (the property is within Carlton City limits) and this entire region of Georgia are under threat of development due to proximity to Athens (the University of Georgia is located here) and Atlanta. In 2007 the local Madison County Commission voted for this area of the County (including this property) to become high density, where ½ acre lots with water and sewer access would be allowed.

d) The preserved site will be permanently protected through an appropriate real estate or other legal instrument: The site will be protected by a permanent conservation easement held by the Athens Land Trust, a Land Trust accredited by the National Land Trust Accreditation Commission.

4. Estimated stream length and/or wetland acreage to be protected:

The project will project the wetland portion of the tract and the frontage along the South Fork of the Broad River through the purchase of a permanent conservation easement held by Athens Land Trust. Specifically, the project will protect 29 acres of wetlands and buffers which act as a collecting system for contaminants and silt before the water flows into the South Fork of the Broad River. These wetlands are forested and contain many important native tree, shrub and herbaceous species.

In addition, there is an unnamed tributary approximately 5 feet in width (with 1 foot of base flow) that flows for approximately 2765 feet through the project area into the river; both sides of this creek will be protected with 100-200 foot riparian buffers. The stream's riparian buffers

include important native species like the native bamboo or canebrake (*Arundinaria gigantea*). This species in particular is considered an important species for preservation for the Piedmont.

5. Sponsors:

Sponsors of this project include USDA Natural Resource Conservation Service (NRCS), Athens Land Trust and the Georgia Department of Natural Resources (GADNR). Funding for the purchase of the easement will come from the following sources: NRCS's Farm and Ranch Protection Program (FRPP) will pay the landowner 50% of Conservation Easement value, the landowner will donate 25% of the Conservation Easement value and we are applying to Georgia Wetland Stream Trust Fund for 25% of the conservation easement value (a requirement of the NRCS grant to receive their funds is to have a 25% match).

6. Funding:

The estimate to purchase a Conservation Easement is $3285.5/acre, approximately 68 acres is being offered for a total conservation easement value of $223,420.
Amount of funds needed from GA Wetlands and Streams Trust Fund: $55,855. (25% of $223,420). The needed funds are available from permits granted in the same watershed as this proposed project.
USDA, NRCS, Farm and Ranchland Protection Program funds allocated: $111,710. (50% of $223,420)
Landowner donation of 25% of the conservation easement value: $55,855 (25% of $223,420)

7. Timeline:

Athens Land Trust already has funds allocated by NRCS. The landowner's portion of the match is also secured. Following the approval of this funding request, final due diligence will begin, with closing expected to be within 3-6 months. Athens Land Trust is an approved/experienced Land Trust and has been approved for a streamlined approval process by NRCS for this project.

8. Monitoring:

The Athens Land Trust will in perpetuity monitor the conservation easement in accordance with both the NRCS monitoring requirements, as the major funder, in compliance with their regulations for the Farm and Ranch Lands Protection Program, and the Land Trust Alliance, the national organization which sets forth policy and protocol for land trusts. The Athens Land Trust is an accredited Land Trust and has policy to follow the Standards and Practices set forth by this organization.

Prior to closing, a Baseline Document Report (BDR) will be prepared for the easement. This BDR will include maps and photo points with coordinates to document property conditions at the time of closing.

Monitoring will be limited to the detection of adverse anthropogenic impacts on the site on which the conservation easement covers and the partners have some control. Monitoring will be

conducted at least annually and in perpetuity by the Athens Land Trust. Monitoring includes the following:
disturbance or removal of vegetation, soil or habitat
construction of improvements, farm roads, and structures
dumping
erosion
planting of aggressive exotic species

This monitoring will also include the following: site visits with landowner present to check that land management is compliant with management plans and that practices are not/will not create disturbance, erosion, or impacts that could affect water quality in the streams, river and wetland areas. We will also look for the existing vegetative communities to be intact both for habitat preservation and scenic view shed protection from the State Park and the river. We will monitor for exotic species and document these areas.

In addition we will plan to conduct more regular visits if there is construction in the vicinity that may impact the preserved area or to review on site permitted activities that need Land Trust approval before commencing. We complete monitor reports that are provided to NRCS, DNR and other project partners. (We can provide additional photos and information as needed)

As part of the monitoring we will work directly with a local water monitoring group such as the local Madison County Adopt-a-Stream program or the Broad River Watershed Association (BRWA). Parameters checked for by Adopt-a-Stream include: temperature (air and water), pH, dissolved - oxygen, and conductivity. Adopt-a-Stream will be conducted quarterly for year 1 and 2 to assess baseline conditions. Monitoring will be conducted annually thereafter.

All management of the property will be by the landowners who have done "model management" as they have managed this farm as a working forest for over 25 years. The landowners are required by the NRCS grant to have a Conservation Plan coordinated with NRCS staff in order to ensure model management of the land. The landowners also have a Forest Management Plan which follows Best Management practices for silvaculture.

Appendices:

Maps
Location Map
Topographic Map (USGS) with boundaries marked
Aerial photograph
Map of nearby Protected Properties
National Wetland Inventory Map

Photographs of the Property

South Fork of the Broad River

South Fork of the Broad River

South Fork of the Broad River

Wildlife areas within working forest

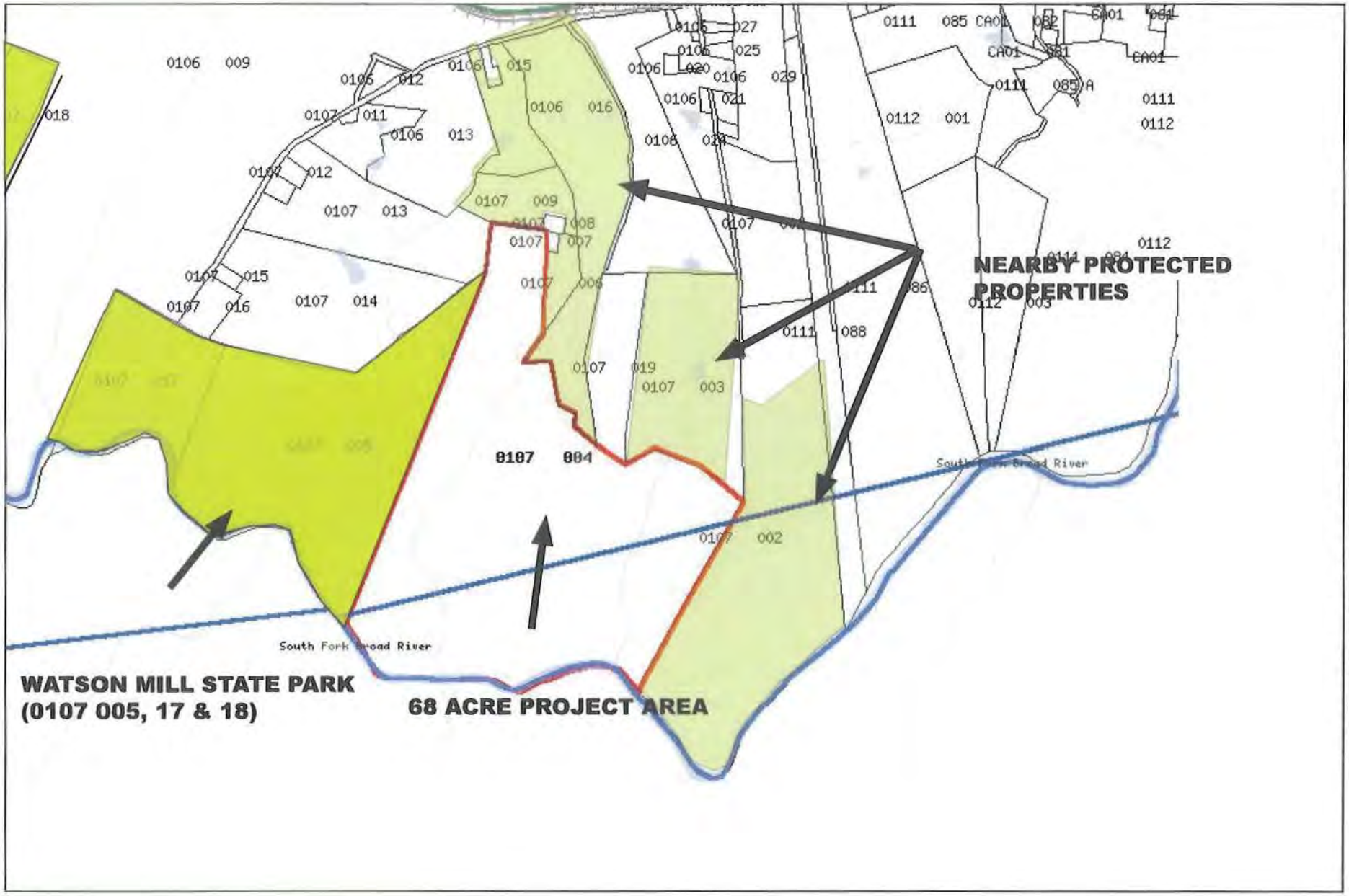
Pine oak forest

Creek

Pine oak forest

Beech forest

MAP OF NEARBY PROTECTED PROPERTIES



© 2010 Google
Image USDA Farm Service Agency
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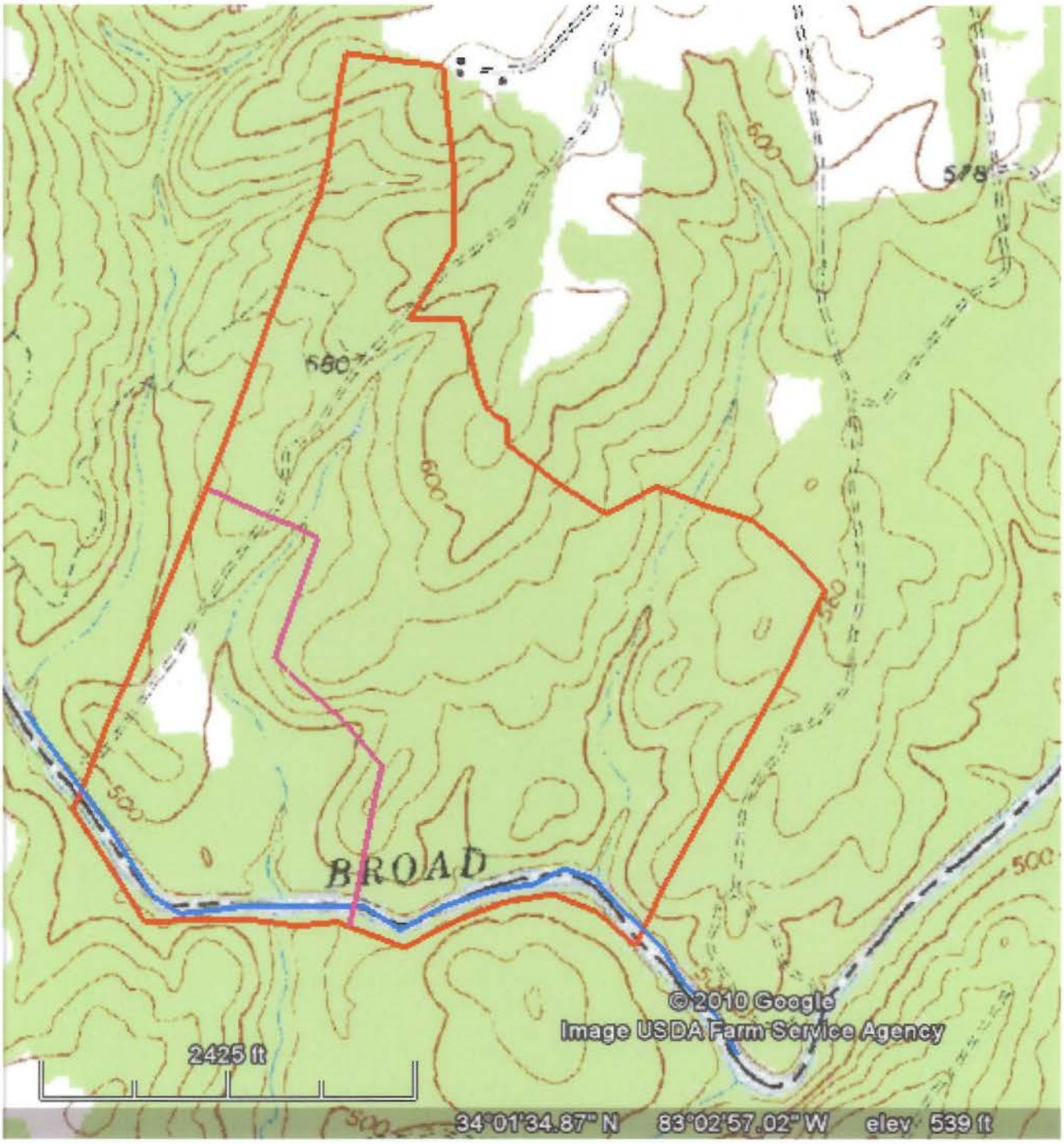
Location Map

USGS Map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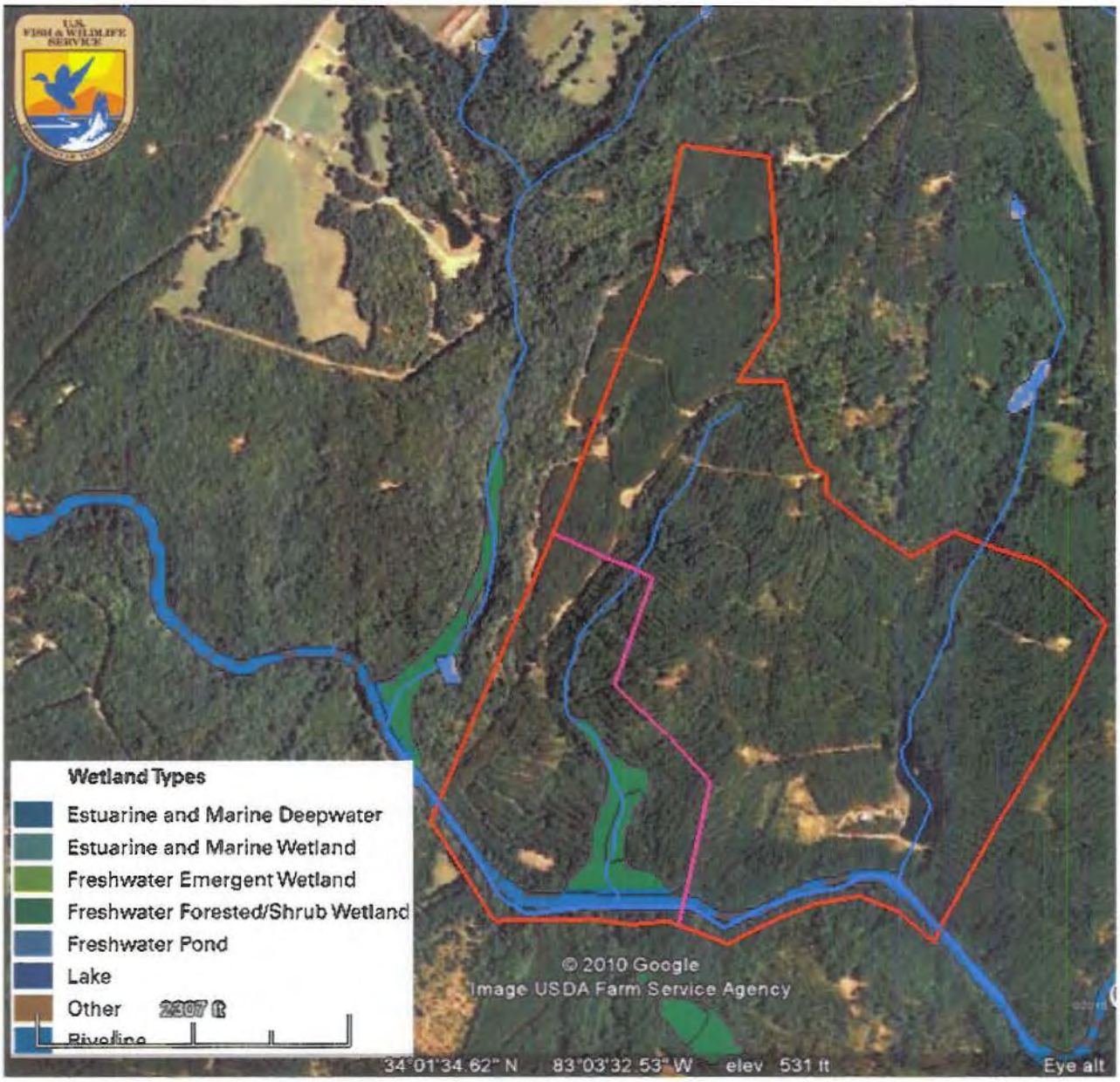
© 2010 Google
Image USDA Farm Service Agency
2425 ft
34°01'34.87" N 83°02'57.02" W elev 539 ft

National Wetland Inventory Map



A. Wetland and Stream Credits: the $16,000 in wetland funds could purchase 3-4 wetland credits. there are an estimated 10.68 acres of wetland on the site, which might generate up to 10 wetland credits. The $39,116 in the stream funds could purchase 391-782 stream credits. Preservation on one bank of the South Fork Broad and both banks of the unnamed tributary (2,765LF) could generate 3,674 stream credits. Stream and wetland credits are available in the Broad River Watershed.

B. Baseline Documentation Report--

For every conservation easement that Athens Land Trust (ALT) receives, a Baseline Documentation Report (BDR) must be completed. The BDR documents the important conservation values protected by the easement and the relevant natural and man-made features and conditions of the easement area at the time the conservation easement is conveyed. This information serves as a baseline for future monitoring and enforcement of the easement.

ALT has been an operating land trust since 1994 and currently holds 30 conservation easements. ALT staff have produced the BDRs for over 90 percent of these easements, and ALT staff continue to successfully monitor and enforce all easements.

ALT's Land Conservation Director, Laura Hall, creates each BDR Ms Hall is a licensed Landscape Architect with a B.L.A. in Environmental Design from the University of Georgia; an employee of ALT since 2001. Ms. Hall has 20 years experience working with native plant communities, land restoration and stream and wetland restoration. Ms. Hall has 4 years experience working for the Jaeger Company, a local Environmental Planning firm. ALT has board members and volunteers that are associated with the University of Georgia, and trained in forestry, environmental planning/land restoration, biology and ecology, that help with our BDRs and monitoring.

A Baseline Documentation Report includes a narrative description of natural and man-made features, on-site photographs, and relevant maps such as survey plat, geographic location, proximity to protected areas, aerial photograph, vegetation and natural features, soils, man-made features, and points where photographs were taken. The report is developed from a baseline survey of the conservation easement area, completed onsite by the same ALT staff person(s) who write(s) the Report; as well as analysis of relevent GIS data obtained from county mapping departments, the Natural Resources Conservation Service, the US Geological Survey, and other agencies. The survey involves visual observation of the entire easement area, on foot, with information recorded by field notebook, digital camera, and 'Every Trail' with GPS mapping capabilities. Vegetative communities occurring on the easement area are documented and, to the extent possible, lists of woody species (trees and shrubs) are compiled for each community. All invasive exotic plant species noted are likewise documented. Existing human modifications, such as transmission lines, buildings, roads, dikes, culverts, excavation, dredging, filling, clearing, dumping, and impervious surface are precisely documented, georeferenced, photographed, and described.

The BDR is signed by its author and both the landowner and the ALT Executive Director sign an acknowledgement of the accuracy of the Report prior to or at the legal closing of the Conservation Easement. At least three full-color copies of the baseline documentation report are produced for signatures at closing. One goes to the landowner, one is for the ALT archives, and

the third is for ALT's working files, in accordance with the Land Trust Alliance protocol and ALT's Records Policy. More copies may be produced if grant-making agencies or other parties are involved in the project.

As owners exercise reserved rights that may be allowed in the easement, or as other changes to the property occur, ALT adds further descriptions, photos, and maps to the Report to provide a continual record of changes to the easement area.

C. Mitigation work plan, maintenance plan, performance standards, monitoring requirements, long -term management plan, adaptive management plan

The landowners have a current Forest Management Plan for the property and as part of this plan do actively work to remove exotic species, mainly the Chinese privet. The landowners control of non-native vegetation will be accomplished through regular burns, mechanical and herbicide treatments. A Habitat Restoration Landowner Agreement (Attachment 2) has been finalized for eradication of invasive exotic plant species. After completion of this agreement, treatments would occur on an as-needed basis to minimize competition with native species.

Monitoring inspections of the conservation easement would occur on at least an annual basis, more often if an apparent easement violation necessitated more frequent visits. On these visits the current level of invasive species infestation is observed and recorded. As necessary, ALT will make recommendations to the landowner in the monitoring report regarding ongoing non-native species removal and control. ALT will also provide volunteers to help the landowners with privet removal. Photo points and visual observation will be used to document the continued vegetative diversity of the site and ensure that invasive exotic vegetation does not occupy more than 25% of the site.

Monitoring consists of visual inspection of the conservation easement, comparing observed conditions with easement language and the baseline documentation report. Natural communities will be monitored for evidence of possible degradation or invasive plant species infestation. Regarding the functions of water quality, flood control, and groundwater recharge, staff will likewise ensure no loss of function by standard monitoring of vegetation, topography, and land use. ALT will monitor for violations such as clearing, excavation, filling, or paving which would impair the wetland and reduce its ability to store and filter water and recharge the water table.

The river and streams shall exhibit overall stability in water quality parameters including water temperature, pH, dissolved oxygen and conductivity and stay within the State water quality standards for the streams designated for fishing. Water quality monitoring ALT commits to will have several aspects 1) The chemistry (dissolved Oxygen, turbidity etc.) 2) invertebrate surveys and 3) bacterial indicators.

Easement violations are documented during monitoring visits and are responded to in accordance with ALT's Stewardship Policies and Procedures. Method of response varies depending upon whether the issue is a simple failure to notify ALT of the exercise of a reserved right (such as trail construction); a minor violation, or a major violation ALT staff are always directly involved in response and enforcement; ALT Board members may be involved depending upon the severity of the violation. In any event, if an actual violation has occurred, the landowner will be informed and will be required to correct the violation.

The conservation easement will contain language ensuring its perpetual integrity, regardless of whether the fee title landowning entity changes with time. Notification of ALT will be required if the title is transferred.

Chandler property
Plant communities and habitats

Oak –Hickory-Pine forest

This forest type is located out of the floodplain and river riparian zone and is approximately 40-60 years old and is moving towards a mature oak-hickory-forest. The canopy layer is mixed deciduous and pine, dense in some areas and more open in others. The dominant tree species include: loblolly pine, winged elm, muscle wood, wild plum, dogwood, pignut hickory, American holly, red maple, willow oak, white oak, black oak, red oak, dogwood, and water oak.

The shrub layer is mostly open with only few areas in dense vegetation and consists of mostly native shrub species and tree saplings (from 2-10 years old). There are some small areas of Chinese privet but for the most part this exotic aggressive species is located in the Bottomland forest. Shrub species include: sparkleberry, various species of hawberries and dwarf paw paw.

The groundlayer is primarily native species and dense. Groundlayer species include: Christmas fern, broomsedge, bushy bluestem, Carolina jessamine, smilax, chickweed and virginia creeper.

There are approximately 12 acres of this forest. This forest provides habitat for many species including fox, wild turkey, deer, raccoons, opposums, and songbirds.

Managed Pine forest

This forest has tree species ranging from 15-20 years old and the canopy consists of only loblolly pine species. The canopy layer is open enough so that the shrub and groundlayer ecosystems are maintained.

The shrub layer is sparse and includes: american holly and sparkleberry. The ground layer is very intact with native plant communities and the species present include: Indian grass, broomsedge, bushy bluestem, smilax, and carolina jessamine, virginia creeper. There are approximately 45 acres of this forest.

The landowners do manage this forest with fire and not only does this reduce the exotic species but also encourages the native grasses and other species like the native river cane to flourish.

Bottomland Hardwood forest

This area is forested wetland of the alluvial floodplain of the West Fork of the Broad River and dominated by diverse deciduous hardwood trees. The canopy varies in species and density with pockets of sparse canopy. The canopy species include: water oak, river birch, northern red oak, sweetgum, red maple, tulip poplar, sycamore, box elder, hackberry, black walnut, willow oak, pignut hickory, sycamore and american elm.

The shrub layer has areas of dense vegetation and other areas of sparse vegetation. There are a variety of mesophytic and hydrophytic woody plants including chinese privet (exotic aggressive) and native bamboo (arundadaria) as well as tree saplings. The native river cane is found in dense thickets and provide important wildlife habitat for a variety of neotropical birds and insects. This habitat requires fire or other forms of periodic disturbance for maintenance.

The groundlayer contains many important native species and woody vines including : blackberry, river oats, Japanese honeysuckle (exotic aggressive), Christmas fern, various sedges (carex) species, wiregrass (juncus),crossvine, greenbriar, sunflower (helianthus), Nepalese browntop (microstygia, an exotic aggressive) and ironweed.

This forest is generally 50-70 years old, and includes tree specimen trees over 100 years old. There are approximately 11 acres of this forest.

Field areas

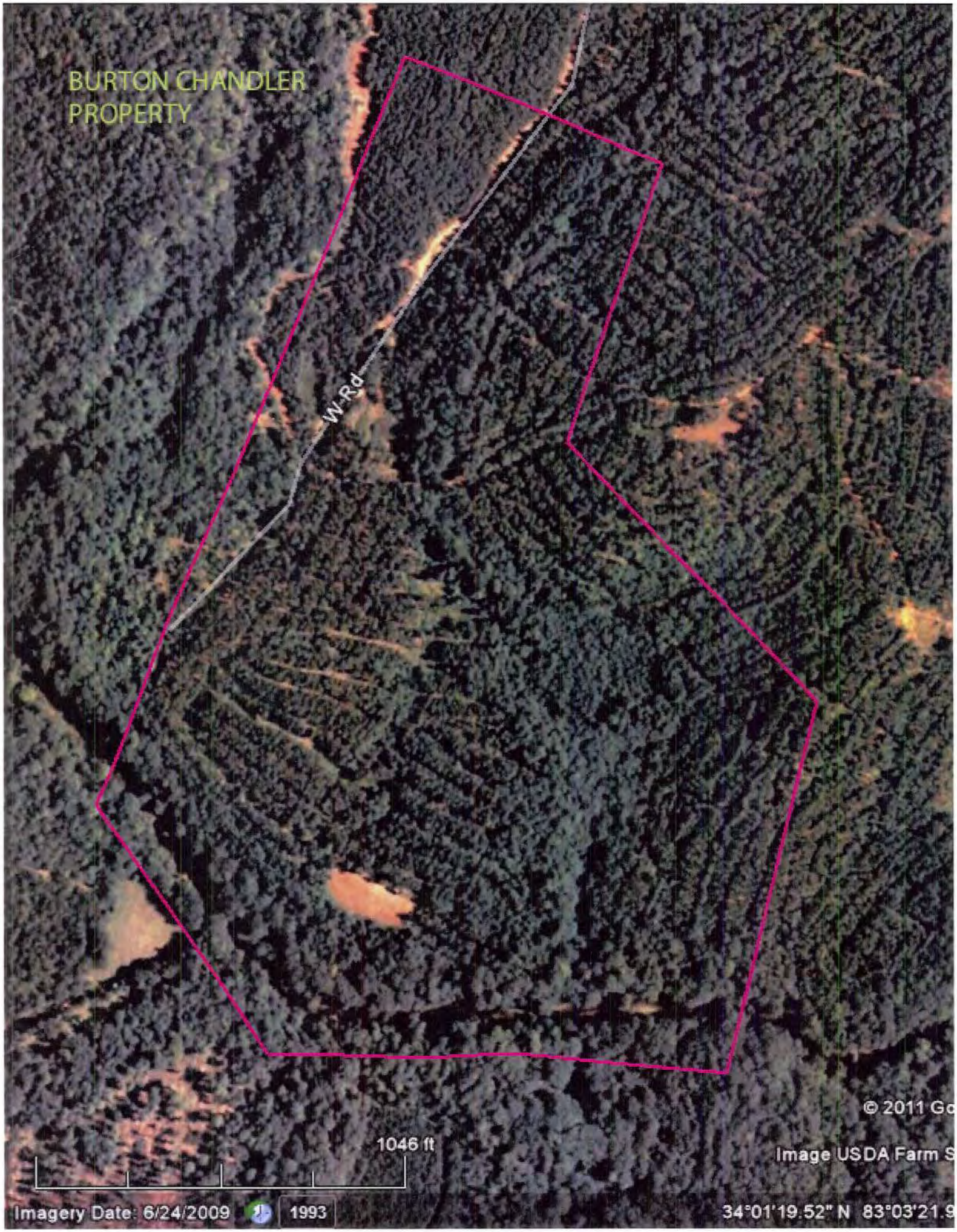
These areas are few and consists of small clearings in the forest. They are planted in fescue, and used to attract wildlife. Deer and songbirds are seen in these areas.

Georgia Rare Species that could likely be located on the property include:

Animal: robust redhorse, sandbar shiner, savannah pebblesnail, and the barn owl.

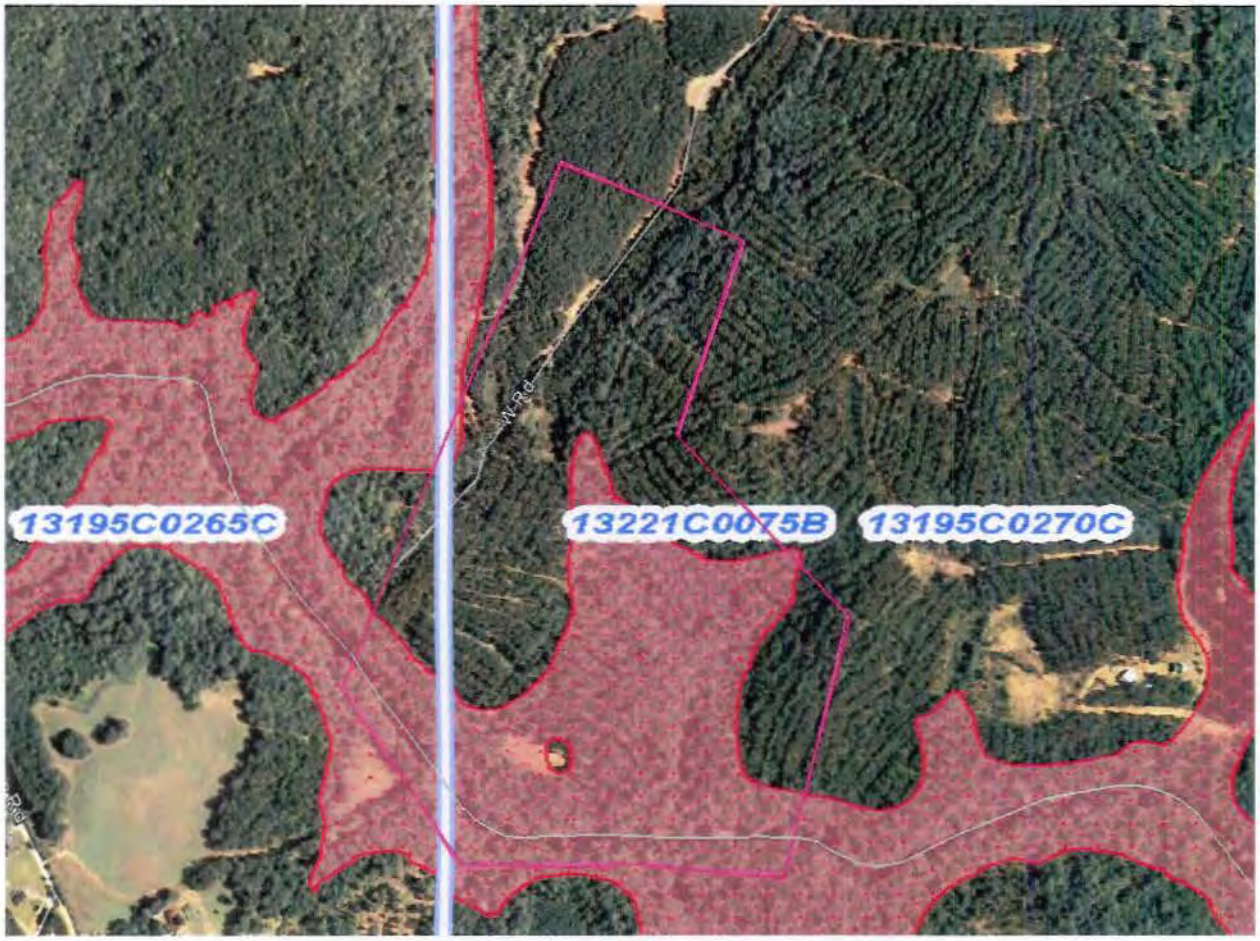
Plants: piedmont bigleaf aster, harper wild ginger, ground juniper, dwarf chinkqpin oak, woodland bulrush, Georgia aster, and the rosy spiderwort.

See the Vegetation Map for locations and size of the various forest and habitats. On the map the 'Natural forest' area includes both Oak Hickory and some Bottomland forest. All remaining forest on the map is Managed Loblolly Pine forest.


BURTON CHANDLER
PROPERTY
W Rd
© 2011 Go
1046 ft
Image USDA Farm S
Imagery Date: 6/24/2009
1993
34°01'19.52" N 83°03'21.9

Burton Chandler project

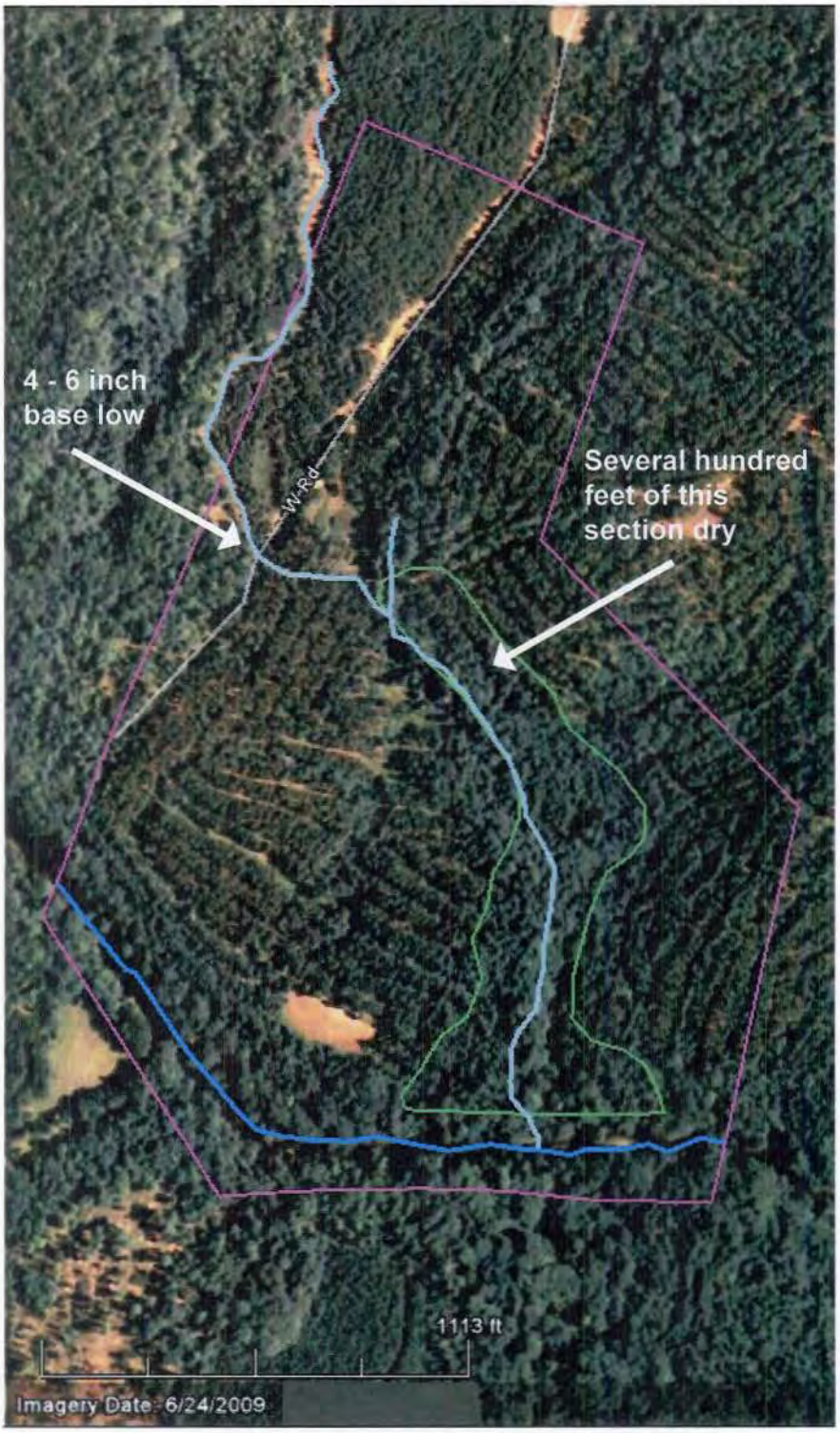
Flood Map (HUC 3060104)



Approximately 39 acres of Floodplain

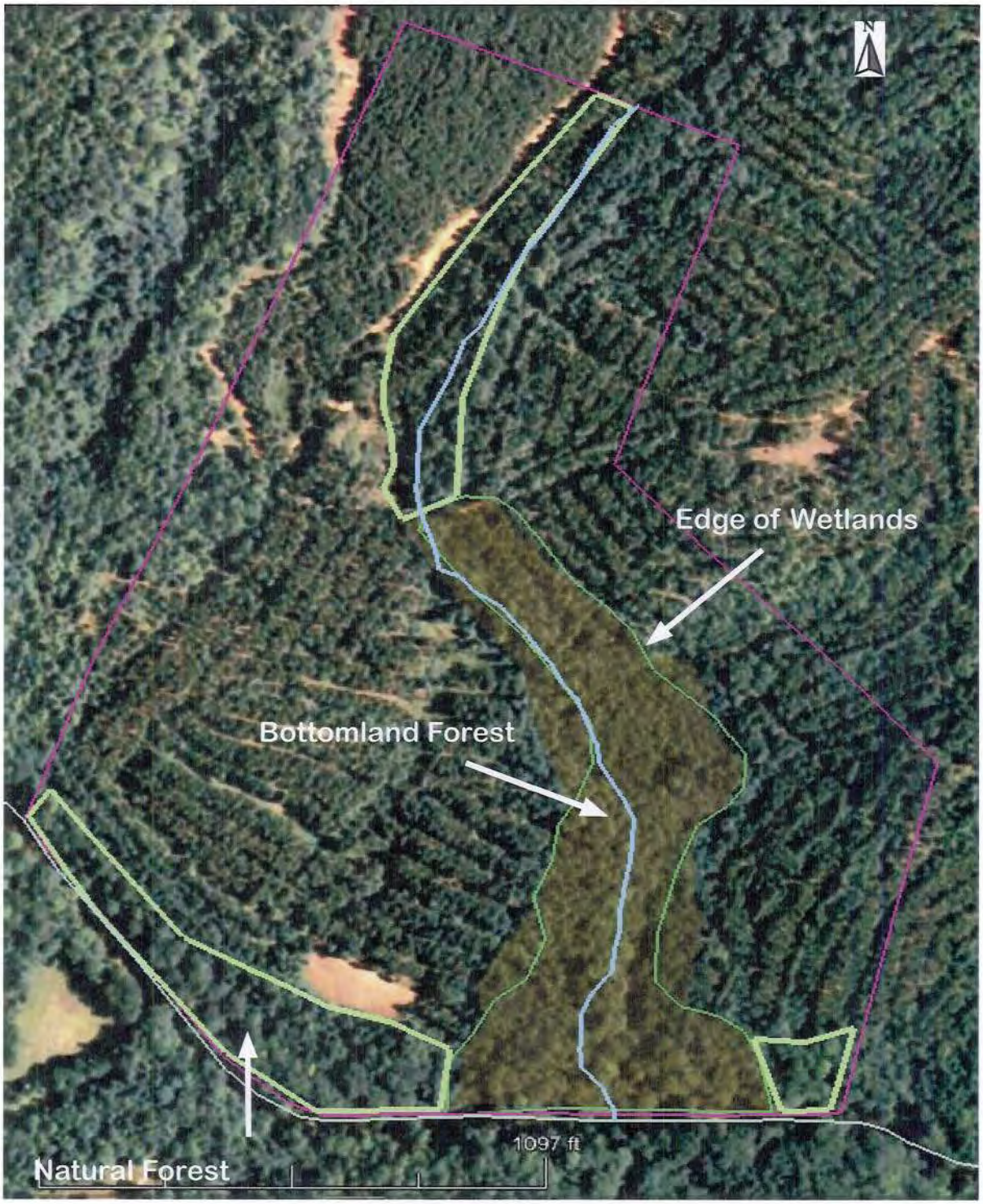
BURTON CHANDLER PROPERTY

WETLANDS DELINEATION MAP

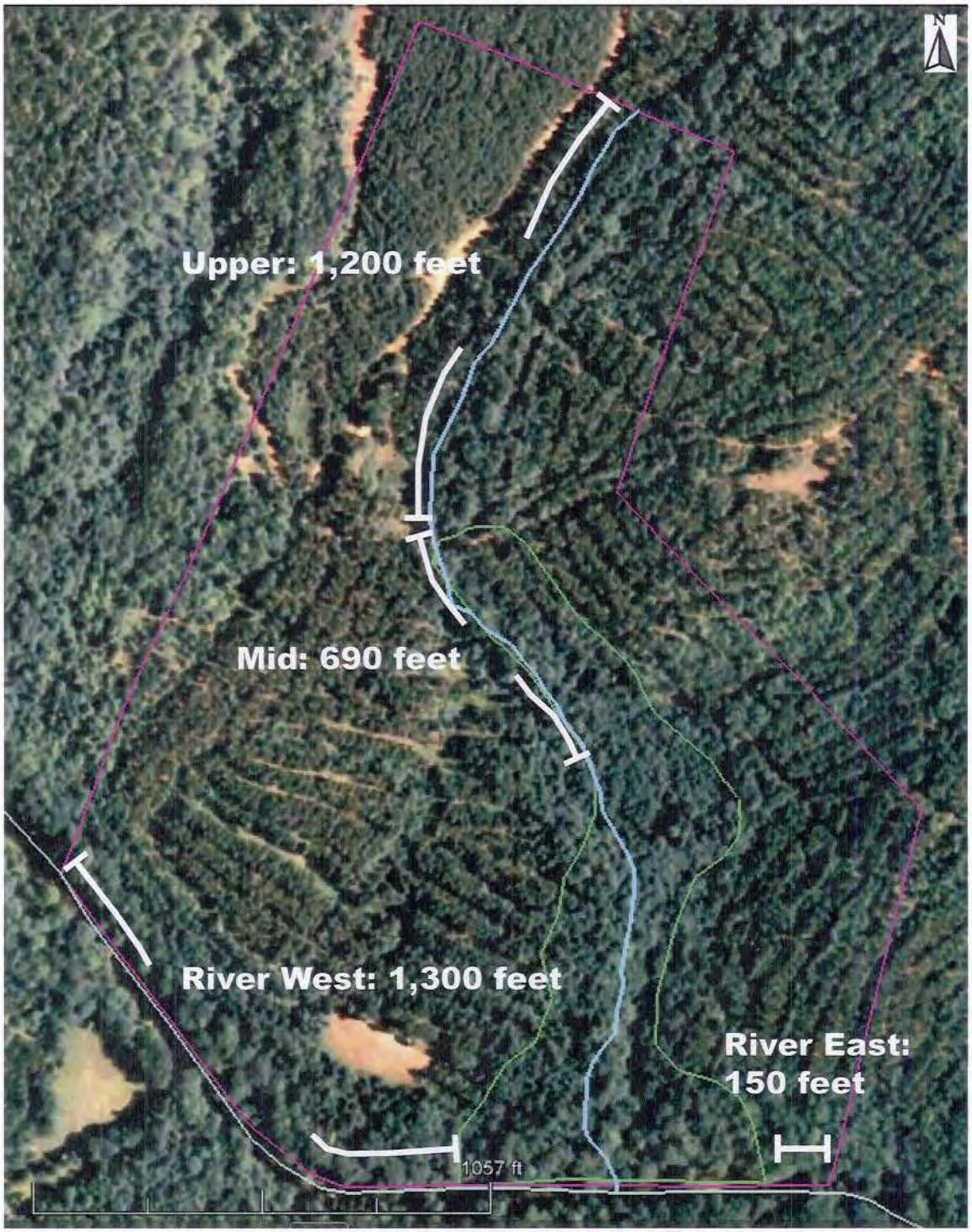


LEGEND

- Outline of 77 Acre Conservation Easement Area
- Creek 2,729 feet
- South Fork of the Broad River 2,128 feet
- Wetlands Delineation 10.68 acres



Athens Land Trust Athens, GA	Seven Generations, LLC Tract Madison County, GA	Vegetation Zones Aerial 2009



Athens Land Trust Athens, GA	Seven Generations, LLC Tract Madison County, GA	Mitigation Calculation Map Aerial 2009

WETLANDS AND OPEN WATERS
MITIGATION WORKSHEETS

PRESERVATION MITIGATION FACTORS

Factor	Options			
Degree of Threat	None 0	Low 0.1	Moderate 0.3	High 0.5
Kind	Category 2 0.2	Category 1 0.6		
Control	RC 0.1	RC + CE or GPP 0.3	RC + CE + GPP 0.5	

PROPOSED PRESERVATION MITIGATION WORKSHEET

Factor	Area 1	Area 2	Area 3	Area 4	Area 5
Degree of Threat	.1				
Kind	.6				
Control	.3				
Sum of m Factors	M_1= 1.0	M_2=	M_3=	M_4=	M_5=
Mitigation Area	A_1= 11.81	A_2=	A_3=	A_4=	A_5=
M x A =	11.81				

Total Preservation Credits = Σ (M x A) = 11.81

WETLANDS AND OPEN WATERS
MITIGATION WORKSHEETS

Mitigation Summary Worksheet For Permit Application #_____

I. Required Mitigation	
A. Total Required Mitigation Credits =	

II. Mitigation Credit Summary	Credits	Acres
B. Mitigation Bank		
C. Restoration and/or Enhancement		
D. Creation		
E. Functional Replacement Mitigation = B + C + D		
F. Upland Buffer		
G. Preservation	11.81	11.81
H. Total Proposed Non-Bank Mitigation = E + F + G	11.81	11.81

The following criteria must be satisfied for the mitigation proposal to meet minimum SOP requirements:

1. Total Proposed Mitigation (Row H) must be greater than or equal to Total Required Mitigation Credits (Row A).

2. Functional Replacement Mitigation (Row E) must be at least 50% of Row A.

3. Preservation Mitigation (Row G) can be up to, but not more than 50% of Row A, if no Upland Buffer Credits are proposed. If Upland Buffer Credits are proposed, then Preservation Mitigation may be reduced to 30% of the Total Required Mitigation Credits.

4. Upland Buffer (Row F) cannot exceed 20% of the Total Required Mitigation (Row A). The following table provides examples of how Preservation and Upland Buffer Mitigation can be used in combination:

Total Required Mitigation Credits	Functional Replacement Credits	Preservation Credits	Upland Buffer Credits
100	50	50	0
100	50	40	10
100	50	30	20

WORKSHEET 3: RIPARIAN RESTORATION AND PRESERVATION WORKSHEET

Net Benefit - select value for each stream side	Riparian Restoration/Habitat Improvement/Preservation Factors – MBW = Minimum Buffer Width = 50'+2'/% slope Select Values from Table 1			
System Credit Condition 1	Condition 1: MWB restored or protected on both streambanks To Calculate Value: Average of the Net Benefit values for Stream Side A and Stream Side B			
System Credit Condition 2	RC Placed on Channel 0.05		RC and CE Placed on Channel 0.1	
M&C - select value for each stream side	Mimimal (Required) 0	Moderate 0.2	Substantial 0.25	Excellent 0.3
Priority Area	Tertiary 0.05	Secondary 0.2	Primary 0.7	
Control	RC on restored channel and 25' buffer (Required) 0.1	Required RC + CE or GPP 0.3	Required RC + CE + GPP 0.5	
Mitigation Timing - select value for each stream side	Schedule 3 0	Schedule 2 (Use for all banks) 0.05	Schedule 1 0.15	

Riparian Reaches	Reach 1 (Upper)	Reach 2 (mid.)	Reach 3 (W. broad)	Reach 4 (E. broad)
	Complete the Following for Each Riparian Reach			
Simon Channel Evolution Stage				
Rosgen Stream Type/D50				
Criteria for Selecting Existing Condition for Each Reach				
Bankfull Width and Depth	Width: Depth:	Width: Depth:	Width: Depth:	Width: Depth:
Bankfull Indicators (attach photograph showing bankfull for each reach)				

Factors		Reach 1	Reach 2	Reach 3	Reach 4
Net Benefit 4 X MBW	Stream Side A	.3	.3	.3	.3
	Stream Side B	.3			
System Credit: Condition 1 Met		.3	NA	NA	NA
System Credit: Condition 2 met (applicable only if Condition 1 met)		.1		NA	NA
M&C (at least minimal M&C required)	Stream Side A	0	0	0	0
	Stream Side B				
Priority Area robust redhorse sandbar shiner		0.2	0.2	0.2	0.2
*Control (at least a RC required)		0.3	0.3	0.3	0.3
*Mitigation Timing (none for riparian preservation)	Stream Side A	NA	NA	NA	NA
	Stream Side B				
Sum of Factors	M =	1.5	0.8	0.8	0.8
Linear Feet of Stream Buffered (do not count each bank separately)	LF =	1200	690	1300	150
M X LF =		600	552	1040	120

Total Riparian Restoration Credits Generated = (M X LF) = 2312.

GWSTF	Funds designated for		**Chandler Farm**			
	Primary Partner		**Athens Land Trust**			
	Data current as of		9/27/2011			
PSA	**County**	**Project**		**USACE**	**Wetlands impacts**	**Funds held**
U Sav	Elbert	Access Road		200301610	0.28	$1,316.80
U Sav	Stephens	Currahee Club		EPA CWA-04-2004-3777		481.69
U Sav	Stephens	Currahee Club		EPA CWA-04-2004-3777		14,941.04
	Total					$16,739.53
	Interest					$5,000.00
File name: GWSTF Designated for Chandler Farm						

GWSTF	Funds designated for		**Chandler Farm**			
	Primary Partner		**Athens Land Trust**			
	Data current as of		9/27/2011			
PSA	**County**	**Project**		**USACE**	**Stream Impacts**	**Funds held**
U Sav	Elbert	Access Road		200301610	100	$5,862.40
U Sav	Rabun	GA Transmission North Burton		200303190	150	12,510.78
U Sav	Rabun	Rabun County School District		200302050	279	20,743.17
	Total	**held for Chandler Farm**			**529**	**$39,116.35**
File name: GWSTF Designated for Chandler Farm Streams						