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50 CFR Part 17

**Endangered and Threatened Wildlife and
Plants; Proposed Endangered Status for
Reticulated Flatwoods Salamander;
Proposed Designation of Critical Habitat
for Frosted Flatwoods Salamander and
Reticulated Flatwoods Salamander;
Proposed Rule**

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17**

[FWS-R4-ES-2008-0082] [92210-1111 FY07 MO-B2]

RIN 1018-AU85

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Reticulated Flatwoods Salamander; Proposed Designation of Critical Habitat for Frosted Flatwoods Salamander and Reticulated Flatwoods Salamander**AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule; availability of draft economic analysis, and opening of comment period.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to split the listing under the Endangered Species Act of 1973, as amended (Act), of the currently threatened flatwoods salamander (*Ambystoma cingulatum*) into two distinct species: frosted flatwoods salamander (*Ambystoma cingulatum*) and reticulated flatwoods salamander (*Ambystoma bishopi*) due to a change in taxonomy. The frosted flatwoods salamander will maintain the status of threatened. However, we propose to list the reticulated flatwoods salamander as endangered under the Act. We also propose to designate critical habitat for both the frosted flatwoods salamander and the reticulated flatwoods salamander under the Act. In total, approximately 30,628 acres (ac) (12,395 hectares (ha)) (23,132 ac (9,363 ha) for the frosted flatwoods salamander and 7,496 ac (3,035 ha) for the reticulated flatwoods salamander) fall within the boundaries of the proposed critical habitat designation, which is located in the panhandle of Florida, southwestern Georgia, and southeastern South Carolina. We also announce the availability of the draft economic analysis for our proposed designation of critical habitat for the frosted and reticulated flatwoods salamanders. The draft economic analysis estimates that, over the period 2009 to 2028, post-designation costs for frosted and reticulated flatwoods salamander conservation-related activities would range between \$3.88 million and \$6.40 million (at a 3 percent discount rate) and \$2.49 million to \$4.38 million (at a 7 percent discount rate). Potential impacts are expected to range from \$261,000 to \$430,000 at 3 percent or \$235,000 to \$413,000 at 7 percent annually.

DATES: We will accept comments received or postmarked on or before *October 14, 2008*. We must receive requests for public hearings, in writing by *September 29, 2008*.

ADDRESSES: You may submit comments by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- U.S. mail or hand-delivery: Public Comments Processing, Attn: [FWS-R4-ES-2008-0082]; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will not accept e-mail or faxes. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

Public Hearing requests: To request a public hearing, submit a request in writing to the person listed under **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT: Ray Aycock, Field Supervisor, U.S. Fish and Wildlife Service, Mississippi Field Office, 6578 Dogwood View Parkway, Jackson, MS 39213; telephone: 601-321-1122; facsimile: 601-965-4340. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION: This document consists of: (1) a proposed rule to change the listing of the currently threatened flatwoods salamander (*Ambystoma cingulatum*) to frosted flatwoods salamander (*Ambystoma cingulatum*) and reticulated flatwoods salamander (*Ambystoma bishopi*). The frosted flatwoods salamander will continue to be listed as threatened and the reticulated flatwoods salamander is proposed to be listed as endangered; and (2) proposed critical habitat designations for both species. We had previously proposed critical habitat for the flatwoods salamander on February 7, 2007 (72 FR 5856).

Public Comments

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, we request comments or suggestions on this proposed rule. We particularly seek comments concerning:

(1) Any available information on known or suspected threats and proposed or ongoing projects with the potential to threaten either the frosted flatwoods salamander or the reticulated flatwoods salamander or any

information on the need to change the status of either species, including any information suggesting that the frosted flatwoods salamander should be listed as anything other than threatened.

(2) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether the benefit of designation would outweigh threats to the species caused by the designation, such that the designation of critical habitat is prudent;

(3) Specific information on:

- The amount and distribution of frosted flatwoods salamander and reticulated flatwoods salamander habitat,

- What areas occupied at the time of the original listing that contain features essential for the conservation of the species we should include in the designation and why, and

- What areas not occupied at the time of listing are essential to the conservation of the species and why;

(4) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(5) Any foreseeable economic, national security, or other relevant impacts resulting from the proposed designation and, in particular, any impacts on small entities; and the benefits of including or excluding areas that exhibit these impacts;

(6) Information on whether the draft economic analysis identifies all State and local costs and benefits attributable to the proposed critical habitat designation, and information on any costs or benefits that have been inadvertently overlooked.

(7) Information on whether the draft economic analysis makes appropriate assumptions regarding current practices and likely regulatory changes that would be imposed as a result of the designation of critical habitat.

(8) Information on whether the draft economic analysis correctly assesses the effect on regional costs associated with any land use controls that may derive from the designation of critical habitat.

(9) Information on areas that could potentially be disproportionately impacted by the designation of critical habitat.

(10) Any foreseeable economic, national security, or other relevant impacts resulting from the proposed designation and, in particular, any impacts on small entities;

(11) Economic data on the incremental effects that would result from designating any particular area as critical habitat, since it is our intent to

include the incremental costs attributed to the revised critical habitat designation in the final economic analysis.

(12) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments; and

(13) Information supporting or opposing possible exclusion of units within National Forests or on Department of Defense lands from critical habitat in the final designation.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We will not accept comments you send by e-mail or fax or to an address not listed in the **ADDRESSES** section.

We will post your entire comment—including your personal identifying information—on <http://www.regulations.gov>. If you provide personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule and draft economic analysis will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Mississippi Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Background

It is our intent to discuss below only those topics directly relevant to the taxonomic split of the flatwoods salamander into two species (the frosted flatwoods salamander and the reticulated flatwoods salamander) and the listing of the reticulated flatwoods salamander as endangered in this section of the proposed rule. For more information on the flatwoods salamander, refer to the final listing rule published in the **Federal Register** on April 1, 1999 (64 FR 15691). The overall range covered by the reticulated and the frosted flatwoods salamanders is the same as is currently designated for the flatwoods salamander. However, the reticulated flatwoods salamander inhabits the western part of the range and the frosted flatwoods salamander inhabits the eastern part.

In light of the taxonomic split, we also re-evaluated the status of the frosted flatwoods salamander. We determined that threatened status is appropriate for

this species because 124 breeding ponds supporting 22 of the 26 (85 percent) total populations for the species are located on public lands, most of these populations are relatively stable, and, based on the best scientific information available, we have concluded there are a sufficient number of populations that the species is not in immediate danger of extinction. The scientific information supporting the presence of populations comes from a variety of sources, including those data compiled in the Florida, Georgia, and South Carolina Natural Heritage databases and individual state databases, and data supplied by Fort Stewart Military Installation, Townsend Bombing Range, Apalachicola National Forest, Francis Marion National Forest, and St. Marks National Wildlife Refuge.

In general, most threats for this species (for example, habitat loss, habitat degradation, inadequacy of existing regulatory mechanisms) are of a historical nature in the majority of the range because breeding ponds supporting 85 percent of frosted flatwoods salamander populations occur on public lands where the habitat is relatively protected. Appropriate habitat management has been more actively pursued and multiple ponds support existing populations in many cases. On the 15 percent of ponds on private lands, there are a number of potential future threats including habitat loss and degradation, disease, predation, and fire suppression. The threat from invasive plant species is considered imminent, even on public lands, because of the current difficulties in managing for the prevention of spread of invasive species into natural habitats. The threat from drought is considered imminent for all populations because it is a current problem for the species at all sites. We will publish a separate notice providing the updated five-factor analysis for the frosted flatwoods salamander for public review and comment in the near future.

Taxonomic Classification

The original listing rule (64 FR 15691; April 1, 1999) described the geographic range of the flatwoods salamander as it was known at that time. Habitat for the species included occurrences across the lower southeastern Coastal Plain in Florida, Georgia, and South Carolina. Taxonomic revision resulted from research done by Pauly *et al.* (2007, pp. 415-429) which split the flatwoods salamander into two species, the frosted flatwoods salamander and the reticulated flatwoods salamander. The Apalachicola River drainage forms a geographic barrier between the two species. This drainage is a common site

for east-west phylogeographic breaks in many other taxa as well. For this reason, the split of the flatwoods salamander into two species is currently accepted by the scientific community. We propose to amend the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h) to reflect this revision to taxonomy.

Goin (1950, p. 299) recognized two distinct subspecies of flatwoods salamander based on morphological and color pattern variation. This split between the eastern and western portions of the salamander's range was later discounted in an analysis by Martof and Gerhardt (1965, pp. 342-346) and for the past 40 years the concept of a single undifferentiated species persisted. Pauly *et al.* (2007, pp. 415-429) conducted molecular and morphological analyses to test whether the flatwoods salamander, as originally described, followed a pattern of east-west disjunction at the Apalachicola River as has been described in many other species. They were able to demonstrate this predicted phylogeographic break. Based on mitochondrial DNA (mtDNA), morphology, and allozymes, they recognize two species of flatwoods salamanders, frosted flatwoods salamander to the east of the Apalachicola drainage and reticulated flatwoods salamander to the west. The Apalachicola River is probably the cause of major disjunctions in species distributions due to the repeated marine embayments during the Pliocene and Pleistocene interglacials that likely caused a barrier to gene flow.

In the Pauly *et al.* (2007, pp. 415-429) analyses, the use of mtDNA splits flatwoods salamander populations into two major clades east and west of the Apalachicola-Flint rivers. Samples from Jackson and Liberty Counties, Florida are informative because, geographically, they are located on opposite sides of the river but are phylogenetically distant with respect to mtDNA sequence divergence. In contrast, geographically distant populations on the same side of the Apalachicola River are very closely related. Their morphological analyses also support a taxonomic boundary at the Apalachicola-Flint rivers. Salamanders on opposite sides of this boundary significantly differed in both body shape and size based on multivariate analyses. The number of costal grooves (grooves along the side body of salamanders used in species identification), snout-vent length, six additional morphometric traits, and sexual dimorphisms in tail length, height, and width are all significantly different between the two taxa. Due to

the importance of the tail in ambystomatid courtship and fertilization, tail differences may be particularly important.

Allozyme data presented in Shaffer *et al.* (1991, pp. 290-291, 302) also indicated differences between salamanders on either side of the Apalachicola River. Their results demonstrated these populations have fixed-allele differences, consistent with the mtDNA and morphological results.

The frosted and reticulated flatwoods salamanders can be differentiated from each other by the use of several morphological characters (Pauly *et al.* 2007, pp. 424-425). The frosted flatwoods salamander generally has more costal grooves and tends to be larger than the reticulated flatwoods salamander. For individuals of the same size, the frosted flatwoods salamander has longer fore- and hind limbs and a longer, wider, and deeper head. Male frosted flatwoods salamanders have longer tails than those of the reticulated flatwoods salamander. The belly pattern of the frosted flatwoods salamander consists of discrete white spots on a dark background while the spots are less distinct in the reticulated flatwoods salamander giving a "salt and pepper" appearance (Goin 1950, pp. 300-314). The back pattern of the reticulated flatwoods salamander has a more net-like appearance than the frosted flatwoods salamander, as the common names imply.

In summary, in the Proposed Regulation Promulgation section of this document, we propose the taxonomic change to reflect the split of flatwoods salamander (*Ambystoma cingulatum*) to frosted flatwoods salamander (*Ambystoma cingulatum*) and reticulated flatwoods salamander (*Ambystoma bishopi*).

Listing of the Reticulated Flatwoods Salamander

History of the Action

On December 16, 1997, we published a proposed rule to list the flatwoods salamander as a threatened species (62 FR 65787). The final rule to list the species was published on April 1, 1999 (64 FR 15691). We are now proposing to list the reticulated flatwoods salamander as a new species that is currently known west of the Apalachicola-Flint Rivers as the flatwoods salamander.

Species Information

As far as we currently know, the life-history traits and habitat use of both the frosted flatwoods salamander and the reticulated flatwoods salamander are

similar to those previously described for the flatwoods salamander. Both species of flatwoods salamanders are moderately sized salamanders that are generally black to chocolate-black with fine, irregular, light gray lines and specks that form a cross-banded pattern across their backs (back pattern more net-like in the reticulated flatwoods salamander). The frosted flatwoods salamander generally tends to be larger than the reticulated flatwoods salamander, as described above. Adults are terrestrial and live underground most of the year. They breed in relatively small, isolated ephemeral ponds where the larvae develop until metamorphosis. Post-metamorphic salamanders migrate out of the ponds and into the uplands where they live until they move back to ponds to breed as adults. Both species of flatwoods salamander are endemic to the lower southeastern Coastal Plain and occur in what were historically longleaf pine-wiregrass flatwoods and savannas.

The historical range of what is now considered the reticulated flatwoods salamander included parts of the States of Alabama, Florida, and Georgia, which are in the lower Coastal Plain of the southeastern United States west of the Apalachicola-Flint Rivers. We have compiled 26 historical (pre-1990) records for the reticulated flatwoods salamander.

In Alabama, there are five historical localities for the reticulated flatwoods salamander, all in the extreme southern portion of the State in Baldwin, Covington, Houston, and Mobile Counties. Surveys have been conducted at numerous sites since 1992; however, no reticulated flatwoods salamanders have been observed in Alabama since 1981 (Jones *et al.* 1982, p. 51; Godwin 2008).

Two historical records for the reticulated flatwoods salamander are known for Georgia, one each in Baker and Early Counties. There has been no observation of this species at either of these sites in the last 20 years. Four new reticulated flatwoods salamander breeding ponds have been discovered since 1990. One pond is on the Mayhaw Wildlife Management Area owned by the State of Georgia in Miller County. Three ponds are on private property in Baker County. Currently, two reticulated flatwoods salamander populations are supported by these breeding sites in Georgia.

Nineteen historical (pre-1990) records for the reticulated flatwoods salamander are known for Florida. Reticulated flatwoods salamander breeding has been documented at only five (26 percent) of these sites since 1990. Extensive surveys

throughout the range of the *Ambystoma cingulatum*, conducted prior to the original listing in 1999, resulted in identifying 40 additional breeding sites. Thirty-one (78 percent) of these sites are located in Okaloosa and Santa Rosa Counties, primarily on Department of Defense lands. Currently, 19 populations of the reticulated flatwoods salamander are known from Florida.

The combined data from all survey work completed since 1990 in Florida and Georgia indicate there are 21 populations of the reticulated flatwoods salamander. Some of these populations are inferred from the capture of a single individual. Ten (48 percent) of the known reticulated flatwoods salamander populations occur, at least in part, on public land. Of these, Department of Defense lands in Florida harbor four populations of the reticulated flatwoods salamander at Eglin Air Force Base, Hurlburt Field, and Naval Air Station Whiting Field's Holley Out-Lying Field. State and local agencies in Florida and Georgia partially manage six additional populations. In Florida, Pine Log State Forest and Point Washington State Forest harbor a single population each; Northwest Florida Water Management District owns a small portion of the habitat occupied by a single population and shares management with the Yellow Creek Marsh State Buffer Preserve of most of another property supporting an additional population; and the Santa Rosa County School Board owns a portion of the habitat supporting a single population. In Georgia, the Mayhaw Wildlife Management Area supports a single population. Eleven (52 percent) reticulated flatwoods salamander populations are solely on private land.

Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)

Section 4 of the Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). The original listing rule for the flatwoods salamander (64 FR 15691) contained a discussion of these five factors. Only those factors relevant to the proposed reclassification of the reticulated flatwoods salamander (*Ambystoma bishopi*; Goin, 1950) from threatened to endangered are described below:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The major threat to the reticulated flatwoods salamander is loss of both its longleaf pine-slash pine flatwoods terrestrial habitat and its isolated, seasonally ponded breeding habitat. The combined pine flatwoods (longleaf pine-wiregrass flatwoods and slash pine flatwoods) historical area was approximately 32 million acres (ac) (12.8 million hectares (ha)) (Outcalt 1997, p. 4). This area has been reduced to 5.6 million ac (2.27 million ha) or approximately 18 percent of its original extent (Outcalt 1997, p. 4). These remaining pine flatwoods (non-plantation forests) areas are typically fragmented, degraded, second-growth forests (Outcalt 1997, p. 6). Conversion of pine flatwoods to intensively managed (use of heavy mechanical site preparation, high stocking rates, low fire frequencies) slash or loblolly plantations often resulted in degradation of flatwoods salamander habitat by creating well-shaded, closed-canopied forests with an understory dominated by shrubs or pine needles (Outcalt 1997, pp. 4-6; Palis 1997, pp. 61-63). Disturbance-sensitive groundcover species, such as wiregrass (*Aristida stricta* [= *A. beyrichiana*] Kesler *et al.* 2003, p. 9), dropseed (*Sporobolus spp.*), and perennial forbs were either greatly reduced in extent or were replaced by weedy pioneering species (Moore *et al.* 1982, p. 216; Outcalt and Lewis 1988, pp. 1-12; Hardin and White 1989, pp. 243-244). In a study conducted by Hedman *et al.* (2000, p. 233), longleaf pine plots had significantly more herbaceous species and greater herbaceous cover than loblolly or slash pine plots. For example, wiregrass is often lost from a site when habitat is converted from longleaf pine forest to other habitat types using common mechanical site preparation methods (Outcalt and Lewis 1988, p. 2). Loss of wiregrass is considered an indicator of site degradation from fire suppression or soil disturbance (Clewell 1989; pp. 226, 230-232). Flatwoods salamanders are unlikely to persist in uplands with a disturbed, wiregrass-depauperate groundcover (Palis 1997, p. 63).

Forest management that includes intensive site preparation may adversely affect flatwoods salamanders directly and indirectly (Means *et al.* 1996, p. 426). Bedding (a technique in which a small ridge of surface soil is elevated as a planting bed) alters the surface soil layers, disrupts the site hydrology, and often eliminates the native herbaceous

groundcover. This can have a cascading effect of reducing the invertebrate community that serves as a food source for flatwoods salamander adults. Post-larval and adult flatwoods salamanders occupy upland flatwoods sites where they live underground in crayfish burrows, root channels, or burrows of their own making (Goin 1950, p. 311; Neill 1951, p. 765; Mount 1975, pp. 98-99; Ashton and Ashton 2005, pp. 63, 65, 68-71). The occurrence of these underground habitats is dependent upon protection of the soil structure. Intensive site preparation destroys the subterranean voids and may result in entombing, injuring, or crushing individuals.

Ecologists consider fire suppression the primary reason for the degradation of remaining longleaf pine forest habitat. The disruption of the natural fire cycle has resulted in an increase in slash and loblolly pine on sites formerly dominated by longleaf pine, an increase in hardwood understory, and a decrease in herbaceous ground cover (Wolfe *et al.* 1988, p. 132). Although reticulated flatwoods salamanders have been found at sites with predominately loblolly or slash pine, the long-term viability of populations at these sites is unknown. On public lands, prescribed burning is a significant part of habitat management plans. However, implementation of prescribed burning has been inconsistent due to financial constraints and limitations of weather (drought, wind direction, etc.) that restrict the number of opportunities to burn.

These alterations of the longleaf pine ecosystem, as a result of incompatible forest practices, have caused historic losses of reticulated flatwoods salamander habitat. Although conversion of native pine flatwoods to plantation forests is not considered a significant threat at this time, we have documented the historic extirpation of at least one previously known population each from Gulf and Jackson Counties in Florida, over the last four decades because of habitat degradation on lands currently managed as pine plantations. In addition, ponds surrounded by pine plantations and protected from the natural fire regime may become unsuitable reticulated flatwoods salamander breeding sites due to canopy closure and the resultant reduction in emergent herbaceous vegetation needed for egg deposition and larval development sites (Palis 1997, p. 62). In addition, lack of fire within the pond during periods of dry-down may result in chemical and physical (vegetative) changes that are unsuitable for the salamander (Palis 1997, p. 62). Lack of fire in the ecotone

may result in the development of a thick shrub zone making it physically difficult or impossible for adult salamanders to enter the breeding ponds (Ripley and Printiss 2005, pp. 1-2, 11).

Land use conversions to urban development and agriculture eliminated large areas of pine flatwoods in the past (Schultz 1983, pp. 24-47; Stout and Marion 1993, pp. 422-429; Outcalt and Sheffield 1996, pp. 1-5; Outcalt 1997, pp. 1-6). Urbanization and agriculture have resulted in the loss of one reticulated flatwoods salamander population from each of the following counties: Mobile and Baldwin Counties, Alabama; Escambia, Jackson, and Washington Counties, Florida; and Early County, Georgia. Two known populations have been extirpated from Santa Rosa County, Florida. State forest inventories completed between 1989 and 1995 indicated that flatwoods losses through land use conversion were still occurring (Outcalt 1997, pp. 3-6). Urbanization in the panhandle of Florida and around major cities is reducing the available pine forest habitat. Wear and Greis (2002, pp. 47, 92) identify conversion of forests to urban land uses as the most significant threat to southern forests. They predict that the South could lose about 12 million ac (4.9 million ha) of pine forest habitat to urbanization between 1992 and 2020. Several relatively recent discoveries of previously unknown reticulated flatwoods salamander breeding sites in Santa Rosa County, Florida, have been made in conjunction with wetland surveys associated with development projects (Cooper 2008). No reticulated flatwoods salamanders have been observed at these degraded sites since completion of the projects (Cooper 2008).

In addition to the loss of upland forested habitat, the number and diversity of small wetlands where reticulated flatwoods salamanders breed have been substantially reduced. Threats to breeding sites include alterations in hydrology, agricultural and urban development, road construction, incompatible silvicultural practices, shrub encroachment, dumping in or filling of ponds, conversion of wetlands to fish ponds, domestic animal grazing, soil disturbance, and fire suppression (Vickers *et al.* 1985, pp. 22-26; Palis 1997, p. 58; Ashton and Ashton 2005, p. 72). Hydrological alterations, such as those resulting from ditches created to drain flatwoods sites or fire breaks and plow lines, represent one of the most serious threats to reticulated flatwoods salamander breeding sites. Lowered water levels and shortened

hydroperiods at these sites may prevent successful flatwoods salamander recruitment because larval salamanders require 11 to 18 weeks to reach metamorphosis and leave the ponds (Palis 1995, p. 352).

USGS has documented multiple drought periods in the southeastern United States since the 1890s (USGS Open File Report 00-380, p. 1). Among significant periods documented in the last three decades are: 1980-1982, 1984-1988, 1998-2000 (USGS Water Supply Paper 2375) and currently from 2006-2008. Although a naturally occurring condition, drought presents additional complications for a species, like reticulated flatwoods salamander, which has been extirpated from most of its historic range and for which populations are represented by single ponds. Palis *et al.* (2006, (p. 5-6) conducted a study in Florida on a population of the closely related frosted flatwoods salamander during a drought from 1999-2002. This study found three consecutive years of reproductive failure and a steadily declining adult immigration to breed at the site as the drought progressed. Taylor *et al.* (2005, (p. 792) noted that wide variation in reproductive success is common among pond-breeding amphibians that depend on seasonal filling of these areas, but that adult persistence may buffer against fluctuations in that success, particularly for species that are long-lived. Although Palis *et al.* (2006) suggested that the flatwoods salamander may only live about four years (based on captive animals), we are currently unsure of the exact life span of wild individuals. Because of this, it is difficult to predict how long adults could persist in the landscape without a successful breeding event to replenish the population. However, Taylor *et al.* (2005, pp. 792, 796) constructed a model to look at how many years of reproductive failure would be required to result in local extinction of pond-breeding salamanders (with varying life spans) and found that even without total reproductive failure, populations required moderate to high upland post-metamorphic survival to persist. Catastrophic failure in this study created fluctuations in the population, raised the threshold of survival required to achieve persistence, and imposed the possibility of extinction even under otherwise favorable environmental conditions. Reproductive failure for this species was closely tied to hydrologic conditions; insufficient or short hydroperiod was the primary cause for complete failure. In addition, early filling of the ponds could also facilitate

the establishment of invertebrate or vertebrate predators before hatching of the eggs (p. 796). Palis *et al.* (2006, p. 6-7) discussed the necessity of protecting clusters of flatwoods salamander breeding sites, especially those with different hydrologic regimes, to guard against population declines at any one breeding site resulting from stochastic events, such as droughts (Palis 2006, p. 7). Currently, the only place this situation exists for the reticulated flatwoods salamander is on Eglin Air Force Base and these populations are threatened with the construction of a proposed highway.

Habitat fragmentation of the longleaf pine ecosystem resulting from habitat conversion threatens the survival of the reticulated flatwoods salamander. Large tracts of intact longleaf pine flatwoods habitat are fragmented by pine plantations, roads, and unsuitable habitat. Most reticulated flatwoods salamander populations are widely separated from each other by unsuitable habitat. This has been verified through recent reviews of aerial photography and site visits to localities of historical and current records for the species. Studies have shown that the loss of fragmented populations is common, and recolonization is critical for their regional survival (Fahrig and Merriam 1994, pp. 50-56; Burkey 1995, pp. 527-540). Amphibian populations may be unable to recolonize areas after local extirpations due to their physiological constraints, relatively low mobility, and site fidelity (Blaustein *et al.* 1994, pp. 60, 67-68). In the case of the reticulated flatwoods salamander, 70 percent of populations only have one breeding pond and if the habitat at that site is destroyed, recolonization would be impossible (see further discussion of metapopulation dynamics under Factor E).

Roads contribute to habitat fragmentation by isolating blocks of remaining contiguous habitat. They may disrupt migration routes and dispersal of individuals to and from breeding sites. Road construction can result in destruction of breeding ponds, as described above. In addition, vehicles may also cause the death of reticulated flatwoods salamanders when they are attempting to cross roads (Means 1996, p. 2). Road construction resulted in the destruction of a historic reticulated flatwoods salamander breeding pond in Escambia County, Florida (Palis 1997, p. 62). A road through Eglin Air Force Base (Eglin AFB) and Hurlburt Field has been proposed and the preferred alternative was selected in 2007 (Northwest Florida Transportation Corridor Authority 2007; Arnold 2007). We are currently in

consultation regarding this bypass project, however, currently there are no viable alternatives to the preferred alternative and the alignment cannot be moved further north on the base due to its potential to impact the mission (Arnold 2007). We believe this proposed road would destroy or severely degrade 22 breeding sites that support the largest reticulated flatwoods salamander population (Mittiga 2007). These breeding sites represent 44 percent of the known reticulated flatwoods salamander ponds. This Eglin population represents the only population of this species supported by more than three breeding ponds and functions as a metapopulation.

Off-road vehicle (ORV) use within reticulated flatwoods salamander breeding ponds and their margins severely degrades the wetland habitat. In the Southeast, ORV use impacts habitat used by flatwoods salamanders and has the potential to cause direct mortality of individual salamanders and is a threat on both public and private land. On public lands there may be areas designated as off limits to ORV use (U.S. Forest Service 2007, p. 19), but these restrictions are very hard to enforce. Even a single afternoon of individuals riding their ORVs in a pond can completely destroy the integrity of breeding sites by damaging or killing the herbaceous vegetation and rutting the substrate (Ripley and Printiss 2005, pp. 11-12). There is also the potential for direct injury or mortality of salamanders by ORVs at breeding sites (Ripley and Printiss 2005, p. 12).

In summary, the loss of habitat is a significant threat the reticulated flatwoods salamander. This threat is compounded by the current environmental conditions, proposed projects, projects which do not require Corps permits, and the nature of pond-breeding salamanders to undergo periodic reproductive failure. We consider this threat to be imminent and of high magnitude because of this species' narrow range and the loss of its habitat loss that is currently occurring at a rapid rate on lands in private ownership within the range of this species. Fifty-seven percent of reticulated flatwoods salamander populations are on private land, where habitat continues to be degraded by fire suppression and inappropriate management. The proposed road project on Eglin could result in destruction or degradation of 44 percent of remaining breeding ponds and the only metapopulation that exists for the reticulated flatwoods salamander. Range-wide historic losses of both upland and wetland habitat have

occurred due to conversion of flatwoods sites to agriculture, urban development, and intensively managed pine plantations. The remaining flatwoods habitat continues to be threatened by fire suppression and other incompatible forest management practices, road construction, and habitat fragmentation across the range of the species. Localized threats to existing wetland breeding sites include alterations in hydrology from agriculture, urban development, road construction, and incompatible forest management; ORVs; and fire suppression. As a result, we have determined that the present or threatened destruction, modification, or curtailment of the reticulated flatwoods salamander is a significant threat to the species.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Overcollecting does not appear to be a threat to the reticulated flatwoods salamander at this time. There is no evidence of a past or current problem with collection of this species. Consequently, we have determined that overutilization for commercial, recreational, scientific, or educational purposes is not a threat to the reticulated flatwoods salamander at this time.

C. Disease or Predation

Although disease has not been specifically documented in the reticulated flatwoods salamander thus far, disease outbreaks with mass mortality in other species of salamanders indicate that disease may be a threat for this species as well (Daszak *et al.* 1999, p. 736). "Red-leg" disease (*Aeromonas hydrophila*), a pathogen bacterium, caused mortality of the mole salamander (*A. talpoideum*) at the breeding pond of the reticulated flatwoods salamander in Miller County, Georgia (Maerz 2006), and reticulated flatwoods salamanders have not been observed at this site since the disease was reported. In addition, Whiles *et al.* (2004, p. 211) found a parasitic nematode (*Hedruris siredonis*, family *Hedruridae*) in larvae of the closely related frosted flatwoods salamander from South Carolina and Florida. This parasite has been found in other ambystomatids and can cause individuals to become undersized and thin, thus reducing their fitness (Whiles *et al.* 2004, p. 212). The infestations were not considered heavy and were probably not having a negative impact on the larvae studied; however, environmental degradation may change the dynamics between salamander

populations and normally innocuous parasites (Whiles *et al.* 2004, p. 212). Ranaviruses in the family *Iridoviridae* and chytrid fungus may be other potential threats, although the susceptibility of the reticulated flatwoods salamander to these diseases is unknown. Ranaviruses have been responsible for die-offs of tiger salamanders throughout western North America and spotted salamanders (*A. maculatum*) in Maine (Daszak *et al.* 1999, p. 736). Chytrid fungus has been discovered and associated with mass mortality in tiger salamanders in southern Arizona and California, and the Santa Cruz long-toed salamander (*A. macrodactylum croceum*) (Vredenburg and Summers 2001, p. 151; Davidson *et al.* 2003, p. 601; Padgett-Flohr and Longcore 2005, p. 50). This discussion of disease in other species of closely related salamanders indicates the potential existence of similar threats to reticulated flatwoods salamander populations.

Exposure to increased predation by fish is a threat to the reticulated flatwoods salamander when isolated, seasonally ponded wetland breeding sites are changed to or connected to more permanent wetlands inhabited by fish species not typically found in temporary ponds. Studies of other ambystomatid species have demonstrated a decline in larval survival in the presence of predatory fish (Semlitsch 1987, p. 481). Ponds may be modified specifically to serve as fish ponds or sites may be altered because of drainage ditches, firebreaks, or vehicle tracks that can all provide avenues for fish to enter the wetlands.

Red imported fire ants (*Solenopsis invicta*) are potential predators of flatwoods salamanders, especially in disturbed areas. They have been seen in areas disturbed by the installation of drift fences at known breeding sites (Palis 2008). Mortality of amphibians trapped at drift fences has occurred when fire ants were present and traps were not monitored with sufficient frequency (NCASI 2002, p. 6). The severity and magnitude, as well as the long-term effect of fire ants on reticulated flatwoods salamander populations is currently unknown.

Diseases of amphibians in the southeastern United States remain largely unstudied. However, given the incidence of disease in species which could be considered surrogates for the flatwoods salamander, the probability exists for similar infections to occur in reticulated flatwoods salamander populations. Predation by fish is a historic threat that continues to be a localized problem when ditches,

firebreaks, or vehicle ruts provide connections allowing the movement of fish from permanent water bodies into reticulated flatwoods salamander breeding sites. Fireants also have the potential of being a localized threat, particularly in disturbed areas. We consider this threat to be imminent and of high magnitude because 70 percent of populations are supported by a single breeding pond and diseases, fish, and invertebrate predators have been found at ponds within the range and are known to cause mortality or reproductive failure in related species. Additionally 57 percent of ponds are on private land, increasing the probability of fish being introduced to a breeding site, which would then cause the breeding habitat to become unsuitable, and result in the extinction of the population. Fire ants also have the potential of being a localized threat, particularly in disturbed areas. As such, we believe that these threats would also act to exacerbate other threats to the species.

D. The Inadequacy of Existing Regulatory Mechanisms

There are no existing regulatory mechanisms for the protection of the upland habitats where reticulated flatwoods salamanders spend most of their lives. Section 404 of the Clean Water Act is the primary Federal law that has the potential to provide some protection for the wetland breeding sites of the reticulated flatwoods salamander. However, due to recent case law (*Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers 2001; Rapanos v. U.S. 2006*), isolated wetlands are no longer considered to be under Federal jurisdiction (not regulatory wetlands). Wetlands are only considered to be under the jurisdiction of the Corps if a "significant nexus" exists to a navigable waterway or its tributaries. Currently, some Corps Districts do not coordinate with us on flatwoods salamanders and, since isolated wetlands are not considered under their jurisdiction, they are often not included on maps in permit applications (Brooks 2008). We are aware of two isolated wetlands that supported flatwoods salamander populations that have been lost since 2006 under this scenario.

Longleaf pine habitat management plans have been written for public lands occupied by the reticulated flatwoods salamander. They include management plans for State-owned lands and integrated natural resource management plans (INRMPs) for Department of Defense lands. Most of the plans contain specific goals and objectives regarding

habitat management that would benefit reticulated flatwoods salamanders including prescribed burning. However, because multiple-use is the guiding principle on most public land, protection of the flatwoods salamander may be just one of many management goals including timber production and military and recreational use. Implementation of the plans has often been problematic due to financial and logistic constraints. In addition, the plans do not provide assured protection from habitat destruction or degradation from land use changes such as the proposed road on Eglin AFB and Hurlburt Field (see Factor A, above).

At the State and local levels, regulatory mechanisms are limited. Although not listed as threatened or endangered in Alabama, the reticulated flatwoods salamander is listed among those nongame species for which it is "unlawful to take, capture, kill, or attempt to take, capture or kill; possess, sell, trade for anything of monetary value, or offer to sell or trade for anything of monetary value" (Alabama Department of Conservation and Natural Resources 2008, p. 1). The flatwoods salamander is listed as a threatened species in the State of Georgia (Jensen 1999, pp. 92-93). This designation protects the species by preventing its sale, purchase, or possession in Georgia and by prohibiting actions that cause direct mortality or the destruction of its habitat on lands owned by the State of Georgia (Ozier 2008). There is only one known flatwoods salamander population on lands owned by the State of Georgia, and that is Mayhaw Wildlife Management Area. In 2001, the Florida Fish and Wildlife Conservation Commission (FFWCC) listed the flatwoods salamander (which would include the reticulated flatwoods salamander) as a species of special concern (FFWCC 2007, p. 2) and prohibited direct take except through permit. As part of the listing process, a statewide management plan was developed for the salamander in Florida (FFWCC 2001, p. 1-60). This plan sets an ambitious conservation goal of maintaining at least 129 self-sustaining populations of flatwoods salamanders (would include both frosted and reticulated flatwoods salamander species) in Florida. The plan also outlines a monitoring plan for population status assessment, an implementation strategy for the management of populations, and areas for future research. The Alabama and Florida regulations offer no protection against the most significant threat to the

reticulated flatwoods salamander, loss of habitat.

In summary, existing regulatory mechanisms provide little direct protection of reticulated flatwoods salamander habitat, the loss of which is the most significant threat to the species. Reticulated flatwoods salamander breeding sites may in some instances come under the jurisdiction of the Corps, but most often they are provided little regulatory protection. These inadequacies represent range-wide historic and known threats to the reticulated flatwoods salamander on private lands within the range. We consider this threat as imminent because the existing regulations are not protecting against the other imminent threats to the species. Also, this threat is of high magnitude because of the small range of the species, and because 57 percent of populations are not protected from further development because they are located on private lands.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Metapopulations, which are neighboring local populations close enough to one another that dispersing individuals could be exchanged (gene flow) at least once per generation, are important to the long-term survival of temporary pond breeding amphibians. In these species, such as the reticulated flatwoods salamander, breeding ponds may differ in the frequency of their ability to support amphibian reproduction. As a result, extirpation and colonization rates can be a function of pond spatial arrangement as well as local habitat quality (Marsh and Trenham 2001, p. 41). Of the 21 known reticulated flatwoods salamanders populations, only 6 (29 percent) are supported by more than one breeding pond and only one (5 percent) population (on Eglin AFB-Hurlburt Field) is supported by more than three breeding ponds. For 71 percent (15 out of 21) of the known reticulated flatwoods salamander populations, any one of the many threats that may render a breeding pond unsuitable could cause the extirpation of the affected population.

Invasive plant species, such as *cogongrass* (*Imperata cylindrica*), threaten to further degrade existing flatwoods habitat. *Cogongrass*, a perennial grass native to southeast Asia, is one of the leading threats to the ecological integrity of native herbaceous flora, including that in the longleaf pine ecosystem (Jose *et al.* 2002, p. 43). It has been documented that *cogongrass* can displace most of the existing vegetation

except large trees. Especially threatening to the reticulated flatwoods salamander is the ability of *cogongrass* to outcompete wiregrass, a key vegetative component of flatwoods salamander habitat. Changing the species composition in this way can alter the soil chemistry, nutrient cycling, and hydrology of an infested site (Jose *et al.* 2002, p. 43). Reticulated flatwoods salamander habitat management plans will need to address threats posed by *cogongrass* and other invasive plant species and include strategies to control them. An integrated management approach to controlling *cogongrass* is outlined in Jose *et al.* (2002, p. 42).

Pesticides (including herbicides) may pose a threat to amphibians such as the reticulated flatwoods salamander, because their permeable eggs and skin readily absorb substances from the surrounding aquatic or terrestrial environment (Duellman and Trueb 1986, pp. 199-200). Negative effects that commonly used pesticides and herbicides may have on amphibians include delayed metamorphosis, paralysis, reduced growth rate, and mortality (Bishop 1992, pp. 67-69). Herbicides used near reticulated flatwoods salamander breeding ponds may alter the density and species composition of vegetation surrounding a breeding site and reduce the number of potential sites for egg deposition, larval development, or shelter for migrating salamanders. Aerial spraying of herbicides over outdoor pond mesocosms (semi-field approximations of ponds) has been shown to reduce zooplankton diversity, a food source for larval reticulated flatwoods salamanders, and cause very high (68 to 100 percent) mortality in tadpoles and juvenile frogs (Relyea 2005, pp. 618-626). The potential for negative effects from pesticide and herbicide use in areas adjacent to breeding ponds would be reduced by avoiding aerial spraying (Tatum 2004, p. 1047).

Studies of other ambystomatid species have demonstrated a decline in larval survival in the presence of predatory fish, as mentioned above under Factor C. One of the potential reasons for this decline may be the negative effect that these fish have on the invertebrate prey of salamander larvae. The invertebrates found by Whiles *et al.* (2004, p. 212) in a study of larval frosted and reticulated flatwoods salamander gut contents are typical of freshwater habitats in the Southeast that do not contain predatory fish on a regular basis. The presence of predatory fish has a marked effect on invertebrate communities and alters prey availability for larval salamanders

with the potential for negative effects on larval fitness and survival (Semlitsch 1987, p. 481). Wherever connections have been created between permanent water and flatwoods salamander ponds, through installation of firebreaks, ditches, and so on, this threat from predatory fish exists.

Studies of reticulated flatwoods salamander populations since the original species classification of flatwoods salamander was listed (64 FR 15691; April 1, 1999) have been limited due to drought. Data on the numbers of adults within existing populations does not exist. However, given the low number of individuals encountered even when breeding is verified, populations are likely to be very small at any given breeding site. Small populations are at increased threat of extirpation from natural processes (genetic isolation, inbreeding depression, and drought), as well as the manmade threats listed above.

In summary, there a number of other natural or manmade factors that either threaten, or have the potential to threaten, that have been historic threats and continue to threaten the reticulated flatwoods salamander. The loss of metapopulation structure in the distribution of reticulated flatwoods salamander populations was a range-wide threat that caused historic losses of this species. It continues to be a current threat for most of the remaining reticulated flatwoods salamander populations, particularly on Eglin Air Force Base. Fire suppression and inadequate habitat management continue to cause the degradation of occupied sites, primarily on private land. Invasive plant species probably did not have much of a historic impact on salamander populations, but they are a range-wide potential threat, especially as they become more widespread and difficult to control. Range-wide, low densities of individuals in a given population have been a historic threat and continue to be a threat for most reticulated flatwoods salamander populations, particularly in the face of the past and current drought conditions and given the nature of pond-breeding amphibians to experience periodic reproductive failures naturally. The impact competing predators may have on the salamander's prey base, and the threat of pesticide and herbicide use, are less clear as historic threats but remain potential localized threats for the species. Therefore, while we have determined that other natural and manmade factors, such as invasive species, pesticides, and competition for the species' prey base may threaten the reticulated flatwoods salamander, the

severity and magnitude of these threats are not currently known. Acting in coordination with major threats listed above with each other, these threats constitute additional complicating factors which could exacerbate other threats. In addition, small population size is particularly detrimental when combined with habitat loss, the ongoing drought, and the nature of this pond-breeding amphibians to experience periodic reproductive failure.

Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the reticulated flatwoods salamander. In summary, the significant threat to the reticulated flatwoods salamander listed in Factor A (above), is loss of its habitat. However, a variety of localized threats factors (which fall under Factors A, D, and E) continue to impact existing wetland breeding sites including alterations in hydrology from agriculture (including "ditching," which results in the introduction of predatory fish), urban development, road construction, and incompatible forest management, ORV use, fire suppression, and disease also threaten the species, but the severity and magnitude of these threats is not currently known. As a result, we have determined that these factors will exacerbate the effects of threats due to habitat loss and drought. As described in Factor E above, small populations are at increased threat of extirpation from natural processes (genetic isolation, inbreeding depression, and drought), as well as the manmade threats listed above. Furthermore, as described in Factor D (above), existing regulatory mechanisms provide little direct protection of reticulated flatwoods salamander habitat, the loss of which is the most significant threat to the species. Reticulated flatwoods salamander breeding sites may in some instances come under the jurisdiction of the Corps, but most often they are provided little regulatory protection. This is likely the reason that two populations were lost recently to development. These inadequacies of existing regulatory mechanisms addressing habitat loss represent range-wide historic and potential threats to the reticulated flatwoods salamander. Finally, there are potential localized threats from fire ants, pesticides, and invasive plants for which the extent of impact is yet undeterminable, but that we believe are legitimate threats due to both their impact on surrogate species and their prevalence in the types of habitats used by this species.

Only 21 reticulated flatwoods salamander populations are known. Fifteen (71 percent) of these populations are supported by only one breeding site. A population with only one breeding site has a tenuous future just given randomly varying environmental factors without considering the additional threats of habitat destruction and degradation that further threaten these populations. As noted previously, we are currently experiencing drought conditions. Palis *et al.* (2006, p. 5-6) studied a frosted flatwoods population in Florida during a drought from 1999-2002. This study documented three consecutive years of reproductive failure and a steady declining adult immigration to the site for breeding as the drought progressed. Catastrophic reproductive failure occurs even in healthy populations of pond-breeding amphibians. When it does occur, the modeling efforts of Taylor *et al.* (2005, p. 796) showed that each year of reproductive failure raises the threshold of survival required to achieve persistence and imposes the possibility of extirpation even under otherwise favorable environmental conditions. Taylor *et al.* (2005, p. 799) reminds us that particularly with small populations or low population growth rates (as exists with the reticulated flatwoods salamander) effects of reproductive failure are made worse by demographic stochasticity. Even in populations with multiple breeding ponds, amphibian populations may be unable to recolonize areas after local extirpations due to their physiological constraints, relatively low mobility, and site fidelity (Blaustein *et al.* 1994, pp. 60, 67-68). In the case of the reticulated flatwoods salamander, 71 percent of populations have only one breeding pond. If the habitat at that site is destroyed, recolonization would be impossible and the population supported by that breeding pond would be extirpated. Since the early 1990s, four reticulated flatwoods salamander populations have been lost, two populations due to urbanization and two populations due to inappropriate forest management. The most robust reticulated flatwoods salamander population remaining is currently threatened by a proposed road through Eglin AFB. The preferred alignment for this road (Mittiga 2007) could destroy or degrade 44 percent of the known reticulated flatwoods salamander breeding sites. This is significant because the Eglin AFB population is the only location which is supported by more than 3 breeding ponds and functions as a metapopulation. In other words, this population has the

best chance of surviving demographic and environmental stochasticity given the distribution of breeding sites within reticulated flatwoods salamander dispersal distance of each other. However, habitat supporting this population continues to decline due to inadequate prescribed burning. The presence of a road in this vicinity, even if there are no direct impacts to vegetative structure or hydrology of the breeding and upland sites, will only decrease the opportunities to burn the area and increase the habitat degradation.

Habitat loss on private lands is an imminent threat that is compounded by a variety of other factors. Fire suppression on private lands occupied by the reticulated flatwoods salamander represents one of the biggest threats to the species' habitat and the continued existence of the species on these sites. In addition, we have lost at least two ponds since 2006 in the range of the reticulated flatwoods salamander that we believe resulted from the continuing threat that isolated wetlands are rarely, if ever, under the jurisdiction of the Corps, thus resulting in limited to no regulatory mechanisms addressing this imminent threat. The Eglin bypass (described as sections FWB/Niceville Bypass, Navarre Bypass and SR 87, collectively) are shown on the Northwest Florida Transportation Corridor Authority website as priority projects for the next five years, meaning FY 2008-FY 2012 (Prioritized Master Plan). A preferred alternative was selected in 2007, but no environmental analysis has been conducted at present. This preferred alignment was chosen because any move further north would impact the mission of base. We believe there is a reasonable expectation that this road could be built, and it is considered an imminent threat to the species, its habitat, and overall to the continued existence of the population on Eglin AFB. We believe that combined, the effect of the historical and ongoing drought, historical, current, and projected habitat loss and degradation (including the proposed bypass on Eglin), and the exacerbating effects of disease, predation, small population size, and isolation would result in the reticulate flatwoods salamander being in danger of extinction throughout all of its range. We believe these threats, in particular the threats from habitat loss and drought, to be current and are projected to continue at the current rate or increase in the future. Further, we have determined that these threats are operating on the species and its habitat

with a high degree of magnitude in that they affect the species throughout all of its range and with a high degree of severity, as discussed above.

Based on the best available scientific and commercial information, we have determined that the reticulated flatwoods salamander is in danger of extinction throughout all or a significant portion of its range. Therefore, we are proposing to list the reticulated flatwoods salamander as an endangered species under the Act. Endangered status reflects the vulnerability of this species to factors that negatively affect the species and its limited and restricted habitat.

We are soliciting comments on this proposed rule and threats to the species. Similarly, we request any available information on ongoing or proposed development activities within reticulated flatwoods salamander habitat.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness and conservation by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed in "Effect of Critical Habitat Designation" for critical habitat and are further discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a

listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal agency actions within the species habitat that may require conference or consultation or both as described in the preceding paragraph include management and any other landscape altering activities on Federal lands administered by the Department of Defense, Fish and Wildlife Service, and U.S. Forest Service; issuance of section 404 Clean Water Act permits by the Army Corps of Engineers; construction and management of gas pipeline and power line rights-of-way by the Federal Energy Regulatory Commission; and construction and maintenance of roads or highways by the Federal Highway Administration.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. The prohibitions, codified at 50 CFR 17.21 for endangered wildlife, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving threatened or endangered wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered species. You may obtain permits for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities.

Critical Habitat

It is our intent to discuss only those topics directly relevant to the designation of critical habitat for the frosted and reticulated flatwoods salamander in this section of the proposed rule. For more information on the previous proposed rule to designate critical habitat for the flatwoods salamander, refer to the **Federal Register** document published on February 7, 2007 (72 FR 5856). The proposed rule, as presented herein,

replaces the previous proposed rule in its entirety.

Previous Federal Actions

The flatwoods salamander was listed as threatened on April 1, 1999 (64 FR 15691). At that time, we found that designation of critical habitat for the flatwoods salamander was not prudent because such designation would not be beneficial and may increase threats to the species. On April 1, 2005, Center for Biological Diversity, Wild South, and Florida Biodiversity Project filed a lawsuit against the Secretary of the Interior alleging failure to designate critical habitat for the flatwoods salamander. In a court-approved settlement agreement, we agreed to reevaluate the need for critical habitat for the species and if prudent submit a proposed designation of critical habitat to the **Federal Register** by January 30, 2007, and submit a final decision on the proposed critical habitat rule for publication in the **Federal Register** by January 30, 2008. A proposed rule to designate critical habitat for the flatwoods salamander published in the **Federal Register** on February 7, 2007 (72 FR 5856). Since that proposed rule published, new information has become available on taxonomy and additional threats to occupied habitat that has necessitated a reevaluation of the proposed rule. On January 25, 2008, the court-approved settlement agreement was modified to require that a revised proposed critical habitat designation for the frosted flatwoods salamander and the reticulated flatwoods salamander must be submitted for publication in the **Federal Register** on or before July 30, 2008, with the final decision on the proposed critical habitat rule to be submitted for publication in the **Federal Register** by January 30, 2009.

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) essential to the conservation of the species and

(b) which may require special management considerations or protection; and

(2) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means the use of all methods and procedures that are necessary to bring any endangered

species or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, transplantation, and in the extraordinary case where population pressures within a given ecosystem cannot otherwise be relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7 of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by the landowner. Where the landowner seeks or requests Federal agency funding or authorization that may affect a listed species or critical habitat, the consultation requirements of Section 7 of the Act would apply. However, even in the event of a destruction or adverse modification finding, the landowner's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must contain features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement for the conservation of the species). Under the Act, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed as critical habitat only when we determine that those areas are essential for the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on

Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub.L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be proposed as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that we may eventually determine, based on scientific data not now available to the Service, are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. They are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new

information available to these planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species. We must weigh the benefits in proposing to designate critical habitat for the frosted flatwoods salamander and the reticulated flatwoods salamander against the harm which could be caused by disclosure of their location. We find that these benefits of the designation of critical habitat outweigh the risk of increased collection.

There is no documentation of commercial or private collection of frosted flatwoods salamanders or reticulated flatwoods salamanders and, although that activity is identified as a potential threat to the two species in the original listing in the **Federal Register** (64 FR 15691), the significance of collection to the viability of the species' populations is not known. Therefore, this threat, if any, to the frosted flatwoods salamander and the reticulated flatwoods salamander is outweighed by the conservation benefits derived from the designation of critical habitat for this species, such as guiding the development of conservation management plans both within and outside of the critical habitat designation. Additionally, much of the habitat where the species occur is under Federal land management where the threat of collection should be reduced by enforcement of section 9 of the Act.

Although we make a detailed determination of the habitat needs of a listed species during the recovery planning process, the Act has no provision to delay designation of critical habitat until such time as a recovery plan is prepared. We reviewed the available information pertaining to habitat characteristics where these two species are located. This and other information represent the best scientific data available and led us to conclude that the designation of critical habitat is both prudent and determinable for the

frosted flatwoods salamander and the reticulated flatwoods salamander.

Methods

As required by section 4(b) of the Act, we used the best scientific data available in determining areas that contain the features that are essential to the conservation of the frosted flatwoods salamander and the reticulated flatwoods salamander. This includes information from the proposed listing rule for the flatwoods salamander (62 FR 65787; December 16, 1997), final listing rule for the flatwoods salamander (64 FR 15691; April 1, 1999), the previous proposed rule for designation of critical habitat for the flatwoods salamander (72 FR 5856; February 7, 2007), site visits, soil and species map coverages, data compiled in the Florida, Georgia, and South Carolina Natural Heritage databases and individual state databases, and data supplied by Eglin Air Force Base, Fort Stewart Military Installation, Hurlburt Field, Townsend Bombing Range, Apalachicola National Forest, Francis Marion National Forest, and St. Marks National Wildlife Refuge.

We also reviewed the available information pertaining to historical and current distribution, ecology, life history, and habitat requirements of the frosted flatwoods salamander and reticulated flatwoods salamander. This material included data in reports submitted by biologists holding section 10(a)(1)(A) recovery permits; research published in peer-reviewed scientific publications; museum records; technical reports and unpublished field observations by Service, State and other experienced biologists; additional notes and communications with qualified biologists or experts; and regional Geographic Information System (GIS) coverages.

All frosted and reticulated flatwoods salamander occurrence records for sites occupied at the time of listing and occupied sites discovered subsequent to listing (typically breeding ponds) were plotted on maps using ArcMap (Environmental Systems Research Institute, Inc.), a computer GIS program, as the initial step in generating critical habitat units. Polygons were then computer-generated by overlaying these occurrence locations with circles of a 1,500-foot (ft) (457-meter (m)) radius as a method to estimate the activity area around a breeding pond (see 72 FR 5861 (February 7, 2007) for a further discussion of the rationale for choosing this distance for the activity area). The area circumscribed by a circle of this radius would be 162 ac (66 ha). These polygons were used as a starting point to delineate the amount of wetland and

upland habitat occupied by salamanders at each occurrence.

Since we have determined that breeding sites within 2 miles of each other could be considered part of the same metapopulation (see discussion above under section entitled Space for Individual and Population Growth and Normal Behavior), polygons within this distance of each other were combined to create areas containing multiple ponds connected by upland habitat corridors. Research on ambystomatid salamanders indicates that they need high terrestrial survival or immigration to persist (Taylor *et al.* 2005, p. 799). Thus, a flatwoods salamander population requires a sufficient amount of terrestrial habitat to ensure survival of adults in upland habitat, or, if needed, immigration of juveniles to the population from nearby breeding ponds. Combining polygons in the above manner provides a greater probability that habitat within a unit or subunit will support the needs of both species of flatwoods salamander long-term.

After the polygons were constructed, they were overlaid on aerial photography. The aerial photography was analyzed to verify the occurrence of PCEs and their distribution within the polygons. In some cases, site visits were made to determine presence of PCEs. Some polygons were discarded as they lacked the PCEs. In other polygons, we adjusted individual unit boundaries based on the presence or absence of the PCEs. Units constructed by merging polygons were also re-assessed to be sure the connecting habitat contained the PCEs.

Primary Constituent Elements (PCEs)

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat within areas occupied by the species at the time of listing, we consider those physical and biological features that are essential to the conservation of the species to be the primary constituent elements laid out in the appropriate quantity and spatial arrangement for conservation of the species. These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the

historical, geographical, and ecological distributions of a species.

We derived the specific primary constituent elements required for the frosted flatwoods salamander and the reticulated flatwoods salamander based on their biological needs.

Space for Individual and Population Growth and Normal Behavior

The frosted and reticulated flatwoods salamanders are terrestrial species of the longleaf pine ecosystem. Flatwoods salamanders spend most of their lives underground and occur in forested habitat consisting of fire-maintained, open-canopied, flatwoods and savannas dominated by longleaf pine (*Pinus palustris*), with naturally occurring slash pine (*P. elliotti*) in wetter areas. Historically, fire-tolerant longleaf pine dominated the uplands, whereas slash pine, being less fire-tolerant, was confined principally to wetlands, wetland edges, and the wetter portions of pine flatwoods. Means *et al.* (1996, pp. 434-435) summarized the natural distribution of slash pine in reference to the flatwoods salamander and concluded that natural slash pine habitats constituted only a minor fraction of the species' upland habitat. Much of the original flatwoods habitat has been converted to pine (often slash pine) plantations and become a closed-canopy forest unsuitable as habitat for the flatwoods salamander. Nevertheless, flatwoods salamanders do occur on some slash and loblolly pine (*P. taeda*) plantation sites. The extent of habitat degradation has been variable among pine plantations. On some plantations, the original hydrology, ground cover, and soil structure have been less severely altered, and these are the areas where remnant frosted and reticulated flatwoods salamander populations still occur.

Pine flatwoods and savannas are typically characterized by low, flat topography, and relatively poorly drained, acidic, sandy soil that becomes seasonally saturated. In the past, this ecosystem was characterized by open pine woodlands maintained by frequent fires. Naturally ignited by lightning during spring and early summer, these flatwoods historically burned at intervals ranging from 1 to 4 years (Clewell 1989, p. 226). In some areas, such as southwest Georgia, the topography of pine flatwoods can vary from nearly flat to gently rolling hills. The groundcover of the pine flatwoods-savanna ecosystem is typically dominated by wiregrass in the Gulf Coastal Plain, which is often joined or replaced by dropseed in the Atlantic Coastal Plain. Many other herbaceous

plants are found in the groundcover and plant diversity is usually very high.

During the breeding season, adult frosted and reticulated flatwoods salamanders leave their subterranean retreats and migrate to breeding sites during rains associated with passing cold fronts. Throughout their range, the salamanders breed at ephemeral (seasonally flooded) isolated ponds (not connected to other water bodies) embedded within the mesic (moderate moisture) to intermediate-mesic flatwoods-savanna communities occupied by post-larval and adult salamanders (Palis and Means 2005, pp. 608-609). There are some variations in vegetation, geology, and soils among geographic areas within the range of the salamander (most notably, differences between the Gulf Coast and Atlantic Coastal Plain communities); however, basic characteristics are fairly similar throughout. Both forested uplands and isolated wetlands (see further discussion of isolated wetlands in section "Sites for breeding, reproduction, and rearing of offspring," below) are needed to provide space for individual and population growth and normal behavior.

The distance between the wetland breeding and upland terrestrial habitats of post-larval and adult salamanders can vary considerably. In the final listing rule the Service used an estimate of 1,476 feet (ft) (450 meters (m)) as the radius of a flatwoods salamander's principal activity area around a breeding pond based on research summarized in Semlitsch (1998, pp. 1115-1117) on this species and other species in its genus (U. S. Fish and Wildlife Service 1999, p.15697). However, according to Ashton and Ashton (2005, p. 65), flatwoods salamanders have been documented up to 5,576 ft (1,700 m) from breeding ponds. We used this distance (rounding to 1 mile) as the maximum dispersal distance for flatwoods salamanders. Therefore, breeding sites within twice this distance (2 miles) could be considered in close enough proximity to be considered part of the same metapopulation (Palis 1997, p. 62).

Food, Water, Air, Light, or Other Nutritional or Physiological Requirements

Post-larval frosted and reticulated flatwoods salamanders eat small invertebrates that share their fossorial habit. Records exist of earthworms that have been found in the stomachs of dissected adult salamanders (Goin 1950, p. 314). Larval flatwoods salamanders most likely prey on a variety of aquatic invertebrates and perhaps small

vertebrates such as other amphibian larvae (Palis and Means 2005, p. 608). Data from a recent study of larval food habits found that freshwater crustaceans dominated stomach contents of preserved, wild-caught individuals from Florida and South Carolina (Whiles *et al.* 2004, p. 208). This indicates a preference for freshwater crustaceans or perhaps is an indication that these invertebrates are the most abundant or most easily captured prey in breeding ponds.

Within the pine uplands, a diverse and abundant herbaceous layer consisting of native species is important to maintain the prey base for adult frosted and reticulated flatwoods salamanders. Wetland water quality is important to maintain the aquatic invertebrate fauna eaten by larval salamanders. An unpolluted wetland with water free of predaceous fish, sediment, pesticides, and the chemicals associated with road runoff, is important to maintain the aquatic invertebrate fauna eaten by larval salamanders.

Cover or Shelter

At wetland sites, developing larval frosted and reticulated flatwoods salamanders hide in submerged herbaceous vegetation during the day (Palis and Means 2005, p. 608) as protection from predators. Thus, an abundant herbaceous community in these ponds is important for cover.

Generally, flatwoods salamander breeding pond and upland habitats are separated by an ecotone (area of transitional habitat) through which salamanders must move during pre- and post-breeding events (Palis 1997, p. 58). The graminaceous (grass-like) ecotone represents a distinct habitat type and is important for maintaining connectivity between aquatic and terrestrial habitats. When the ecotone provides cover and appropriate microclimatic conditions, survival of migratory salamanders is enhanced. Studies of migratory success in post-metamorphic salamanders have demonstrated the importance of high levels of survival of these individuals to population maintenance and persistence (Rothermel 2004, pp. 1544-1545).

Post-larval and adult frosted and reticulated flatwoods salamanders occupy upland flatwoods sites where they live underground in crayfish burrows, root channels, or burrows of their own making (Goin 1950, p. 311; Neill 1951, p. 765; Mount 1975, pp. 98-99; Ashton and Ashton 2005, pp. 63, 65, 68-71). The occurrence of these below-ground habitats is dependent upon protection of the soil structure within flatwoods salamander terrestrial sites.

Sites for Breeding, Reproduction, and Rearing of Offspring

Adult frosted and reticulated flatwoods salamanders move from the uplands to breed in ponds that are typically acidic, tannin-stained, isolated, ephemeral wetlands (marsh-like depressions) (Palis 1997, pp. 53, 58; Safer 2001, pp. 5, 12). Breeding occurs from late September to December when ponds flood due to rainy weather associated with cold fronts. If rainfall is insufficient to result in adequate pond flooding, breeding may not occur or, if larvae do develop, they may die before metamorphosis. Egg development from deposition to hatching occurs in approximately 2 weeks, but eggs do not hatch until they are inundated (Palis 1995, pp. 352, 353). Larval salamanders usually metamorphose in March or April after an 11-to-18-week larval period (Palis 1995, p. 352). Ponds dry shortly thereafter. A cycle of filling and drying is essential for maintaining the appropriate habitat conditions of these wetlands.

The overstory within breeding ponds is typically dominated by pond-cypress (*Taxodium ascendens* [= *T. distichum* var. *imbricarium*; Lickey and Walker 2002, p. 131]), blackgum (*Nyssa sylvatica* var. *biflora*), and slash pine (Palis 1997, pp. 58, 59). An open midstory is often present as well, and dominant species include the myrtle-leaved holly (*Illex myrtifolia*) and other shrubs and small trees (Palis 1997, pp. 58, 59). When they are dry, breeding ponds burn naturally due to periodic wildfires, especially during late spring and summer. Depending on canopy closure and midstory, the herbaceous groundcover of breeding sites can vary considerably (Palis 1997, pp. 58, 59). However, flatwoods salamander larvae are typically found in those portions of breeding sites containing abundant herbaceous vegetation. The ground cover is dominated by graminaceous species. The floor of breeding sites generally consists of relatively firm mud with little or no peat. Burrows of crayfish (primarily genus *Procambarus*) are a common feature of flatwoods salamander breeding sites. Breeding sites are typically encircled by a bunchgrass-dominated (wiregrass or dropseed) graminaceous ecotone (see discussion of ecotone above). Small fish, such as pygmy sunfishes (*Elassoma* spp.), mosquitofish (*Gambusia holbrooki*), and banded sunfish (*Enneacanthus obesus*) may be present, but large predaceous species are absent (Palis 1997, pp. 58, 60).

Primary Constituent Elements for the Frosted Flatwoods Salamander and the Reticulated Flatwoods Salamander

Within the geographical area we know to be occupied by the frosted flatwoods salamander and the reticulated flatwoods salamander, we must identify the PCEs that may require special management considerations or protections.

Based on the needs of the species, as described above, and our current knowledge of the life history, biology, and ecology of the species, we have determined that the frosted flatwoods salamander and reticulated flatwoods salamander PCEs are:

1. *Breeding habitat.* Small (generally <1 to 10 acres (ac) (<0.4 to 4.0 hectares (ha)), acidic, depressional standing bodies of fresh water (wetlands) that:

(a) are seasonally flooded by rainfall in late fall or early winter and dry in late spring or early summer;

(b) are geographically isolated from other water bodies;

(c) occur within pine flatwoods-savanna communities;

(d) are dominated by grasses and grass-like species in the ground layer and overstories of pond-cypress, blackgum, and slash pine;

(e) have a relatively open canopy, necessary to maintain the herbaceous component that serves as cover for flatwoods salamander larvae and their aquatic invertebrate prey; and

(f) typically have a burrowing crayfish fauna, but, due to periodic drying, the breeding ponds typically lack large, predatory fish (for example, *Lepomis* (sunfish), *Micropterus* (bass), *Amia calva* (bowfin)).

2. *Non-breeding habitat.* Upland pine flatwoods-savanna habitat that is open, mesic woodland maintained by frequent fires and that:

(a) is within 1,500 ft (457 m) of adjacent and accessible breeding ponds;

(b) contains crayfish burrows or other underground habitat that the flatwoods salamander depends upon for food, shelter, and protection from the elements and predation;

(c) has an organic hardpan in the soil profile, which inhibits subsurface water penetration and typically results in moist soils with water often at or near the surface under normal conditions; and

(d) often have wiregrasses as the dominant grasses in abundant herbaceous ground cover, which supports the herbivorous invertebrates that serve as a food source for the flatwoods salamander.

3. *Dispersal habitat.* Upland habitat areas between non-breeding and

breeding habitat that allows for salamander movement between such sites and that is characterized by:

(a) a mix of vegetation types representing a transition between wetland and upland vegetation (ecotone);

(b) an open canopy and abundant native herbaceous species; and

(c) moist soils as described in PCE 2; and

(d) subsurface structure, such as that created by deep litter cover or burrows, that provides shelter for salamanders during seasonal movements.

This proposed designation is designed for the conservation of the physical and biological features essential to the conservation of the species, which support the life-history functions of the species, through the identification of the appropriate quantity and spatial arrangement of areas containing the PCEs. All units proposed for designation contain all of these PCEs and support multiple life processes.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the occupied areas contain the physical or biological features essential to the conservation of the species, and whether these features may require special management considerations or protection. It is recognized that numerous activities in and adjacent to the unit designated as critical habitat, as described in this proposed rule, may affect one or more of the PCEs found in that unit. These activities include, but are not limited to, those listed in the Application of the "Adverse Modification" Standard (AMS) section as activities that may destroy or adversely modify critical habitat. Special management of the PCEs for the frosted flatwoods salamander and the reticulated flatwoods salamander and their habitat may be required for the following threats: direct and indirect impacts of land use conversions, primarily urban development and conversion to agriculture and pine plantations; stump removal and other soil-disturbing activities which destroy the below-ground structure within forest soils; fire suppression and low fire frequencies; wetland destruction and degradation; and stochastic effects of drought or floods. Specific details regarding these threats can be found in the proposed listing rule (62 FR 65787), the final listing rule (64 FR 15691), and above in the section entitled Summary of Factors Affecting the Species. Due to one or more of the threats described above, and as discussed in more detail in the

individual unit descriptions below, we find that all areas known to be occupied at the time of listing that we are proposing for designation as critical habitat contain PCEs that may require special management considerations or protections to ensure the conservation of the frosted flatwoods salamander and the reticulated flatwoods salamander.

Criteria Used To Identify Critical Habitat

We began our analysis by evaluating both species of flatwoods salamander in the context of their distribution within their historic range, to determine what portion of their range must be included to ensure conservation of both species. We assessed the critical life-history components of flatwoods salamanders, as they relate to habitat. Flatwoods salamanders require small, acidic, depressional standing bodies of freshwater for breeding, upland pine flatwoods-savanna habitat that is open, mesic and maintained by fire for non-breeding habitat, and ecotonal habitat areas between non-breeding and breeding habitat that allow for salamander movement. Therefore, all areas meeting these requirements were considered for inclusion.

To determine which areas should be designated as critical habitat, we then evaluated where the necessary physical and biological features of flatwoods salamander habitat occur within the currently occupied habitat. Detailed data on specific locations are included in the unit description in the Proposed Critical Habitat Designation section of this proposed rule. We considered the following criteria in the selection of areas that contain the essential features for the frosted and reticulated flatwoods salamanders and focused on designating units: (1) throughout the current geographic and ecological distribution of the species; (2) that retain or provide for connectivity between breeding sites that allows for the continued existence of viable and essential metapopulations (populations at individual ponds that interbreed over time), despite fluctuations in the status of subpopulations; (3) that possess large continuous blocks of occupied habitat, representing source populations or unique ecological characteristics; and (4) that contain sufficient upland habitat around each breeding location to allow for sufficient survival and recruitment to maintain a breeding population over the long term.

We selected areas for the frosted flatwoods salamander and the reticulated salamander that were occupied at the time of listing, based on the best scientific data available, which

possess those physical and biological features essential to the conservation of the species that may require special management considerations or protection. In addition, we included two areas subsequently identified as occupied by the frosted flatwoods salamander and essential to the conservation of the species. We found that the two newer (post-listing) occurrence records were in close proximity to areas already known to support the frosted flatwoods salamander. We identified proposed critical habitat units that were occupied at the time of listing based on: (1) presence of the defined PCEs; (2) density of flatwoods salamander occurrences; and (3) kind, amount, and quality of habitat associated with those occurrences. We identified proposed critical habitat units that were not occupied at the time of listing based on: (1) density of flatwoods salamander occurrences; (2) kind, amount, and quality of habitat associated with those occurrences; and (3) a determination that these areas are essential to the conservation of the species.

The currently occupied habitat of the frosted flatwoods salamander and the reticulated flatwoods salamander is highly localized and fragmented. Due to several drought events, post-listing observations of salamanders have been made at breeding ponds in only a small portion of their occupied range and no population estimates are currently available. As with many rare species, especially pond-breeding amphibians with fossorial adult life stages, detection probabilities are low even in "normal" weather years (Bailey *et al.* 2004, pp. 2463-2464). Flatwoods salamanders are particularly susceptible to drought, as breeding cannot occur if breeding ponds do not receive adequate rainfall. We know that isolated populations, including those of the frosted and reticulated flatwoods salamanders, are highly susceptible to stochastic events. Protection of a single, isolated, minimally viable population risks the extirpation or extinction of a species as a result of harsh environmental conditions, catastrophic events, or genetic deterioration over several generations (Kautz and Cox 2001, p. 59). To reduce the risk of extinction through these processes, it is important to establish multiple protected subpopulations across the landscape (Soulé and Simberloff 1986, pp. 25-35; Wiens 1996, pp. 73-74). We have determined that all but four of the areas occupied at the time of listing contain the features essential to the conservation of the species. The two units occupied

since the time of listing are essential areas for the conservation of the species.

We are proposing to designate critical habitat on lands that we have determined were occupied at the time of listing and that contain sufficient PCEs to support life-history functions essential for the conservation of the species. In addition we are proposing to designate two areas that we have not been able to determine were occupied at the time of listing (they occur within the same geographical area but were discovered after 1999), and but we believe to be essential to the conservation of the species.

The lands proposed as critical habitat collectively contain small, and in some cases, isolated, populations of the species. These small populations are at a high risk of extinction due to stochastic events and human-induced threats, such as urban-agricultural development and habitat degradation due to fire suppression and hydrological alterations. Thus, we believe all lands proposed as critical habitat are essential for the persistence and conservation of the frosted flatwoods salamander and the reticulated flatwoods salamander, and meet the criteria as set forth above. We believe that with proper protection and management, the proposed critical habitat within this designation, and those areas excluded due to the Sikes Act, are sufficient to provide for the conservation of the species. We are not proposing any areas outside the geographical area presently occupied by these species because we are unaware of any other suitable habitat for these species outside their currently occupied range.

When determining proposed critical habitat boundaries within this proposed rule, we made every effort to avoid including developed areas such as buildings, paved areas, and other structures that lack PCEs for frosted flatwoods salamander and the reticulated flatwoods salamander. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures, and the land under them, inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, Federal actions involving these areas would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the primary constituent elements in the adjacent critical habitat.

Proposed Critical Habitat Designation

For the reticulated flatwoods salamander, we are proposing 10 units, some of which are divided into subunits (for a total of 21 units and subunits), as critical habitat. For the frosted flatwoods salamander, we are proposing

7 units, some of which are divided into subunits (for a total of 20 units and subunits), as critical habitat. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the reticulated flatwoods salamander and the frosted flatwoods

salamander. We are presenting the data geographically from west to east and thus the critical habitat for the reticulated flatwoods salamander is described first below. Table 1 shows the occupied units for the reticulated flatwoods salamander.

TABLE 1. OCCUPANCY OF RETICULATED FLATWOODS SALAMANDER BY PROPOSED CRITICAL HABITAT UNIT.

Unit	Occupied at Time of Listing	Currently Occupied (but not known to be occupied at the time of listing)	Size of Unit in Acres (Hectares)
Florida Units			
RFS-1	X		687 ac (278 ha)
RFS-2, Subunit A	X		162 ac (66 ha)
RFS-2, Subunit B	X		162 ac (66 ha)
RFS-3, Subunit A	X		148 ac (60 ha)
RFS-3, Subunit B	X		57 ac (23 ha)
RFS-4, Subunit A	X		289 ac (117 ha)
RFS-4, Subunit B	X		162 ac (66 ha)
RFS-4, Subunit C	X		2,158 ac (873 ha)
RFS-4, Subunit D	X		272 ac (110 ha)
RFS-5	X		162 ac (66 ha)
RFS-6, Subunit A	X		213 ac (86 ha)
RFS-6, Subunit B	X		162 ac (66 ha)
RFS-7, Subunit A	X		162 ac (66 ha)
RFS-7, Subunit B	X		165 ac (67 ha)
RFS-8, Subunit A	X		110 ac (45 ha)
RFS-8, Subunit B	X		358 ac (145 ha)
RFS-8, Subunit C	X		244 ac (99 ha)
RFS-9, Subunit A	X		162 ac (66 ha)
RFS-9, Subunit B	X		877 ac (355 ha)
Georgia Units			
RFS-10, Subunit A	X		162 ac (66 ha)
RFS-10, Subunit B	X		622 ac (252 ha)

The approximate area of each proposed critical habitat unit for the reticulated flatwoods salamander is shown in table 2. Area estimates reflect

all land within revised proposed critical habitat unit boundaries. Acre and hectare values were individually computer-generated using GIS software,

rounded to nearest whole number, and then summed. Table 3 shows the occupied units for the frosted flatwoods salamander.

TABLE 2. PROPOSED CRITICAL HABITAT UNITS FOR THE RETICULATED FLATWOODS SALAMANDER (RFS). TOTALS MAY NOT MATCH DUE TO ROUNDING.

Subunit	FederalAc (ha)	StateAc (ha)	LocalAc (ha)	PrivateAc (ha)	TotalAc (ha)
Florida Units					
RFS-1		466 ac (186 ha)		221 ac (89 ha)	687 ac (275 ha)
RFS-2, Subunit A				162 ac (66 ha)	162 ac (66 ha)
RFS-2, Subunit B		32 ac (13 ha)		130 ac (53 ha)	162 ac (66 ha)
RFS-3, Subunit A				148 ac (60 ha)	148 ac (60 ha)
RFS-3, Subunit B			25 ac (10 ha)	32 ac (13 ha)	57 ac (23 ha)
RFS-4Subunit A	289 ac (117 ha)				289 ac (117 ha)
RFS-4Subunit B	162 ac (66 ha)				162 ac (66 ha)
RFS-4Subunit C	2,158 ac (873 ha)				2,158 ac (873 ha)
RFS-4Subunit D	272 ac (110 ha)				272 ac (110 ha)
RFS-5		162 ac (66 ha)			162 ac (66 ha)
RFS-6, Subunit A				213 ac (86 ha)	213 ac (86 ha)
RFS-6, Subunit B		162 ac (66 ha)			162 ac (66 ha)
RFS-7, Subunit A				162 ac (66 ha)	162 ac (66 ha)
RFS-7, Subunit B				165 ac (67 ha)	165 ac (67 ha)
RFS-8, Subunit A				110 ac (45 ha)	110 ac (45 ha)
RFS-8, Subunit B				358 ac (145 ha)	358 ac (145 ha)
RFS-8, Subunit C				244 ac (99 ha)	244 ac (99 ha)
RFS-9, Subunit A				162 ac (66 ha)	162 ac (66 ha)
RFS-9, Subunit B				877 ac (355 ha)	877 ac (355 ha)
Georgia Units					
RFS-10, Subunit A		162 ac (66 ha)			162 ac (66 ha)
RFS-10, Subunit B				622 ac (252 ha)	622 ac (252 ha)
Total	2,881 ac (1,166 ha)	984 ac (397 ha)	25 ac (10 ha)	3,606 ac (1,462 ha)	7,496 ac (3,035 ha)

TABLE 3. OCCUPANCY OF FROSTED FLATWOODS SALAMANDER BY PROPOSED CRITICAL HABITAT UNIT.

Unit	Occupied at Time of Listing	Currently Occupied (but not known to be occupied at the time of listing)	Size of Unit in Acres (Hectares)
Florida Units			
FFS-1, Subunit A	X		2,285 ac (925 ha)
FFS-1, Subunit B	X		733 ac (296 ha)
FFS-1, Subunit C	X		972 ac (393 ha)
FFS-1, Subunit D	X		568 ac (230 ha)
FFS-1, Subunit E	X		3,679 ac (1,489 ha)
FFS-1, Subunit F	X		162 ac (66 ha)
FFS-1, Subunit G	X		5,373 ac (2,175 ha)

TABLE 3. OCCUPANCY OF FROSTED FLATWOODS SALAMANDER BY PROPOSED CRITICAL HABITAT UNIT.—Continued

Unit	Occupied at Time of Listing	Currently Occupied (but not known to be occupied at the time of listing)	Size of Unit in Acres (Hectares)
FFS-1, Subunit H		X	887 ac (359 ha)
FFS-1, Subunit I		X	162 ac (66 ha)
FFS-1, Subunit J	X		593 ac (240 ha)
FFS-2	X		162 ac (66 ha)
FFS-3, Subunit A	X		3,078 ac (1,245 ha)
FFS-3, Subunit B	X		1,804 ac (730 ha)
FFS-3, Subunit C	X		163 ac (66 ha)
FFS-4, Subunit A	X		550 ac (223 ha)
FFS-4, Subunit B	X		162 ac (66 ha)
South Carolina Units			
FFS-5, Subunit A	X		154 ac (63 ha)
FFS-5, Subunit B	X		183 ac (74 ha)
FFS-6	X		1,300 ac (526 ha)
FFS-7	X		162 ac (66 ha)

The approximate area of each proposed critical habitat unit for the frosted flatwoods salamander is shown in table 4. Area estimates reflect all land

within revised proposed critical habitat unit boundaries. Acre and hectare values were individually computer-generated using GIS software, rounded

to nearest whole number, and then summed.

TABLE 4. PROPOSED CRITICAL HABITAT UNITS FOR THE FROSTED FLATWOODS SALAMANDER (FFS). TOTALS MAY NOT MATCH DUE TO ROUNDING.

Subunit	Federal ac (ha)	State ac (ha)	Local ac (ha)	Private ac (ha)	Total ac (ha)
Florida Units					
FFS-1, Subunit A	1,976 ac (800 ha)			309 ac (125 ha)	2,285 ac (925 ha)
FFS-1, Subunit B	695 ac (281 ha)			38 ac (15 ha)	733 ac (296 ha)
FFS-1, Subunit C	972 ac (393 ha)				972 ac (393 ha)
FFS-1, Subunit D	568 ac (230 ha)				568 ac (230 ha)
FFS-1, Subunit E	3,473 ac (1,406 ha)			206 ac (83 ha)	3,679 ac (1,489 ha)
FFS-1, Subunit F	162 ac (66 ha)				162 ac (66 ha)
FFS-1, Subunit G	5,277 ac (2,136 ha)			96 ac (39 ha)	5,373 ac (2,175 ha)
FFS-1, Subunit H	861 ac (348 ha)	22 ac (9 ha)		4 ac (2 ha)	887 ac (359 ha)
FFS-1, Subunit I	162 ac (66 ha)				162 ac (66 ha)
FFS-1, Subunit J	593 ac (240 ha)				593 ac (240 ha)
FFS-2		162 ac (66 ha)			162 ac (66 ha)
FFS-3, Subunit A	1,456 ac (589 ha)			1,622 ac (656 ha)	3,078 ac (1,245 ha)
FFS-3, Subunit B	593 ac (240 ha)			1,211 ac (490 ha)	1,804 ac (730 ha)

TABLE 4. PROPOSED CRITICAL HABITAT UNITS FOR THE FROSTED FLATWOODS SALAMANDER (FFS). TOTALS MAY NOT MATCH DUE TO ROUNDING.—Continued

Subunit	Federal ac (ha)	State ac (ha)	Local ac (ha)	Private ac (ha)	Total ac (ha)
Florida Units					
FFS-3, Subunit C		85 ac (34 ha)		78 ac (32 ha)	163 ac (66 ha)
FFS-4, Subunit A	550 ac (223 ha)				550 ac (223 ha)
FFS-4, Subunit B				162 ac (66 ha)	162 ac (66 ha)
South Carolina Units					
FFS-5, Subunit A				154 ac (62 ha)	154 ac (62 ha)
FFS-5 Subunit B				183 ac (74 ha)	183 ac (74 ha)
FFS-6	1,176 ac (476 ha)			124 ac (50 ha)	1,300 ac (526 ha)
FFS-7		162 ac (66 ha)		0.32 ac (0.13 ha)	162 ac (66 ha)
Total	18,514 ac (7,494 ha)	431 ac (175 ha)	0 ac (0 ha)	4,187 ac (1,694 ha)	23,132 ac (9,363 ha)

We present brief descriptions of all units and reasons why they meet the definition of critical habitat for the reticulated flatwoods salamander and the frosted flatwoods salamander below. Unit descriptions are presented separately by species. All threats apply equally to all PCEs in each unit description.

Reticulated Flatwoods Salamander (RFS)

Unit RFS-1

Unit RFS-1 encompasses 687 ac (278 ha). Within this unit, 466 ac (189 ha) consist of State land in the Garcon Point Water Management Area managed by the Northwest Florida Water Management District (NWFLWMD) and in the Yellow River Marsh State Buffer Preserve (YRMSBP); 221 ac (89 ha) are in private ownership. Unit RFS-1 is bisected by Hwy. 191 and occurs within an extensive wet prairie. Since the majority of this unit occupied at the time of listing is owned by NWFLWMD and YRMSBP, it is likely protected from most agricultural and urban development. Threats to reticulated flatwoods salamander habitat that may require special management of the PCEs include potential fire suppression and potential hydrologic changes resulting from the adjacent highway that could alter the ecological functioning of the breeding pond and surrounding terrestrial habitat. Ditches associated with highways can drain water from a site and result in ponds with shorter hydroperiods and drier terrestrial habitat. Alternatively, ditches can connect isolated wetlands with permanent water sites that increase the

hydroperiod of ponds and facilitate the introduction of predaceous fish into breeding ponds. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-2

Unit RFS-2 is comprised of two subunits encompassing 324 ac (131 ha) in Santa Rosa County, Florida. Within this unit, which was occupied at the time of listing, there are 32 ac (13 ha) on State land managed by NWFLWMD and 292 ac (118 ha) are in private ownership.

Subunit A

Unit RFS-2, Subunit A encompasses 162 ac (66 ha) on private land in Santa Rosa County, Florida. This subunit is located northeast of Milton, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include agricultural and urban development, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrological alterations to the habitat, and the potential for fire suppression. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-2, Subunit B encompasses 162 ac (66 ha) in Santa Rosa County, Florida. Within this unit, there are 32 ac (13 ha) on State land managed by NWFLWMD and 130 ac (53 ha) on

private land. This subunit is located south of Interstate 10 and near the Santa Rosa–Okaloosa County border. A small county road bisects the unit and a power line crosses the eastern edge of the breeding pond. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from the road and power line that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. Agricultural and urban development are potential threats on the lands in private ownership. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-3

Unit RFS-3 is comprised of two subunits encompassing 205 ac (83 ha) in Santa Rosa County, Florida. Within this unit, which was known to be occupied at the time of listing, 180 ac (73 ha) are on private land and 25 ac (10 ha) are on property owned by the Santa Rosa County School Board.

Subunit A

Unit RFS-3, Subunit A encompasses 148 ac (60 ha) on private land in Santa Rosa County, Florida. This subunit is located near a rapidly developing section of Federal Hwy. 98 between Navarre and Gulf Breeze, Florida. Threats to the reticulated flatwoods

salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from the highway that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and potential habitat destruction due to urban and commercial development nearby. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-3, Subunit B encompasses 57 ac (23 ha) in Santa Rosa County, Florida. This subunit is located near a rapidly developing section of U.S. Hwy. 98 between Navarre and Gulf Breeze, Florida. Within this subunit, 32 ac (13 ha) are on private land and 25 ac (10 ha) are on property owned by the Santa Rosa County School Board. Threats to the reticulated flatwoods salamander habitat that may require special management of the existing PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to urban and commercial development. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-4

Unit RFS-4 is comprised of four subunits encompassing 2,881 ac (1,166 ha) on Department of Defense lands. Within this unit, which was occupied at the time of listing, 289 ac (167 ha) occur on Whiting Field's Out-Lying Landing Field Holley, 713 ac (289 ha) occur on Hurlburt Field, and 1,880 ac (761 ha) occur on Eglin Air Force Base.

Subunit A

Unit RFS-4, Subunit A encompasses 289 ac (117 ha) on Whiting Field's Out-Lying Landing Field Holley (Holley Field) in Santa Rosa County, Florida. This subunit is located within a rapidly developing area of the county north of U.S. Hwy. 98 and northwest of Navarre, Florida. The U.S. Department of the Navy currently manages Holley Field (see discussion below under Application of Section 4(a)(3) of the Act). Threats to the reticulated flatwoods salamander habitat that may

require special management of the existing PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to urban and commercial development. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-4, Subunit B encompasses 162 ac (66 ha) on Eglin Air Force Base (Eglin) in Santa Rosa County, Florida. This subunit is located northeast of Navarre, Florida. Threats to the reticulated flatwoods salamander habitat that may require special management of the existing PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to the construction of a proposed toll road (see discussion below under Application of Section 4(a)(3) of the Act). All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit C

Unit RFS-4, Subunit C encompasses 2,158 ac (873 ha) in Santa Rosa and Okaloosa Counties, Florida. Within this subunit, 1,446 ac (585 ha) are on Eglin and 712 ac (288 ha) are on Hurlburt Field. The subunit is located just north of U.S. Hwy. 98 and west of Fort Walton Beach, Florida. Threats to the reticulated flatwoods salamander habitat that may require special management of the existing PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to the construction of a proposed toll road (see discussion below under Application of Section 4(a)(3) of the Act). All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit D

Unit RFS-4, Subunit D encompasses 272 ac (110 ha) in Okaloosa County, Florida. This subunit is located on Eglin AFB northwest of Fort Walton Beach, Florida. Threats to the reticulated flatwoods salamander habitat that may require special management of the existing PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to the construction of a proposed toll road (see discussion below under Application of Section 4(a)(3) of the Act). All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-5

Unit RFS-5 encompasses 162 ac (66 ha) on the Point Washington State Forest (managed by the State of Florida's Division of Forestry), Walton County, Florida. Since the lands located in this unit, which was known to be occupied at the time of listing, are owned by the State of Florida, they are likely protected from direct agricultural and urban development; however, threats remain to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs. They include the potential for fire suppression and potential detrimental alterations in forestry practices that could destroy the below-ground soil structure. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-6

Unit RFS-6 is composed of two subunits encompassing 375 ac (152 ha) in Walton and Washington Counties, Florida. Within this unit (which was occupied at the time of listing), 213 ac (86 ha) are on private land in Walton County, Florida, and 162 ac (66 ha) are located on Pine Log State Forest (managed by the State of Florida's Division of Forestry) in Washington County, Florida.

Subunit A

Unit RFS-6, Subunit A encompasses 213 ac (86 ha) on private land in Walton County, Florida. This subunit is bisected by State Hwy. 81 near Bruce, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire

suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to urban and commercial development. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-6, Subunit B encompasses 162 ac (66 ha) on Pine Log State Forest (managed by the State of Florida's Division of Forestry) in Washington County, Florida. Since the lands located within this subunit are owned by the State of Florida, they are likely protected from direct agricultural and urban development; however, threats remain to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs. They include the potential for fire suppression and potential detrimental alterations in forestry practices that could destroy the below-ground soil structure. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-7

Unit RFS-7, which was occupied at the time of listing, is comprised of two subunits encompassing 327 ac (132 ha) on private land in Holmes and Washington Counties, Florida.

Subunit A

Unit RFS-7, Subunit A encompasses 162 ac (66 ha) on private land in Holmes County, Florida. This subunit is located approximately 2 mi (3.2 km) east of State Hwy. 79 and approximately 5.5 mi (8.8 km) north of Bonifay, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-7, Subunit B encompasses 165 ac (67 ha) on private land in Washington County, Florida. This subunit is located less than a mile (1.6 km) northwest of State Hwy. 79 and approximately 4 mi (6.4 km) west of Vernon, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-8

Unit RFS-8, which was occupied at the time of listing, is composed of three subunits encompassing 712 ac (288 ha) on private land in Jackson County, Florida.

Subunit A

Unit RFS-8, Subunit A encompasses 110 ac (45 ha) on private land in western Jackson County, Florida near the Jackson-Washington County line. This subunit is located just south of U.S. Hwy. 90 and west of State Hwy. 231 approximately 10 mi (16 km) west of Marianna, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-8, Subunit B encompasses 358 ac (145 ha) on private land in Jackson County, Florida. This subunit is located just east of State Hwy. 71 and south of U.S. Hwy. 90, between Old Spanish Trail and the CSX railroad. This locality is approximately 4 mi (6.4 km) southeast of Marianna, Florida.

Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit C

Unit RFS-8, Subunit C encompasses 244 ac (99 ha) on private land in Jackson County, Florida. This currently occupied subunit is bisected by State Hwy. 275 south of Interstate 10 near Wolf Slough. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-9

Unit RFS-9, which was occupied at the time of listing, is comprised of two subunits encompassing 1,039 ac (421 ha) on private land in Calhoun County, Florida.

Subunit A

Unit RFS-9, Subunit A encompasses 162 ac (66 ha) on private land in Calhoun County, Florida. This subunit is bisected by an unnamed road near Broad Branch, is approximately 2.5 mi (4 km) west of State Hwy. 73, and is approximately 4 mi (6.4 km) west of Kinard, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry

practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-9, Subunit B encompasses 877 ac (355 ha) on private land in Calhoun County, Florida. This subunit is bisected by an unnamed road running east of and parallel to State Hwy. 71, and is located approximately 13 mi (20.8 km) south of Scotts Ferry, Florida. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Unit RFS-10

Unit RFS-10, which was occupied at the time of listing, is comprised of two subunits encompassing 784 ac (317 ha) in Baker and Miller counties, Georgia. Within RFS-10, 162 ac (66 ha) are located on Mayhaw Wildlife Management Area (managed by the State of Georgia) in Miller County, Georgia, and 622 ac (252 ha) are located on private land adjacent to, and running south of, State Highway 200 in southwestern Baker County, Georgia.

Subunit A

Unit RFS-10, Subunit A encompasses 162 ac (66 ha) on Mayhaw Wildlife Management Area (managed by the State of Georgia) in Miller County, Georgia. Since this subunit is owned by the State of Georgia, it is likely protected from most agricultural and urban development (Ozier 2008). Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential detrimental

alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Subunit B

Unit RFS-10, Subunit B encompasses 622 ac (252 ha) on private land adjacent to, and south of, State Highway 200 in southwestern Baker County, Georgia. Threats to the reticulated flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple reticulated flatwoods salamander life processes.

Frosted Flatwoods Salamander (FFS)

Unit FFS-1

Unit FFS-1 is comprised of 10 subunits in Liberty and Franklin Counties, Florida. These subunits are comprised primarily of U. S. Forest Service land lying within the Apalachicola National Forest. The combined acreage of these subunits is 15,414 ac (6,238 ha). Of these acres, 14,614 ac (5,914 ha) are on the Apalachicola National Forest, 22 ac (9 ha) are under State management, and 778 ac (315 ha) are in private ownership. Subunits A through G and subunit J (14,365 ac (5,813 ha)) were occupied at the time of listing and are currently occupied; subunits H and I (1,049 ac (425 ha)) were not occupied at the time of listing, but are currently occupied.

Subunit A

Unit FFS-1, Subunit A encompasses 2,285 ac (925 ha). Within this subunit, 1,976 ac (800 ha) are in the Apalachicola National Forest and 309 ac (125 ha) are in private ownership. Lands within this subunit owned by the U.S. Forest Service are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special

management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit B

Unit FFS-1, Subunit B encompasses 733 ac (296 ha). Within this subunit, 695 ac (281 ha) are in the Apalachicola National Forest and 38 ac (15 ha) are in private ownership. Lands within this subunit owned by the U.S. Forest Service are protected from direct agricultural and urban development (Griep 2008); however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit C

Unit FFS-1, Subunit C encompasses 972 ac (393 ha). All of this subunit is within the Apalachicola National Forest. Lands within this subunit are owned by the U.S. Forest Service and are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit D

Unit FFS-1, Subunit D encompasses 568 ac (230 ha). All of this subunit is within the Apalachicola National Forest. Lands within this subunit are owned by the U.S. Forest Service and are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit E

Unit FFS-1, Subunit E encompasses 3,679 ac (1,489 ha). Within this subunit, 3,473 ac (1,406 ha) are in the Apalachicola National Forest and 206 ac (83 ha) are in private ownership. Lands within this subunit owned by the U.S. Forest Service are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, as well as agricultural and urban development. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit F

Unit FFS-1, Subunit F encompasses 162 ac (66 ha). All of this subunit is within the Apalachicola National Forest. Lands within this subunit are owned by the U.S. Forest Service and are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire

suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit G

Unit FFS-1, Subunit G encompasses 5,373 ac (2,175 ha). Within this subunit, 5,277 ac (2,136 ha) are in the Apalachicola National Forest and 96 ac (39 ha) are in private ownership. Lands within this subunit owned by the U.S. Forest Service are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, as well as agricultural and urban development. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit H

Unit FFS-1, Subunit H encompasses 887 ac (359 ha). Within this subunit, 861 ac (348 ha) are in the Apalachicola National Forest, 22 ac (9 ha) are under State management, and 4 ac (2 ha) are in private ownership. This subunit was not occupied at the time of listing, but is currently occupied. The currently occupied habitat of the flatwoods salamander is highly localized and fragmented. Flatwoods salamanders are particularly susceptible to drought, as breeding cannot occur if breeding ponds do not receive adequate rainfall. These small populations are at a high risk of extinction due to stochastic events such as drought, and human-induced threats such as urban-agricultural development and habitat degradation due to fire suppression and hydrological alterations. Thus, to ensure the persistence and conservation of this species throughout its current geographic and ecological distribution despite fluctuations in the status of subpopulations, we have determined that this subunit, not occupied at the time of listing, is essential for the

conservation of the species. Lands within this subunit owned by the U.S. Forest Service are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, as well as agricultural and urban development. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit I

Unit FFS-1, Subunit I encompasses 162 ac (66 ha) within the Apalachicola National Forest. This subunit was not occupied at the time of listing, but is currently occupied. The currently occupied habitat of the flatwoods salamander is highly localized and fragmented. Flatwoods salamanders are particularly susceptible to drought, as breeding cannot occur if breeding ponds do not receive adequate rainfall. These small populations are at a high risk of extinction due to stochastic events such as drought, and human-induced threats such as urban-agricultural development and habitat degradation due to fire suppression and hydrological alterations. Thus, to ensure the persistence and conservation of this species throughout its current geographic and ecological distribution despite fluctuations in the status of subpopulations, we have determined that this subunit, is essential for the conservation of the species. Lands within this subunit are owned by the U.S. Forest Service and are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, as well as agricultural and urban development. All lands proposed for designation contain all PCEs and

support multiple frosted flatwoods salamander life processes.

Subunit J

Unit FFS-1, Subunit J encompasses 593 ac (240 ha). All of this subunit is within the Apalachicola National Forest. Lands within this subunit are owned by the U.S. Forest Service and are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-2

Unit FFS-2, which was occupied at the time of listing, encompasses 162 ac (66 ha) on Tate's Hell State Forest (managed by the State of Florida's Division of Forestry) in Franklin County, Florida. Since this subunit is owned by the State of Florida, it is likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. They include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-3

Unit FFS-3, which was occupied at the time of listing, is comprised of three subunits encompassing 5,045 ac (2,042 ha) in Jefferson and Wakulla Counties, Florida. Within this unit, 2,049 ac (829 ha) are on St. Marks National Wildlife Refuge (NWR) (managed by the Service), 85 ac (34 ha) are in the Aucilla Wildlife Management Area managed by the State of Florida, and 2,911 ac (1,178 ha) are in private ownership.

Subunit A

Unit FFS-3, Subunit A encompasses 3,078 ac (1,245 ha) on Federal and private land in Wakulla County, Florida. This subunit is located south of U.S. Hwy. 98 and southeast of the town of Newport, Florida. Within this subunit, 1,456 ac (589 ha) are in the St. Marks NWR and 1,622 ac (656 ha) are in private ownership. Portions of this subunit that are within Federal ownership are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. Special management is needed to address the threats of agricultural and urban development on portions of the unit within private ownership. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit B

Unit FFS-3, Subunit B encompasses 1,804 ac (730 ha) on Federal and private land. This subunit is located south of U.S. Hwy. 98 in southeastern Wakulla and southwestern Jefferson counties. Within this subunit, 593 ac (240 ha) are in the St. Marks NWR and 1,211 ac (490 ha) are in private ownership. Portions of this subunit that are within Federal ownership are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. Special management is needed to address the threats of agricultural and urban development on portions of the

unit within private ownership. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit C

Unit FFS-3, Subunit C encompasses 163 ac (66 ha) in Jefferson County, Florida. Within this subunit, 85 ac (34 ha) are in the Aucilla Wildlife Management Area managed by the State of Florida and 78 ac (32 ha) are in private ownership. This subunit is bisected by State Hwy. 59, 5.3 mi (8.4 km) north of U.S. Hwy. 98, and approximately 2 mi (3.2 km) east of the Jefferson-Wakulla County line. Portions of this subunit that are within State ownership are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. Special management is needed to address the threats of agricultural and urban development on portions of the unit within private ownership. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-4

Unit FFS-4 is comprised of two subunits encompassing 712 ac (288 ha) in Baker County, Florida. Within this unit, which was occupied at the time of listing, 550 ac (223 ha) are on Osceola NF and 162 ac (66 ha) are in private ownership.

Subunit A

Unit FFS-4, Subunit A encompasses 550 ac (223 ha) on the Osceola National Forest in Baker County, Florida. This subunit is located adjacent and south of Interstate 10 in the southwestern corner of Baker County between State Highways 250 and 229. Portions of this subunit within Federal ownership are likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. This subunit requires special management to address threats

including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit B

Unit FFS-4, Subunit B encompasses 162 ac (66 ha) on private land in Baker County, Florida. This subunit occurs approximately 2 mi (3.2 km) south of State Hwy. 229 and 3.5 mi (5.6 km) north of Interstate 10. This subunit requires special management to address threats including the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, as well as agricultural and urban development. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-5

Unit FFS-5 is comprised of two subunits encompassing 337 ac (136 ha) on privately owned land in Jasper County, South Carolina. Both subunits were occupied at the time of listing and are currently occupied.

Subunit A

Unit FFS-5, Subunit A encompasses 154 ac (62 ha) on private land in Jasper County, South Carolina. This subunit is bisected by State Hwy. 46 and occurs near a rapidly developing area of Jasper County. Within this subunit, threats to the frosted flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential

expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to urban and commercial development. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit B

Unit FFS-5, Subunit B encompasses 183 ac (74 ha) on private land in Jasper County, South Carolina. This subunit is bisected by a county road, approximately 1 mi (1.6 km) west of U.S. Hwy. 321, northwest of Hardeeville, South Carolina. Within this subunit, threats to the frosted flatwoods salamander and its habitat that may require special management of the PCEs include the potential for fire suppression, potential expansion of agriculture and residential development into the unit, potential detrimental alterations in forestry practices that could destroy the below-ground soils structure, potential hydrologic changes resulting from adjacent roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat, and future habitat destruction due to urban and commercial development. In addition, run-off from highways can introduce toxic chemicals into breeding sites. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-6

Unit FFS-6, occupied at the time of listing, encompasses 1,300 ac (526 ha) on Federal and private land in Berkeley County, South Carolina. This unit is bisected by State Highway 41 approximately 10 mi (16 km) south of the town of Huger. Within this unit, 1,176 ac (476 ha) are in the Francis Marion National Forest and 124 ac (50 ha) are on private land. Land within this subunit owned by the U.S. Forest

Service is protected from agricultural and urban development; however, threats remain to frosted flatwoods salamander habitat that may require special management of the PCEs. These threats include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecological functioning of the breeding pond and surrounding terrestrial habitat. Special management of the PCEs may also be required for the threats posed by agricultural and urban development on the lands in private ownership. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Unit FFS-7

Unit FFS-7 encompasses 162 ac (66 ha) on the Santee Coastal Reserve (managed by the State of South Carolina) in Charleston County, South Carolina. Approximately 0.32 ac (0.13 ha) on private land are also included within this unit. Since most of this unit, which was occupied at the time of listing, is owned by the State of South Carolina, it is likely protected from direct agricultural and urban development; however, threats remain to the frosted flatwoods salamander and its habitat that may require special management of the PCEs. They include the potential for fire suppression, potential detrimental alterations in forestry practices that could destroy the below-ground soil structure, and potential hydrologic changes resulting from adjacent highways and roads that could alter the ecology of the breeding pond and surrounding terrestrial habitat. All lands proposed for designation contain all PCEs and support multiple frosted flatwoods salamander life processes.

Table 5 below provides approximate areas (ac, ha) of lands that meet the definition of critical habitat but that we are exempting from the proposed critical habitat rule. Table 5 also provides our reasons for the exemptions.

TABLE 5. EXEMPTIONS FROM CRITICAL HABITAT.

State	Specific Area: Reason for Exemption	Areas Meeting the Definition of Critical Habitat in Acres (ac) (Hectares (ha))	Areas Exempted ac (ha)
Georgia	Fort Stewart Military Installation: Section 4(a)(3)	5,121 ac (0 ha)	5,121 ac (2,072 ha)

TABLE 5. EXEMPTIONS FROM CRITICAL HABITAT.—Continued

State	Specific Area: Reason for Exemption	Areas Meeting the Definition of Critical Habitat in Acres (ac) (Hectares (ha))	Areas Exempted ac (ha)
Georgia	Townsend Bombing Range: Section 4(a)(3)	162 ac (0 ha)	162 ac (66 ha)

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our definition of “destruction or adverse modification” (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir 2004) and *Sierra Club v. U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional to serve its intended conservation role for the species.

Under section 7(a)(2) of the Act, if a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that are likely to adversely affect listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define “Reasonable and prudent alternatives” at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director’s opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency’s discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect the frosted flatwoods or reticulated flatwoods salamanders or their designated critical habitat will require section 7(a)(2) consultation under the Act. Activities on State, Tribal, local or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from us under section 10(a)(1)(B) of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are examples of agency actions that may be subject to the section 7(a)(2) consultation process. Federal actions

not affecting listed species or critical habitat, and actions on State, Tribal, local or private lands that are not federally funded, authorized, or permitted, do not require section 7(a)(2) consultations.

Application of the “Adverse Modification” Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or would retain its current ability for the primary constituent elements to be functionally established. Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for the reticulated flatwoods salamander and the frosted flatwoods salamander. Generally, the conservation role of reticulated flatwoods salamander and frosted flatwoods salamander critical habitat units is to support viable core areas for the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore should result in consultation for the reticulated flatwoods salamander and the frosted flatwoods salamander include, but are not limited to:

(1) Actions that would significantly alter water chemistry in reticulated flatwoods salamander or frosted flatwoods salamander breeding ponds. Such activities could include, but are not limited to, the release of chemicals, biological pollutants, or sedimentation into the surface water or connected groundwater at a point source or by dispersed release (non-point source) via road construction, urban and agricultural development, ditching, timber harvest, off-road vehicle use, and other watershed disturbances. These

activities could alter the condition of the water beyond the tolerances of the reticulated flatwoods salamander and frosted flatwoods salamander and their respective food bases, resulting in direct or cumulative adverse effects to individuals and their life cycles.

(2) Actions that would significantly alter the hydroperiod and vegetation of a reticulated flatwoods salamander or a frosted flatwoods salamander breeding pond. Such activities could include, but are not limited to, road construction; urban and agricultural development; dredging, ditching, or filling ponds; fire suppression; and timber harvesting and replanting. These activities could alter the hydrologic timing, duration, or water flows of a pond basin, as well as alter the constituent vegetation. They could also increase the connectivity of breeding ponds to more permanent waters, which would allow the invasion of predatory fish. As a result, the habitat necessary for reticulated flatwoods salamander or frosted flatwoods salamander reproduction and the growth and development of eggs and juvenile salamanders would be reduced or eliminated.

(3) Actions that would significantly alter the terrestrial forested habitat of the reticulated flatwoods salamander or the frosted flatwoods salamander. Such activities could include, but are not limited to, road construction, urban and agricultural development, dredging, ditching, fire suppression, and timber harvesting and replanting. These activities may lead to changes in soil moisture, soil below-ground structure, soil temperatures, and vegetation that would degrade or eliminate the terrestrial habitat of the reticulated flatwoods salamander or frosted flatwoods salamander.

Please see "Special Management Considerations or Protection" section for a more detailed discussion on the impacts of these actions to the listed species.

Exemptions and Exclusions

Application of Section 4(a)(3) of the Act

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resource management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108-136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation."

We consult with the military on the development and implementation of INRMPs for installations with listed species. The Service reviewed each of the INRMPs described below prior to their finalization and has provided input into strategies for monitoring and management of endangered species including the reticulated flatwoods salamander and frosted flatwoods salamander. Each military facility has been conducting surveys and habitat management to benefit the reticulated flatwoods salamander or the frosted flatwoods salamander and reporting the results of their efforts to the Service. Cooperation between the military facilities and the Service on specific conservation measures continues. INRMPs developed by military installations located within the range of the proposed critical habitat designation for the reticulated flatwoods salamander and the frosted flatwoods salamander were analyzed for exemption under the authority of 4(a)(3) of the Act.

Approved INRMPs

Whiting Field's Out-Lying Landing Field Holley (Holley Field)

Holley Field is located in Unit RFS-4, Subunit A (Santa Rosa County, Florida, and has approximately 289 ac (117 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander. In 2006, the U.S. Department of the Navy (DoN) drafted a revision of its 2001 INRMP for Naval Air Station Whiting Field Complex, of which Holley Field is a part (DoN 2006, pp. 5-68, 5-70, 5-73, 5-76, 5-77, 6-22, 6-23, A-16). The revised INRMP outlines management for the next 10 years (2007-2016). We have examined this document and determined that it does provide conservation measures for the reticulated flatwoods salamander, as well as for the management of important wetland and upland habitats at Holley Field. The area of Holley Field where reticulated flatwoods salamander habitat is located has been designated as a Protected Area. The INRMP outlines a Special Management Initiative for the reticulated flatwoods salamander, which includes a prescribed burning program, strategies to identify salamander distribution and habitat, control of invasive species, enforcement of restrictions on off-road vehicle use, and forest management consistent with recommendations in the final listing rule (64 FR 15691; April 1, 1999). However, Holley Field is no longer used for military training, and the property is being considered for transfer from Department of Defense ownership.

Based on the above considerations, and consistent with the direction provided in section 4(a)(3)(B)(i) of the Act, we have determined that even though measures outlined in the INRMP have the potential to provide benefits to the reticulated flatwoods salamander and the features essential to the species' conservation occurring on Holley Field, the continued implementation of this INRMP is not assured and therefore the INRMP does not provide a conservation benefit overall. As a result, approximately 290 ac (117 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander within Holley Field are not exempt from this proposed designation of critical habitat for the reticulated flatwoods salamander under section 4(a)(3) of the Act. These lands meet the definition of critical habitat for the reticulated flatwoods salamander and are being proposed as critical habitat. However, we are specifically soliciting public comment on the possible exclusion of Unit RFS 4,

Subunit A from critical habitat in the final designation. We are seeking comments from the public on all the exclusions we are proposing.

Hurlburt Field

Hurlburt Field is located in Unit RFS 4, Subunit C (Okaloosa County, Florida) and has approximately 1,103 ac (446 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander. The U.S. Department of Defense–Air Force completed an INRMP for Hurlburt Field in 2001 (DoD 2001, pp. 37, 40, 51). The INRMP covers a period of 10 years. We have examined this document and determined that it does outline conservation measures for the reticulated flatwoods salamander, as well as for the management of important wetland and upland habitats at Hurlburt Field. The INRMP outlines goals and objectives for the reticulated flatwoods salamander and its habitat that include a prescribed burning program, strategies to identify and monitor salamander distribution and habitat, control of invasive species, and forest management consistent with recommendations in the final listing rule (64 FR 15691; April 1, 1999). However, it has come to our attention that a road has been proposed that would impact habitat with features essential to the conservation of the reticulated flatwoods salamander on Hurlburt Field (Mittiga 2007). The INRMP provides no assurance that this road will not be built.

Based on the above considerations, and consistent with the direction provided in section 4(a)(3)B(i) of the Act, we have determined that the INRMP will not provide a benefit to the reticulated flatwoods salamander overall. The INRMP does not provide protection for the reticulated flatwoods salamander from habitat destruction or degradation as evidenced by the road planned to traverse known habitat. Construction of this road will result in the destruction of habitat with features essential to conservation of the reticulated flatwoods salamander. Therefore, approximately 1,103 ac (446 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander within Hurlburt Field are not exempt from this proposed designation of critical habitat for the reticulated flatwoods salamander under section 4(a)(3) of the Act. These lands meet the definition of critical habitat for the reticulated flatwoods salamander and are being proposed as critical habitat. However, we are specifically soliciting public comment on the possible exclusion of this unit from critical habitat in the final designation.

We are seeking comments from the public on all the exclusions we are proposing.

Eglin Air Force Base (Eglin)

Eglin Air Force Base is located in Unit RFS-4, Unit B (Santa Rosa and Okaloosa Counties, Florida, and has approximately 3,191 ac (1,291 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander. The Department of Defense completed the update of its INRMP for Eglin in 2007 (DoD 2007, pp. 124-126, 181). This INRMP covers a period of 4 years from 2007 through 2011. A separate threatened and endangered species component plan has been written and contains specific monitoring and management actions for the reticulated flatwoods salamander (DoD 2006, pp. 53-64, 240-242). The INRMP and component plan outline a management direction for the reticulated flatwoods salamander that includes a prescribed burning program, strategies to identify and monitor salamander distribution and habitat, control of invasive species, and forest management consistent with recommendations in the final listing rule (64 FR 15691; April 1, 1999). It has come to our attention (Arnold 2007) that a road has been proposed which will cross Eglin within the habitat with features essential to the conservation of the reticulated flatwoods salamander. Neither the INRMP nor recent correspondence with Eglin AFB provide assurance that this road will not be built, nor that its construction will meet the goal set forth in the INRMP to protect populations of flatwoods salamander located on the base.

Based on the above considerations, and consistent with the direction provided in section 4(a)(3)B(i) of the Act, we have determined that the INRMP will not provide a benefit to the reticulated flatwoods salamander overall. The INRMP does not provide protection for the reticulated flatwoods salamander from habitat destruction or degradation as evidenced by the road planned to traverse known habitat. Construction of this road will result in the destruction of habitat with features essential to the conservation of the reticulated flatwoods salamander. Therefore, approximately 3,191 ac (1,291 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander within Eglin are not exempt from this proposed designation of critical habitat for the reticulated flatwoods salamander under section 4(a)(3) of the Act. These lands meet the definition of critical habitat for the reticulated flatwoods salamander

and are being proposed as critical habitat. However, we are specifically soliciting public comment on the possible exclusion of Unit RFS 4, Subunit B from critical habitat in the final designation. We are seeking comments from the public on all the exclusions we are proposing.

Fort Stewart Military Installation (Fort Stewart)

Fort Stewart, U.S. Army installation, is located in Bryan, Evans, Liberty, Long, and Tattnall Counties, Georgia and has approximately 5,121 ac (2,072 ha) of habitat with features essential to the conservation of the frosted flatwoods salamander. The first INRMP (INRMP I) for Fort Stewart was completed in 2001 and updated in 2005 (DoD 2005, pp. 1, 22, 34, 76-77). Each INRMP covers a period of 5 years with a subsequent review and update every 5 years. Additionally, an annual review of management implementation is conducted and, if necessary, the INRMP is adapted to address needed improvements. The management direction from INRMP I is being continued in the review. We have examined this document and determined that it does provide conservation measures for the frosted flatwoods salamander, as well as for the management of important wetland and upland habitats at Fort Stewart. The INRMP outlines management activities to be conducted for the frosted flatwoods salamander (DoD 2005, p. 22). These include a prescribed burning program, strategies to identify and monitor frosted flatwoods salamander distribution and habitat, control of invasive species, and forest management consistent with recommendations in the final listing rule (64 FR 15691; April 1, 1999). At this time, we know of no proposed projects outside the scope of the INRMP which would threaten the frosted flatwoods salamander or its habitat.

Based on the above considerations, and consistent with the direction provided in section 4(a)(3)B(i) of the Act, we have determined that conservation identified in the INRMP will provide benefits to the frosted flatwoods salamander and the features essential to the species' conservation occurring on Fort Stewart Military Installation. In our analyses, we have taken into consideration that the INRMP does not protect the habitat from future destruction or modification associated with development, however, we know of no such potential threat at this time. Therefore, approximately 5,121 ac (2,072 ha) of habitat with features essential to the conservation of the

frosted flatwoods salamander within Fort Stewart Military Installation are exempt from this proposed designation of critical habitat for the frosted flatwoods salamander under section 4(a)(3) of the Act.

Townsend Bombing Range (Townsend)

Townsend is located in McIntosh County, Georgia, and contains approximately 162 ac (66 ha) of habitat with features essential to the conservation of the frosted flatwoods salamander. The property is owned by the U.S. Department of the Navy and the land is managed by Marine Corps Air Station, Beaufort, South Carolina (MCAS Beaufort). The original INRMP written in 2001 for Townsend has been renewed to cover the period November 2006 through October 2011 (DoD 2006, pp. ES-1, ES-2, 1-3, 1-8, 1-9, 1-10, 3-15, 4-4, 4-8, 4-9, 4-10, 4-11, 4-19, 4-20, 4-22, 4-23, 4-27, 4-28, 4-29). We have examined this document and determined that it does provide conservation measures for the frosted flatwoods salamander, as well as for the management of important wetland and upland habitats at Townsend. The INRMP includes activities to maintain or increase the salamander's population on Townsend through improvement of terrestrial habitat through use of prescribed fire and improvement of water quality and hydrologic regime of the breeding ponds. The INRMP provides biological goals and objectives, measures of success, provisions for annual monitoring and adaptive management, and provisions for reporting. The INRMP outlines projects that would benefit the frosted flatwoods salamander including a prescribed burning program, strategies to identify and monitor salamander distribution and habitat, control of invasive species, and forest management consistent with recommendations in the final listing rule (64 FR 15691; April 1, 1999). At this time, we know of no proposed projects outside the scope of the INRMP that would threaten the frosted flatwoods salamander or its habitat.

Based on the above considerations, and in accordance with section 4(a)(3)B(i) of the Act, we have determined that conservation efforts identified in the INRMP will provide benefits to the frosted flatwoods salamander and the features essential to the species' conservation occurring in habitats within or adjacent to the Townsend Bombing Range. In our analyses, we have taken into consideration that the INRMP does not protect the habitat from future destruction or modification associated with development, however, we know

of no such potential threat at this time. Therefore, this installation is exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 162 ac (66 ha) of habitat in this proposed critical habitat designation because of this exemption.

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination, then we can exclude the area only if such exclusion would not result in the extinction of the species.

In the following sections, we address a number of general issues that are relevant to the exclusions we are considering. In addition, we have prepared a draft economic analysis of the impacts of the proposed critical habitat designation and related factors, which is currently available for public review and comment. Based on public comment on that document, the proposed designation itself, and the information in the final economic analysis, the Secretary may exclude from critical habitat additional areas beyond those identified in this assessment under the provisions of section 4(b)(2) of the Act. This is also addressed in our implementing regulations at 50 CFR 424.19.

Under section 4(b)(2) of the Act, we must consider economic impacts. We also consider a number of factors in a section 4(b)(2) analysis. For example, we consider whether there are lands

owned or managed by the Department of Defense where a national security impact might exist. We also consider whether landowners having proposed critical habitat on their lands have developed any conservation plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any Tribal issues, and consider the government-to-government relationship of the United States with Tribal entities. We also consider any social or other impacts that might occur because of the designation.

Areas Considered For Exclusion Under Section 4(b)(2) of the Act

National Forests

We have evaluated the Forest Management Plans for Francis Marion, Osceola, and Apalachicola National Forests with respect to providing adequate protection and management for the flatwoods salamander. At this time, none of these Plans provide sufficient protection and management to satisfy the criteria necessary for proposed exclusion from critical habitat. However, it is possible that improvements in National Forest management, through amendment to forest plans, development of species-specific management prescriptions, or other management approaches, coupled with assurances of implementation, will enable us to exclude one or more of these National Forests from the final designation of critical habitat. Therefore, we are specifically soliciting public comment on the possible exclusion of the units in these National Forests from critical habitat in the final designation.

We anticipate no impact to national security, Tribal lands, partnerships, or HCPs from this proposed critical habitat designation. Based on the best available information, we believe that all of these units contain the features essential to the species, or are otherwise essential for the conservation of the species. During the development of a final designation, we will be considering economic impacts and additional conservation plans, if available, such that areas may be excluded from the final critical habitat designation under section 4(b)(2).

Economics

Section 4(b)(2) of the Act requires that we designate or revise critical habitat based upon the best scientific data available, after taking into consideration the economic impact, impact on national security, or any other relevant

impact of specifying any particular area as critical habitat. In compliance with section 4(b)(2) of the Act, we have prepared a draft economic analysis of this proposed designation of critical habitat for the frosted and reticulated flatwoods salamanders.

The draft economic analysis (Industrial Economics 2008) considers the potential economic effects of actions relating to the conservation of the frosted and reticulated flatwoods salamanders, including costs associated with sections 4, 7, and 10 of the Act, and including those attributable to designating critical habitat. It further considers the economic effects of protective measures taken as a result of other Federal, State, and local laws that aid habitat conservation for the frosted and reticulated flatwoods salamanders in essential habitat areas. The draft economic analysis considers both economic efficiency and distributional effects. In the case of habitat conservation, efficiency effects generally reflect the “opportunity costs” associated with the commitment of resources to comply with habitat protection measures (for example, lost economic opportunities associated with restrictions on land use).

The draft economic analysis also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on small entities and the energy industry. This information can be used by decision-makers to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the draft economic analysis considers those costs that may occur in the 20 years following a designation of critical habitat.

Pre-critical-habitat designation (or pre-designation) (1999–2008) costs associated with species conservation activities are estimated at \$2.08 million discounted at 7 percent (Industrial Economics 2008, p. B-4). Potential post-critical-habitat designation (or post-designation) (2009–2028) costs are estimated to range between \$3.88 and \$6.40 million at a 3 percent discount rate and between \$2.49 and \$4.38 million at a 7 percent discount rate (Industrial Economics, p. B-5). In annualized terms, potential post-designation costs are expected to range from \$261,000 to \$430,000 annualized at 3 percent and \$235,000 to \$413,000 annualized at 7 percent (Industrial Economics 2008, p. B-5).

We solicit data and comments from the public on the draft economic analysis, as well as on all aspects of the

proposal to designate critical habitat. We will be conducting an incremental analysis for the final rule, and so we solicit any information on costs that are the result of the difference between application of the jeopardy and adverse modification standards, or other incremental costs. We may revise the proposal, or its supporting documents, to incorporate or address new information received during the comment period. In particular, we may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area as critical habitat, provided such exclusion will not result in the extinction of the species.

Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we are obtaining the expert opinions of at least three appropriate independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this public comment period on our specific assumptions and conclusions in this proposed designation of critical habitat.

We will consider all comments and information we receive during this comment period on this proposed rule during our preparation of a final determination. Accordingly, our final decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if we receive any requests for hearings. We must receive your request for a public hearing within 45 days after the date of this **Federal Register** publication. Send your request to the address shown in the **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the first hearing.

Required Determinations

Regulatory Planning and Review (Executive Order 12866)

The Office of Management and Budget (OMB) has determined that this rule is not significant under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of \$100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended RFA to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration (SBA), small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical

small business firm's business operations.

To determine if the proposed designation of critical habitat for the frosted and reticulated flatwoods salamanders could significantly affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (for example, housing development, grazing, oil and gas production, timber harvesting). We considered each industry or category individually to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by the designation of critical habitat. Designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies; non-Federal activities are not affected by the designation. Typically, when proposed critical habitat designations are made final, Federal agencies must consult with us if their activities may affect that designated critical habitat. Consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process.

The draft economic analysis for the frosted and reticulated flatwoods salamanders evaluated the potential for economic impacts related to several categories, including (1) timber management; (2) development; (3) other activities, including road construction, species management, fire management and recreation (Industrial Economics 2008, p. A-2). Based on our analysis, only small business entities that rely on land development are expected to be affected by conservation efforts for the frosted and reticulated flatwoods salamanders. Therefore, the screening analysis focused on incremental impacts to development activities. Six small businesses may be affected with an average high-end potential per business impact of \$46,100 (Industrial Economics, 2008, p. A-6) for both species. Potential high-end incremental impacts per landowner range from \$6,770 in FFS-1 to \$102,000 in RFS-3. Potentially affected developable acres in areas proposed for critical habitat designation are small relative to the total number of developable acres in these counties. Regional businesses that support or are supported by development (such as construction companies, hardware suppliers, or lumberyards) in these counties are not expected to be measurably affected by

salamander conservation (Industrial Economics, p. A-6). In addition, "downstream" impacts are not measurable due to the small proportion of all developable lands that are projected to be impacted by salamander conservation measures (as measured at the county level) (Industrial Economics, p. A-3).

In summary, we have considered whether this proposed designation of critical habitat would result in a significant economic effect on a substantial number of small entities. We have determined, for the above reasons and based on currently available information, that it is not likely to affect a substantial number of small entities. Therefore, we certify that this proposed regulation will not result in a significant economic impact on a substantial number of small business entities. Please refer to our draft economic analysis of this designation for a more detailed discussion of potential economic impacts.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)-(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or Tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding," and the State, local, or Tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and

Child Support Enforcement. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments because it is not likely to produce a Federal mandate of \$100 million or greater in any year, that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act. Most lands being proposed for critical habitat designation owned by a government entity are Federal or State properties. In addition, the designation of critical habitat imposes no obligations on State or local governments. Therefore, a Small Government Agency Plan is not required. However, as we conduct our economic analysis, we will further evaluate this issue and revise this assessment if appropriate.

Takings

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the reticulated flatwoods salamander and the frosted flatwoods salamander in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for the reticulated flatwoods salamander and the frosted flatwoods salamander does not pose

significant takings implications for lands within or affected by the designation.

Federalism

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate State resource agencies in Florida, Georgia, and South Carolina. The designation of critical habitat in areas currently occupied by the reticulated flatwoods salamander and the frosted flatwoods salamander imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments because the areas that contain the physical and biological features essential to the conservation of the species are more clearly defined, and the PCEs necessary to support the life processes of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies physical and biological features essential to the conservation of the species within the designated areas to assist the public in understanding the habitat needs of the reticulated flatwoods salamander and the frosted flatwoods salamander.

Paperwork Reduction Act of 1995

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments,

individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (NEPA)

It is our position that, outside the jurisdiction of the United States Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld by the Circuit Court of the United States for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (a) Be logically organized;
- (b) Use the active voice to address readers directly;
- (c) Use clear language rather than jargon;
- (d) Be divided into short sections and sentences; and
- (e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the “ADDRESSES” section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Government-to-Government Relationship with Tribes

In accordance with the President’s memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior’s manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust

Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that there are no tribal lands occupied at the time of listing that contain the features essential for the conservation, and no tribal lands that are essential for the conservation, of the reticulated flatwoods salamander and the frosted flatwoods salamander. Therefore, we have not proposed designation of critical habitat for the reticulated flatwoods salamander and the frosted flatwoods salamander on tribal lands.

Energy Supply, Distribution, or Use

On May 18, 2001, the President issued an Executive Order (E.O. 13211; Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. While this proposed rule to designate critical habitat for the reticulated flatwoods salamander and frosted flatwoods salamander is a significant regulatory action under E.O. 12866 in that it may raise novel legal and policy issues, we do not expect it to significantly affect energy supplies, distribution, or use. Based on our draft economic analysis (Industrial Economics, Inc. 2008, p. A-8), none of the nine outcomes that may constitute “a significant adverse effect” exist for this proposed rule. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Ray Aycok, Mississippi Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Author(s)

The primary author of this package is Linda LaClaire of the Mississippi Fish and Wildlife Service Field Office (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.11(h) by removing the entry for “Salamander, flatwoods”, and by adding entries for “Salamander, frosted flatwoods” and “Salamander, reticulated flatwoods” in alphabetical order under “AMPHIBIANS,” to the List

of Threatened and Endangered Wildlife, to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
* * * * *							
AMPHIBIANS							
* * * * *							
Salamander, frosted flatwoods	<i>Ambystoma cingulatum</i>	U.S.A.(FL, GA, SC)	Entire	T	658	17.95 (d)	
* * * * *							
Salamander, reticulated flatwoods	<i>Ambystoma bishopi</i>	U.S.A.(FL, GA)	Entire	E		17.95(d)	
* * * * *							

3. In § 17.95, amend paragraph (d) by adding entries for “Frosted flatwoods salamander (*Ambystoma cingulatum*)” and “Reticulated flatwoods salamander (*Ambystoma bishopi*),” in the same alphabetical order that the species appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *
(d) Amphibians.
* * * * *

Frosted Flatwoods Salamander (*Ambystoma cingulatum*)

(1) Critical habitat units are depicted for Baker, Franklin, Jefferson, Liberty, and Wakulla Counties in Florida; and Berkeley, Charleston, and Jasper Counties in South Carolina on the maps below.

(2) The primary constituent elements of critical habitat for the frosted flatwoods salamander are:

(i) Breeding habitat. Small (generally <1 to 10 ac (<0.4 to 4.0 ha), acidic, depressional standing bodies of freshwater (wetlands) that:

(A) Are seasonally flooded by rainfall in late fall or early winter and dry in late spring or early summer;

(B) Are geographically isolated from other water bodies;

(C) Occur within pine flatwoods–savanna communities;

(D) Are dominated by grasses and grass-like species in the ground layer

and overstories of pond-cypress, blackgum, and slash pine;

(E) Have a relatively open canopy, necessary to maintain the herbaceous component that serves as cover for flatwoods salamander larvae and their aquatic invertebrate prey; and

(F) Typically have a burrowing crayfish fauna, but, due to periodic drying, the breeding ponds typically lack large, predatory fish (for example, *Lepomis* (sunfish), *Micropterus* (bass), *Amia calva* (bowfin)).

(ii) Non-breeding habitat. Upland pine flatwoods–savanna habitat that is open, mesic woodland maintained by frequent fires and that:

(A) Is within 1,500 ft (457 m) of adjacent and accessible breeding ponds;

(B) Contains crayfish burrows or other underground habitat that the flatwoods salamander depends upon for food, shelter, and protection from the elements and predation;

(C) Has an organic hardpan in the soil profile, which inhibits subsurface water penetration and typically results in moist soils with water often at or near the surface under normal conditions; and

(D) Often has wiregrasses as the dominant grasses in the abundant herbaceous ground cover, which supports the rich herbivorous invertebrates that serve as a food source for the flatwoods salamander.

(iii) Dispersal habitat. Upland habitat areas between nonbreeding and breeding habitat that allow for salamander movement between such sites and that is characterized by:

(A) A mix of vegetation types representing a transition between wetland and upland vegetation (ecotone);

(B) An open canopy and abundant native herbaceous species;

(C) Moist soils as described in paragraph (2)(ii); and

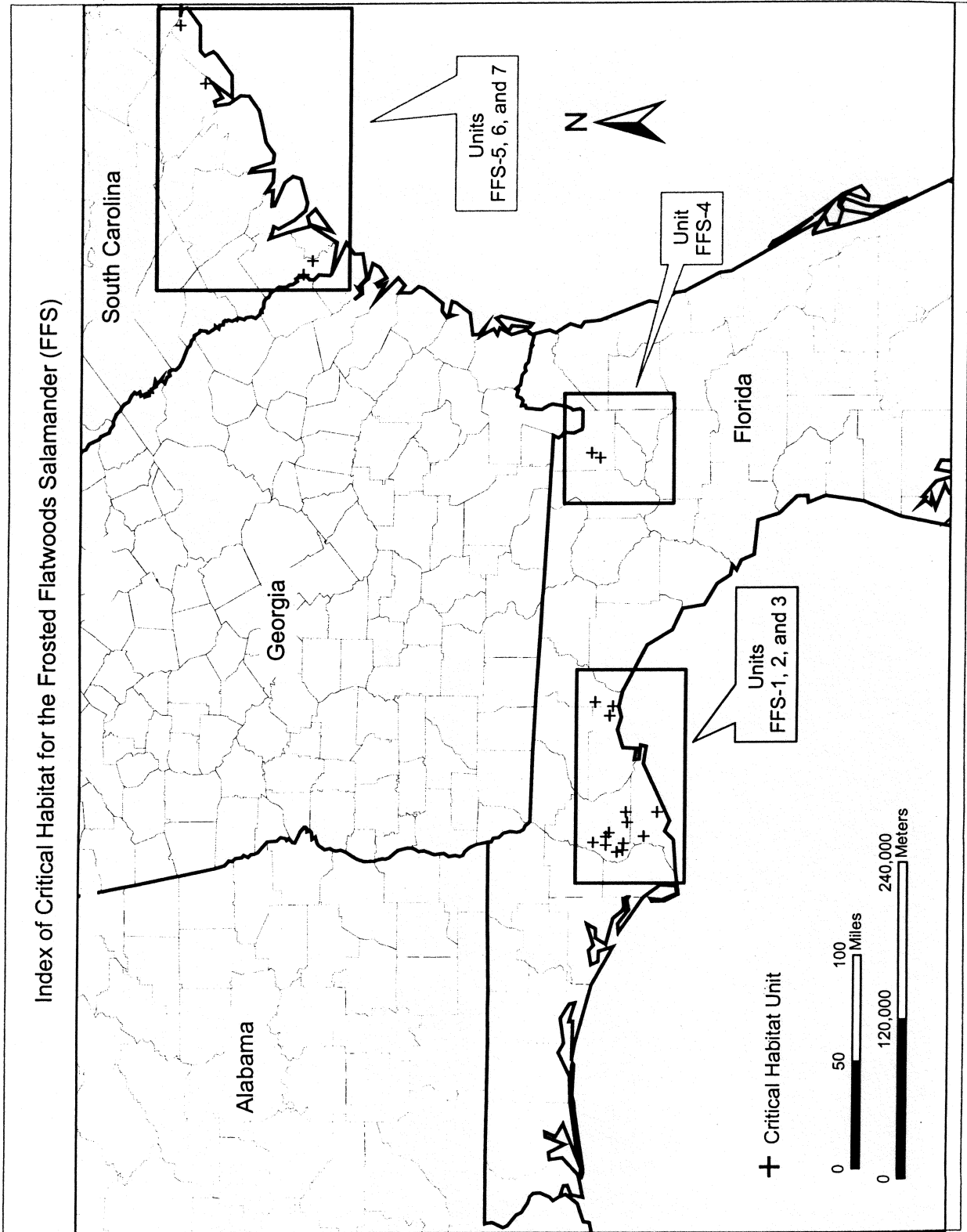
(D) Subsurface structure, such as that provided by deep litter cover or burrows, that provides shelter for salamanders during seasonal movements.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Data layers defining map units were created on a base of USGS 7.5’ quadrangles, and critical habitat units were then mapped using Universal Transverse Mercator (UTM) coordinates.

(5) Note: Index Map of critical habitat for the frosted flatwoods salamander follows:

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(6) Florida: Baker, Franklin, Jefferson, Liberty, and Wakulla Counties, Florida.

(i) Unit FFS-1, Subunit A: Liberty County, Florida. From USGS 1:24,000 scale quadrangle maps Estiffanulga and Woods, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 691617.99, 3350707.71; 693095.71, 3348233.03; 692983.53, 3348209.57; 692897.48, 3348210.76; 692828.41, 3348229.52; 692759.43, 3348248.25; 692691.40, 3348292.76; 692639.72, 3348326.57; 690393.30, 3350136.47; 690313.39, 3350218.63; 690268.29, 3350291.92; 690230.96, 3350400.29; 690221.36, 3350485.81; 690241.25, 3350627.47; 690274.03, 3350707.04; 690333.43, 3350797.24; 690401.06, 3350865.47; 690279.29, 3350935.03; 690182.82, 3351040.66; 690111.95, 3351227.14; 690119.70, 3351398.31; 690131.84, 3352855.50; 690169.32, 3352993.56; 690267.58, 3353133.94; 690384.46, 3353216.42; 690549.65, 3353261.95; 690664.14, 3353256.77; 690773.74, 3353223.27; 690871.58, 3353163.57; 690968.05, 3353057.95; 692565.25, 3351422.56; 692602.62, 3351378.97; 692634.23, 3351331.03; 692669.80, 3351252.67; 692690.04, 3351169.02; 693379.09, 3348814.26; 693399.33, 3348730.61; 693403.55, 3348644.66; 693391.58, 3348559.43; 693363.86, 3348477.96; 693321.37, 3348403.12; 693265.60, 3348337.58; 693174.08, 3348268.59; 693095.71, 3348233.03.

(B) Map depicting Unit FFS-1, Subunit A is provided at paragraph (6)(x)(B) of this entry.

(ii) Unit FFS-1, Subunit B: Liberty County, Florida. From USGS 1:24,000 scale quadrangle map Orange, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 689802.94, 3340960.90; 689428.14, 3339447.54; 689123.11, 3339393.72; 688873.13, 3339525.49; 688743.74, 3339836.26; 688831.13, 3340169.91; 689917.07, 3342147.02; 690004.49, 3342326.33; 690240.38, 3342481.91; 690522.67, 3342469.12; 690726.97, 3342316.32; 690843.40, 3342033.33; 690847.40, 3341805.94; 690741.36, 3341604.76; 689705.63, 3339902.63; 689617.94, 3339656.89; 689428.14, 3339447.54.

(B) Map depicting Unit FFS-1, Subunit B is provided at paragraph (6)(x)(B) of this entry.

(iii) Unit FFS-1, Subunit C: Liberty County, Florida. From USGS 1:24,000 scale quadrangle map Wilma, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 695595.00, 3340429.07; 695320.75, 3338608.68; 695308.16, 3338582.86; 695293.97, 3338557.88; 695278.24,

3338533.84; 695261.04, 3338510.84; 695242.42, 3338488.97; 695222.47, 3338468.30; 695201.27, 3338448.93; 695178.88, 3338430.93; 695155.41, 3338414.37; 695130.95, 3338399.31; 695105.59, 3338385.83; 695079.43, 3338373.95; 695052.58, 3338363.76; 695025.14, 3338355.26; 694997.23, 3338348.50; 694968.94, 3338343.51; 694940.40, 3338340.31; 694911.71, 3338338.90; 694882.99, 3338339.30; 694854.35, 3338341.50; 694825.90, 3338345.50; 694797.76, 3338351.27; 694770.05, 3338358.80; 694742.85, 3338368.06; 694709.40, 3338382.20; 694683.58, 3338394.79; 694658.61, 3338408.98; 694634.57, 3338424.71; 694611.57, 3338441.91; 694589.69, 3338460.52; 694569.03, 3338480.47; 694549.66, 3338501.69; 694531.66, 3338524.07; 694515.10, 3338547.54; 694500.05, 3338572.01; 694486.56, 3338597.37; 694474.69, 3338623.53; 694464.49, 3338650.38; 694455.99, 3338677.82; 694449.24, 3338705.74; 694444.25, 3338734.03; 694441.05, 3338762.57; 694439.64, 3338791.26; 694440.04, 3338819.98; 694442.24, 3338848.63; 694446.23, 3338877.07; 694452.01, 3338905.21; 694459.53, 3338932.93; 694468.79, 3338960.12; 694479.73, 3338986.68; 695846.37, 3342195.36; 695866.57, 3342249.11; 695909.07, 3342323.95; 695944.89, 3342368.83; 696008.43, 3342426.87; 696081.72, 3342471.97; 696134.73, 3342494.04; 696218.37, 3342514.28; 696304.32, 3342518.50; 696399.96, 3342505.83; 696481.43, 3342478.10; 696532.23, 3342451.33; 696601.14, 3342399.78; 696659.17, 3342336.24; 696716.14, 3342236.78; 696741.60, 3342154.57; 696751.20, 3342069.05; 696748.60, 3342011.68; 696738.84, 3341955.10; 696711.11, 3341873.63; 695320.75, 3338608.68.

(B) Map depicting Unit FFS-1, Subunit C is provided at paragraph (6)(x)(B) of this entry.

(iv) Unit FFS-1, Subunit D: Liberty County, Florida. From USGS 1:24,000 scale quadrangle map Wilma, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 698315.71, 3338507.25; 697480.52, 3338897.39; 697508.44, 3338904.15; 699107.25, 3339112.64; 699249.88, 3339101.68; 699357.17, 3339061.36; 699491.10, 3338954.46; 699566.06, 3338832.62; 699600.72, 3338636.16; 699571.97, 3338496.02; 699501.32, 3338371.62; 699419.16, 3338291.70; 699319.85, 3338227.75; 699161.66, 3338161.88; 697647.47, 3337884.31; 697505.31, 3337868.36; 697338.62, 3337908.06; 697240.79, 3337967.76; 697160.88, 3338049.93; 697093.71, 3338176.24; 697068.86, 3338317.12; 697081.23, 3338431.07; 697135.72,

3338563.34; 697197.51, 3338669.79; 697283.19, 3338784.36; 697400.08, 3338866.83; 697480.52, 3338897.39.

(B) Map depicting Unit FFS-1, Subunit D is provided at paragraph (6)(x)(B) of this entry.

(v) Unit FFS-1, Subunit E: Liberty County, Florida. From USGS 1:24,000 scale quadrangle maps Orange and Kennedy Creek, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 686367.53, 3332295.84; 686431.12, 3334276.72; 686521.73, 3334038.23; 686486.41, 3333905.93; 686456.16, 3333792.66; 686384.37, 3333673.40; 686529.54, 3333545.42; 686684.99, 3333670.42; 686821.64, 3333712.74; 686964.68, 3333710.75; 689322.67, 3333980.79; 689576.20, 3334009.24; 689736.59, 3333948.97; 689863.53, 3333833.87; 689945.95, 3333652.21; 689948.95, 3333480.88; 689888.68, 3333320.48; 689773.58, 3333193.53; 688133.75, 3332060.68; 687963.85, 3331956.15; 687770.73, 3331922.03; 687750.83, 3331780.36; 687652.31, 3331606.91; 687435.02, 3331473.21; 686480.70, 3331191.98; 686369.22, 3331102.34; 685860.73, 3329667.19; 685722.17, 3329523.69; 685535.70, 3329452.84; 685421.11, 3329450.84; 685283.06, 3329488.34; 685142.70, 3329586.62; 685038.17, 3329756.51; 684075.02, 3330678.79; 683908.10, 3330788.01; 683825.64, 3330904.90; 683780.13, 3331070.10; 683798.63, 3331240.45; 683861.33, 3331369.02; 685068.99, 3333929.17; 685144.99, 3334113.61; 685267.82, 3334233.07; 685426.00, 3334298.93; 685697.77, 3334272.20; 685864.11, 3334411.77; 686057.99, 3334458.69; 686253.39, 3334418.58; 686431.12, 3334276.72.

(B) Map depicting Unit FFS-1, Subunit E is provided at paragraph (6)(x)(B) of this entry.

(vi) Unit FFS-1, Subunit F: Liberty County, Florida. From USGS 1:24,000 scale quadrangle map Kennedy Creek, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 686994.66, 3327715.03; 687031.71, 3327259.31; 687003.02, 3327257.90; 686974.30, 3327258.30; 686945.66, 3327260.51; 686917.22, 3327264.50; 686889.08, 3327270.28; 686861.36, 3327277.81; 686834.17, 3327287.06; 686781.80, 3327310.60; 686756.83, 3327324.79; 686718.31, 3327349.17; 686687.92, 3327376.34; 686647.89, 3327417.50; 686629.89, 3327439.88; 686598.28, 3327487.82; 686584.79, 3327513.18; 686562.73, 3327566.19; 686547.48, 3327621.55; 686539.29, 3327678.38; 686538.28, 3327735.79; 686544.48, 3327792.87; 686557.79, 3327848.73; 686577.99, 3327902.48;

686604.76, 3327953.27; 686627.73, 3327993.87; 686676.26, 3328042.84; 686697.47, 3328062.21; 686719.85, 3328080.21; 686767.79, 3328111.82; 686819.30, 3328137.17; 686873.59, 3328155.87; 686929.80, 3328167.62; 686987.03, 3328172.22; 687072.83, 3328165.62; 687128.68, 3328152.32; 687182.43, 3328132.12; 687233.22, 3328105.34; 687280.26, 3328072.41; 687342.16, 3328012.63; 687391.77, 3327942.31; 687417.12, 3327890.79; 687435.81, 3327836.50; 687447.56, 3327780.29; 687450.76, 3327751.75; 687451.76, 3327694.34; 687445.57, 3327637.25; 687432.26, 3327581.40; 687423.01, 3327554.21; 687385.28, 3327476.86; 687352.35, 3327429.82; 687292.58, 3327367.91; 687222.26, 3327318.30; 687143.89, 3327282.75; 687116.45, 3327274.26; 687088.54, 3327267.50; 687060.25, 3327262.51; 687031.71, 3327259.31.

(B) Map depicting Unit FFS-1, Subunit F is provided at paragraph (6)(x)(B) of this entry.

(vii) Unit FFS-1, Subunit G: Liberty County, Florida. From USGS 1:24,000 scale quadrangle maps Kennedy Creek and Sumatra, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 692743.43, 3325970.41; 690511.49, 3328333.04; 690352.62, 3327300.27; 690398.82, 3327359.05; 690435.78, 3327418.40; 690476.94, 3327458.44; 690522.80, 3327492.99; 690572.10, 3327512.25; 690653.06, 3327552.10; 690737.82, 3327567.04; 690852.31, 3327561.85; 690961.91, 3327528.34; 691036.74, 3327485.83; 691102.27, 3327430.06; 691139.64, 3327386.47; 691184.74, 3327313.17; 691206.80, 3327260.16; 691226.10, 3327181.87; 691285.53, 3327253.00; 691352.60, 3327306.93; 691428.57, 3327347.33; 691510.78, 3327372.78; 691596.30, 3327382.38; 691653.66, 3327379.78; 691709.33, 3327370.19; 691748.27, 3327399.19; 691798.09, 3327427.72; 691851.10, 3327449.80; 691906.46, 3327465.04; 691963.28, 3327473.24; 691991.97, 3327474.64; 692049.33, 3327472.04; 692105.91, 3327462.27; 692160.82, 3327445.48; 692197.42, 3327442.46; 692254.00, 3327432.70; 692315.34, 3327416.01; 692284.77, 3327496.45; 692273.03, 3327552.66; 692268.42, 3327609.90; 692271.03, 3327667.26; 692288.33, 3327751.56; 692308.53, 3327805.31; 692351.03, 3327880.14; 692388.83, 3327927.78; 692448.61, 3327989.69; 692518.93, 3328039.30; 692570.45, 3328064.66; 692624.74, 3328083.35; 692709.48, 3328098.30; 692766.90, 3328099.31; 692823.98, 3328093.10; 694135.90, 3328069.14; 694193.26, 3328066.53; 694249.84, 3328056.76; 694304.75,

3328039.98; 694357.13, 3328016.44; 694406.14, 3327986.52; 694451.01, 3327950.70; 694491.04, 3327909.54; 694525.60, 3327863.68; 694554.14, 3327813.85; 694576.20, 3327760.84; 694591.45, 3327705.48; 694596.44, 3327677.19; 694601.05, 3327619.96; 694598.45, 3327562.59; 694588.68, 3327506.01; 694571.89, 3327451.10; 694548.36, 3327398.72; 694518.44, 3327349.71; 693770.98, 3326221.08; 693868.81, 3326161.37; 693948.72, 3326079.20; 694005.68, 3325979.75; 694036.11, 3325869.25; 694038.12, 3325754.65; 695152.74, 3325675.90; 695209.97, 3325680.51; 695267.33, 3325677.91; 695323.91, 3325668.13; 695378.82, 3325651.35; 695431.20, 3325627.81; 695480.21, 3325597.89; 695525.08, 3325562.07; 695565.11, 3325520.90; 695581.45, 3325500.59; 695608.30, 3325493.29; 695629.02, 3325486.24; 695635.41, 3325556.71; 695657.97, 3325639.76; 695695.70, 3325717.11; 695728.63, 3325764.15; 695767.20, 3325806.69; 695810.79, 3325844.06; 695864.85, 3325870.66; 695911.78, 3325893.76; 695964.54, 3325919.72; 696020.74, 3325931.47; 696077.98, 3325936.07; 696135.33, 3325933.47; 696219.63, 3325916.16; 696273.38, 3325895.96; 696324.17, 3325869.18; 696371.21, 3325836.25; 696413.74, 3325797.68; 696467.67, 3325730.61; 697336.67, 3324321.07; 697362.02, 3324269.54; 697380.72, 3324215.25; 697392.46, 3324159.04; 697397.07, 3324101.80; 697394.46, 3324044.44; 697384.69, 3323987.86; 697367.90, 3323932.94; 697344.37, 3323880.57; 697314.45, 3323831.55; 697258.68, 3323766.01; 697215.08, 3323728.64; 697167.14, 3323697.03; 697115.63, 3323671.68; 697061.33, 3323652.99; 697005.13, 3323641.24; 696947.90, 3323636.64; 696890.54, 3323639.24; 696806.24, 3323656.54; 696752.49, 3323676.75; 696677.66, 3323719.26; 695425.27, 3324601.45; 694686.48, 3324259.64; 694636.66, 3324231.10; 694583.65, 3324209.03; 694528.29, 3324193.78; 694471.46, 3324185.59; 694414.05, 3324184.59; 694356.97, 3324190.79; 694304.17, 3324203.26; 694297.65, 3324123.23; 694284.34, 3324067.37; 694264.14, 3324013.62; 694237.37, 3323962.82; 694185.82, 3323893.91; 694144.65, 3323853.88; 694084.93, 3323810.79; 694067.06, 3323750.57; 694043.52, 3323698.19; 694010.56, 3323625.86; 693968.05, 3323551.04; 693932.23, 3323506.16; 693868.68, 3323448.13; 693820.75, 3323416.52; 693769.23, 3323391.17; 693714.94, 3323372.47; 693658.74, 3323360.73; 693601.51, 3323356.12; 693544.15, 3323358.72; 693487.56, 3323368.50; 693432.65,

3323385.28; 693380.29, 3323408.82; 693331.27, 3323438.74; 693286.40, 3323474.56; 693246.37, 3323515.72; 693224.54, 3323543.55; 693210.13, 3323497.41; 693186.60, 3323445.03; 693156.69, 3323396.02; 693120.86, 3323351.14; 693079.70, 3323311.11; 693033.84, 3323276.55; 692984.02, 3323248.02; 692931.01, 3323225.95; 692875.65, 3323210.70; 692818.82, 3323202.51; 692761.42, 3323201.50; 692704.33, 3323207.71; 692648.47, 3323221.01; 692608.55, 3323235.51; 692570.41, 3323187.10; 692529.25, 3323147.06; 692458.93, 3323097.45; 692407.41, 3323072.10; 692325.20, 3323046.65; 692268.37, 3323038.46; 692210.96, 3323037.46; 692125.74, 3323049.44; 692070.83, 3323066.22; 692011.40, 3323093.76; 691923.51, 3323089.22; 691866.43, 3323095.42; 691810.57, 3323108.73; 691731.01, 3323141.52; 691682.00, 3323171.44; 691637.13, 3323207.26; 691597.10, 3323248.43; 691562.54, 3323294.28; 691534.00, 3323344.11; 691503.44, 3323424.56; 691491.70, 3323480.77; 691487.09, 3323538.00; 691489.70, 3323595.37; 691507.00, 3323679.67; 691539.79, 3323759.24; 692318.77, 3325166.83; 692288.21, 3325247.29; 692273.27, 3325332.04; 692269.31, 3326096.13; 692212.73, 3326105.90; 692165.53, 3326127.24; 692126.83, 3326144.74; 692092.01, 3326160.48; 692049.42, 3326179.73; 692011.56, 3326211.96; 691971.53, 3326253.13; 691936.98, 3326298.98; 691908.44, 3326348.81; 691872.05, 3326393.76; 691837.49, 3326439.61; 691816.22, 3326475.77; 691767.03, 3326455.43; 691711.68, 3326440.18; 691654.84, 3326431.99; 691626.16, 3326430.59; 691568.79, 3326433.19; 691512.21, 3326442.96; 691457.31, 3326459.75; 691390.25, 3326491.62; 691353.93, 3326429.48; 691298.16, 3326363.94; 691231.09, 3326310.01; 691155.11, 3326269.60; 691072.90, 3326244.15; 689760.49, 3325296.16; 689712.55, 3325264.55; 689661.04, 3325239.20; 689606.75, 3325220.50; 689550.54, 3325208.76; 689493.31, 3325204.15; 689407.51, 3325210.75; 689324.46, 3325233.31; 689247.12, 3325271.04; 689157.55, 3325342.54; 689103.62, 3325409.61; 689063.22, 3325485.59; 689044.52, 3325539.88; 689032.78, 3325596.09; 689028.17, 3325653.33; 689034.77, 3325739.13; 689233.31, 3327105.96; 689637.00, 3328600.37; 689861.46, 3329635.49; 689894.25, 3329715.06; 689924.16, 3329764.07; 689959.98, 3329808.95; 690001.15, 3329848.98; 690047.00, 3329883.54; 690096.82, 3329912.08; 690149.83, 3329934.15; 690205.19, 3329949.40; 690262.02, 3329957.59; 690319.43,

3329958.59; 690404.65, 3329946.62; 690457.17, 3329926.88; 690511.93, 3329906.30; 690560.94, 3329876.39; 690626.48, 3329820.61; 690663.84, 3329777.02; 690695.45, 3329729.08; 690720.81, 3329677.56; 690739.50, 3329623.27; 690751.25, 3329567.06; 690755.85, 3329509.83; 690749.26, 3329424.02; 690735.95, 3329368.16; 690529.29, 3328448.39; 690524.80, 3328388.90; 690511.49, 3328333.04.

(B) Map depicting Unit FFS-1, Subunit G is provided at paragraph (6)(x)(B) of this entry.

(viii) Unit FFS-1, Subunit H: Liberty County, Florida. From USGS 1:24,000 scale quadrangle maps Sumatra and Owens Bridge, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 705290.30, 3325041.96; 706646.10, 3324321.38; 706503.21, 3324314.39; 704109.35, 3324557.65; 703953.05, 3324627.90; 703833.59, 3324750.75; 703782.98, 3324853.59; 703758.14, 3324994.48; 703787.30, 3325163.35; 703857.96, 3325287.74; 703940.13, 3325367.66; 704025.87, 3325418.40; 704016.83, 3325569.76; 704034.13, 3325654.07; 704096.85, 3325782.66; 704196.22, 3325885.57; 704322.53, 3325952.74; 704463.41, 3325977.58; 704605.08, 3325957.68; 706601.96, 3325223.59; 706713.46, 3325197.03; 706859.72, 3325107.75; 706949.37, 3324996.25; 707005.16, 3324834.22; 707007.16, 3324719.61; 706989.86, 3324635.31; 706942.88, 3324530.75; 706871.37, 3324441.17; 706796.16, 3324398.25; 706728.31, 3324346.84; 706646.10, 3324321.38.

(B) Map depicting Unit FFS-1, Subunit H is provided at paragraph (6)(x)(B) of this entry.

(ix) Unit FFS-1, Subunit I: Liberty County, Florida. From USGS 1:24,000 scale quadrangle map Owens Bridge, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 712262.72, 3326181.63; 712356.33, 3325733.94; 712270.80, 3325724.34; 712213.44, 3325726.95; 712129.13, 3325744.25; 712101.94, 3325753.51; 712024.58, 3325791.24; 711977.54, 3325824.17; 711955.67, 3325842.79; 711915.63, 3325883.96; 711881.07, 3325929.82; 711852.53, 3325979.66; 711830.47, 3326032.67; 711815.21, 3326088.04; 711807.02, 3326144.87; 711805.62, 3326173.57; 711808.22, 3326230.94; 711817.99, 3326287.52; 711834.78, 3326342.44; 711858.32, 3326394.82; 711888.24, 3326443.84; 711905.44, 3326466.84; 711944.01, 3326509.39; 711965.23, 3326528.76; 711987.61, 3326546.76; 712011.09, 3326563.32; 712060.92, 3326591.86; 712087.08, 3326603.73; 712113.93, 3326613.93; 712169.29, 3326629.18; 712226.13, 3326637.37; 712254.82, 3326638.78; 712312.18, 3326636.17; 712368.77, 3326626.40; 712423.68, 3326609.61; 712476.06, 3326586.07; 712525.08, 3326556.15; 712590.62, 3326500.37; 712644.55, 3326433.30; 712684.96, 3326357.30; 712703.65, 3326303.01; 712715.40, 3326246.79; 712720.00, 3326189.55; 712717.40, 3326132.18; 712707.63, 3326075.60; 712700.10, 3326047.87; 712674.07, 3325977.60; 712653.11, 3325943.32; 712601.56, 3325874.40; 712560.39,

3325834.36; 712538.01, 3325816.36; 712514.54, 3325799.80; 712464.71, 3325771.26; 712411.69, 3325749.19; 712356.33, 3325733.94.

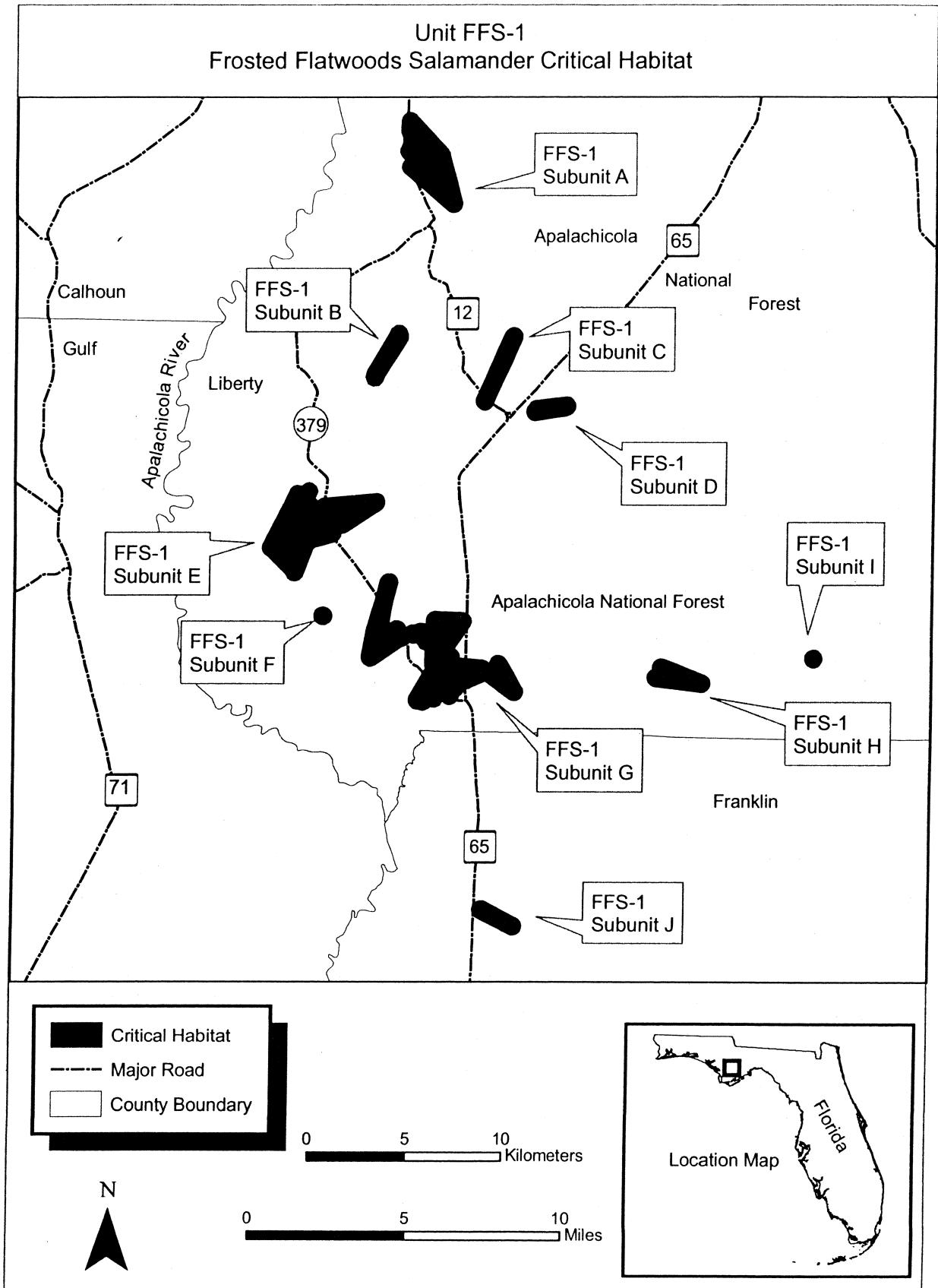
(B) Map depicting Unit FFS-1, Subunit I is provided at paragraph (6)(x)(B) of this entry.

(x) Unit FFS-1, Subunit J: Franklin County, Florida. From USGS 1:24,000 scale quadrangle map Fort Gadsen, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 696448.29, 3312586.05; 697417.53, 3311729.38; 697304.09, 3311713.04; 697218.29, 3311719.64; 697135.24, 3311742.21; 697057.90, 3311779.94; 695449.24, 3312550.89; 695396.87, 3312574.43; 695324.87, 3312621.56; 695282.33, 3312660.13; 695228.41, 3312727.20; 695188.01, 3312803.20; 695162.57, 3312885.41; 695152.98, 3312970.93; 695159.58, 3313056.74; 695182.15, 3313139.79; 695219.88, 3313217.14; 695271.43, 3313286.05; 695335.05, 3313350.76; 695405.38, 3313400.37; 695456.90, 3313425.72; 695511.18, 3313444.41; 695595.94, 3313459.35; 695710.43, 3313454.14; 695820.03, 3313420.63; 697427.52, 3312615.68; 697509.40, 3312574.69; 697581.41, 3312527.56; 697643.31, 3312467.77; 697706.40, 3312372.08; 697743.71, 3312263.71; 697752.89, 3312149.46; 697733.38, 3312036.51; 697686.39, 3311931.97; 697653.45, 3311884.93; 697593.67, 3311823.03; 697523.35, 3311773.42; 697417.53, 3311729.38.

(B) Map of Unit FFS-1 follows:

BILLING CODE 4310-55-S



(xi) Unit FFS-2: Franklin County, Florida. From USGS 1:24,000 scale quadrangle map Green Point, Florida.

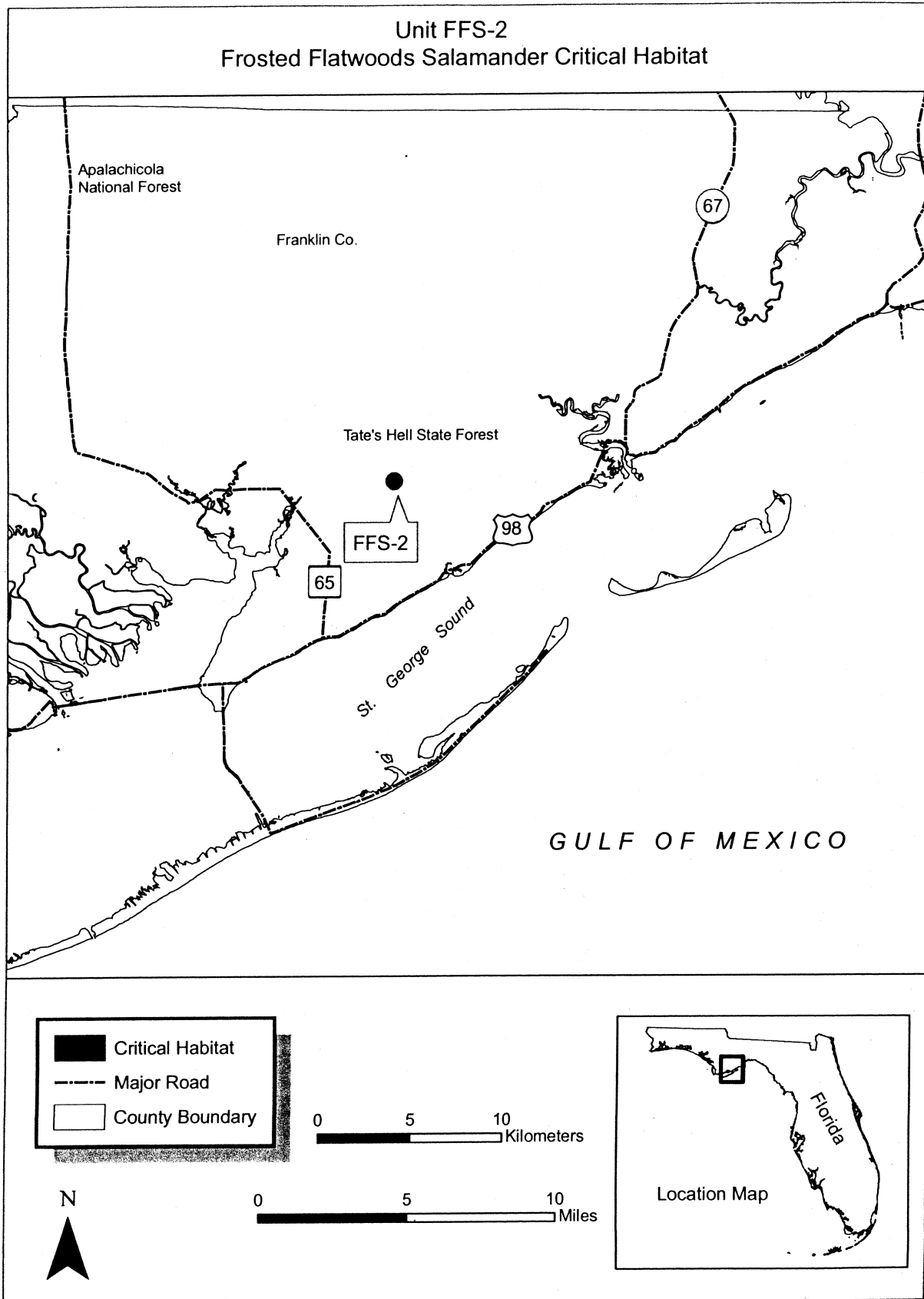
(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 713163.69, 3302378.99; 713155.25, 3302836.18; 713183.97, 3302835.81; 713212.61, 3302833.63; 713241.06, 3302829.66; 713269.21, 3302823.91; 713296.94, 3302816.41; 713324.14, 3302807.18; 713350.71, 3302796.26; 713376.54, 3302783.69; 713401.53, 3302769.53; 713425.59, 3302753.82; 713448.61, 3302736.64; 713470.50, 3302718.04; 713491.18, 3302698.11; 713510.57, 3302676.91; 713528.60, 3302654.55; 713545.18, 3302631.09; 713560.26, 3302606.64; 713573.77, 3302581.29; 713585.66, 3302555.14; 713595.89, 3302528.29; 713604.41, 3302500.86; 713611.19, 3302472.95; 713616.21, 3302444.66; 713619.44, 3302416.12; 713620.87, 3302387.43; 713620.50, 3302358.71; 713618.32, 3302330.06; 713614.35, 3302301.61;

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3302126.90; 712767.11, 3302151.35; 712753.60, 3302176.70; 712741.71, 3302202.85; 712731.48, 3302229.69; 712722.96, 3302257.12; 712716.18, 3302285.04; 712711.16, 3302313.32; 712707.93, 3302341.87; 712706.50, 3302370.56; 712706.87, 3302399.28; 712709.05, 3302427.92; 712713.02, 3302456.37; 712718.76, 3302484.52; 712726.27, 3302512.25; 712735.50, 3302539.45; 712746.42, 3302566.02; 712758.99, 3302591.85; 712773.15, 3302616.84; 712788.85, 3302640.89; 712806.04, 3302663.91; 712824.64, 3302685.81; 712844.57, 3302706.49; 712865.76, 3302725.88; 712888.13, 3302743.90; 712911.59, 3302760.49; 712936.04, 3302775.56; 712961.39, 3302789.07; 712987.54, 3302800.97; 713014.38, 3302811.19; 713041.82, 3302819.72; 713069.73, 3302826.50; 713098.01, 3302831.52; 713126.56, 3302834.75; 713155.25, 3302836.18.

(B) Map of Unit FFS-2 follows:

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(xii) Unit FFS-3, Subunit A: Wakulla County, Florida. From USGS 1:24,000 scale quadrangle maps St. Marks and St. Marks NE, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 775789.22, 3340665.92; 778066.61, 3340484.87; 777670.88, 3338778.31; 777533.15, 3338184.41; 777525.56, 3338156.70; 777516.42, 3338129.40; 777505.42, 3338102.83; 777492.86, 3338076.99; 777478.74, 3338052.00; 777471.13, 3338040.27; 777482.70, 3338036.35; 777509.30, 3338025.48; 777535.17, 3338012.93; 777560.12, 3337998.80; 777584.24, 3337982.99; 777607.24, 3337965.82; 777629.12, 3337947.29; 777649.88, 3337927.29; 777669.21, 3337906.14; 777687.24, 3337883.74; 777703.84, 3337860.31; 777714.90, 3337842.39; 777724.48, 3337852.29; 777745.69, 3337871.69; 777768.09, 3337889.78; 777791.49, 3337906.35; 777815.99, 3337921.39; 777841.30, 3337934.91; 777867.51, 3337946.89; 777894.35, 3337957.11; 777921.81, 3337965.57; 777949.70, 3337972.38; 777978.02, 3337977.42; 777990.29, 3337977.52; 778007.58, 3337977.78; 778035.40, 3337978.19; 778064.31, 3337978.62; 778092.26, 3337979.03; 778121.08, 3337975.61; 778149.29, 3337969.88; 778177.06, 3337962.38; 778204.20, 3337953.08; 778230.80, 3337942.21; 778256.67, 3337929.67; 778281.62, 3337915.43; 778305.74, 3337899.73; 778328.75, 3337882.56; 778350.72, 3337863.93; 778371.38, 3337844.03; 778390.82, 3337822.89; 778408.84, 3337800.49; 778425.45, 3337776.95; 778440.53, 3337752.59; 778454.00, 3337727.19; 778465.95, 3337700.97; 778476.17, 3337674.16; 778484.68, 3337646.75; 778491.46, 3337618.85; 778496.52, 3337590.46; 778499.75, 3337561.92; 778501.16, 3337533.22; 778500.82, 3337504.47; 778498.66, 3337475.90; 778494.65, 3337447.40; 778488.90, 3337419.29; 778481.41, 3337391.48; 778472.17, 3337364.28; 778461.27, 3337337.71; 778448.71, 3337311.87; 778434.49, 3337286.88; 778418.81, 3337262.74; 778401.64, 3337239.78; 778383.01, 3337217.89; 778363.09, 3337197.19; 778341.88, 3337177.80; 778319.48, 3337159.70; 778296.08, 3337143.13; 778271.58, 3337128.08; 778246.27, 3337114.46; 778220.05, 3337102.59; 778193.21, 3337092.37; 778165.75, 3337083.80; 778137.85, 3337077.10; 778109.53, 3337072.05; 778080.97, 3337068.78; 778052.27, 3337067.39; 778023.61, 3337067.77; 777994.91, 3337069.93; 777966.46, 3337073.87; 777938.25, 3337079.59; 777910.58, 3337087.10; 777883.34, 3337096.29; 777856.73, 3337107.26;

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773143.94, 3340558.68; 773159.63,
3340582.71; 773176.80, 3340605.77;
773195.44, 3340627.64; 773215.36,
3340648.33; 773236.57, 3340667.72;
773240.54, 3340670.93; 774190.69,
3341600.54; 774207.73, 3341623.69;
774226.19, 3341645.71; 774245.99,
3341666.54; 774267.06, 3341686.08;
774289.32, 3341704.26; 774312.67,
3341721.00; 774337.03, 3341736.25;
774362.30, 3341749.94; 774388.38,
3341762.01; 774415.16, 3341772.42;
774442.55, 3341781.13; 774470.43,
3341788.10; 774498.69, 3341793.31;
774527.22, 3341796.73; 774555.91,
3341798.36; 774584.65, 3341798.18;
774613.32, 3341796.20; 774641.80,
3341792.42; 774670.00, 3341786.86;
774697.79, 3341779.54; 774725.06,
3341770.48; 774751.71, 3341759.74;
774777.64, 3341747.34; 774802.74,
3341733.34; 774826.90, 3341717.79;
774850.05, 3341700.75; 774872.07,
3341682.30; 774892.90, 3341662.49;
774912.44, 3341641.42; 775378.58,
3341173.26; 775544.57, 3341006.80;
777609.30, 3341044.76; 777638.03,
3341044.58; 777666.70, 3341042.60;
777680.70, 3341040.35; 777695.19,
3341038.82; 777723.39, 3341033.26;
777751.18, 3341025.93; 777778.45,
3341016.88; 777805.10, 3341006.14;
777831.03, 3340993.74; 777856.13,
3340979.74; 777880.29, 3340964.19;
777903.44, 3340947.15; 777925.47,
3340928.69; 777946.29, 3340908.89;
777965.83, 3340887.82; 777984.01,
3340865.56; 778000.76, 3340842.21;
778016.00, 3340817.85; 778029.69,
3340792.58; 778041.76, 3340766.50;
778052.18, 3340739.71; 778060.89,
3340712.33; 778067.86, 3340684.45;

778073.07, 3340656.19; 778076.49, 3340627.65; 778078.11, 3340598.96; 778077.93, 3340570.22; 778075.95, 3340541.55; 778072.17, 3340513.07; 778066.61, 3340484.87.

(B) Map depicting Unit FFS-3, Subunit A is provided at paragraph (6)(xiv)(B) of this entry.

(xiii) Unit FFS-3, Subunit B: Wakulla and Jefferson Counties, Florida. From USGS 1:24,000 scale quadrangle map St. Marks NE, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 781813.02, 3338564.97; 780854.75, 3336748.56; 780826.19, 3336745.28; 780797.49, 3336743.88; 780768.74, 3336744.25; 780751.83, 3336745.48; 780740.73, 3336730.55; 780722.10, 3336708.66; 780702.18, 3336687.96; 780680.97, 3336668.56; 780658.57, 3336650.57; 780635.18, 3336633.88; 780610.68, 3336618.83; 780585.37, 3336605.31; 780559.15, 3336593.44; 780532.31, 3336583.21; 780504.85, 3336574.63; 780476.95, 3336567.82; 780448.63, 3336562.88; 780420.07, 3336559.60; 780391.36, 3336558.20; 780362.71, 3336558.58; 780334.01, 3336560.73; 780305.55, 3336564.66; 780277.43, 3336570.38; 780249.66, 3336577.88; 780222.42, 3336587.17; 780195.81, 3336598.03; 780170.02, 3336610.69; 780144.97, 3336624.81; 780120.94, 3336640.51; 780097.94, 3336657.67; 780075.95, 3336676.31; 780055.29, 3336696.20; 780035.94, 3336717.45; 780017.82, 3336739.85; 780001.31, 3336763.28; 779986.22, 3336787.75; 779972.64, 3336813.14; 779960.79, 3336839.25; 779950.56, 3336866.06; 779941.95, 3336893.58; 779935.16, 3336921.48; 779930.20, 3336949.76; 779926.96, 3336978.30; 779925.49, 3337005.78; 779913.72, 3337013.47; 779890.72, 3337030.63; 779868.74, 3337049.27; 779848.07, 3337069.16; 779828.63, 3337090.41; 779810.60, 3337112.81; 779794.09, 3337136.24; 779779.00, 3337160.71; 779765.43, 3337186.11; 779753.58, 3337212.21; 779743.35, 3337239.02; 779734.74, 3337266.54; 779727.96, 3337294.44; 779722.99, 3337322.72; 779719.76, 3337351.26; 779718.26, 3337379.96; 779718.68, 3337408.71; 779720.84, 3337437.39; 779724.75, 3337465.89; 779730.49, 3337494.00; 779738.08, 3337521.71; 779747.22, 3337548.90; 779758.21, 3337575.59; 779770.77, 3337601.43; 779784.89, 3337626.42; 779800.67, 3337650.46; 779817.83, 3337673.53; 779836.46, 3337695.42; 779856.38, 3337716.12; 779877.58, 3337735.52; 779899.88, 3337753.51; 779923.38, 3337770.08; 779947.87, 3337785.24; 779973.18, 3337798.76; 779999.40, 3337810.63; 780026.23, 3337820.86; 780046.61,

3337827.26; 780031.54, 3337835.75; 780007.52, 3337851.45; 779984.42, 3337868.61; 779962.53, 3337887.25; 779941.87, 3337907.14; 779922.43, 3337928.39; 779904.40, 3337950.79; 779887.80, 3337974.22; 779872.71, 3337998.69; 779859.23, 3338024.09; 779859.02, 3338024.55; 779847.29, 3338050.19; 779837.06, 3338077.00; 779828.54, 3338104.52; 779821.76, 3338132.42; 779816.70, 3338160.70; 779813.46, 3338189.24; 779812.06, 3338217.94; 779812.38, 3338246.69; 779814.55, 3338275.37; 779818.54, 3338303.87; 779824.29, 3338331.98; 779831.78, 3338359.69; 779841.02, 3338386.88; 779851.91, 3338413.57; 779864.56, 3338439.41; 779878.68, 3338464.40; 779894.36, 3338488.43; 779911.61, 3338511.51; 779930.15, 3338533.40; 779950.16, 3338554.10; 779971.36, 3338573.50; 779993.66, 3338591.49; 780017.15, 3338608.07; 780041.65, 3338623.23; 780066.95, 3338636.74; 780093.17, 3338648.62; 780120.00, 3338658.84; 780147.46, 3338667.42; 780175.35, 3338674.13; 780203.67, 3338679.18; 780232.22, 3338682.46; 780260.92, 3338683.85; 780289.67, 3338683.48; 780318.27, 3338681.32; 781659.28, 3338623.11; 783371.06, 3341075.49; 783388.08, 3341098.65; 783406.52, 3341120.69; 783426.31, 3341141.53; 783447.37, 3341161.09; 783469.61, 3341179.28; 783492.96, 3341196.05; 783517.31, 3341211.31; 783542.57, 3341225.02; 783568.64, 3341237.11; 783595.42, 3341247.54; 783622.80, 3341256.27; 783650.68, 3341263.26; 783678.94, 3341268.49; 783707.47, 3341271.93; 783736.16, 3341273.58; 783764.90, 3341273.42; 783793.57, 3341271.45; 783822.06, 3341267.69; 783850.26, 3341262.15; 783878.06, 3341254.85; 783905.34, 3341245.82; 783932.00, 3341235.09; 783957.94, 3341222.71; 783983.05, 3341208.72; 784007.23, 3341193.19; 784030.38, 3341176.17; 784052.42, 3341157.73; 784073.27, 3341137.94; 784092.82, 3341116.88; 784111.02, 3341094.63; 784127.78, 3341071.29; 784143.04, 3341066.94; 784156.75, 3341021.68; 784168.84, 3340995.61; 784179.27, 3340968.83; 784188.00, 3340941.45; 784194.99, 3340913.57; 784200.22, 3340885.31; 784203.67, 3340856.78; 784205.31, 3340828.09; 784205.15, 3340799.35; 784203.19, 3340770.67; 784199.43, 3340742.18; 784193.88, 3340713.98; 784186.58, 3340686.19; 784177.55, 3340658.90; 784166.82, 3340632.24; 784154.44, 3340606.31; 784140.46, 3340581.20; 784124.92, 3340557.02; 782277.60, 3337914.11; 782294.12, 3337890.57; 782309.21, 3337866.10; 782322.78, 3337840.82; 782334.64,

3337814.60; 782344.88, 3337787.79; 782353.40, 3337760.27; 782360.19, 3337732.38; 782365.26, 3337704.10; 782368.50, 3337675.56; 782369.91, 3337646.86; 782369.59, 3337618.11; 782367.34, 3337589.43; 782363.44, 3337561.03; 782357.70, 3337532.81; 782350.22, 3337505.10; 782340.98, 3337477.90; 782330.00, 3337451.33; 782317.45, 3337425.48; 782303.24, 3337400.49; 782287.56, 3337376.34; 782270.41, 3337353.37; 782251.78, 3337331.48; 782231.86, 3337310.77; 782210.66, 3337291.37; 782188.27, 3337273.26; 782164.78, 3337256.68; 782140.38, 3337241.63; 782114.97, 3337228.11; 781683.92, 3337059.84; 780938.43, 3336768.89; 780910.97, 3336760.31; 780883.08, 3336753.50; 780854.75, 3336748.56.

(B) Map depicting Unit FFS-3, Subunit B is located at paragraph (6)(xiv)(B) of this entry.

(xiv) Unit FFS-3, Subunit C: Jefferson County, Florida. From USGS 1:24,000 scale quadrangle map Cody, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 784571.80, 3351736.64; 784608.07, 3351280.60; 784579.36, 3351279.22; 784554.83, 3351279.59; 784550.62, 3351279.65; 784521.97, 3351281.88; 784493.51, 3351285.91; 784465.37, 3351291.71; 784437.64, 3351299.27; 784410.44, 3351308.56; 784383.88, 3351319.54; 784358.06, 3351332.16; 784333.09, 3351346.38; 784309.05, 3351362.14; 784286.06, 3351379.37; 784264.19, 3351398.02; 784243.53, 3351418.00; 784224.17, 3351439.25; 784206.19, 3351461.66; 784189.64, 3351485.16; 784174.61, 3351509.65; 784161.14, 3351535.04; 784149.29, 3351561.22; 784139.11, 3351588.10; 784130.64, 3351615.56; 784123.90, 3351643.50; 784118.94, 3351671.81; 784115.76, 3351700.37; 784114.38, 3351729.08; 784114.81, 3351757.81; 784117.04, 3351786.47; 784121.07, 3351814.92; 784126.87, 3351843.07; 784134.43, 3351870.80; 784143.72, 3351897.99; 784154.70, 3351924.55; 784167.32, 3351950.37; 784181.54, 3351975.35; 784197.30, 3351999.38; 784214.53, 3352022.38; 784233.18, 3352044.25; 784253.16, 3352064.90; 784274.40, 3352084.26; 784296.82, 3352102.25; 784320.32, 3352118.79; 784344.81, 3352133.83; 784370.20, 3352147.30; 784396.38, 3352159.15; 784423.26, 3352169.33; 784450.72, 3352177.80; 784478.66, 3352184.53; 784506.97, 3352189.50; 784535.53, 3352192.68; 784558.55, 3352193.78; 784564.24, 3352194.05; 784592.97, 3352193.63; 784621.63, 3352191.40; 784650.08, 3352187.37; 784678.23, 3352181.56; 784705.96, 3352174.00; 784733.15, 3352164.72; 784759.71,

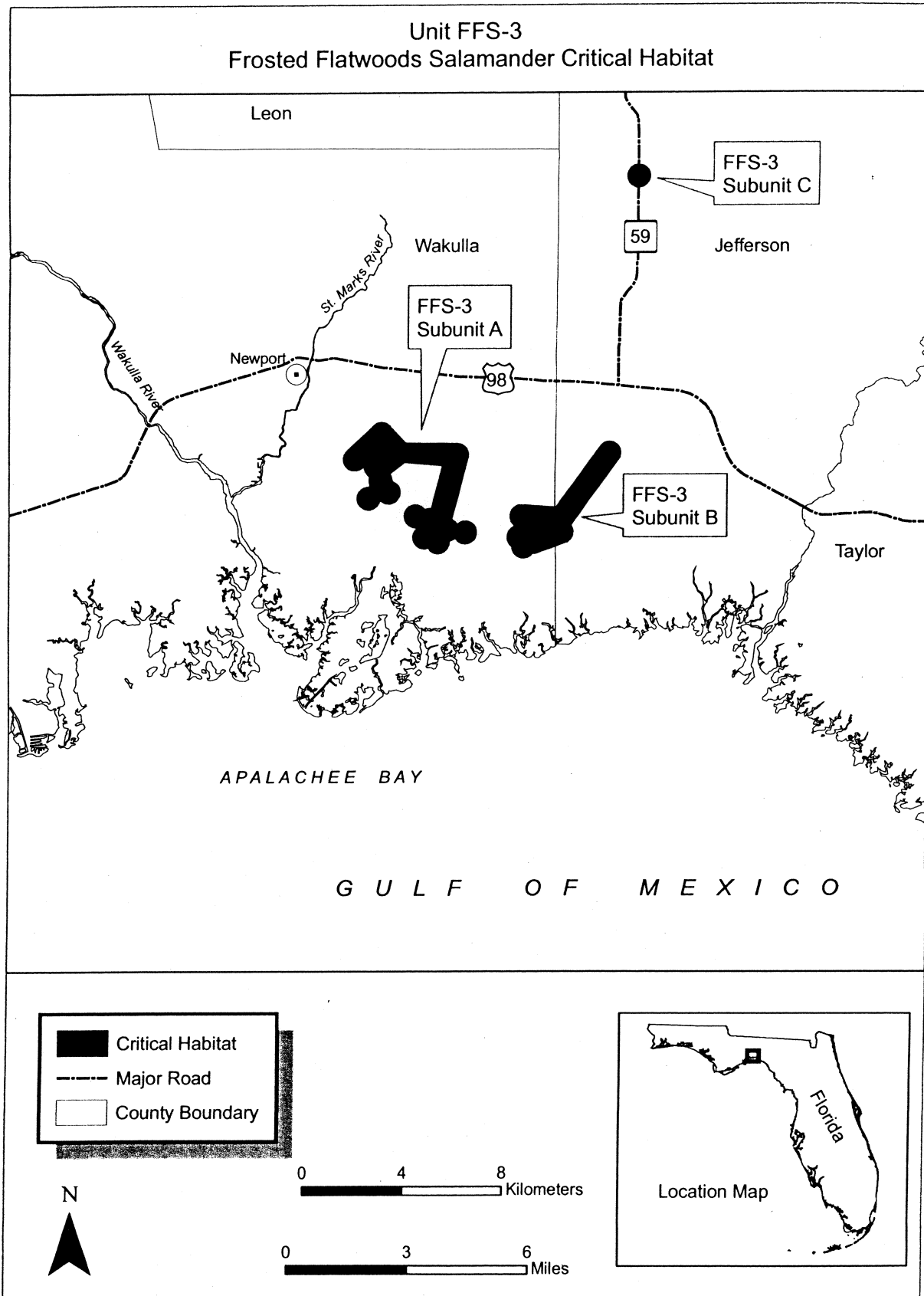
3352153.74; 784785.53, 3352141.12;
784810.51, 3352126.90; 784834.54,
3352111.14; 784857.54, 3352093.90;
784879.41, 3352075.26; 784900.06,
3352055.27; 784919.42, 3352034.03;
784937.41, 3352011.62; 784953.96,
3351988.12; 784968.99, 3351963.63;
784982.46, 3351938.24; 784994.31,
3351912.06; 785004.49, 3351885.18;
785012.96, 3351857.72; 785019.70,
3351829.78; 785024.66, 3351801.47;

785027.84, 3351772.91; 785029.21,
3351744.20; 785028.79, 3351715.46;
785026.56, 3351686.81; 785022.53,
3351658.36; 785016.72, 3351630.21;
785009.16, 3351602.48; 784999.88,
3351575.28; 784988.90, 3351548.72;
784976.28, 3351522.90; 784962.06,
3351497.93; 784946.30, 3351473.89;
784929.06, 3351450.90; 784910.42,
3351429.03; 784890.43, 3351408.37;
784869.19, 3351389.01; 784846.78,

3351371.03; 784823.28, 3351354.48;
784798.79, 3351339.44; 784773.40,
3351325.98; 784747.21, 3351314.13;
784720.34, 3351303.95; 784692.88,
3351295.47; 784664.94, 3351288.74;
784636.63, 3351283.78; 784608.07,
3351280.60.

(B) Map of Unit FFS-3 follows:

BILLING CODE 4310-55-S



(xv) Unit FFS-4, Subunit A: Baker County, Florida. From USGS 1:24,000 scale quadrangle maps Big Gum Swamp and Sanderson North, Florida.

(A) Land bounded by the following UTM Zone 17N NAD83 coordinates, (E, N): 367084.38, 3347273.00; 367857.36, 3347865.13; 367885.57, 3347850.05; 367910.67, 3347848.97; 367939.21, 3347845.97; 367967.54, 3347841.08; 367995.46, 3347834.54; 368022.88, 3347826.11; 368076.03, 3347804.41; 368126.01, 3347776.10; 368149.58, 3347759.63; 368172.08, 3347741.85; 368213.36, 3347702.00; 368249.49, 3347657.34; 368279.60, 3347608.54; 368303.41, 3347556.26; 368320.55, 3347501.41; 368326.47, 3347473.30; 368330.56, 3347444.98; 368333.52, 3347387.64; 368329.18, 3347330.38; 368324.31, 3347302.07; 368309.40, 3347246.60; 368287.59, 3347193.55; 368274.29, 3347168.10; 368242.92, 3347120.04; 368205.82, 3347076.15; 368163.49, 3347037.42; 368116.61, 3347004.29; 368066.05, 3346977.19; 368012.39, 3346956.67; 367956.61, 3346943.15; 366301.34, 3346652.76; 366243.94, 3346653.45; 366187.08, 3346661.34; 366131.66, 3346676.29; 366078.54, 3346698.07; 366028.58, 3346726.33; 365982.55, 3346760.63; 365941.18, 3346800.43; 365889.28, 3346869.05; 365862.23, 3346919.69; 365841.75, 3346973.32; 365828.15, 3347029.09; 365821.64, 3347086.12; 365822.34, 3347143.52; 365830.23, 3347200.39; 365845.18, 3347255.81; 365866.95, 3347308.92; 365895.22, 3347358.89; 365948.77, 3347426.23; 365991.09, 3347465.01; 366037.94, 3347498.19; 366088.58, 3347525.23;

366142.20, 3347545.72; 367577.52, 3347903.88; 367634.57, 3347910.39; 367692.00, 3347909.70; 367748.88, 3347901.80; 367804.22, 3347886.84; 367857.36, 3347865.13.

(B) Map depicting Unit FFS-4, Subunit A is provided at paragraph (6)(xvi)(B) of this entry.

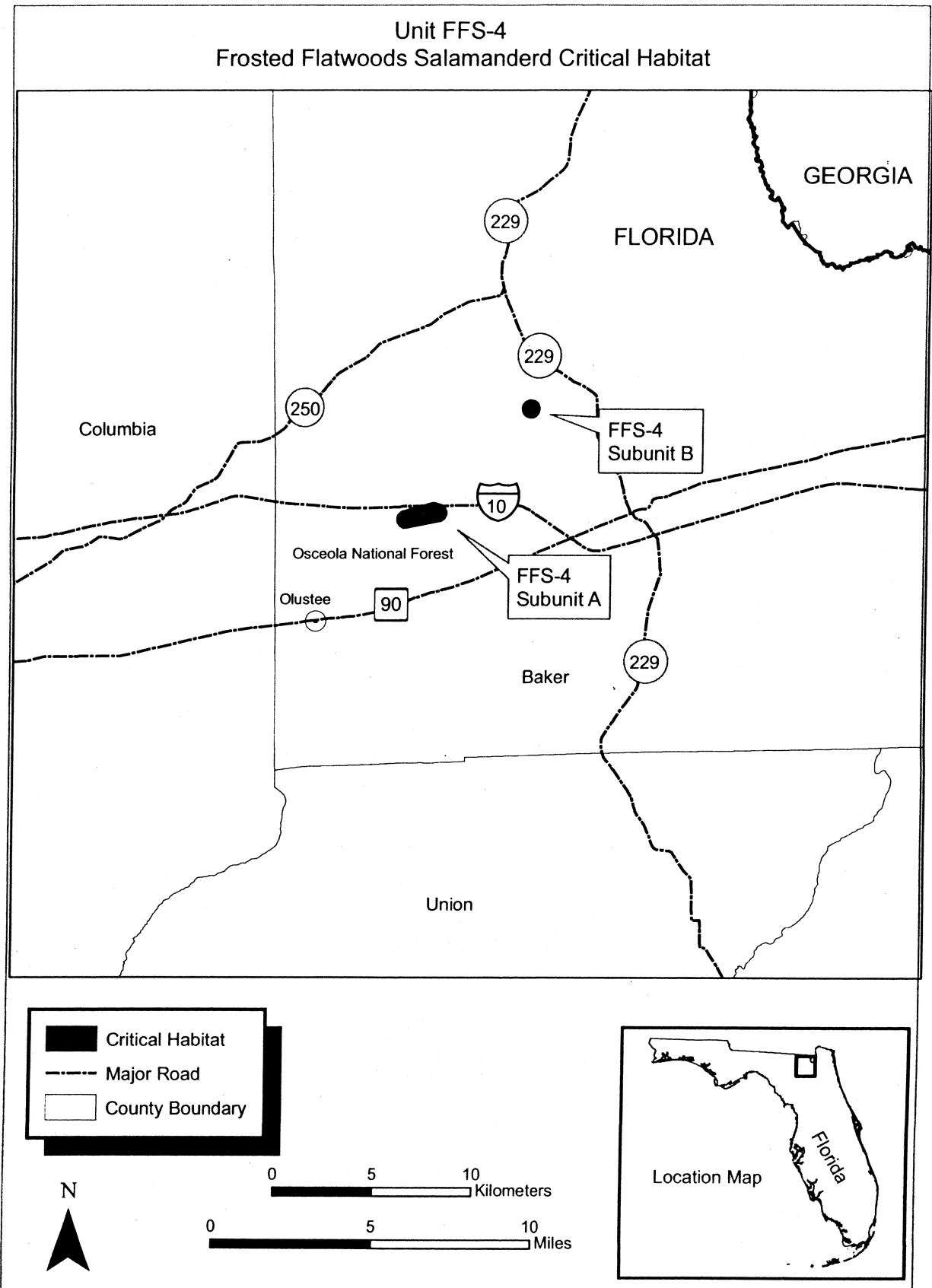
(xvi) Unit FFS-4, Subunit B: Baker County, Florida. From USGS 1:24,000 scale quadrangle map Sanderson North, Florida.

(A) Land bounded by the following UTM Zone 17N NAD83 coordinates, (E, N): 372674.15, 3352411.84; 372686.30, 3351954.90; 372657.58, 3351955.03; 372628.93, 3351956.98; 372600.46, 3351960.71; 372572.28, 3351966.23; 372544.50, 3351973.51; 372517.23, 3351982.51; 372490.58, 3351993.21; 372464.66, 3352005.56; 372439.56, 3352019.52; 372415.39, 3352035.02; 372392.24, 3352052.02; 372370.20, 3352070.43; 372349.36, 3352090.19; 372329.81, 3352111.21; 372311.61, 3352133.43; 372294.84, 3352156.74; 372279.57, 3352181.06; 372265.86, 3352206.29; 372253.76, 3352232.34; 372243.32, 3352259.09; 372234.58, 3352286.44; 372227.57, 3352314.29; 372222.33, 3352342.52; 372218.86, 3352371.03; 372217.20, 3352399.70; 372217.34, 3352428.41; 372219.28, 3352457.06; 372223.02, 3352485.54; 372228.54, 3352513.72; 372235.81, 3352541.50; 372244.82, 3352568.77; 372255.52, 3352595.41; 372267.87, 3352621.34; 372281.83, 3352646.43; 372297.33, 3352670.61; 372314.32, 3352693.76; 372332.73, 3352715.79; 372352.49, 3352736.63; 372373.52, 3352756.19; 372395.74, 3352774.38;

372419.05, 3352791.15; 372443.37, 3352806.42; 372468.60, 3352820.13; 372494.64, 3352832.23; 372521.39, 3352842.68; 372548.75, 3352851.42; 372576.60, 3352858.42; 372604.83, 3352863.67; 372633.34, 3352867.13; 372662.00, 3352868.79; 372690.72, 3352868.66; 372719.37, 3352866.71; 372747.84, 3352862.98; 372776.02, 3352857.46; 372803.80, 3352850.18; 372831.07, 3352841.18; 372857.72, 3352830.48; 372883.64, 3352818.12; 372908.74, 3352804.17; 372932.91, 3352788.66; 372956.06, 3352771.67; 372978.10, 3352753.26; 372998.94, 3352733.50; 373018.49, 3352712.47; 373036.69, 3352690.26; 373053.46, 3352666.95; 373068.73, 3352642.63; 373082.44, 3352617.40; 373094.54, 3352591.35; 373104.98, 3352564.60; 373113.72, 3352537.25; 373120.73, 3352509.40; 373125.97, 3352481.17; 373129.43, 3352452.66; 373131.10, 3352423.99; 373130.96, 3352395.28; 373129.02, 3352366.63; 373125.28, 3352338.15; 373119.76, 3352309.97; 373112.49, 3352282.19; 373103.48, 3352254.92; 373092.78, 3352228.28; 373080.43, 3352202.35; 373066.47, 3352177.26; 373050.97, 3352153.08; 373033.98, 3352129.93; 373015.57, 3352107.90; 372995.81, 3352087.06; 372974.78, 3352067.50; 372952.56, 3352049.31; 372929.25, 3352032.54; 372904.93, 3352017.27; 372879.70, 3352003.56; 372853.66, 3351991.46; 372826.91, 3351981.01; 372799.55, 3351972.27; 372771.70, 3351965.27; 372743.47, 3351960.02; 372714.96, 3351956.56; 372686.30, 3351954.90.

(B) Map of Unit FFS-4 follows:

BILLING CODE 4310-55-S



(7) South Carolina Units: Berkeley, Charleston, and Jasper Counties, South Carolina.

(i) Unit FFS-5, Subunit A: Jasper County, South Carolina. From USGS 1:24,000 scale quadrangle map Limehouse, South Carolina.

(A) Land bounded by the following UTM Zone 17N, NAD83 coordinates (E, N): 497847.74, 3566350.32; 498446.09, 3566295.60; 498439.16, 3566219.48; 498471.15, 3566178.02; 498514.08, 3566169.34; 498465.77, 3566061.18; 498347.55, 3566000.50; 498335.98, 3566046.55; 498253.70, 3566211.29; 498242.87, 3566287.84; 498145.31, 3566241.91; 498093.47, 3566197.40; 497998.76, 3566059.86; 497934.00, 3565901.25; 497898.67, 3565909.74; 497750.14, 3565959.14; 497684.01, 3565953.12; 497606.99, 3565916.86; 497442.74, 3566050.55; 497406.11, 3566214.18; 497415.01, 3566475.87; 497493.26, 3566667.21; 497540.65, 3566737.25; 497620.82, 3566798.86; 497732.91, 3566816.47; 497862.02, 3566803.14; 497974.49, 3566781.53; 497979.42, 3566780.58; 497992.64, 3566773.81; 497990.36, 3566773.41; 497991.28, 3566768.03; 497987.84, 3566757.91; 497989.91, 3566748.69; 497989.47, 3566747.94; 497988.60, 3566711.90; 497989.72, 3566675.82; 498042.65, 3566632.46; 498093.51, 3566608.11; 498098.16, 3566599.05;

498150.81, 3566572.33; 498174.50, 3566503.10; 498224.43, 3566468.83; 498297.24, 3566436.54; 498367.33, 3566396.68; 498406.68, 3566344.87; 498446.09, 3566295.60.

(B) Map depicting Unit FFS-5, Subunit A is provided at paragraph (7)(ii)(B) of this entry.

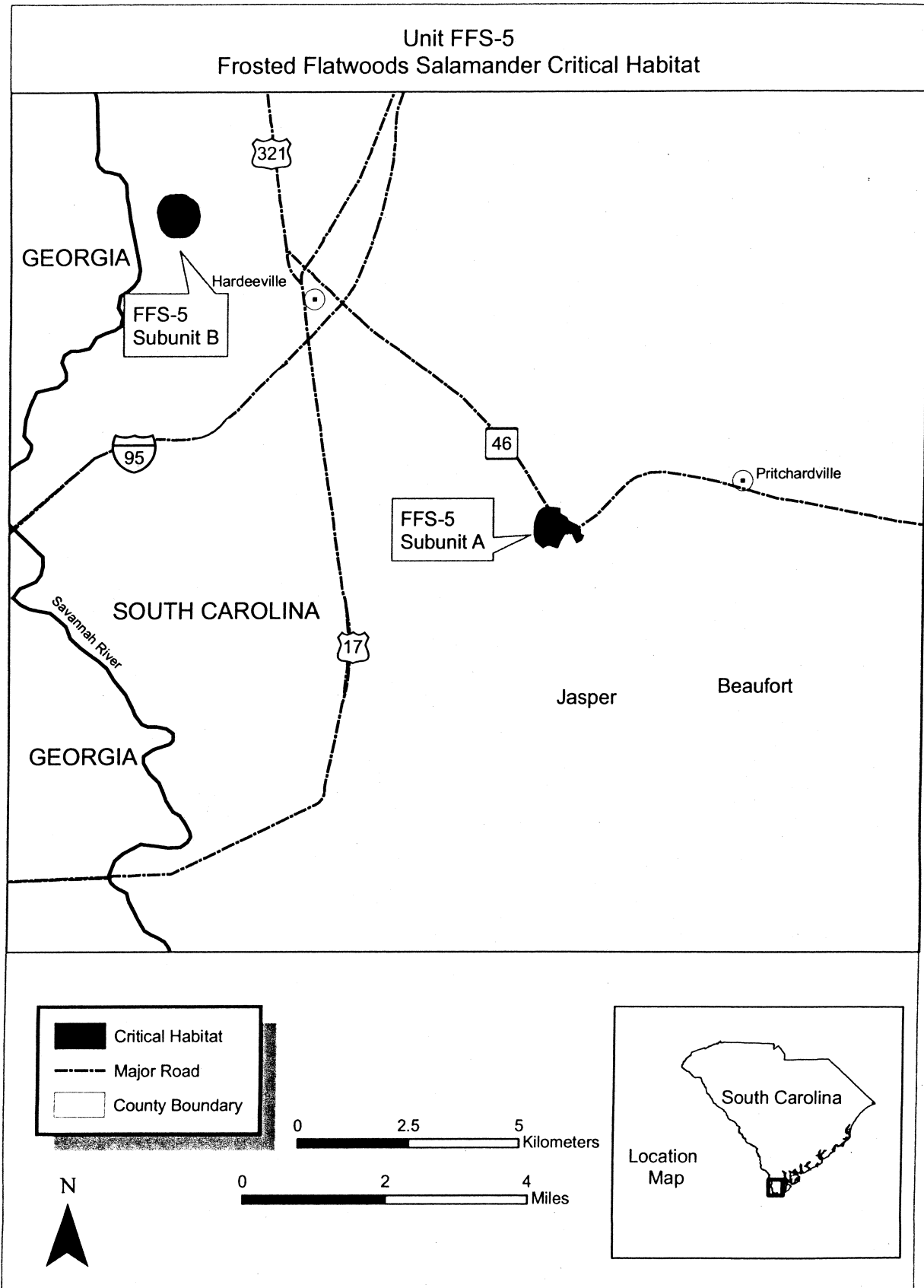
(ii) Unit FFS-5, Subunit B: Jasper County, South Carolina. From USGS 1:24,000 scale quadrangle map Hardeeville, South Carolina.

(A) Land bounded by the following UTM Zone 17N, NAD83 coordinates (E, N): 489561.94, 3573503.59; 489722.85, 3573967.97; 489813.22, 3573903.16; 489904.81, 3573840.10; 489926.27, 3573824.52; 489946.02, 3573806.80; 489963.82, 3573787.14; 489979.50, 3573765.74; 489992.88, 3573742.83; 490003.82, 3573718.67; 490012.20, 3573693.50; 490017.94, 3573667.60; 490016.20, 3573652.66; 490013.19, 3573637.92; 490015.98, 3573632.12; 490025.87, 3573604.58; 490032.87, 3573576.16; 490036.91, 3573547.18; 490037.03, 3573543.60; 490041.81, 3573520.55; 490043.92, 3573497.11; 490043.41, 3573474.57; 490040.43, 3573452.23; 490035.01, 3573430.36; 490027.22, 3573409.21; 490026.77, 3573385.43; 490023.98, 3573361.81; 490018.89, 3573338.58; 490011.54, 3573315.96; 490002.00, 3573294.17; 489990.37, 3573273.42; 489980.99,

3573259.55; 489970.67, 3573246.37; 489959.67, 3573227.66; 489937.65, 3573195.84; 489913.35, 3573165.71; 489886.91, 3573137.45; 489858.47, 3573111.20; 489828.18, 3573087.11; 489796.21, 3573065.31; 489762.72, 3573045.91; 489727.90, 3573029.02; 489644.36, 3573024.70; 489560.73, 3573022.61; 489477.08, 3573022.74; 489393.46, 3573025.10; 489359.85, 3573040.41; 489327.69, 3573058.58; 489297.23, 3573079.47; 489268.70, 3573102.92; 489242.31, 3573128.77; 489218.27, 3573156.80; 489196.75, 3573186.82; 489177.92, 3573218.59; 489161.92, 3573251.88; 489148.87, 3573286.44; 489138.87, 3573321.99; 489085.29, 3573601.84; 489092.79, 3573641.38; 489103.20, 3573680.27; 489116.45, 3573718.27; 489132.48, 3573755.19; 489151.20, 3573790.83; 489172.50, 3573824.98; 489196.26, 3573857.47; 489214.53, 3573880.49; 489235.17, 3573901.42; 489257.94, 3573920.01; 489282.57, 3573936.04; 489308.78, 3573949.34; 489336.26, 3573959.75; 489364.71, 3573967.15; 489393.78, 3573971.44; 489423.15, 3573972.59; 489452.47, 3573970.58; 489453.58, 3573970.39; 489507.35, 3573975.17; 489561.29, 3573977.32; 489615.28, 3573976.84; 489669.17, 3573973.72; 489722.85, 3573967.97.

(B) Map of Unit FFS-5 follows:

BILLING CODE 4310-55-S



(iii) Unit FFS-6: Berkeley County, South Carolina. From USGS 1:24,000 scale quadrangle map Cainhoy, South Carolina.

(A) Land bounded by the following UTM Zone 17N NAD83 coordinates, (E, N): 611278.81, 3648848.98; 613513.07, 3649951.18; 613527.98, 3649895.75; 613535.82, 3649838.89; 613536.47, 3649781.49; 613529.62, 3649718.85; 613516.29, 3649668.71; 613495.76, 3649615.10; 613468.68, 3649564.49; 613435.47, 3649517.67; 613416.73, 3649495.91; 613396.66, 3649475.38; 613352.85, 3649438.29; 613304.74, 3649406.98; 613265.68, 3649387.26; 613198.69, 3649363.59; 613142.44, 3649352.20; 613087.44, 3649348.04; 613094.83, 3649293.89; 613095.48, 3649236.49; 613088.93, 3649179.46; 613075.29, 3649123.71; 613054.77, 3649070.10; 613042.02, 3649044.36; 613027.69, 3649019.49; 612994.47, 3648972.67; 612955.66, 3648930.38; 612911.85, 3648893.29; 612888.28, 3648876.88; 612863.74, 3648861.98; 612812.08, 3648836.95; 609500.97, 3647503.91; 609474.07, 3647493.88; 609446.58, 3647485.56; 609418.63, 3647478.99; 609390.32, 3647474.18; 609361.76, 3647471.16; 609333.08, 3647469.94; 609304.37, 3647470.53; 609275.75, 3647472.91; 609247.34, 3647477.09; 609219.25, 3647483.04; 609191.59, 3647490.74; 609164.46, 3647500.17; 609137.99, 3647511.28; 609112.26, 3647524.03; 609087.38, 3647538.37; 609063.45, 3647554.25; 609040.57, 3647571.59; 609018.82, 3647590.34; 608998.29, 3647610.42; 608979.07, 3647631.75; 608961.22, 3647654.24; 608944.81, 3647677.81; 608929.92, 3647702.36; 608916.60, 3647727.80; 608904.91, 3647754.02; 608894.88, 3647780.93; 608886.56, 3647808.42; 608879.99, 3647836.37; 608875.18, 3647864.68; 608872.16, 3647893.23; 608870.94, 3647921.92; 608871.52, 3647950.63; 608873.91, 3647979.25; 608878.08, 3648007.66; 608884.04, 3648035.75; 608891.74, 3648063.41; 608901.17, 3648090.53; 608912.28, 3648117.01; 608925.03, 3648142.74; 608939.37, 3648167.62;

608955.25, 3648191.54; 608972.59, 3648214.43; 608991.34, 3648236.18; 609011.42, 3648256.70; 609032.74, 3648275.93; 609055.24, 3648293.78; 609078.81, 3648310.18; 609103.36, 3648325.08; 612197.25, 3649979.02; 612248.91, 3650004.05; 612275.81, 3650014.08; 612331.23, 3650028.99; 612359.55, 3650033.80; 612416.80, 3650038.06; 612474.12, 3650035.11; 612502.53, 3650030.94; 612558.29, 3650017.30; 612611.90, 3649996.77; 612655.36, 3649973.81; 612691.29, 3650045.52; 612724.50, 3650092.34; 612743.24, 3650114.09; 612784.64, 3650153.86; 612830.69, 3650188.12; 612855.24, 3650203.02; 612906.90, 3650228.05; 612961.29, 3650246.41; 613025.74, 3650257.06; 613074.79, 3650262.06; 613103.50, 3650261.49; 613160.52, 3650254.94; 613216.28, 3650241.30; 613269.89, 3650220.78; 613295.63, 3650208.03; 613320.51, 3650193.70; 613367.33, 3650160.49; 613409.62, 3650121.67; 613428.85, 3650100.35; 613463.11, 3650054.30; 613491.34, 3650004.31; 613513.07, 3649951.18.

(B) Map depicting Unit FFS-6 is provided at paragraph (7)(iv)(B) of this entry.

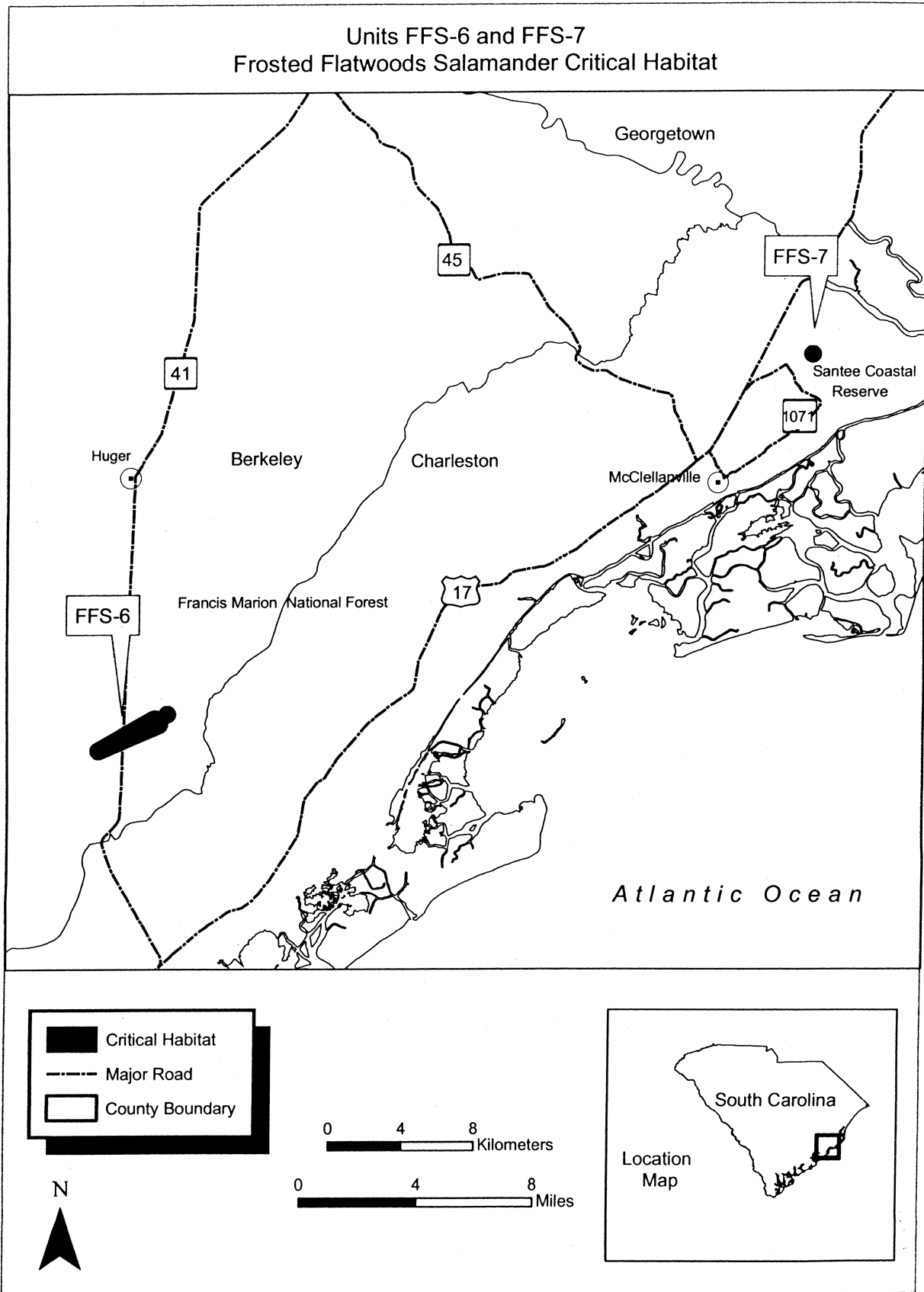
(iv) Unit FFS-7: Charleston County, South Carolina. From USGS 1:24,000 scale quadrangle map, Santee, South Carolina.

(A) Land bounded by the following UTM Zone 17N NAD83 coordinates, (E, N): 648576.17, 3668543.24; 648579.86, 3668086.10; 648551.15, 3668086.77; 648522.54, 3668089.24; 648494.14, 3668093.50; 648466.06, 3668099.54; 648438.42, 3668107.33; 648411.32, 3668116.84; 648384.87, 3668128.03; 648359.18, 3668140.86; 648334.34, 3668155.28; 648310.46, 3668171.23; 648287.62, 3668188.65; 648265.93, 3668207.47; 648245.46, 3668227.61; 648226.29, 3668249.00; 648208.50, 3668271.55; 648192.17, 3668295.17; 648177.35, 3668319.77; 648164.11, 3668345.25; 648152.49, 3668371.52; 648142.54, 3668398.46; 648134.31, 3668425.97; 648127.82, 3668453.95; 648123.09, 3668482.28; 648120.16,

3668510.84; 648119.03, 3668539.54; 648119.70, 3668568.25; 648122.17, 3668596.86; 648126.43, 3668625.26; 648132.47, 3668653.34; 648140.26, 3668680.98; 648149.77, 3668708.08; 648160.96, 3668734.53; 648173.79, 3668760.22; 648188.21, 3668785.06; 648204.16, 3668808.94; 648221.58, 3668831.78; 648240.40, 3668853.47; 648260.54, 3668873.94; 648281.93, 3668893.11; 648304.48, 3668910.89; 648328.10, 3668927.23; 648352.70, 3668942.05; 648378.18, 3668955.29; 648404.45, 3668966.91; 648431.39, 3668976.86; 648458.90, 3668985.09; 648486.88, 3668991.58; 648515.21, 3668996.30; 648543.77, 3668999.24; 648572.47, 3669000.37; 648601.18, 3668999.70; 648629.80, 3668997.23; 648658.20, 3668992.97; 648686.27, 3668986.93; 648713.92, 3668979.14; 648741.02, 3668969.63; 648767.46, 3668958.44; 648793.16, 3668945.61; 648818.00, 3668931.19; 648841.88, 3668915.24; 648864.71, 3668897.82; 648886.41, 3668879.00; 648906.88, 3668858.86; 648926.04, 3668837.47; 648943.83, 3668814.92; 648960.16, 3668791.30; 648974.98, 3668766.70; 648988.23, 3668741.22; 648999.85, 3668714.96; 649009.79, 3668688.01; 649018.03, 3668660.50; 649024.52, 3668632.53; 649029.24, 3668604.20; 649032.17, 3668575.63; 649033.31, 3668546.93; 649032.64, 3668518.22; 649030.17, 3668489.61; 649025.90, 3668461.21; 649019.86, 3668433.13; 649012.08, 3668405.49; 649002.57, 3668378.39; 648991.37, 3668351.94; 648978.54, 3668326.25; 648964.12, 3668301.41; 648948.17, 3668277.53; 648930.76, 3668254.69; 648911.94, 3668233.00; 648891.79, 3668212.53; 648870.41, 3668193.36; 648847.86, 3668175.58; 648824.23, 3668159.24; 648799.63, 3668144.42; 648774.15, 3668131.18; 648747.89, 3668119.56; 648720.94, 3668109.62; 648693.43, 3668101.38; 648665.46, 3668094.89; 648637.13, 3668090.17; 648608.56, 3668087.23; 648579.86, 3668086.10.

(B) Map of Units FFS-6 and FFS-7 follows:

BILLING CODE 4310-55-S



* * * * *

Reticulated Flatwoods Salamander
(*Ambystoma bishopi*)

(1) Critical habitat units are depicted for Calhoun, Holmes, Jackson, Okaloosa, Santa Rosa, Walton, and Washington Counties in Florida; and Baker and Miller Counties in Georgia on the maps below.

(2) The primary constituent elements of critical habitat for the reticulated flatwoods salamander are the habitat components that provide:

(i) Breeding habitat. Small (generally <1 to 10 ac (<0.4 to 4.0 ha), acidic, depressional standing bodies of freshwater (wetlands) that:

(A) Are seasonally flooded by rainfall in late fall or early winter and dry in late spring or early summer;

(B) Are geographically isolated from other water bodies;

(C) Occur within pine flatwoods-savanna communities;

(D) Are dominated by grasses and grass-like species in the ground layer and overstories of pond-cypress, blackgum, and slash pine;

(E) Have a relatively open canopy, necessary to maintain the herbaceous component that serves as cover for

flatwoods salamander larvae and their aquatic invertebrate prey; and

(F) Typically have a burrowing crayfish fauna, but, due to periodic drying, the breeding ponds typically lack large, predatory fish (for example, *Lepomis* (sunfish), *Micropterus* (bass), *Amia calva* (bowfin)).

(ii) Non-breeding habitat. Upland pine flatwoods-savanna habitat that is open, mesic woodland maintained by frequent fires and that:

(A) Is within 1,500 ft (457 m) of adjacent and accessible breeding ponds;

(B) Contains crayfish burrows or other underground habitat that the flatwoods salamander depends upon for food, shelter, and protection from the elements and predation;

(C) Has an organic hardpan in the soil profile, which inhibits subsurface water penetration and typically results in moist soils with water often at or near the surface under normal conditions; and

(D) Often has wiregrasses as the dominant grasses in the abundant herbaceous ground cover, which supports the rich herbivorous invertebrates that serve as a food source for the flatwoods salamander.

(iii) Dispersal habitat. Upland habitat areas between nonbreeding and

breeding habitat that allow for salamander movement between such sites and that is characterized by:

(A) A mix of vegetation types representing a transition between wetland and upland vegetation (ecotone);

(B) An open canopy and abundant native herbaceous species;

(C) Moist soils as described in paragraph (2)(ii); and

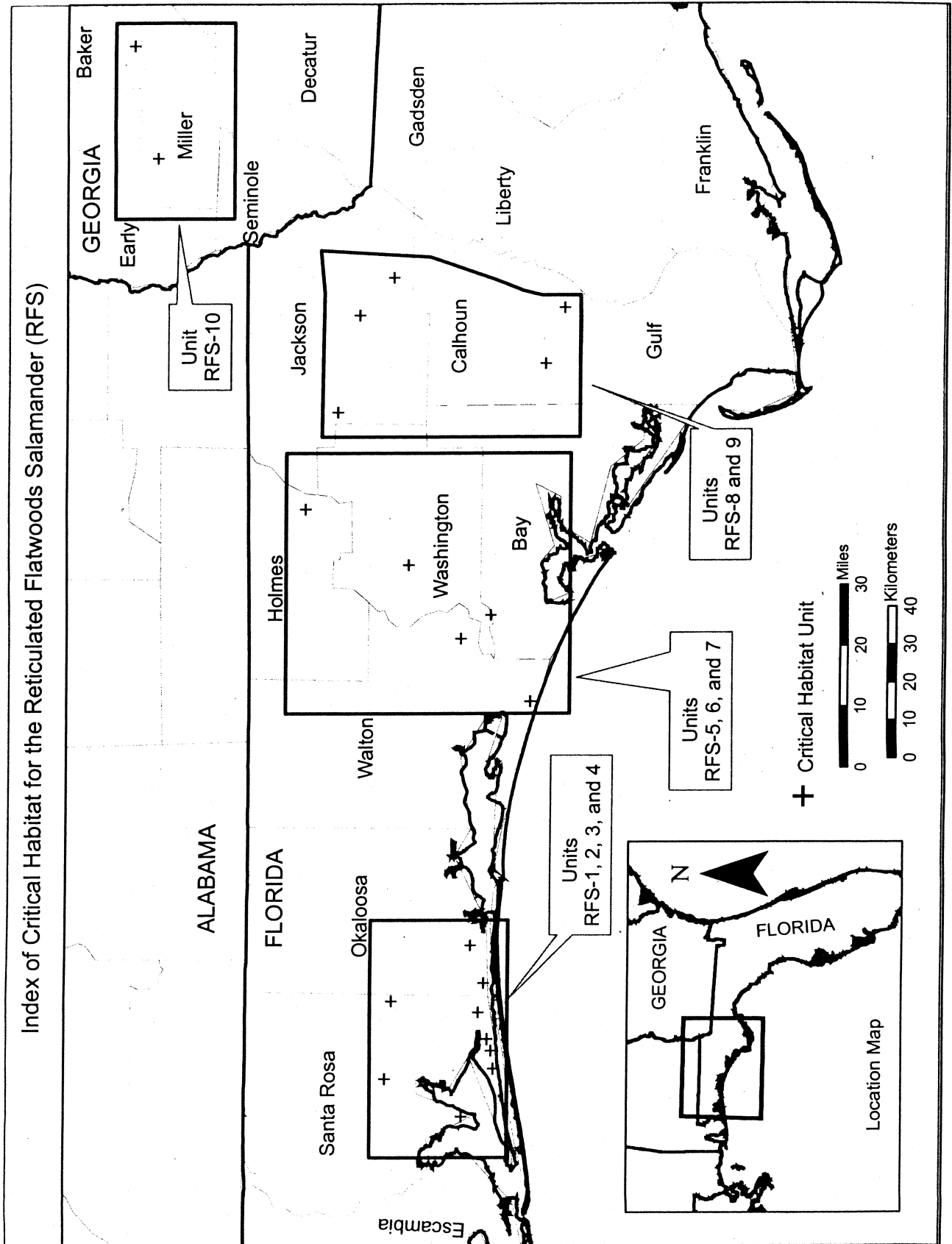
(D) Subsurface structure, such as deep litter cover or burrows that provide shelter for salamanders during seasonal movements.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Data layers defining map units were created on a base of USGS 7.5' quadrangles, and critical habitat units were then mapped using Universal Transverse Mercator (UTM) coordinates.

(5) Note: Index Map of critical habitat for the Reticulated Flatwoods Salamander follows:

BILLING CODE 4310-55-S



(6) Florida: Calhoun, Holmes, Jackson, Okaloosa, Santa Rosa, Walton and Washington Counties, Florida.

(i) Unit RFS-1: Santa Rosa County, Florida. From USGS 1:24,000 scale quadrangle map Garcon Point, Florida.

(A) Land bounded by the following UTM Zone 16N, North American Datum of 1983 (NAD83) coordinates, (E, N):

492983.94, 3372029.94; 493099.21, 3373387.45; 493154.87, 3373453.03; 493198.40, 3373490.44; 493271.61, 3373535.60; 493351.98, 3373566.25; 493436.67, 3373581.30; 493522.69, 3373580.20; 493551.12, 3373576.25; 493606.97, 3373563.02; 493686.54, 3373530.34; 493735.56, 3373500.50; 493801.14, 3373444.83; 493838.55, 3373401.30; 493870.20, 3373353.43; 493905.84, 3373275.14; 493921.15, 3373219.82; 493930.85, 3373134.35; 493928.32, 3373077.01; 493918.62, 3373020.45; 493901.91, 3372965.54; 492974.90, 3370886.40; 492965.68, 3370859.21; 492954.77, 3370832.65; 492942.22, 3370806.83; 492928.07, 3370781.84; 492912.38, 3370757.80; 492895.22, 3370734.79; 492876.64, 3370712.90; 492856.72, 3370692.22; 492835.54, 3370672.83; 492813.19, 3370654.81; 492789.75, 3370638.23; 492765.32, 3370623.16; 492739.98, 3370609.64; 492713.85, 3370597.75; 492687.03, 3370587.52; 492659.61, 3370578.99; 492631.71, 3370572.21; 492603.45, 3370567.18; 492574.92, 3370563.95; 492546.24, 3370562.51; 492517.54, 3370562.87; 492488.91, 3370565.04; 492460.47, 3370568.99; 492432.34, 3370574.73; 492404.62, 3370582.22; 492377.43, 3370591.44; 492350.87, 3370602.35; 492320.06, 3370618.11; 492291.54, 3370614.88; 492262.86, 3370613.44; 492234.15, 3370613.80; 492205.52, 3370615.97; 492177.09, 3370619.93; 492148.96, 3370625.66; 492121.24, 3370633.16; 492094.05, 3370642.37; 492067.49, 3370653.28; 492041.67, 3370665.83; 492016.69, 3370679.98; 491992.64, 3370695.67; 491969.63, 3370712.84; 491947.74, 3370731.42; 491927.07, 3370751.34; 491907.68, 3370772.52; 491889.66, 3370794.87; 491873.08, 3370818.31; 491858.01, 3370842.75; 491850.37, 3370857.07; 491865.61, 3370901.72; 491918.43, 3370965.16; 491965.55, 3371021.75; 492011.53, 3371083.74; 492053.38, 3371140.16; 492103.93, 3371212.08; 492141.72, 3371264.53; 492176.37, 3371309.64; 492207.14, 3371351.35; 492243.74, 3371397.83; 492283.27, 3371453.23; 492331.51, 3371520.83; 493069.37, 3373338.43; 493099.21, 3373387.45.

(B) Map depicting Unit RFS-1 is provided at paragraph (6)(ix)(B) of this entry.

(ii) Unit RFS-2, Subunit A: Santa Rosa County, Florida. From USGS 1:24,000 scale quadrangle map Harold, Florida.

(A) Land bounded by the following UTM Zone 16N, North American Datum of 1983 (NAD83) coordinates, (E, N):

501542.20, 3392876.13; 501578.50, 3392420.55; 501549.82, 3392419.17; 501521.11, 3392419.59; 501492.49, 3392421.82; 501464.06, 3392425.84; 501435.94, 392431.63; 501408.24, 3392439.18; 501381.07, 3392448.45; 501354.53, 3392459.42; 501328.74, 3392472.02; 501303.78, 3392486.22; 501279.77, 3392501.96; 501256.80, 392519.18; 501234.95, 3392537.80; 501214.31, 3392557.76; 501194.97, 3392578.98; 501176.99, 3392601.37; 501160.46, 3392624.84; 501145.44, 3392649.31; 501131.98, 392674.67; 501120.14, 3392700.83; 501109.96, 3392727.67; 501101.49, 3392755.11; 501094.76, 3392783.02; 501089.80, 3392811.30; 501086.62, 3392839.83; 501085.24, 392868.51; 501085.25, 3392868.93; 501085.66, 3392897.21; 501086.27, 3392904.98; 501087.89, 3392925.84; 501091.91, 3392954.27; 501097.70, 3392982.39; 501105.25, 393010.09; 501114.52, 3393037.26; 501125.49, 3393063.80; 501138.09, 3393089.59; 501152.29, 3393114.54; 501168.03, 3393138.56; 501185.25, 3393161.53; 501203.87, 393183.38; 501223.83, 3393204.02; 501245.05, 3393223.36; 501267.44, 3393241.33; 501290.91, 3393257.87; 501315.38, 3393272.89; 501340.74, 3393286.35; 501366.90, 393298.19; 501393.74, 3393308.36; 501421.18, 3393316.83; 501449.09, 3393323.56; 501477.37, 3393328.53; 501505.90, 3393331.70; 501534.58, 3393333.08; 501563.29, 393332.66; 501584.95, 3393330.98; 501591.91, 3393330.44; 501613.98, 3393327.32; 501620.34, 3393326.42; 501648.46, 3393320.62; 501676.16, 3393313.07; 501703.33, 393303.80; 501729.87, 3393292.84; 501755.66, 3393280.23; 501780.61, 3393266.03; 501804.63, 3393250.29; 501827.60, 3393233.08; 501849.45, 3393214.45; 501870.09, 393194.49; 501889.43, 3393173.27; 501907.41, 3393150.89; 501923.94, 3393127.41; 501938.96, 3393102.95; 501952.42, 3393077.59; 501964.26, 3393051.43; 501974.44, 393024.58; 501982.91, 3392997.15; 501989.64, 3392969.24; 501994.60, 3392940.96; 501997.78, 3392912.43; 501999.16, 3392883.75; 501998.73, 3392855.04; 501996.51, 392826.42; 501992.49, 3392797.99; 501986.70, 3392769.87; 501979.15, 3392742.17; 501969.87, 3392715.00; 501958.91, 3392688.46; 501946.31, 3392662.66; 501932.11, 392637.71; 501916.37, 3392613.70; 501899.15, 3392590.72;

501880.52, 3392568.87; 501860.56, 3392548.24; 501839.35, 3392528.89; 501816.96, 3392510.92; 501793.48, 392494.39; 501769.02, 3392479.36; 501743.66, 3392465.90; 501717.50, 3392454.06; 501690.66, 3392443.89; 501663.22, 3392435.42; 501635.31, 3392428.69; 501607.03, 3392423.73; 501578.50, 3392420.55.

(B) Map depicting Unit RFS-2, Subunit A is provided at paragraph (6)(ix)(B) of this entry.

(iii) Unit RFS-2, Subunit B: Santa Rosa County, Florida. From USGS 1:24,000 scale quadrangle map Floridale, Florida.

(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 518978.93, 3390847.46; 519015.23, 3390391.88; 518986.55, 3390390.50; 518957.84, 3390390.92; 518929.22, 3390393.14; 518900.79, 3390397.16; 518872.67, 390402.96; 518844.97, 3390410.51; 518817.80, 3390419.78; 518791.26, 3390430.74; 518765.46, 3390443.35; 518740.51, 3390457.55; 518716.50, 3390473.29; 518693.52, 3390490.50; 518671.67, 3390509.13; 518651.04, 3390529.09; 518631.69, 3390550.31; 518613.72, 3390572.70; 518597.19, 3390596.17; 518582.16, 3390620.64; 518568.70, 3390646.00; 518556.86, 3390672.15; 518546.69, 3390699.00; 518538.22, 3390726.43; 518531.49, 3390754.34; 518526.53, 3390782.62; 518523.35, 3390811.16; 518521.97, 3390839.83; 518522.39, 3390868.54; 518524.62, 3390897.17; 518528.63, 3390925.59; 518534.43, 3390953.71; 518541.98, 3390981.41; 518551.25, 3391008.59; 518562.21, 3391035.12; 518574.82, 3391060.92; 518589.02, 3391085.87; 518604.76, 3391109.88; 518621.98, 3391132.86; 518640.60, 3391154.71; 518660.56, 3391175.35; 518681.78, 3391194.69; 518704.17, 3391212.66; 518727.64, 3391229.19; 518752.11, 3391244.22; 518777.47, 3391257.68; 518803.62, 3391269.52; 518830.47, 3391279.69; 518857.91, 3391288.16; 518885.82, 3391294.89; 518914.10, 3391299.86; 518942.63, 3391303.03; 518971.31, 3391304.41; 519000.02, 3391303.99; 519028.64, 3391301.77; 519057.07, 3391297.75; 519085.19, 3391291.95; 519112.89, 3391284.40; 519140.06, 3391275.13; 519166.60, 3391264.17; 519192.39, 3391251.56; 519217.35, 3391237.36; 519241.36, 3391221.62; 519264.33, 3391204.41; 519286.18, 3391185.78; 519306.82, 3391165.82; 519326.16, 3391144.60; 519344.14, 3391122.21; 519360.67, 3391098.74; 519375.69, 3391074.28; 519389.16, 3391048.92; 519401.00, 3391022.77; 519410.33, 3390998.13; 519411.17, 3390995.92; 519419.64, 3390968.48; 519426.37, 3390940.57; 519431.34,

3390912.29; 519434.51, 3390883.76;
519435.89, 3390855.08; 519435.47,
3390826.37; 519433.25, 3390797.7493;
519429.2274, 3390769.3210;
519423.4325, 3390741.2012;
519415.8831, 3390713.50; 519406.61,
3390686.33; 519395.65, 3390659.79;
519383.04, 3390634.00; 519368.84,
3390609.04; 519353.10, 3390585.03;
519335.89, 3390562.06; 519317.26,
3390540.21; 519297.30, 3390519.57;
519276.08, 3390500.23; 519253.69,
3390482.25; 519230.22, 3390465.72;
519205.75, 3390450.70; 519180.39,
3390437.24; 519154.24, 3390425.40;
519127.39, 3390415.22; 519099.96,
3390406.75; 519072.05, 3390400.02;
519043.77, 3390395.06; 519025.17,
3390392.99; 519015.23, 3390391.88.

(B) Map depicting Unit RFS-2,
Subunit B is provided at paragraph
(6)(ix)(B) of this entry.

(iv) Unit RFS-3, Subunit A: Santa
Rosa County, Florida. From USGS
1:24,000 scale quadrangle map Holley,
Florida.

(A) Land bounded by the following
UTM Zone 16N NAD83 coordinates, (E,
N): 503177.78, 3363967.21; 503665.03,
3364056.93; 503673.05, 3364029.36;
503679.32, 3364001.35; 503683.82,
3363972.99; 503686.53, 3363944.41;
503687.44, 3363915.71; 503694.98,
3363896.36; 503703.23, 3363884.01;
503713.36, 3363875.67; 503720.87,
3363866.60; 503726.39, 3363857.48;
503733.34, 3363843.78; 503741.25,
3363818.20; 503752.72, 3363782.15;
503757.95, 3363757.83; 503766.30,
3363741.51; 503653.07, 3363742.06;
503644.01, 3363721.11; 503630.98,
3363695.52; 503615.44, 3363669.75;
503614.55, 3363724.18; 503603.43,
3363777.35; 503601.27, 3363799.83;
503594.64, 3363834.69; 503563.00,
3363831.09; 503563.97, 3363824.67;
503558.81, 3363820.93; 503559.46,
3363811.37; 503555.68, 3363800.73;
503543.49, 3363787.96; 503527.75,
3363771.89; 503514.02, 3363772.76;
503464.40, 3363773.57; 503448.85,
3363749.85; 503448.44, 3363558.27;
503320.62, 3363559.79; 503273.43,
3363560.71; 503273.49, 3363572.75;
503279.14, 3363573.95; 503279.03,
3363592.72; 503284.42, 3363598.55;
503277.70, 3363622.86; 503272.12,
3363658.96; 503257.00, 3363659.53;
503220.26, 3363657.70; 503211.46,
3363656.94; 503211.34, 3363632.86;
503198.99, 3363600.69; 503189.65,
3363605.42; 503175.37, 3363661.31;
503174.55, 3363690.00; 503175.30,
3363735.30; 503170.12, 3363757.64;
503161.91, 3363768.67; 503127.37,
3363773.12; 503100.70, 3363791.93;
503033.44, 3363790.29; 502978.97,
3363827.84; 502954.55, 3363827.72;
502938.01, 3363827.31; 502928.95,

3363818.51; 502929.56, 3363685.06;
502929.74, 3363569.45; 502821.80,
3363570.13; 502821.27, 3363591.92;
502814.36, 3363603.64; 502789.75,
3363608.33; 502751.22, 3363613.34;
502704.61, 3363624.01; 502670.48,
3363639.13; 502640.35, 3363788.37;
502630.38, 3363844.28; 502624.76,
3363884.45; 502620.15, 3363937.85;
502612.79, 3363995.15; 502605.87,
3364010.90; 502632.10, 3364030.43;
502667.63, 3364049.11; 502682.24,
3364047.48; 502713.23, 3364052.86;
502771.52, 3364051.63; 502794.68,
3364052.20; 502805.45, 3364083.69;
502816.85, 3364110.04; 502828.97,
3364135.63; 502844.48, 3364160.34;
502860.61, 3364184.09; 502878.20,
3364206.79; 502897.18, 3364228.33;
502917.48, 3364248.63; 502939.01,
3364267.63; 502961.69, 3364285.23;
502985.43, 3364301.38; 503010.14,
3364316.00; 503035.71, 3364329.04;
503062.06, 3364340.45; 503089.07,
3364350.18; 503116.64, 3364358.20;
503144.65, 3364364.47; 503173.01,
3364368.97; 503201.59, 3364371.69;
503230.29, 3364372.60; 503258.99,
3364371.70; 503287.57, 3364369.01;
503315.93, 3364364.53; 503343.95,
3364358.27; 503371.52, 3364350.27;
503398.54, 3364340.55; 503424.89,
3364329.16; 503450.47, 3364316.13;
503475.19, 3364301.52; 503498.94,
3364285.39; 503521.63, 3364267.80;
503543.18, 3364248.82; 503563.48,
3364228.53; 503582.48, 3364207.00;
503600.08, 3364184.32; 503616.23,
3364160.57; 503630.85, 3364135.87;
503643.89, 3364110.29; 503655.30,
3364083.94; 503665.03, 3364056.93 .

(B) Map depicting Unit RFS-3,
Subunit A is provided at paragraph
(6)(ix)(B) of this entry.

(v) Unit RFS-3, Subunit B: Santa Rosa
County, Florida. From USGS 1:24,000
scale quadrangle map Holley, Florida.

(A) Land bounded by the following
UTM Zone 16N NAD83 coordinates, (E,
N): 507814.78, 3364090.74; 508038.93,
3364260.63; 508159.63, 3364258.28;
508158.08, 3364132.67; 508156.37,
3364018.27; 508155.42, 3363957.25;
508106.06, 3363958.06; 508068.35,
3363958.68; 508035.07, 3363959.24;
507887.21, 3363961.45; 507885.38,
3363855.42; 507685.15, 3363855.35;
507684.90, 3363837.37; 507612.21,
3363836.12; 507612.77, 3363907.73;
507612.90, 3363927.61; 507638.84,
3363928.05; 507638.99, 3363940.21;
507583.59, 3364018.73; 507491.86,
3364016.60; 507493.27, 3364096.55;
507471.91, 3364096.05; 507455.12,
3364095.65; 507457.47, 3364243.92;
507529.64, 3364243.19; 507566.34,
3364270.07; 507830.20, 3364271.25;
507890.35, 3364271.37; 507890.09,

3364262.80; 507967.94, 3364261.67;
508038.93, 3364260.63.

(B) Map depicting Unit RFS-3,
Subunit B is provided at paragraph
(6)(ix)(B) of this entry.

(vi) Unit RFS-4, Subunit A: Santa
Rosa County, Florida. From USGS
1:24,000 scale quadrangle map Holley,
Florida.

(A) Land bounded by the following
UTM Zone 16N NAD83 coordinates, (E,
N): 510400.66, 3365505.95; 510400.66,
3365505.94; 509771.80, 3365986.12;
509786.15, 3365697.09; 509742.19,
3365653.73; 509689.01, 3365608.17;
509680.07, 3365594.74; 509676.34,
3365584.74; 509675.94, 3365574.16;
509680.82, 3365564.37; 509751.49,
3365490.11; 509758.27, 3365483.67;
509763.58, 3365483.14; 509781.33,
3365488.19; 509793.15, 3365465.36;
509803.57, 3365445.13; 509813.90,
3365428.86; 509822.88, 3365413.89;
509832.40, 3365403.55; 509844.45,
3365397.90; 509860.53, 3365390.36;
509879.19, 3365385.53; 509883.00,
3365365.14; 509889.27, 3365352.08;
509898.17, 3365340.40; 509910.19,
3365336.07; 509928.15, 3365332.55;
510029.23, 3365341.61; 510098.49,
3365352.55; 510105.01, 3365356.67;
510100.49, 3365406.11; 510097.21,
3365485.98; 510117.71, 3365487.14;
510122.76, 3365497.17; 510129.84,
3365505.27; 510140.24, 3365513.45;
510133.36, 3365550.94; 510128.52,
3365613.59; 510125.58, 3365625.41;
510121.61, 3365652.40; 510101.37,
3365667.77; 510087.38, 3365671.39;
510091.69, 3365711.80; 510143.86,
3365825.38; 510213.21, 3365886.53;
510250.11, 3365921.13; 510325.41,
3365976.14; 510689.35, 3365967.54;
510995.83, 3365962.39; 511011.83,
3365904.55; 511026.52, 3365903.70;
511152.39, 3365900.83; 511153.19,
3365885.50; 511152.71, 3365855.05;
511151.76, 3365794.14; 511151.28,
3365762.18; 511150.81, 3365731.74;
511150.33, 3365699.46; 511149.86,
3365667.18; 511149.39, 3365634.88;
511148.92, 3365602.61; 511148.44,
3365570.37; 511147.46, 3365505.85;
511146.98, 3365473.61; 511146.51,
3365441.45; 511146.02, 3365409.78;
511145.54, 3365378.13; 511145.05,
3365346.46; 511144.56, 3365314.73;
511144.08, 3365282.91; 511143.60,
3365251.09; 511143.12, 3365219.27;
511142.63, 3365187.45; 511142.15,
3365155.55; 511141.67, 3365123.58;
511141.18, 3365090.42; 510337.08,
3365119.03; 510286.41, 3365120.83;
510154.18, 3365125.87; 510134.70,
3365126.68; 510137.11, 3365072.50;
509812.03, 3365058.71; 509810.32,
3365102.13; 509808.80, 3365140.28;
509750.99, 3365142.69; 509679.61,
3365145.66; 509618.68, 3365148.20;

509535.78, 3365151.66; 509523.88,
3365152.16; 509527.33, 3365325.26;
509412.51, 3365446.74; 509440.28,
3365472.87; 509478.83, 3365509.22;
509514.03, 3365542.40; 509531.95,
3365559.25; 509532.53, 3365588.18;
509533.26, 3365626.23; 509535.10,
3365717.83; 509536.31, 3365778.93;
509536.89, 3365809.47; 509537.52,
3365840.02; 509538.11, 3365870.57;
509538.69, 3365901.06; 509539.43,
3365937.19; 509540.80, 3365973.66;
509546.71, 3365985.26; 509649.97,
3365986.45; 509658.51, 3365989.30;
509705.49, 3365990.45; 509707.55,
3365987.19; 509771.80, 3365986.12.

(B) Map depicting Unit RFS-4,
Subunit A is provided at paragraph
(6)(ix)(B) of this entry.

(vii) Unit RFS-4, Subunit B: Santa
Rosa County, Florida. From USGS
1:24,000 scale quadrangle map Navarre,
Florida.

(A) Land bounded by the following

UTM Zone 16N NAD83 coordinates (E,
N): 516505.37, 3367798.89; 516048.35,
3367797.90; 516049.19, 3367826.60;
516051.83, 3367855.19; 516056.26,
3367883.55; 516062.46, 3367911.59;
516070.41, 3367939.17; 516080.08,
3367966.21; 516091.43, 3367992.58;
516104.41, 3368018.19; 516118.97,
3368042.94; 516135.05, 3368066.72;
516152.60, 3368089.44; 516171.54,
3368111.02; 516191.80, 3368131.36;
516213.29, 3368150.40; 516235.94,
3368168.04; 516259.65, 3368184.23;
516284.33, 3368198.90; 516309.88,
3368211.99; 516336.21, 3368223.45;
516363.20, 3368233.24; 516390.75,
3368241.31; 516418.76, 3368247.63;
516447.11, 3368252.18; 516475.68,
3368254.95; 516504.38, 3368255.91;
516533.08, 3368255.07; 516561.67,
3368252.43; 516590.03, 3368248.00;
516618.07, 3368241.80; 516645.65,
3368233.85; 516672.69, 3368224.18;
516699.06, 3368212.84; 516724.67,
3368199.86; 516749.42, 3368185.30;
516773.20, 3368169.21; 516795.92,
3368151.66; 516817.50, 3368132.72;
516837.84, 3368112.47; 516856.88,
3368090.97; 516874.52, 3368068.32;
516890.71, 3368044.61; 516905.38,
3368019.93; 516918.47, 3367994.38;
516929.93, 3367968.05; 516939.72,
3367941.06; 516947.79, 3367913.51;
516954.11, 3367885.50; 516958.66,
3367857.16; 516961.43, 3367828.58;
516962.39, 3367799.88; 516961.55,
3367771.19; 516958.91, 3367742.60;
516954.48, 3367714.23; 516948.28,
3367686.20; 516940.33, 3367658.61;
516930.66, 3367631.58; 516919.32,
3367605.20; 516906.34, 3367579.59;
516891.78, 3367554.85; 516875.69,
3367531.07; 516858.14, 3367508.34;
516839.20, 3367486.77; 516818.95,
3367466.42; 516797.45, 3367447.39;

516774.80, 3367429.74; 516751.09,
3367413.55; 516726.41, 3367398.88;
516700.86, 3367385.79; 516674.53,
3367374.33; 516647.54, 3367364.55;
516619.99, 3367356.48; 516591.98,
3367350.15; 516563.64, 3367345.60;
516535.06, 3367342.84; 516506.36,
3367341.87; 516477.67, 3367342.71;
516449.08, 3367345.35; 516420.71,
3367349.78; 516392.68, 3367355.98;
516365.09, 3367363.93; 516338.06,
3367373.60; 516311.68, 3367384.95;
516286.07, 3367397.93; 516261.33,
3367412.49; 516237.55, 3367428.57;
516214.82, 3367446.12; 516193.24,
3367465.06; 516172.90, 3367485.32;
516153.87, 3367506.81; 516136.22,
3367529.46; 516120.03, 3367553.17;
516105.36, 3367577.85; 516092.27,
3367603.40; 516080.81, 3367629.73;
516071.03, 3367656.72; 516062.96,
3367684.27; 516056.63, 3367712.28;
516052.08, 3367740.63; 516049.32,
3367769.20; 516048.35, 3367797.90.

(B) Map depicting Unit RFS-4,

Subunit B is provided at paragraph
(6)(ix)(B) of this entry.

(viii) Unit RFS-4, Subunit C: Okaloosa
County, Florida. From USGS 1:24,000
scale quadrangle maps Navarre and
Mary Esther, Florida.

(A) Land bounded by the following

UTM Zone 16N NAD83 coordinates (E,
N): 523394.20, 3365436.98; 523394.24,
3365436.76; 524170.60, 3366343.42;
524193.32, 3366325.88; 524214.90,
3366306.94; 524235.24, 3366286.68;
524254.28, 3366265.18; 524255.52,
3366263.59; 524257.59, 3366263.79;
524286.28, 3366264.75; 524314.98,
3366263.91; 524343.57, 3366261.27;
524371.94, 3366256.84; 524399.97,
3366250.64; 524427.56, 3366242.69;
524454.60, 3366233.02; 524480.97,
3366221.68; 524506.58, 3366208.70;
524531.32, 3366194.14; 524555.10,
3366178.05; 524577.83, 3366160.50;
524599.41, 3366141.56; 524619.75,
3366121.31; 524638.79, 3366099.81;
524656.43, 3366077.16; 524672.62,
3366053.45; 524687.29, 3366028.77;
524700.38, 3366003.22; 524711.84,
3365976.89; 524721.62, 3365949.90;
524729.69, 3365922.35; 524736.02,
3365894.34; 524736.03, 3365894.25;
524754.88, 3365888.81; 524789.36,
3365915.08; 524813.07, 3365931.27;
524863.30, 3365959.04; 524916.61,
3365980.30; 524972.16, 3365994.70;
525000.51, 3365999.26; 525029.09,
3366002.03; 525057.78, 3366003.00;
525115.07, 3365999.53; 525156.98,
3365992.11; 525184.46, 3366020.70;
525228.59, 3366057.39; 525276.98,
3366088.26; 525328.85, 3366112.82;
525383.39, 3366130.68; 525468.32,
3366144.34; 525525.71, 3366144.48;
525582.67, 3366137.42; 525638.29,
3366123.27; 525665.33, 3366113.61;

525717.31, 3366089.30; 525765.84,
3366058.66; 525810.15, 3366022.18;
525836.51, 3365995.14; 525887.15,
3366027.76; 525939.02, 3366052.32;
525993.57, 3366070.19; 526049.92,
3366081.07; 526123.42, 3366084.34;
526177.98, 3366168.19; 526238.66,
3366229.16; 526309.68, 3366277.68;
526361.56, 3366302.24; 526444.10,
3366326.43; 526529.72, 3366334.73;
526587.00, 3366331.26; 526670.99,
3366312.69; 526750.02, 3366278.72;
526798.55, 3366248.08; 526842.86,
3366211.60; 526882.24, 3366169.85;
526930.76, 3366098.82; 526955.32,
3366046.94; 526840.75, 3366058.44;
526659.02, 3366085.02; 526646.47,
3366077.08; 526620.18, 3366079.65;
526609.34, 3366074.35; 526597.34,
3366075.64; 526598.59, 3366031.48;
526627.16, 3366029.57; 526647.75,
3366021.05; 526631.05, 3365879.47;
526603.56, 3365868.67; 526552.16,
3365863.93; 526523.60, 3365860.56;
526509.33, 3365854.59; 526506.04,
3365798.55; 526619.19, 3365783.67;
526623.10, 3365795.38; 526683.15,
3365794.37; 526754.59, 3365782.64;
526783.73, 3365781.43; 526802.03,
3365772.25; 526815.74, 3365774.92;
526829.36, 3365786.94; 526851.13,
3365788.19; 526888.90, 3365784.51;
526923.70, 3365781.12; 526969.41,
3365775.96; 526984.28, 3365770.06;
526998.01, 3365764.17; 527012.85,
3365767.50; 527027.14, 3365766.22;
527132.30, 3365746.04; 527137.85,
3365584.55; 527293.10, 3365586.09;
527481.63, 3365593.15; 527483.96,
3365233.86; 526972.58, 3365237.53;
526707.31, 3364779.33; 526677.81,
3364779.98; 526643.02, 3364780.75;
526618.34, 3364781.18; 526593.92,
3364781.60; 526574.43, 3364781.94;
526557.61, 3364782.27; 526537.63,
3364782.70; 526486.90, 3364783.79;
526445.53, 3364784.68; 526404.35,
3364785.57; 526358.97, 3364786.55;
526324.82, 3364787.28; 526309.73,
3364787.60; 526272.91, 3364788.40;
526263.31, 3364788.60; 526233.87,
3364789.24; 526161.04, 3364790.80;
526069.02, 3364792.78; 525872.91,
3364797.00; 525859.88, 3364797.28;
525827.02, 3364797.99; 525801.47,
3364798.54; 525774.77, 3364799.11;
525764.94, 3364799.32; 525749.71,
3364799.65; 525717.89, 3364800.10;
525686.21, 3364800.55; 525658.69,
3364800.94; 525604.26, 3364801.72;
525569.57, 3364802.21; 525539.10,
3364802.64; 525529.96, 3364802.77;
525502.59, 3364803.16; 525472.04,
3364803.59; 525420.19, 3364804.33;
525419.48, 3364862.05; 525390.89,
3364864.68; 525362.52, 3364869.11;
525334.49, 3364875.30; 525306.90,
3364883.25; 525279.86, 3364892.91;

525253.49, 3364904.25; 525227.88,
3364917.23; 525192.79, 3364938.78;
525159.51, 3364939.46; 525130.92,
3364942.09; 525102.55, 3364946.51;
525074.52, 3364952.71; 525046.93,
3364960.66; 525017.36, 3364972.29;
524993.52, 3364981.66; 524967.91,
3364994.63; 524943.16, 3365009.19;
524919.38, 3365025.27; 524896.65,
3365042.82; 524875.07, 3365061.75;
524860.32, 3365068.51; 524835.64,
3365053.84; 524810.09, 3365040.75;
524783.76, 3365029.29; 524756.77,
3365019.51; 524729.22, 3365011.44;
524701.21, 3365005.12; 524672.87,
3365000.56; 524644.29, 3364997.80;
524615.59, 3364996.84; 524586.89,
3364997.67; 524558.31, 3365000.31;
524529.94, 3365004.74; 524501.91,
3365010.95; 524474.32, 3365018.90;
524447.28, 3365028.56; 524420.91,
3365039.91; 524395.30, 3365052.89;
524370.56, 3365067.45; 524346.77,
3365083.54; 524324.05, 3365101.08;
524302.47, 3365120.02; 524282.13,
3365140.28; 524263.09, 3365161.78;
524245.45, 3365184.42; 524229.26,
3365208.13; 524214.59, 3365232.81;
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(B) Map depicting Unit RFS-4, Subunit C is provided at paragraph (6)(ix)(B) of this entry.

(ix) Unit RFS-4, Subunit D: Okaloosa County, Florida. From USGS 1:24,000 scale quadrangle map Mary Esther, Florida.

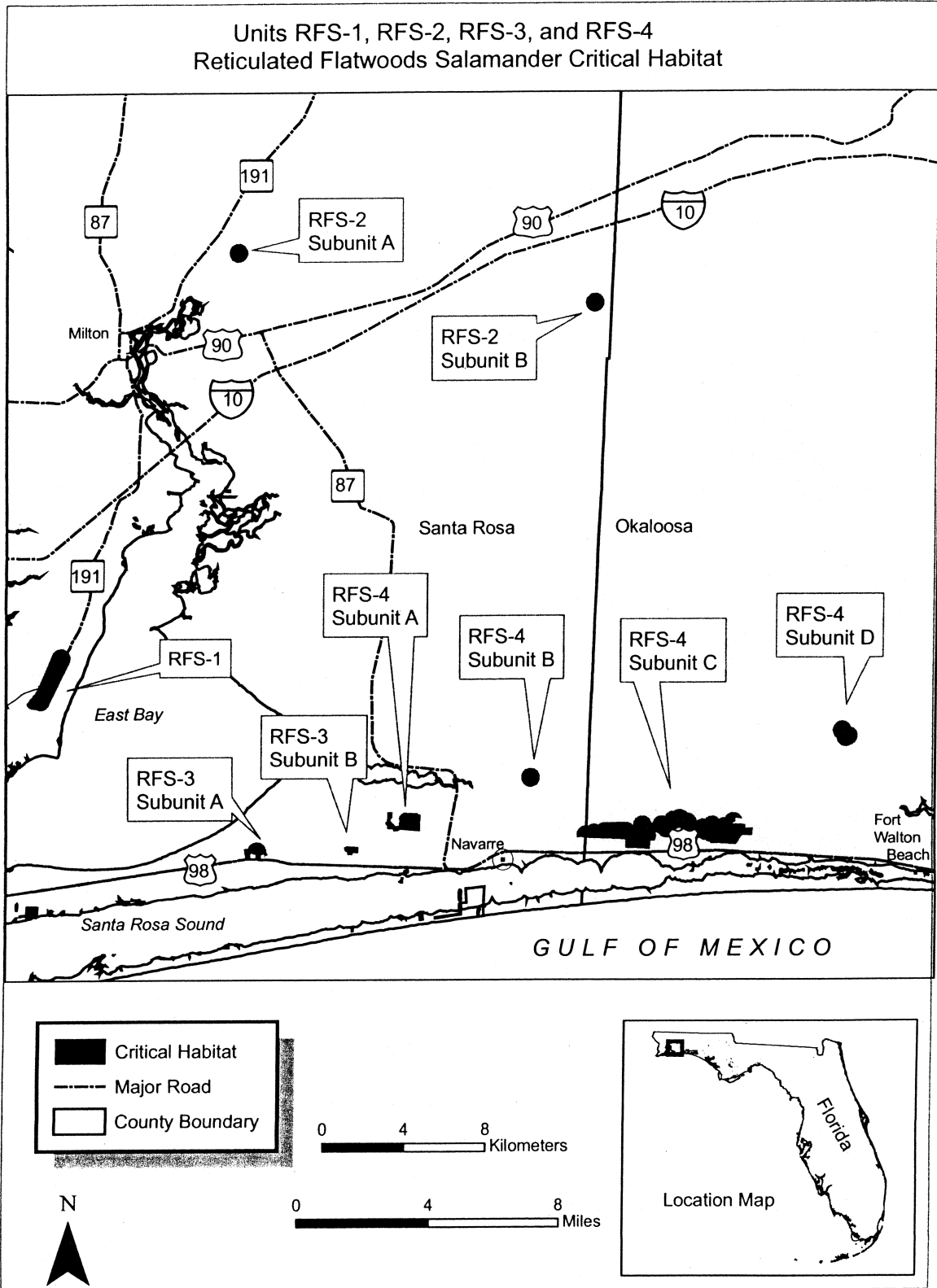
(A) Land bounded by the following UTM Zone 16N NAD83 coordinates, (E, N): 531820.63, 3370271.49; 531211.54, 3370435.75; 531212.38, 3370464.45; 531215.02, 3370493.04; 531219.45, 3370521.41; 531225.65, 3370549.44; 531233.60, 3370577.03; 531243.27, 3370604.06; 531254.62, 3370630.44; 531267.60, 3370656.05; 531282.16, 3370680.79; 531298.24, 3370704.57; 531315.79, 3370727.30; 531334.73, 3370748.87; 531354.99, 3370769.22; 531376.48, 3370788.25; 531399.13, 3370805.90; 531422.84, 3370822.09; 531447.52, 3370836.76; 531473.08, 3370849.85; 531499.40, 3370861.31; 531526.39, 3370871.09; 531553.95, 3370879.16; 531581.95, 3370885.49; 531610.30, 3370890.04; 531638.88, 3370892.80; 531667.57, 3370893.77; 531696.27, 3370892.93; 531724.86, 3370890.29; 531753.23, 3370885.86; 531781.26, 3370879.66; 531808.85, 3370871.71; 531835.88, 3370862.04; 531862.26, 3370850.69; 531887.87, 3370837.72; 531912.61, 3370823.15; 531936.39, 3370807.07; 531959.12, 3370789.52; 531980.69, 3370770.58; 532001.04, 3370750.32; 532020.07, 3370728.83; 532037.72, 3370706.18; 532053.91, 3370682.47; 532068.58, 3370657.79; 532081.67, 3370632.23; 532087.29, 3370619.33; 532108.43, 3370614.65; 532136.02, 3370606.70; 532163.05, 3370597.04; 532189.42, 3370585.69; 532215.03, 3370572.71; 532239.78, 3370558.15; 532263.56, 3370542.06; 532286.28, 3370524.52; 532307.86, 3370505.58; 532328.21, 3370485.32; 532347.24, 3370463.82; 532364.89, 3370441.18; 532381.08, 3370417.47; 532395.75, 3370392.78; 532408.84, 3370367.23; 532420.30, 3370340.91; 532430.08, 3370313.91; 532438.15, 3370286.36; 532444.47, 3370258.36; 532449.03, 3370230.01; 532451.79, 3370201.43; 532452.76, 3370172.74; 532451.92, 3370144.04; 532449.28, 3370115.45; 532444.85, 3370087.08; 532438.64, 3370059.05; 532430.69, 3370031.46; 532421.03, 3370004.42; 532409.66, 3369978.05; 532396.70, 3369952.44; 532382.14, 3369927.70; 532366.06, 3369903.91; 532348.51, 3369881.19; 532329.57, 3369859.61; 532309.31, 3369839.27; 532287.82, 3369820.23; 532265.17, 3369802.59; 532241.46, 3369786.40; 532216.78, 3369771.73; 532191.22, 3369758.64; 532164.90, 3369747.18; 532137.91, 3369737.39; 532110.35, 3369729.32; 532101.86, 3369727.41; 532082.54, 3369715.92; 532056.99, 3369702.83; 532030.66, 3369691.37; 532003.67, 3369681.59; 531976.12, 3369673.52; 531948.11, 3369667.20; 531919.77, 3369662.64; 531891.19, 3369659.88; 531862.49, 3369658.91; 531833.79, 3369659.75; 531805.21, 3369662.39; 531776.84, 3369666.82; 531748.81, 3369673.03; 531721.22, 3369680.98; 531694.18, 3369690.64; 531667.81, 3369701.99; 531642.20, 3369714.97; 531617.45, 3369729.53; 531593.67, 3369745.61; 531570.95, 3369763.16; 531549.37, 3369782.10; 531529.02, 3369802.36; 531509.99, 3369823.85; 531492.34, 3369846.50; 531476.16, 3369870.21; 531461.49, 3369894.89; 531448.40, 3369920.45; 531436.94, 3369946.77; 531427.15, 3369973.76; 531419.08, 3370001.32; 531412.76, 3370029.32; 531408.21, 3370057.67; 531407.82, 3370061.63; 531400.74, 3370066.42; 531378.01, 3370083.97; 531356.44, 3370102.91; 531336.09, 3370123.17; 531317.06, 3370144.66; 531299.41, 3370167.31; 531283.22, 3370191.02; 531268.55, 3370215.70; 531255.46, 3370241.25; 531244.00, 3370267.58; 531234.22,

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(B) Map of Units RFS-1, RFS-2, RFS-3 and RFS-4 follows:

BILLING CODE 4310-55-S



(x) Unit RFS-5: Walton County, Florida. From USGS 1:24,000 scale quadrangle map Point Washington, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 587515.35, 3355152.48; 587506.79, 3355609.46; 587535.50, 3355609.10; 587564.13, 3355606.93; 587592.57, 3355602.97; 587620.71, 3355597.23; 587648.42, 3355589.74; 587675.62, 3355580.52; 587702.18, 3355569.61; 587728.00, 3355557.06; 587752.99, 3355542.90; 587777.03, 3355527.21; 587800.05, 3355510.04; 587821.94, 3355491.46; 587842.61, 3355471.54; 587862.00, 3355450.36; 587880.02, 3355428.01; 587896.60, 3355404.56; 587911.68, 3355380.13; 587925.19, 3355354.79; 587937.09, 3355328.66; 587947.32, 3355301.83; 587955.84, 3355274.41; 587962.63, 3355246.51; 587967.65, 3355218.24; 587970.89, 3355189.71; 587972.33, 3355161.03; 587971.96, 3355132.32; 587969.80, 3355103.69; 587965.84, 3355075.25; 587960.10, 3355047.12; 587952.61, 3355019.40; 587943.39, 3354992.21; 587932.48, 3354965.65; 587919.82, 3354939.82; 587905.77, 3354914.84; 587890.08, 3354890.79; 587872.91, 3354867.78; 587854.33, 3354845.89; 587834.41, 3354825.21; 587813.23, 3354805.82; 587790.87, 3354787.80; 587767.43, 3354771.22; 587743.00, 3354756.14; 587717.66, 3354742.63; 587691.53, 3354730.74; 587664.70, 3354720.51; 587637.28, 3354711.98; 587609.38, 3354705.19; 587581.11, 3354700.17; 587552.58, 3354696.94; 587523.90, 3354695.50; 587495.19, 3354695.86; 587466.56, 3354698.03; 587438.12, 3354701.99; 587409.99, 3354707.73; 587382.27, 3354715.22; 587355.07, 3354724.44; 587328.51, 3354735.35; 587302.69, 3354747.90; 587277.71, 3354762.05; 587253.66, 3354777.74; 587230.65, 3354794.91; 587208.76, 3354813.50; 587188.08, 3354833.42; 587168.69, 3354854.60; 587150.67, 3354876.95; 587134.09, 3354900.39; 587119.01, 3354924.83; 587105.50, 3354950.16; 587093.61, 3354976.30; 587083.38, 3355003.13; 587074.85, 3355030.54; 587068.06, 3355058.44; 587063.04, 3355086.72; 587059.80, 3355115.25; 587058.37, 3355143.92; 587058.73, 3355172.63; 587060.90, 3355201.27; 587064.86, 3355229.70; 587070.59, 3355257.84; 587078.09, 3355285.56; 587087.31, 3355312.75; 587098.21, 3355339.31; 587110.77, 3355365.13; 587124.92, 3355390.12; 587140.61, 3355414.16; 587157.78, 3355437.18; 587176.36, 3355459.07; 587196.28, 3355479.75; 587217.46, 3355499.13; 587239.82, 3355517.15; 587263.26, 3355533.74;

587287.70, 3355548.81; 587313.03, 3355562.32; 587339.17, 3355574.22; 587365.99, 3355584.45; 587393.41, 3355592.97; 587421.31, 3355599.76; 587449.58, 3355604.78; 587478.11, 3355608.02; 587506.79, 3355609.46.
(B) Map depicting Unit RFS-5 is provided at paragraph (6)(xiv)(B) of this entry.

(xi) Unit RFS-6, Subunit A: Walton County, Florida. From USGS 1:24,000 scale quadrangle map Bruce, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 601647.75, 3373576.77; 601493.33, 3374109.03; 601522.04, 3374108.60; 601550.67, 3374106.38; 601579.10, 3374102.36; 601607.23, 3374096.56; 601634.93, 3374089.01; 601662.11, 3374079.74; 601688.65, 3374068.77; 601714.44, 3374056.17; 601739.40, 3374041.96; 601763.41, 3374026.22; 601786.39, 3374009.00; 601808.25, 3373990.37; 601828.89, 3373970.41; 601848.23, 3373949.19; 601866.21, 3373926.80; 601882.74, 3373903.32; 601897.76, 3373878.85; 601911.23, 3373853.49; 601923.07, 3373827.33; 601933.24, 3373800.48; 601941.71, 3373773.04; 601948.44, 3373745.13; 601953.40, 3373716.84; 601956.58, 3373688.31; 601957.96, 3373659.62; 601957.54, 3373630.91; 601955.31, 3373602.29; 601951.29, 3373573.85; 601945.50, 3373545.73; 601937.95, 3373518.03; 601932.81, 3373498.30; 602077.97, 3373412.75; 602148.71, 3373370.38; 602189.04, 3373346.29; 602226.02, 3373324.08; 602242.81, 3373314.59; 602251.57, 3373308.87; 602249.73, 3373302.87; 602248.52, 3373298.22; 602244.07, 3373290.84; 602232.30, 3373285.25; 602226.49, 3373279.16; 602219.36, 3373273.03; 602212.40, 3373260.30; 602203.50, 3373245.54; 602189.89, 3373207.54; 602185.07, 3373188.25; 602182.00, 3373178.92; 602174.92, 3373170.82; 602167.16, 3373163.35; 602161.52, 3373150.66; 602159.44, 3373128.14; 602152.20, 3373073.77; 602147.72, 3373041.28; 602068.26, 3373014.83; 602046.87, 3372996.45; 602018.93, 3372975.27; 601977.95, 3372972.42; 601920.70, 3372984.20; 601893.12, 3373001.35; 601867.36, 3373025.15; 601844.26, 3373048.36; 601816.50, 3373072.78; 601799.99, 3373071.04; 601789.68, 3373059.55; 601764.95, 3373042.41; 601751.13, 3373012.99; 601725.10, 3372994.49; 601700.34, 3373005.10; 601680.55, 3373028.40; 601659.92, 3373058.94; 601630.17, 3373083.30; 601595.72, 3373083.76; 601568.63, 3373081.76; 601562.85, 3373153.48; 601546.32, 3373152.40; 601512.87, 3373139.67; 601482.57, 3373133.62; 601457.54, 3373128.37; 601443.06, 3373124.70; 601441.20,

3373198.67; 601422.79, 3373201.67; 601394.66, 3373207.46; 601366.96, 3373215.01; 601339.78, 3373224.29; 601313.25, 3373235.25; 601287.45, 3373247.86; 601262.49, 3373262.06; 601238.48, 3373277.81; 601215.50, 3373295.02; 601193.65, 3373313.65; 601173.01, 3373333.62; 601153.66, 3373354.84; 601135.69, 3373377.23; 601119.15, 3373400.70; 601104.13, 3373425.17; 601090.67, 3373450.54; 601078.83, 3373476.70; 601068.65, 3373503.55; 601060.18, 3373530.98; 601053.45, 3373558.90; 601048.49, 3373587.18; 601045.31, 3373615.72; 601043.93, 3373644.40; 601044.35, 3373673.11; 601046.58, 3373701.74; 601050.60, 3373730.17; 601056.39, 3373758.30; 601063.95, 3373786.00; 601073.22, 3373813.17; 601084.18, 3373839.71; 601096.79, 3373865.51; 601111.00, 3373890.47; 601126.74, 3373914.48; 601143.96, 3373937.46; 601162.58, 3373959.31; 601182.55, 3373979.95; 601203.77, 3373999.30; 601226.16, 3374017.27; 601249.64, 3374033.81; 601274.11, 3374048.83; 601299.47, 3374062.29; 601325.63, 3374074.13; 601352.48, 3374084.31; 601379.92, 3374092.78; 601407.83, 3374099.51; 601436.11, 3374104.47; 601464.65, 3374107.65; 601493.33, 3374109.03.

(B) Map depicting Unit RFS-6, Subunit A is provided at paragraph (6)(xiv)(B) of this entry.

(xii) Unit RFS-6, Subunit B: Washington County, Florida. From USGS 1:24,000 scale quadrangle map Bruce, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 607444.16, 3365585.74; 607435.59, 3366042.75; 607464.30, 3366042.38; 607492.93, 3366040.22; 607521.37, 3366036.26; 607549.51, 3366030.52; 607577.23, 3366023.03; 607604.42, 3366013.81; 607630.98, 3366002.90; 607656.81, 3365990.35; 607681.79, 3365976.20; 607705.84, 3365960.50; 607728.86, 3365943.33; 607750.75, 3365924.75; 607771.43, 3365904.83; 607790.82, 3365883.65; 607808.84, 3365861.30; 607825.42, 3365837.85; 607840.50, 3365813.42; 607854.02, 3365788.08; 607865.91, 3365761.94; 607876.14, 3365735.11; 607884.67, 3365707.70; 607891.46, 3365679.79; 607896.48, 3365651.52; 607899.72, 3365622.99; 607901.16, 3365594.31; 607900.79, 3365565.60; 607898.63, 3365536.97; 607894.67, 3365508.53; 607888.93, 3365480.39; 607881.44, 3365452.67; 607872.22, 3365425.48; 607861.31, 3365398.91; 607848.76, 3365373.09; 607834.61, 3365348.10; 607818.91, 3365324.06; 607801.74, 3365301.04; 607783.16, 3365279.15; 607763.24, 3365258.47; 607742.06,

3365239.08; 607719.71, 3365221.06;
607696.26, 3365204.48; 607671.83,
3365189.40; 607646.49, 3365175.88;
607620.36, 3365163.99; 607593.53,
3365153.76; 607566.11, 3365145.23;
607538.21, 3365138.44; 607509.93,
3365133.42; 607481.40, 3365130.18;
607452.72, 3365128.74; 607424.01,
3365129.11; 607395.38, 3365131.27;
607366.94, 3365135.23; 607338.80,
3365140.97; 607311.08, 3365148.46;
607283.89, 3365157.68; 607257.33,
3365168.59; 607231.50, 3365181.14;
607206.52, 3365195.29; 607182.47,
3365210.99; 607159.45, 3365228.16;
607137.56, 3365246.74; 607116.88,
3365266.66; 607097.49, 3365287.84;
607079.47, 3365310.19; 607062.89,
3365333.64; 607047.81, 3365358.07;
607034.30, 3365383.41; 607022.40,
3365409.54; 607012.17, 3365436.37;
607003.64, 3365463.79; 606996.85,
3365491.69; 606991.83, 3365519.97;
606988.59, 3365548.50; 606987.15,
3365577.18; 606987.52, 3365605.89;
606989.68, 3365634.52; 606993.64,
3365662.96; 606999.38, 3365691.10;
607006.87, 3365718.82; 607116.09,
3365746.01; 607027.00, 3365772.57;
607039.55, 3365798.40; 607053.70,
3365823.38; 607069.40, 3365847.43;
607086.57, 3365870.45; 607105.15,
3365892.34; 607125.07, 3365913.02;
607146.25, 3365932.41; 607168.60,
3365950.43; 607192.05, 3365967.01;
607216.48, 3365982.09; 607241.82,
3365995.60; 607267.95, 3366007.50;
607294.78, 3366017.73; 607322.20,
3366026.26; 607350.10, 3366033.05;
607378.38, 3366038.07; 607406.91,
3366041.31; 607435.59, 3366042.75.

(B) Map depicting Unit RFS-6,
Subunit B is provided at paragraph
(6)(xiv)(B) of this entry.

(xiii) Unit RFS-7, Subunit A: Holmes
County, Florida. From USGS 1:24,000
scale quadrangle map Bonifay, Florida.

(A) Land bounded by the following
UTM Zone 16N, NAD83 coordinates (E,
N): 630429.91, 3415116.39; 630422.24,
3415573.43; 630450.95, 3415573.01;
630479.58, 3415570.79; 630508.01,
3415566.77; 630536.14, 3415560.98;
630563.84, 3415553.43; 630591.02,
3415544.16; 630617.56, 3415533.20;
630643.36, 3415520.59; 630668.32,
3415506.39; 630692.34, 3415490.65;
630715.32, 3415473.44; 630737.18,
3415454.81; 630757.82, 3415434.85;
630777.17, 3415413.63; 630795.15,
3415391.24; 630811.68, 3415367.76;
630826.71, 3415343.29; 630840.18,
3415317.93; 630852.02, 3415291.77;
630862.20, 3415264.92; 630870.67,
3415237.48; 630877.41, 3415209.57;
630882.38, 3415181.28; 630885.56,
3415152.74; 630886.94, 3415124.06;
630886.52, 3415095.35; 630884.30,

3415066.72; 630880.28, 3415038.28;
630874.49, 3415010.16; 630866.94,
3414982.45; 630857.67, 3414955.27;
630846.71, 3414928.73; 630834.11,
3414902.93; 630819.91, 3414877.97;
630804.17, 3414853.95; 630786.95,
3414830.97; 630768.32, 3414809.11;
630748.36, 3414788.47; 630727.15,
3414769.12; 630704.75, 3414751.14;
630681.28, 3414734.60; 630656.81,
3414719.57; 630631.45, 3414706.11;
630605.29, 3414694.26; 630578.44,
3414684.08; 630551.00, 3414675.61;
630523.09, 3414668.88; 630494.81,
3414663.91; 630466.27, 3414660.73;
630437.59, 3414659.34; 630408.87,
3414659.76; 630380.24, 3414661.99;
630351.81, 3414666.00; 630323.69,
3414671.79; 630295.98, 3414679.34;
630268.80, 3414688.61; 630242.26,
3414699.58; 630216.46, 3414712.18;
630191.50, 3414726.38; 630167.49,
3414742.12; 630144.51, 3414759.34;
630122.65, 3414777.97; 630102.01,
3414797.93; 630082.66, 3414819.15;
630064.68, 3414841.54; 630048.14,
3414865.01; 630033.11, 3414889.48;
630019.65, 3414914.85; 630007.80,
3414941.01; 629997.63, 3414967.86;
629989.15, 3414995.29; 629982.42,
3415023.21; 629977.45, 3415051.49;
629974.27, 3415080.03; 629972.89,
3415108.72; 629973.31, 3415137.43;
629975.53, 3415166.06; 629979.54,
3415194.49; 629985.34, 3415222.62;
629992.88, 3415250.32; 630002.16,
3415277.50; 630013.12, 3415304.04;
630025.72, 3415329.85; 630039.92,
3415354.81; 630055.66, 3415378.82;
630072.88, 3415401.81; 630091.50,
3415423.66; 630111.46, 3415444.31;
630132.68, 3415463.65; 630155.07,
3415481.63; 630178.55, 3415498.17;
630203.02, 3415513.20; 630228.38,
3415526.67; 630254.54, 3415538.51;
630281.39, 3415548.69; 630308.82,
3415557.16; 630336.74, 3415563.90;
630365.02, 3415568.87; 630393.56,
3415572.05; 630422.24, 3415573.43.

(B) Map depicting Unit RFS-7,
Subunit A is provided at paragraph
(6)(xiv)(B) of this entry.

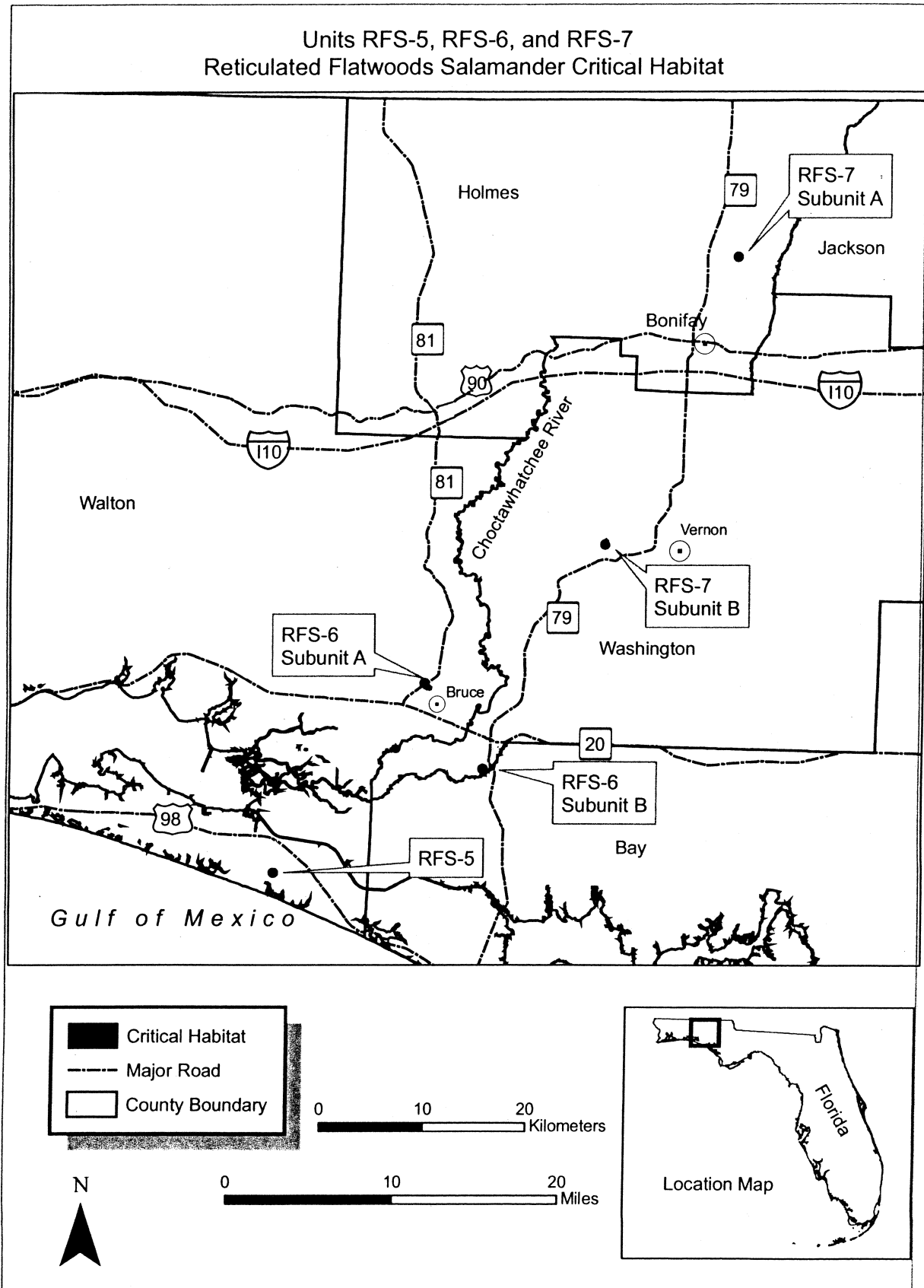
(xiv) Unit RFS-7, Subunit B:
Washington County, Florida. From
USGS 1:24,000 quadrangle map Millers
Ferry, Florida.

(A) Land bounded by the following
UTM Zone 16N, NAD83 coordinates (E,
N): 618603.41, 3387429.45; 618699.68,
3387966.18; 618708.26, 3387969.49;
618723.71, 3387970.50; 618726.33,
3387965.00; 618725.78, 3387937.80;
618728.76, 3387918.09; 618732.40,
3387896.55; 618738.22, 3387886.81;
618755.97, 3387870.57; 618776.73,
3387857.50; 618803.06, 3387844.57;
618839.32, 3387830.66; 618872.53,
3387815.43; 618904.43, 3387802.63;

618918.85, 3387795.58; 618926.43,
3387789.59; 618930.96, 3387781.67;
618931.79, 3387748.94; 618930.13,
3387716.76; 618932.43, 3387674.79;
618932.53, 3387646.37; 618934.03,
3387611.79; 618948.87, 3387588.07;
618962.97, 3387569.26; 618980.28,
3387545.60; 618995.92, 3387515.09;
619007.01, 3387492.50; 619018.24,
3387464.98; 619025.65, 3387441.06;
619035.64, 3387413.50; 619042.95,
3387393.91; 619052.14, 3387373.13;
619059.11, 3387348.17; 619055.09,
3387319.74; 619049.30, 3387291.61;
619041.75, 3387263.91; 619032.48,
3387236.62; 619021.51, 3387210.19;
619008.91, 3387184.39; 618994.70,
3387159.43; 618978.96, 3387135.42;
618961.74, 3387112.44; 618943.12,
3387090.58; 618923.15, 3387069.94;
618901.93, 3387050.59; 618879.54,
3387032.62; 618856.06, 3387016.08;
618831.60, 3387001.05; 618806.23,
3386987.59; 618780.07, 3386975.75;
618753.22, 3386965.57; 618725.78,
3386957.10; 618697.87,
3386950.37; 618669.59, 3386945.41;
618641.05, 3386942.23; 618612.37,
3386940.85; 618583.65, 3386941.27;
618555.02, 3386943.49; 618526.59,
3386947.51; 618498.47, 3386953.31;
618470.76, 3386960.86; 618443.59,
3386970.13; 618417.05, 3386981.10;
618391.25, 3386993.70; 618366.29,
3387007.91; 618342.28, 3387023.65;
618319.30, 3387040.87; 618297.44,
3387059.49; 618276.80, 3387079.46;
618257.46, 3387100.68; 618239.48,
3387123.07; 618222.95, 3387146.55;
618207.92, 3387171.02; 618194.46,
3387196.38; 618182.61, 3387222.54;
618172.44, 3387249.39; 618163.97,
3387276.83; 618157.24, 3387304.75;
618152.27, 3387333.03; 618149.09,
3387361.57; 618147.71, 3387390.25;
618148.13, 3387418.97; 618150.36,
3387447.59; 618154.38, 3387476.03;
618160.17, 3387504.15; 618167.72,
3387531.86; 618177.00, 3387559.03;
618187.96, 3387585.58; 618200.57,
3387611.37; 618214.77, 3387636.33;
618230.51, 3387660.35; 618247.73,
3387683.33; 618266.36, 3387705.18;
618286.32, 3387725.82; 618307.54,
3387745.17; 618329.93, 3387763.15;
618353.41, 3387779.68; 618377.88,
3387794.71; 618403.24, 3387808.17;
618429.40, 3387820.02; 618456.25,
3387830.19; 618483.69, 3387838.66;
618511.60, 3387845.39; 618552.33,
3387867.90; 618598.24, 3387912.94;
618635.11, 3387948.48; 618647.90,
3387956.84; 618666.90, 3387964.74;
618689.14, 3387966.53; 618699.68,
3387966.18.

(B) Map of Units RFS-5, RFS-6, and
RFS-7 follows:

BILLING CODE 4310-55-S



(xv) Unit RFS-8, Subunit A: Jackson County, Florida. From USGS 1:24,000 quadrangle map Cottondale West, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 652825.49, 3407068.83; 652825.48, 3407068.83; 653303.68, 3406605.29; 653038.02, 3406583.61; 653039.18, 3406691.92; 653028.57, 3406721.18; 653006.55, 3406734.40; 652986.39, 3406751.60; 652981.54, 3406786.91; 652980.43, 3406830.19; 652979.67, 3406859.70; 652965.63, 3406869.19; 652941.78, 3406876.45; 652916.11, 3406877.76; 652884.59, 3406876.95; 652859.18, 3406868.42; 652831.89, 3406855.91; 652800.52, 3406849.20; 652767.02, 3406848.34; 652747.17, 3406853.74; 652732.87, 3406873.06; 652724.33, 3406898.44; 652743.83, 3406906.81; 652763.39, 3406913.22; 652758.74, 3406940.66; 652753.99, 3406972.04; 652760.86, 3407011.59; 652764.09, 3407039.23; 652761.57, 3407060.82; 652749.49, 3407070.36; 652725.65, 3407077.62; 652709.68, 3407085.09; 652701.20, 3407108.49; 652698.57, 3407134.02; 652696.09, 3407153.64; 652674.12, 3407164.89; 652656.23, 3407170.34; 652642.04, 3407185.72; 652620.14, 3407175.05; 652594.55, 3407165.80; 652583.46, 3407159.57; 652578.33, 3407152.82; 652573.28, 3407143.44; 652569.58, 3407132.77; 652565.24, 3407121.42; 652555.67, 3407107.29; 652545.45, 3407092.48; 652535.85, 3407079.68; 652526.16, 3407070.17; 652517.58, 3407069.29; 652507.43, 3407077.62; 652495.88, 3407089.23; 652486.90, 3407103.54; 652483.22, 3407117.99; 652480.80, 3407135.12; 652478.24, 3407157.53; 652480.37, 3407177.42; 652480.51, 3407197.92; 652475.78, 3407201.76; 652465.72, 3407206.79; 652458.25, 3407213.87; 652449.33, 3407226.21; 652438.05, 3407227.24; 652428.85, 3407224.36; 652417.75, 3407218.12; 652411.37, 3407208.70; 652407.64, 3407199.35; 652404.20, 3407178.77; 652402.01, 3407160.86; 652397.94, 3407138.94; 652395.00, 3407124.32; 652386.76, 3407110.23; 652373.71, 3407102.62; 652360.44, 3407103.60; 652343.53, 3407117.72; 652333.43, 3407124.07; 652322.15, 3407125.10; 652314.14, 3407127.54; 652305.95, 3407137.25; 652296.58, 3407140.97; 652287.20, 3407145.36; 652274.56, 3407147.68; 652268.06, 3407142.89; 652261.53, 3407139.41; 652255.03, 3407134.62; 652248.60, 3407127.18; 652243.50, 3407119.78; 652238.44, 3407110.39; 652237.44, 3407097.81; 652241.12, 3407083.36; 652242.82, 3407068.86; 652245.24, 3407051.73; 652244.24, 3407039.14;

652236.01, 3407024.39; 652221.05, 3407014.09; 652203.25, 3407010.99; 652190.56, 3407015.29; 652182.47, 3407021.03; 652175.50, 3407034.74; 652172.53, 3407047.22; 652173.53, 3407059.81; 652170.75, 3407065.03; 652164.64, 3407070.82; 652155.26, 3407075.21; 652145.32, 3407075.61; 652133.44, 3407073.99; 652119.02, 3407068.33; 652106.60, 3407062.06; 652100.97, 3407049.36; 652097.32, 3407036.70; 652077.38, 3407039.50; 652052.56, 3407052.08; 652042.52, 3407056.45; 652034.12, 3407074.09; 652048.98, 3407088.35; 652061.11, 3407105.85; 652085.32, 3407117.05; 652106.16, 3407130.80; 652105.19, 3407142.68; 652106.02, 3407161.87; 652112.91, 3407177.25; 652135.31, 3407181.79; 652182.83, 3407187.64; 652215.86, 3407190.47; 652257.41, 3407196.82; 652295.04, 3407201.09; 652314.35, 3407205.65; 652308.49, 3407218.63; 652292.89, 3407233.43; 652266.52, 3407254.57; 652238.70, 3407280.96; 652220.19, 3407305.61; 652212.44, 3407323.92; 652210.01, 3407341.05; 652209.77, 3407350.30; 652210.11, 3407362.87; 652213.26, 3407375.54; 652299.80, 3407383.66; 652374.80, 3407395.52; 652472.45, 3407408.60; 652594.12, 3407426.43; 652663.66, 3407439.95; 652719.80, 3407445.35; 652756.73, 3407450.93; 652822.76, 3407457.91; 652861.06, 3407462.20; 652917.52, 3407467.64; 652905.20, 3407362.30; 652901.54, 3407298.74; 652968.31, 3407276.65; 653003.40, 3407251.11; 653001.57, 3407219.33; 652994.98, 3407166.27; 653006.18, 3407142.76; 653022.74, 3407116.74; 653023.96, 3407069.17; 653009.23, 3407023.84; 653002.04, 3406994.56; 653028.78, 3406984.67; 653046.56, 3407014.22; 653069.77, 3407038.61; 653101.19, 3407052.64; 653145.98, 3407061.72; 653188.39, 3407060.16; 653209.09, 3407079.20; 653227.21, 3407095.54; 653233.05, 3407074.53; 653231.22, 3407042.75; 653237.12, 3407019.10; 653258.77, 3407001.15; 653290.87, 3406988.75; 653294.33, 3406957.10; 653292.43, 3406927.97; 653290.39, 3406904.11; 653290.87, 3406885.61; 653306.88, 3406880.74; 653330.43, 3406891.92; 653353.91, 3406905.74; 653377.80, 3406903.71; 653389.13, 3406874.91; 653395.38, 3406838.05; 653396.39, 3406798.41; 653397.07, 3406771.98; 653400.40, 3406745.62; 653413.97, 3406732.75; 653440.50, 3406730.79; 653454.01, 3406720.56; 653454.42, 3406704.70; 653438.67, 3406699.01; 653411.87, 3406711.54; 653393.20, 3406716.35; 653374.68, 3406715.88; 653358.93, 3406710.18; 653341.08, 3406683.28; 653331.11, 3406659.23;

653321.06, 3406637.81; 653308.37, 3406616.33; 653303.68, 3406605.29.

(B) Map depicting Unit RFS-8, Subunit A is provided at paragraph (6)(xix)(B) of this entry.

(xvi) Unit RFS-8, Subunit B: Jackson County, Florida. From USGS 1:24,000 scale quadrangle map Oakdale, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 674995.60, 3401690.28; 673875.85, 3402158.93; 674341.17, 3402164.28; 674675.84, 3402154.41; 674910.48, 3402162.13; 675034.90, 3402087.99; 675083.93, 3402061.49; 675233.86, 3401974.12; 675401.89, 3401877.97; 675485.18, 3401832.51; 675531.62, 3401803.30; 675583.62, 3401764.31; 675781.28, 3401546.61; 675851.43, 3401471.73; 675878.14, 3401437.38; 675932.68, 3401376.64; 675959.66, 3401349.36; 675970.87, 3401333.99; 675981.97, 3401314.44; 676115.36, 3401200.87; 676086.59, 3401161.12; 676052.69, 3401114.62; 676041.90, 3401096.49; 676016.12, 3401069.38; 675998.03, 3401051.73; 675964.86, 3401028.39; 675934.93, 3401007.79; 675918.10, 3400992.81; 675908.38, 3400984.62; 675897.49, 3400970.46; 675889.97, 3400953.73; 675879.31, 3400879.41; 675844.53, 3400883.06; 675327.40, 3401121.69; 674861.39, 3401328.81; 674684.03, 3401401.59; 674391.31, 3401530.89; 673876.29, 3401753.54; 673877.85, 3402081.41; 673875.85, 3402158.93.

(B) Map depicting Unit RFS-8, Subunit B is provided at paragraph (6)(xix)(B) of this entry.

(xvii) Unit RFS-8, Subunit C: Jackson County, Florida. From USGS 1:24,000 scale quadrangle map Cypress, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 683829.73, 3393074.70; 684023.32, 3393574.80; 684052.04, 3393574.38; 684080.68, 3393572.16; 684109.12, 3393568.14; 684137.25, 3393562.34; 684164.96, 3393554.79; 684192.15, 3393545.52; 684218.69, 3393534.55; 684244.50, 3393521.94; 684269.46, 3393507.74; 684293.49, 3393491.99; 684316.47, 3393474.77; 684338.33, 3393456.14; 684358.98, 3393436.17; 684378.33, 3393414.95; 684396.32, 3393392.55; 684412.86, 3393369.07; 684427.89, 3393344.60; 684441.36, 3393319.23; 684453.20, 3393293.06; 684463.38, 3393266.20; 684471.86, 3393238.76; 684478.59, 3393210.84; 684483.56, 3393182.55; 684486.74, 3393154.00; 684488.12, 3393125.31; 684487.70, 3393096.59; 684485.48, 3393067.96; 684481.46, 3393039.52; 684475.66, 3393011.38; 684468.11, 3392983.67; 684458.84, 3392956.49; 684447.87, 3392929.94; 684435.27, 3392904.13; 684421.06, 3392879.17;

684405.32, 3392855.15; 684388.09, 3392832.16; 684369.46, 3392810.30; 684349.50, 3392789.65; 684328.27, 3392770.30; 684305.87, 3392752.32; 684282.39, 3392735.78; 684257.92, 3392720.75; 684232.55, 3392707.28; 684206.38, 3392695.43; 684179.52, 3392685.25; 684152.08, 3392676.78; 684124.16, 3392670.04; 684095.87, 3392665.08; 684067.32, 3392661.89; 684038.63, 3392660.51; 3392634.33; 3392660.93; 683981.28, 3392663.16; 683966.02, 3392656.75; 683947.05, 3392647.66; 683923.43, 3392639.12; 683903.85, 3392628.04; 683886.86, 3392619.00; 683867.12, 3392613.87; 683843.82, 3392618.55; 683819.20, 3392623.21; 683789.11, 3392634.33; 683770.46, 3392638.47; 683744.30, 3392651.02; 683720.12, 3392664.28; 683706.10, 3392668.55; 683685.47, 3392672.64; 683658.43, 3392667.97; 683632.03, 3392664.65; 683606.95, 3392661.36; 683585.89, 3392656.18; 683542.11, 3392633.24; 683512.11, 3392615.27; 683479.46, 3392597.24; 683450.00, 3392583.92; 683423.91, 3392568.70; 683385.42, 3392545.89; 683371.14, 3392534.94; 683348.35, 3392519.81; 683332.69, 3392510.81; 683315.62, 3392505.08; 683294.59, 3392498.59; 683272.28, 3392490.74; 683253.15, 3392487.60; 683203.24, 3392496.89; 683207.64, 3392582.95; 683209.99, 3392696.72; 683212.45, 3392729.84; 683218.34, 3392783.54; 683218.66, 3392796.77; 683214.15, 3392817.81; 683194.50, 3392886.06; 683182.83, 3392927.40; 683174.68, 3392960.91; 683171.34, 3392987.93; 683171.38, 3393011.73; 683174.93, 3393028.35; 683181.19, 3393042.39; 683179.64, 3393050.95; 683179.13, 3393070.77; 683177.70, 3393100.48; 683176.50, 3393146.73; 683179.16, 3393171.92; 683183.14, 3393197.15; 683188.54, 3393219.10; 683190.03, 3393238.31; 683189.67, 3393252.19; 683214.05, 3393256.78; 683227.92, 3393258.46; 683266.03, 3393270.03; 683309.50, 3393279.08; 683347.79, 3393284.04; 683367.66, 3393283.89; 683389.34, 3393286.52; 683469.22, 3393300.40; 683524.08, 3393304.46; 683580.93, 3393308.57; 683593.71, 3393300.97; 683608.59, 3393292.07; 683614.08, 3393305.37; 683626.69, 3393331.18; 683640.90, 3393356.14; 683656.64, 3393380.17; 683673.86, 3393403.15; 683692.49, 3393425.01; 683712.46, 3393445.66; 683733.68, 3393465.01; 683756.08, 3393482.99; 683779.56, 3393499.53; 683804.04, 3393514.57; 683829.41, 3393528.03; 683855.57, 3393539.88; 683882.43, 3393550.06; 683909.88, 3393558.54; 683937.80, 3393565.27; 683966.09,

3393570.24; 683994.63, 3393573.42; 684023.32, 3393574.80.

(B) Map depicting Unit RFS-8, Subunit C is provided at paragraph (6)(xix)(B) of this entry.

(xviii) Unit RFS-9, Subunit A: Calhoun County, Florida. From USGS 1:24,000 scale quadrangle map Broad Branch, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 664818.75, 3351879.40; 664810.75, 3352336.50; 664839.47, 3352336.10; 664868.11, 3352333.90; 664896.55, 3352329.90; 664924.68, 3352324.13; 664952.40, 3352316.60; 664979.59, 3352307.34; 665006.14, 3352296.40; 665031.95, 3352283.81; 665056.93, 3352269.63; 665080.96, 3352253.90; 665103.96, 3352236.70; 665125.83, 3352218.08; 665146.49, 3352198.13; 665165.86, 3352176.93; 665183.85, 3352154.54; 665200.41, 3352131.08; 665215.46, 3352106.61; 665228.94, 3352081.26; 665240.81, 3352055.10; 665251.01, 3352028.25; 665259.50, 3352000.82; 665266.26, 3351972.90; 665271.25, 3351944.62; 665274.45, 3351916.08; 665275.85, 3351887.39; 665275.45, 3351858.67; 665273.25, 3351830.04; 665269.26, 3351801.60; 665263.48, 3351773.46; 665255.95, 3351745.75; 665246.70, 3351718.56; 665235.75, 3351692.00; 665223.16, 3351666.19; 665208.98, 3351641.22; 665193.25, 3351617.18; 665176.05, 3351594.19; 665157.44, 3351572.31; 665137.49, 3351551.65; 665116.28, 3351532.29; 665093.90, 3351514.29; 665070.43, 3351497.73; 665045.97, 3351482.68; 665020.61, 3351469.20; 664994.45, 3351457.33; 664967.61, 3351447.13; 664940.17, 3351438.64; 664912.26, 3351431.89; 664883.97, 3351426.90; 664855.43, 3351423.70; 664826.74, 3351422.29; 664798.03, 3351422.69; 664769.39, 3351424.89; 664740.95, 3351428.89; 664712.82, 3351434.66; 664685.10, 3351442.19; 664657.91, 3351451.45; 664631.36, 3351462.39; 664605.54, 3351474.98; 664580.57, 3351489.17; 664556.54, 3351504.89; 664533.54, 3351522.09; 664511.67, 3351540.71; 664491.01, 3351560.66; 664471.64, 3351581.87; 664453.64, 3351604.25; 664437.09, 3351627.72; 664422.04, 3351652.18; 664408.55, 3351677.53; 664396.69, 3351703.69; 664386.49, 3351730.54; 664377.99, 3351757.97; 664371.24, 3351785.89; 664366.25, 3351814.17; 664363.05, 3351842.71; 664361.65, 3351871.40; 664362.05, 3351900.12; 664364.25, 3351928.75; 664368.24, 3351957.19; 664374.02, 3351985.33; 664381.55, 3352013.04; 664390.80, 3352040.23; 664401.74, 3352066.79; 664414.33, 3352092.60; 664428.52, 3352117.57; 664444.24, 3352141.60;

664461.45, 3352164.60; 664480.06, 3352186.47; 664500.01, 3352207.14; 664521.22, 3352226.50; 664543.60, 3352244.50; 664567.07, 3352261.06; 664591.53, 3352276.11; 664616.89, 3352289.59; 664643.04, 3352301.46; 664669.89, 3352311.66; 664697.33, 3352320.15; 664725.24, 3352326.90; 664753.53, 3352331.89; 664782.07, 3352335.09; 664810.75, 3352336.50.

(B) Map depicting Unit RFS-9, Subunit A is provided at paragraph (6)(xix)(B) of this entry.

(xix) Unit RFS-9, Subunit B: Calhoun County, Florida. From USGS 1:24,000 scale quadrangle map Dead Lake, Florida.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 677786.48, 3346665.69; 676322.21, 3345710.86; 676293.52, 3345709.49; 676264.80, 3345709.91; 676236.17, 3345712.14; 676207.73, 3345716.17; 676179.60, 3345721.97; 676151.89, 3345729.52; 676124.71, 3345738.80; 676098.16, 3345749.77; 676072.36, 3345762.39; 676047.40, 3345776.60; 676023.38, 3345792.34; 676000.40, 3345809.57; 675978.54, 3345828.20; 675957.90, 3345848.17; 675938.55, 3345869.40; 675920.57, 3345891.80; 675904.04, 3345915.28; 675889.01, 3345939.76; 675875.55, 3345965.13; 675863.71, 3345991.30; 675853.53, 3346018.16; 675845.07, 3346045.60; 675838.34, 3346073.52; 675833.38, 3346101.81; 675830.20, 3346130.36; 675828.82, 3346159.05; 675829.25, 3346187.76; 675831.48, 3346216.40; 675835.50, 3346244.84; 675841.31, 3346272.97; 675848.86, 3346300.67; 675858.14, 3346327.85; 675869.11, 3346354.40; 675881.73, 3346380.20; 675895.94, 3346405.16; 675911.69, 3346429.18; 675928.91, 3346452.16; 675947.55, 3346474.02; 675967.52, 3346494.66; 675988.75, 3346514.01; 676011.15, 3346531.98; 676034.63, 3346548.52; 676059.11, 3346563.55; 676084.48, 3346577.01; 676110.65, 3346588.85; 676137.51, 3346599.02; 679138.53, 3347597.18; 679165.98, 3347605.65; 679193.90, 3347612.37; 679222.19, 3347617.34; 679250.74, 3347620.51; 679279.43, 3347621.89; 679308.15, 3347621.46; 679336.78, 3347619.23; 679365.22, 3347615.21; 679393.35, 3347609.41; 679421.06, 3347601.85; 679448.25, 3347592.57; 679474.79, 3347581.60; 679500.60, 3347568.99; 679525.56, 3347554.78; 679549.58, 3347539.03; 679572.56, 3347521.81; 679594.42, 3347503.17; 679615.06, 3347483.20; 679634.41, 3347461.97; 679652.39, 3347439.57; 679668.92, 3347416.09; 679683.95, 3347391.61; 679697.41, 3347366.24; 679709.25, 3347340.07; 679719.43, 3347313.22; 679727.89, 3347285.77;

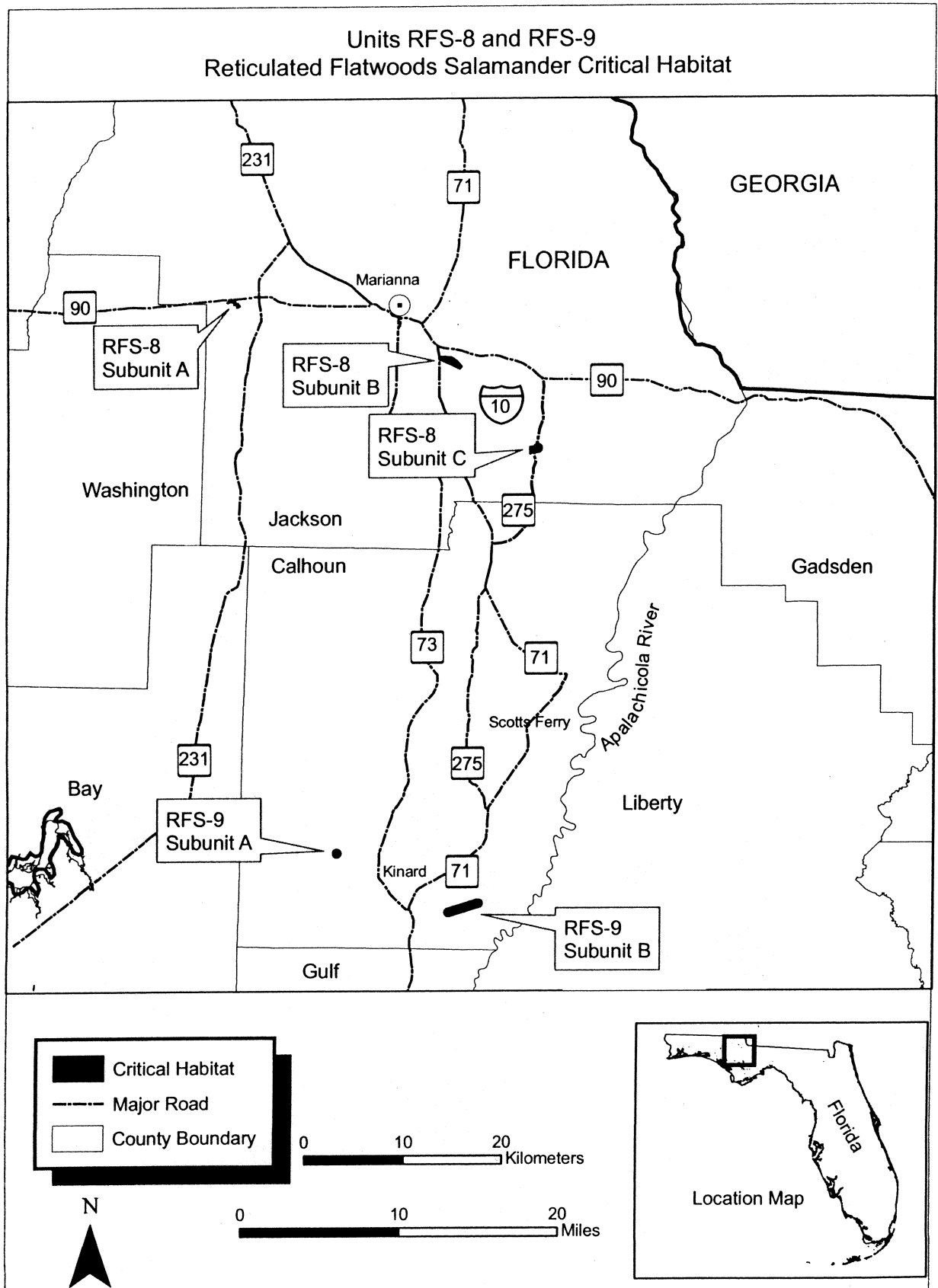
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3347229.56; 679742.76, 3347201.01;
679744.14, 3347172.32; 679743.71,
3347143.61; 679741.48, 3347114.97;
679737.46, 3347086.53; 679731.66,
3347058.40; 679724.10, 3347030.69;
679714.82, 3347003.51; 679703.85,
3346976.97; 679691.23, 3346951.16;

679677.02, 3346926.20; 679661.27,
3346902.19; 679644.05, 3346879.20;
679625.41, 3346857.35; 679605.44,
3346836.70; 679584.21, 3346817.36;
679561.81, 3346799.38; 679538.33,
3346782.84; 679513.85, 3346767.82;
679488.47, 3346754.36; 679462.31,
3346742.52; 679435.45, 3346732.34;

676434.42, 3345734.20; 676406.97,
3345725.73; 676379.05, 3345719.00;
676350.76, 3345714.04; 676322.21,
3345710.86.

(B) Map of Units RFS-8 and RFS-9
follows:

BILLING CODE 4310-55-S



(7) Georgia: Baker and Miller Counties, Georgia.

(i) Unit RFS-10, Subunit A: Miller County, Georgia. From USGS 1:24,000 scale quadrangle map Donalsonville NE, Georgia.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 709773.06, 3456290.97; 709801.78, 3456290.64; 709830.43, 3456288.51; 709858.89, 3456284.58; 709887.04, 3456278.87; 709914.78, 3456271.41; 709942.00, 3456262.22; 709968.58, 3456251.34; 709994.43, 3456238.81; 710019.45, 3456224.68; 710043.52, 3456209.01; 710066.57, 3456191.86; 710088.49, 3456173.30; 710109.20, 3456153.39; 710128.62, 3456132.23; 710146.68, 3456109.89; 710163.30, 3456086.45; 710178.41, 3456062.02; 710191.96, 3456036.69; 710203.89, 3456010.56; 710214.16, 3455983.73; 710222.72, 3455956.31; 710229.54, 3455928.41; 710234.60, 3455900.13; 710237.88, 3455871.59; 710239.35, 3455842.91; 710239.02, 3455814.18; 710236.89, 3455785.53; 710232.96, 3455757.08; 710227.25, 3455728.92; 710219.79, 3455701.18; 710210.60, 3455673.97; 710199.72, 3455647.38; 710187.19, 3455621.53; 710173.06, 3455596.52; 710157.39, 3455572.44; 710140.24, 3455549.40; 710121.68, 3455527.48; 710101.77, 3455506.76; 710080.61, 3455487.34; 710058.27, 3455469.29; 710034.83, 3455452.67; 710010.40, 3455437.56; 709985.07, 3455424.01; 709958.94, 3455412.08; 709932.11, 3455401.81; 709904.69, 3455393.25; 709876.79, 3455386.42;

709848.51, 3455381.36; 709819.97, 3455378.09; 709791.29, 3455376.62; 709762.56, 3455376.95; 709733.91, 3455379.08; 709705.46, 3455383.01; 709677.30, 3455388.71; 709649.56, 3455396.18; 709622.35, 3455405.37; 709595.76, 3455416.25; 709569.91, 3455428.78; 709544.90, 3455442.90; 709520.82, 3455458.57; 709497.78, 3455475.73; 709475.86, 3455494.29; 709455.15, 3455514.19; 709435.72, 3455535.36; 709417.67, 3455557.70; 709401.05, 3455581.13; 709385.94, 3455605.56; 709372.39, 3455630.89; 709360.46, 3455657.02; 709350.19, 3455683.85; 709341.63, 3455711.27; 709334.80, 3455739.18; 709329.75, 3455767.45; 709326.47, 3455795.99; 709325.00, 3455824.68; 709325.33, 3455853.40; 709327.46, 3455882.05; 709331.39, 3455910.51; 709337.10, 3455938.66; 709344.56, 3455966.40; 709353.75, 3455993.62; 709364.63, 3456020.20; 709377.16, 3456046.05; 709391.29, 3456071.07; 709406.96, 3456095.14; 709424.11, 3456118.19; 709442.67, 3456140.11; 709462.57, 3456160.82; 709483.74, 3456180.24; 709506.08, 3456198.30; 709529.51, 3456214.92; 709553.94, 3456230.03; 709579.27, 3456243.58; 709605.40, 3456255.51; 709632.23, 3456265.78; 709659.65, 3456274.34; 709687.56, 3456281.16; 709715.83, 3456286.22; 709744.37, 3456289.49; 709773.06, 3456290.97 .

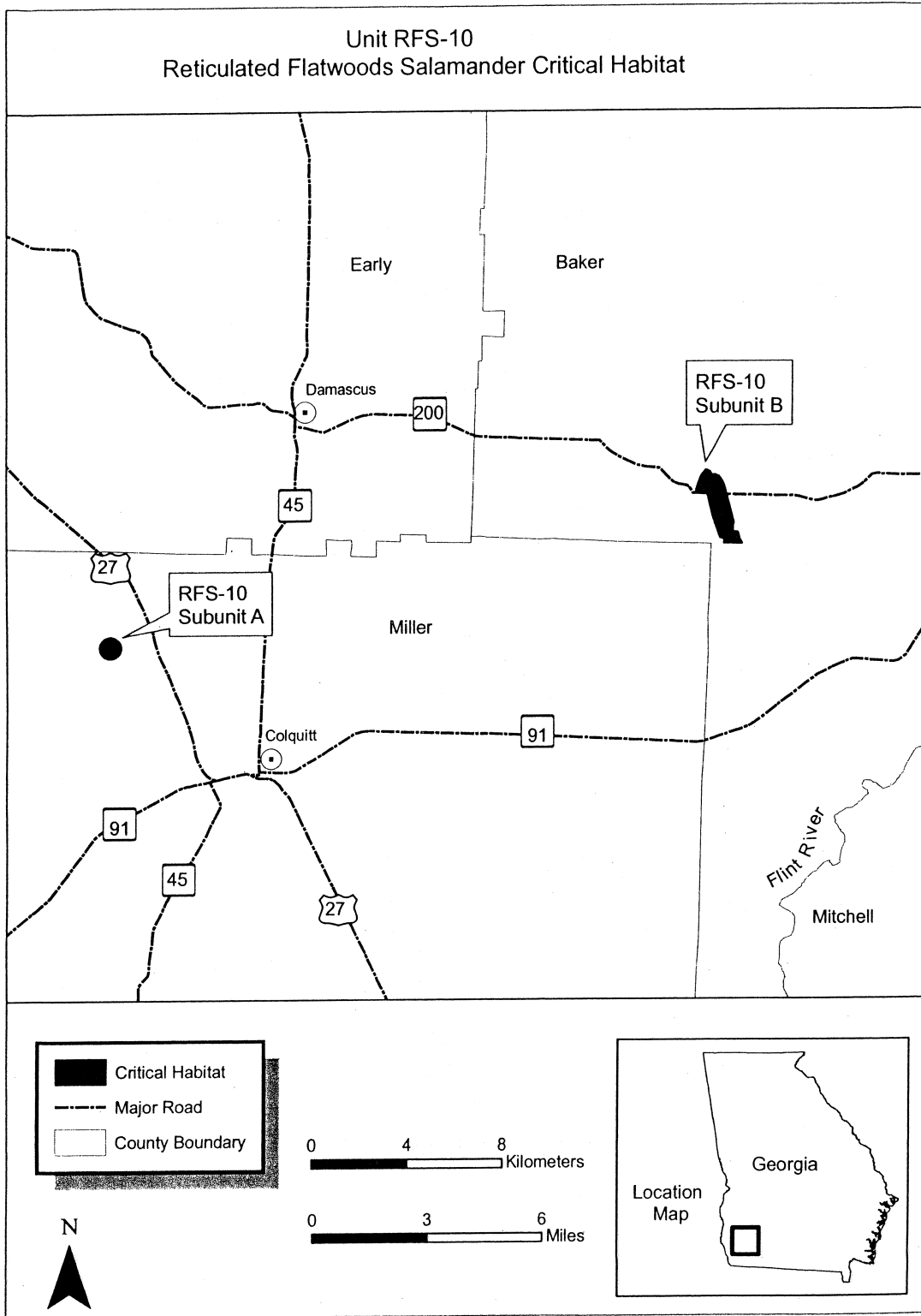
(B) Map depicting Unit RFS-10, Subunit A is provided at paragraph (7)(ii)(B) of this entry.

(ii) Unit RFS-10, Subunit B: Baker County, Georgia. From USGS 1:24,000 scale quadrangle map Bethany, Georgia.

(A) Land bounded by the following UTM Zone 16N, NAD83 coordinates (E, N): 734799.11, 3462120.86; 735025.60, 3462958.51; 735075.16, 3462764.67; 735444.38, 3461469.20; 735412.19, 3461400.33; 735420.28, 3461310.28; 735420.28, 3461223.05; 735430.58, 3461136.30; 735479.60, 3461141.39; 735578.13, 3461132.68; 735613.43, 3461091.58; 735650.82, 3461010.58; 735669.51, 3460923.35; 735703.92, 3460811.06; 735756.74, 3460736.42; 735800.35, 3460649.19; 735744.28, 3460624.27; 735432.74, 3460624.27; 735021.51, 3460618.04; 735040.20, 3460767.58; 734952.97, 3460823.66; 734840.82, 3460861.04; 734812.02, 3460938.41; 734541.74, 3461658.58; 734504.36, 3461783.19; 734301.81, 3462565.34; 734165.92, 3462612.37; 734048.55, 3462652.99; 733925.73, 3462646.35; 733818.44, 3462640.54; 733818.98, 3462680.42; 733831.44, 3462724.03; 733831.91, 3462789.15; 733887.18, 3462970.92; 733929.82, 3463111.13; 733981.10, 3463244.98; 734029.39, 3463371.05; 734111.12, 3463466.09; 734161.67, 3463534.03; 734214.05, 3463602.19; 734302.98, 3463595.69; 734405.69, 3463535.78; 734460.75, 3463434.34; 734585.36, 3463428.11; 734697.51, 3463384.49; 734766.02, 3463372.96; 734844.43, 3463268.82; 734936.26, 3463146.86; 735025.60, 3462958.51.

(B) Map of Unit RFS-10 follows:

BILLING CODE 4310-55-S



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Dated: July 30, 2008.

Lyle Laverty

Assistant Secretary for Fish and Wildlife and Parks.

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