BIOLOGICAL EVALUATION
WILDLIFE FOOD PLOT RENOVATION
ON
GEORGIA DNR WILDLFE MANAGEMENT AREAS
BRASSTOWN, TOCCOA, CHATTOOGA, AND TALLULAH RANGER DISTRICTS
CHATTAHOOCHEE NATIONAL FOREST

I. INTRODUCTION

The purpose of this biological evaluation is to document any potential effects of management activities on Proposed, Endangered, Threatened, and Sensitive (PETS) species and their habitats, and to ensure that land management decisions are made with the benefit of such knowledge.

This BE is also written to ensure actions taken on Forest Service lands do not contribute to loss of viability of any native or desired nonnative plant or animal species. The BE contributes to meeting viability objectives by focusing analysis on those species most at risk of losing viability, namely proposed, endangered, threatened, and sensitive species, and ensuring their habitat needs are met. Habitat to support viable populations of other more common species is provided through Forest Plan requirements related to habitat diversity.

II. PROJECT AREA DESCRIPTION AND LOCATION

The project evaluated is the proposed wildlife food plot renovation on Georgia Department of Natural Resources (GADNR) Wildlife Management Areas (WMA's) on the Brasstown, Toccoa, Chattooga, and Tallulah Ranger Districts. This includes the Blue Ridge, Chattahoochee, Chestatee, Coopers Creek, Lake Burton, Lake Russell, Swallow Creek, and Warwoman WMA's. These WMA's are located on National Forest lands in Fannin, Union, Lumpkin, White, Habersham, Towns, Rabun, and Stephens counties.

There are approximately 500 individual openings totaling 700 acres on these 8 WMA's. All are established openings that have received routine maintenance for many years. Most are mowed at least once annually. Many are planted in high quality grass-clover mixtures, which include combinations of white and red clovers along with wheat, rye, oats, orchard grass, and ryegrass. Some of the older openings are dominated by fescue and/or annual weed species, and some of the recently renovated openings are planted to grain sorghum. The 700 acres of maintained openings on the WMA's represents approximately 0.1 % of the 580,000 acres that comprise these 4 Ranger Districts. No more than 100 sites will be treated in any given year, and this proposal will therefore take about 5 years overall.

Additional details of the existing conditions of these sites and maps showing the location of these openings can be found in the Project File at the Supervisor's Office.

III. PROJECT DESCRIPTION

The proposed action consists of the renovation of existing wildlife foodplots on the 8 northeast Georgia WMAs (Blue Ridge, Chattahoochee, Chestatee, Coopers Creek, Lake Burton, Lake Russell, Swallow Creek and Warwoman). Unproductive wildlife food plots containing fescue, crabgrass, bermudagrass or foxtail grass will be selected for treatment. Treatments are necessary to rehabilitate wildlife food plots that have been taken out of effective production by white grubs (beetle larvae), noxious weeds, or both. Fescue is usually the dominant problem. If caught in early stages, fescue clumps can be controlled by spot spraying a 1% solution of Roundup or Poast using backpack sprayers. Otherwise, in the appropriate seasons when fescue is vigorously growing, it is proposed to apply Roundup (glyphosate) at 1.5 quarts per acre in sprayers pulled by tractor, truck or 6 wheel ATV. In one to three weeks after application, a clover-small grain mix can then be planted by a no-till grain drill into the dead fescue sod to re-establish a clover stand. If crabgrass, bermudagrass, johnsongrass, sericea lespedeza or foxtail grass (warm season forbs or grasses) are the predominant weed species, then the same procedure can then be used, except the ideal timing changes to mid to late spring and a grain sorghum mix is drilled instead of clover. If there is a moderate but declining clover component (40-70%) left in the field amidst the weed species, then a grass selective herbicide, Poast (sethoxydim) at 2 pints per acre mixed with 80% Sevin (Carbaryl) at 2 lbs. per acre and applied by boom sprayer in mid-spring or late summer will be used to selectively kill grass/weed combinations as well as the white grub complex (Japanese beetle and June beetle larvae) which often contribute to complete elimination of valuable wildlife forage plants. The plot can then be drilled with clover or winter grains, or simply allowed to fill back in with existing clover that recaptures the ground vacated by the dead weed species. Wildlife Resource Personnel (Wildlife Biologists and Wildlife Technicians) all have certified private pesticide applicators licenses and will apply the chemicals themselves according to strict label directions. If contractors are involved with sprayer trucks, WRD personnel will be on site to insure proper application. These activities would occur on a periodic, as needed basis, over the next five years.

Further details of the proposed action can be found in the Project File at the Supervisor's Office.

IV. SPECIES CONSIDERED AND SPECIES EVALUATED

Species addressed in this document were chosen due to known occurrences and/or presence of habitat for the species in or near the project area. This was determined by: (1) consulting 11 years of U.S. Forest Service (FS) plant inventory records, (2) consulting Georgia Natural

Heritage Program (GNHP) records, (3) consulting University of Georgia, Georgia DNR, and Forest Service fish inventory records, (4) reviewing U.S. Fish and Wildlife Service (USFWS) lists for potential species in Fannin, Union, Lumpkin, White, Habersham, Towns, Rabun, and Stephens counties, (5) ongoing discussions with GNHP, FS, and other agency biologists, and (6) the references at the end of this document.

There are 122 species, (33 Federally listed and 89 Forest Service Sensitive) on the Chattahoochee-Oconee PETS list. All PETS species were initially considered during this evaluation. Of these, 109 were dropped from further consideration due to: (1) the range of the species not extending into the project area, (2) lack of suitable habitat in the project area, and/or (3) species not found in inventories of the project area (see Appendix A).

The intensively managed, maintained, wildlife openings do not provide habitat for PETS plants. In addition, no known locations of PETS species were identified in the GNHP database for the project sites. However, several species listed below are known to occur or have potential to occur in this portion of the Forest based on GNHP records, species distribution, and habitat preferences. The following table also indicates for which species project-level surveys were completed and provides the rationale for why surveys were not completed for other species.

Common Name	Scientific Name	Species Status P/E/T/S	Inventory Status
Diana Fritillary	*Speyeria diana*	S	3
Rafineque's Big-eared Bat	*Corynorhinus rafenesquii*	S	1
Etowah Darter	*Etheostoma etowahae*	E	2
Parrish Crayfish	*Cambarus parrishi*	S	2
Oconee Stream Crayfish	*Cambarus chaugaensis*	S	2
Holiday Darter	*Etheostoma brevirostrum*	S	2
Wounded Darter	*Ethestoma vulneratum*	S	2
Mountain Brook Lamprey	*Ichthyomyzon greelyi*	S	2
Olive Darter	*Percina squamata*	S	2
Margarita River Skimmer	*Macromia margarita*	S	2
Alleghany Snaketail	*Ophiogomphus incurvatus alleghaniensis*	S	2
Edmund's Snaketail	*Ophiogomphus edmundo*	S	2

S = Forest Service Sensitive List E = Federally listed as Endangered

Inventory Status:

X = Project-level inventories were conducted.

1. = Presence of the species is presumed; surveys would have low likelihood of detecting the species.

2. = Presence of the species is presumed; protection measures already in place and part of the proposed action.

3. = Presence of the species is presumed; proposed actions would have beneficial or no effects to the sp. or any expected adverse effects would not likely cause a trend to federal listing or a loss of viability.

V. STATUS OF THE SPECIES AND HABITAT IN THE PROJECT AREA AND DETERMINATION OF EFFECT

1. Diana Fritillary

The Diana fritillary butterfly (sensitive species) occurs throughout the Southern Appalachians. There are historic reports of this species in White, Union, Fannin, Habersham, and Rabun Counties (Harris 1972). Over the past 8 years, the Diana fritillary has been observed in numerous locations in a variety of habitats throughout the Forest and on private land (C. Wentworth, pers. comm.). Opler (1992) states that males may use a variety of habitats, but primary habitat consists of openings and fields in wet, rich woods. Violets serve as the host plant for larvae (Scott 1986). At the end of summer eggs are laid next to dried-up violets, where they hatch in the fall. The young caterpillars overwinter without feeding until spring, when they begin feeding on the adjacent violets (Opler 1992). The maintained openings would not provide habitat for the establishment of violets and therefore there will be no impact to larval host plants from the proposed treatment.

Roads and other openings in moist woods provide nectar plants for this butterfly (Broadwell 1993). Many of the nectar plants are associated with early successional habitats or forest edges. Most of the wildlife openings in the WMA's are maintained in various mixtures of clover and grass and are mowed twice a year. These intensively maintained openings are not likely to provide habitat for the Diana fritillary. However, a few of the older openings are less intensively managed, and contain both planted grasses and annual weed species. These openings may provide some nectar plants for the butterfly. Some of the nectar plants could be impacted by the herbicide application. However, because of the method and rate of application (direct foliar application), impacts of herbicides on non-target plants would be minimal. Nectar plants are not a limiting factor for the Diana. The wildlife openings comprise only 0.4% of the WMA's, not all of them would provide nectar plants, and there are many flowering plants that would provide nectar for the butterfly in all types of habitat throughout the Forest.

It is unlikely that this species would be directly impacted during application of the Sevin, but some mortality may occur from subsequent contact on blooms. Indirect impacts of herbicides would not likely occur to the larval host plants (violets) or nectar through drift with only 100 acres annually treated on a 760,000-acre Forest. There should not be any overwintering larvae present in the openings during maintenance activities such as fall plowing. Given that the project plots contain no habitat specifically required by this species, and that most of the Forest provides suitable habitat, the minor loss of the violets, if it does occur, would not affect this species.

For the reasons discussed above, and due to the fact butterflies simply fly elsewhere when disturbed, there would be no direct or indirect impacts to the Diana fritillary from any proposed maintenance activities in the existing wildlife openings.

2. Rafinesque's Big-eared Bat

In northern Georgia, the GNHP database has historic records for Rafinesque's big-eared bat (sensitive species) from Fannin and Union Counties, the most recent of which was a 1963 record from an old gold mine near Dial. Laerm (1981) reported historic records from Fannin, Union, Towns, and Rabun Counties in northern Georgia and several counties in the Coastal Plain, but indicated that this species was found only at one locality on the coast (Floyd's Island) in more recent extensive surveys throughout the state.

In July and early August 2001, Dr. Susan Loeb from Clemson University conducted bat mist netting across the Chattahoochee National Forest including several sites on the Brasstown Ranger District. Dr. Loeb also mist netted areas near known records (year 1950) of the Rafinesque big-eared bat. No big-eared bats were found during any of the mist netting.

The Rafinesque's big-eared bat hibernates primarily in caves and old buildings, usually near permanent water (Webster et al. 1985). Harvey (1992) states that maternity colonies are primarily found in old buildings, and are found rarely in caves and mines. There are no caves, mines, or old buildings present in or near the wildlife openings to be renovated. In the summer, male big-eared bats may roost in hollow trees (Harvey, 1992). Trees for roosting are present throughout the Chattahoochee National Forest. For these reasons, primarily the fact hibernation and maternity habitats are not present in the vicinity of the openings, Alternatives 1, 2 or 3 would not have any impacts to the Rafinesque big-eared bat.

3. Aquatic Species

Etowah Darter - The U. S. Fish and Wildlife Service (USFWS) recently listed this species as Endangered. It is endemic to the upper Etowah River system in north Georgia, where it is restricted to the upper Etowah mainstem and two tributaries, Long Swamp and Amicalola Creeks (Smith 1993). It lives in warm and cool, medium and large creek or small rivers, approximately 15 to 30 meters in width, and of moderate or high gradient with rocky bottoms (Burkhead 1993). It is found in relatively shallow riffles, with large gravel, cobble, and small boulder substrates. The sites having the greatest abundance of this species have clear water and relatively little silt in the riffles. A portion of the Blue Ridge WMA lies within the headwaters of the Etowah River watershed. The Etowah Darter is not known from any of the Etowah River tributaries on the WMA. However, this species is known to occur in the Etowah River downstream of the Hightower Bridge (B. Freeman, pers. comm), which is approximately 2 miles down stream of several wildlife openings on the Blue Ridge WMA.

Parrish Crayfish - The Parrish Crayfish (sensitive species) is restricted to the headwaters of the Hiawassee River in Clay County, NC and Towns County, GA where it occurs in rocky areas between riffles (Hobbs 1981). Cover in streams is provided by rocks and by accumulated debris in the rocks. Swallows Creek is a Hiawassee River Tributary. The Swallow Creek WMA lies within the Hiawassee River watershed. The Parrish Crayfish is not known from any of the Hiawassee River tributaries on the WMA, but could occur downstream of the Swallow Creek WMA.

Oconee Stream Crayfish – The Oconee Stream Crayfish (sensitive species) is known from the tributaries of the Savannah River in Oconee County, South Carolina and Rabun County, Georgia (Hobbs 1981). There is a single collection (1952) of this species in Georgia from Gold Mine Creek, which is a tributary of Warwoman Creek. Hobbs (1981) reported that this was not found in more recent collections of other tributaries of Warwoman Creek and other Chattaooga River tributaries, but he suggests it likely occurs in a number of lower tributaries of the Chattooga River, perhaps near Warwoman WMA.

Holiday Darter - This species complex (sensitive species) is known from the upper headwater streams of the Conasauga, Coosawattee, and Etowah systems (Freeman 1992). In the Etowah system, it has been reported from Cochran Creek, Amicalola Creek and Etowah headwaters (Suttkus and Etnier 1991). A portion of the Blue Ridge WMA lies within the headwaters of the Etowah River watershed. The Holiday Darter is not known from any of the Etowah River tributaries on the WMA. However, this species is known to occur in the Etowah River, downstream of the Hightower Bridge (B. Freeman, pers. comm), which is approximately 2 miles down stream of several wildlife openings on the Blue Ridge WMA.

Mountain Brook Lamprey – This is a sensitive species that occurs in the Tennessee and Cumberland river drainages. It is locally abundant in small to medium-sized upland streams, but is absent from the Coastal Plain (Etnier and Starnes 1993). It occurs in the Hiawassee, Tennessee, and Little Tennessee drainages in Georgia (B. Freeman, pers. comm. with M. Cole). McLarney (1995) found this species over the entire length of the Little Tennessee River above Lake Emory, NC and most tributaries of the Little Tennessee in both North Carolina and Georgia. It also has been reported from Hiawassee River tributaries and the Toccoa River (GNHP, FS, UGA records). It normally inhabits small, clear, high-gradient streams where it occurs over gravel and sand in moderate currents (Mettee et al. 1996). The mountain brook lamprey is known to occur in the Hiawassee River, downstream of the Swallow Creek WMA, and is known to occur in the portion of the Toccoa River within the Blue Ridge WMA and downstream of the Coopers Creek WMA.

Wounded Darter - The wounded darter (sensitive species) is known in Georgia only from an isolated population in the Toccoa River, but also occurs in the Little Tennessee system in North Carolina and Tennessee (Freeman 1992, USFS records, B. Freeman pers. comm.). It is listed as

a state endangered species in Georgia. The wounded darter is known to occur in the portion of the Toccoa River within the Blue Ridge WMA and downstream of the Coopers Creek WMA.

Olive Darter - The Olive darter (sensitive species) occurs in Georgia in two tributaries of the Tennessee drainage, the Little Tennessee and Toccoa Rivers (Freeman 1992, USFS records, B. Freeman, pers. comm.). It is listed as a state threatened species in Georgia. The Olive Darter is known to occur in the portion of the Toccoa River within the Blue Ridge WMA and downstream of the Coopers Creek WMA.

Margarita River Skimmer - The Margarita river skimmer (sensitive species) inhabits shallow pools between riffles in undercut banks and leaf packs (S. Krotzer, pers.comm. with K. Wooster). It has been reported from North Carolina, South Carolina, Virginia, Georgia (Brick 1983) and Alabama (S. Krotzer, pers. comm. with K. Wooster). The Georgia record is a single 1939 report from Lumpkin County (Kormandy 1960). Suitable habitat for this species occurs throughout the Forest, including some of the small streams near existing wildlife openings.

Alleghany Snaketail - The Alleghany snaketail (sensitive species) is one of 2 subspecies of the Appalachian snaketail (Ophiogomphus incurvatus) described by Carle (1982). This subspecies was reported west of the Appalachian Mountains in West Virginia, Tennessee, Virginia, and Alabama (Carle 1982). The Piedmont snaketail (Ophiogomphus i. incurvatus) was reported from east of the Appalachian Mountains in Virginia, North Carolina, Maryland, South Carolina, and Georgia. The single Georgia record for this subspecies was collected in 1979 near Helen (Carle 1982). There is much taxonomic uncertainty with this species complex with a great deal of intergradation among specimens (Krotzer and Krotzer 1995, Vogt 1995, Tennessen et al. 1996). For this reason, some authors have chosen to refer to this complex as Ophiogomphus incurvatus, Appalachian snaketail (Krotzer and Krotzer 1995, S. Krotzer, pers.comm. with J. Wentworth). The Appalachian snaketail complex occurs in shallow riffles of low gradient streams with a sand/gravel substrate. The riffles generally have moderate flow, are less than 18 inches deep, with a stable substrate (S. Krotzer, pers. comm. with K. Wooster). Suitable habitat for this species occurs throughout the Forest, including some of the small streams near existing wildlife openings.

Edmund's snaketail - This dragonfly (sensitive species) is known from the Conasauga River on National Forest land in Tennessee and Georgia (S. Krotzer pers.comm. with K. Wooster) and was rediscovered in two localities in the Catawba drainage in North Carolina (Vogt 1995). In 1998, two males were found in a tributary of the Chattahoochee Rive, north of Helen, Georgia (K.Tennessen, pers. comm.). Edmund's snaketail occurs in shallow riffles of low gradient streams with a sand/gravel substrate. The riffles generally have moderate flow and are less than 18 inches deep, with a stable substrate (S. Krotzeer, pers. comm. with K. Wooster). Some of the

streams near wildlife openings on the Chattahoochee WMA could provide habitat for Edmund's snaketail.

As discussed above, the Etowah Darter is the only federally listed species that occurs downstream of any of the existing wildlife openings on the 5 WMA's. The openings on the Blue Ridge WMA are 2 miles or greater upstream from the known range of this species. Several Forest Service Sensitive species also occur or have the potential to occur downstream of some of the existing wildlife openings on the WMA's. As discussed previously, these include the Parrish Crayfish, Oconee Stream Crayfish, Holiday Darter, Mountain Brook Lamprey, Wounded Darter, Olive Darter, Margarita River Skimmer, Alleghany Snaketail and Edmund's Snaketail. Most of the openings are on ridgetop sites, well away from any streams. Wildlife openings near streams occur on level ground which limit the potential of run-off from these sites. In addition, a buffer of undisturbed vegetation is maintained between the openings and adjacent streams to prevent soil movement into the streams. Ground disturbing activities such plowing, and disking typically only occur once every 3-5 years in any individual opening. The sites that are disked or plowed generally are reseeded immediately to establish vegetative cover. Because the wildlife openings to be treated are located on flat ground and streamside vegetative buffers are present, the continued maintenance of the existing openings would have no direct or indirect impacts on water quality or any aquatic PETS species. Also, as stated within the Environmental Assessment for this project, "No herbicide would be used within 100 feet of perennial or intermittent springs and streams, which far exceeds the 30 foot minimum (VMFEIS Vol.I, II-67 #25). This would ensure the protection of aquatic habitat. The expected application rates are within the typical rates used for the aquatic risk analysis for Roundup in the Vegetation Management FEIS, Vol. II. At these rates there is no significant risk of acute adverse effects to aquatic species as a result of drift (VMFEIS, Vol. II, p.8-21). The same is true for Poast (Nursery Pest Management, FEIS, USDA Forest Service, March 1993) and Sevin (Smith 1987). Therefore, because of the method (direct foliar) and rate of application of these herbicides it is unlikely that there would be any adverse impacts to aquatic species, including PETS and Locally Rare species" (EA, 2002).

VI. CUMULATIVE EFFECTS

There are approximately 180 acres of Forest Service maintained openings, along with 390 acres of DNR maintained openings in the Central Zone (Brasstown and Toccoa Ranger Districts). Similar routine maintenance activities are planned for the Forest Service openings. There are approximately 304,500 acres of National Forest land in the Central Zone. Therefore, both FS and DNR openings comprise less than 0.2% of the total National Forest acreage on the Brasstown and Toccoa Ranger Districts. The East Zone (Chattooga and Tallulah Ranger Districts) have a similarly low amount of DNR openings to be treated with regard to the total National Forest acreage found on those districts.

Implementation of Forest standards and guidelines including maximum opening size, snag/mast requirements, and water quality standards and guidelines all assist in avoiding adverse cumulative effects on PETS and wildlife species. Adherence to these standards and guides also assist in maintaining habitat for PETS species on the Forest level. Any future action requires the appropriate analysis including cumulative effects on PETS species and their habitats.

Surveys have been and continue to be conducted in portions of the Forest to determine presence and distribution of various small mammals, birds, amphibians and reptiles, aquatic species, and PETS plants. The Georgia National Heritage Program records are checked for known occurrences of PETS species in project areas, and close contact is maintained between the Heritage biologists and Forest Service biologists for sharing of new information. Forest Service and other records are also checked for occurrences.

Future management activities and project locations will be analyzed utilizing any new information available on PETS species. For Sensitive species, mitigating measures will be implemented to maintain habitat for these species on the Forest, and to prevent future listing under the Endangered Species Act. These strategies will assist in avoiding cumulative effects on PETS species and their habitats.

The wildlife openings provide no habitat for PETS plants. No federally listed plant species will be affected by the proposed action and no sensitive plants will be impacted. Botanical inventories will be conducted on all high-risk sites in the areas of the openings prior to all future activities. Effects on federally listed species will be avoided and significant populations of sensitive plant species will be protected on the Forest. No cumulative effects to PETS plants from past, present, and reasonably foreseeable future actions will occur.

Habitat for Diana fritillary butterfly is found throughout the Chattahoochee National Forest. The project sites contain no rare habitat specifically required by this species. Future projects will be analyzed using any new information available on the Diana and other terrestrial PETS invertebrates and vertebrates. Negative impacts to federally listed terrestrial species will be avoided and mitigating measures will be implemented to ensure viability of all Forest Sensitive species. There will be no cumulative effects to terrestrial PETS invertebrates and vertebrates from past, present, and reasonably foreseeable future actions.

Forest-wide water quality standards and guidelines as well as Georgia State BMP's will be followed on all future projects in the area to maintain water quality and prevent adverse impacts to aquatic species. Wildlife openings occur on flat ground and a streamside vegetative buffer is maintained. In addition, activities such as plowing and planting may occur only once or twice in any opening over the 5 year period.

On a periodic basis, the Forest evaluates Forest Plan management practices to determine how fully objectives have been met and how closely management standards have been applied. This

monitoring and evaluation program contains several items designed to evaluate the implementation and effectiveness of the water quality standards and guidelines. These include: Item F1 Water Quality (Assure compliance with Federal, State, and local standards), Item F2 Riparian Area Management (Assure compliance on wetland, floodplains, and watercourse protection strips), Item K2 Erosion Control Compliance (Assure success of erosion control practices on timber sale areas, roads, wildlife improvements, and construction sites), Item L2 Road Standards Compliance (Assure road construction, reconstruction, and maintenance comply with standards), and Item P2 Fire (Evaluate the extent and effects of prescribed fire on National Forest lands) (Table 5-1 FLRMP). Monitoring is accomplished both formally through reviews, functional assistance trips, integrated resource reviews (monitoring/quality reviews), and specific data collection and analysis, and informally through daily site visits to projects and visits, phone calls, and letters to or from the public. In 1999, the Forest made visits with US EPD and the Georgia Forestry Commission to a random sample of projects to review the adequacy of the implementation and effectiveness of Forest-wide Standards and Guideline for water quality.

In the Annual Monitoring and Evaluation Reports for the last 5 years (FY 95-99), all the above items were shown to be in compliance with the goals, objectives, management area direction, and standards and guidelines of the FLRMP. This monitoring demonstrates that the water quality standards and guidelines that are being implemented are effective in protecting the existing aquatic habitat on the Forest.

Therefore, the cumulative effects from past, present, and reasonably foreseeable future actions will not impact any aquatic PETS species.

For the reasons discussed above, cumulative effects from past, present, and reasonably foreseeable future actions in the existing wildlife openings are not expected to impact any PETS species.

VII. SUMMARY OF DETERMINATION OF EFFECT

As discussed previously, because of the lack of larval host plants in the maintained wildlife openings, presence of nectar plants in some openings until late summer mowing, and presence of nectar plants throughout the Forest, there will be no impact to the Diana fritillary butterfly. Due to the location of the openings on flat terrain, the protective streamside vegetative buffer, and the immediate planting of disked or plowed sites, there will be no effect on the Etowah Darter, and no impacts to the Parrish Crayfish, Oconee Stream Crayfish, Holiday Darter, Mountain Brook Lamprey, Wounded Darter, Olive Darter, Margarita river skimmer, Alleghany snaketail, or Edmund's snaketail as a result of the continued maintenance of existing wildlife openings.

VIII. CONSULTATION WITH OTHERS

James M. Wentworth, Central Zone Biologist
Cindy Wentworth, USFS Botanist/Ecologist
Keith Wooster, USFS West Zone Biologist
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X. DATA SOURCES

Georgia DNR WMA Statistics
Georgia Natural Heritage Program records
University of Georgia Fisheries data
USFS Fisheries data
Forest Land Resource Management Plan, 1985

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Date : 10/28/2002

APPENDIX A

The following documents the review of the PETS list for the Chattahoochee-Oconee National Forests used to determine species to address in detail in the project-level Biological Evaluation.

Project Name: WMA Wildlife Food Plot Renovation

Reasons species considered but eliminated from further analysis in Biological Evaluation:

1. Project area not in range of the species
2. Species habitat does not occur in the project area
3. Species not found during inventories

X = Species evaluated in BE

THREATENED AND ENDANGERED SPECIES (FY2001)

Species	Common Name	Federal Status	Reason
Plants:			
Amphianthus pusillus	Little amphianthus	Threatened	1
Echinacea laevigata	Smooth purple coneflower	Endangered	2
Gymnoderma lineare	Rock gnome lichen	Endangered	2
Helonias bullata	Swamp pink	Endangered	2
Isoetes melanospora	Black spored quillwort	Endangered	1
Isoetes tegetiformans	Mat forming quillwort	Endangered	1
Isotria medeoloides	Small whorled pogonia	Threatened	2
Rhus michauxii	Michaux's sumac	Endangered	1
Sarracenia oreophila	Green pitcher plant	Endangered	2
Scutellaria montana	Large flowered skullcap	Threatened	1
Trillium persistens	Persistent trillium	Endangered	2
Trillium reliquum	Relict trillium	Endangered	1
Xyris tennesseensis	Tennessee yellow-eyed grass	Endangered	1

Species	Common Name	Federal Status	Reason
Vertebrates:			
Haliaeetus leucocephalus	Bald eagle (nests)	Threatened	1
Mycteria americana	Woodstork (foraging habitat)	Endangered	1
Myotis grisescens	Gray bat	Endangered	1
Myotis sodalis	Indiana bat	Endangered	1
Picoides borealis	Red-cockaded woodpecker	Endangered	1
Cyprinella caerulea	Blue shiner	Threatened	1
Etheostoma etowahae	Etowah darter	Endangered	X
Etheostoma scotti	Cherokee darter	Threatened	1
Percina antesella	Amber darter	Endangered	1
Percina aurolineata	Goldline darter	Threatened	1
Percina jenkinsi	Conasauga logperch	Endangered	1
Molluscs:			
Epioblasma metastriata	Upland combshell	Endangered	1
Epioblasma othcaloogensis	Southern acornshell	Endangered	1
Lampsilis altilis	Fine-lined pocketbook	Threatened	1
Medionidus acutissimus	Alabama moccasinshell	Endangered	1
Medionidus parvulus	Coosa moccasinshell	Endangered	1
Pleurobema decisum	Southern clubshell	Endangered	1
Pleurobema georgianum	Southern pigtoe	Endangered	1
Ptychobranchus greeni	Triangular kidneyshell	Endangered	1
Pleurobema perovatum	Ovate Clubshell	Endangered	1

REGIONAL FORESTER'S SENSITIVE SPECIES (2001REVISION)

Common Name	Scientific Name	Reason
BIRDS		
BACHMAN'S SPARROW	*Aimophila aestivalis*	1
PEREGRINE FALCON	*Falco peregrinus*	1
MIGRANT LOGGERHEAD SHRIKE	*Lanius ludovicia migrans*	1
MAMMALS		
RAFINESQUE'S BIG-EARED BAT	*Corynorhinus rafinesquii*	X
EASTERN SMALL-FOOTED MYOTIS	*Myotis leibii*	2
SOUTHERN WATER SHREW	*Sorex palustris punctulatus*	2
INSECTS		
GEORGIA BELONEURIAN STONEFLY	*Beloneuria georgiana*	2
DIANA FRITILLARY BUTTERFLY	*Speyeria diana*	X
CHEROKEE CLUBTAIL DRAGONFLY	*Gomphus consanguis*	1
MARGARITA RIVER SKIMMER	*Macromia margarita*	X
EDMUND'S SNAKETAIL	*Ophiogomphus edmundo*	X
APPALACHIAN SNAKETAIL	*Ophiogomphus incurvatus*	X
CRAYFISH		
OCONEE STREAM CRAYFISH	*Cambarus chaugaensis*	X
A CRAYFISH	*Cambarus cymatilis*	1
CHICKAMAUGA CRAYFISH	*Cambarus extraneus*	1
LITTLE TENNESSEE CRAYFISH	*Cambarus georgiae*	1
PARRISH CRAYFISH	*Cambarus parrishi*	X
A CRAYFISH	*Cambarus speciosus*	1
REPTILES/AMPHIBIANS		
BOG TURTLE	*Clemmys muhlenbergii*	2
S. APPALACHIAN SALAMANDER	*Plethodon teyahalee* (*=oconaluftee)*	1
MUSSELS		
BROOK FLOATER	*Alasmidonta varicosa*	1
TENNESSEE HEELSPLITTER	*Lasmigona holstonia*	1
GEORGIA PIGTOE	*Pleurobema hanleyianum*	1
INFLATED FLOATER	*Pyganodon gibbosa*	1

Common Name	Scientific Name	Reason
RIDGED MAPLELEAF	*Quadrula rumphiana*	1
ALABAMA CREEKMUSSEL	*Strophitis connasaugaensis*	1
ALABAMA RAINBOW	*Villosa nebulosa*	1
FISH		
OCMULGEE SHINER	*Cyprinella callisema*	1
BLUESTRIPE SHINER	*Cyprinella callitaenia*	1
ALTAMAHA SHINER	*Cyprinella xaenura*	1
HOLIDAY DARTER	*Etheostoma brevirostrum*	X
COLDWATER DARTER	*Etheostoma ditrema*	1
TRISPOT DARTER	*Etheostoma trisella*	1
WOUNDED DARTER	*Ethoestoma vulneratum*	X
LINED CHUB	*Hybopsis lineapunctata*	1
MOUNTAIN BROOK LAMPREY	*Ichthyomyzon greelyi*	X
ROBUST REDHORSE	*Moxostoma robustum*	1
POPEYE SHINER	*Notropis ariommus*	1
HIGHSCALE SHINER	*Notropis hypsilepis*	1
FRECKLEBELLY MADTOM	*Noturus munitus*	1
FRECKLED DARTER	*Percina lenticula*	1
OLIVE DARTER	*Percina squamata*	X
FATLIPS MINNOW	*Phenacobius crassilabrum*	1
PLANTS (Vascular)		
SCHERWIN'S FALSE INDIGO	*Amorpha schwerinii*	2
GEORGIA ROCKCRESS	*Arabis Georgiana*	1
GEORGIA ASTER	*Aster georgianus*	2
SPREADING YELLOW FALSE FOXGLOVE	*Aureolaria patula*	1
AMERICAN BARBERRY	*Berberis Canadensis*	2
MOUNTAIN BITTERCRESS	*Cardamine clematitis*	2
BILTMORE SEDGE	*Carex biltmoreana*	2
FORT MOUNTAIN SEDGE	*Carex communis* var. *amplisquama*	2
MISERABLE SEDGE	C*arex misera*	2
RADFORD'S SEDGE	*Carex radfordii*	2
ROAN MOUNTAIN SEDGE	*Carex roanensis*	2
CUTHBERT'S TURTLEHEAD	*Chelone cuthbertii*	2

Common Name	Scientific Name	Reason
SMALL SPREADING POGONIA	*Cleistes bifaria*	2
WHORLED STONEROOT	*Collinsonia verticillata*	2
BROADLEAF TICKSEED	*Coreopsis latifolia*	2
MOUNTAIN WITCH ALDER	*Fothergilla major*	2
SMITH'S SUNFLOWER	*Helianthus smithii*	2
HARPER'S WILD GINGER	*Hexastylis shuttleworthii* var. *harperi*	2
TAYLOR'S FILMY FERN	*Hymenophyllum tayloriae*	2
BUTTERNUT	*Juglans cinerea*	2
FRASER LOOSESTRIFE	*Lysimachia fraseri*	2
SWEET PINESAP	*Monotropsis odorata*	2
SMALL'S BEARDTONGUE	*Penstemon smallii*	2
MONKEYFACE ORCHID	*Platanthera integrilabia*	2
TENNESSEE LEAFCUP	*Polymnia laevigata*	1
OGLETHORPE OAK	*Quercus oglethorpensis*	1
ROSE GENTIAN	*Sabatia capitata*	1
PIEDMONT RAGWORT	*Senecio millifolium*	2
BAY STARVINE	*Schisandra glabra*	2
OCONEE BELLS	*Shortia galacifolia* var. *galacifolia*	2
OVATE CATCHFLY	*Silene ovata*	2
GRANITE DOME GOLDENROD	*Solidago simulans*	2
ASH-LEAF BUSH PEA	*Thermopsis mollis var. fraxinifolia*	2
LEAST TRILLIUM	*Trillium pusillum*	1
SOUTHERN NODDING TRILLIUM	*Trillium rugellii*	2
SWEET WHITE TRILLIUM	*Trillium simile*	2
CAROLINA HEMLOCK	*Tsuga caroliniana*	2
PIEDMONT STRAWBERRY	*Waldsteinia lobata*	2
PLANTS (Nonvascular)		
A LIVERWORT	*Drepanolejeunea appalachiana*	2
A LIVERWORT	*Pellia X appalachiana*	2
A LIVERWORT	*Plagiochila caduciloba*	2
A LIVERWORT	*Plagiochila echinata*	2
SHARP'S LEAFY LIVERWORT	*Plagiochila sharpii*	2
CAROLINA PLAGIOMNIUM	*Plagiomnium carolinianum*	2
PRINGLE'S PLATYHYPNIDIUM	*Platyhypnidium pringlei*	2
A LIVERWORT	*Radula sullivanti*	2