DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS–R4–ES–2008–0082; MO 9921050083–B2]

RIN 1018–AU85

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

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), finalize 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 recognized taxonomic reclassification; determine endangered status for the reticulated flatwoods salamander; retain threatened status for the frosted flatwoods salamander; and designate critical habitat for the frosted flatwoods salamander and the reticulated flatwoods salamander. In total, approximately 27,423 acres (ac) (11,100 hectares (ha)) in 35 units or subunits fall within the boundaries of the critical habitat designation; 22,970 ac (9,297 ha) of critical habitat is designated for the frosted flatwoods salamander and 4,453 ac (1,803 ha) for the reticulated flatwoods salamander. This area is a reduction of 3,205 ac (977 ha) from the proposed designation; 162 ac (66 ha) less for the frosted flatwoods salamander and 3,043 ac (928 ha) less for the reticulated flatwoods salamander. The critical habitat is located in Baker, Calhoun, Franklin, Holmes, Jackson, Jefferson, Liberty, Santa Rosa, Wakulla, Walton, and Washington Counties in Florida; Baker and Miller Counties in Georgia; and Berkeley, Charleston, and Jasper Counties in South Carolina.

DATES: This rule becomes effective on March 12, 2009.

ADDRESSES: This final rule and final economic analysis are available on the Internet at *http://www.regulations.gov.* Supporting documentation we used in preparing this final rule is available for public inspection, by appointment, during normal business hours, at U.S. Fish and Wildlife Service, Mississippi Fish and Wildlife Office, 6578 Dogwood View Parkway, Jackson, MS 39213.

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 final 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 listed as endangered); and (2) final critical habitat designations for each species.

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 re-evaluate 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 critical habitat rule for publication in the **Federal Register** by January 30, 2008. We published a proposed rule to designate critical habitat for the flatwoods salamander in the **Federal Register** on February 7, 2007 (72 FR 5856). After that proposed rule published, new information became available on its taxonomic classification and additional threats to occupied habitat that 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 be submitted for publication in the **Federal Register** on or before July 30, 2008, with the final critical habitat rule to be submitted for publication in the **Federal Register** by January 30, 2009. The revised proposed rule was signed on and delivered to the **Federal Register** on July 30, 2008, and it subsequently published on August 13, 2008 (73 FR 47258). We also published supplemental information on the proposed rule to maintain the status of the frosted flatwoods salamander as threatened (73 FR 54125; September 18, 2008).

Public Comments

Due to the nature of the proposed rule, we received combined comments from the public on the listing action and the critical habitat designation. Therefore, we have addressed these issues in a single comment section. In this final rule, we have presented the listing analysis first, followed by the analysis for designation of critical habitat. All public comments and our responses to them are presented under the Critical Habitat section.

Background

It is our intent to discuss only those topics directly relevant to the taxonomic reclassification of the flatwoods salamander into two species, the frosted flatwoods salamander and the reticulated flatwoods salamander, the determination of the status of these two species, and the designation of critical habitat for both species. For more information on the biology and ecology of flatwoods salamanders, refer to the final listing rule published in the **Federal Register** on April 1, 1999 (64 FR 15691). For information on our proposed determination of endangered status for the reticulated flatwoods salamander, and on the proposed designation of critical habitat for the frosted flatwoods salamander and the reticulated flatwoods salamander, refer to the proposed rule published in the **Federal Register** on August 13, 2008 (73 FR 47258).

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. The range 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) that suggested a taxonomic reclassification of the species by splitting 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 reclassification of the flatwoods salamander into two species is currently accepted by the scientific community and by the Service. We hereby 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 reclassification 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 (Duellman and Trueb 1986, pp. 64–66).

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 forelimbs and hind limbs and a larger 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 Regulation Promulgation section of this document, we present a taxonomic change reflecting the reclassification of flatwoods salamander (*Ambystoma cingulatum*) to frosted flatwoods salamander (*A. cingulatum*) and reticulated flatwoods salamander (*A. 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). We published the final rule to list the species on April 1, 1999 (64 FR 15691). On August 13, 2008, we published the proposal to list the reticulated flatwoods salamander, currently known as the flatwoods salamander west of the Apalachicola-Flint Rivers, as a new species (73 FR 47258).

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 (Palis and Means 2005, pp. 608–609).

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 from Georgia, one each in Baker and Early Counties. Site visits to the areas in the vicinity of these two records have indicated that there is no longer suitable habitat for flatwoods salamanders at these localities. The area of the Baker County record has been cleared for agriculture (LaClaire 1994b). The upland habitat surrounding the Early County record has been converted to home sites and agricultural fields (Seyle 1994, p. 4). 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 39 additional breeding sites. Thirty-one (80 percent) of these sites are located in Okaloosa and Santa Rosa Counties, primarily on Department of Defense lands. Currently, 18 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 20 populations of the reticulated flatwoods salamander. Some of these populations are inferred from the capture of a single individual. Nine (45 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 Navy Outlying Landing Field Holley. State and local agencies in Florida and Georgia partially manage habitat for five additional populations and monitor breeding ponds. In Florida, Pine Log State Forest harbors a single population; Northwest Florida Water Management District (NWFLWMD) and Blackwater River State Forest share management of a single population; NWFLWMD and Yellow River Marsh Preserve State Park share management 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 (55 percent) reticulated flatwoods salamander populations are solely on private land.

Summary of Factors Affecting the 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, as did the proposed rule (73 FR 47258; August 13, 2008) and supplemental information (73 FR 54125; September 18, 2008). 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, and 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 ground cover 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 ground cover (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 ground cover. 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. Conversion of native pine flatwoods to plantation forests is not considered a significant threat at this time. Forecasts indicate that most new plantation forests will come from converting agricultural fields (Wear and Greis 2002, p. 47). Nevertheless, we have documented the historic extirpation of at least one previously known population each from Gulf and Jackson Counties in Florida,

over the last 4 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 as 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 2008a). No reticulated flatwoods salamanders have been observed at these degraded sites since completion of the projects (Cooper 2008a).

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).

Drought conditions exacerbate other threats and, although they represent a natural phenomenon, can lower the resiliency of populations to withstand other man-made threats. The U.S. Geological Survey (USGS) has documented multiple drought periods in the southeastern United States since the 1890s (USGS 2000, p. 1). Significant drought periods documented in the last three decades are: 1980–1982, 1984–1989, 1998–2002, 2005–2008 (USGS 1991, p. 163; USGS 2000, p. 1; Seager *et al.* 2008, pp. 2, 22). 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, p. 6) suggested that the flatwoods salamander may only live about 4 years (based on captive animals), we are currently unsure of the exact lifespan of wild individuals. Other sources have suggested 10 years may represent a maximum lifespan (Jensen 2008). As a result, 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, based on extensive population data available for the marbled salamander (*Ambystoma opacum*), to look at how many years of reproductive failure would be required to result in local extinction of pond-breeding salamanders (with varying lifespans) 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 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 (Taylor *et al.* 2005, 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 random events, such as droughts (Palis 2006, p. 7). A cluster of breeding sites represents a metapopulation, which is defined as neighboring local populations close enough to one another that dispersing individuals could be exchanged (gene flow) at least once per generation. Currently, the only place where a metapopulation exists for the reticulated flatwoods salamander is on Eglin Air Force Base.

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 one 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 changes in hydrology and 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) and Hurlburt Field has been proposed by the Northwest Florida Transportation Corridor Authority (NWFTCA) (NWFTCA 2007). We are currently in consultation regarding this bypass project. The conceptually approved route for the project, as currently proposed, places the road adjacent to or through 22 breeding sites that support the largest reticulated flatwoods salamander population (Mittiga 2007). However, the Service has been assured by Eglin that they will not allow negative impacts to the salamander's habitat and that they will continue to ensure the conservation of the reticulated flatwoods salamander (Department of the Air Force (DoAF) 2008a, p. 1; 2008b, p. 1). The Service will work with Eglin to protect these breeding sites which represent the only population of this species supported by more than three breeding ponds and functioning as a metapopulation.

In summary, the loss of habitat is a significant threat to the reticulated flatwoods salamander. This threat is compounded by current drought conditions 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 rapid rate of habitat loss that is currently occurring within the range of this species. Thirteen (65 percent) of the reticulated flatwoods salamander populations are partly or completely on private land where habitat continues to be degraded by management that frequently includes fire suppression and intensive site preparation that alters surface soil layers, disrupts site hydrology, disturbs the ground cover, and which has the potential to entomb, injure, or crush individual salamanders. Forest management conducted in this way is considered incompatible for maintaining flatwoods salamander populations. 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; and fire suppression. As a result, we have determined that the present or threatened destruction, modification, or curtailment of the reticulated flatwoods salamander's habitat and range represents an imminent and 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 the factor of 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 the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) 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 of the closely related frosted flatwoods salamander (Palis 2008). The severity and magnitude, as well as the long-term effect, of fire ants on reticulated flatwoods salamander populations are currently unknown.

In summary, diseases of amphibians in the southeastern United States remain largely unstudied. However, given the incidence of disease in species that could be considered surrogates for flatwoods salamanders, the probability exists for similar infections to occur in reticulated flatwoods salamander populations. We consider this to be an imminent threat of moderate magnitude. 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. Sixty-five percent of reticulated flatwoods salamander breeding ponds are partly or completely on private land. This situation increases 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. In addition, we believe that the threats described here would also act to exacerbate other threats to the species. Overall, we consider the threat within this factor to be imminent and of moderate magnitude because 70 percent of reticulated flatwoods salamander populations are supported by a single breeding pond; diseases and fish and invertebrate predators have been found at ponds within the species' range; and these diseases and predators are known to cause mortality or reproductive failure in related 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 531 U.S. 159 (2001)*; *Rapanos* v. *United States 547 U.S. 715 (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 U.S. Army Corps of Engineers (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 reticulated 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.

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 (which 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 65 percent of populations are not protected from further development because they are located partially or completely on private lands.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Metapopulations 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 20 known reticulated flatwoods salamanders populations, only 6 (30 percent) are supported by more than one breeding pond and only one (5 percent) population (on Eglin-Hurlburt Field) is supported by more than three breeding ponds. For 70 percent (14 out of 20) 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). 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). In addition, 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. However, if application by aerial spraying is avoided, the potential for negative effects from pesticide and herbicide use in areas adjacent to breeding ponds would be reduced (Tatum 2004, p. 1047). Herbicides may be a necessary tool to reduce or eliminate woody vegetation or invasive plants when the use of prescribed fire is not possible or effective (Jensen 2007, Wigley 2008). Nevertheless, pesticides should not be used in flatwoods salamander habitat unless no other habitat management tool is available; herbicide label directions should be followed closely; and aerial spraying should never be used as an application technique. Under these conditions, we consider this threat to be of moderate magnitude.

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 resulting from these fish competing with salamander larvae for invertebrate prey. 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, such as through installation of firebreaks or ditches, this threat from predatory fish exists.

Studies of reticulated flatwoods salamander populations, since the original species listing of flatwoods salamander as threatened (64 FR 15691; April 1, 1999), have been limited due to drought. Data on the numbers of adults within existing populations do 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, a variety of other natural or manmade factors historically or currently threaten, or have the potential 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 70 percent of the remaining reticulated flatwoods salamander populations. 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 current threat, and they are likely to 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 due to past and current drought conditions, habitat loss, population fragmentation, and periodic reproductive failures that occur naturally in pond-breeding amphibians. The impact that 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 threats listed above under Factors A through D, the threats under Factor E could increase the severity of the 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 amphibian 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 most significant historical threat to the reticulated flatwoods salamander, as listed above in Factor A, is loss of its habitat. However, a variety of localized threats described under Factors A, C, D, and E continue to impact the remaining reticulated flatwoods salamander populations and their habitat. These include alterations in the hydrology of existing wetland breeding sites (including ''ditching,'' which can result in the introduction of predatory fish), urban development, road construction, incompatible forest management, fire suppression, and disease. The severity and magnitude of threats under Factor E are not currently known. Nevertheless, we have determined that threats under this factor 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 we believe they are legitimate threats due to both their impact on surrogate species and their prevalence in the types of habitats used by this species.

Only 20 reticulated flatwoods salamander populations are known. Fourteen (70 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, the habitat within the range of the reticulated flatwoods salamander is currently experiencing drought conditions. Palis *et al.* (2006, p. 5–6) studied a frosted flatwoods salamander population in Florida during a drought from 1999–2002. This study documented three consecutive years of reproductive failure and a steady decline in 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), the 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, 70 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 incompatible forest management (Palis 2006, Cooper and LaClaire 2007, Cooper 2008b). The most robust reticulated flatwoods salamander population remaining is located on Eglin. Continued conservation of this locality is imperative because it represents habitat for the only population that is supported by more than three breeding ponds and functions as a metapopulation. In other words, this population has the best chance of surviving demographic and environmental stochasticity given that the distribution of breeding sites is within the dispersal distance of adult reticulated flatwoods salamanders.

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. Endangered status reflects the vulnerability of this species to factors that negatively affect the species and its limited and restricted habitat. 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, since 1999 we have lost at least two reticulated flatwoods salamander breeding ponds due to the threat of inadequate existing regulatory mechanisms. We believe the destruction of these ponds was a result of the continuing threat that isolated wetlands are rarely, if ever, under the jurisdiction of the Corps. We believe that, combined, the effect of the historical and ongoing drought; historical, current, and projected habitat loss and degradation; and the exacerbating effects of disease, predation, small population size, and isolation result in the reticulated 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 imminent 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.

Listing of the Frosted Flatwoods Salamander

History of the Action

The final rule to list the flatwoods salamander as threatened was published on April 1, 1999 (64 FR 15691). On August 13, 2008, we published a proposed rule to reclassify the listing of the species into two distinct species: Frosted flatwoods salamander and reticulated flatwoods salamander due to new taxonomic information (73 FR 47258). In that proposed rule, we provided the analysis of the threats for the reticulated flatwoods salamander and our determination of its endangered status. On September 18, 2008, we published a notice providing supplemental information to the proposed rule that included our analysis and determination to retain threatened status for the frosted flatwoods salamander (73 FR 54125).

Species Information

Taxonomic revision resulting from research done by Pauly *et al.* (2007, pp. 415–429) split the flatwoods salamander into two species—the frosted flatwoods salamander and the reticulated flatwoods salamander. Background information on flatwoods salamanders, a discussion of their taxonomic status, and the five-factor analysis and associated determination of endangered status for the reticulated flatwoods salamander are provided above. Information provided here, and in the analysis that follows, will only address issues specific to the frosted flatwoods salamander.

Based on the best available information, 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 (64 FR 15691, April 1, 1999; 73 FR 47258, August 13, 2008). However, most of our references predate Pauly *et al.* (2007, p. 415) and, therefore, do not distinguish between the two species.

Flatwoods salamanders 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 frosted flatwoods salamander included parts of the States of Florida, Georgia, and South Carolina. This area encompassed the lower Coastal Plain of the southeastern United States along the Gulf Coast east of the Apalachicola-Flint Rivers, across north Florida, south into north-central Florida, and north along the Atlantic Coast through coastal Georgia and South Carolina.

We have compiled 84 historical (pre-1990) records for the frosted flatwoods salamander. Twenty historical records (with supporting locality information) for the frosted flatwoods salamander are known from eight counties in Florida. Frosted flatwoods salamander breeding has been documented at only four (20

percent) of these sites since 1990. Surveys conducted since 1990 by Federal and State agency personnel, as well as private parties, have resulted in the identification of more than 50 additional frosted flatwoods salamander breeding sites, including two sites in Jefferson County, a county that previously was not known to be occupied by the salamander. Most of these new breeding sites are located on the Apalachicola and Osceola National Forests, and on St. Marks National Wildlife Refuge. One site, discovered in 1998 on Tate's Hell State Forest, has been degraded as a result of habitat modification efforts that created a more permanently flooded wetland and flooded the ecotone at the historic breeding pond. The upland habitat is degraded as well with the result that the primary constituent elements (PCEs) on the site are no longer present (Enge 2008). Fifteen populations of the frosted flatwoods salamander are known from Baker, Franklin, Jefferson, Liberty, and Wakulla Counties in Florida.

Thirty-four historical records for the frosted flatwoods salamander are known from 20 counties in Georgia. Frosted flatwoods salamanders have not been seen again at any of these sites in recent years; however, surveys conducted since 1990 have resulted in the discovery of 23 new breeding sites. All but one of these new sites are located on the Fort Stewart Military Installation. The one additional pond was discovered on the Townsend Bombing Range. Currently, these breeding sites support six frosted flatwoods salamander populations in Bryan, Evans, Liberty, and McIntosh Counties, Georgia, all on Department of Defense lands. The frosted flatwoods salamander is assumed to be extirpated from 16 other counties in Georgia where it previously occurred. However, some suitable habitat still remains on the Okefenokee National Wildlife Refuge and the potential exists for the species to occur there.

Thirty historical records for the frosted flatwoods salamander are known from five counties in South Carolina. Since 1990, metamorphic frosted flatwoods salamanders have been documented at six (21 percent) of these sites, and one new breeding site has been discovered. Currently, four populations of the frosted flatwoods salamander are known from Berkeley, Charleston, and Jasper Counties in South Carolina. Two populations are on private land in Jasper County: One population occurs on the Francis Marion National Forest in Berkeley County, and one population occurs on the Santee Coastal Preserve (state-owned and managed) in Charleston County.

The combined data from all survey work completed since 1990 in Florida, Georgia, and South Carolina indicate there are 25 populations of the frosted flatwoods salamander. Some of these populations are inferred from the capture of a single individual. Twenty-two (88 percent) of the known frosted flatwoods salamander populations occur primarily on public land. Sixteen of the populations (64 percent of total populations of the species) on public land represent metapopulations supported by more than one breeding site. A single population occurs on each of the following publicly owned sites: Osceola National Forest in Florida; Townsend Bombing Range in Georgia; and Francis Marion National Forest and Santee Coastal Reserve in South Carolina. In Florida, habitat supports 10 populations on Apalachicola National Forest and 2 populations on St. Marks National Wildlife Refuge. In Georgia, five populations occur on Fort Stewart Military Installation. Three (12 percent) frosted flatwoods salamander populations are solely on private land.

Summary of Factors Affecting the Species (Frosted Flatwoods Salamander)

Section 4 of the Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act. The original listing rule for the flatwoods salamander (64 FR 15691; April 1, 1999), and the supplement to the August 2008 proposed rule (73 FR 54125; September 18, 2008), contain a discussion of these five factors. Only those factors relevant to the frosted flatwoods salamander (*Ambystoma cingulatum* Cope, 1867) are described below:

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

The major historical threat to the frosted flatwoods salamander was loss of habitat, both its longleaf pine-slash pine flatwoods terrestrial habitat and its isolated, seasonally ponded breeding habitat. Refer above to Factor A under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for general information on threats to pine flatwoods habitat that also applies to the frosted flatwoods salamander.

Degradation of the remaining frosted flatwoods salamander habitat in Florida, Georgia, and South Carolina is a current, ongoing threat, primarily on private land. Ecologists consider fire suppression the primary reason for the degradation of remaining longleaf pine forest habitat. The disruption affects both the upland forested habitat of adult salamanders and their ponded breeding habitat also required for development of larval salamanders. Alterations of the longleaf pine ecosystem, as a result of incompatible forest practices, have caused the historic loss of most of the original frosted flatwoods salamander habitat. Conversion of native pine flatwoods to plantation forests is not considered a significant threat at this time. However, much of the historic extirpation of frosted flatwoods populations in Florida, Georgia, and South Carolina over the last six decades resulted from habitat degradation on lands managed for timber extraction.

Land use conversions to housing, other development projects, 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). Residential development and conversion to agriculture have resulted in the historical loss of one frosted flatwoods salamander population each from Ben Hill, Berrien, Brooks, Effingham, Emanuel, and Irwin Counties, Georgia (Seyle 1994, pp. 4–5); an additional site has been degraded in Orangeburg County, South Carolina, and the population at this site is also considered extirpated (LaClaire 1994a). State forest inventories completed between 1989 and 1995 indicated that flatwoods losses through land use conversion were still occurring (Outcalt 1997, pp. 3–6); however, further conversions are only likely to impact three of the populations occurring in large part on private lands or only 12 percent of the total frosted flatwoods salamander populations.

In addition to the loss of upland forested habitat, the number and diversity of small wetlands where frosted 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). As described above (see Species Information), the unintentional result of hydrological restoration on Tate's Hell State Forest was the destruction of the ephemeral nature of a reticulated flatwoods salamander breeding site and the extinction of the salamander population on that site.

Drought conditions exacerbate other threats, and although they represent a natural phenomenon, can lower the resiliency of populations to withstand other man-made threats. The U.S. Geological Survey (USGS) has documented multiple drought periods in the southeastern United States since the 1890s (USGS 2000, p. 1). Among significant periods documented in the last three decades are: 1980–1982, 1984–1989, 1998–2002, 2005–2008 (USGS 1991, p. 163; USGS 2000, p. 1; Seager *et al.* 2008, pp. 2, 22). Although drought is a naturally occurring condition, it presents additional complications for a species like the frosted flatwoods salamander, which has been extirpated from most of its historic range. Palis *et al.* (2006, p. 5–6) conducted a study in Florida on a population of the frosted flatwoods salamander during a drought from 1999–2002. This study found 3 consecutive years of reproductive failure and a steadily declining adult immigration to breed at the site as the drought progressed.

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 random events, such as droughts. Currently, 15 populations of the frosted flatwoods salamander, occurring on public land, are supported by multiple breeding sites.

Habitat fragmentation of the longleaf pine ecosystem resulting from habitat conversion is primarily a historical threat to the frosted flatwoods salamander. Large tracts of intact longleaf pine flatwoods habitat are fragmented by pine plantations, roads, and unsuitable habitat. Although the threat of ongoing habitat fragmentation has slowed, the effect of past habitat loss is that many frosted 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 frosted flatwoods salamander, 36 percent of populations have only one breeding pond. If the habitat at that site is destroyed, recolonization would be impossible (see further discussion of metapopulation dynamics under Factor E).

Roads have contributed to habitat fragmentation by isolating blocks of remaining contiguous habitat. Roads disrupt migration routes and dispersal of individuals to and from breeding sites. Road construction can result in changes in hydrology and destruction of breeding ponds. Highway construction and associated development resulted in the destruction of a historic frosted flatwoods salamander breeding pond in Chatham County, Georgia (Seyle 1994, pp. 3–4). In addition, vehicles may also cause the death of frosted flatwoods salamanders when they are attempting to cross roads (Means 1996, p. 2).

Off-road vehicle (ORV) use within frosted flatwoods salamander breeding ponds and their margins severely degrades the wetland habitat. In the Southeast, ORV use impacts habitat used by frosted flatwoods salamanders, has the potential to cause direct mortality of individual salamanders, and is a threat on both public and private land. On public lands, areas may be designated as off-limits to ORV use (U.S. Forest Service 2007, p. 19), but these restrictions are difficult 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 was a significant historical threat to the frosted flatwoods salamander. This range-wide loss of both upland and wetland habitat occurred primarily due to conversion of flatwoods sites to agriculture, residential development, and intensively managed pine plantations. This historic loss of habitat is presently compounded by current environmental conditions (drought), proposed projects on private land that do not require Corps permits under the Clean Water Act (33 U.S.C. 1251 *et seq.*), and the nature of pond-breeding salamanders to undergo periodic reproductive failure. We consider this threat to be primarily a past and future threat of moderate magnitude because most of the remaining occupied habitat of this species occurs on public lands that are managed to support the native longleaf pine ecosystem. However, 12 percent of frosted flatwoods salamander populations are on private land where habitat continues to be degraded by fire suppression and incompatible management (defined above under summary discussion for reticulated flatwoods salamander). If the remaining frosted flatwoods salamander habitat on public land continues to be protected from fire suppression and other incompatible forest management practices, road construction, and additional habitat fragmentation, the threat of habitat loss should be limited. Localized threats on private lands would include loss or alteration of habitat from agriculture, residential development, road construction, incompatible forest management, ORVs, fire suppression, and ditching or draining wetland breeding sites. As a result, we have determined that the present or threatened destruction, modification, or curtailment of frosted flatwoods salamander habitat and range represents a moderate but significant threat to the species.

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

Overutilization does not appear to be a threat to the frosted 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 the factor of overutilization for commercial, recreational, scientific, or educational purposes is not a threat to the frosted flatwoods salamander at this time.

C. Disease or Predation

Although disease has not been specifically documented in the frosted 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). Whiles *et al.* (2004, p. 211) found a parasitic nematode (*Hedruris siredonis*, family Hedruridae) in larvae of the 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 the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) may be other potential threats, although the susceptibility of the frosted 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). The amphibian 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 fungus has been found at Fort Stewart Military Installation in Georgia, a locality where the frosted flatwoods salamander occurs (Mitchell 2002, p. 191–202). This disease has negatively impacted populations of other ambystomatid salamanders (*A. macrodactylum croceum*) (Vredenburg and Summers 2001, p. 151; Davidson *et al.* 2003, p. 601; Padgett-Flohr and Longcore 2005, p. 50), and it is likely to negatively impact frosted flatwoods salamander populations as well. This discussion of disease in other species of closely related salamanders indicates the potential existence of similar threats to frosted flatwoods salamander populations.

Exposure to increased predation by fish is a threat to the frosted 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. Red imported fire ants (*Solenopsis invicta*) are also potential predators of flatwoods salamanders, especially in disturbed areas. They have been seen in areas disturbed by the installation of drift fences at known frosted flatwoods salamander 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 (Palis *et al.* 2002, p. 6). The severity and magnitude of effects, as well as the long-term effect, of fire ants on frosted flatwoods salamander populations are currently unknown.

In summary, diseases of amphibians in the southeastern United States remain largely unstudied. However, given the incidence of disease in species in the western United States that could be considered surrogates for flatwoods salamanders, the probability exists for similar infections to occur in frosted flatwoods salamander populations. We consider this to be a potential threat of moderate magnitude. 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 frosted flatwoods salamander breeding sites. Fire ants also have the potential of being a localized threat, particularly in disturbed areas. We consider these threats to be potential threats of moderate magnitude because 88 percent of frosted flatwoods salamander populations occur primarily on public lands where they are relatively protected from habitat destruction.

D. The Inadequacy of Existing Regulatory Mechanisms

Other than the National Forest Management Act and the Sikes Act, there are no existing regulatory mechanisms for the protection of the upland habitats where frosted flatwoods salamanders spend most of their lives. Refer to Factor D under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for information on the threat of the Inadequacy of Existing Regulatory Mechanisms that also applies to frosted flatwoods salamander.

Longleaf pine habitat management plans that provide conservation benefits to frosted flatwoods salamanders have been written for most of these sites. They include management plans for State- and Federally-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, including prescribed burning, that would benefit frosted flatwoods salamanders if implemented. Multiple-use is the guiding principle on most of these public lands, however, and protection of the frosted flatwoods salamander may be just one of many management goals including timber production and military and recreational use.

At the State and local levels, regulatory mechanisms are limited. 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 of the species or the destruction of its habitat on lands owned by the State of Georgia (Ozier 2008). However, there are no known frosted flatwoods salamander populations on lands owned by the State of Georgia. In 2001, the Florida Fish and Wildlife Conservation Commission (FFWCC) listed the flatwoods salamander (which includes the frosted 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); however, Florida regulations offer no protection against the most significant threat to the frosted flatwoods salamander—loss of habitat. In South Carolina, the flatwoods salamander is listed as endangered (South Carolina Department of Natural Resources 2008a). Prohibitions extend only to the direct take of the flatwoods salamander (South Carolina Department of Natural Resources 2008b). These regulations offer no protection against the most significant threat to the flatwoods salamander, which is loss of its habitat.

In summary, although existing regulatory mechanisms provide little direct protection of frosted flatwoods salamanders (beyond the protections afforded by the Act), they do provide a degree of protection for the remaining occupied habitat, primarily on public lands. The record of management on public lands since the original listing of the flatwoods salamander in 1999 indicates that public agencies are actively pursuing longleaf pine ecosystem management programs that benefit the frosted flatwoods salamander. Frosted flatwoods salamander breeding sites on the three private land sites may, in some cases, come under the jurisdiction of the Corps (Refer to Factor D under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for discussion of section 404 of the Clean Water Act and regulatory wetlands), but most likely they are provided little regulatory protection. We have determined that the threat of inadequate existing regulatory mechanisms is primarily an ongoing threat of moderate magnitude.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Metapopulations are important to the long-term survival of temporary pond

breeding amphibians. Refer to Factor E under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for additional information on metapopulations. Of the 25 known frosted flatwoods salamanders populations, 16 (64 percent) are supported by more than one breeding pond and may be considered metapopulations. However, 36 percent (9 out of 25) of the known frosted flatwoods salamander populations that have only a single breeding pond, 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. Refer to Factor E under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for additional information on invasive species and the threat they represent, which also applies to the frosted flatwoods salamander. Frosted flatwoods salamander habitat management plans will need to address threats posed by cogongrass and other invasive plant species and include strategies to control them.

Pesticides (including herbicides) may pose a threat to amphibians, such as the frosted flatwoods salamander. Refer to Factor E under ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander)'' for additional information on pesticides and the threat they represent, which also applies to the frosted flatwoods salamander. However, herbicides may be a necessary tool to reduce or eliminate woody vegetation or invasive plants when the use of prescribed fire is not possible or effective (Jensen 2007, Wigley 2008). Nevertheless, pesticides should never be used in flatwoods salamander habitat unless no other habitat management tool is available; herbicide label directions should be followed closely and aerial spraying should not be used as an application technique. Under these conditions, we consider this threat to be of moderate magnitude.

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 resulting from these fish competing with salamander larvae for invertebrate prey. 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 frosted flatwoods salamander ponds, such as through installation of firebreaks or ditches, this threat from predatory fish exists.

Studies of frosted flatwoods salamander populations, since the original species listing of flatwoods salamander as threatened (64 FR 15691; April 1, 1999), have been limited due to drought. Data on the numbers of adults within existing populations do 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 described above.

In summary, a variety of natural or manmade factors historically or currently threaten, or have the potential to threaten, the frosted flatwoods salamander. The loss of metapopulation structure in the distribution of frosted flatwoods salamander populations was a range-wide threat that caused historic losses of this species. It continues to be a current threat for 64 percent of the remaining frosted flatwoods salamander populations. 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 current threat, and they are likely to become more widespread and difficult to control. Range-wide, low population densities have been a historic threat and continue to be a threat for most frosted flatwoods salamander populations, particularly due to past and current drought conditions, habitat loss, population fragmentation, and periodic reproductive failures that occur naturally in pond-breeding amphibians. The impact that competing predators may have on the salamanders' 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 frosted flatwoods salamander, the severity and magnitude of these threats are not currently known. Acting in combination with threats listed above under Factors A through D, the threats under Factor E could increase the severity of the other threats.

Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the frosted flatwoods salamander. In summary, the most significant historical threat to the frosted flatwoods salamander, as listed in Factor A (above), is loss of the majority of its habitat. A variety of localized threats (described under Factors A, C, D, and E) have the potential to impact the remaining frosted flatwoods salamander populations and habitat. These include—alterations in the hydrology of existing wetland breeding sites (including ''ditching'' which results in the introduction of predatory fish); incompatible forest management; ORV use; fire suppression; drought; and disease. The severity and magnitude of the threats under Factor E are not currently known. Nevertheless, we have determined that threats under this factor 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. 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 25 frosted flatwoods salamander populations are known. Ten (40 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, habitat with the range of the frosted flatwoods salamander is currently experiencing drought conditions. Palis *et al.* (2006, pp. 5–6) studied a frosted flatwoods population in Florida during a drought from 1999–2002. This study documented 3 consecutive years of reproductive failure and a steady

decline in 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 frosted 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).

For frosted flatwoods salamander, 40 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.

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 frosted flatwoods salamander represents one of the biggest threats to the species' habitat and the continued existence of the species on these sites. However, 60 percent of frosted flatwoods salamander populations have an improved chance of surviving demographic and environmental stochasticity given that the distribution of breeding sites occurs within an adult salamander's dispersal distance.

We believe that, when combining the effects of historical, current, and projected habitat loss and degradation, historical and ongoing drought, and the exacerbating effects of disease, predation, small population size, and isolation, the frosted flatwoods salamander continues to be likely to become an endangered species throughout all of its range within the foreseeable future. We believe these threats, particularly the threats to populations resulting from habitat degradation and fragmentation, small population size, and drought, are current and are projected to continue into the future. We have determined that these threats are operating on the species and its habitat with a moderate degree of magnitude throughout most of its range and with a moderate degree of severity, as discussed above.

Based on the best available scientific and commercial information, we have determined that the preferred action is for the frosted flatwoods salamander to retain its status as a threatened species under the Act. Without the protection of the Act, significant management of threats would likely occur on public lands; however, there is still substantial risk of loss of ponds to drought and disease and, on private lands, a variety of potential threats (for example, introduction of fish, predation, pesticides), and imminent threats (for example, fire suppression, invasive species, and development). As discussed previously, declines resulting from drought can occur within only a few years. In the case of the frosted flatwoods salamander, 40 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. This could occur within a few years given recurring drought conditions and existing threats. While not in immediate danger of extinction, the frosted flatwoods salamander is likely to become an endangered species in the foreseeable future throughout all or a significant portion of its range if the present trends that negatively affect the species, and its limited and restricted habitat, continue. Furthermore, because these threats to the species are of comparable magnitude and severity across all of the species' range, we have determined that an analysis of whether a specific portion of the range might require a different listing status is not warranted at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition of the status, increased priority for research and conservation funding, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing results in public awareness and conservation actions by Federal, State, and local agencies; private organizations; and individuals. The Act provides for possible land acquisition and cooperation with the States, and for conservation actions to be carried out for listed species.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is 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)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must consult with us under the provisions of section 7(a)(2) of the Act.

Federal agency actions within the species habitat that may require consultation 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 Corps; 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

Previous Federal Actions

For information about previous Federal actions regarding designation of

critical habitat for flatwoods salamanders, see our proposed rule (73 FR 47258) published on August 13, 2008. This notice included revisions to the proposed designation of critical habitat published in the **Federal Register** on February 7, 2007 (72 FR 5856), and announced the availability of our draft economic analysis of the proposed critical habitat designation (DEA). On September 18, 2008, we published a notice in the **Federal Register** (73 FR 54125) providing supplemental information on the status of the frosted flatwoods salamander. On October 8, 2008, we published a notice in the **Federal Register** which extended the public comment period on the proposed rule and provided the time, date, and location of our public hearing (73 FR 58922). We held a public hearing on October 22, 2008. The extended public comment period ended on November 3, 2008.

Summary of Comments and Recommendations

As stated above, since the proposed rule addressed both listing and critical habitat, comments received combined these two issues. Therefore, we are presenting the combined comments and responses for these issues, below.

In the 2007 proposed rule, we requested written comments from the public on reasons why we should or should not designate critical habitat for the flatwoods salamander (72 FR 5856). We contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties, and invited them to comment on the proposed rule. We also issued press releases and published legal notices in the *Jasper County Sun, Pensacola News Journal, The DeFuniak Springs Herald-Breeze, Savannah Morning News, Tallahassee Democrat, The Albany Herald, Miller County Liberal, The Berkeley Independent, The Florida Times-Union, The News Herald*, and *The Post and Courier* newspapers. During the open public comment period, we received a request to hold a public hearing, however a public hearing was not held at that time. Due to new information that became available on threats to the flatwoods salamander and the reclassification in the taxonomy of the species, we asked for an extension of our court-ordered deadline on the designation of critical habitat for the flatwoods salamander to include the new information. Subsequently, a new proposed rule was written and published in the **Federal Register** on August 13, 2008 (73 FR 4725).

For the 2008 proposed rule, we requested written comments from the public on known or suspected threats to the frosted flatwoods salamander and the reticulated flatwoods salamander and any information on the need to change the status of either species; reasons why we should or should not designate critical habitat for the two species; and on the DEA (73 FR 47258). We contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties, and invited them to comment on the proposed rule. We also issued press releases and published legal notices in the *Jasper County Sun, Northwest Florida Daily News, Pensacola News Journal, Savannah Morning News, Tallahassee Democrat, The Albany Herald, The Berkeley Independent, The Florida Times-Union, The News Herald*, and *The Post and Courier* newspapers. Based on a request received during the public comment period, we held a public hearing and information meeting on October 22, 2008, at Pensacola Junior College in Pensacola, Florida.

During the comment period for the first proposed rule that opened on February 7, 2007, and closed on April 9, 2007, we received 23 comments directly addressing the original proposed critical habitat designation: five from peer reviewers; three from Federal agencies; three from State agencies; and 12 from organizations or individuals. During the comment period for the second proposed rule that opened on August 13, 2008, and closed on November 3, 2008, we received 79 comments directly addressing the reclassification in the listing of the flatwoods salamander into two species; the proposed designation of the reticulated flatwoods salamander as endangered; the maintenance of the listing of the frosted flatwoods salamander as threatened; the revised proposed critical habitat designation for the two species; and the DEA. Of these latter comments, 44 comments were received either in written form or through the portal at: *http://www.regulations.gov*; three of these were from Federal agencies, none were from State agencies, one was from a local government, and 40 were from organizations or individuals. Thirty-five of the 79 comments were made during the public hearing held on October 22, 2008; one of these was from a Federal agency, one was from a State agency, one was from a state senator, four were from local governments, and 28 were from organizations or individuals.

The following summary statistics are provided on the 23 comments received on the 2007 proposed rule. In total, 7 commenters supported the designation of critical habitat for the flatwoods salamander, 3 opposed the designation, and 13 were neutral regarding the designation. These following summary statistics are provided on the 79 comments received on the 2008 proposed rule. Nine commenters sent comments during the 2008 open comment period and also commented at the public hearing. An individual, group, or agency responding multiple times was only counted once as none of these commenters' opinions of the proposed rule differed between responses. In total, 33 commenters supported the proposed rule, 34 opposed the proposed rule, and 3 were neutral regarding the proposed rule. Comments received were grouped into 7 general issues specifically relating to the subjects in the 2008 proposed rule and the DEA, and are addressed in the following summary. We have incorporated comments into this final rule as appropriate.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), and current Department of the Interior guidance, we solicited expert opinions for both the 2007 and 2008 proposed rules from five knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles. We received responses from all five of the peer reviewers on the 2007 proposed rule and from four of the five peer reviewers on the 2008 proposed rule. We reviewed all comments received from the peer reviewers for substantive issues and new information regarding flatwoods salamander critical habitat. We combined peer reviewer comments from both years. The peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve the final critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review Comments

(1) *Comment:* Three of the peer reviewers emphasized the importance of the Eglin Air Force Base-Hurlburt Field metapopulation to the survival of the reticulated flatwoods salamander and questioned whether adequate habitat management, especially fire management, could be conducted if the highway proposed for the area was

approved (*see* also Comment 15). They discussed the inclusion or exclusion of military lands which have approved Integrated Natural Resource Management Plans (INRMPs), including these two sites as well as Navy Outlying Landing Field (NOLF) Holley (see also Comment 16). These peer reviewers were concerned about the finite period of the plans and the potential for decreased conservation efforts if INRMPs are revised when renewed. One peer reviewer recommended that NOLF Holley be included in critical habitat because the Navy's natural resources manager and forester had informed him that the Navy no longer had use for the field and that Santa Rosa County was interested in acquiring it. They concurred with the 2008 proposed rule (73 FR 47258) that included these military lands in proposed critical habitat.

Our Response: Eglin Air Force Base (Eglin) has assured the Service that they ''will not allow negative impacts to the salamander habitat'' on the base (DoAF 2008a, p. 1). The Commander of Eglin stated that, ''Eglin will ensure that the proposed Bypass road, and any actions associated with it, will not prevent implementation of the conservation measures identified in the INRMP for the flatwoods salamander'' (DoAF 2008b, p. 1). The Service has reassessed the Eglin INRMP and determined that, with the Air Force's recent assurances, it will provide a conservation benefit for the reticulated flatwoods salamander. The Department of the Navy has assured the Service that the Navy has no intention of transferring ownership of NOLF Holley and the INRMP will continue to be implemented for this site as written (Department of the Navy 2008, p. 2). We conduct annual reviews of the INRMPs for all the military bases with known flatwoods salamander populations and reassess their conservation benefits and implementation. All the involved military bases have assured the Service of their future compliance with their INRMPs (see citations above). As a result of this analysis, Eglin, Hurlburt Field, and NOLF Holley have been removed from the final critical habitat designation for the reticulated flatwoods salamander.

(2) *Comment:* One peer reviewer stated that the locality record used as the basis for proposed critical habitat unit RFS–5 is based on a poor quality photograph of a single larva collected in 1998 and that the larva in the photograph is likely a mole salamander (*Ambystoma talpoideum*). The site of the locality record and at least 100 other wetlands in the area have been surveyed since 2002 during suitable immigration and emigration periods. Many mole salamanders have been captured, but no reticulated flatwoods salamanders. It is the opinion of the peer reviewer that the original identification of the collected larva as a reticulated flatwoods salamander was in error.

Our Response: We agree that there is no verifiable evidence that flatwoods salamanders occupy habitat represented by Unit RFS–5, as originally proposed. Therefore, this unit has been removed and the final critical habitat designation for the reticulated flatwoods salamander has been revised based on this comment.

(3) *Comment:* One peer reviewer stated that habitat within proposed critical habitat unit FFS–2, located on Tate's Hell State Forest, is no longer suitable for the frosted flatwoods salamander. Since an adult flatwoods salamander was discovered there in 1998, hydrological restoration of the likely breeding site has been conducted and altered the site to a more permanently flooded wetland. Surveyors sampled the site in 2002, 2003, and 2004 but were unsuccessful in documenting any flatwoods salamander larvae within the wetland. The peer reviewer believes the wetland restoration project and the historically poor upland management of the area have resulted in the loss of flatwoods salamander habitat at this site on Tate's Hell State Forest.

Our Response: Based on the peer reviewer's comment and the site visit information, we believe Unit FFS–10, as originally proposed, no longer contains the PCEs essential to the conservation of the flatwoods salamander. Therefore, this unit has been removed from the final critical habitat designation.

(4) *Comment:* One peer reviewer stated that maps in the proposed rule are not sufficient for delineating actual boundaries of proposed critical habitat. The peer reviewer suggested using road or topographic maps and aerial photography.

Our Response: The printing standards of the **Federal Register** are not compatible with using road or topographic maps and aerial photography. We constructed the critical habitat units using a Geographic Information System (GIS). The resulting critical habitat GIS shapefiles are available by request from the Mississippi Field Office (see **FOR FURTHER INFORMATION CONTACT**). The shapefiles can be laid over other layers (aerial photography, roads) to get more precise locality information.

(5) *Comment:* One peer reviewer stated that reticulated flatwoods salamander units in southwest Georgia (unit names in 2008 proposed rule (73 FR 47258; August 13, 2008) are RFS–10, subunits A and B, respectively) may have agricultural land that does not contain the primary constituent elements and should be removed.

Our Response: The peer reviewer did not have access to our GIS data when we received this comment. When constructing the units in question, we used aerial photography to verify the presence of the primary constituent elements on the areas and that all agricultural land was excluded from RFS–10, subunits A and B.

Public Comments

General Biological Comments

(6) *Comment:* One commenter cited studies which described flatwoods salamander breeding sites as roadside ditches and borrow pits, as well as natural habitats. This commenter believed that this shows the adaptability of the species and the likelihood that suitable breeding habitat could be created for the salamanders. Several commenters during the public hearing thought that flatwoods salamander habitat could be relocated or constructed elsewhere as an alternative to protecting the existing occupied sites through critical habitat designation. Other commenters at the public hearing stated that this was not possible, as flatwoods salamanders are tied to specific soils and forest–wetland types that need to be present in a landscape context. These commenters expressed support for protecting existing sites.

Our Response: Flatwoods salamanders are known to breed in wetlands that dry on a seasonal basis. The Service is aware of records of flatwoods salamander larvae occurring in ditches and borrow pits. However, whether larvae were successful in developing into adult salamanders at these sites is unknown. The ponded breeding sites must hold water long enough and have a sufficient food source to allow salamander development and metamorphosis. They must also be free of predaceous fish and toxic substances. In addition, there are a number of biotic and abiotic factors that are likely essential for flatwoods salamanders at breeding sites that are currently unknown. Experimental relocations should be an action of last resort for these species and may be explored through the recovery process, if deemed necessary.

Adequacy and Extent of Critical Habitat

(7) *Comment:* Two commenters stated that critical habitat designation on any

lands approved under the Sustainable Forestry Initiative and Sustainable Forestry Certification Program (SFI) is unnecessary and redundant (not warranted). These lands are already recognized as habitat for listed species under the certification program and participants in the program are required to safeguard and protect threatened and endangered species. Participants are expected to implement scientifically based management practices and adaptive management strategies as appropriate. Provisions of this program are not legally binding; however, participants must comply to stay in the program. Therefore, lands under SFI programs should not require special management considerations. The commenters believed designation would not significantly increase or contribute to the likelihood of recovery of the species because the vast majority of lands are either in public ownership or managed according to SFI standards. Therefore, the commenters asserted that critical habitat offers little or no additional management protection and no additional conservation benefit.

Our Response: The criteria for designating sites as critical habitat are whether the sites provide the features essential for the conservation of the species and whether those features may require special management consideration or protection. Under section 4(b)(2) of the Act, the Secretary may exclude an area from critical habitat if the benefits of such exclusion outweigh the benefits of specifying such areas as part of critical habitat. 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. Included in this analysis would be whether or not conservation plans have species-specific management prescriptions, or other management approaches, that are coupled with assurances of implementation. The commenter presented a general statement about SFI programs. However, the Service did not receive any comments from specific private landowners within proposed critical habitat that identified themselves as participants in SFI programs nor did we receive any SFI conservation plans for analysis. Therefore, there is no new information indicating that removal of lands under SFI from critical habitat is warranted.

(8) *Comment:* Several commenters stated that private land should be excluded from critical habitat designation. One commenter suggested that the Service should offer incentives, such as voluntary cooperative agreements as a conservation policy for private lands in lieu of critical habitat designation. These commenters stated that it would not be beneficial to flatwoods salamanders to designate critical habitat on private land since designation would be a disincentive for the landowners to continue conservation efforts for this species, would likely increase threats resulting in a net loss of conservation benefit, and eventually result in the extirpation of flatwoods salamanders on private lands.

Our Response: Section 4 of the Act requires the Service to use the best available scientific data in designating critical habitat. Private lands are not exempted from this analysis. Flatwoods salamanders have been listed since 1999 and protection from ''take'' under section 9 has been in effect since that time. The Service knows of no situation where a private landowner has knowingly destroyed or mismanaged flatwoods salamander habitat as a result of this listing. Critical habitat only applies to those lands where there is a Federal nexus (a connection or link to the Federal government). In some cases, private lands may be affected if the landowner is undertaking a project that requires Federal funding or permit. However, the Service believes most application of the protection provided by critical habitat will not affect private lands. Programs are available to provide funds to private landowners for managing habitat for listed species, as well as permits that can be obtained to protect private landowners from the take prohibition when such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Private landowners may contact their local Service field office to obtain information about these programs and permits.

(9) *Comment:* Several commenters expressed concern about the potential for being prosecuted for adverse modification if private properties designated as critical habitat are fire suppressed. The commenter requested a definition for fire suppression and an explanation of practices related to fire suppression that would be problematic. The commenter requested that the Service offer emergency exemptions from adverse modification for human life or property.

Our Response: At this time, the Service is unaware of any Federal actions that would leave a private landowner vulnerable to prosecution for adverse modification due to fire suppression. Federal actions related to fire suppression that might lead to adverse modification would include improper implementation of management plans on Federal lands. If suppression of a wildfire is necessary as an emergency Federal action relating to human health and safety within occupied habitat of a listed species or designated as critical habitat, an after-the-fact consultation can be conducted. 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. However, when considering fire suppression as a threat, we refer to a Federal action which will lead to elimination of fire as a management tool and allow thick underbrush and mid-story to shade out the herbaceous ground cover. Fire suppression, in this sense, leads to deterioration of flatwoods salamander habitat quality and potentially adverse modification of critical habitat.

(10) *Comment:* One commenter requested that the Service should consider a buffer width less than 1,475 feet (ft) (450 meters (m)) around known breeding ponds when defining and designating critical habitat units and stated that the designation of this distance was arbitrary because it was based on a different salamander species. The commenter suggested a 534 [sic] ft (164 m) buffer width as calculated by Semlitsch (1998, p. 1113). This commenter also references Palis *et al.* (2002, pp. 1–20) that is provided as support for a smaller buffer width around known flatwoods salamander breeding ponds. Another commenter disputed the scientific basis for rounding up the buffer radius to 1,500 ft (457 m) from 1,476 ft (450 m) when constructing critical habitat units. Several commenters requested that the buffer width used in calculating critical habitat units be increased to 5,576 ft (1,700 m), since this is the maximum distance flatwoods salamanders have been reported to disperse and this would create connectivity between known occurrences.

Our Response: Semlitsch (1998, p. 1113) combined movement data in five States for six species of ambystomatid salamanders, which had been collected over a period of several decades. Using these data, we generated a 538-ft (164-m) buffer width from a wetland's edge into the terrestrial habitat, which would create an area that he stated would encompass 95 percent of a population of one of these species. However, Semlitsch (1998, p. 1117) pointed out

that the values used in this calculation probably underestimate the actual buffer needed for some species of salamanders. In addition, he specifically mentioned the flatwoods salamander as one of the species that may require more habitat than the area created by using the 538-ft (164-m) buffer width (Semlitsch 1998, p. 1117). The Service selected a buffer width of 1,475 ft (450 m) from the Semlitsch (1998, p. 1115) paper to use for the flatwoods salamander calculation. This is the maximum value used in his calculations for the marbled salamander. We chose this species because it was recommended by researchers as a model for the flatwoods salamander due to its similar life history (Taylor *et al.* 2005, pp. 792) and because it uses habitat in a similar way. Although adult marbled salamanders occupy hardwood forests rather than pine forests, they breed underground and in temporary ponds. The 1,475 ft (450 m) value corresponded well with data collected over 20 years by Means *et al.* (1996, p. 435) which described estimated movements of flatwoods salamanders of 984 ft (300 m) to 1,640 ft (500 m) between upland habitat and breeding ponds in relatively homogeneous habitat.

The Service used the value of 1,476 ft (450 m) to estimate the size of activity areas used by flatwoods salamanders in the original listing rule. This value also was used originally in draft management guidelines for flatwoods salamanders that the Service wrote in conjunction with the flatwoods salamander recovery team. During review of these draft guidelines, several members of the recovery team (mainly foresters) felt that use of this value was unrealistic. They believed that it was unlikely that a forester in the field would measure such an uneven number. For ease of application, they believed an even number would be easier to work with in the field and recommended rounding the value up to 1,500 ft (457 m). The Service did not use the 5,576 ft (1,700 m) movement distance described in Ashton and Ashton (2005, p. 65) to define the activity area for flatwoods salamanders because we consider this distance to represent the limit of the species dispersal. Therefore, the Service considered breeding sites within twice this distance (rounded to 2 mi (3.2 km)) to be considered part of the same metapopulation. Dr. Semlitsch was a peer reviewer of this proposed rule. In his review of the proposed rule, he stated that the distance the Service used to delineate the activity area around the breeding ponds is well-supported biologically in the literature and based on numerous studies of species in the same genus. Further, he also stated that connecting breeding sites within two miles of each other to protect dispersal habitat is also well-justified in the literature. He stated that neither value used in our calculations is too conservative or excessive, but rather an appropriate balance between the economics of land use and habitat protection. Palis *et al.* (2002, pp. 1–20) provides information on a declining flatwoods salamander population during a drought. A drift fence was set up enclosing the breeding site for this population and three partial drift fences were set into the uplands at 164, 328, and 656 ft (50, 100, and 200 m) from the pond-upland edge. Only one individual provided one travel movement of 328 ft (100 m) from the uplands into the pond, during this 3-year study. Although this paper provides this movement datum of one individual during a drought, the Service does not believe it is conclusive enough to use in defining the activity area of flatwoods salamanders around breeding ponds.

(11) *Comment:* One commenter questioned whether, when proposing critical habitat, we had taken into account wide-scale global climate change and the possibility of inbreeding or natural extinction in the many small, isolated populations of flatwoods salamanders.

Our Response: Extinction is a natural process. Normally, new species develop through a process known as speciation at about the same rate that other species become extinct. However, because of air and water pollution, extensive deforestation, the loss of wetlands, and other human-induced impacts, extinctions are now occurring at a rate far exceeding the speciation rate. The purpose of the Act is to conserve endangered and threatened species and the ecosystems on which they depend. The Service has presented information on threats to the two species of flatwoods salamander elsewhere in this rule. We have no data supporting global climate change as a specific threat; however, flatwoods salamanders have been negatively affected by a recent long-term drought. The many threats that face these species, including the possibility of inbreeding or natural extinction, highlight the importance of metapopulations. These threats were considered and we designated critical habitat for areas occupied by metapopulations whenever possible by providing habitat to connect occupied sites.

(12) *Comment:* One commenter asked if we had population estimates for those populations whose habitat had been used to designate critical habitat. He questioned the use of presence-absence surveys as a basis for designating critical habitat, especially those areas where only one individual flatwoods salamander had been captured. Without population estimates, he did not believe we had sufficient population data to use as a basis for designating critical habitat.

Our Response: Obtaining population estimates from wild populations of animals is frequently a difficult task. The two species of flatwoods salamander are widely distributed across the southeastern United States. Only a few of the populations have been studied in detail. Even in these populations, estimates of the number of salamanders at a site have not been possible. For a pond-breeding amphibian that lives underground for most of its life, the typical method used to monitor a population is to put a fence around a breeding site that captures the adult salamanders that come in to breed and the metamorphic salamanders and adults that leave the pond after the breeding event. At minimum, obtaining a population estimate using this technique needs to be repeated often enough to get values for the number of females breeding in the population, their annual survival and reproductive rates, survival of juvenile salamanders (especially the first year cohort) and the age at first reproduction for females. These values are not known for any flatwoods salamander population. It was impossible, due to constraints of time, money, and fluctuations in weather, to determine the number of individuals in extant populations for use in this rule. The capture of one larva at a particular location does not always indicate low numbers. In many cases, surveyors will simply stop surveying once an individual is documented in order to cover as many different locations as possible within a limited survey time period. The Act requires determinations of critical habitat to be based on the best scientific data available. In this case, data from presence-absence surveys represent the best scientific data available and the Service used these data as a basis for designating critical habitat.

(13) *Comment:* One commenter suggested that flatwoods salamanders may have adapted their lifestyle requirements to a different habitat than that which was designated as critical habitat. He stated that flatwoods salamanders may occur in other breeding habitats than ephemeral ponds and that these habitats have yet to be surveyed.

Our Response: Researchers have been studying flatwoods salamanders for over

20 years and surveys have been conducted on the Apalachicola National Forest in Florida for more than 30 years. Herpetologists have also been studying other species of amphibians in the numerous wetland habitats of the southeast since at least the 1930s. No flatwoods salamander has ever been found outside of historical longleaf pine flatwoods or in wetland areas that do not dry on a cyclic basis.

(14) *Comment:* One commenter asked about how we knew that breeding habitats were ephemeral ponds and not seasonally connected to other wetlands if we do not have long-term hydrologic data.

Our Response: The Service used data from known flatwoods salamander localities to determine occupied areas. The locality data included descriptions of the habitat. The vegetation of ephemeral ponds is distinctive and researchers use it to distinguish between wetland habitat types. In addition, we used aerial photography to look at each area proposed for critical habitat and verify wetland type. Long-term hydrologic data are needed to determine a wetland's hydroperiod but are not necessary to discriminate an ephemeral pond. Under high water conditions, such as those resulting from a hurricane, ephemeral wetlands may become connected to other wetlands. However, under normal weather conditions, they are isolated from other water bodies.

(15) *Comment:* Many commenters requested that habitat within Eglin Air Force Base and Hurlburt Field be removed from critical habitat, mainly due to a perception that designation of critical habitat would stop the construction of the Bypass Road proposed by the Northwest Florida Transportation Corridor on the southern property boundary of Eglin Air Force Base. Other commenters simply wrote in support of the Bypass Road construction without taking any position on any of the actions proposed in the rule. The Department of the Air Force's Eglin Air Force Base requested removal of the Base from critical habitat because they stated that their existing Integrated Natural Resource Management Plan (INRMP) is adequate, and they provided assurance that the proposed Bypass Road would not prevent them from implementing the INRMP. Many other commenters supported retaining Eglin and Hurlburt Field within critical habitat because of the vital importance of this area to the long-term survival of the reticulated flatwoods salamander. These commenters were concerned that habitat management of these areas proposed as critical habitat would not be possible if a road was constructed in the proposed location.

Our Response: In 2007, the Service published a proposed rule designating critical habitat for the flatwoods salamander (72 FR 5856). Within this rule, Eglin was exempted from critical habitat because the Service considered the INRMP for the base to be adequate. After this rule was published, a threat became known to the Service which we considered to be serious enough to question the adequacy of Eglin's INRMP. This new threat was represented by a letter of conceptual approval provided by Eglin to the Northwest Florida Transportation Corridor Authority in October of 2007 for alignment of a road along the southern boundary of the base. The proposed alignment was adjacent or through most of the occupied reticulated flatwoods salamander habitat on Eglin and Hurlburt Field. Due to the threat posed by this road and Eglin's conceptual approval of it, the Service did not believe that Eglin's INRMP was adequate and habitat on Eglin and Hurlburt Field was included in the revised proposed critical habitat designation published in 2008. However, in comments received by the Service during the open comment period for this proposed rule, the Commander of Eglin stated, ''Eglin will ensure the proposed Bypass road, and any actions associated with it, will not prevent implementation of the conservation measures identified in the INRMP for the flatwoods salamander'' (DoAF 2008b, p. 1, see also response to Comment 1). As a result, Eglin and Hurlburt Field have been removed from the final critical habitat designation for the species.

(16) *Comment:* The Department of the Navy has requested that Navy Outlying Landing Field (NOLF) Holley be removed from critical habitat designation. Reasons for removal included that: The INRMP covering NOLF Holley provides a conservation benefit to the reticulated flatwoods salamander, thereby making critical habitat designation unnecessary; the Navy currently has no plans to transfer ownership of NOLF Holley and intends to continue its stewardship of the salamander and its habitat; and NOLF Holley is required to meet current and future military mission needs and as such is considered necessary for national security. One commenter has requested that the Service retain NOLF Holley within the critical habitat designation due to its importance as the only habitat remaining in the area for the reticulated flatwoods salamander and the potential for transfer of ownership from the Department of the Navy to local developers.

Our Response: In 2007, the Service published a proposed rule designating critical habitat for the flatwoods salamander (72 FR 5856). Within this rule, NOLF Holley was exempted from proposed critical habitat because the Service considered its INRMP to be adequate. After the proposed rule was published, the Service received information that the Navy was no longer using this field for military operations and discussions had been initiated with Santa Rosa County to transfer ownership of this property to the county. For this reason, NOLF Holley was included in the 2008 revised proposed rule (73 FR 47258). During the open comment period for the revised proposed rule, the Department of the Navy assured the Service ''that the Navy currently has no plans to transfer ownership of NOLF Holley (DoN 2008, p. 2, see also response to Comment 1). Further, it is the Navy's intent to continue its stewardship of the salamander and its habitat.'' Based on these comments, the Service has reassessed the benefit of their INRMP and concluded that it will continue to be implemented. Therefore, NOLF Holley has been exempted from the final critical habitat designation.

(17) *Comment:* One commenter was concerned with the benefits of INRMPs for the DOD lands in Georgia, Fort Stewart Military Installation and Townsend Bombing Range. This commenter questioned whether the existing INRMPs would meet the standard of ''conservation,'' which would entail using all methods and procedures which would benefit the survival and recovery of the frosted flatwoods salamander. The commenter acknowledged that the Service has concluded that these two INRMPs have met this standard, but questions whether funding is sufficient to ensure conservation measures are implemented. The commenter stated that, at the very least, the Service should continue to review the INRMPs annually to ensure no projects, land use changes, or funding cuts are proposed that will threatened continued protection of the flatwoods salamander or its habitat.

Our Response: The Service will continue to review all INRMPs for habitat occupied by both species of flatwoods salamander on an annual basis to ensure that there is certainty they will be implemented and that no projects or land use changes are proposed that are likely to jeopardize the continued existence of the frosted and reticulated flatwoods salamanders

or result in the destruction or adverse modification of their habitats. The Service has determined that conservation efforts identified in the existing INRMPs for the DOD lands in Georgia, Fort Stewart Military Installation and Townsend Bombing Range, will provide benefits to the frosted flatwoods salamander and the features essential to the species' conservation on these lands.

(18) *Comment:* One commenter identified unoccupied habitat in the general area in the Apalachicola National Forest (ANF) that he believed has the primary constituent elements for the frosted flatwoods salamander but had not been proposed for critical habitat designation. In addition, the commenter stated that designating unoccupied habitat is an essential part of critical habitat for a species and needs to be included in the final critical habitat designation for the flatwoods salamander. The Service received comments from the ANF District Ranger supporting the proposed designation of critical habitat for both species of flatwoods salamander, including that portion of the designation within the boundaries of ANF and Osceola National Forest. In addition, the District Ranger has proposed to create ''salamander conservation areas'' as a part of amending the forest's land management plan. These areas would encompass proposed critical habitat and additional areas not known to be occupied by salamanders but appearing to have potential as flatwoods salamander habitat. These salamander conservation areas will expand to the existing compartment boundaries and provide more buffer area around known ponds, as well as unoccupied potential habitat referred to by the first commenter. This strategy will be implemented on the Osceola National Forest as well as ANF. Expanding conservation areas to the compartment boundaries will ensure that management of unoccupied areas will be conducted in the same manner as, and in conjunction with, those areas currently occupied and proposed for critical habitat.

Our Response: We recognize the value of designating unoccupied habitat as critical habitat in certain situations. Based on the available information, we do not believe that designating unoccupied habitat for frosted and reticulated flatwoods salamanders provides conservation benefit to these species if it is separated from occupied habitat by an area of unsuitable habitat beyond the dispersal distance of the salamanders for two reasons: The likelihood of natural recolonization of these sites is nearly impossible (see also comment 23), and we have determined that this unoccupied habitat and other areas not occupied at the time of listing not already included within this rule are not essential to the conservation of the species. The particular area referenced by the commenters has been combined with those designated as critical habitat into compartments that will be managed in their totality by ANF for conservation of the frosted flatwoods salamander. We will continue to work with the Forest staff to ensure conservation of the species and encourage management for ''salamander conservation areas'' as outlined by the ANF.

(19) *Comment:* One commenter stated that critical habitat, as proposed, will result in a fragmented landscape, with salamander occurrences existing as isolated islands cut off from other salamanders and from the ecosystem process that maintains habitat suitability. In addition, the commenter stated the purpose of critical habitat designation is to aid in the recovery of listed species, not simply to protect isolated individuals or occurrences within a fragmented and disturbed landscape. Several commenters from 2007 provided a general statement that they did not believe we were protecting enough acreage in critical habitat. One commenter asked for the inclusion of areas within Bay and Gulf Counties, in the critical habitat designation.

Our Response: The longleaf pine ecosystem currently exists in the context of a fragmented landscape. The Service has connected occupied flatwoods salamander sites whenever it was possible, according to the method described above in Comment 10. In most cases, however, flatwoods salamander populations are separated from each other by large distances and unsuitable habitat that lacks the PCEs for the species. Surveys totaling hundreds of person-hours have been conducted to search for flatwoods salamanders and potential, unoccupied habitat across the range of both species. The degradation of the existing longleaf pine flatwoods has been extensive. Although new flatwoods salamander localities have been found over the past 15 years, most of these new sites were in the vicinity of known records on the larger public land bases. We believe the recovery of flatwoods salamanders is tied to management on these public lands, where the possibility exists of mimicking natural ecosystem processes through the use of prescribed fire. Outside of these public lands, landscape ecosystem processes have broken down and the potential for linking occupied flatwoods salamander sites by re-establishing longleaf flatwoods habitat on degraded sites is virtually non-existent. There is one historical record for flatwoods salamanders in Gulf County and no historical record for Bay County. There are no known flatwoods salamander populations in either county, no known occupied habitat, and no appropriate unoccupied habitat within an appropriate dispersal distance to allow for natural recolonization. Therefore, we designated no critical habitat in either Bay or Gulf Counties.

(20) *Comment:* One commenter quoted the statement in the original listing rule analysis (64 FR 15691) that any potential benefit from a critical habitat designation would be offset by an increased level of vulnerability to collecting. The commenter inquired about whether the designation of critical habitat for the reticulated and frosted flatwoods salamanders was based on science or pressure from a lawsuit.

Our Response: It is true that we reassessed the need for critical habitat based on a mediated settlement agreement (see ''Previous Federal Actions''). We reviewed the available data on collecting amphibians for the pet trade and on prosecutions for collecting endangered species, and could find no evidence of collecting as a threat to flatwoods salamanders. We reevaluated our original prudency determination and concluded it is prudent to designate critical habitat for the frosted and reticulated flatwoods salamanders. Based on the best scientific information, we are completing this designation under the requirements of the Act and in the best interest of the species, using the best scientific information available.

(21) *Comment:* One commenter quoted a 2003 Government Accounting Office (GAO) report that recommended delaying critical habitat designations until recovery plans are developed. The commenter suggested that this recommendation should be followed and designation of critical habitat should be postponed.

Our Response: The GAO report quoted by the commenter included recommendations to improve the process of designating critical habitat. The report provides recommendations. There have been no regulations promulgated requiring the completion of a recovery plan prior to designation of critical habitat for a listed species. In fact, the Act states that, to the maximum extent prudent and determinable, designation of critical habitat shall be made concurrently with a species' listing determination.

(22) *Comment:* One commenter was under the impression that critical

habitat was based on ''potential, not exact situations.''

Our Response: The Service assumes that the commenter is referring to flatwoods salamander occurrence data in this comment. All the localities used as the basis for designating critical habitat were occupied by either the frosted or reticulated flatwoods salamander at the time of listing or are currently occupied.

(23) *Comment:* One commenter questioned why more critical habitat was not designated on Francis Marion National Forest (FMNF) and other public lands. The commenter urged the Service to work with the Forest Service to expand the critical habitat designation on FMNF.

Our Response: The Service is designating all areas containing the primary constituent elements and occupied by flatwoods salamanders, on the FMNF and other public lands, as critical habitat. As we said in our response to Comment 18, we do not believe that designating unoccupied habitat for frosted and reticulated flatwoods salamanders provides conservation benefit to these species if it is separated from occupied habitat by an area of unsuitable habitat beyond the dispersal distance of the salamanders, because the likelihood of natural recolonization of these sites is nearly impossible.

Reclassifying the Listing of the Flatwoods Salamander Into Two Distinct Species

(24) *Comment:* One commenter asked if the study that reported the split of the flatwoods salamander into two species had a thorough peer review and requested that the publication be presented to the public.

Our Response: Pauly *et al.* (2007, p. 415) recognized two species of flatwoods salamanders in their publication in *Molecular Ecology*, a peer-reviewed journal; therefore, it did undergo a thorough peer-review, as did the proposed rule. If a member of the public would like a copy of any of the literature cited, contact the Mississippi Field Office (*see* **FOR FURTHER INFORMATION CONTACT** above).

Listing Status of Reticulated Flatwoods Salamander

(25) *Comment:* One commenter asked if the Service used population estimates to determine that the reticulated flatwoods salamander was endangered. The commenter did ''not believe that population decline can be derived solely from habitat decline due to both the adaptability and unpredictability of any species will to survive.'' In general, this commenter and several others believed that the Service does not have sufficient data to warrant listing this species as endangered. Many other commenters wrote in support of listing the reticulated flatwoods salamander as endangered.

Our Response: There are no data available on numbers of individual salamanders within any flatwoods salamander population. However, we did not rely solely on declines of suitable habitat to determine the status of the reticulated flatwoods salamander. As required by the Act, we used the best scientific data available to verify existence of historical reticulated flatwoods salamander populations, new populations, and threats to populations. For example, of the 26 historical localities for the reticulated flatwoods salamander, only 5 (19 percent) were still occupied, primarily due to habitat loss and degradation. These data were collected during presence-absence surveys and during other field research unrelated to obtaining population estimates. New data received have been incorporated into this final rule where appropriate. There is no scientific basis for the assertion that flatwoods salamanders may have evolved different habitat and life history requirements from those currently described for the species.

(26) *Comment:* Several commenters stated that the Service had made a determination that the Bypass road on Eglin Air Force Base and Hurlburt Field would threaten the reticulated flatwoods salamander and that the proposed designation of the reticulated flatwoods salamander as endangered was done to stop the road. Other commenters stated that if we changed the designation of the reticulated flatwoods salamander to endangered status this would mean we had in effect said ''no'' to the Bypass road.

Our Response: The determination to uplist the reticulated flatwoods salamander to endangered was based on the best available scientific data on its status and the existing and potential threats to the species. One of the threats we considered was the proposed Bypass road. The flatwoods salamander was originally listed as threatened under the Act in 1999 (64 FR 15691). The Bypass road, as currently envisioned, would be constructed across military lands that are Federal property. The authorization and permitting of this road represents a Federal action which would trigger consultation under section 7 of the Act since the flatwoods salamander is already listed. In addition, the proposed Bypass road crosses jurisdictional wetlands and this action will likely require a section 404 permit(s) per the Clean Water Act. Thus, since the road crosses Federal property and there are Federal permit issues, the effects on the salamander would need to be considered regardless of a change in listing status. In fact, the Service is in the very preliminary stages of an informal consultation on the Bypass road and, therefore, no final determination on the impacts of the Bypass to the flatwoods salamander has been made. In addition, in the event of an adverse modification or jeopardy determination, we would also explore measures to minimize the impacts of a proposed action.

(27) *Comment:* One commenter inquired about whether the uplisting of the reticulated flatwoods salamander was based on science or pressure from a lawsuit.

Our Response: The Service determined to uplist the reticulated flatwoods salamander based on the best scientific data available and not as a result of a lawsuit. For more information, refer above to ''Summary of Factors Affecting the Species (Reticulated Flatwoods Salamander).''

Listing Status of Frosted Flatwoods Salamander

(28) *Comment:* One commenter supported uplisting the frosted flatwoods salamander to endangered since there are only 26 [sic] known populations of this species, these populations occur in isolated clumps that could be extirpated by a localized drought, and none of the populations are grouped closely enough to be a metapopulation.

Our Response: Most land occupied by the frosted flatwoods salamander (88 percent) is owned and managed by State and Federal agencies. The Service has worked closely with these agencies to ensure their management actions provide conservation benefits for the species. Drought is a problem; however, 64 percent of frosted flatwoods salamander populations are supported by more than one breeding pond and do function as metapopulations. Due to the active flatwoods salamander management on public lands and the existing metapopulation structure within the species' populations, we believe the frosted flatwoods salamander does not meet the criteria for listing as an endangered species. Further analysis is presented above under the section ''Summary of Factors Affecting the Species (Frosted Flatwoods Salamander).''

Procedural and Legal Considerations

(29) *Comment:* Many commenters requested that a second public hearing on the proposed rule be held in Okaloosa County, Florida, because this county is within the area where the proposed Eglin Bypass of the Northwest Florida Transportation Corridor is to be constructed. One commenter quoted a *Northwest Florida Daily News* article as saying a Service spokesperson stated that the decision to hold the public hearing in Pensacola was based on its being a central location of the salamander's range. Several commenters stated they did not receive sufficient notice of when and where the public hearing would be held. Several other commenters stated that the notice announcing the public hearing in the **Federal Register** was posted 14 days prior to the public hearing rather than 15 days prior to the hearing as required by Service guidance. One commenter stated that the process of providing information regarding the proposed rule and public hearing needs improvement.

Our Response: A request was submitted to the Service by the Northwest Florida Transportation Corridor Authority on September 24, 2008, for a public hearing with the suggestion that the hearing be held in Fort Walton Beach, Florida. A public hearing was held on October 22, 2008, in Pensacola, Florida. It was announced in a press release that was submitted to over 200 newspapers in Florida, Georgia, and South Carolina on October 8, 2008. The press release was also sent to television stations and radio stations. The hearing announcement published in the **Federal Register** on October 8, 2008 (73 FR 58922). Announcement of the public hearing was mailed to Federal and State representatives in Florida, Georgia, and South Carolina; County Commissioners of occupied counties in these three States; other Federal and State agencies; conservation organizations and other non-governmental organizations; special interest groups; and other interested parties. The Service also purchased legal notices in the following newspapers: *Albany Herald, Northwest Florida Daily News, Jasper County Sun, The News Herald, The Post and Courier, Pensacola News Journal, Savannah Morning News, Tallahassee Democrat*, and *The Florida Times-Union*. The Service placed the notice for the public hearing on public review in the **Federal Register** the day before it was published. As a result, the notice was available to the public for 15 days before the hearing.

The Service is not required to hold a requested public hearing in the exact location provided by the requestor. The Service selected Pensacola as the location for the public hearing because of its central location near major highways and an airport, to give the largest number of people the opportunity to attend. The location and schedule for the public hearing were selected to accommodate the general public, as well as the requestor of the public hearing, as much as possible. Pensacola is not central to the flatwoods salamander's range nor was this statement made in the *Northwest Florida Daily News* article.

Section 4(b)(5) of the Endangered Species Act states, ''[w]ith respect to any regulation proposed by the Secretary to implement a determination, designation, or revision referred to in subsection (a)(1) or (3) [proposed or final rule to list a species as endangered or threatened, or proposed or final rule to designate any habitat of such species to be critical habitat], the Secretary shall * * * promptly hold one public hearing on the proposed regulation if any person files a request for such a hearing within 45 days after the date of publication of general notice.'' We have met the regulatory requirement.

(30) *Comment:* One commenter stated that the notice in the **Federal Register** announcing the public hearing did not provide information on how to obtain reasonable accommodations and this is a violation of American Disabilities Act (ADA) requirements.

Our Response: The notice in the **Federal Register** announcing the public hearing provided information on how to contact the Service for further information including the name, address, telephone number, and fax number of the Field Supervisor of the Mississippi Field Office; and the number of the Federal Information Relay Service to call if a telecommunications device for the deaf was required. We did not receive any requests for additional information regarding how to obtain reasonable accommodations for the public hearing.

(31) *Comment:* One commenter stated that the notice in the **Federal Register** announcing the public hearing was not published in Okaloosa County's local newspaper, the *Northwest Florida Daily News*.

Our Response: The public hearing notice was published in the *Northwest Florida Daily News* on October 10, 2008.

(32) *Comment:* Several commenters suggested there may be members of the public that were denied their right to submit public comments because the online portal for submitting public comments at *www.regulations.gov* was inaccessible for approximately a week beginning on October 14, 2008.

Our Response: The public comment submission portion of the online portal for this proposed rule was inaccessible during the time period from October 14, 2008, through October 22, 2008, due to an administrative error. This occurred because, although the comment period was extended to a date 2 weeks after the public hearing, this information did not immediately reach the portal controller. However, the problem was corrected as soon as the Service knew of it and the portal was operational until the end of the extended comment period on November 3, 2008. Comments could still be received by mail and this option was provided in the proposed rule and the supplemental information (73 FR 54125; September 18, 2008). In addition, because this online system is new, we still accepted comments provided by e-mail, fax, or mail at our Washington office location or received at either the Mississippi or Panama City field offices until November 3, 2008. All comments we received were considered in the preparation of this final rule. The comment period for the proposed rule was open for a total of 83 days, from August 13, 2008, to November 3, 2008. We believe this provided ample opportunity for the public to comment on the proposed rule.

Best Scientific Information

(33) *Comment:* One commenter stated that the proper application of herbicides most commonly used in modern silviculture is unlikely to pose a risk to flatwoods salamanders or cause adverse modification of critical habitat. A peer reviewer from 2007 stated that habitat management to benefit flatwoods salamanders may require herbicide use in dry wetlands or at timber harvest or replanting to improve habitat conditions.

Our Response: Herbicide use in dry wetlands or at timber harvest or re-planting may be compatible with habitat management to benefit flatwoods salamanders. When a property owner has developed management plans that include the use of herbicides at a site known to be occupied by flatwoods salamanders, we recommend coordination with the local Service field office covering the area. We still consider the use of herbicides as a threat due to the potential that improper application will result in toxicity to salamanders.

(34) *Comment:* One commenter encouraged the Service to not overstate the role of modern forest management in

the historical loss and degradation of flatwoods salamander habitat.

Our Response: We described many threats to flatwoods salamander habitat, both past and present. We agree with the commenter that clear-cutting at the turn of the century was not done to standards of modern forestry and that many sites in plantation forestry have been converted from agricultural land rather than forested land. We do not believe conversion of native longleaf pine flatwoods to plantation forests is a significant threat to flatwoods salamanders at this time. Nevertheless, some aspects of modern forestry, such as use of site preparation techniques that remove stumps and alter or destroy below-ground soil structure (such as old root channels), continue to present a threat to flatwoods salamanders. We present further analysis above under ''Summary of Factors Affecting the Reticulated Flatwoods Salamander.''

Economic Impacts and Economic Analysis (EA)

(35) *Comment:* Several commenters stated that the Service should consider the positive economic impacts of critical habitat designation. Designation of critical habitat provides support for maintaining healthy ecosystems which are the foundation of healthy economies.

Response: As indicated in Section 1.3.3 of the EA: ''Rather than rely on economic measures, the Service believes that the direct benefits of the proposed rule are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking.''

(36) *Comment:* Several commenters stated that the draft EA failed to assess the potential economic impacts that could occur if the Bypass Road proposed by the Northwest Florida Transportation Corridor Authority is affected by the presence of critical habitat on Eglin Air Force Base (Unit RFS–4, Subunit C in the proposed rule). These comments generally argued that, by not considering the potential impacts to the proposed Bypass Road project, the EA understates the potential costs of designation. These commenters argued that the Bypass Road would: (1) Reduce congestion, (2) provide additional hurricane evacuation alternatives, (3) reduce highway traffic accidents, (4) increase homeland security, (5) improve energy distribution, (6) benefit small businesses, (7) allow access to the international airport opening in Bay County, and (8) substantially increase regional jobs and tax revenue. Lastly, several commenters express concerns that the Northwest Florida Transportation Corridor Authority (NWFTCA) was not a primary source of information for the EA.

Response: In this final rule, areas within Eglin Air Force Base and Hurlburt Field have been removed from the critical habitat designation. Thus, this designation will not impact the proposed Bypass Road project. NWFTCA could not be reached to discuss these impacts prior to the public comment period, and thus was not included as a source in the draft EA (see Section 4.2.1.2). However, to provide greater context for this issue, the final EA describes the benefits that could result from construction of the Bypass Road. The final EA also presents the results of a technical memorandum by HDR/Decision Economics, Inc. (HDR), developed for the NWFTCA, that documents the potential costs of not constructing the Bypass Road.

(37) *Comment:* Several commenters stated that the Service did not consider public lands in the EA of critical habitat designation.

Response: The draft and final EAs do consider potential impacts to publicly owned lands. Specifically, Section 2 describes potential impacts to publicly owned timberlands, and Section 4 describes potential impacts to fire management and species management activities on these lands.

(38) *Comment:* One commenter asked about the cost to taxpayers of elevating the reticulated flatwoods salamander to endangered status.

Response: The purpose of the EA is to describe the potential economic and other impacts that could result from critical habitat designation (see Section 1). The EA is not intended to address the economic impact of a change in the status of a species. In addition, under the Endangered Species Act, the Service does not take into account the economic impacts of listing decisions, only the impact of critical habitat designation. Therefore, an EA of the effects of listing the reticulated flatwoods salamander as endangered has not been conducted.

(39) *Comment:* One commenter stated that excluding Holley Outlying Landing Field could result in additional development in the area, which would be potentially damaging to the local economy. The commenter indicated that negative effects could include a flooded housing market, decreased housing values, or increased insurance rates from building in a hurricane prominent area.

Response: As described in Section 3.2.1 of the final EA, the development analysis evaluates potential impacts to undeveloped land that is currently zoned for future rural, residential, industrial, or privately owned commercial development. Because Holley Outlying Landing Field is not currently zoned for development, the analysis assumes it will not be developed in the future without zoning changes. Absent available information on when or where such zoning changes may occur in future years, the analysis does not quantify either positive or negative impacts of any resulting development. The Final Rule exempts this area from the critical habitat designation.

(40) *Comment:* One commenter stated that Section 3.2.2 of the EA unreasonably assumes that impacts to development activities occur only on parcels that contain wetlands within proposed critical habitat. This commenter stated that future consultations may lead to critical habitat considerations of parcels not containing wetlands. The commenter stated that the EA undervalues the potential for development to be precluded on uplands based on critical habitat designation.

Response: Section 3 of the final EA provided estimates of impacts to any developable parcels that intersect wetlands. Historically, consultations have not occurred in areas without wetlands due to the lack of a Federal nexus (see Section 3.2). Note that the analysis does consider the potential impacts to development activities on the entire parcel, not just that portion that is wetland.

(41) *Comment:* One commenter stated that input-output models should be used to estimate impacts on Federal lands to properly consider impacts to small businesses. This commenter stated that, absent such modeling, the report focuses only on private property values.

Response: Section 1.2.2.2 of the EA indicates that input-output models may provide useful information about the scale and scope of localized economic impacts. For changes in activities on Federal lands designated as critical habitat, the Service does not anticipate regional economic impacts. Note that, although this final rule exempts Eglin Air Force Base from the designation, the final EA presents the results of HDR's regional EA of the proposed Bypass Road, developed for NWFTCA.

(42) *Comment:* One commenter stated that the EA makes the invalid assumption that incremental impacts occur only in the migratory corridor areas, and that this assumption ignores the added review and protection afforded to lands designated as critical habitat that are not located in the migratory corridors. The commenter

also stated that there are other reasons for Federal consultation besides Corps permitting that have been ignored.

Response: As noted in Section 3 of the final EA the only Federal nexus that could be identified within the proposed critical habitat areas is through Section 404 of the Clean Water Act, which directs the Corps to permit dredge and fill activities in wetlands. Aside from additional administrative costs of section 7 consultations, the EA was unable to identify any added costs specifically related to the designation of critical habitat outside of the migratory corridors.

(43) *Comment:* One commenter stated that Section 2.7 of the EA forecasts no section 7 consultations related to development activities.

Response: Section 3 of the final EA estimates impacts to developable lands that intersect wetlands. However, available information does not allow forecasting of either the timing or frequency of development-related consultations in future years. Thus, while addressing the potential for a reduction in the option value of developable lands, the final EA does not estimate the cost of consultations associated with these activities.

(44) *Comment:* One commenter stated that the EA does not estimate the impacts of possible future land-use changes and re-zonings that would accommodate greater levels of development.

Response: As discussed in Section 3.2.1 of the final EA, available information does not allow forecasting of when and where any such re-zonings may take place in future years.

(45) *Comment:* One commenter stated that Section 3.2.1 of the EA makes the unreasonable assumption that existing residential, commercial, and industrial developments are unaffected by salamander conservation and are, therefore, removed from the analysis. The commenter also indicated that redevelopment in these areas may affect salamander habitat conservation efforts, particularly areas with extensive open space.

Response: As stated in Section 3.2.1 of the draft EA, ''[b]ecause the threat to the salamander of development involves disturbance of soil structure and the removal of trees, existing residential, commercial, and industrial developments are assumed to be unaffected by salamander conservation and are therefore removed from the analysis according to available aerial photography.'' Based on this aerial photography, existing residential, commercial and industrial developments were excluded from the analysis; however, all currently open spaces were included in the analysis of developable acreage that may be affected by salamander conservation efforts.

(46) *Comment:* One commenter stated that the EA undervalues the potential for development to be precluded on uplands based on critical habitat designation.

Response: The EA identifies no Federal nexus that would cause the private owners of these acres to modify their behavior, as indicated in the introduction to Section 3 of the EA.

(47) *Comment:* One commenter stated that Section 3.2.3 of the EA utilizes unreasonably low mitigation ratios, which do not accurately reflect current regulatory requirements or costs.

Response: Section 3.2 of the EA quantifies the potential economic impacts to development activities under two scenarios. The low-end scenario uses a mitigation ratio based on past salamander consultations on development projects. The high-end scenario assumes development is entirely precluded. Therefore, we believe we have captured the entire possible range of economic impacts to development activities.

(48) *Comment:* One commenter noted that Apalachicola National Forest has proposed an amendment to their Forest Plan which would provide a higher level of protection to the species. Particular changes include: (1) Creating ''salamander conservation areas'' that encompass proposed critical habitat and other areas offering high potential as flatwoods salamander habitat; (2) no conducting of extensive mechanical site preparation or other actions that cause significant soil disturbance within the primary and secondary zones; and (3) conducting harvests in such a manner that will minimize rutting and not alter hydrology within the primary and secondary zones.

Response: This comment has been noted in the final EA, and costs related to developing the amendment have been incorporated into Section 2 of the analysis. Based on written communication with National Forests in Florida on December 5, 2008, it is unlikely that the amendment will impose additional timber management costs in future years.

Comments From States

Section 4(i) of the Act states, ''the Secretary shall submit to the State agency a written justification for his failure to adopt a regulation consistent with the agency's comments or petition.'' We received no comments on the 2008 proposed rule from State agencies. We did receive comments from two State agency biologists, one employed by Florida Fish and Wildlife Conservation Commission and the other by Georgia Department of Natural Resources; however, they were peer reviewers and their comments are addressed under that section. Comments were received on the 2007 proposed rule from the office of the governor, the State of Florida; the Florida Department of Transportation; and the South Carolina Department of Natural Resources.

Comments From States on 2007 Proposed Rule

(49) *Comment:* The office of the governor, the State of Florida, provided the comment from the Office of Citizen Services that the information on designation of critical habitat was passed on to the Executive Director for the Florida Fish and Wildlife Conservation Commission.

Our Response: We have noted these comments.

(50) *Comment:* The Central Environmental Management Office provided comments on behalf of the Florida Department of Transportation (FDOT). The commenter stated that a flatwoods salamander habitat evaluation model is used by FDOT to assess potential impacts to flatwoods salamander habitat as a result of construction activities on a project by project basis. So far, FDOT believed that this method had been successful as a means of coordination with the Service and developing approved avoidance and minimization measures. FDOT believed designation of critical habitat could affect future projects; however, they will continue to coordinate with the Service to avoid and minimize impacts to flatwoods salamander

Our Response: We have noted these comments.

(51) *Comment:* In comments on the 2007 proposed rule, the South Carolina Department of Natural Resources (SCDNR) requested that the Service remove the Santee Coastal Reserve (SCR), Charleston County, South Carolina, from critical habitat designation. They provided a SCDNR Board approved management plan, dated September 13, 2002, which provided information on the flatwoods salamander and management recommendations derived from the final listing package for the species.

Our Response: In 2007, SCDNR provided the Service with general information and management recommendations reworded from the ''no take'' guidelines presented in the original flatwoods salamander listing

rule from 1999. They did not provide a species-specific management plan for the flatwoods salamander, nor evidence that management actions have been implemented to benefit the species in the past, nor assurances that they will be conducted in the future. Prescribed fire is mentioned as an important component of habitat management for the flatwoods salamander; however, no specifics regarding the use of prescribed fire as a management tool are mentioned. The Service considers this a deficiency in the plan. The Service received no comments from SCDNR on the 2008 proposed rule. The Service does not believe the plan provided by SCDNR in 2007 provides benefits of excluding the SCR from critical habitat designation that outweigh the benefits of inclusion. Therefore, the Service is including SCR in the final critical habitat designation.

Summary of Changes From Proposed Rule

In preparing this final listing rule and critical habitat designation for the frosted flatwoods salamander and the reticulated flatwoods salamander, we reviewed and considered comments from the public on the proposed designation of critical habitat for the flatwoods salamander published on February 7, 2007 (72 FR 5856), and on the proposed determination of endangered status for the reticulated flatwoods salamander, proposed designation of critical habitat for the frosted flatwoods salamander and reticulated flatwoods salamander, and our announcement of the availability of the DEA published on August 13, 2008 (73 FR 47258). We likewise reviewed and considered comments from our notice providing supplemental information on the status of the frosted flatwoods salamander published on September 18, 2008 (73 FR 54125), and from the public hearing held on October 22, 2008. As a result of public comments and peer review, we made changes to our proposed designation of critical habitat for the frosted flatwoods salamander and reticulated flatwoods salamander resulting in a reduction of 3,205 acres (977 hectares). These changes are as follows:

(1) We removed the unit containing occupied reticulated flatwoods salamander habitat on Navy Outlying Landing Field Holley, Santa Rosa County, Florida, because this area meets our criteria for exclusion (*see* Comment 16 and ''Application of Section 4(a)(3) of the Act'' for more information).

(2) We removed the units containing occupied reticulated flatwoods salamander habitat on Eglin Air Force Base and Hurlburt Field, Okaloosa and Santa Rosa Counties, Florida, because these areas meet our criteria for exclusion (see Comment 15 and ''Application of Section 4(a)(3) of the Act'' for more information).

(3) We removed the unit containing portions of Point Washington State Forest, Walton County, Florida, because the data on which the occupancy determination was based are considered to be in error (see Comment 2 for more information).

(4) We removed the unit containing portions of Tate's Hell State Forest, Franklin County, Florida, because the habitat within this unit no longer contains the PCEs (see Comment 3 for more information).

Critical Habitat

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

(i) 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) That may require special management considerations or protection; and

(ii) 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, and 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 government or public access to private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by the private landowner. Where a landowner seeks or requests Federal agency funding or authorization that may affect a listed species or critical habitat, the consultation requirements of Section 7(a)(2) of the Act would apply.

For inclusion in a critical habitat designation, the habitat within the geographic area occupied by the species at the time of listing must contain the physical and biological features that are essential to the conservation of the species, and be included only if those features may require special management consideration or protection. 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 (i.e., areas on which are found those physical and biological features essential to the conservation of the species). Under the Act, we can designate critical habitat in areas outside of the geographical area occupied by the species at the time it is listed 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 Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and 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 represent 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 determining which areas should be designated as critical habitat, our primary source of information is generally the listing package 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.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. 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 may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the 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, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

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 subsequently occupied sites (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. For purposes of determining occupancy at the time of listing, we have used the original data of listing of the combined species. Polygons were then computer-generated by overlaying these occurrence locations with circles of a 1,500-ft (457-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 (3.2 km) 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

In accordance with Section 3(5)(A) of the Act and regulations at 40 CFR 424.12, in determining which areas occupied at the time of listing to designate as critical habitat, 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 appropriate quantity and spatial arrangement for conservation of the species, and that may require special management considerations or protection.

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 ground cover 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 ground cover 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 ft (450 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 (1.6 km)) as the maximum dispersal distance for flatwoods salamanders. Therefore, breeding sites within twice this distance (2 miles (3.2 km)) 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 underground 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 ground cover 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 holbrookii*), 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 less than 1 to 10 acres (ac) (less than 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 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 PCE 2; and

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

This 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. Even though per the Act, each unit must contain at least one or more PCEs, in this designation all units designated as critical habitat 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 final 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 random 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 occupied at the time of listing that we are designating 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 areas occupied at the time of listing and for areas unoccupied at listing, whether these areas were essential to the conservation of the species. Detailed data on specific locations are included in the unit description in the Critical Habitat Designation section of this final 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 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 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 underground 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 random 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; as a result, these four areas were not part of the designation. The two units occupied since the time of listing are essential areas for the conservation of the species and were therefore included in the designation.

We are designating 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 designating 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 we believe to be essential to the conservation of the species.

The lands designated 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 random 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 within the critical habitat designation 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 critical habitat within this designation, and those areas exempted due to the Sikes Act, are sufficient to provide for the conservation of the species. We are not designating 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 critical habitat boundaries within this final 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 rule have been excluded by text in this final rule and are not designated 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.

Critical Habitat Designation

For the reticulated flatwoods salamander, we are designating 8 units, some of which are divided into subunits (for a total of 16 units and subunits), as critical habitat. For the frosted flatwoods salamander, we are designating 6 units, some of which are divided into subunits (for a total of 19 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 (RFS) BY CRITICAL HABITAT UNIT

Unit	Occupied at time of listing	Currently occupied (but not occupied at time of listing)	Size of unit in acres (ac) (hectares (ha))
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–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).

TABLE 2—AREAS DETERMINED TO MEET THE DEFINITION OF CRITICAL HABITAT FOR THE RETICULATED FLATWOODS SALAMANDER BUT WERE EXEMPTED FROM FINAL CRITICAL HABITAT DESIGNATION

[Totals may not sum due to rounding]

Geographic area	Definitional areas acres (hectares)	Area exempted from final designation acres (hectares)	Reason
NOLF Holley	289 (117)	289 (117)	INRMP.
Eglin Air Force Base	1,880 ac (761 ha)	1,880 ac (761 ha)	INRMP.
Hurlburt Field	712 ac (288 ha)	712 ac (288 ha)	INRMP.
Total (Okaloosa and Santa Rosa counties, Florida)	2,881 ac (1,166 ha)	2,881 ac (1,166 ha).	

Table 3 provides the approximate area encompassed within each critical habitat unit determined to meet the definition of critical habitat for the reticulated flatwoods salamander. Acre and hectare values were individually computer-generated using GIS software, rounded to nearest whole number, and then summed. Table 4 shows the occupied units for the frosted flatwoods salamander.

TABLE 3—CRITICAL HABITAT UNITS FOR THE RETICULATED FLATWOODS SALAMANDER (RFS)

[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					
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		162 ac (66 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–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).

TABLE 3—CRITICAL HABITAT UNITS FOR THE RETICULATED FLATWOODS SALAMANDER (RFS)—Continued

[Totals may not match due to rounding]

Subunit	Federal ac (ha)	State ac (ha)	Local ac (ha)	Private ac (ha)	Total ac (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	0 ac (0 ha)	952 ac (397 ha)	25 ac (10 ha)	3,476 ac (1,396 ha)	4,453 ac (1,803 ha).

TABLE 4—OCCUPANCY OF FROSTED FLATWOODS SALAMANDER (FFS) BY CRITICAL HABITAT UNIT

Unit	Occupied at time of listing	Currently occupied (but not occupied at 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).
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–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).

TABLE 5—AREAS DETERMINED TO MEET THE DEFINITION OF CRITICAL HABITAT FOR THE FROSTED FLATWOODS SALAMANDER BUT WERE EXEMPTED FROM FINAL CRITICAL HABITAT DESIGNATION

[Totals may not sum due to rounding]

Geographic area	Definitional areas acres (hectares)	Area exempted from final designation acres (hectares)	Reason
Fort Stewart Military Installation	5,121 (2,072)	5,121 (2,072)	INRMP.
Townsend Bombing Range	162 (66)	162 (66)	INRMP.
Total (Georgia)	5,283 (2,137)	5,283 (2,137)	

Table 6 provides the approximate area encompassed within each critical habitat unit determined to meet the definition of critical habitat for the frosted flatwoods salamander. Acre and hectare values were individually computer-generated using GIS software, rounded to nearest whole number, and then summed.

TABLE 6—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–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).
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)	269 ac (109 ha)	0 ac (0 ha)	4,187 ac (1,694 ha)	22,970 ac (9,297 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) in Santa Rosa County, Florida. 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, which was 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 designated as critical habitat 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 162 ac (66 ha) on State land managed by NWFLWMD and Blackwater River State Forest (BRSF); and 162 ac (66 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 designated as critical habitat 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 State land managed by BRSF. 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. All lands designated as critical habitat 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 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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) in Liberty County, Florida. 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 designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit B

Unit FFS–1, Subunit B encompasses 733 ac (296 ha) in Liberty County, Florida. 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 designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit C

Unit FFS–1, Subunit C encompasses 972 ac (393 ha) in Liberty County, Florida. 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 designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit D

Unit FFS–1, Subunit D encompasses 568 ac (230 ha) in Liberty County, Florida. 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 designated as critical habitat 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) in Liberty County, Florida. 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 designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit F

Unit FFS–1, Subunit F encompasses 162 ac (66 ha) in Liberty County, Florida. 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 designated as critical habitat 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) in Liberty County, Florida. 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 designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit H

Unit FFS–1, Subunit H encompasses 887 ac (359 ha) in Liberty County, Florida. 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 random 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, although 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. All lands designated as critical habitat 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 in Liberty County, Florida. 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 random 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. All lands designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Subunit J

Unit FFS–1, Subunit J encompasses 593 ac (240 ha) in Franklin County, Florida. 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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 designated as critical habitat 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. 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 ecology of the breeding pond and

surrounding terrestrial habitat. All lands designated as critical habitat contain all PCEs and support multiple frosted flatwoods salamander life processes.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the Act requires Federal agencies 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 (or retain the current ability for the PCEs to be functionally established) 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 Corps 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 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 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

Navy Outlying Landing Field Holley (NOLF Holley)

NOLF Holley is located in 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 NOLF Holley 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 5 years (2007–2011). 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 NOLF Holley. The area of NOLF Holley 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). Although we had received information in 2007 that the Navy was considering selling NOLF Holley and as a result were concerned about implementation of the INRMP, the Navy has assured us that it has no plans to transfer ownership of the site and it intends to continue stewardship of the salamander and its habitat (DoN 2008, p. 2).

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 efforts identified in the INRMP will provide benefits to the reticulated flatwoods salamander and the features essential to the species' conservation occurring on NOLF Holley. 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 289 ac (117 ha) of habitat in the final critical habitat designation for the reticulated flatwoods salamander because of this exemption.

Hurlburt Field

Hurlburt Field is located in Okaloosa County, Florida, and has approximately 712 ac (288 ha) of habitat with features essential to the conservation of the reticulated flatwoods salamander. The U.S. Department of Defense-Air Force finalized a revision to the INRMP for Hurlburt Field in 2008 (DoD 2008, pp. 1–152). The INRMP will continue to be reviewed annually to monitor the effectiveness of the plan, and be reviewed every five years to develop revisions and updates as necessary. We have examined this document and determined that it does outline conservation measures for the reticulated flatwoods salamander, as well as management plans for 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 (DoD 2008, pp. 61, 79, 133–151).

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 efforts identified in the INRMP will provide a benefit to the reticulated flatwoods salamander and the features essential to the species' conservation occurring in habitats within Hurlburt Field. Therefore, this installation is exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 712 ac (288 ha) of habitat in this final designation of critical habitat because of this exemption.

Eglin Air Force Base (Eglin)

Eglin is located in Okaloosa and Santa Rosa counties, Florida, and has approximately 1,880 ac (761 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 5 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 2006a, 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). In 2007, it came to our attention (Arnold 2007) that a road had been proposed which could cross Eglin within the habitat with features essential to the conservation of the reticulated flatwoods salamander. However, during the open comment period Eglin assured us that it will not allow negative impacts to the salamander's habitat and that it will continue to ensure the conservation of the reticulated flatwoods salamander.

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 provide a benefit to the reticulated flatwoods salamander and the features essential to the species' conservation occurring on Eglin. Therefore, approximately 1,880 ac (761 ha) of habitat on Eglin with features essential to the conservation of the reticulated flatwoods salamander are exempt from this final critical habitat designation under section 4(a)(3) of the Act.

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 final 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 2006b, 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).

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, approximately 162 ac (66 ha) of habitat with features essential to the conservation of the frosted flatwoods salamander on Townsend are exempt from final critical habitat designation under section 4(a)(3) of the Act.

Application of Exclusions Under 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 statute as well as the legislative history are 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 determine that the benefits of exclusion would outweigh the benefits of inclusion of an area, then we can exclude the area only if such exclusions would not result in the extinction of the species.

Under section 4(b)(2) of the Act, we must consider all relevant impacts, including economic impacts. We 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.

In the proposed rule, we requested comments regarding information supporting or opposing possible exclusion of units within National Forests from critical habitat in the final designation. In this instance, we have examined all comments submitted and 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. None of these Plans provide sufficient protection and management to satisfy the criteria necessary for exclusion from final critical habitat.

On the other hand, we have determined that the lands designated as critical habitat for the frosted and reticulated flatwoods salamanders are not currently included in habitat conservation plans (HCPs) for these species and that the designation does not include any Tribal lands or trust resources. We anticipate no impact to national security, Tribal lands, partnerships, or HCPs from this critical habitat designation.

Economic Analysis (EA)

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 an EA of this final designation of critical habitat for the frosted and reticulated flatwoods salamanders.

The final EA (Industrial Economics 2008b) 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 EA 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 EA 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 EA 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 2008b, 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 2008b, 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 2008b, p. B–5).

Because our EA did not identify any disproportionate costs that are likely to result from the designation, we did not consider excluding any areas from this designation of critical habitat for the frosted or reticulated flatwoods salamanders based on economic impacts.

A copy of the final EA with supporting documents is included in our administrative record and may be obtained by contacting U.S. Fish and Wildlife Service, Branch of Endangered Species (see **FOR FURTHER INFORMATION CONTACT**) or by downloading from the Internet at *www.regulations.gov/*.

Therefore, there are no areas excluded from this final critical habitat designation under section 4(b)(2).

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. In this final rule, we are certifying that the critical habitat designation for the frosted and reticulated flatwoods salamanders will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

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 final 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 final 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 EA 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 2008b, 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 2008b, 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 the final 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 2008b, 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 2008b, p. A–3).

In summary, we have considered whether this final 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 final regulation will not result in a significant economic impact on a substantial number of small business entities. Please refer to our EA 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 designated as critical habitat 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.

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 final 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 final 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 designated critical habitat in accordance with the provisions of the Act. This final 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 United States Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

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 no final 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 final 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 EA (Industrial Economics Inc. 2008a, p. A–8), none of the nine outcomes that

may constitute ''a significant adverse effect'' exist for this final 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 Aycock, Mississippi Fish and Wildlife Office (*see* **FOR FURTHER INFORMATION CONTACT**).

Author(s)

The primary author of this document is the Staff of the U.S. Fish and Wildlife Service, Mississippi Fish and Wildlife Service Field Office (*see* **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

■ Accordingly, we 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; Public Law 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. In § 17.11(h) remove the entry for ''Salamander, flatwoods'', and add 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.	*Ambystoma cingulatum.*	U.S.A. (FL, GA, SC)	Entire	T	658	17.95(d)	NA
*	*	*	*	*	*	*	
Salamander, reticulated flatwoods.	*Ambystoma bishopi*	U.S.A. (FL, GA)	Entire	E		17.95(d)	NA
*	*	*	*	*	*	*	

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 these species appear 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 less than 1 to 10 ac (less than 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 frosted flatwoods salamander.

(iii) *Dispersal habitat.* Upland habitat areas between nonbreeding 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;

(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.

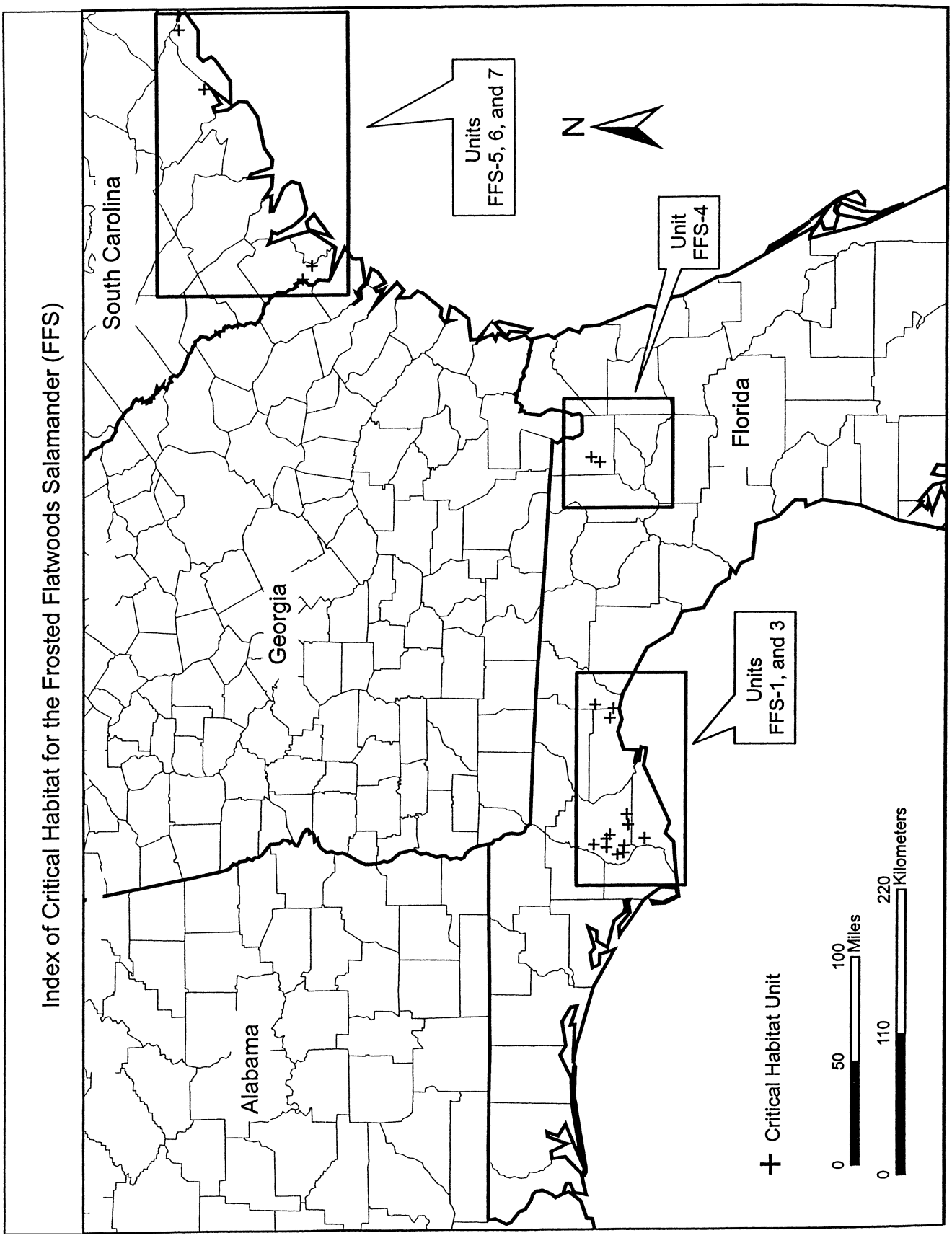
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they

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:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(6) Frosted flatwood salamander—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) *Note:* 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) *Note:* 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) *Note:* 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) *Note:* 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) *Note:* 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) *Note:* 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; 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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) *Note:* 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) *Note:* 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.

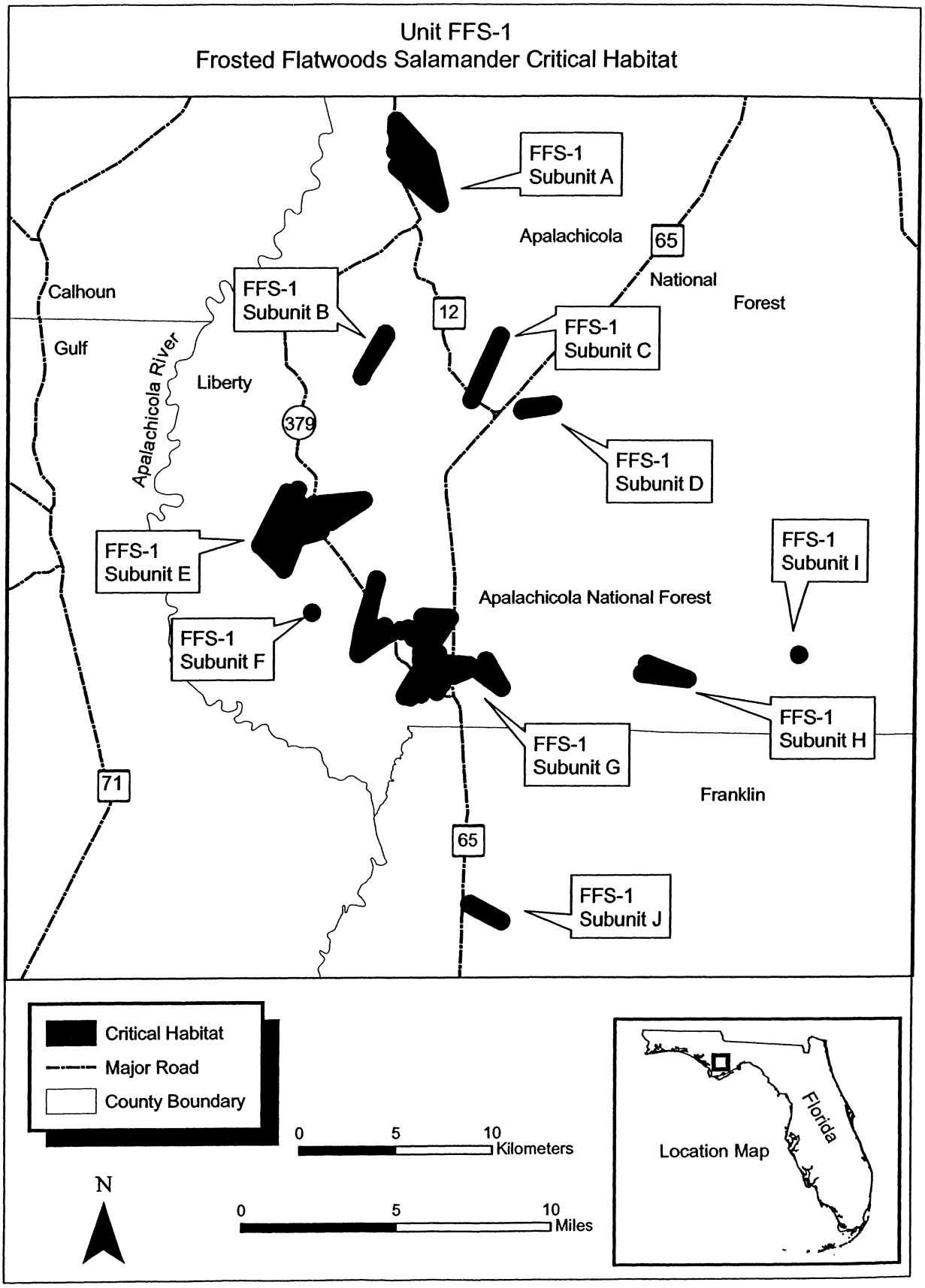
(B) *Note:* Map depicting Unit FFS–1, Subunit I is provided at paragraph (6)(x)(B) of this entry.

(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) *Note:* Map of Unit FFS–1 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(xi) 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; 777830.96, 3337119.82; 777805.91, 3337133.94; 777781.88, 3337149.75; 777758.79, 3337166.92; 777736.91, 3337185.45; 777716.25, 3337205.45; 777696.81, 3337226.60; 777678.79, 3337249.00; 777662.19, 3337272.43; 777651.12, 3337290.35; 777641.54, 3337280.46; 777620.33, 3337261.06; 777598.03, 3337242.96; 777574.53, 3337226.39; 777550.03, 3337211.35; 777524.72, 3337197.84; 777498.59, 3337185.86; 777471.75, 3337175.64; 777444.29, 3337167.07; 777416.30, 3337160.37; 777410.25, 3337159.33; 777411.85, 3337145.51; 777413.25, 3337116.80; 777412.92, 3337088.06; 777410.75, 3337059.38; 777406.74, 3337030.88; 777400.99, 3337002.77; 777393.49, 3336975.07; 777384.25, 3336947.76; 777373.35, 3336921.19; 777360.79, 3336895.35; 777346.57, 3336870.36; 777330.87, 3336846.33; 777313.71, 3336823.27; 777295.07, 3336801.38; 777275.15, 3336780.69; 777253.94, 3336761.29; 777231.63, 3336743.20; 777208.13, 3336726.63; 777183.73, 3336711.59; 777158.32, 3336698.08; 777132.19, 3336686.10; 777105.35, 3336675.88; 777077.88, 3336667.42; 777049.99, 3336660.62; 777021.67, 3336655.58; 776993.11, 3336652.30; 776964.40, 3336650.92; 776935.65, 3336651.30; 776907.05, 3336653.46; 776878.50, 3336657.40; 776850.38, 3336663.13; 776822.61, 3336670.64; 776795.47, 3336679.83; 776768.87, 3336690.81; 776742.99, 3336703.36; 776718.05, 3336717.49; 776693.93, 3336733.19; 776670.93, 3336750.37; 776648.95, 3336769.01; 776628.29, 3336788.90; 776608.85, 3336810.16; 776590.83, 3336832.56; 776574.23, 3336856.00; 776570.11, 3336862.66; 776553.01, 3336856.13; 776525.55, 3336847.67; 776497.65, 3336840.87; 776469.33, 3336835.83; 776440.77, 3336832.56; 776412.07, 3336831.17; 776383.32, 3336831.56; 776354.72, 3336833.72; 776326.26, 3336837.66; 776298.05, 3336843.39; 776270.38, 3336850.90; 776243.14, 3336860.09; 776216.54, 3336871.08; 776190.67, 3336883.63; 776165.72, 3336897.76; 776141.60, 3336913.46; 776118.60, 3336930.63; 776096.72, 3336949.28; 776075.97, 3336969.17; 776056.63, 3336990.43; 776038.52, 3337012.83; 776021.92, 3337036.27; 776006.84, 3337060.74; 775993.38, 3337086.03; 775981.43, 3337112.25; 775971.21, 3337139.07; 775962.71, 3337166.48; 775955.93, 3337194.49; 775950.88, 3337222.77; 775947.66, 3337251.31; 775946.17, 3337280.01; 775946.60, 3337308.76; 775948.78, 3337337.32; 775952.69, 3337365.83; 775958.44, 3337394.04; 775965.94, 3337421.74; 775975.19, 3337448.94; 775986.10, 3337475.51; 775998.66, 3337501.34; 776012.79, 3337526.33; 776028.58, 3337550.47; 776045.74, 3337573.53; 776064.28, 3337595.41; 776084.30, 3337616.11; 776105.42, 3337635.50; 776127.82, 3337653.48; 776151.32, 3337670.16; 776175.72, 3337685.20; 776201.13, 3337698.71; 776227.26, 3337710.57; 776244.06, 3337717.09; 776242.57, 3337718.94; 776232.10, 3337713.35; 776205.89, 3337701.38; 776179.04, 3337691.16; 776151.58, 3337682.70; 776123.69, 3337675.90; 776095.37, 3337670.86; 776066.81, 3337667.59; 776038.11, 3337666.20; 776009.36, 3337666.59; 775980.76, 3337668.76; 775952.31, 3337672.70; 775924.10, 3337678.43; 775896.43, 3337685.94; 775869.20, 3337695.13; 775842.60, 3337706.12; 775816.73, 3337718.67; 775791.78, 3337732.80; 775767.66, 3337748.50; 775744.67, 3337765.68; 775722.70, 3337784.32; 775702.04, 3337804.22; 775682.61, 3337825.48; 775664.59, 3337847.77; 775648.00, 3337871.32; 775632.92, 3337895.68; 775619.36, 3337921.08; 775607.52, 3337947.30; 775597.30, 3337974.11; 775588.70, 3338001.52; 775581.93, 3338029.42; 775576.97, 3338057.81; 775573.65, 3338086.36; 775572.26, 3338115.06; 775572.59, 3338143.80; 775574.77, 3338172.37; 775578.78, 3338200.87; 775584.54, 3338228.98; 775592.03, 3338256.79; 775601.19, 3338283.98; 775612.19, 3338310.55; 775624.75, 3338336.39; 775638.88, 3338361.37; 775654.57, 3338385.51; 775671.73, 3338408.46; 775690.37, 3338430.46; 775710.29, 3338451.15; 775731.50, 3338470.54; 775753.90, 3338488.52; 775777.31, 3338505.09; 775801.80, 3338520.24; 775827.21, 3338533.75; 775853.33, 3338545.61; 775880.17, 3338555.94; 775907.63, 3338564.39; 775935.52, 3338571.20; 775963.84, 3338576.23; 775992.39, 3338579.50; 776021.09, 3338580.89; 776049.84, 3338580.50; 776078.53, 3338578.34; 776106.98, 3338574.40; 776135.09, 3338568.67; 776162.85, 3338561.16; 776190.08, 3338551.97; 776216.69, 3338540.99; 776242.46, 3338528.43; 776267.50, 3338514.30; 776291.52, 3338498.60; 776314.61, 3338481.43; 776336.49, 3338462.78; 776357.24, 3338442.89; 776376.58, 3338421.63; 776392.70, 3338401.62; 776403.17, 3338407.21; 776429.29, 3338419.08; 776456.13, 3338429.40; 776483.59, 3338437.86; 776511.57, 3338444.67; 776539.80, 3338449.71; 776568.35, 3338452.98; 776597.05, 3338454.37; 776625.80, 3338453.98; 776654.49, 3338451.82; 776660.01, 3338451.07; 776670.54, 3338476.85; 776827.26, 3339164.36; 777053.70, 3340157.85;

775510.45, 3340235.09; 775168.35, 3339961.10; 775144.54, 3339940.36; 775091.43, 3339897.57; 774949.30, 3339783.09; 774965.89, 3339759.65; 774980.97, 3339735.17; 774994.43, 3339709.77; 775006.36, 3339683.66; 775016.58, 3339656.74; 775025.08, 3339629.33; 775031.95, 3339601.43; 775036.90, 3339573.15; 775039.60, 3339549.86; 775040.22, 3339544.61; 775041.61, 3339515.91; 775041.27, 3339487.16; 775041.13, 3339484.94; 775057.54, 3339480.47; 775084.67, 3339471.27; 775111.27, 3339460.29; 775137.13, 3339447.74; 775162.17, 3339433.61; 775186.18, 3339417.90; 775209.27, 3339400.73; 775231.15, 3339382.08; 775251.80, 3339362.18; 775271.23, 3339340.93; 775289.24, 3339318.63; 775305.83, 3339295.08; 775321.00, 3339270.72; 775334.47, 3339245.32; 775346.40, 3339219.21; 775356.62, 3339192.29; 775365.12, 3339164.87; 775371.89, 3339136.97; 775376.94, 3339108.70; 775380.17, 3339080.04; 775381.66, 3339051.34; 775381.32, 3339022.71; 775379.14, 3338994.03; 775375.13, 3338965.53; 775369.38, 3338937.42; 775361.88, 3338909.61; 775352.63, 3338882.42; 775341.73, 3338855.85; 775329.16, 3338830.02; 775315.04, 3338805.03; 775299.35, 3338780.89; 775282.09, 3338757.94; 775263.54, 3338735.95; 775243.62, 3338715.26; 775222.41, 3338695.86; 775200.01, 3338677.88; 775176.51, 3338661.32; 775152.11, 3338646.17; 775126.70, 3338632.67; 775100.58, 3338620.80; 775073.74, 3338610.48; 775046.28, 3338602.03; 775018.39, 3338595.22; 774990.07, 3338590.19; 774961.52, 3338586.92; 774932.82, 3338585.54; 774904.08, 3338585.82; 774875.38, 3338588.09; 774846.93, 3338592.04; 774818.83, 3338597.77; 774791.06, 3338605.29; 774763.83, 3338614.48; 774737.24, 3338625.35; 774711.37, 3338638.02; 774686.43, 3338652.15; 774662.31, 3338667.86; 774639.71, 3338684.71; 774638.37, 3338684.57; 774609.67, 3338683.18; 774582.28, 3338683.50; 774581.67, 3338680.60; 774574.17, 3338652.89; 774564.92, 3338625.59; 774554.01, 3338599.02; 774541.45, 3338573.19; 774527.32, 3338548.21; 774511.63, 3338524.18; 774494.37, 3338501.12; 774475.82, 3338479.24; 774455.89, 3338458.55; 774434.69, 3338439.05; 774412.28, 3338421.07; 774388.88, 3338404.51; 774364.38, 3338389.36; 774338.97, 3338375.86; 774312.85, 3338364.00; 774286.01, 3338353.68; 774258.55, 3338345.22; 774230.66, 3338338.43; 774202.34, 3338333.39; 774173.78, 3338330.13; 774145.08, 3338328.74; 774116.34, 3338329.03; 774087.74, 3338331.20; 774059.19, 3338335.25; 774031.09, 3338340.99; 774003.32, 3338348.51; 773976.09, 3338357.70; 773949.59, 3338368.58; 773923.73, 3338381.14; 773898.69, 3338395.38; 773874.67, 3338411.09; 773851.58, 3338428.26; 773829.72, 3338446.80; 773808.97, 3338466.81; 773789.64, 3338487.96; 773771.53, 3338510.37; 773754.94, 3338533.81; 773739.86, 3338558.28; 773726.41, 3338583.58; 773714.47, 3338609.79; 773704.26, 3338636.61; 773695.67, 3338664.02; 773688.90, 3338692.03; 773683.85, 3338720.31; 773680.63, 3338748.86; 773679.24, 3338777.56; 773679.59, 3338806.30; 773681.77, 3338834.98; 773685.69, 3338863.37; 773691.44, 3338891.58; 773698.95, 3338919.28; 773708.20, 3338946.47; 773719.11, 3338973.04; 773731.67, 3338998.98; 773745.80, 3339023.97; 773761.50, 3339047.99; 773778.76, 3339071.05; 773797.31, 3339092.93; 773817.23, 3339113.62; 773838.44, 3339133.01; 773860.84, 3339151.10; 773884.34, 3339167.66; 773908.74, 3339182.80; 773934.15, 3339196.31; 773960.27, 3339208.16; 773987.11, 3339218.38; 774014.57, 3339226.94; 774042.46, 3339233.74; 774070.77, 3339238.77; 774099.33, 3339242.04; 774128.03, 3339243.42; 774155.42, 3339242.99; 774156.02, 3339246.00; 774163.52, 3339273.71; 774172.77, 3339301.01; 774174.22, 3339304.59; 774174.02, 3339304.92; 774162.19, 3339331.03; 774151.88, 3339357.85; 774143.38, 3339385.37; 774136.61, 3339413.27; 774131.56, 3339441.55; 774128.34, 3339470.09; 774126.85, 3339498.79; 774127.29, 3339527.54; 774129.37, 3339556.21; 774133.39, 3339584.61; 774139.14, 3339612.82; 774146.65, 3339640.52; 774150.33, 3339651.49; 774130.27, 3339662.97; 774106.16, 3339678.68; 774083.17, 3339695.85; 774061.21, 3339714.39; 774040.56, 3339734.40; 774021.14, 3339755.55; 774003.13, 3339777.95; 773986.54, 3339801.39; 773971.46, 3339825.87; 773957.91, 3339851.27; 773945.98, 3339877.38; 773935.76, 3339904.19; 773927.27, 3339931.72; 773926.18, 3339936.26; 773926.14, 3339936.25; 773920.50, 3339959.62; 773915.45, 3339987.90; 773912.23, 3340016.44; 773910.75, 3340045.14; 773910.93, 3340060.90; 773909.63, 3340058.87; 773892.47, 3340035.81; 773873.92, 3340013.93; 773853.91, 3339993.24; 773832.70, 3339973.85; 773810.39, 3339955.76; 773786.90, 3339939.20; 773777.78, 3339933.61; 773777.91, 3339933.62; 773762.40, 3339924.06; 773737.09, 3339910.55; 773710.97, 3339898.70; 773684.04, 3339888.48; 773656.68, 3339879.92; 773628.70, 3339873.12; 773600.38, 3339868.09; 773571.83, 3339864.83; 773543.13, 3339863.45; 773514.39, 3339863.73; 773485.80, 3339865.90; 773476.45, 3339867.03; 773476.45, 3339867.18; 773457.35, 3339869.96; 773429.15, 3339875.70; 773401.39, 3339883.21; 773374.17, 3339892.41; 773347.58, 3339903.29; 773321.81, 3339915.85; 773296.78, 3339930.09; 773272.67, 3339945.80; 773249.68, 3339962.98; 773227.82, 3339981.52; 773207.07, 3340001.53; 773187.65, 3340022.68; 773169.64, 3340045.08; 773153.05, 3340068.52; 773137.98, 3340093.00; 773124.43, 3340118.29; 773112.50, 3340144.51; 773102.29, 3340171.33; 773093.80, 3340198.74; 773086.93, 3340226.64; 773081.99, 3340255.03; 773078.67, 3340283.58; 773077.28, 3340312.28; 773077.63, 3340341.02; 773079.81, 3340369.59; 773083.82, 3340398.09; 773089.48, 3340426.30; 773096.99, 3340454.00; 773106.24, 3340481.19; 773117.15, 3340507.76; 773129.71, 3340533.59; 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) *Note:* Map depicting Unit FFS–3, Subunit A is provided at paragraph (6)(xiii)(B) of this entry.

(xii) 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, 3341046.94; 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) *Note:* Map depicting Unit FFS–3, Subunit B is located at paragraph (6)(xiii)(B) of this entry.

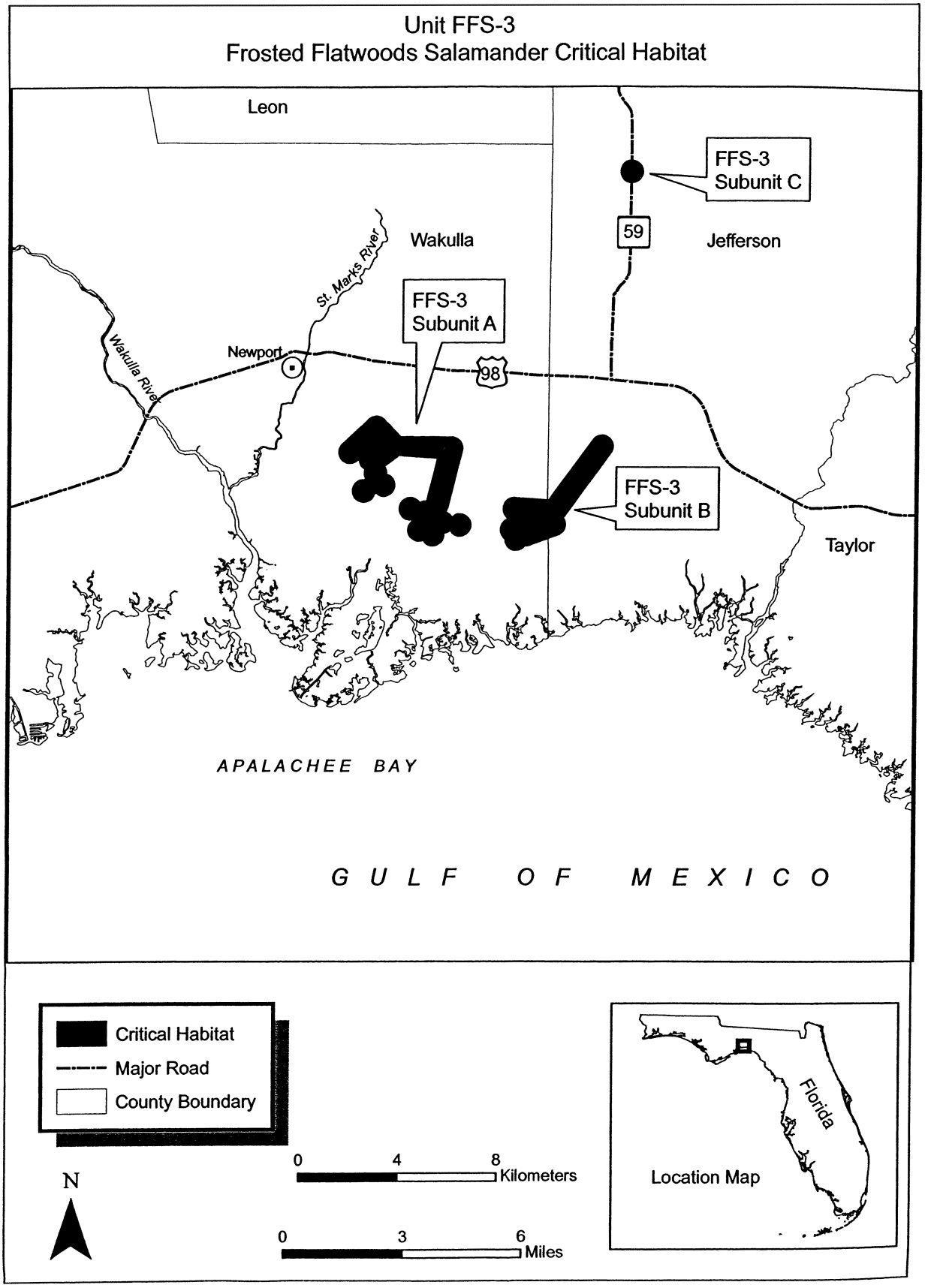
(xiii) Unit FFS–3, Subunit C—Jefferson County, Florida. From USGS 1:24,000 scale quadrangle map Cody, Florida.

(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) *Note:* Map of Unit FFS–3 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(xiv) 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.

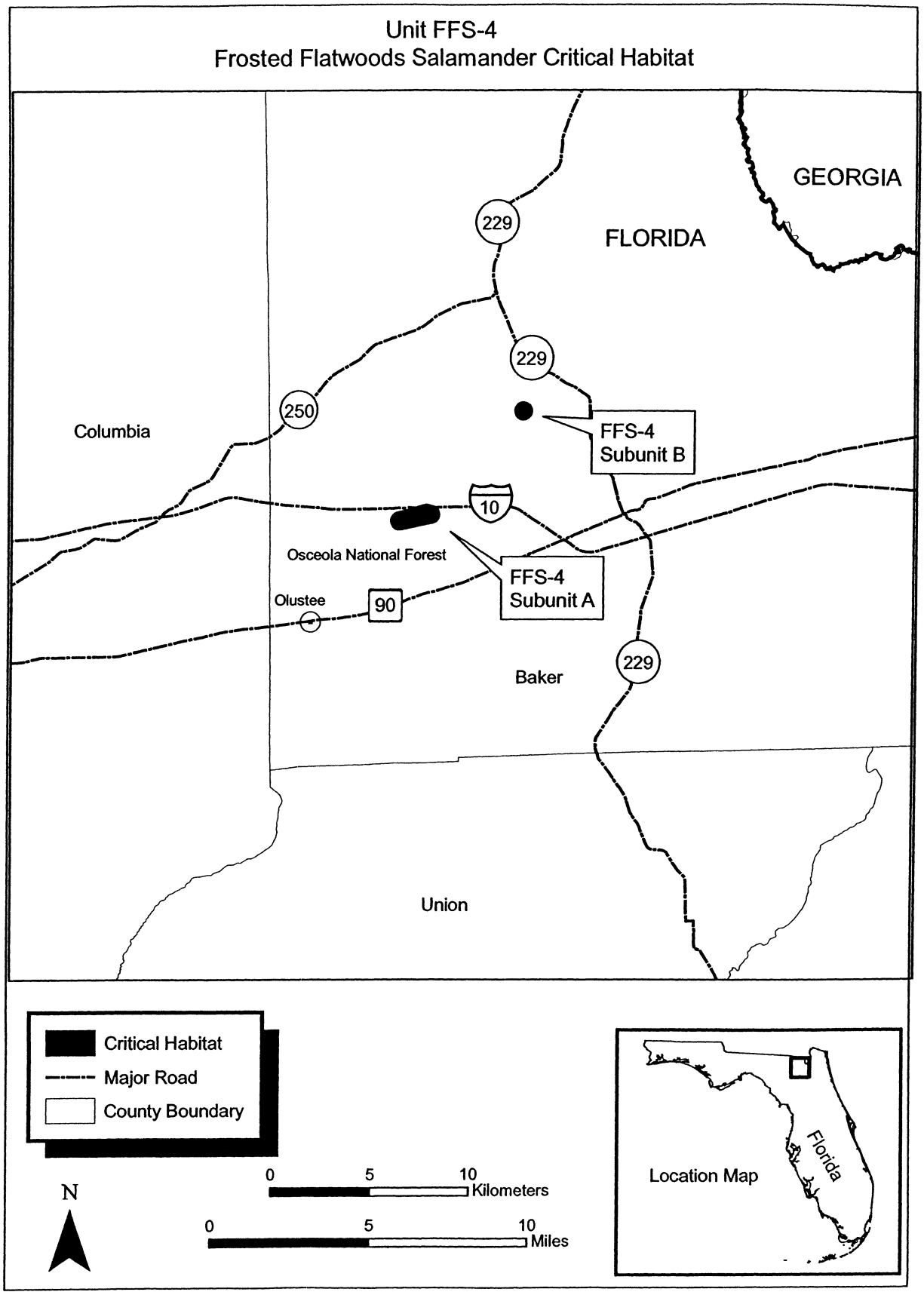
(B) *Note:* Map depicting Unit FFS–3, Subunit A is provided at paragraph (6)(xv)(B) of this entry.

(xv) 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) *Note:* Map of Unit FFS–4 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(7) Frosted flatwood salamander—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.

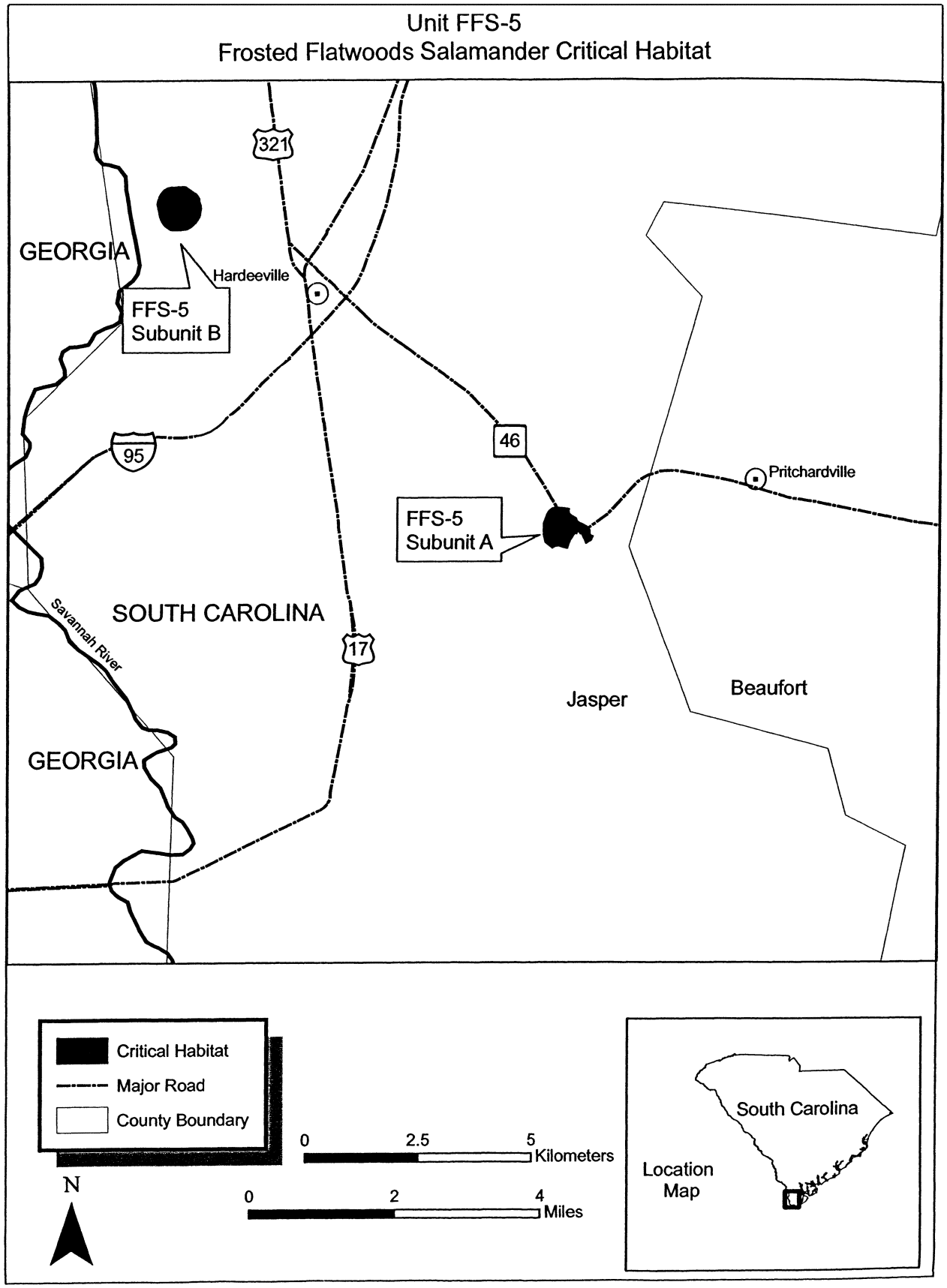
(B) *Note:* Map depicting Unit FFS–5, Subunit A is provided at paragraph (7)(ii)(B) of this entry.

(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) *Note:* Map of Unit FFS–5 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(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.

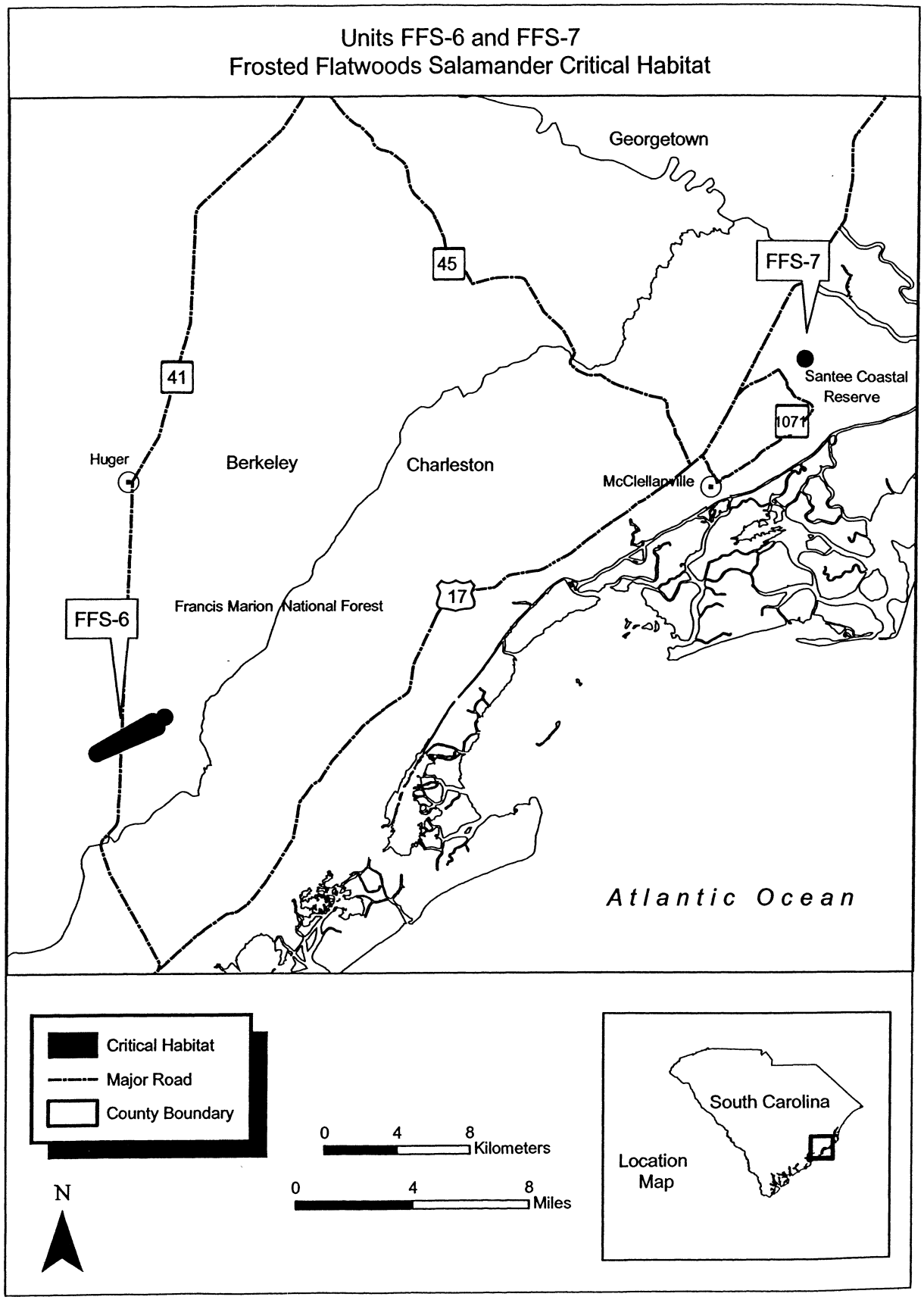
(B) *Note:* Map depicting Unit FFS–6 is provided at paragraph (7)(iv)(B) of this entry.

(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) *Note:* Map of Units FFS–6 and FFS–7 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

Reticulated Flatwoods Salamander (*Ambystoma bishopi*)

(1) Critical habitat units are depicted for Calhoun, Holmes, Jackson, 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 less than 1 to 10 ac (less than 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 reticulated flatwoods salamander.

(iii) *Dispersal habitat.* Upland habitat areas between nonbreeding 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;

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

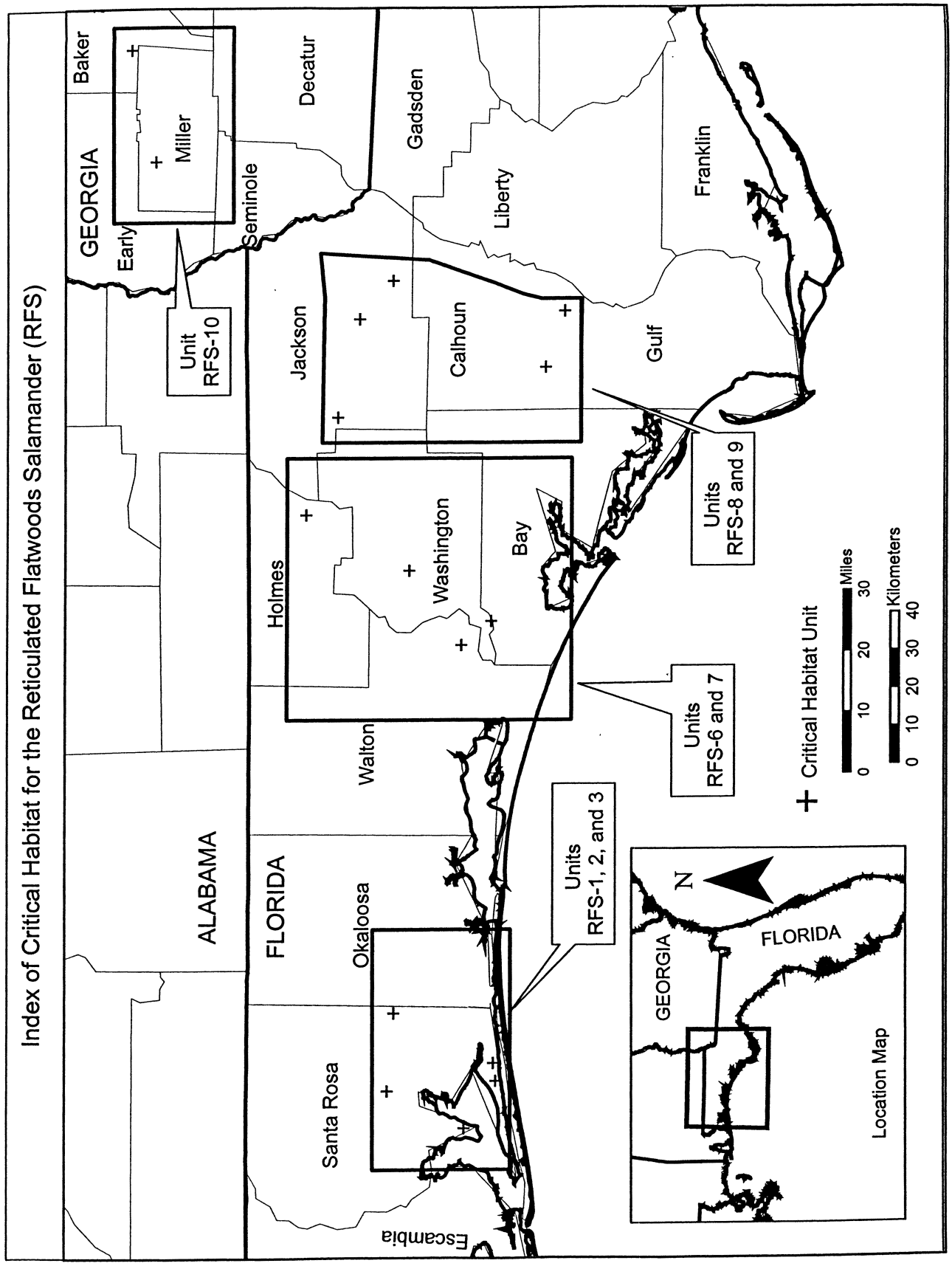
(D) Subsurface structure, such as deep litter cover or burrows that provide shelter for salamanders during seasonal movements.

(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–P



BILLING CODE 4310–55–C

(6) Reticulated flatwood salamander—Calhoun, Holmes, Jackson, 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) *Note:* Map depicting Unit RFS–1 is provided at paragraph (6)(v)(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) *Note:* Map depicting Unit RFS–2, Subunit A is provided at paragraph (6)(v)(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) *Note:* Map depicting Unit RFS–2, Subunit B is provided at paragraph (6)(v)(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; 502829.87, 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.

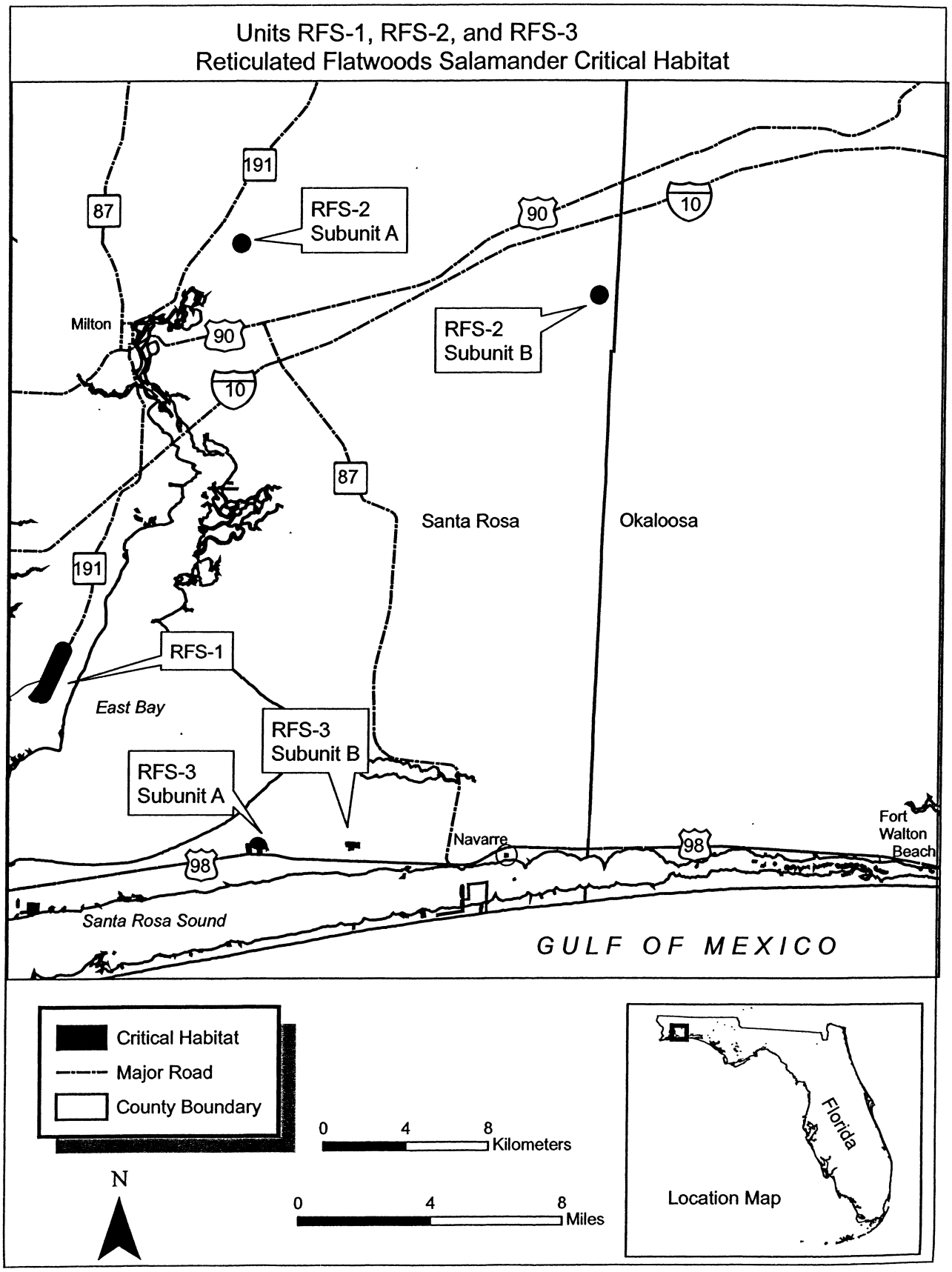
(B) *Note:* Map depicting Unit RFS–3, Subunit A is provided at paragraph (6)(v)(B) of this entry.

(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) *Note:* Map of Units RFS–1, RFS–2, and RFS–3 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(vi) 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) *Note:* Map depicting Unit RFS–6, Subunit A is provided at paragraph (6)(ix)(B) of this entry.

(vii) 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; 607016.09, 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) *Note:* Map depicting Unit RFS–6, Subunit B is provided at paragraph (6)(ix)(B) of this entry.

(viii) 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.

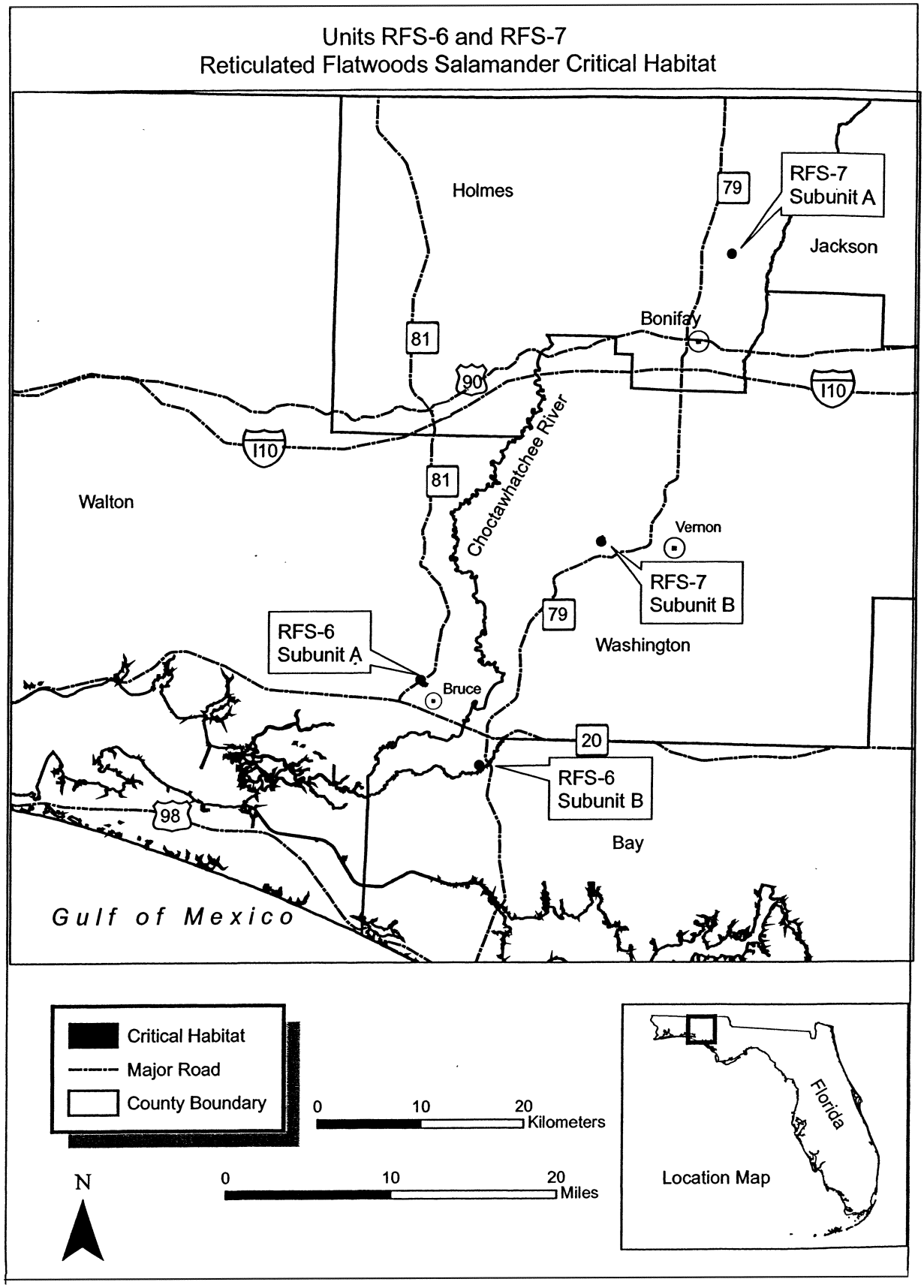
(B) *Note:* Map depicting Unit RFS–7, Subunit A is provided at paragraph (6)(ix)(B) of this entry.

(ix) 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, 3387236.73; 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) *Note:* Map of Units RFS–6 and RFS–7 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(x) 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) *Note:* Map depicting Unit RFS–8, Subunit A is provided at paragraph (6)(xiv)(B) of this entry.

(xi) 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, 3400893.06; 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) *Note:* Map depicting Unit RFS–8, Subunit B is provided at paragraph (6)(xiv)(B) of this entry.

(xii) 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; 684009.91, 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) *Note:* Map depicting Unit RFS–8, Subunit C is provided at paragraph (6)(xiv)(B) of this entry.

(xiii) 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) *Note:* Map depicting Unit RFS–9, Subunit A is provided at paragraph (6)(xiv)(B) of this entry.

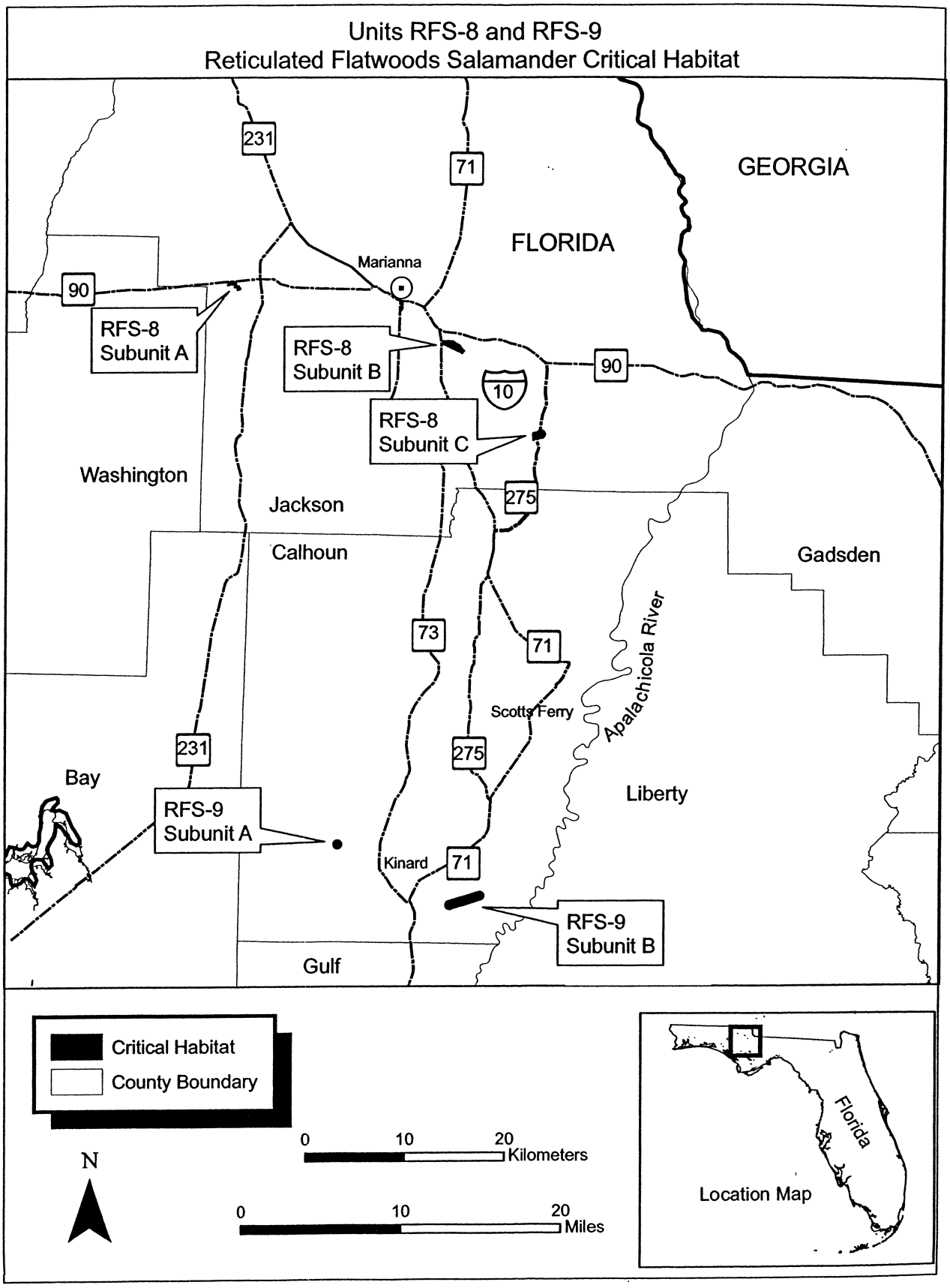
(xiv) Unit RFS–9, Subunit B—Calhoun County, Florida. From USGS 1:24,000 scale quadrangle map Dead Lake, Florida.

(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;

679734.62, 3347257.85; 679739.58, 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) *Note:* Map of Units RFS–8 and RFS–9 follows:

BILLING CODE 4310–55–P



BILLING CODE 4310–55–C

(7) Reticulated flatwood salamander—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.

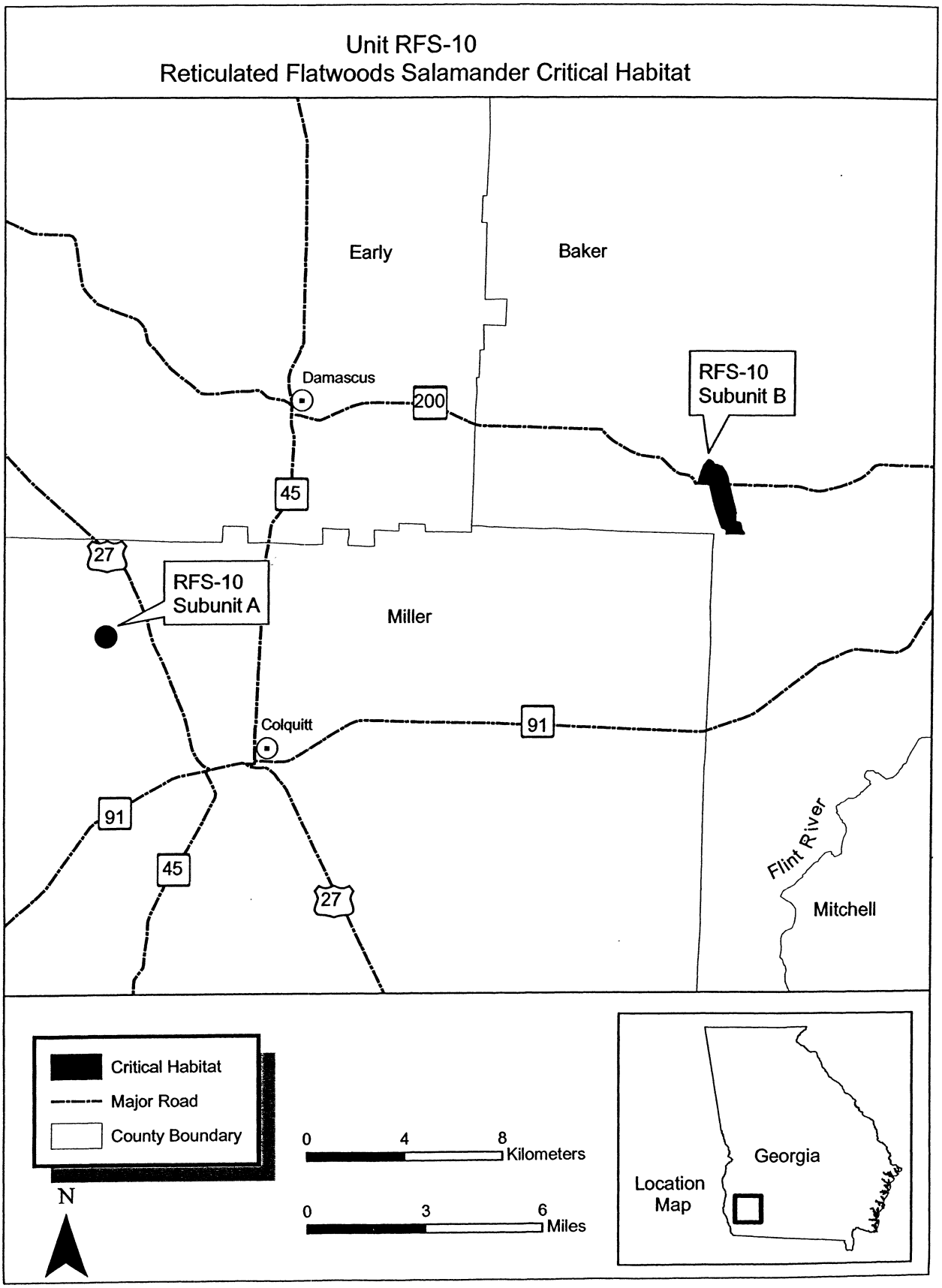
(B) *Note:* Map depicting Unit RFS–10, Subunit A is provided at paragraph (7)(ii)(B) of this entry.

(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) *Note:* Map of Unit RFS–10 follows:

BILLING CODE 4310–55–P


Unit RFS-10
Reticulated Flatwoods Salamander Critical Habitat
Early
Baker
Damascus
200
RFS-10
Subunit B
45
27
RFS-10
Subunit A
Miller
Colquitt
91
91
45
27
Flint River
Mitchell
Critical Habitat
Major Road
County Boundary
N
0 4 8 Kilometers
0 3 6 Miles
Location
Map
Georgia

* * * * *

Dated: *January 29, 2009.*

Jane Lyder,

Assistant Deputy Secretary, Department of the Interior.

[FR Doc. E9–2403 Filed 2–9–09; 8:45 am]

BILLING CODE 4310–55–C