United States
Department of
Agriculture

Forest Service
Southern Region

SUPPLEMENT to the
Final Environmental Impact Statement
VEGETATION MANAGEMENT in the Coastal Plain/Piedmont

Management Bulletin R-8 MB 98A **October 2002**

SUPPLEMENT TO THE

Final Environmental Impact Statement for Vegetation Management in the Coastal Plain/Piedmont

USDA Forest Service Southern Region	Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas

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Abstract

This Supplement to the Final Environmental Impact Statement for Vegetation Management in the Coastal Plain/Piedmont (VMEIS) addresses a proposal to clarify direction concerning requirements for conducting project-level inventories for those activities covered under the VMEIS. It discloses the effects of a proposed change to a management requirement in the VMEIS. The proposal does not involve reconsideration of the various vegetation management activities or their effects on the environment.

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SUMMARY

This Supplement to the Final Environmental Impact Statement for Vegetation Management in the Coastal Plain/Piedmont Mountains (VMEIS) addresses a proposal to clarify direction for conducting project-level inventories for Biological Evaluations (BEs) on those projects covered by the VMEIS. It discloses the effects of a proposed change to a management requirement in the VMEIS. The proposal does not involve reconsideration of the various vegetation management activities or their effects on the environment.

The Proposal

The proposed change is limited to modification of specific language in a portion of one of the General Mitigation Measures (Vol. I, Chap. II.E.1.a(2) in VMEIS, page II-45) and in the Record of Decision (page A-1). The proposal does not involve reconsideration of the various vegetation management activities or their environmental effects. The vegetation management activities include herbicide use, prescribed fire, and mechanical site preparation.

Alternatives

Two alternatives are developed in the supplement: the proposed change (described in general terms above) and the no-action alternative. The no-action alternative would retain the original language of the VMEIS.

Public Involvement – Scoping

On September 7, 2001, Region 8 of the Forest Service published a Notice of Intent in the *Federal Register* to supplement the three VMEISs that cover three physiographic provinces—Appalachian Mountains, Coastal Plain/Piedmont, and Ozark/Ouachita Mountains. The National Environmental Policy Act (NEPA) sets forth the requirements and procedures for notice and comment on environmental impact statements. On August 31, 2001, the Forest Service mailed letters to interested and affected agencies, associations, businesses, individuals, organizations, and tribal nations (approximately 20,000 addresses) on the forest planning mailing lists for the national forests that are covered by these VMEISs.

Consultation with the federally recognized Indian tribes of the Region was done as desired by the tribes based on Executive Order No. 13175, Section 3. The Executive Order requires consultation on matters that significantly or uniquely affect Indian communities. The National Environmental Policy Act and the Council on Environmental Quality also require consultation with the tribes.

During the comment period on the Draft Supplement the Regional Office sent copies of the draft documents to all those who had commented during the scoping period and to the required mailings. The Draft Supplement was also posted to the web site that has been

created for the process. CDROMs were supplied to any interested parties and a "planning update" letter was sent out announcing the availability of the documents to the approximately 20,000 addresses on the forests' planning mailing lists. The result of the public review of the draft was that the Region received 37 letters containing over 150 comments. All of the comments are included in the separate Comments document. One Comments document was compiled for all three Supplements because of the generally applicable nature of the comments received. Very few were applicable to only one Supplement. The comments are accompanied by responses from the team where were appropriate and could help increase understanding.

Significant Issues

The following issues, applicable to the scope of the supplement, were identified from the responses received during scoping.

- Whether or not the proposed changes in inventory requirements weaken protection of Proposed, Endangered, Threatened, and Sensitive (PETS) species.

  Some respondents implied that the change in inventory requirements might result in noncompliance with NEPA, National Forest Management Act (NFMA), and Endangered Species Act (ESA).

- Whether or not costs should be a factor in determining inventory requirements.

  Some respondents were concerned that the Forest Service would be wasting taxpayers' money on inventorying for every species in every project. Others indicated that inventory should be conducted in all cases regardless of cost.

Nonsignificant Issues

Many comments were identified as nonsignificant. They were outside the scope of the proposed action, already decided (e.g., by law or Forest Plan), irrelevant to the decision, or not supported by scientific evidence.

Overview of VMEIS Chapters

Chapter I, Purpose and Need, would not have any changes. Chapter II, Alternatives, would have no changes to the alternatives. However, this supplement does change one of the General Management Requirements and Mitigation Measures. The management requirements and mitigation measures are common to all of the action alternatives. Chapter III, Affected Environment, references the current PETS species list. Chapter IV, Environmental Consequences, discloses effects of the proposal. Because the proposal is limited to a modification of the inventory requirements for PETS species, the only relevant effects considered are those related to PETS species and to inventory costs and efficiency. It will result in neither additional effects to PETS species nor in a change to the effects on PETS species disclosed in the VMEIS.

PREAMBLE

On February 15, 2002, the Southern Region supplemented Forest Service Manual (FSM) 2672, *Planning for Management and Recovery*, specifically Chapter 43, Procedure for Conducting Biological Evaluations. The supplement makes the Biological Evaluation process more efficient and consistent throughout the Region. In addition, we are preparing a Regional supplement to Forest Service Handbook (FSH) 2609.21R, *Fish and Wildlife Survey Handbook for the Southern Region*, to provide more specific procedures and techniques for individual species and/or species groups for biologists to use when conducting inventories. This document is a supplement to the *Final Environmental Impact Statement for Vegetation Management in the Coastal Plain/Piedmont* (VMEIS, January 1989).

Scope of the Proposal

This supplement addresses a proposal to clarify direction concerning requirements for conducting project-level inventories for those activities covered under the VMEIS. It discloses the effects of a proposed change to a management requirement in the VMEIS. The vegetation management activities include herbicide use, prescribed fire, and mechanical site preparation. The proposed change, as detailed below, is limited to modification of specific language in a portion of one of the General Mitigation Measures (Vol. I, Chap. II.E.1.a(2) in VMEIS, page II-45) and in the Record of Decision (page A-1). The proposal does not involve reconsideration of the various vegetation management activities or their effects on the environment.

Proposed Change

The wording in Exhibit 1 (left column) is found in both the Record of Decision (page A-1) and in the VMEIS (Vol. I, Chap. II.E.1.a(2), page II-45) and would be changed by this proposal. Exhibit 2 (right column) presents the proposed wording. Determination of when project level inventory information should be gathered would be made based on the direction now contained in the new Regional supplement to FSM 2672.

Exhibit 1 - Current Wording	**Exhibit 2 - New Proposed Wording**
"A biological evaluation of how a project may affect any species Federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive, **is** done as part of the site-specific environmental analysis. This evaluation considers **all** available **inventories of** threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area. **When adequate population inventory information is unavailable, it must be collected when the site has high potential for occupancy by a threatened, endangered, proposed, or sensitive species.**"	"A Biological Evaluation of how a project may affect any species federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive **shall be** done as part of the site-specific environmental analysis. This evaluation considers available **information on** threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area."

Alternative to the Proposed Change in Supplement to VMEIS

The no-action alternative is to retain the original language.

Decision to Be Made

The decision to be made is whether or not to make the proposed wording change in one of the General Mitigation Measures and in the Record of Decision for the VMEIS. This decision amends the forest plans for national forests in the Coastal Plain/Piedmont of the Southern Region.

Public Involvement - Scoping

On September 7, 2001, Region 8 of the Forest Service published in the *Federal Register* a Notice of Intent to supplement the three VMEISs in the Southern Region. The National Environmental Policy Act (NEPA) sets forth the requirements and procedures for notice and comment on EISs. On August 31, 2001, the Forest Service mailed letters to interested and affected agencies, associations, businesses, individuals, organizations, and tribal nations (for a total of approximately 20,000) on the forest planning mailing lists for each of the national forests that are covered by these VMEISs.

Consultation with the federally recognized Indian tribes of the Region will be done as desired by the tribes based on Executive Order No. 13175, Section 3. The National Environmental Policy Act and Council on Environmental Quality regulations also require consultation with the tribes. The Executive Order requires consultation on matters that significantly or uniquely affect Indian communities.

The Southern Region received approximately 150 written responses to the scoping letter during the 30-day comment period. The Forest Service Content Analysis Team in Salt Lake City, Utah, processed and analyzed all of the responses and prepared a report. The report is posted to the Southern Region's Internet site: http://www.southernregion.fs.fed.us/planning/vmeis/index.htm. The ID team used the comments received to develop public issues and concerns related to the Proposed Action.

Significant Issues

The following issues, applicable to the scope of the supplement, were identified from the responses received during scoping.

- Whether or not the proposed changes in inventory requirements weaken protection of Proposed, Endangered, Threatened, and Sensitive (PETS) species.

  Some respondents implied that the change in inventory requirements might result in noncompliance with NEPA, National Forest Management Act (NFMA), and Endangered Species Act (ESA).

- Whether or not costs should be a factor in determining inventory requirements.

  Some respondents were concerned that the Forest Service would be wasting taxpayers' money on inventorying for every species in every project. Others indicated that inventory should be conducted in all cases regardless of cost.

Nonsignificant Issues

Many comments were identified as nonsignificant. They were outside the scope of the proposed action, already decided (e.g., by law or Forest Plan), irrelevant to the decision, or not supported by scientific evidence. A few comments were mentioned more frequently than other, they included:

- Whether or not the proposed action should explicitly state the requirement to follow the direction in FSM 2672 when conducting Biological Evaluations.

  The issue is not an issue related to any environmental effect from the proposed action. There is already direction that the directive system codifies the agency's policy, practice, and procedure. 36 CFR Part 200.4(b)(1) already states that

  > "directives are issued through the Forest Service Directive System, which is comprised of the Forest Service Manual and related Forest Service Handbooks. The Directive System codifies the agency's policy, practice, and procedure affecting more than one unit and the delegations of continuing authority and assignment of continuing responsibilities; serves as the primary administrative basis for the internal management and control of all programs; and is the primary source of administrative direction to Forest Service employees."

- There were numerous comments that addressed several aspects of Forest Service management—such as road building, timber harvest, recreation, and mineral exploration.

  All of these concerns are outside the scope of the proposal. The proposed action would not increase or decrease those activities.

- The list of sensitive species considered is unnecessarily long and not scientifically based.

  The Region's policy on sensitive species is outside the scope of the proposal.

VMEIS CHAPTER I - PURPOSE AND NEED

(The proposed changes, outlined in Exhibit 2 in the Preamble, do not require any changes in the Purpose and Need for the VMEIS for the Coastal Plain/ Piedmont.)

VMEIS CHAPTER II - ALTERNATIVES

(There are no changes to the alternatives [A-H]. This supplement changes one of the General Management Requirements and Mitigation Measures. The management requirements and mitigation measures are common to all of the action alternatives.)

Beginning at page II-44,

E. Management Requirements and Mitigation Measures
   1. General Management Requirements and Mitigation Measures
      a. Site-Specific Analysis
         (2) A biological evaluation….

Replace the current wording shown in Exhibit 1 with that in Exhibit 2.

Exhibit 1 - Current Wording	**Exhibit 2 - New Proposed Wording**
"A biological evaluation of how a project may affect any species Federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive, **is** done as part of the site-specific environmental analysis. This evaluation considers **all** available **inventories of** threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area. **When adequate population inventory information is unavailable, it must be collected when the site has high potential for occupancy by a threatened, endangered, proposed, or sensitive species.**"	"A Biological Evaluation of how a project may affect any species federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive **shall be** done as part of the site-specific environmental analysis. This evaluation considers available **information on** threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area."

VMEIS CHAPTER III - AFFECTED ENVIRONMENT

(There is only one change to the affect environment—incorporation of the reference to the current PETS species list, which is in Appendix 1.)

(The change proposed is limited to the modification of the specific language of a portion of one of the Management Requirements and Mitigation Measures related to the process requirement for conducting project-level BEs for those activities covered under the VMEIS. In some cases, it may result in changes in the requirement for site-specific inventories for PETS species but, as discussed below, will neither result in additional effects to PETS species nor change the effects on PETS species disclosed in the VMEIS. Since the change only involves a modification of the inventory requirements for PETS species, the only relevant effects to consider are those related to PETS species and inventory costs and efficiency.

Under the existing direction from the VMEIS, population inventory information is required for all PETS species occurring, or with the potential to occur, within the vicinity of a proposed project. The change proposed would remove the requirement that site-specific inventories be conducted for every PETS species under all circumstances. Following this change, project-level inventories for all BEs will follow the direction provided in the Regional supplement to FSM 2672.

Effects on PETS Species

The following examples are presented to compare the effects on PETS species of implementing current inventory requirements and those under the proposed change.

There are situations where site-specific inventories could provide more definitive information to improve the determination of effects on PETS species or increase the level of protection afforded. This would include situations where the following conditions are met: (1) a species has the potential to occur based on existing range and habitat information, (2) the project activities could have negative effects on the species, (3) information on number and locations of individuals are necessary to implement appropriate protective measures, (4) no current site-specific inventories are available, and (5) feasible and effective inventory methods are available. For example, if ground-disturbing activities were proposed in an area that provides potential habitat for PETS plants, it would be appropriate to conduct site-specific inventories. Plants lend themselves to these types of field inventories. In cases like these, information on presence and location of individuals is necessary to avoid impacts from the ground-disturbing activities.

For situations such as these, there would not be any difference between existing direction in the VMEIS and the proposed change in terms of the process followed to complete the BE for a project. In both cases, site-specific inventories would be conducted and the effects of the project disclosed in the BE.

There are some PETS species and situations where information to determine potential effects to PETS species may not require site-specific inventories. This includes situations where one or more of the previously mentioned conditions are not met. For example where a dormant-season prescribed burn is proposed in an area that provides potential habitat for PETS plants, such as the Kentucky lady's slipper (*Cypripedium kentuckiense*), it would be unnecessary to conduct site-specific inventories. Plow lines would be inventoried at the project level unless they are existing plow lines. Even if this species were present on the site, the prescribed burn conducted during the dormant season would not adversely affect the lady's slipper or other herbaceous plants. There would be no benefit to determining the number and location of individuals on the site. Another situation where inventories are unnecessary would be a project where aquatic PETS species, such as the Southern hickorynut mussel (*Obovaria jacksoniana*), are known to be present in the watershed. Appropriate mitigation measures to protect the mussel and other aquatic species would be part of any proposed action in the watershed. Information on numbers and specific location would not change or improve these protective measures.

For these examples there will be a difference in the inventory requirements between current direction in the VMEIS and the proposed change. Under the existing direction, inventories would be required even though they would not provide more definitive information to improve the determination of effects on PETS species or increase the level of protection afforded. Under the proposed change, these additional inventories would not be required. However, presence of these species would be assumed and as under the existing direction, the effects to these species would be disclosed in the BE. In these situations, the determination of effects would be the same with or without the additional inventories. Therefore, the proposed change in language in the Management Requirement and Mitigation Measures would not result in additional effects to PETS species or change the effects on PETS species disclosed in the VMEIS.

There would be no changes to Chapter IV, Section E, Threatened, Endangered, Proposed, and Sensitive Species.

Effects on Inventory Costs

There will be some differences between existing direction in the VMEIS and the proposed change in terms of the costs of PETS species inventories. In general, costs would be higher under the existing direction since site-specific inventories would be conducted for every PETS species under all circumstances. The following examples are presented to compare the effects on inventory costs of implementing current inventory requirements and those under the proposed change.

In the example described previously where ground-disturbing activities were proposed in an area that provides potential habitat for PETS plants, it would be appropriate to conduct site-specific inventories under both current direction and the proposed change. In this situation, the inventory costs would be the same. However, in the examples involving the Kentucky lady's slipper and Southern hickorynut mussel, there would be differences in the inventory costs between current direction and the proposed change. In these situations, site-specific inventories would be required under existing direction, but since these inventories would not provide more definitive information to improve the determination of effects on PETS species, they would not be required under the proposed change. For these examples, the amount of inventory required and the inventory costs would be higher under the existing direction. However, as discussed previously, the determination of effects would be the same with or without the additional inventories.

There would be no specific changes to Chapter IV, Section M, Socioeconomic Conditions.)

VMEIS CHAPTER V - LIST OF PREPARERS

(Add) List of Preparers of Supplement

Co-Team Leader, Robert Wilhelm, Regional Office, Atlanta – Bob received a master of science degree in forest management from Oregon State University, a master of forestry at Utah State University, and a bachelor of science degree in business administration from Augustana College in South Dakota. Bob is in his 25th year with the Forest Service and has had assignments in Montana, Alaska, Oregon, and Georgia for a combined 25 years. Forest Planning has been his specialty for the last 20 years. Previously, his experience was in silviculture, timber management, recreation, and lands.

Co-Team Leader, David Purser, Regional Office, Atlanta – Dave received a master of science degree and a bachelor of science degree in forestry from the University of Georgia. Dave has more than 25 years with the Forest Service and has had assignments in Georgia, Virginia, North Carolina, and Arkansas. His specialty is NEPA (National Environmental Policy Act). His previous experience includes silviculture, timber management, recreation, and planning.

Endangered Species Specialist, Dennis L. Krusac, Regional Office, Atlanta – Dennis received a bachelor of science degree in wildlife management from Michigan State University at East Lansing, Michigan, and worked on a master of science degree in wildlife biology at West Virginia University, Morgantown. Dennis is in his 21st year with the Forest Service and has had assignments in Ohio, South Carolina, Tennessee, and Georgia. His principle area of expertise is threatened and endangered species conservation. He has worked with red-cockaded woodpecker, peregrine falcon, bald eagle, northern flying

squirrel, Indiana bat, gray bat, and several species of endangered plants. He is currently focusing efforts on bat conservation in the eastern United States.

Fishery Biologist, Stephanie K. Medlin, Cherokee National Forest, Tennessee – Stephanie received a bachelor of science degree in wildlife and fisheries science from the University of Tennessee, Knoxville, and received a master of science degree in biology–fisheries from Tennessee Technological University, Cookeville. Stephanie is in her 11th year with the Forest Service. She has worked as a fisheries co-op student, district fisheries biologist, zone fisheries biologist, and land management planning aquatic biologist. Stephanie recently accepted the Forest NEPA Coordinator position on the Cherokee National Forest.

Wildlife Biologist, James M. Wentworth, Chattahoochee-Oconee National Forests, Georgia – Jim received a bachelor of science degree in wildlife management from the University of Massachusetts in Amherst and a master of science and Ph.D. in wildlife management from the University of Georgia in Athens. Graduate research involved the evaluation of prescribed burning in hardwoods for wildlife habitat improvement and deer-habitat relationships in Southern Appalachian national forests. Jim is in his 13th year with the Forest Service and has had assignments in Minnesota, New Hampshire, and Georgia. He currently is the central zone wildlife biologist on the Chattahoochee National Forest in Georgia.

Writer-Editor, Patricia Nobles, Regional Office, Atlanta – Patricia is currently working with the Department of the Interior USGS. Previously she worked as writer-editor for five forest plans in five states—Alabama, Georgia, South Carolina, Tennessee, and Virginia. She was the editorial assistant for the Forest Plan of National Forests in Florida. Patricia is in her 10th year with the Forest Service and has had assignments in Florida and Georgia. Before transferring to the Forest Service, she was the lead editorial assistant in the Editorial Branch of Air University Press in the Center for Aerospace Doctrine, Research, and Education, Maxwell Air Force Base, Alabama. She also has served as secretary to the director of the Air University Press. In the private sector, she was an editorial assistant at Jaques Cattell Press, Tempe, Arizona.

VMEIS CHAPTER VI - PUBLIC PARTICIPATION AND CONSULTATION WITH OTHERS

Individuals and Groups

Copies of the draft were mailed to individuals and groups who furnished written comments during scoping. Additional copies were mailed to those who requested copies. In addition this document, and the Draft EIS were posted on the web site. The following individuals commented on the Draft Supplement and, along with those who commented during scoping, they will receive copies of this Final Supplement.

Case Galvin
Dan Dessecker
Barbara J. Theisen
Kent Bonar
Joe Glenn
Clifford L. Davis
Jerry Bearden
Murray Hudson
Thomas Price
Rob Messick
Robert Williams Jr.
Phillip W. Hebert
Brandt Mannchen
Tim Goodbar
Edward C. Fritz
Al & Jane Brooks
Allan C. Glasscock
Gregory Hogue
Clarla Sell
Joseph Gatins
Joffrey W. Brooks
Sandi Formica
Katherine Groves
Jerry Williams
James T. Donaldson
Christina Wulf
Douglas Ruley
Norm Sharp
Hugh Irwin
Vernon Bates
Bruce Saunders
Tom Davenport
NC Dept. of Administration
Levy and McDowell

Agencies

Copies of the draft were mailed to agencies listed in the distribution list for FSH 1909.15 and agencies that provided comments during scoping.

Agriculture (USDA), U.S. Dept. of
- USDA APHIS PPD/EAD
- Rural Utilities Service (RUS)
- Forest Service - Ecosystem Management Coordination
- Natural Resources Conservation Service
- National Agricultural Library

Army, U.S. Dept. of
- U.S. Army Corps of Engineers Mississippi Valley Division
- U.S. Army Engr. Souther Atlantic Div.

Commerce, U.S. Dept. of
- National Marine Fisheries Service

Energy, U.S. Dept. of
- Office of Environmental Compl.

Housing & Urban Development, U.S. Dept. of
- Environmental Review Division
- Office of Community Planning and Development
- Alabama – HUD CPD Div.Director
- Arkansas – HUD CPD Div.Director
- Georgia – HUD CPD Div. Director
- Mississippi – HUD CPD Div. Director
- No. Carolina – HUD CPD Div. Director
- So. Carolina – HUD CPD Div. Director
- Tennessee – HUD CPD Div. Director
- Texas – HUD CPD Div. Director
- Virginia – HUD CPD Div. Director
- West Virginia – HUD CPD Div. Director

Interior, U.S. Dept. of the
- Advisory Council on Historic Preservation
- Bureau of Land Management
  - Eastern States Office
- Fish and Wildlife Service
- Office of Environmental Policy and Compliance
- National Park Service
  - Midwest Region
  - Intermountain Region
  - Northeast Region
  - Southeast Region

Navy, U.S. Dept. of
- Office of Chief of Navy Operations, Environmental Protection Div.
- Naval Oceanography Div.
  - Observatory

Ohio River Basins Commission

Ohio River Basins Commission – University of Kentucky

VMEIS CHAPTER VII - GLOSSARY

(No change.)

VMEIS CHAPTER VIII - REFERENCES

(Add) Regional Supplement to FSM 2672, *Planning for Management and Recovery*, Chapter 43, Procedure for Conducting Biological Evaluations.

VMEIS CHAPTER IX - INDEX

(No change.)

APPENDIX 1
PETS SPECIES LIST FOR NATIONAL FORESTS IN THE COASTAL PLAIN/PIEDMONT

Threatened and Endangered Species in the Coastal Plain/Piedmont				
Forest[1]	**Group**	**Scientific Name**	**Common Name**	**FWS[2]**
1, 5, 12	Amphibian	*Ambystoma cingulatum*	Flatwoods salamander	T
13	Amphibian	*Bufo houstonensis*	Houston toad	E
1	Amphibian	*Phaeognathus hubrichti*	Red Hills salamander	T
7	Amphibian	*Rana capito sevosa*	Mississippi gopher frog	E
5	Bird	*Aphelocoma coerulescens*	Florida scrub-jay	T
13	Bird	*Charadrius melodus*	Piping plover	T
7	Bird	*Grus canadensis pulla*	Mississippi sandhilll crane	E
1, 3, 5, 6, 7, 11, 12, 13	Bird	*Haliaeetus leucocephalus*	Bald eagle	T
1, 3, 5, 12	Bird	*Mycteria americana*	Wood stork	E
1, 3, 5, 6, 7, 11, 12, 13	Bird	*Picoides borealis*	Red-cockaded woodpecker	E
12	Bird	*Vermivora bachmanii*	Bachman's warbler	E
12	Fish	*Acipenser brevirostrum*	Shortnose sturgeon	E
1, 5, 7	Fish	*Acipenser oxyrinchus desotoi*	Gulf sturgeon	T
1	Fish	*Notropis cahabae*	Cahaba shiner	E
11	Fish	*Notropis mekistocholas*	Cape Fear shiner	E
1	Fish	*Percina aurolineata*	Goldline darter	T
7	Fish	*Scaphirhynchus albus*	Pallid sturgeon	E
1	Fish	*Scaphirhynchus suttkusi*	Alabama sturgeon	E
1	Insect	*Neonympha mitchellii mitchellii*	Mitchell's satyr butterfly	E
13	Insect	*Nicrophorus americanus*	American burying beetle	E
11	Mammal	*Canis rufus*	Red wolf	E
5	Mammal	*Puma concolor coryi*	Florida panther	E
11	Mammal	*Puma concolor couguar*	Eastern cougar	E
1, 5	Mammal	*Myotis grisescens*	Gray bat	E
1	Mammal	*Myotis sodalis*	Indiana bat	E
5, 12	Mammal	*Trichechus manatus*	West Indian manatee	E
6, 7, 13	Mammal	*Ursus americanus luteolus*	Louisiana black bear	T
11	Mollusk	*Alasmidonta heterodon*	Dwarf wedgemussel	E

Threatened and Endangered Species in the Coastal Plain/Piedmont				
Forest[1]	Group	Scientific Name	Common Name	FWS[2]
5	Mollusk	*Amblema neislerii*	Fat three-ridge	E
5	Mollusk	*Elliptiodeus sloatianus*	Purple bankclimber	T
1	Mollusk	*Lampsilis altilis*	Finelined pocketbook	T
5	Mollusk	*Lampsilis subangulata*	Shinyrayed pocketbook	E
12	Mollusk	*Lasmigona decorata*	Carolina heelsplitter	E
6	Mollusk	*Margaritifera hembeli*	Louisiana pearlshell	T
5	Mollusk	*Medionidus simpsonianus*	Ochlockonee moccasinshell	E
1, 7	Mollusk	*Pleurobema decisum*	Southern clubshell	E
1	Mollusk	*Pleurobema perovatum*	Ovate clubshell	E
5	Mollusk	*Pleurobema pyriforme*	Oval pigtoe	E
1	Mollusk	*Pleurobema taitianum*	Heavy pigtoe	E
1	Mollusk	*Potamilus inflatus*	Alabama heelsplitter	T
11	Plant	*Aeschynomene virginica*	Sensitive joint-vetch	T
3	Plant	*Amphianthus pusillus*	Little amphianthus	T
7	Plant	*Apios priceana*	Price's potato-bean	T
5	Plant	*Bonamia grandiflora*	Florida bonamia	T
5	Plant	*Clitoria fragrans*	Pigeon wings	T
11	Plant	*Echinacea laevigata*	Smooth coneflower	E
5	Plant	*Eriogonum longifolium* var. *gnaphalifolium*	Scrub buckwheat	T
5	Plant	*Harperocallis flava*	Harper's beauty	E
11	Plant	*Helianthus schweinitzii*	Schweinitz's sunflower	E
7	Plant	*Isoetes louisianensis*	Louisiana quillwort	E
3	Plant	*Isoetes melanospora*	Black spored quillwort	E
3	Plant	*Isoetes tegetiformans*	Mat-forming quillwort	E
13	Plant	*Lesquerella pallida*	White bladderpod	E
7, 12	Plant	*Lindera melissifolia*	Pondberry	E
11	Plant	*Lysimachia asperulaefolia*	Rough-leaved loosestrife	E
5	Plant	*Macbridea alba*	White birds-in-a-nest	T
5	Plant	*Nolina brittoniana*	Britton's beargrass	E
12	Plant	*Oxypolis canbyi*	Canby's dropwort	E
13	Plant	*Phlox nivalis spp. texensis*	Texas trailing phlox	E
5	Plant	*Pinguicula ionantha*	Godfrey's butterwort	T
5	Plant	*Polygala lewtonii*	Lewton's polygala	E
11	Plant	*Ptilimnium nodosum*	Harperella	E

Threatened and Endangered Species in the Coastal Plain/Piedmont				
Forest[1]	Group	Scientific Name	Common Name	FWS[2]
3, 11	Plant	*Rhus michauxii*	Michaux's sumac	E
12	Plant	*Ribes echinellum*	Miccosukee gooseberry	T
1	Plant	*Sarracenia rubra* alabamensis	Alabama canebrake pitcher-plant	E
12, 13	Plant	*Schwalbea americana*	American chaffseed	E
5	Plant	*Scutellaria floridana*	Florida skullcap	T
13	Plant	*Spiranthes parksii*	Navasota ladies'-tresses	E
3,12	Plant	*Trillium reliquum*	Relict trillium	E
1, 5, 6, 7, 11, 12, 13	Reptile	*Alligator mississippiensis*	American alligator	TSA
1, 5, 7	Reptile	*Drymarchon corais couperi*	Eastern indigo snake	T
1, 7	Reptile	*Gopherus polyphemus*	Gopher tortoise	T
5	Reptile	*Neoseps reynoldsi*	Sand skink	T
1	Snail	*Leptoxis ampla*	Round rocksnail	T
1	Snail	*Lepyrium showalteri*	Flat pebblesnail	E
1	Snail	*Lioplax cyclostomaformis*	Cylindrical lioplax	E

[1]Forest: 1 – NFs in Alabama 3 – Chattahoochee-Oconee NFs 5 – NFs in Florida
6 – Kisatchie NF 7 - NFs in Mississippi 11 – NFs in North Carolina
12 – Frances Marion & Sumter NFs 13 – NFs and Grasslands in Texas

[2]FWS – U.S. Fish and Wildlife Service Status: T – Threatened E – Endangered TSA – Threatened by Similarity of Appearance

Sensitive Species in Coastal Plain/Piedmont					
Forest	Group	Scientific Name	Common Name	G-Rank	Candidate
5	Amphibian	*Amphiuma pholeter*	One-toed amphiuma	G3	
5	Amphibian	*Desmognathus apalachicolae*	Apalachicola dusky salamander	G3	
11	Amphibian	*Necturus lewisi*	Neuse River waterdog	G3	
5	Amphibian	*Notophthalmus perstriatus*	Striped newt	G2G3	
6	Amphibian	*Plethodon kisatchie*	Louisiana slimy salamander	G3Q	
7,12	Amphibian	*Plethodon websteri*	Webster's salamander	G3	
1,11,12	Amphibian	*Rana capito capito*	Carolina gopher frog	G3G4T3	
1,3,5,6,7,12,13	Bird	*Aimophila aestivalis*	Bachman's sparrow	G3	
6, 13	Bird	*Falco peregrinus*	Peregrine Falcon	G4	
5	Bird	*Grus canadensis pratensis*	Florida sandhill crane	G5T2T3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
3,11,12,13	Bird	*Lanius ludovicianus migrans*	Migrant loggerhead shrike	G4T3Q	
1	Crustacean	*Cambarus englishi*	A crayfish	G3	
7	Crustacean	*Fallicambarus danielae*	Speckled burrowing crayfish	G2	
7	Crustacean	*Fallicambarus gordoni*	Camp Shelby burrowing crayfish	G1	C
6,13	Crustacean	*Faxonella beyeri*	Sabine fencing crayfish	G2	
6	Crustacean	*Faxonella creaseri*	Ouachita fencing crayfish	G2	
7	Crustacean	*Hobbseus attenuatus*	A crayfish	G2	
6	Crustacean	*Orconectes blacki*	Calcasieu painted crayfish	G2	
6	Crustacean	*Orconectes hathawayi*	Teche painted crayfish	G3	
6	Crustacean	*Orconectes maletae*	Kisatchie painted crayfish	G2	
5	Crustacean	*Procambarus attiguus*	Silver Glen Springs crayfish	G1	
7	Crustacean	*Procambarus barbiger*	Jackson Prairie crayfish	G2	
5	Crustacean	*Procambarus delicatus*	Big-cheeked cave crayfish	G1	
7	Crustacean	*Procambarus fitzpatricki*	Spiny-tailed crayfish	G2	
13	Crustacean	*Procambarus kensleyi*	A crayfish	G3	
1	Crustacean	*Procambarus marthae*	A crayfish	G3	
13	Crustacean	*Procambarus nechesae*	Neches crayfish	G1G2	
13	Crustacean	*Procambarus nigrocintus*	crayfish	G1	
5	Crustacean	*Procambarus orcinus*	Woodville karst cave crayfish	G1	
7	Crustacean	*Procambarus penni*	Pearl blackwater crayfish	G3	
5,11	Fish	*Acipenser oxyrhinchus oxyrhinchus*	Atlantic sturgeon	G3T3	C
1,5,7	Fish	*Alosa alabamae*	Alabama shad	G3	C
5	Fish	*Ameiurus serracanthus*	Spotted bullhead	G3	
6	Fish	*Ammocrypta clara*	Western sand darter	G3	
1,7	Fish	*Crystallaria asprella*	Crystal darter	G3	
6, 13	Fish	*Cycleptus elongatus*	Blue sucker	G3	
3	Fish	*Cyprinella callisema*	Ocmulgee shiner	G3	
3	Fish	*Cyprinella callitaenia*	Bluestripe shiner	G2	
3	Fish	*Cyprinella xaenura*	Altamaha shiner	G1G2	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
1	Fish	*Etheostoma bifascia*	Florida sand darter	G3	
11,12	Fish	*Etheostoma collis*	Carolina darter	G3	
11	Fish	*Etheostoma mariae*	Pinewoods darter	G3	
7	Fish	*Etheostoma raneyi*	Yazoo darter	G2	
1	Fish	*Etheostoma zonifer*	Blackwater darter	G3	
7	Fish	*Fundulus euryzonus*	Broadstripe topminnow	G2	
5	Fish	*Micropterus notius*	Suwannee bass	G2G3	
3	Fish	*Moxostoma robustum*	Robust redhorse	G1	
6	Fish	*Notropis hubbsi*	Bluehead shiner	G3	
7	Fish	*Notropis melanostomus*	Blackmouth shiner	G2	
6,13	Fish	*Notropis sabinae*	Sabine shiner	G3	
11	Fish	*Nopturus furiosus*	Carolina Madtom	G3	
1,7	Fish	*Noturus munitus*	Frecklebelly madtom	G3	
7	Fish	*Noturus stigmosus*	Northern madtom	G3	
7	Fish	*Percina aurora*	Pearl Darter	G1	
1	Fish	*Percina austroperca*	Southern logperch	G3	
1	Fish	*Percina brevicauda*	Coal darter	G2	
1,7	Fish	*Percina lenticula*	Freckled darter	G2	
11	Fish	*Semotilus lumbee*	Sandhills chub	G3	
7	Insect	*Alloperla natchez*	Natchez stonefly	G2	
5,7,11	Insect	*Atrytone arogos arogos*	Arogos skipper	G3G4T1T2	C
11	Insect	*Atrytonopsis loammi*	Loammi skipper	G2G4Q	
1	Insect	*Cheumatopsyche bibbensis*	A caddisfly	G1	
1,5	Insect	*Cordulegaster sayi*	Say's spiketail	G1G2	
1	Insect	*Epitheca spinosa*	Robust baskettail	G3	
11	Insect	*Euphyes dukesi*	Dukes' skipper	G3	
1	Insect	*Gomphus geminatus*	Twin-striped clubtail	G3	
1	Insect	*Gomphus hodgesi*	Hodges' clubtail	G3	
1	Insect	*Gomphus hybridus*	Cocoa clubtail	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
11	Insect	*Gomphus septima*	Septima's clubtail	G2	
7	Insect	*Haploperla chukcho*	Chukcho stonefly	G2	
11	Insect	*Hemipachnobia subporphyrea*	Venus flytrap cutworm moth	G1?	
11	Insect	*Hesperia attalus slossonae*	Dotted skipper	G3G4T3	
6	Insect	*Leuctra szczytkoi*	Schoolhouse Springs leuctran stonefly	G2	
3	Insect	*Macromia margarita*	Mountain river cruiser	G2G3	
11	Insect	*Melanoplus attenuatus*	Slender-Bodies Malanoplus	G2G3	
11	Insect	*Melanoplus nubilus*	A Short-Winged Melanoplus	G3?	
1	Insect	*Oecetis morsei*	A caddisfly	G2	
3	Insect	*Ophiogomphus incurvatus*	Appalachian snaketail	G3	
1,5	Insect	*Progomphus bellei*	Belle's sanddragon	G3	
11	Insect	*Ptichodis bistrigata*	Southern ptichodis	G3	
5	Insect	*Somatochlora calverti*	Calvert's emerald dragonfly	G3	
13	Insect	*Somatochlora margarita*	Dragonfly, Big Thicket emerald	G2	
1	Insect	*Somatochlora provacans*	treetop emeral dragonfly	G3	
11	Insect	*Spartiniphaga carterae*	Carter's noctuid moth	G2G3	
1	Insect	*Stylurus townesi*	Townes' clubtail	G3	
1,5,7,12,13	Mammal	*Corynorhinus rafinesquii*	Rafinesque's big-eared bat	G3G4	
1,12, 13	Mammal	*Myotis austroriparius*	Southeastern myotis	G3G4	
5	Mammal	*Neofiber alleni*	Round-tailed muskrat	G3	
5	Mammal	*Podomys floridanus*	Florida mouse	G3	
5	Mammal	*Sciurus niger shermani*	Sherman's fox squirrel	G5T2	
1,5	Mammal	*Ursus americanus floridanus*	Florida black bear	G5T2	
11,12	Mollusk	*Alasmidonta varicosa*	Brook floater	G3	
5	Mollusk	*Alasmidonta wrightiana*	Ochlockonee arcmussel	GH	
5	Mollusk	*Anodonta heardi*	Apalachicola floater	G1	
1,7	Mollusk	*Anodontoides radiatus*	Rayed creekshell	G3	
5	Mollusk	*Aphaostracon pycnus*	Dense hydrobe	G1	
5	Mollusk	*Cincinnatia vanhyningi*	Seminole Spring siltsnail	G1	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
7	Mollusk	*Elliptio arca*	Alabama spike	G3	
11	Mollusk	*Elliptio roanokensis*	Roanoke slabshell	G2	
13	Mollusk	*Fusconaia askewi*	Texas pigtoe	G2	
13	Mollusk	*Fusconaia lananensis*	Triangle pigtoe	G1Q	
11	Mollusk	*Fusconaia masoni*	Atlantic pigtoe	G2	
1	Mollusk	*Fusconaia succissa*	Purple pigtoe	G3	
1	Mollusk	*Lampsilis australis*	Southern sandshell	G2	
13	Mollusk	*Lampsilis hydiana*	Louisiana fatmucket	G3	
6,13	Mollusk	*Lampsilis satura*	sandbank pocketbook	G3	
12	Mollusk	*Lampsilis splendida*	Rayed Pink Fatmucket	G3	
1	Mollusk	*Lasmigona complanta alabamensis*	Alabama heelsplitter	G5T2T3	
11	Mollusk	*Lasmigona subviridis*	Green floater	G3	
1	Mollusk	*Margaritifera marrianae*	Alabama pearlshell	G1	C
1,6,13	Mollusk	*Obovaria jacksoniana*	Southern hickorynut	G1G2	
7	Mollusk	*Obovaria unicolor*	Alabama hickorynut	G3	
7	Mollusk	*Plethobasus cyphyus*	Sheepnose	G3	
7	Mollusk	*Pleurobema beadleanum*	Mississippi Pigtoe	G3	
6,13	Mollusk	*Pleurobema riddellii*	Louisiana pigtoe	G1G2	
7	Mollusk	*Pleurobema rubrum*	Pyramid pigtoe	G2	
6,13	Mollusk	*Potamilus amphiachaenus*	Texas heelsplitter	G1	
3	Mollusk	*Pyganodon gibbosa*	Inflated floater	G3Q	
7	Mollusk	*Quadrula cylindrica cylindrica*	Rabbitsfoot	G3T3	
1	Mollusk	*Quadrula rumphiana*	Ridged mapleleaf	G3	
6,7	Mollusk	*Strophitus subvexus*	Southern creekmussel	G2	
11	Mollusk	*Toxolasma pullus*	Savannah lilliput	G3	
5	Mollusk	*Utterbackia peggyae*	Florida floater	G3	
1	Mollusk	*Villosa choctawensis*	Choctaw bean	G2	
5	Other Invertebrate	*Crangonyx hobbsi*	Hobbs' cave amphipod	G2G3	
5	Other Invertebrate	*Progomphus bellei*	Belle's sand clubtail	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
1,5	Reptile	*Gopherus polyphemus*	Gopher tortoise	G3	
1	Reptile	*Graptemys ernsti*	Escambia map turtle	G2	
5	Reptile	*Lampropeltis getula goini*	Apalachicola kingsnake	G5T2	
11	Reptile	*Nerodia sipedon williamengelsi*	Carolina salt marsh snake	G5T3	
1,11	Reptile	*Ophisaurus mimicus*	Mimic glass lizard	G3	
7	Reptile	*Pithuophis melanoleucus lodingi*	Black pine snake	G4T3	C
1,5	Reptile	*Pituophis melanoleucus mugitus*	Florida pine snake	G5T3?	
6,13	Reptile	*Pituophis melanoleucus ruthveni*	Louisiana pinesnake	G4T3	C
5	Reptile	*Pseudemys concinna suwanniensis*	Suwannee cooter	G5T3	
5	Reptile	*Sceloporus woodi*	Florida scrub lizard	G3	
5	Reptile	*Stilosoma extenuatum*	Short-tailed snake	G3	
11	Nonvascular Plant	*Campylopus carolinae*	Carolina campylopus	G1	
11	Nonvascular Plant	*Cylindrocolea rhizantha*	A Liverwort	G3?	
11	Nonvascular Plant	*Fissidens hallii*	Hall's fissiden moss	G2	
11	Nonvascular Plant	*Frullania donnellii*	A liverwort	G3?	
11	Nonvascular Plant	*Lejeunea dimorphophylla*	A liverwort	G2G3	
11	Nonvascular Plant	*Metzgeria uncigera*	A liverwort	G3	
11	Nonvascular Plant	*Sphagnum fitzgeraldii*	Fitzgerald's peatmoss	G2G3	
11	Nonvascular Plant	*Sphagnum macrophyllum* var. *floridanum*	Florida Peatmoss	G3T3	
11	Nonvascular Plant	*Teloschistes flavicans*	Sunrise Lichen	G3G4	
7	Nonvascular Plant	*Trachyxiphium heteroicum*	Trachyxiphium Mosss	G2G3	
1,5	Vascular Plant	*Agalinis divaricata*	Pinelands false foxglove	G3	
7	Vascular Plant	*Agalinis pseudaphylla*	Shinner's false foxglove	G2?Q	
1,5,6,7,11,12,13	Vascular Plant	*Agrimonia incisa*	Incised agrimony	G3	
3, 11,12	Vascular Plant	*Amorpha schwerinii*	Schwerin's false indigo	G3	
6,7	Vascular Plant	*Amsonia ludoviciana*	Louisiana bluestar	G3	
1,5	Vascular Plant	*Andropogon arctatus*	Pinewoods bluestem	G3	
5	Vascular Plant	*Angelica dentata*	Coastalplain angelica	G2G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
7	Vascular Plant	*Arabis patens*	Spreading rockcress	G3	
5	Vascular Plant	*Aristida mohrii*	Mohr's threeawn	G1	
5	Vascular Plant	*Aristida patula*	Tall threeawn	G3	
5	Vascular Plant	*Aristida rhizomophora*	Florida threeawn grass	G2	
5,7	Vascular Plant	*Aristida simpliciflora*	Southern three-awn grass	G2	
5	Vascular Plant	*Arnoglossum diversifolium*	Variableleaf Indian plantain	G2	
5	Vascular Plant	*Arnoglossum floridanum*	Florida cacalia	G3	
1,5	Vascular Plant	*Arnoglossum sulcatum*	Indian plantain	G2G3	
5	Vascular Plant	*Asclepias curtissii*	Curtiss' milkweed	G3	
5	Vascular Plant	*Asclepias viridula*	Southern milkweed	G2	
11,12	Vascular Plant	*Asplenium X heteroresiliens*	Carolina spleenwort	HYB	
5	Vascular Plant	*Aster chapmanii*	Savannah aster	G2G3	
1,5	Vascular Plant	*Aster eryngiifolius*	Thistleleaf aster	G3G4	
11,12	Vascular Plant	*Aster georgianus*	Georgia aster	G2G3	C
11	Vascular Plant	*Aster mirabilis*	Bouquet aster	G2G3	
1,11	Vascular Plant	*Astragalus michauxii*	Sandhills milkvetch	G3	
1	Vascular Plant	*Baptisia megacarpa*	Appalachian wild indigo	G2	
5	Vascular Plant	*Baptisia simplicifolia*	Scareweed	G3	
13	Vascular Plant	*Bartonia texana*	Texas Bartonia	G3	
5	Vascular Plant	*Berlandiera subacaulis*	Florida greeneyes	G3	
5	Vascular Plant	*Boltonia apalachicolensis*	Apalachicola doll's daisy	G2Q	
7	Vascular Plant	*Botrychium jenmanii*	Dixie grapefern	G3G4	
5	Vascular Plant	*Calamintha ashei*	Ashe's calamint	G3	
5	Vascular Plant	*Calamintha dentata*	Florida calamint	G3	
1,7,11,12	Vascular Plant	*Calopogon multiflorus*	Many-flower grass pink	G2G3	
1,5	Vascular Plant	*Calopogon pallidus*	Page grasspink	G3	
11	Vascular Plant	*Cardamine longii*	Long's bittercress	G3Q	
5,7	Vascular Plant	*Carex baltzelli*	Baltzell's sedge	G3	
5,6,7,12	Vascular Plant	*Carex decomposita*	Cypress-knee sedge	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
7,11	Vascular Plant	*Carex impressinervia*	Ravine sedge	G1G2	
7	Vascular Plant	*Castanea pumila* var. *ozarkensis*	Ozark chinquapin	G5T3	
5	Vascular Plant	*Centrosema arenicola*	Pineland butterfly pea	G2	
5,7,11	Vascular Plant	*Cleistes bifaria*	Small spreading pogonia	G3G4	
1,5	Vascular Plant	*Coelorachis tuberculosa*	Bumpy joittail grass	G3	
5,7	Vascular Plant	*Coreopsis nudata*	Georgia tickseed	G3?	
11	Vascular Plant	*Coreopsis X delphiniifolia*	Larkspur Coreopsis	HYB	
7	Vascular Plant	*Crataegus harbisonii (=C. ashei)*	Ashe hawthorne	G1	
7	Vascular Plant	*Crataegus triflora*	Three-flower hawthorne	G2	
13	Vascular Plant	*Crataegus warneri*	Warner's Hawthorn	G2	
1	Vascular Plant	*Croton alabamensis*	Alabama croton	G3	
5	Vascular Plant	*Ctenium floridanum*	Florida toothache grass	G2	
6,13	Vascular Plant	*Cyperus grayioides*	Mohlenbrock's Umbrella-sedge	G3	
1,6,13	Vascular Plant	*Cypripedium kentuckiense*	Kentucky Lady's slipper	G3	
11	Vascular Plant	*Danthonia epilis*	Bog oat-grass	G3?	
7	Vascular Plnat	*Desmodium ochroleucum*	Cream tick-trefoil	G2G3	
11	Vascular Plant	*Dichanthelium hirstii*	Hirsts' panic grass	G1	C
7	Vascular Plant	*Dryopteris X australis*	Small woodfern	HYB	
1,5	Vascular Plant	*Echinodorus parvulus*	mudbabies	G3	
11	Vascular Plant	*Ericaulon parkeri*	Parker's pipewort	G3	
5,6	Vascular Plant	*Euphorbia discoidalis*	Summer spurge	G3?Q	
5	Vascular Plant	*Forestiera godfreyi*	Godfrey's swampprivet	G3	
11	Vascular Plant	*Fothergilla major*	Large witchalder	G3	
5	Vascular Plant	*Gentiana pennelliana*	Wiregrass gentian	G3	
5	Vascular Plant	*Hartwrightia floridana*	Florida hartwrightia	G2	
5	Vascular Plant	*Hasteola robertiorum*	Hammockherb	G1	
11	Vascular Plant	*Heuchera caroliniana*	Carolina Alumroot	G3	
1	Vascular Plant	*Hexastylis speciosa*	Harper's heartleaf	G2	
13	Vascular Plant	*Hisbiscus dasycalyx*	Neches River Rose mallow	G1	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
1,12	Vascular Plant	*Hymenocallis caroliniana (=H. coronaria)*	Carolina spider lily	G2Q	
5	Vascular Plant	*Hymenocallis henryae*	Henry's spiderlily	G2	
5	Vascular Plant	*Hypericum chapmanii*	Apalachicola St. Johnswort	G3	
5	Vascular Plant	*Hypericum exile*	Florida sands St. Johnswort	G2G3	
5	Vascular Plant	*Illicium parviflorum*	Yellow anisetree	G2	
11	Vascular Plant	*Isoetes microvela*	Quillwort	G1	
11	Vascular Plant	*Isoetes virginica*	Virginia quillwort	G1	
7	Vascular Plant	*Juglans cinerea*	Butternut	G3G4	
5	Vascular Plant	*Justicia crassifolia*	Thickleaf waterwillow	G2	
11	Vascular Plant	*Kalmia cuneata*	White Wicky	G3	
5,11	Vascular Plant	*Lachnocaulon beyrichianum*	Southern bogbutton	G2G3	
1,5,6,7,13	Vascular Plant	*Lachnocaulon digynum*	Pineland bogbutton	G3	
5	Vascular Plant	*Lachnocaulon engleri*	Engler's bogbutton	G3	
13	Vascular Plant	*Leavenworthia texana*	Texas Golden Bladecress	G1	C
5	Vascular Plant	*Lechea cernua*	Nodding pinweed	G3	
5	Vascular Plant	*Lechea divaricata*	Drysand pinweed	G2	
13	Vascular Plant	*Liatris cymosa*	Branched gay feather	G2	
6,13	Vascular Plant	*Liatris tenuis*	Slender gay feather	G3	
1	Vascular Plant	*Lilium pyrophilium*	Panhandle lily	G1G2	
1,7,11	Vascular Plant	*Lindera subcoriacea*	Bog spicebush	G2	
1,7	Vascular Plant	*Linum macrocarpum*	Spring Hill flax	G2?	
5	Vascular Plant	*Linum westii*	West's flax	G2	
5,11,12	Vascular Plant	*Litsea aestivalis*	Pondspice	G3	
11,12	Vascular Plant	*Lobelia boykinii*	Boykin's lobelia	G2G3	
11	Vascular Plant	*Lotus helleri*	Heller's bird-foot trefoil	G3	
11	Vascular Plant	*Ludwigia ravenii*	Raven's Seedbox	G2?	
5	Vascular Plant	*Lupinus westianus*	Gulf coast lupine	G2	
1	Vascular Plant	*Lysimachia fraseri*	Fraser's yellow loosestrife	G2	
12	Vascular Plant	*Lysimachia loomisii*	Loomis yellow loosestrife	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
5	Vascular Plant	*Lythrum curtissii*	Curtiss' loosestrife	G1	
11	Vascular Plant	*Macbridea caroliniana*	Carolina birds-in-a-nest	G2G3	
1,5,7	Vascular Plant	*Macranthera flammea*	Flame flower	G3	
5	Vascular Plant	*Magnolia ashei*	Ashe's magnolia	G2	
1,6,7	Vascular Plant	*Marshallia trinervia*	Broadleaf Barbara's buttons	G3	
5	Vascular Plant	*Matelea floridana*	Florida milkving	G2	
5	Vascular Plant	*Matelea pubiflora*	Trailing milkvine	G3G4	
5	Vascular Plant	*Micranthemum glomeratum*	Manatee mudflower	G3?	
11	Vascular Plant	*Minuartia godfreyi*	Godfrey's stitchwort	G1	
5,12	Vascular Plant	*Monotropsis odorata*	Sweet Pinesap	G3	
11	Vascular Plant	*Muhlenbergia torreyana*	Pinebarren muhly	G3	
1,5,7,11	Vascular Plant	*Myriophyllum laxum*	Loose watermilfoil	G3	
5	Vascular Plant	*Najas filifolia*	Needleleaf waternymph	G1	
5	Vascular Plant	*Nemastylis floridana*	Fallflowering pleatleaf	G2	
5	Vascular Plant	*Nolina atopocarpa*	Florida beargrass	G3	
11	Vascular Plant	*Nuphar saggitifolia*	Narrowleaf Cowlily	G3	
5	Vascular Plant	*Nyssa ursina*	Bear tupelo	G2Q	
1	Vascular Plant	*Onosmodium sp. nov. "decipiens"*	A false gromwell	G1G2	
5,11	Vascular Plant	*Oxypolis ternata*	Piedmont cowbane	G3	
1,5,7	Vascular Plant	*Panicum nudicaule*	naked-stemmed panic grass	G3?	
11	Vascular Plant	*Parietaria praetermissa*	Large-seed Pellitory	G3G4	
5,11	Vascular Plant	*Parnassia caroliniana*	Carolina grass of parnassus	G3	
5	Vascular Plant	*Paronychia rugelii*	Rugel's nailwort	G2	
7	Vascular Plant	*Penstemon tenuiflorus*	White-flowered beardtongue	G3?	
5	Vascular Plant	*Persea humilis*	Silk bay	G3	
5	Vascular Plant	*Phlox floridana*	Florida phlox	G1G2Q	
5	Vascular Plant	*Phoebanthus tenuifolius*	Pineland false sunflower	G3	
5	Vascular Plant	*Physalis arenicola*	Cypresshead groundcherry	G3?	
5	Vascular Plant	*Physalis carpenterii*	Carpenter's groundcherry	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
5	Vascular Plant	*Physostegia godfreyi*	Apalachicola false dragonhead	G3	
1,5,7,12	Vascular Plant	*Pieris phillyreifolia*	Climbing fetterbush	G3	
5	Vascular Plant	*Pinckneya bracteata*	Fevertree	G3G4	
1,5,7	Vascular Plant	*Pinguicula planifolia*	Chapman's butterwort	G3?	
1,5,7	Vascular Plant	*Pinguicula primuliflora*	Southern butterwort	G3G4	
5	Vascular Plant	*Pityopsis flexuosa*	Zigzag silkgrass	G3	
1,5	Vascular Plant	*Pityopsis oligantha*	Coastal-Plain golden-aster	G2G4	
1,5,11,12	Vascular Plant	*Plantago sparsiflora*	Pineland plantain	G3	
1,5,6,7,11,12,13	Vascular Plant	*Platanthera integra*	Yellow fringeless orchid	G3G4	
1	Vascular Plant	*Platanthera integrilabia*	White fringeless orchid	G2G3	C
1,5,7,11	Vascular Plant	*Polygala hookeri*	Hooker's milkwort	G3	
5,7	Vascular Plant	*Polygala leptostachys*	Slender spike milkwort	G3G4	
5	Vascular Plant	*Polygonella macrophylla*	Largeleaf jointweed	G2	
11	Vascular Plant	*Polygonum glaucum*	Seaside knotweed	G3	
6,13	Vascular Plant	*Prenanthes barbata*	Barbed rattlesnakeroot	G2	
5,6,7,12	Vascular Plant	*Pteroglossaspis ecristata (=Eulophia ecristata)*	Giant Orchid	G2	
5	Vascular Plant	*Pycnanthemum floridanum*	Florida mountainmint	G3	
1,5	Vascular Plant	*Quercus arkansana*	Arkansas oak	G3	
13	Vascular Plant	*Quercus boyntonii*	Dwarf Post Oak	G1	
3,7,12	Vascular Plant	*Quercus oglethorpensis*	Oglethorpe oak	G3	
11,12	Vascular Plant	*Rhexia aristosa*	Awnpetal meadow-beauty	G3	
5	Vascular Plant	*Rhexia parviflora*	White meadowbeauty	G2	
1,5	Vascular Plant	*Rhexia salicifolia*	Panhandle meadowbeauty	G2	
1,5,7	Vascular Plant	*Rhododendron austrinum*	Orange azalea	G3	
5	Vascular Plant	*Rhynchosia michauxii*	Michaux's snoutbean	G3?	
5,12	Vascular Plant	*Rhynchospora breviseta*	Shortbristle beaksedge	G3G4	
1,5,7	Vascular Plant	*Rhynchospora crinipes*	Hairy peduncled beakrush	G1	
1,5,6,7,13	Vascular Plant	*Rhynchospora macra*	Large beakrush	G3	
1,5,11,12	Vascular Plant	*Rhynchospora pleiantha*	Coastal beaksedge	G2	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
1,11	Vascular Plant	*Rhynchospora thornei*	Thorne's beaksedge	G1G2	
1	Vascular Plant	*Rudbeckia auriculata*	Eared coneflower	G1	
5	Vascular Plant	*Rudbeckia graminifolia*	Grassleaf coneflower	G3	
1	Vascular Plant	*Rudbeckia heliopsidis*	Sunfacing coneflower	G2	
5	Vascular Plant	*Rudbeckia nitida*	Shiny coneflower	G3?	
6,13	Vascular Plant	*Rudbeckia scabrifolia*	Sabine coneflower	G2	
1,5,7	Vascular Plant	*Ruellia noctiflora*	Night flowering ruellia	G2	
11	Vascular Plant	*Sagittaria graminea* var. *weatherbiana*	Chapman's Arrowhead	G5T2	
5	Vascular Plant	*Sagitaria isoetiformis*	Quillwort arowleaf	G3	
5	Vascular Plant	*Salix floridanum*	Florida willow	G2	
1,5,7	Vascular Plant	*Sarracenia leucophylla*	Crimson pitcherplant	G3	
1,7	Vascular Plant	*Sarracenia rubra ssp. wherryi*	Wherry's pitcherplant	G3	
1,3,5,6,7	Vascular Plant	*Schisandra glabra*	Bay starvine	G3	
5	Vascular Plant	*Schoenocaulon dubium*	Florida feathershank	G3?	
5	Vascular Plant	*Schoenolirion albiflorum*	White sunnybells	G3	
6,13	Vascular Plant	*Schoenolirion wrightii*	Texas sunnybell	G3	
5	Vascular Plant	*Scutellaria glabriuscula*	Georgia skullcap	G2?	
5	Vascular Plant	*Sideroxylon alachuense*	Silver buckthorn	G1	
5	Vascular Plant	*Sideroxylon tenax*	Tough bully	G3?	
7	Vascular Plant	*Silene ovata*	Blue Ridge catchfly	G2G3	
6,13	Vascular Plant	*Silene subciliata*	Scarlet Catchfly	G3	
5	Vascular Plant	*Silphium simpsonii*	Simpson's rosinweed	G3?Q	
5	Vascular Plant	*Sisyrinchium xerophyllum*	Jeweled blue-eyed grass	G3	
11	Vascular Plant	*Solidago plumosa*	Plumed goldenrod	G1	
11	Vascular Plant	*Solidago pulchra*	Carolina goldenrod	G3	
11	Vascular Plant	*Solidago villosicarpa*	Coastal goldenrod	G1Q	
11	Vascular Plant	*Solidago verna*	Spring-flowering goldenrod	G3	
5,11	Vascular Plant	*Spigelia loganiodes*	Florida pinkroot	G1G2	
5,6,7,11	Vascular Plant	*Spiranthes longilabris*	Giant spiral ladies'-tresses	G3	

Sensitive Species in Coastal Plain/Piedmont					
Forest	**Group**	**Scientific Name**	**Common Name**	**G-Rank**	**Candidate**
1,5,12	Vascular Plant	*Sporobolus curtisii*	Pineland Dropseed	G3	
1,5	Vascular Plant	*Sporobolus floridanus*	Florida dropseed	G3	
12	Vascular Plant	*Sporobolus pinetorum*	Carolina Dropseed	G3	
5	Vascular Plant	*Stachydeoma graveolens*	Mock pennyroyal	G2	
13	Vascular Plant	*Streptanthus maculatus*	Clasping Twistflower	G3	
5	Vascular Plant	*Stylisma abdita*	Showy dawnflower	G2G3	
1,5	Vascular Plant	*Tephrosia mohrii*	Pineland hoarypea	G3	
1,11	Vascular Plant	*Thalictrum macrostylum (=T.subrotundum)*	Piedmont meadowrue	G1G2Q	
1,11	Vascular Plant	*Tofieldia glabra*	Smooth tofieldia	G3	
1,5,6,7,12	Vascular Plant	*Tridens carolinianus*	Carolina fluffgrass	G3	
7	Vascular Plant	*Trillium foetidissimum*	Fetid trillium	G3	
12	Vascular Plant	*Trillium lancifolium*	Lanceleaf trillium	G3	
11	Vascular Plant	*Trillium pusillum var. pusillum*	Least trillium	G3T2	
12	Vascular Plant	*Trillium rugelii*	Illscented trillium	G3	
13	Vascular Plant	*Trillium texanum*	Texas trillium	G3T2	
7	Vascular Plant	*Uvularia floridana*	Florida bellwort	G3	
5	Vascular Plant	*Verbesina chapmanii*	Chapman's crownbeard	G3	
5	Vascular Plant	*Verbesina heterophylla*	Diverseleaf crownbeard	G2	
5	Vascular Plant	*Vicia ocalensis*	Ocala vetch	G1	
5	Vascular Plant	*Warea sessilifolia*	Sessileleaf pinelandcress	G2G4	
1,5,7	Vascular Plant	*Xyris chapmanii*	Chapman's yellow-eyed grass	G3	
1,5,6,7,13	Vascular Plant	*Xyris drummondii*	Drummond's yelloweyed grass	G3	
1,5	Vascular Plant	*Xyris isoetifolia*	Quillwort yelloweyed grass	G2	
1,5	Vascular Plant	*Xyris longisepala*	Kral's yelloweyed grass	G2	
5,6,7	Vascular Plant	*Xyris louisianica*	Louisiana yelloweyed grass	G3	
1,5,6,7,13	Vascular Plant	*Xyris scabrifolia*	Harper's yelloweyed grass	G3	
5	Vascular Plant	*Zephyranthes simpsonii*	Redmargin zephyrlily	G2G3	

[1]Forest: 1 – NFs in Alabama 3 – Chattahoochee-Oconee NFs 5 – NFs in Florida
6 – Kisatchie NF 7 - NFs in Mississippi 11 – NFs in North Carolina
12 – Frances Marion & Sumter NFs 13 – NFs and Grasslands in Texas

APPENDIX 2
BIOLOGICAL ASSESSMENT

for

SUPPLEMENT to the
FINAL ENVIRONMENTAL IMPACT STATEMENT for
VEGETATION MANAGEMENT in the COASTAL PLAIN/PIEDMONT

USDA FOREST SERVICE, SOUTHERN REGION

INTRODUCTION

The purpose of this biological assessment (BA) is to document any potential effects of the proposed modification of specific language in a portion of one of the General Mitigation Measure (Coastal Plain/Piedmont VMEIS Vol. II.E.1.a(2)) on proposed, endangered, threatened, and sensitive (PETS) species or their habitat, and to ensure that management decisions can be made with the benefit of such knowledge. The proposed change only involves a modification of inventory requirements for PETS species. The proposal does not involve reconsideration of the various vegetation management activities or their effects on the environment.

The objectives of this assessment are to:

1. Ensure Forest Service actions do not contribute to a loss of viability of any plant or animal species or cause a trend toward Federal listing of any species.
2. Comply with the requirements of the Endangered Species Act that action by Federal agencies not jeopardize or adversely modify critical habitat of federally listed species.
3. Provide a process and a standard by which PETS species receive full consideration in the decision-making process.

PROPOSED ACTION AND AFFECTED AREA

The analysis area includes the Coastal Plain/Piedmont. The proposed action involves the modification of specific language in a portion of one of the General Mitigation Measure of the VMEIS. It addresses a proposal to clarify direction concerning requirements for conducting project-level inventories for those activities covered under the VMEIS. The change proposed would remove the requirement that site-specific inventories be conducted for every PETS species under all circumstances.

The wording in Exhibit 1 below is found in both the Record of Decision and in Coastal Plain/Piedmont VMEIS Vol. II.E.1.a(2) and would be changed by this proposal. Exhibit

2 presents the proposed wording. The differences between the exhibits are in bold. Determination of when population information should be gathered would be made based on the direction contained in the Regional supplement to FSM 2672.

Exhibit 1. Current Wording
"A biological evaluation of how a project may affect any species Federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive, **is** done as part of the site-specific environmental analysis. This evaluation considers **all** available **inventories of** threatened, endangered, proposed and sensitive species populations and their habitat for the proposed treatment area. **When adequate population inventory information is unavailable, it must be collected when the site has high potential for occupancy by a threatened, endangered, proposed, or sensitive species.**"

Exhibit 2. Proposed Wording
"A biological evaluation of how a project may affect any species Federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitve **shall be** done as part of the site-specific environmental analysis. This evaluation considers available **information on** threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area."

SPECIES EVALUATED

The Regional Forester currently lists 348 sensitive species (2001 list revision) as potentially occurring in the Coastal Plain/Piedmont region. In addition, there are 76 proposed, endangered, or threatened species that can potentially occur in the Coastal Plain/Piedmont region. All these species were considered in this assessment. These species are listed in Appendix 1.

EFFECTS

Site specific Biological Evaluations (BE) will be completed for all vegetation management projects covered under theVMEIS. The decision as to when site-specific inventories for PETS species are needed will be based on the direction from the Regional Supplement to FSM 2672.

There are situations where site-specific surveys could provide more definitive information to improve the determination of effects on PETS species or increase the level of protection afforded. This would include situations where the following conditions are met: (1) a species has the potential to occur based on existing range and habitat information, (2) the project activities could have negative effects on the species, (3) information on number and locations of individuals are necessary to implement appropriate protective measures, (4) no current site-specific survey is available, and (5) feasible and effective inventory methods are available. Examples of these situations for representative species are as follow:

Example 1. Site-specific inventories would be necessary where plants (vascular and non-vascular) species are known or have the potential to occur in the proposed area if the previously listed conditions exist. For example, if ground-disturbing activities were proposed in an area that provides potential habitat for PETS species, such as American chaffseed (*Schwabia americana*), then site-specific inventories would be appropriate. Information on presence and location of individuals is necessary to avoid impacts from the ground-disturbing activities.

Example 2. Site-specific inventories would be necessary where bird species are known or have potential to occur in the proposed area if the previously listed conditions exist. For example, if mechanical midstory reduction in a 60+ year old southern yellow pine stand were proposed in an area that provides potential habitat for PETS birds, such as red-cockaded woodpecker (*Picoides borealis*), then site-specific inventories would be appropriate prior to any action occurring. Information on presence/absence and location of individuals is necessary to avoid impacts from ground-disturbing activities.

Example 3. Site-specific inventories would be necessary where aquatic species are known or have potential to occur in the proposed area if the previously listed conditions exist. For example, if disturbance of a stream crossing were proposed in an area that provides potential habitat for PETS aquatics, such as sandbook pocketbook mussel *(Lampsilis satura)*, then site-specific inventories would be appropriate. Information on presence/absence and location of individuals is necessary to avoid impacts fromthe stream crossing construction.

There are some PETS species and situations where site-specific surveys would not provide more definitive information to improve the determination of effects on PETS species or increase the level of protection afforded. Examples of these situations for representative species are listed as follows:

Example 1. Site-specific inventories may not be necessary where potential habitat for PETS plants (vascular and non-vascular) is present in the proposed area. For example, if dormant season prescribed burning is proposed in an area that provides potential habitat for PETS plants such as Kentucky lady slipper *(Cypripedium kentuckiense)*, no site-specific inventory would be necessary. Even if this species were present on site, prescribed burning during the dormant season would not adversely affect the lady's slipper or other herbaceous plants. There would be no benefit to determining the number and locations of individuals on the site. However, if fire control lines are needed, the line location would need to be surveyed prior to constructing these lines.

Example 2. Site-specific inventories may not be necessary where aquatic PETS species are known to occur in the watershed. For example, if ground-disturbing activities were proposed in a watershed known to contain the gulf sturgeon (*Acipenser oxyrhynchus desotoi*) or other PETS species, a site-specific inventory

would not be necessary. Species would be assumed to be present and appropriate riparian mitigation measures would be established to protect these and other aquatic species. Information on numbers and specific location would not change or improve the protective measures.

Example 3. Site-specific inventories may not be necessary where potential habitat for PETS bird species is present in the proposed area. For example, if growing season prescribed burning were proposed in the habitat of the Bachman's sparrow (*Aimophila aestivalis*), then no site-specific inventory would be necessary. The species would be assumed to be present and nests would be assumed to be lost. However, re-nestings is likely and prescribed burning would provide long-term habitat benefits by creating the open, grassy conditions preferred by this species. Information on numbers and specific location would not change or improve project design or mitigation. However, if fire control lines are needed, the line location would need to be surveyed prior to constructing these lines.

Example 4. Site-specific inventories may not be necessary where potential habitat for PETS reptile species is present in the proposed area. For example, if mechanical midstory reduction activities were proposed for red-cockaded woodpecker in the habitat of the Louisiana pinesnake (*Pituophis melanoleucus ruthveni*), then no site-specific Louisiana pinesnake inventory would be necessary. This species would be assumed to be present because feasible and effective inventory techniques currently do not exist for this species. Its subterrainian nature makes it extremely difficult to gather meaningful data. With appropriate project design, respective mitigation measures are established to protect the Louisiana pinesnake. Information on numbers and specific location would not change or improve the protective measures.

The above examples illustrate under what circumstances site-specific inventories for PETS species would be appropriate. Site-specific inventories will be conducted when they would provide more definitive information to improve the determination of effects on PETS species or increase the level of protection afforded. Site-specific inventories would not be conducted if they would not provide more definitive information. However, presence of these species would be assumed and the effects to these species disclosed in the BE. In these situations, the determination of effects would be the same with or without additional inventories. Therefore, the proposed change in language in the one General Mitigation Measure (Coastal Plain/Piedmont VMEIS II.E.1.a(2)) would not result in additional effects to PETS species or change the effects on PETS species.

DETERMINATIONS OF EFFECT

The proposed actions are not likely to adversely affect Proposed, Endangered, or Threatened species that occurs in the Coastal Plain/Piedmont. The proposed action will have no impacts on Sensitive species that occur in the Coastal Plain/Piedmont. The proposed action will not result in a trend toward federal listing or loss of viability of any PETS species within the Coastal Plain/Piedmont region.

REFERENCES

USDA Forest Service. 2001. Region 8 Sensitive Species List.

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APPENDIX 3
US FISH AND WILDLIFE SERVICE
Letter of Concurrence