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Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Florida Leafwing and Bartram's Scrub-Hairstreak Butterflies; Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2013–0031; 4500030114]

RIN 1018–AZ59

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Florida Leafwing and Bartram's Scrub-Hairstreak Butterflies

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, designate critical habitat for the Florida leafwing *(Anaea troglodyta floridalis)* and Bartram's scrub-hairstreak *(Strymon acis bartrami)* butterflies under the Endangered Species Act. In total, approximately 4,273 hectares (10,561 acres) in Miami-Dade and Monroe Counties, Florida, fall within the boundaries of the critical habitat designation for the Florida leafwing butterfly, and approximately 4,670 hectares (11,539 acres) in Miami-Dade and Monroe Counties, Florida, fall within the boundaries of the critical habitat designation for the Bartram's scrub-hairstreak butterfly.

DATES: This rule is effective on September 11, 2014.

ADDRESSES: This final rule is available on the Internet at *http://www.regulations.gov* and *http://www.fws.gov/verobeach/*. Comments and materials we received, as well as supporting documentation used in preparation of this rule, are available for public inspection at *http://www.regulations.gov*. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, South Florida Ecological Services Office, 1339 20th Street, Vero Beach, FL 32960; telephone 772–562–3909; facsimile 772–562–4288.

The coordinates, plot points, or both from which the maps are generated are included in the administrative record for this critical habitat designation and are available at *http://www.fws.gov/verobeach/*, at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2013–0031, and at the South Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we develop for this critical habitat designation will also be available at the Fish and Wildlife Service Web site and Field Office set out above, and may also be included in the preamble of this rule and at *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Craig Aubrey, Field Supervisor, U.S. Fish and Wildlife Service, South Florida Ecological Services Office, 1339 20th Street, Vero Beach, FL 32960; telephone 772–562–3909; or facsimile 772–562–4288. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act, when the U.S. Fish and Wildlife Service (Service) determines that a species is endangered or threatened, we are required to designate critical habitat to the maximum extent prudent and determinable. Designations of critical habitat can only be completed by issuing a rule. Elsewhere in today's **Federal Register**, we list the Florida leafwing and Bartram's scrub-hairstreak butterflies as endangered species.

Basis for our action. Section 4(b)(2) of the Act states that the Secretary shall designate 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 areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak butterflies. In total, we are designating approximately 4,273 hectares (ha) (10,561 acres (ac)) in four units as critical habitat for the Florida leafwing butterfly and approximately 4,670 ha (11,539 ac) in seven units as critical habitat for the Bartram's scrub-hairstreak butterfly.

We have prepared an economic analysis of the designation of critical habitat. We have prepared an analysis of the economic impacts of the critical habitat designation and related factors. We announced the availability of the draft economic analysis in the **Federal Register** on May 8, 2014 (79 FR 26392), allowing the public to provide comments. We have incorporated the comments and have completed the analysis concurrently with this final designation.

Peer review and public comment. We sought comments from independent experts to ensure that our designation is based on scientifically sound data and analyses. We obtained opinions from seven knowledgeable individuals with scientific expertise to review our technical assumptions analysis, and to determine whether or not we had used the best available information. These peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve this final rule. We also considered all comments and information we received from the public during the comment periods. Information we received during the comment period is incorporated in this final designation as appropriate.

Previous Federal Actions

On August 15, 2013, we published proposed rules to list the Florida leafwing and Bartram's scrub-hairstreak butterflies as endangered species (78 FR 49878) and to designate their critical habitat (78 FR 49832), under the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*). All Federal actions related to protection under the Act for these subspecies prior to August 15, 2013, are outlined in the preamble to the proposed listing rule (78 FR 49878). On May 8, 2014, we announced the availability of the draft economic analysis (DEA) for the proposed critical habitat designation, as well as revisions to the proposed rule, and we reopened the comment period on the proposed rule for 30 days (79 FR 26392).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for Florida leafwing and Bartram's scrub-hairstreak butterflies during two comment periods. The first comment period opened with the publication of the proposed rule on August 15, 2013, and closed on October 15, 2013 (78 FR 49832). The second comment period, during which we requested comments on the proposed critical habitat designation and associated DEA, opened May 8, 2014, and closed on June 9, 2014 (79 FR 26392). We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties, and we invited them to comment on the proposed rule and draft economic analysis during these comment periods.

Although the proposed listing rule and proposed critical habitat rule were published in separate **Federal Register** notices, we received combined comments from the public on both

actions. However, in this final rule we address only those comments that apply to the designation of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak butterflies. Comments on the proposed listing are addressed in the final listing rule, which is published elsewhere in today's **Federal Register**.

During the first comment period, we received two State agency comments and one letter from a member of the public directly commenting on the proposed critical habitat designation for the Florida leafwing and Bartram's scrub-hairstreak. During the second comment period, we received two letters from members of the public on the proposed critical habitat designation. While both of these letters expressed support for the proposed designation, neither provided substantive comments or information requiring response. We did not receive any requests for a public hearing during either comment period. All substantive information provided during the comment periods specifically relating to the proposed critical habitat designation for the Florida leafwing and Bartram's scrub-hairstreak is addressed in the following summary and incorporated into this final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from eight knowledgeable individuals with scientific expertise that included familiarity with at least one of the two subspecies, the geographic region in which these subspecies occur, and conservation biology principles. Of those reviewers, three were experts on the Florida leafwing and Bartram's scrub-hairstreak or the butterflies of southern Florida. We received responses from seven of the peer reviewers including all three experts on the Florida leafwing and Bartram's scrub-hairstreak.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the Florida leafwing and Bartram's scrub-hairstreak. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve this final critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into this final rule as appropriate.

Peer Reviewer Comments

(1) *Comment:* One peer reviewer indicated that existing data do not support the necessity of including a specified return interval for disturbance (i.e., 3- to 5-year return interval for fire), as indicated under the fourth primary constituent element (PCE) for occupied critical habitat. The commenter indicated that the butterflies have been observed at varying densities within pine rocklands that have burned at intervals of up to 10 years.

Our Response: We agree. While the literature (FNAI 2010, p. 3) indicates a fire return interval of approximately 3 to 7 years is appropriate for maintaining the pine rockland ecosystem, there is considerable variability in population numbers of the Florida leafwing and Bartram's scrub-hairstreak from year-to-year. Observations of the Florida leafwing and Bartram's scrub-hairstreak within portions of Long Pine Key that have experienced fire or other disturbance regimes at intervals of up to 10 years (Salvato and Salvato 2010a, p. 91; 2010b, p. 154; Sadle 2013c, pers. comm.) suggest further studies are required on the influence of these factors on butterfly ecologies. We have modified this PCE for both butterflies to reflect a more variable return interval for dynamic natural or artificial disturbances.

(2) *Comment:* One peer reviewer suggested that the physical or biological features (PBFs) be modified to mention both fire and storms as disturbance regimes.

Our Response: We appreciate the information provided and have revised the PBFs appropriately below.

(3) *Comment:* One peer reviewer indicated that the boundaries of the proposed critical habitat in units FLB1 and BSHB1 did not accurately represent those of pine rockland habitat within Everglades National Park (ENP). In addition, several areas with a substantial number of Florida leafwing and Bartram's scrub-hairstreak sightings, in areas with host plants, were not included within the proposed critical habitat boundaries.

Our Response: Based on the information provided by this peer reviewer and in coordination with ENP, we revised the proposed critical habitat designation for the Florida leafwing and Bartram's scrub-hairstreak when we announced the availability of the DEA, and we reopened the comment period on our proposal (79 FR 26392; May 8, 2014). The proposed revisions increased the size of the ''Everglades National Park, Miami-Dade County, Florida'' Units of both butterflies (FLB1 and BSHB1) from 2,313 ha (5,716 ac) to 3,235 ha (7,994 ac) to incorporate the additional pine rockland and associated habitats within the Long Pine Key region of ENP where additional recent sightings have been documented. This expansion will ensure connectivity between viable populations within Long Pine Key.

(4) *Comment:* One peer reviewer indicated that a few parcels (Rockland Pineland and Gould's Pineland Preserve) that meet the criteria for inclusion in the proposed critical habitat for the Bartram's scrub-hairstreak were not included in BSHB4.

Our Response: We appreciate the information and acknowledge that a few parcels within the proposed critical habitat units in Miami-Dade County, which meet the minimum size requirement (7 ha (18 ac) or above) or other criteria, were not included within the units. We attempted to select an appropriate network of pine rockland parcels to serve as stepping stones between units BSHB3 and BSHB4, to aide in the dispersal and conservation of the Bartram's scrub-hairstreak. However, in order to streamline the corridor of stepping stones within and between units BSHB3 and BSHB4, some parcels at the periphery (such as Rockland Pineland and Gould's Pineland Preserve) were not selected. It was not our intent to indicate that all parcels within these units meeting the criteria of 7 ha (18 ac) are to be included in the designation, and we have modified language in this final rule to reflect this under *Criteria Used To Identify Critical Habitat for the Bartram's Scrub-hairstreak Butterfly.*

Comments From States

Section 4(b)(5)(A)(ii) of the Act requires the Secretary, not less than 90 days before the effective date of a final rule, give actual notice of the rule to the State agency in each State in which the species is believed to occur, and invite the comment of such agency on the proposal. The two subspecies only occur in Florida, and we received comments from two entities from the State of Florida regarding the proposed critical habitat designation. The Florida Fish and Wildlife Conservation Commission (FWC) found the document to comprehensive, with conclusions that are well-documented and justified, but otherwise did not provide substantive comments requiring a response. The Florida Department of Agriculture and Consumer Services (FDACS) neither supported nor opposed the proposed critical habitat designation, but indicated its intent to work with the Service and other stakeholders in protecting imperiled species, as well as determining ways to mitigate potential risks of pesticide use and mosquito control towards imperiled species in Florida.

(5) *Comment:* FDACS indicated that given the current stakeholder cooperation, any future considerations concerning research addressing potential for and magnitude of impact of mosquito control practices on imperiled butterflies, including the Florida leafwing and Bartram's scrub-hairstreak, should continue to be discussed in this forum where stakeholders can actively participate.

Our Response: We agree and appreciate stakeholder cooperation and willingness to help support and direct research to minimize potential pesticide impacts on imperiled butterflies. Previously, the Service has worked proactively with mosquito control districts within habitat of the endangered Schaus swallowtail butterfly (*Heraclides (=Papilio) aristodemus ponceanus*) (Hennessey *et al.* 1992, p. 715; Salvato 2001, p. 8) in order to coordinate mosquito control activities in such a way that public health is adequately protected while still promoting conservation and recovery of the species. In addition, the Florida Keys Mosquito Control District has coordinated with the Service and multiple partners to study and measure the potential influence of pesticide applications on the endangered Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) on northern Key Largo (Zhong *et al.* 2010, pp. 1961–1972).

Public Comments

(6) *Comment:* Lee County stated that the data presented in the document do not support the designation of mosquito control activities as a PBF. The County states that the cited reports of Pierce (2009, 2011) do not directly indicate effects on any butterflies or other insects.

Our Response: The objective of the Pierce (2009, 2011) study was to document and quantify the deposition of mosquito control chemicals in and around National Key Deer Refuge (NKDR) following application events. Examining effects on biota was not an objective of the studies. No impacts to invertebrate species were noted because quantifying such effects were not part of the study plans and were not examined.

Summary of Changes From Proposed Rule

Based on information we received in comments, we make the following changes:

(1) We adopt our proposed revision to our critical habitat designation for the Florida leafwing and Bartram's scrub-hairstreak butterflies (see 79 FR 26392; May 8, 2014) by increasing the size of the ''Everglades National Park, Miami-Dade County, Florida'' Units of both butterflies (FLB1 and BSHB1) from 2,313 ha (5,716 ac) to 3,235 ha (7,994 ac) to incorporate the additional pine rockland and associated habitats within the Long Pine Key region of ENP where additional recent sightings have been documented.

(2) Based on the revision described in (1), above, the total amount of critical habitat we are designating in this rule increased from 3,351 ha (8,283 ac) to 4,273 ha (10,561 ac) for the Florida leafwing, and from 3,748 ha (9,261 ac) to 4,670 ha (11,539 ac) for the Bartram's scrub-hairstreak.

(3) Based on the revision described in (1), above, the overall percentage of ownerships of designated critical habitat changed from 81 percent to 85 percent for Federal lands, 4 percent to 3 percent for State lands, and 15 percent to 12 percent for private and other lands for the Florida leafwing, and from 75 percent to 80 percent for Federal lands, and 20 percent to 15 percent for private and other lands for the Bartram's scrub-hairstreak.

(4) Based on the revision described in (1), above, we also revise our discussion regarding overlap of the critical habitat we are designating for both butterflies within ENP (FLB1 and BSHB1) with that already designated for other currently listed species.

(5) We include hydric pine flatwoods, when interspersed within pine rockland habitat, as a plant community used by the Florida leafwing and Bartram's scrub-hairstreak.

(6) We modify the PCE of natural disturbance regimes, for both butterflies, to reflect a more variable fire-return interval and to specify both fire and storms as disturbance regimes.

Critical Habitat

Background

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

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

(a) Essential to the conservation of the species, and

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

(2) Specific areas outside the geographical area occupied by the 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 to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to 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 be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species, and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those PBFs within an area, we focus on the principal biological or physical constituent elements (PCEs such as

roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. PCEs are the specific elements of PBFs that provide for a species' life-history processes and are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential for the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

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

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, would continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of these subspecies. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the PBFs that are essential to the conservation of the species and which 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 PBFs essential for the Florida leafwing and Bartram's scrub-hairstreak butterflies from studies of both of the butterflies' habitat, ecology, and life histories as described in the Critical Habitat section of the proposed rule to designate critical habitat published in the **Federal Register** on August 15, 2013 (78 FR 49832), and in the information presented below.

We have determined that PBFs presented below are required for the conservation of the Florida leafwing and Bartram's scrub-hairstreak butterflies. One change to these features in this final determination from the proposed rule is a result of the peer review process: Hydric pine flatwoods is added to the plant communities known for the Florida leafwing and Bartram's scrub-hairstreak butterflies to describe the plant community more accurately in ENP (Sadle 2013c, pers. comm.). We also specify the disturbance regime of storms as a PBF for both butterflies. We clarify the criteria for inclusion of parcels within critical habitat for the Bartram's scrub-hairstreak butterfly. We also modify the fourth PCE for both butterflies, to reflect a more variable return interval for dynamic natural or artificial disturbances.

Physical or Biological Features for the Florida Leafwing Butterfly

Space for Individual and Population Growth

The Florida leafwing butterfly occurs within pine rockland habitat, and occasionally associated rockland hammock and hydric pine flatwoods interspersed in these pinelands, throughout its entire lifecycle. Description of these communities and associated native plant species are provided in the Status Assessment for the Florida Leafwing and Bartram's Scrub-hairstreak Butterflies section in the final listing rule published elsewhere in today's **Federal Register** and in the information on hydric pine flatwoods in this final rule. The lifecycle of the Florida leafwing occurs entirely within the pine rockland habitat, and in some instances, associated rockland hammocks and hydric pine flatwoods (Salvato and Salvato 2008, p. 246; 2010a, p. 96; Minno 2009, pers. comm.; Sadle 2013c, pers. comm.). At present, the Florida leafwing is extant within ENP and, until 2006, had occurred on Big Pine Key in the Florida Keys and historically in pineland fragments on mainland Miami-Dade County (Smith *et al.* 1994, p. 67; Salvato and Salvato 2010a, p. 91; 2010c, p. 139), the smallest viable population being Navy Wells Pineland Preserve (120 ha (296 ac)). The Florida leafwing

was only sporadic in occurrence north of Miami-Dade County (Smith *et al.* 1994, p. 67; Salvato and Hennessey 2003, p. 243). Studies indicate butterflies are capable of dispersing throughout the landscape, sometimes as far as 5 kilometers (km) (3 miles (mi)), utilizing high-quality habitat patches (Davis *et al.* 2007, p. 1351; Bergman *et al.* 2004, p. 625). The Florida leafwing, with its strong flight abilities, can disperse to make use of appropriate habitat in ENP (Salvato and Salvato 2010a, p. 95). At present, ongoing surveys suggest the Florida leafwing actively disperses throughout the Long Pine Key region of ENP (Salvato and Salvato 2010a, p. 91; 2010c, p. 139). However, once locally common at Navy Wells Pineland Preserve and the Richmond Pine Rocklands (which occur approximately 8 and 27 km (5 and 17 mi) to the northeast of ENP, respectively), Florida leafwings are not known to have bred at either location in over 25 years (Salvato and Hennessey 2003, p. 243; Salvato 2012, pers. comm.). Therefore, based on the information above, we identify pine rockland habitats and associated rockland hammock and hydric pine flatwoods that are at least 120 ha (296 ac) in size to be a PBF for this butterfly.

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

The Florida leafwing is dependent on pine rocklands that retain the butterfly's sole hostplant, pineland croton (*Croton linearis*) (Hennessey and Habeck 1991, pp. 13–17; Smith *et al.* 1994, p. 67; Worth *et al.* 1996, pp. 64–65). The immature stages of this butterfly feed on the croton for development (Worth *et al.* 1996, pp. 64–65; Minno *et al.* 2005, p. 115). Adult Florida leafwings will feed on tree sap, take minerals from mud, and occasionally visit flowers within the pine rockland (Lenczewski 1980, p. 17; Salvato and Salvato 2008, p. 326; Salvato and Salvato 2010a, p. 96). Therefore, based on the information above, we identify pine rockland and associated rockland hammocks and hydric pine flatwoods (specifically those containing pineland croton and other herbaceous vegetation typical of these plant communities that fulfill the larval development and adult dietary requirements of the Florida leafwing) to be a PBF for the Florida leafwing.

Cover or Shelter

Immature stages of the Florida leafwing occur entirely on the hostplant, pineland croton. Adult Florida leafwing disperse and roost within the pine rockland canopy, and also in associated rockland hammock and hydric pine flatwood vegetation interspersed within these pinelands. Because of their use of the croton and their choice of roosting sites, the former Florida leafwing population on Big Pine Key may have been deleteriously impacted by exposure to seasonal pesticide applications designed to control mosquitoes. The potential for mosquito control chemicals to drift into nontarget areas on the island and to persist for varying periods of time has been well documented (Hennessey and Habeck 1989, pp. 1–22; 1991, pp. 1–68; Hennessey *et al.* 1992, pp. 715–721; Pierce 2009, pp. 1–17). If exposed, studies have indicated that both immature and adult butterflies could be affected (Zhong *et al.* 2010, pp. 1961–1972; Bargar 2012, pp. 1–7). Truck-applied pesticides were found to drift considerable distances from target areas with residues that persisted for weeks on the hostplant (Pierce 2009, pp. 1–17), possibly threatening larvae. Salvato (2001, p. 13) suggested that adult Florida leafwings were particularly vulnerable to aerial applications based on their tendency to roost within the pineland canopy, an area with maximal exposure to such treatments. Therefore, based on the information above, we identify pine rocklands, and associated rockland hammock and hydric pine flatwood communities with pineland croton for larval development and ample roosting sites for adults and limited or restricted pesticide application, to be a PBF for this subspecies.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

The Florida leafwing, with its strong flight abilities, can disperse to make use of appropriate habitat in ENP (Salvato and Salvato 2010a, p. 95). Reproduction and larval development occur entirely within the pine rocklands. The Florida leafwing is multivoltine (i.e., produces multiple generations per year), with an entire life cycle of about 2 to 3 months (Hennessey and Habeck 1991, p. 17) and maintains continuous broods throughout the year (Baggett 1982, pp. 78–79; Salvato 1999, p. 121). Natural history studies by Salvato and Salvato (2012, p. 1) indicate that the extant Florida leafwing population within Long Pine Key experiences up to 80 percent mortality amongst immature larval stages from parasites. All parasitic mortality noted for the Florida leafwing by Salvato and Salvato (2012, pp. 1–3) has been from native species; however, mortality from both native and nonnative predators has been observed. Therefore, based on the information above, we identify pine rockland and associated rockland hammocks and hydric pine flatwoods (specifically those containing pineland croton and other herbaceous vegetation typical of these plant communities, with limited nonnative predation, that fulfill the larval development and adult reproductive requirements of the Florida leafwing) to be a PBF for this subspecies.

Pine rockland native vegetation includes, but is not limited to, canopy vegetation dominated by slash pine (*Pinus elliottii* var. *densa*); subcanopy vegetation that may include, but is not limited to, saw palmetto (*Serenoa repens*), cabbage palm (*Sabal palmetto*), silver palm *(Coccothrinax argentata),* brittle thatch palm *(Thrinax morrisii),* wax myrtle (*Myrica cerifera*), myrsine *(Rapanea punctata),* poisonwood *(Metopium toxiferum),* locustberry *(Byrsonima lucida),* varnishleaf *(Dodonaea viscosa),* tetrazygia *(Tetrazygia bicolor),* rough velvetseed *(Guettarda scabra),* marlberry *(Ardisia escallonioides),* mangrove berry *(Psidium longipes),* willow bustic *(Sideroxylon salicifolium),* and winged sumac *(Rhus copallinum);* short-statured shrubs that may include, but are not limited to, a subcanopy with running oak *(Quercus elliottii),* white indigoberry *(Randia aculeata),* Christmas berry *(Crossopetalum ilicifolium),* redgal *(Morinda royoc),* and snowberry *(Chiococca alba);* and understory vegetation that may include, but is not limited to, bluestem *(Andropogon* spp., *Schizachyrium gracile, S. rhizomatum,* and *S. sanguineum),* arrowleaf threeawn *(Aristida purpurascens),* lopsided indiangrass *(Sorghastrum secundum),* hairawn muhly *(Muhlenbergia capillaris),* Florida white-top sedge *(Rhynchospora floridensis),* pineland noseburn *(Tragia saxicola),* devil's potato *(Echites umbellata),* pineland croton, several species of sandmats *(Chamaesyce* spp.*),* partridge pea *(Chamaecrista fasciculata),* coontie *(Zamia pumila),* and maidenhair pineland fern *(Anemia adiantifolia).* Rockland hammock native vegetation includes, but is not limited to, a canopy vegetated by gumbo limbo *(Bursera simaruba),* false tamarind (*Lysiloma latisiliquum*), paradisetree *(Simarouba glauca),* black ironwood *(Krugiodendron ferreum),* lancewood *(Ocotea coriacea),* Jamaican dogwood *(Piscidia piscipula),* West Indies mahogany *(Swietenia mahagoni),* willow bustic, inkwood *(Exothea paniculata),* strangler fig *(Ficus aurea),* pigeon plum *(Coccoloba diversifolia),* poisonwood , buttonwood

(Conocarpus erectus), blolly *(Guapira discolor),* and devil's claw *(Pisonia* spp.*);* subcanopy vegetation that may include, but is not limited to, Spanish stopper *(Eugenia foetida), Thrinax,* torchwood *(Amyris elemifera),* marlberry, wild coffee *(Psychotria nervosa), Sabal,* gumbo limbo, lignumvitae *(Guaiacum sanctum),* hog plum *(Ximenia americana),* and *Colubrina;* and understory vegetation that may include, but is not limited to, coonti, barbed-wire cactus *(Acanthocereus tetragonus),* and basket grass *(Oplismenus hirtellus).* Hydric pine flatwoods vegetation includes, but is not limited to, canopy consisting of slash pine; subcanopy vegetation, if present, of scattered sweetbay, swamp bay, loblolly bay, pond cypress, dahoon, titi, and/or wax myrtle; shrubs, commonly including large gallberry, fetterbush, titi, black titi, sweet pepperbush, red chokeberry, azaleas, saw palmetto, gallberry, and cabbage palm, both in the subcanopy and shrub layers; and herbs, including wiregrass, blue maidencane, and/or hydrophytic species such as toothache grass, cutover muhly, coastalplain yellow-eyed grass, Carolina redroot, beaksedges, and pitcherplants, among others.

Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Subspecies

The Florida leafwing continues to occur in habitats that are protected from human-generated disturbances and are only partially representative of the butterfly's historical, geographical, and ecological distribution because its range within these habitats has been reduced. The subspecies is still found in its representative plant communities of pine rocklands and associated rockland hammocks and hydric pine flatwoods. Representative plant communities are located on Federal, State, local, and private conservation lands that implement conservation measures benefitting the butterfly.

Pine rockland is dependent on some degree of disturbance, most importantly from natural or prescribed burns (Loope and Dunevitz 1981, p. 5; Snyder *et al.* 2005, p. 1; Bradley and Saha 2009, p. 4; Saha *et al.* 2011, pp. 169–184; Florida Natural Areas Inventory (FNAI) 2010, p. 1). These fires are a vital component in maintaining native vegetation, such as croton, within this ecosystem. Without fire, successional climax from tropical pineland to rockland hammock is too rapid, and displacement of native species by invasive, nonnative plants often occurs.

The Florida leafwing, as with other subtropical butterflies, has adapted over time to the influence of tropical storms and other forms of adverse weather conditions (Minno and Emmel 1994, p. 671; Salvato and Salvato 2007, p. 154). Hurricanes and other significant weather events create openings in the pine rockland habitat (FNAI 2010, p. 3). However, given the substantial reduction in the historical range of the butterfly in the past 50 years, the threat and impact of tropical storms and hurricanes on its remaining populations is much greater than when its distribution was more widespread (Salvato and Salvato 2010a, p. 96; 2010c, p. 139). Therefore, based on the information above, we identify disturbance regimes natural or prescribed to mimic natural disturbances, such as fire and storms, to be a PBF for this subspecies.

Primary Constituent Elements for the Florida Leafwing Butterfly

Under the Act and its implementing regulations, we are required to identify the PBFs essential to the conservation of the Florida leafwing in areas occupied at the time of listing, focusing on the features' PCEs. PCEs are those specific elements of the PBFs that provide for a species' life-history processes and are essential to the conservation of the species.

Based on our current knowledge of the PBFs and habitat characteristics required to sustain the butterfly's life-history processes, we determine that the PCEs for the Florida leafwing butterfly are:

(1) Areas of pine rockland habitat, and in some locations, associated rockland hammocks and hydric pine flatwoods.

(a) Pine rockland habitat contains:

(i) Open canopy, semi-open subcanopy, and understory;

(ii) Substrate of oolitic limestone rock; and

(iii) A plant community of predominately native vegetation.

(b) Rockland hammock habitat associated with pine rocklands contains:

(i) Canopy gaps and edges with an open to semi-open canopy, subcanopy, and understory;

(ii) Substrate with a thin layer of highly organic soil covering limestone or organic matter that accumulates on top of the underlying limestone rock; and

(iii) A plant community of predominately native vegetation.

(c) Hydric pine flatwood habitat associated with pine rocklands contains:

(i) Open canopy with a sparse or absent subcanopy, and dense understory;

(ii) Substrate with a thin layer of poorly drained sands and organic materials that accumulates on top of the underlying limestone or calcareous rock; and

(iii) A plant community of predominately native vegetation.

(2) Competitive nonnative plant species in quantities low enough to have minimal effect on survival of the Florida leafwing butterfly.

(3) The presence of the butterfly's hostplant, pineland croton, in sufficient abundance for larval recruitment, development, and food resources, and for adult butterfly roosting habitat and reproduction.

(4) A dynamic natural disturbance regime or one that artificially duplicates natural ecological processes (e.g., fire, hurricanes, or other weather events, at appropriate intervals) that maintains the pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities.

(5) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities that are sufficient in size to sustain viable Florida leafwing populations.

(6) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities with levels of pesticide low enough to have minimal effect on the survival of the butterfly or its ability to occupy the habitat.

Special Management Considerations or Protection for the Florida Leafwing Butterfly

When designating critical habitat, we assess whether the specific areas within the geographic areas occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protections. The features essential to the conservation of this subspecies may require special management considerations or protection to reduce the following threats:

Habitat Destruction and Modification by Development—The Florida leafwing butterfly has experienced substantial destruction, modification, and curtailment of its habitat and range. The pine rockland community of south Florida, on which both the butterfly and its hostplant depend, is critically imperiled globally (FNAI 2012, p. 27). Destruction of the pinelands for economic development has reduced this habitat community by 90 percent on mainland south Florida (O'Brien 1998, p. 208). All known mainland populations of the Florida leafwing

occur on publicly owned land that is managed for conservation, ameliorating some of the threat. However, any unknown extant populations of the butterfly or suitable habitat that may occur on private land or non-conservation public land are vulnerable to habitat loss. In Miami-Dade County, occupied Florida leafwing habitat occurs in the Long Pine Key region of ENP and is actively managed by the National Park Service (NPS) for the Florida leafwing and the pine rockland ecosystem, in general.

Sea Level Rise—Various model scenarios developed at the Massachusetts Institute of Technology (MIT) have projected possible trajectories of future transformation of the south Florida landscape by 2060 based upon four main drivers: Climate change, shifts in planning approaches and regulations, human population change, and variations in financial resources for conservation (Vargas-Moreno and Flaxman 2010, pp. 1–6). The Service used various MIT scenarios in combination with extant and historical Florida leafwing occurrences and remaining hostplant-bearing pine rocklands to predict climate change impacts to the butterfly and its habitat.

In the best case scenario, which assumes low sea level rise, high financial resources, proactive planning, and only trending human population growth, analyses suggest that the extant Florida leafwing population within ENP is susceptible to future losses, with losses attributed to increases in sea level and human population. In the worst case scenario, which assumes high sea level rise, low financial resources, a ''business as usual'' approach to planning, and a doubling of human population, the habitat at Long Pine Key may be lost, resulting in the complete extirpation of the Florida leafwing. Actual impacts may be greater or less than anticipated based upon high variability of factors involved (e.g., sea level rise, human population growth) and assumptions made. Being proactive to address sea level rise may be beyond the feasibility of land owners or managers. However, while land owners or land managers may not be able to be proactive in preventing these events, they may be able to respond with management or protection. Management actions or activities that could ameliorate sea level rise include providing protection of suitable habitats unaffected or less affected by sea level rise.

Lack of Natural or Prescribed Burns—The threat of habitat destruction or modification is further exacerbated by a lack of adequate fire management (Salvato and Salvato 2010a, p. 91; 2010c, p. 139). Historically, lightning-induced fires were a vital component in maintaining native vegetation, including pineland croton, within the pine rockland ecosystem (Loope and Dunevitz 1981, p. 5; Slocum *et al.* 2003, p. 93; Snyder *et al.* 2005, p. 1; Salvato and Salvato 2010b, p. 154). Resprouting after burns is the primary mechanism allowing for the persistence of perennial shrubs, including pineland croton, in pine habitat (Olson and Platt 1995, p. 101). Without fire, perennial native vegetation can be displaced by invasive, nonnative plants.

In recent years, ENP has used partial and systematic prescribed burns to treat the Long Pine Key pine rocklands in their entirety over a 3-year window (NPS 2005, p. 27). These methods attempt to burn adjacent pine rockland habitats alternately. In addition, refugia (i.e., unburned areas of croton hostplant) have been included as part of burns conducted within occupied butterfly habitat, wherever possible (Anderson 2011, pers. comm.). Providing refugia directly within (as well as adjacent to) the treatment area during prescribed burn activities may substantially increase the potential for the Florida leafwing to recolonize recently burned areas and to remain within or near the fire-treated pineland. Outside of ENP, Miami-Dade County has implemented various conservation measures, such as burning in a mosaic pattern and on a small scale, during prescribed burns to protect the butterfly (Maguire 2010, pers. comm.).

Fire management of pine rocklands in NKDR is hampered by the pattern of land ownership and development; residential and commercial properties are embedded within or in close proximity to pineland habitat (Snyder *et al.* 2005, p. 2; Anderson 2012, pers. comm.). Ongoing management activities designed to ameliorate this threat include the use of small-scale prescribed burns or mechanical clearing to maintain the native vegetative structure in the pine rockland required by the subspecies.

Hurricanes and Storm Surge—The Florida leafwing, as with other subtropical butterflies, have adapted over time to the influence of tropical storms and other forms of adverse weather conditions (Minno and Emmel 1994, p. 671; Salvato and Salvato 2007, p. 154). Hurricanes and other significant weather events create openings in the pine rockland habitat (FNAI 2010, p. 3). However, given the substantial reduction in the historical range of the butterfly in the past 50 years, the threat and impact of tropical storms and hurricanes on its remaining populations are much greater than when its distribution was more widespread (Salvato and Salvato 2010a, p. 96; 2010c, p. 139). While land owners or land managers may not be able to be proactive in preventing these events, they may be able to respond with management or protection resulting from these threats. Management actions or activities that could enhance pine rockland recovery following tropical storms include hand removal of damaged vegetation, as well as by other mechanical means or prescribed burns.

Mosquito Control Pesticide Applications—Efforts to control salt marsh mosquitoes (*Aedes taeniorhynchus,* among others) have increased as human activity and population have increased in south Florida. To control mosquito populations, second-generation organophosphate (naled) and pyrethroid (permethrin) adulticides are applied by mosquito control districts throughout south Florida. The use of such pesticides (applied using both aerial and ground-based methods) for mosquito control presents a potential risk to nontarget species, such as the Florida leafwing butterfly. Mosquito control pesticides use within Miami-Dade County's pine rockland areas is limited (approximately two to four times per year, and only within a portion of critical habitat) (Vasquez 2013, pers. comm.), and no spraying is conducted in Long Pine Key within ENP.

Pesticide spraying practices by the Mosquito Control District at NKDR have changed to reduce pesticide use over the years. Since 2003, expanded larvicide treatments to surrounding islands have significantly reduced adulticide use on Big Pine Key, No Name Key, and the Torch Keys. In addition, the number of aerially applied naled treatments allowed on NKDR has been limited since 2008 (Florida Key Mosquito Control District 2012, pp. 10–11). No spray zones that include the core habitat used by pine rockland butterflies and several linear miles of pine rockland habitat within the Refuge-neighborhood interface were excluded from truck spray applications (Anderson 2012, pers. comm.; Service 2012, p. 32). These exclusions and buffer zones encompass over 95 percent of extant croton distribution on Big Pine Key, and include the majority of known recent and historical Florida leafwing population centers on the island (Salvato 2012, pers. comm.). However, some areas of pine rocklands within NKDR are still sprayed with naled (aerially applied adulticide), and buffer zones remain at risk from drift;

additionally, private residential areas and roadsides across Big Pine Key are treated with permethrin (ground-based applied adulticide) (Salvato 2001, p. 10). Therefore, if extant, the leafwing and their habitat on Big Pine Key may be directly or indirectly (via drift) exposed to adulticides used for mosquito control at some unknown level.

Criteria Used To Identify Critical Habitat for the Florida Leafwing Butterfly

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify occupied areas at the time of listing that contain the features essential to the conservation of the species. If after identifying currently occupied areas we determine that those areas are inadequate to ensure conservation of the species (in accordance with the Act and our implementing regulations at 50 CFR 424.12(e)), we then consider whether designating additional areas—outside those currently occupied—are essential for the conservation of the species. We are designating critical habitat in areas within the geographical area occupied by the species at the time of listing in 2014. As described below, we also are designating specific areas outside the geographical area occupied by the species at the time of listing that were historically occupied, but are presently unoccupied, because we have determined that such areas are essential for the conservation of the subspecies.

To determine the location and boundaries of critical habitat, the Service used the following sources of information and considerations:

(1) Historical and current records of Florida leafwing occurrence and distribution found in publications, reports, and associated voucher specimens housed at museums and private collections.

(2) Institute for Regional Conservation (IRC) and Fairchild Tropical Gardens (FTG) geographic information system (GIS) data showing the location and extent of documented occurrences of the pine rockland habitat with pineland croton.

(3) Reports prepared by ecologists, biologists, and botanists with the IRC, ENP, FTG, and Service assessing the current and historical distribution of pine rockland habitat and pineland croton. Some of these were funded by the Service; others were requested or volunteered by biologists with the Service, NPS, or IRC.

(4) Historical records of pineland croton found in publications, reports and associated voucher specimens housed at herbaria, all of which are also referenced in the above mentioned reports from the IRC and cited publications.

Small butterfly populations with limited, fragmented distributions, such as the Florida leafwing, are highly vulnerable to localized extirpations (Schultz and Hammond 2003, pp. 1377, 1379; Frankham 2005, pp. 135–136). Historical populations of endangered south Florida butterflies such as the Miami blue (Saarinen 2009, p. 79) and Schaus swallowtail (Daniels and Minno 2012, p. 2), once linked, now are subject to the loss of genetic diversity from genetic drift, the random loss of genes, and inbreeding. In general, isolation, whether caused by geographic distance, ecological factors, or reproductive strategy, will likely prevent the influx of new genetic material and can result in a highly inbred population with low viability and/or fecundity (Chesser 1983, p. 68). Fleishman *et al.* (2002, pp. 706–716) indicated that factors such as habitat quality may influence metapopulation dynamics of butterflies, driving extinction and colonization processes, especially in systems that experience substantial natural and anthropogenic environmental variability. In addition, natural fluctuations in rainfall, hostplant vigor, or butterfly predators may weaken a population to such an extent that recovery to a viable level would be impossible. Isolation of habitat can prevent recolonization from other sites and result in extinction. Because of the dangers associated with small populations or limited distributions, the recovery of many rare butterfly species includes the creation of new sites or reintroductions within the historical range to ameliorate these effects.

When designating critical habitat, we consider future recovery efforts and conservation of the species. We have determined that all currently known occupied habitat should be designated as critical habitat. However, realizing that the current occupied habitat is not adequate for the conservation of the Florida leafwing, we used habitat and historical occurrence data to identify unoccupied habitat essential for the conservation of the subspecies.

Only one extant Florida leafwing population remains (Salvato and Salvato 2010c, p. 139). Population estimates for the Florida leafwing are estimated to be only several hundred or fewer at any given time. Although this population occurs on conservation lands, management and law enforcement are limited. We believe it is necessary for conservation that additional populations of the Florida leafwing be established within the subspecies' historical range. Therefore, we are designating three unoccupied areas as critical habitat, one on Big Pine Key within the Florida Keys, and two others on the mainland within Miami-Dade County, where the Florida leafwing was historically recorded, but has since been extirpated.

The critical habitat areas in Miami-Dade County are large pine rockland fragments (Navy Wells Pineland Preserve) or contiguous fragments (Richmond Pine Rocklands), which we believe provide the minimal habitat size (at least 120 ha (296 ac)) required for the subspecies to persist. The Florida leafwing was known to occur at Navy Wells Pineland Preserve within the past 25 years (Smith *et al.* 1994, p. 67). Although causes for the Florida leafwing's subsequent disappearance from Navy Wells are unknown, we believe that, with proper management and restoration efforts (consistent prescribed burns and habitat enhancement) and given its strong flight abilities, the leafwing will be able to recolonize both this and the Richmond Pine Rockland area. The critical habitat unit on Big Pine Key in the Florida Keys is a former stronghold for the subspecies (Smith *et al.* 1994, p. 67; Salvato and Salvato 2010c, p. 39), where appropriate hostplant-bearing habitat was historically recorded, but has since become degraded and unsuitable for butterfly use. Here also, we believe that, following habitat restoration activities (vegetation and fire management), the Florida leafwing will be able to be reestablished on this site, thereby returning a vital population of the subspecies to the Florida Keys.

The current distribution of the Florida leafwing is much reduced (90 percent) from its historical distribution. We anticipate that recovery will require continued protection of the remaining extant population and habitat, as well as establishing populations in additional areas that more closely approximate its historical distribution in order to ensure there are adequate numbers of butterflies in stable populations and that these populations occur over a wide geographic area. This will help to ensure that catastrophic events, such as storms, cannot simultaneously affect all known populations.

Areas Occupied at the Time of Listing

For the purpose of designating critical habitat for the Florida leafwing, we

defined the geographical area currently occupied by the subspecies as required by section 3(5)(A)(i) of the Act. The occupied critical habitat unit was delineated around the one documented extant population. This unit included the mapped extent of the population that contains one or more of the elements of the PBFs.

We considered the following when identifying occupied areas of critical habitat for the Florida leafwing:

(1) Space to allow for the successional nature of the occupied pine rockland habitat. While suitable, only a portion of this habitat is optimal for the Florida leafwing at any one time, and the size and location of optimal areas is successional over time, being largely driven by the frequency and scale of natural or prescribed burns or other disturbances such as storms. Correspondingly the abundance and distribution of pineland croton within the pine rockland habitat varies greatly from time to time depending on habitat changes because of these events. Although prescribed burns are administered on the conservation land that retains the Florida leafwing population, fire return intervals and scope are inconsistent. As a result, areas within the pine rockland habitat supporting the subspecies may not always provide optimal habitat for the butterfly in the future as a lack of adequate fire management or other disturbances removes or fragments hostplant distribution. Conversely, changes in hostplant distribution over time following fires or other disturbances may allow the butterfly to return, expand, and colonize areas with shifting hostplant populations.

(2) Space to plan for the persistence of the current Florida leafwing population in the face of imminent effects on habitats as a result of sea level rise. Although currently occupied and containing the elements of PBFs, this area may be altered, as a result of vegetation shifts or salt water intrusion, to an extent to which cannot be predicted at this time.

Units are designated based on sufficient elements of PBFs being present to support Florida leafwing life processes. Some units contain all of the identified elements of PBFs and support multiple life processes. Some segments contain only some elements of the PBFs necessary to support the Florida leafwing's particular use of that habitat.

Areas Outside of the Geographic Range at the Time of Listing

After following the above criteria, we determined that occupied areas are not sufficient for the conservation of the subspecies for the following reasons:

(1) Restoring the subspecies to its historical range and reducing its vulnerability to stochastic events, such as hurricanes and storm surge, require reintroduction to areas where the subspecies occurred in the past but has since been extirpated;

(2) Providing increased connectivity for populations and areas for small populations to expand requires currently unoccupied habitat; and

(3) Reintroduction or assisted migration to reduce the vulnerability of the subspecies to sea level rise and storm surge requires higher elevation sites that currently are unoccupied by the Florida leafwing.

Therefore, we looked to unoccupied areas that may be essential for the conservation of the subspecies.

We used habitat and historical occurrence data to identify unoccupied habitat essential for the conservation of the subspecies.

The unoccupied areas are essential for the conservation of the subspecies because they:

(1) Represent areas of sufficient size to support ecosystem processes for populations of the Florida leafwing. The historical distribution of the Florida leafwing appeared limited to large pine rocklands parcels 120 ha (296 ac) or greater. For many years the leafwing persisted at Navy Wells, which has an area of 120 ha (296 ac), long after being extirpated from everywhere else in Miami-Dade County that was smaller in area. The only other leafwing populations that occurred outside of the Everglades in the past 25 years were those in the Richmond Pine Rocklands and Big Pine Key, which have approximately 364 and 567 ha (900 and 1,400 ac) of pine rocklands, respectively. We believe appropriately sized units should be, at a minimum, the size of Navy Wells (i.e., 120 ha (296 ac)). Large contiguous parcels of habitat are more likely to be resilient to ecological processes of disturbance and succession, and support viable populations of the Florida leafwing. The unoccupied areas selected were at least 120 ha (296 ac) or greater in size.

(2) Provide areas to maintain connectivity of habitat to allow for population expansion. Isolation of habitat can prevent recolonization of the Florida leafwing and result in extinction. Because of the dangers associated with small populations or limited distributions, the recovery of many rare butterfly species includes the creation of new sites or reintroductions to ameliorate these effects.

(3) Provide areas that, once restored, will allow the Florida leafwing to disperse and recolonize, and in some instances may be able to support expansion and a larger number of the subspecies either through reintroduction or expansion from areas already occupied by the butterfly. These areas generally are habitats within or adjacent to pine rocklands that have been affected by natural or anthropogenic impacts but retain areas that are still suitable for the butterfly or that could be restored. These areas would help to offset the anticipated loss and degradation of habitat occurring or expected from the effects of climate change (such as sea level rise) or due to development.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack PBFs for the Florida leafwing. 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 lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the Regulation Promulgation section. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates, plot points, or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R4–ES–2013–0031, on our Internet site at *http://www.fws.gov/verobeach/*, and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

Final Critical Habitat Designation for the Florida Leafwing Butterfly

We are designating four units as critical habitat for the Florida leafwing. The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical habitat for the

Florida leafwing. The four units we are designating as critical habitat are:

(1) FLB1 Everglades National Park, Miami-Dade County, Florida;

(2) FLB2 Navy Wells Pineland Preserve, Miami-Dade County, Florida;

(3) FLB3 Richmond Pine Rocklands, Miami-Dade County, Florida; and

(4) FLB4 Big Pine Key, Monroe County, Florida.

Land ownership within the designated critical habitat consists of Federal (85 percent), State (3 percent), and private and other (12 percent). Table 1 shows the land ownership, area, and occupancy by unit.

TABLE 1—FLORIDA LEAFWING BUTTERFLY CRITICAL HABITAT UNITS

Unit No.	Unit name	Ownership	Percent	Hectares (acres)	Occupied
FLB1	Everglades National Park	Federal	100	3,235 (7,994)	yes.
		Total	*100*	*3,235 (7,994)*	
FLB2	Navy Wells Pineland Preserve.	State	29	35 (85)	no.
		Private-Other	71	85 (211)	
		Total	*100*	*120 (296)*	
FLB3	Richmond Pine Rocklands	Federal	14	50 (122)	no.
		Private-Other	86	309 (767)	
		Total	*100*	*359 (889)*	
FLB4	Big Pine Key	Federal	65	365 (901)	no.
		State	16	90 (223)	
		Private-Other	19	104 (258)	
		Total	*100*	*559 (1,382)*	
Total All Units		Federal	85	3,650 (9,017)	
		State	3	125 (308)	
		Private-Other	12	498 (1,236)	
		All	100	4,273 (10,561)	

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Florida leafwing, below.

Unit FLB1: Everglades National Park, Miami-Dade County, Florida

Unit FLB1 consists of 3,235 ha (7,994 ac) in Miami-Dade County. This unit is composed entirely of lands in Federal ownership, 100 percent of which are located within the Long Pine Key region of ENP. This unit is currently occupied and contains all the PBFs required by the subspecies, and contains the PCE of pine rockland. The PBFs in this unit may require special management considerations or protection to address threats of a lack of adequate fire management, habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with the ENP to implement needed actions.

For instance, ENP is currently in the process of updating its fire management plan (FMP) and environmental assessment which will assess the impacts of fire on various environmental factors, including listed, proposed, and candidate species (Land 2011, pers. comm.; Sadle 2013a, pers. comm.). ENP is actively coordinating with the Service, as well as other members of the Imperiled Butterfly Working Group (IBWG), to review and adjust the prescribed burn practices outlined in the FMP to help maintain or increase Florida leafwing population sizes, protect pine rocklands, expand or restore remnant patches of hostplants, and ensure that short-term negative effects from fire (i.e., loss of hostplants, loss of eggs and larvae) can be avoided or minimized.

Unit FLB2: Navy Wells Pineland Preserve, Miami-Dade County, Florida

Unit FLB2 consists of 120 ha (296 ac) in Miami-Dade County. This unit is comprised entirely of conservation lands located within the Navy Wells Pineland Preserve, which is jointly owned by Miami-Dade County (85 ha (211 ac)) and the State (35 ha (85 ac)). State lands are interspersed within Miami-Dade County Parks and Recreation Department lands, which are managed for conservation. This unit is bounded on the north by SW 348 Street, on the south by SW 360 Street, on the east by State Road 9336, and on the west by the vicinity of SW 202 Avenue.

The unit was occupied historically by the Florida leafwing and includes some of the largest remaining contiguous fragments of pine rockland habitats outside of ENP. This unit is not currently occupied but is essential for the conservation of the butterfly because it serves to protect habitat needed to recover the subspecies, reestablish wild populations within the historical range of the subspecies, and maintain populations throughout the historic distribution of the subspecies in Miami-Dade County, and it provides habitat for recovery in the case of stochastic events if the butterfly is extirpated from the one location where it is presently found.

Unit FLB3: Richmond Pine Rocklands, Miami-Dade County, Florida

Unit FLB3 consists of 359 ha (889 ac) in Miami-Dade County. This unit is comprised of lands in Federal (U.S. Coast Guard (Homeland Security) (29 ha (72 ac)), U.S. Army Corps of Engineers (Department of Defense (DoD) (8 ha (20 ac)), National Oceanic Atmospheric Administration (NOAA) (4 ha (9 ac)), Federal Bureau of Prisons (Department of Justice (DoJ) (9 ha (21 ac))), and private or other (309 ha (767 ac)) ownership. This unit is bordered on the

north by Coral Reef Drive, on the south by SW 168 Street, on the east by SW 117 Avenue, and on the west by SW 137 Avenue; then is bordered on the north by SW 168 Street, on the south by SW 184 Street, on the east by SW 122 Avenue, and on the west by SW 137 Avenue.

Unit FLB4: Big Pine Key, Monroe County, Florida

Unit FLB4 consists of 559 ha (1,382 ac) in Monroe County. This unit includes Federal lands within NKDR (365 ha (901 ac)), State lands (90 ha (223 ac)), and property in private or other ownership (104 ha (258 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge. The unit begins on northern Big Pine Key on the southern side of Gulf Boulevard, and continues south on both sides of Key Deer Boulevard (County Road 940 (CR 940)) to the vicinity of Osprey Lane on the western side of CR 940 and Tea Lane to the east of CR 940; then resumes on both sides of CR 940 from Osprey Lane south of the vicinity of Driftwood Lane; then resumes south of Osceola Street, between Fern Avenue to the west and Baba Lane to the east; then resumes north of Watson Boulevard in the vicinity of Avenue C; then continues south on both sides of Avenue C to South Street; then resumes on both sides of CR 940 south to U.S. 1 between Ships Way to the west and Sands Street to the east; then resumes south of U.S. 1 from Newfound Boulevard to the west and Deer Run Trail to the east; and then resumes south of U.S. 1 from Palomino Horse Trail to the west and Industrial Road to the east.

This unit was historically occupied by the Florida leafwing. This unit is not currently occupied but is essential for the conservation of the Florida leafwing because it serves to protect habitat needed to recover the subspecies, reestablish wild populations within the historical range of the subspecies, and maintain populations throughout the historic distribution of the subspecies in the Lower Florida Keys, and it provides area for recovery in the case of stochastic events if the butterfly is extirpated from the one location where it is presently found. In the Lower Florida Keys National Wildlife Refuge's Comprehensive Conservation Plan (CCP), management objective number 11 provides specifically for maintaining and restoring butterfly populations of special conservation concern, including the Florida leafwing butterfly.

Physical or Biological Features for the Bartram's Scrub-Hairstreak Butterfly

Space for Individual and Population Growth and for Normal Behavior

Bartram's scrub-hairstreak butterfly's entire lifecycle occurs within pine rockland habitat and occasionally associated rockland hammock and hydric pine flatwoods interspersed in these pinelands. A description of these communities and associated native plant species are provided in the Status Assessment for the Florida Leafwing and Bartram's Scrub-hairstreak Butterflies section in the final listing rule published elsewhere in today's **Federal Register** and in the information on hydric pine flatwoods in this rule.

At present, the Bartram's scrub-hairstreak butterfly is extant on Big Pine Key, within ENP, and several pineland fragments on mainland Miami-Dade County (Smith *et al.* 1994, p. 118; Salvato and Salvato 2010b, p. 154), the smallest being Navy Wells Pineland Preserve outparcel number 39 (7 ha (18 ac)), which represents the minimum known extant sustained population size. The Bartram's scrub-hairstreak was historically less common and sporadic in occurrence north of Miami-Dade County (Smith *et al.* 1994, pp. 118; Salvato and Hennessey 2004, p. 223). Studies indicate butterflies are capable of dispersing throughout the landscape, sometimes as far as 5 km (3 mi), and utilizing high-quality habitat patches (Davis *et al.* 2007, p. 1351; Bergman *et al.* 2004, p. 625). Stepping stones may be particularly useful to the Bartram's scrub-hairstreak, which exhibits low vagility (movement), rarely venturing from the pine rockland habitat or away from large areas of contiguous patches of hostplant. Therefore, based on the information above, we identify pine rockland habitats and associated rockland hammock and hydric pine flatwoods that are at least 7 ha (18 ac) in size and are located no more than 5 km (3 miles) apart to allow for habitat connectivity to be a PBF for this butterfly.

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

The Bartram's scrub-hairstreak butterfly is dependent on pine rocklands that retain the butterfly's sole hostplant, pineland croton. The immature stages of this butterfly feed on the croton for development (Minno and Emmel 1993, p. 129; Worth *et al.* 1996, p. 62). Adult Bartram's scrub-hairstreaks actively visit flowers for nectar (Minno and Emmel 1993, p. 129; Worth *et al.* 1996, p. 65; Calhoun *et al.* 2002, p. 14; Salvato and Hennessey 2004, p. 226; Salvato and Salvato 2008, p. 324) within open pine areas and edges and openings within associated rockland hammocks and hydric pine flatwoods. Therefore, based on the information above, we identify pine rockland and associated rockland hammocks and hydric pine flatwoods (specifically those containing pineland croton and other herbaceous vegetation typical of these plant communities that fulfill the larval development and adult dietary requirements) to be PBFs for the Bartram's scrub-hairstreak butterfly.

Cover or Shelter

Immature stages of the Bartram's scrub-hairstreak butterfly occur entirely on the hostplant, pineland croton. Adult Bartram's scrub-hairstreaks prefer more open pine areas, at the edges and openings of associated rockland hammocks and hydric pine flatwoods. The Bartram's scrub-hairstreak population on Big Pine Key may be deleteriously impacted by exposure to seasonal pesticide applications designed to control mosquitoes because of where the butterflies congregate in the vegetation. Salvato (2001, p. 13) suggested that the Bartram's scrub-hairstreak is particularly vulnerable to truck-based applications based on the fact that the subspecies commonly aggregates on low-lying shrubs occurring along frequently treated roadsides. Therefore, based on the information above, we identify the absence of pesticide in the pine rocklands and associated rockland hammock and hydric pine flatwood communities, or pesticides in low enough quantities that they are not detrimental to the butterfly, to be a PBF for this subspecies.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

Bartram's scrub-hairstreak butterfly's reproduction and larval development occur entirely within the pine rocklands. The butterfly has been observed during every month throughout its range; however the exact number of broods appears to be sporadic from year to year, with varying peaks in seasonal abundance (Baggett 1982, p. 81; Hennessey and Habeck 1991, pp. 17–19; Emmel *et al.* 1995, pp. 14–15; Minno and Minno 2009, pp. 70–76; Salvato and Salvato 2010b, p. 156; Anderson 2012, pers. comm.; Sadle 2013b, pers. comm.). The Bartram's scrub-hairstreak retains breeding populations within pine rocklands on Big Pine Key and Long Pine Key in ENP, and within a number of pine rockland fragments adjacent to ENP (Salvato and

Salvato 2010b, p. 154). Therefore, based on the information above, we identify pine rockland and associated rockland hammocks and hydric pine flatwoods (specifically those containing pineland croton and other herbaceous vegetation typical of these plant communities that fulfill the larval development and adult reproductive requirements of the Bartram's scrub-hairstreak) to be a PBF for this subspecies. For a detailed description of pine rockland native vegetation, see *Physical or Biological Features for the Florida Leafwing Butterfly,* above.

Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Subspecies

The Bartram's scrub-hairstreak butterfly continues to occur in habitats that are protected from human-generated disturbances and are representative of the butterfly's historical, geographical, and ecological distribution, although its range has been reduced. The subspecies is still found in its representative plant communities of pine rocklands. Representative communities are located on Federal, State, local, and private conservation lands that implement conservation measures benefitting the butterfly.

Pine rockland is dependent on some degree of disturbance, most importantly from natural or prescribed burns (Loope and Dunevitz 1981, p. 5; Carlson *et al.* 1993, p. 914; Slocum *et al.* 2003, p. 93; Snyder *et al.* 2005, p. 1; Bradley and Saha 2009, p. 4; Saha *et al.* 2011, pp. 169–184; FNAI 2010, p. 1). These fires are a vital component in maintaining native vegetation, such as pineland croton, within this ecosystem. Without fire, successional climax from tropical pineland to rockland hammock is too rapid, and displacement of native species by invasive, nonnative plants often occurs.

The Bartram's scrub-hairstreak butterfly, as with other subtropical butterflies, have adapted over time to the influence of tropical storms and other forms of adverse weather conditions (Minno and Emmel 1994, p. 671; Salvato and Salvato 2007, p. 154). Hurricanes and other significant weather events create openings in the pine rockland habitat (FNAI 2010, p. 3). However, given the substantial reduction in the historical range of the butterfly in the past 50 years, the threat and impact of tropical storms and hurricanes on their remaining populations is much greater than when their distribution was more widespread (Salvato and Salvato 2010a, p. 96; 2010c, p. 139). Therefore, based on the information above, we identify disturbance regimes natural or prescribed to mimic natural disturbances, such as fire and storms, to be a PBF for this subspecies.

Primary Constituent Elements for the Bartram's Scrub-Hairstreak Butterfly

Based on our current knowledge of the PBFs and habitat characteristics required to sustain the butterfly's life-history processes, we determine that the PCEs for the Bartram's scrub-hairstreak are:

(1) Areas of pine rockland habitat, and in some locations, associated rockland hammocks and hydric pine flatwoods. For a detailed description of this PCE, see the discussion of PCE 1 for the Florida leafwing in *Primary Constituent Elements for the Florida Leafwing Butterfly,* above.

(2) Competitive nonnative plant species in quantities low enough to have minimal effect on survival of Bartram's scrub-hairstreak butterfly.

(3) The presence of the butterfly's hostplant, pineland croton, in sufficient abundance for larval recruitment, development, and food resources, and for adult butterfly nectar source and reproduction.

(4) A dynamic natural disturbance regime or one that artificially duplicates natural ecological processes (e.g., fire, hurricanes, or other weather events, at appropriate intervals) that maintains the pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities.

(5) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities that allow for connectivity and are sufficient in size to sustain viable populations of the Bartram's scrub hairstreak butterfly.

(6) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities with levels of pesticide low enough to have minimal effect on the survival of the butterfly or its ability to occupy the habitat.

Special Management Considerations or Protection for Bartram's Scrub-Hairstreak Butterfly

The special management considerations or protections for the Bartram's scrub-hairstreak, and the primary threats to the PBFs on which the Bartram's scrub-hairstreak depends, are the same as those described for the Florida leafwing above, except where noted below.

Habitat Destruction and Modification by Development—The majority of known mainland populations of the Bartram's scrub-hairstreak butterfly occur on publicly owned lands that are managed for conservation. In Miami-Dade County, occupied Bartram's scrub-hairstreak habitat occurs in the Long Pine Key region of ENP and is actively managed by the NPS for the Bartram's scrub-hairstreak and the pine rockland ecosystem, in general. Outside of the ENP, extant occupied habitat for the Bartram's scrub-hairstreak occurs on lands owned by Miami-Dade County, University of Miami, and the U.S. Coast Guard, which are managed for the conservation of the pine rockland ecosystem ameliorating some of the threat.

Sea Level Rise—Based on modeling using best case scenario, which assumes low sea level rise, high financial resources, proactive planning, and only trending population growth, analyses suggest that the Big Pine Key population of the Bartram's scrub-hairstreak may be lost or greatly reduced. Based upon the above assumptions, extant Bartram's scrub-hairstreak populations on Big Pine Key and Long Pine Key appear to be most susceptible to future losses attributed to increases in sea level and human population. In the worst case scenario, which assumes high sea level rise, low financial resources, a ''business as usual'' approach to planning, and a doubling of human population, the habitat at Big Pine Key and Long Pine Key may be lost. Under the worst case scenario, pine rockland habitat would remain within Navy Wells Pineland Preserve and the Richmond Pine Rocklands, both of which currently retain Bartram's scrub-hairstreak populations. Proactively addressing sea level rise may be beyond the feasibility of land owners or managers. However, while land owners or land managers may not be able to be proactive in preventing these events, they may be able to respond with management or protection. Management actions or activities that could ameliorate sea level rise include providing protection of suitable habitats unaffected or less affected by sea level rise.

Lack of Natural or Prescribed Burns—For a detailed description of this special management considerations or protection, see the discussion of *Special Management Considerations or Protection for the Florida Leafwing Butterfly.*

Mosquito Control Pesticide Applications—For a detailed description of this special management consideration or protection, see the discussion of *Special Management Considerations or Protection for the Florida Leafwing Butterfly.*

Criteria Used To Identify Critical Habitat for the Bartram's Scrub-Hairstreak Butterfly

The criteria used to identify critical habitat for the Bartram's scrub-hairstreak are the same as those discussed above for the Florida leafwing, except where noted below.

Isolation of habitat can prevent recolonization of Bartram's scrub-hairstreak from other sites and result in extinction. Because of the dangers associated with small populations or limited distributions, the recovery of many rare butterfly species includes the creation of new sites or reintroductions to ameliorate these effects. In addition, establishing corridors or employing small patches (stepping stones) of similar habitats have been shown to facilitate dispersal, reduce extinction rates, and increase gene flow of imperiled butterflies (Schultz 1998, p. 291; Haddad 2000, pp. 739; 744; Haddad *et al.* 2003, p. 614; Wells *et al.* 2009, p. 709). Leidner and Haddad (2010, pp. 2318–2319) suggest that small natural areas within the urban landscape may serve an important role in promoting butterfly dispersal and gene flow in fragmented landscapes. Davis *et al.* (2007, p. 1351) and Bergman *et al.* (2004, p. 625) indicate butterflies are capable of dispersing throughout the landscape, sometimes as far as 5 km (3 miles), and utilizing high-quality habitat patches. Stepping stones may be particularly useful to the Bartram's scrub-hairstreak, which like most lycaenids, exhibits low vagility, rarely venturing from the pine rockland habitat or away from large areas of contiguous patches of hostplant.

Accordingly, realizing that the current occupied habitat is not adequate for the conservation of Bartram's scrub-hairstreak butterfly, we used habitat and historical occurrence data to identify unoccupied habitat essential for the conservation of the subspecies.

Only five extant Bartram's scrub-hairstreak populations remain within the subspecies' historical range. Total population estimates for the Bartram's scrub-hairstreak are estimated to be only several hundred or fewer at any given time. Although these populations occur on conservation lands, management and law enforcement are limited. We believe it is necessary for conservation and recovery that additional populations of the Bartram's scrub-hairstreak be established within the subspecies' historical range. Therefore, as described below, we are designating two critical habitat units in the Florida Keys where appropriate hostplant-bearing habitat was historically recorded, which has since been degraded and became unsuitable for butterfly use. We believe that, given proper management and restoration efforts, the Bartram's scrub-hairstreak may be able to be established on these units, thereby providing an essential fortification of the subspecies' population in the Florida Keys.

Areas Occupied at the Time of Listing

We considered the following when identifying occupied areas of critical habitat for the Bartram's scrub-hairstreak butterfly:

(1) Space to allow for population growth and expansion. In ENP, the distribution of the Bartram's scrub-hairstreak is across a larger area than at any other single location. Outside of ENP, units are limited to three units composed of pine rockland fragments within the current distribution of the subspecies that contain the elements of the PBFs. These units retain extant, localized Bartram's scrub-hairstreak populations. The units include only pine rocklands fragments that are at least 7 ha (18 ac) in size (which represents the minimum known extant population size) and are currently occupied. On Big Pine Key, the distribution of the Bartram's scrub-hairstreak is across all extant pine rocklands on the island that contain the elements of the PBFs.

(2) Space to plan for the persistence of the current Bartram's scrub-hairstreak populations in the face of imminent effects on habitats as a result of sea level rise. Under the worst case scenario for sea level rise (as discussed above in *Special Management Considerations or Protection*), pine rockland habitat would remain at both Navy Wells, Camp Owaissa Bauer, and the Richmond Pine Rocklands, each of which retain Bartram's scrub-hairstreak populations. However, even in these areas, pine rocklands may be altered as a result of vegetation shifts or salt water intrusion, at an extent to which cannot be predicted at this time.

Areas Outside of the Geographic Range at the Time of Listing

After following the above criteria, we determined that occupied areas were not sufficient for the conservation of the subspecies for the following reasons:

(1) Restoring the subspecies to its historical range and reducing its vulnerability to stochastic events, such as hurricanes and storm surge, requires reintroduction to areas where it occurred in the past but has since been extirpated.

(2) Providing increased connectivity for populations and areas for small populations to expand requires currently unoccupied habitat.

(3) Reintroduction or assisted migration to reduce the vulnerability of the subspecies to sea-level rise and storm surge requires higher elevation sites that currently are unoccupied by the Bartram's scrub-hairstreak.

Therefore, we looked to unoccupied areas that may be essential for the conservation of the subspecies.

We used habitat and historical occurrence data to identify unoccupied habitat essential for the conservation of the subspecies as described below.

The unoccupied areas are essential for the conservation of the subspecies because they:

(1) Represent large contiguous parcels of habitat that are more likely to be resilient to ecological processes of disturbance and succession, and support viable populations of the Bartram's scrub-hairstreak butterfly. However, in Miami-Dade County, the Bartram's scrub-hairstreak is extant on parcels as small as 7 ha (18 ac), which lay adjacent to larger pine rocklands. Bartram's scrub-hairstreak populations may be able to utilize these smaller fragments while dispersing between units. Therefore, pine rockland fragments, at least 7 ha (18 ac) in size, that are currently unoccupied and within 5 km (3 miles) of an extant Bartram's scrub-hairstreak population within Miami-Dade County, were identified as critical habitat for the Bartram's scrub-hairstreak.

(2) Provide areas needed to maintain connectivity of habitat and aid butterfly dispersal within and between occupied units (i.e., stepping stones for dispersal). These areas maintain connectivity within and between populations and allow for population expansion within the butterfly's historical range.

(3) Provide areas that are needed to allow the dynamic ecological nature of the pine rockland habitat to continue. The abundance and distribution of pineland croton within the pine rockland habitat varies greatly throughout the range of the Bartram's scrub-hairstreak. At any one time, only a portion of this habitat is optimally suitable for the Bartram's scrub-hairstreak and the size and location of suitable areas is dynamic over time, being largely driven by the frequency and scale of natural or prescribed burns. Historically, lighting-induced fires maintained native vegetation within the pine rockland ecosystem, including pineland croton. Although prescribed burns are administered on the majority of conservation lands that retain Bartram's scrub-hairstreak populations,

fire return intervals and scope are inconsistent. In addition, little or no fire management occurs on private lands. Thus, areas of pine rockland that now support the subspecies may not provide as optimal habitat in the future as a lack of adequate fire management removes or fragments hostplant distribution. Conversely, hostplants may return or increase in areas following prescribed burns, allowing the butterflies to expand or colonize within them in the future.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack PBFs for the Bartram's scrub-hairstreak butterfly. 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 lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the PBFs in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the Regulation Promulgation section. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates, plot points, or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R4–ES–2013–0031, on our Internet site at *http://www.fws.gov/verobeach/*, and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

Final Critical Habitat Designation for the Bartram's Scrub-hairstreak Butterfly

We are designating seven units as critical habitat for the Bartram's scrub-hairstreak. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the Bartram's scrub-hairstreak. The seven areas we are designating as critical habitat are:

(1) BSHB1 Everglades National Park, Miami-Dade County, Florida;

(2) BSHB2 Navy Wells Pineland Preserve, Miami-Dade County, Florida;

(3) BSHB3 Camp Owaissa Bauer, Miami-Dade County, Florida;

(4) BSHB4 Richmond Pine Rocklands, Miami-Dade County, Florida;

(5) BSHB5 Big Pine Key, Monroe County, Florida;

(6) BSHB6 No Name Key, Monroe County, Florida; and

(7) BSHB7 Little Pine Key, Monroe County, Florida.

Land ownership within the designated critical habitat consists of Federal (80 percent), State (5 percent), and private and other (15 percent). Table 2 summarizes these units. Designated critical habitat for the Florida leafwing butterfly occurs entirely within Bartram's scrub- hairstreak units BSHB1, BSHB2, BSHB4, and BSHB5.

TABLE 2—BARTRAM'S SCRUB-HAIRSTREAK CRITICAL HABITAT UNITS

Unit No.	Unit name	Ownership	Percent	Hectares (acres)	Occupied
BSHB1	Everglades National Park	Federal	100	3,235 (7,994)	yes.
		Total	*100*	*3,235 (7,994)*	
BSHB2	Navy Wells Pineland Preserve	State Private-Other	30 70	62 (153) 141 (349)	yes.
		Total	*100*	*203 (502)*	
BSHB3	Camp Owaissa Bauer	State Private-Other	20 80	29 (71) 117 (288)	yes.
		Total	*100*	*146 (359)*	
BSHB4	Richmond Pine Rocklands	Federal State Private-Other	11 7 82	50 (122) 32 (79) 356 (881)	yes.
		Total	*100*	*438 (1,082)*	
BSHB5	Big Pine Key	Federal State Private-Other	65 16 19	365 (901) 90 (223) 104 (258)	yes.
		Total	*100*	*559 (1,382)*	
BSHB6	No Name Key	Federal State Private-Other	75 18 7	30 (75) 9 (22) 11 (26)	no.
		Total	*100*	*50 (123)*	
BSHB7	Little Pine Key	Federal	100	39 (97)	no.
		Total	*100*	*39 (97)*	

TABLE 2—BARTRAM'S SCRUB-HAIRSTREAK CRITICAL HABITAT UNITS—Continued

Unit No.	Unit name	Ownership	Percent	Hectares (acres)	Occupied
Total All Units		Federal State Private-Other	80 5 15	3,719 (9,189) 222 (548) 729 (1,802)	
		All	100	4,670 (11,539)	

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Bartram's scrub-hairstreak butterfly, below.

Unit BSHB1: Everglades National Park, Miami-Dade County, Florida

Unit BSHB1 consists of 3,235 ha (7,994 ac) in Miami-Dade County. This unit is composed entirely of lands in Federal ownership, 100 percent of which are located within the Lone Pine Key region of ENP. This unit is currently occupied by the Bartram's scrub-hairstreak and contains all the PBFs, including suitable habitat (pine rockland habitat of sufficient size), hostplant presence, natural or artificial disturbance regimes, low levels of nonnative vegetation and larval parasitism, and restriction of pesticides, and the unit contains the PCE of pine rockland. The PBFs in this unit may require special management considerations or protection to address threats of a lack of adequate fire management, habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with the NPS to implement needed actions.

ENP is currently in the process of updating its FMP and environmental assessment, which will assess the impacts of fire on various environmental factors, including listed, proposed, and candidate species (Land 2011, pers. comm.; Sadle 2013a, pers. comm.). ENP is actively coordinating with the Service, as well as other members of the IBWG, to review and adjust the prescribed burn practices outlined in the FMP to help maintain or increase Bartram's scrub-hairstreak population sizes, protect pine rocklands, expand or restore remnant patches of hostplants, and ensure that short-term negative effects from fire (i.e., loss of hostplants, loss of eggs and larvae) can be avoided or minimized.

Unit BSHB2: Navy Wells Pineland Preserve, Miami-Dade County, Florida

Unit BSHB2 consists of 203 ha (502 ac) in Miami-Dade County. This unit is comprised of lands in State (62 ha (153 ac)) and private or other (141 ha (349 ac)) ownership. The 120-ha (296-ac) Navy Wells Pineland Preserve is jointly owned by Miami-Dade County (85 ha (211 ac)) and the State (35 ha (85 ac)). State lands are interspersed within Miami-Dade County Parks and Recreation Department lands, which are managed for conservation.

This unit begins in Homestead, Florida, on SW 304 Street, between SW 198 Avenue to SW 204 Avenue; then resumes between SW 340 Street and SW 344 Street, between SW 213 Avenue and SW 214 Avenue; then resumes between SW 344 Street and SW 360 Street on SW 209 Avenue; then resumes along SW 268 Street, between SW 202 Avenue and SW 205 Avenue; then resumes along SW 360 Street, between SW 202 Avenue and SW 188 Avenue; then resumes between SW 7 Street and SW 158 Street, in the vicinity of SW 180 Avenue; then resumes along Palm Drive and SW 3 Terrace, between SW 6 Avenue and SW 8 Avenue.

This unit is occupied by the Bartram's scrub-hairstreak butterfly and contains all the PBFs, including suitable habitat, hostplant, adult food sources, breeding sites, disturbance regimes, and restriction of pesticides, and the unit contains pine rockland and rockland hammock PCEs. The PBFs in this unit may require special management considerations or protection to address threats of a lack of adequate fire management, habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with our partners and landowners to implement needed actions.

Unit BSHB3: Camp Owaissa Bauer, Miami-Dade County, Florida

Unit BSHB3 consists of 146 ha (359 ac) in Miami-Dade County. This unit is comprised of lands in State (29 ha (71 ac)) and private or other (117 ha (288 ac)) ownership, of which one large fragment (40 ha (99 ac)) is owned by Miami-Dade County-Camp Owaissa Bauer. State lands are interspersed within Miami-Dade County Parks and Recreation Department lands, which are managed for conservation.

This unit begins in Homestead, Florida, on SW 147 Ave, between SW 216 Street and SW 200 Street; then resumes on both sides of SW 157 Avenue, between SW 216 Street and SW 228 Street; then resumes along SW 232 Street, between SW 142 Avenue and SW 144 Avenue; then continues south of SW 232 Street along both sides of SW 142 Ave to SW 248 Street; then resumes along SW 248 Street, south to SW 256 Street, between SW 144 Avenue and the vicinity of SW 157 Avenue; then resumes along SW 240 Street, north to the vicinity of SW 238 Street, between SW 152 Avenue and SW 147 Avenue; then resumes between SW 264 Street and SW 272 Street, along both sides of SW 155 Avenue; then resumes along both sides of SW 264 Street in the vicinity of SW 162 Avenue.

This unit is occupied by the Bartram's scrub-hairstreak butterfly and contains all the PBFs, including suitable habitat, hostplant, adult food sources, breeding sites, disturbance regimes, and restriction of pesticides required by the subspecies, and the unit contains the pine rockland and rockland hammock PCEs. The PBFs in this unit may require special management considerations or protection to address threats of a lack of adequate fire management, habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with our partners and landowners to implement needed actions.

Unit BSHB4: Richmond Pine Rocklands, Miami-Dade County, Florida

Unit BSHB4 consists of 438 ha (1,082 ac) in Miami-Dade County. This unit comprises lands in both Federal (U.S. Coast Guard (Homeland Security) (29 ha (72 ac)), U.S. Army Corps of Engineers (DoD) (8 ha (20 ac)), National Oceanic Atmospheric Administration (NOAA) (4 ha (9 ac)), Federal Bureau of Prisons (DoJ) (9 ha (21 ac))), State (32 ha (79 ac)), and private or other (356 ha (881 ac)) ownership. The unit includes some of the largest remaining contiguous

fragments of pine rockland habitats outside of ENP known to be occupied by the Bartram's scrub-hairstreak butterfly.

This unit begins in Miami, Florida, at SW 120 Street, north to SW 112 Street, between SW 142 Avenue and the vicinity of SW 137 Avenue; then resumes along SW 124 Street south to SW 128 Street, between SW127 Avenue and the vicinity of SW 137 Avenue; then resumes in the vicinity of SW 136 Street and SW 122 Avenue; then resumes on Coral Reef Drive (State Road 992) south to SW 168 Street, between U.S. 1 and SW 117 Avenue; then resumes from Coral Reef Drive south to SW 184 Street, between FL–832 and SW 137 Avenue.

This unit is currently occupied by the Bartram's scrub-hairstreak butterfly and contains all the PBFs, including suitable habitat, hostplant, adult food sources, breeding sites, disturbance regimes, and restriction of pesticides, and the unit contains the pine rockland and rockland hammock PCEs. The PBFs in this unit may require special management considerations or protection to address threats of a lack of adequate fire management, habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with our partners and landowners to implement needed actions. The U.S. Army Corps of Engineers lands do not have an integrated natural resources management plan (INRMP) or other natural resource management plan.

Unit BSHB5: Big Pine Key, Monroe County, Florida

Unit BSHB5 consists of 559 ha (1,382 ac) in Monroe County. This unit includes Federal lands within NKDR (365 ha (901 ac)), State lands (90 ha (223 ac)), and property in private or other ownership (104 ha (258 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge.

The unit begins on northern Big Pine Key on the southern side of Gulf Boulevard, continues south on both sides of Key Deer Boulevard (CR 940) to the vicinity of Osprey Lane on the western side of CR 940 and Tea Lane to the east of CR 940; then resumes on both sides of CR 940 from Osprey Lane to rest south of the vicinity of Driftwood Lane; then resumes south of Osceola Street, between Fern Avenue to the west and Baba Lane to the east; then resumes north of Watson Boulevard in the vicinity of Avenue C; then continues south on both sides of Avenue C to South Street; then resumes on both sides of CR 940 south to U.S. 1 between Ships Way to the west and Sands Street to the east; then resumes south of U.S. 1 from Newfound Boulevard to the west and Deer Run Trail to the east; then resumes south of U.S. 1 from Palomino Horse Trail to the west and Industrial Road to the east.

This unit is currently occupied by the Bartram's scrub-hairstreak butterfly. This unit contains several of the PBFs, including suitable habitat, hostplant, adult food sources, and breeding sites required by the subspecies, and it contains the pine rockland and rockland hammock PCEs. The PBFs in this unit may require special management considerations or protection to address threats of disturbance regimes (fire) and pesticide applications, as well as habitat fragmentation, poaching, and sea level rise. However, in most cases these threats are being addressed or coordinated with our partners and landowners to implement needed actions.

Unit BSHB6: No Name Key, Monroe County, Florida

Unit BSHB6 consists of 50 ha (123 ac) in Monroe County. This unit includes Federal lands within NKDR (30 ha (75 ac)), State lands (9 ha (22 ac)), and property in private or other ownership (11 ha (26 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge. The unit extends from Watson Road entirely on National Key Deer Refuge lands just south of the vicinity of Spanish Channel Drive eastward to the vicinity of Paradise Drive, then resumes north of Watson Road from No Name Drive east to Paradise Lane.

This unit is not currently occupied by the Bartram's scrub-hairstreak butterfly but is essential for the conservation of the subspecies because it serves to protect habitat needed to recover the subspecies, reestablish wild populations within the historical range of the subspecies, and maintain populations throughout the historical distribution of the subspecies in the Florida Keys, and the unit provides area for recovery in the case of stochastic events that otherwise hold the potential to eliminate the subspecies from the one or more locations where it is presently found. The Lower Florida Keys National Wildlife Refuge's CCP management objective number 11 provides specifically for maintaining and restoring butterfly populations of special conservation concern, including the Bartram's scrub-hairstreak butterfly.

Unit BSHB7: Little Pine Key, Monroe County, Florida

Unit BSHB7 consists of 39 ha (97 ac) in Monroe County. This unit comprises entirely lands in Federal ownership, 100 percent of which are located within NKDR. This unit is not currently occupied by the Bartram's scrub-hairstreak butterfly but is essential to the conservation of the subspecies because it serves to protect habitat needed to recover the subspecies, reestablish wild populations within the historical range of the subspecies, and maintain populations throughout the historical distribution of the subspecies in the Florida Keys, and it provides area for recovery in the case of stochastic events that otherwise hold the potential to eliminate the subspecies from one or more locations where it is presently found. The Lower Florida Keys National Wildlife Refuge's CCP management objective number 11 provides specifically for maintaining and restoring butterfly populations of special conservation concern, including the Bartram's scrub-hairstreak butterfly.

Unit BSHB7–Little Pine Key is designated critical habitat for the silver rice rat *(Oryzomys palustris natator;* 50 CFR 17.95(a)).

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory 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,* 245 F.3d 434 (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 provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the effected critical habitat would continue to serve its intended conservation role for the species.

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. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 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 may affect and 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 and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define ''reasonable and prudent alternatives'' (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of 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 sometimes may 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.

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. Activities that may destroy or adversely modify critical habitat are those that alter the physical or biological features to an extent that appreciably reduces the conservation value of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak butterflies. As discussed above, the role of critical habitat is to support life-history needs of these butterflies and provide for the conservation of these subspecies.

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

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Florida leafwing and Bartram's scrub-hairstreak butterflies. These activities include, but are not limited to:

(1) Actions that would significantly alter the pine rockland and associated rockland hammock and hydric pine flatwood habitats. Such activities may include, but are not limited to, residential, commercial, or recreational development, including associated infrastructure.

(2) Actions that would significantly alter vegetation structure or composition, such as clearing vegetation for construction of residential, commercial, or recreational development; and associated infrastructure.

(3) Actions that would introduce nonnative plant species that would significantly alter vegetation structure or composition. Such activities may include, but are not limited to, residential and commercial development and associated infrastructure.

(4) Actions that would introduce nonnative arthropod species that would significantly influence the natural histories of the Florida leafwing and Bartram's scrub-hairstreak butterflies. Such activities may include release of parasitic or predator species (flies or wasps) for use in agriculture-based biological control programs.

(5) Actions that would introduce chemical pesticides into the pine rockland and associated rockland hammock and hydric pine flatwood habitats in a manner that impacts the butterflies. Such activities may include use of adulticides for control of mosquitos or agricultural-related pests.

Exemptions

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

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: ''The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an INRMP 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.'' There are DoD lands within the critical habitat designation area; however, none of these lands is covered by an INRMP. Accordingly, no lands that otherwise meet the definition of critical habitat are exempt under section 4(a)(3)(B)(i) of the Act.

Consideration of Impacts Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to 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 she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she 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 on its face, 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.

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis, which together with our narrative interpretation of effects, constituted our draft economic analysis (DEA) of the proposed critical habitat designation and related factors (Service 2013, entire; IEc 2014, entire). The DEA was made available for public review from May 8, 2014, through June 9, 2014 (79 FR 26392). Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation.

Based on the analysis, the Service anticipates no more than eight to nine consultations per year in the critical habitat units. The analysis concluded the economic impacts of the designation are likely to range from $400 to $9,000 per consultation resulting in approximately $72,000 (2013 dollars) in a given year. Critical habitat is not likely to generate additional consultations, and in circumstances where consultation does occur, additional project modifications are unlikely. Additional information relevant to the probable incremental economic impacts of critical habitat designations for the Florida leafwing and Bartram's scrub-hairstreak butterflies are summarized in the DEA (IEc 2014, entire), available at *http://www.regulations.gov*.

In summary, our analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exercising her discretion to exclude any areas from this designation of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak based on economic impacts.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the DoD where a national security impact might exist. In preparing this final rule, we have determined that some lands within the designation of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak are owned or managed by the DoD and the Department of Homeland Security. However, we anticipate no impact on national security. Consequently, the Secretary is not intending to exercise her discretion to exclude any areas from the final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we also consider any other relevant impacts resulting from the designation of critical habitat. We consider a number of factors, including whether the landowners have developed any HCPs or other management 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 impacts that might occur because of the designation.

In preparing this final rule, we have determined that there are currently no permitted HCPs or other management plans for the Florida leafwing and Bartram's scrub-hairstreak. An HCP for Big Pine and No Name Keys in Monroe County, Florida, which was implemented in 2006, did not address the Florida leafwing and Bartram's scrub-hairstreak. However, in order to fulfill the HCP's mitigation requirements, Monroe County has been actively acquiring parcels of high-quality habitats, including pine rocklands, and placing them into conservation. Natural lands acquired under the HCP will be managed for conservation, in perpetuity, either by the County or through agreements with the State or Service. These conservation actions have benefited the Florida leafwing and Bartram's scrub-hairstreak by protecting habitat. However, we anticipate no impact on the HCP from this final critical habitat designation. Furthermore, the final designation does not include any tribal lands or additional trust resources, so we anticipate no impact on tribal lands or partnerships from this final critical habitat designation. Accordingly, the Secretary is not exercising her discretion to exclude any areas from the final designation based on other relevant impacts.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C 801 *et seq.*), whenever an agency is required to 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 (i.e., 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. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, 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; and 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 considered the types of activities that might trigger regulatory impacts under these designations as well as 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.

The Service's current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself, and therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7 only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by these designations. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. The Office of Management and Budget (OMB) has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute ''a significant adverse effect'' when compared to not taking the regulatory action under consideration.

Appendix A of the FEA discusses the potential for critical habitat to affect energy supply, distribution, or use through the additional cost of considering adverse modification in section 7 consultation. The FEA finds that none of the outcomes relative to significant adverse effect thresholds set forth by OMB are relevant to this analysis. Thus, based on information in the FEA, energy-related impacts associated with Florida leafwing and Bartram's scrub-hairstreak conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

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

(1) 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; Aid to Families with Dependent Children 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.

(2) We do not believe that this rule will significantly or uniquely affect small governments because it will not 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. Small governments will be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. The FEA concludes incremental impacts may occur due to administrative costs of section 7 consultations for activities related to commercial, residential, and recreational development and

associated actions; however, these are not expected to significantly affect small government entities. Consequently, we do not believe that the critical habitat designation will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Florida leafwing and Bartram's scrub-hairstreak butterflies in a takings implications assessment. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding or assistance, or that 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. Based on the best available information, the takings implications assessment concludes that this designation of critical habitat for the Florida leafwing and Bartram's scrub-hairstreak does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with Executive Order 13132 (Federalism), this rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this critical habitat designation with appropriate State resource agencies in Florida. We received comments from FWC and FDACS and have addressed them in the Summary of Comments and Recommendations section of this rule. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the PBFs of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. 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.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 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 applicable standards set forth in sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, the rule identifies the elements of PBFs essential to the conservation of the Florida leafwing and Bartram's scrub-hairstreak butterflies. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

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; 42 U.S.C. 4321 et seq.)

It is our position that we do not need to prepare environmental analyses pursuant to NEPA 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 position was upheld by the U.S. 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), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), 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.

As discussed above, we determined that there are no tribal lands that are currently occupied by the Florida leafwing and Bartram's scrub-hairstreak butterflies that contain the features essential for conservation of these subspecies, and no tribal lands unoccupied by the Florida leafwing and Bartram's scrub-hairstreak that are essential for the conservation of these subspecies.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the South Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this package are the staff members of the South Florida Ecological Services Field Office.

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; 1531–1544; 4201–4245, unless otherwise noted.

■ 2. In § 17.95, amend paragraph (i) by:
■ a. Adding an entry for ''Bartram's Scrub-hairstreak Butterfly (*Strymon acis bartrami*)'' immediately following the entry for ''Valley Elderberry Longhorn Beetle *(Desmocerus californicus dimorphus*) California. Sacramento County'' and
■ b. Adding an entry for ''Florida Leafwing Butterfly (*Anaea troglodyta floridalis*)'' immediately following the entry for ''Fender's Blue Butterfly *(Icaricia icarioides fenderi)''.*

The additions read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) *Insects.*

* * * * *

Bartram's Scrub-Hairstreak Butterfly (*Strymon Acis Bartrami*)

(1) Critical habitat units are depicted for Miami-Dade and Monroe Counties, Florida, on the maps below.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the Bartram's scrub-hairstreak butterfly are:

(i) Areas of pine rockland habitat, and in some locations, associated rockland hammocks and hydric pine flatwoods.

(A) Pine rockland habitat contains:

(*1*) Open canopy, semi-open subcanopy, and understory.

(*2*) Substrate of oolitic limestone rock.

(*3*) A plant community of predominately native vegetation.

(B) Rockland hammock habitat associated with the pine rocklands contains:

(*1*) Canopy gaps and edges with an open semi-open canopy, subcanopy, and understory.

(*2*) Substrate with a thin layer of highly organic soil covering limestone or organic matter that accumulates on top of the underlying limestone rock.

(*3*) A plant community of predominately native vegetation.

(C) Hydric pine flatwood habitat associated with the pine rocklands contains:

(*1*) Open canopy with a sparse or absent subcanopy, and dense understory.

(*2*) Substrate with a thin layer of poorly drained sands and organic materials that accumulates on top of the underlying limestone or calcareous rock.

(*3*) A plant community of predominately native vegetation.

(ii) Competitive nonnative plant species in quantities low enough to have minimal effect on survival of Bartram's scrub-hairstreak butterfly.

(iii) The presence of the butterfly's hostplant, pineland croton, in sufficient abundance for larval recruitment, development, and food resources, and for adult butterfly nectar source and reproduction;

(iv) A dynamic natural disturbance regime or one that artificially duplicates natural ecological processes (e.g. fire, hurricanes or other weather events, at appropriate intervals) that maintains the pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities.

(v) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities that allow for connectivity and are sufficient in size to sustain viable populations of Bartram's scrub hairstreak butterfly.

(vi) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities with levels of pesticide low enough to have minimal effect on the survival of the butterfly or its ability to occupy the habitat.

(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 September 11, 2014.

(4) *Critical habitat map units.* Data layers defining map units were created using ESRI ArcGIS mapping software along with various spatial data layers. ArcGIS was also used to calculate the size of habitat areas. The projection used in mapping and calculating distances and locations within the units was North American Albers Equal Area Conic, NAD 83. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates, plot points, or both on which each map is based are available to the public at the Service's Internet site (*http://www.fws.gov/verobeach/*), the Federal eRulemaking Portal (*http://www.regulations.gov* at Docket No. FWS–R4–ES–2013–0031), and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map of all critical habitat units for the Bartram's scrub-hairstreak butterfly follows:

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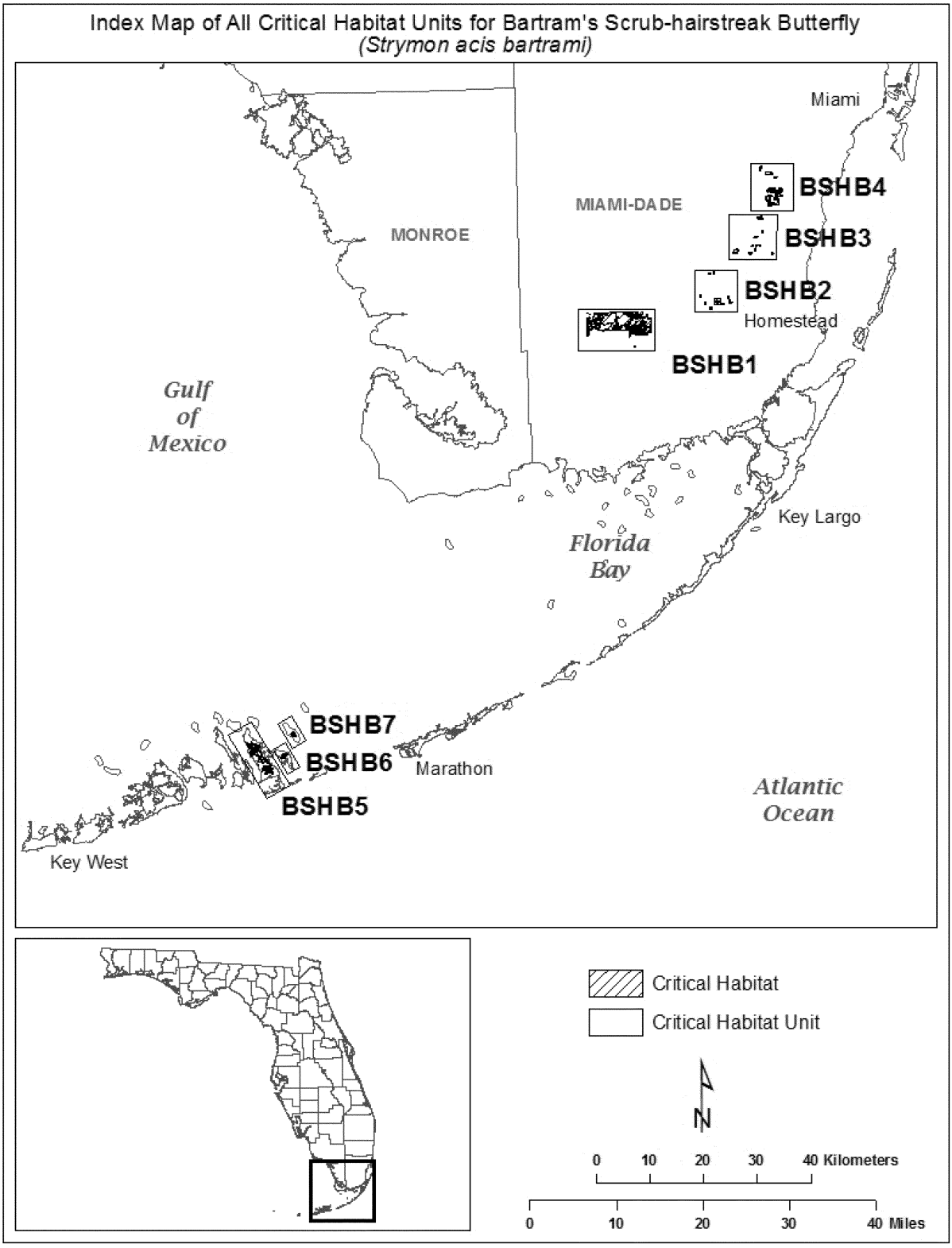
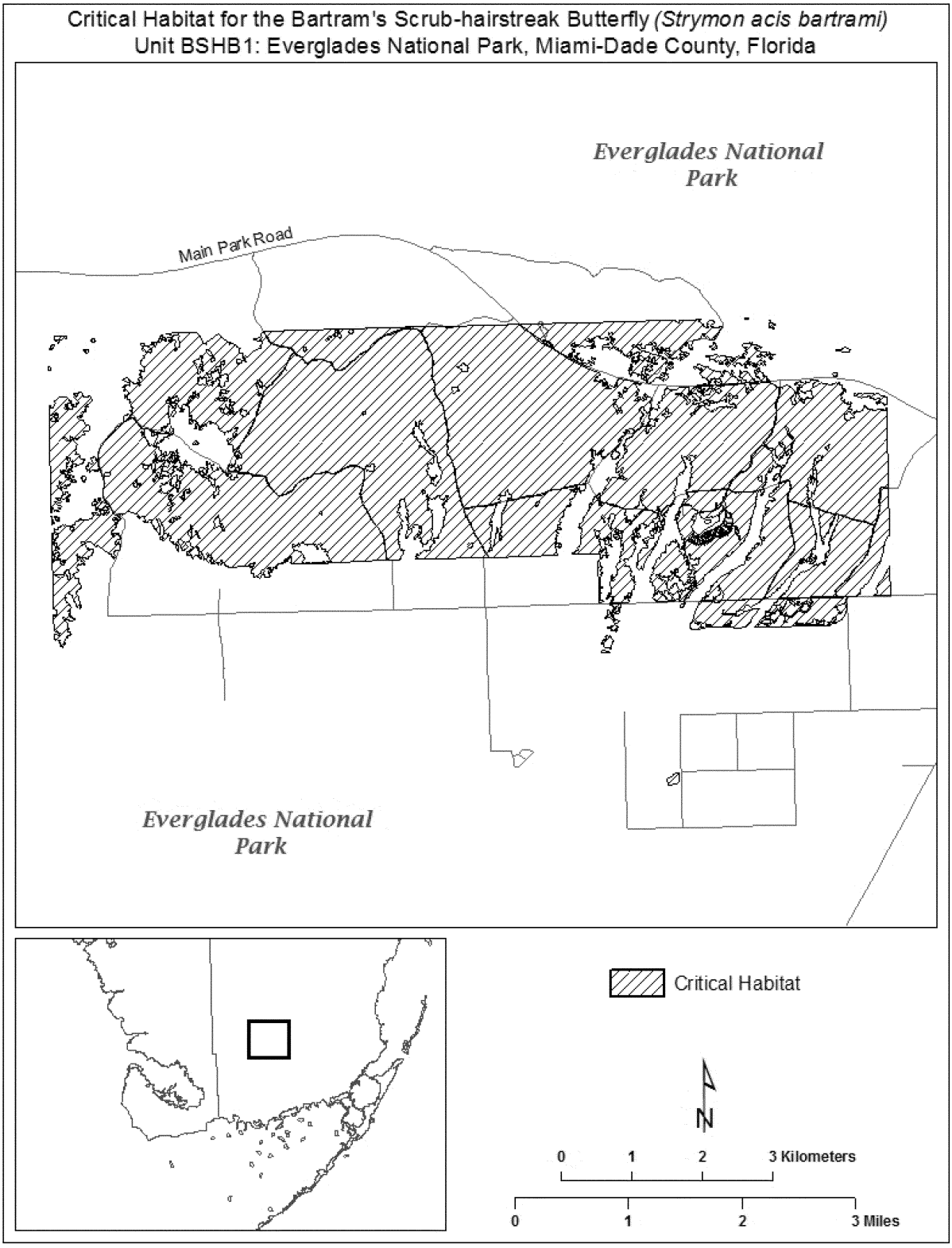


(6) Unit BSHB1: Everglades National Park, Miami-Dade County, Florida.

(i) *General description:* Unit BSHB1 consists of 3,235 ha (7,994 ac) in Miami-Dade County and is composed entirely of lands in Federal ownership, 100 percent of which are located within the Long Pine Key region of Everglades National Park.

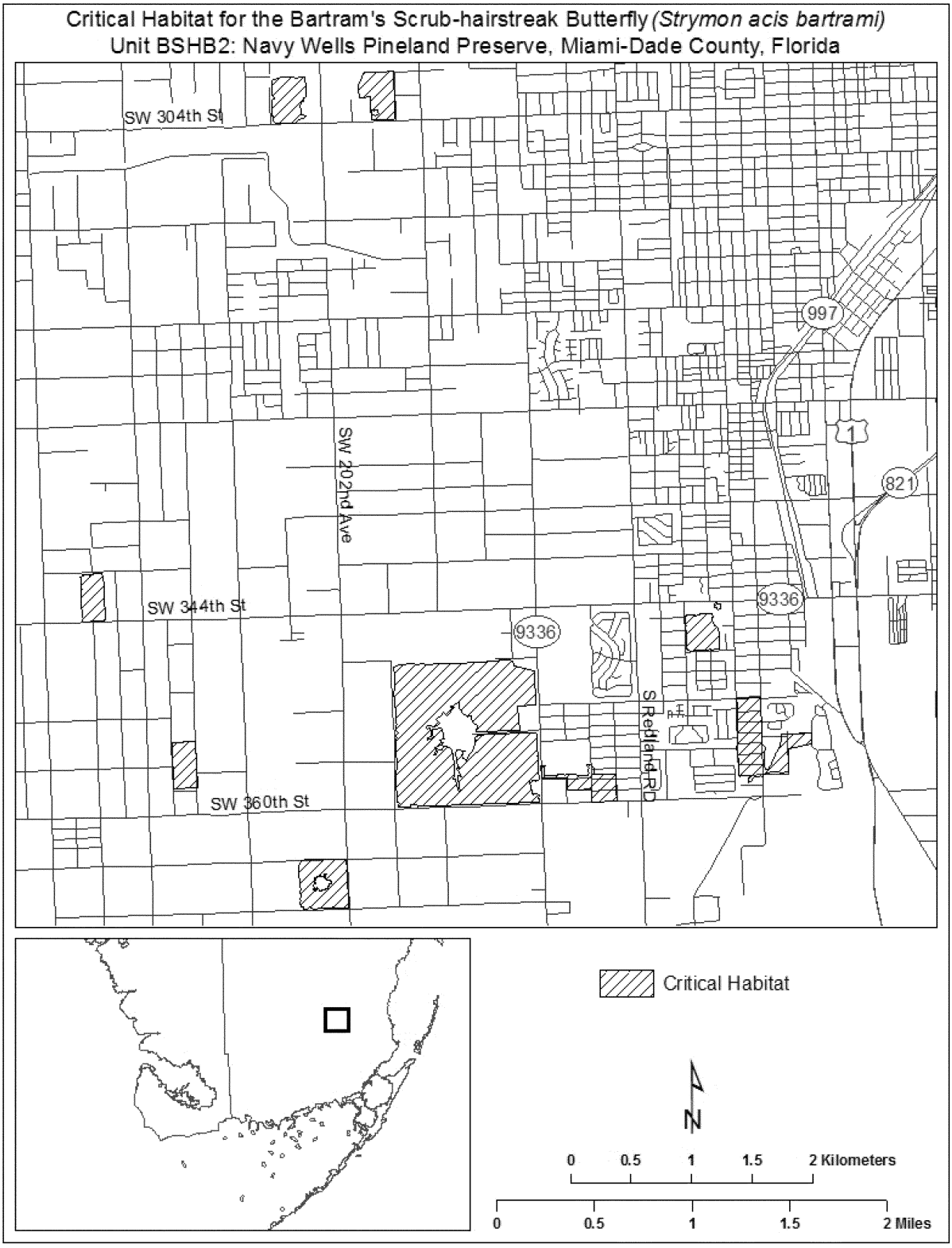
(ii) Map of Unit BSHB1 follows:



(7) Unit BSHB2: Navy Wells Pineland Preserve, Miami-Dade County, Florida.

(i) *General description:* Unit BSHB2 consists of 203 ha (502 ac) in Miami-Dade County and is composed of lands in State (62 ha (153 ac)), and private or other ownership (141 ha (349 ac)), including the County and State-owned Navy Wells Pineland Preserve.

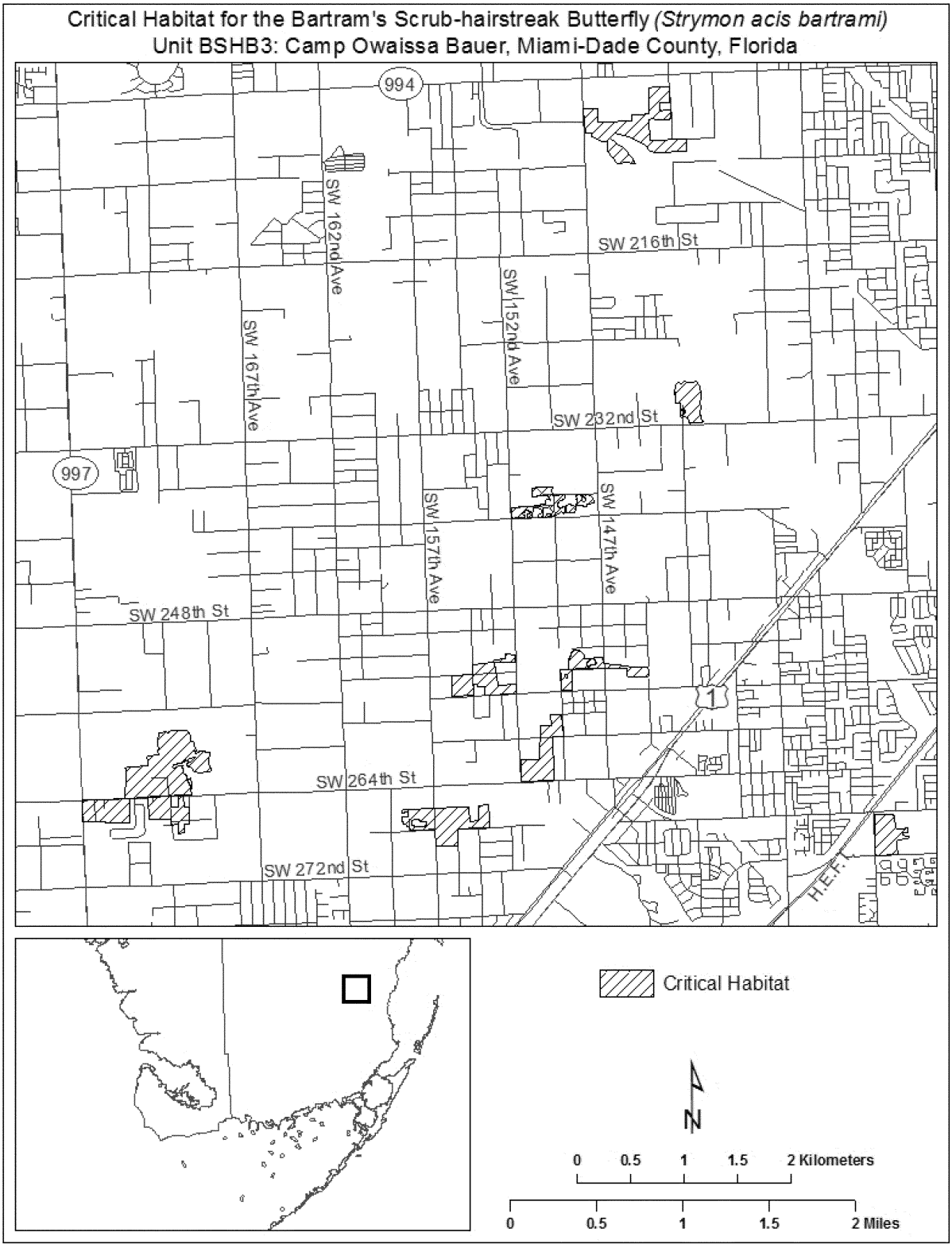
(ii) Map of Unit BSHB2 follows:



(8) Unit BSHB3: Camp Owaissa Bauer, Miami-Dade County, Florida.

(i) *General description:* Unit BSHB3 consists of 146 ha (359 ac) in Miami-Dade County and is comprised of lands in State (29 ha (71 ac)) and private or other ownership (117 ha (288 ac)), including 40 ha (99 ac) of Miami-Dade County-owned Camp Owaissa Bauer.

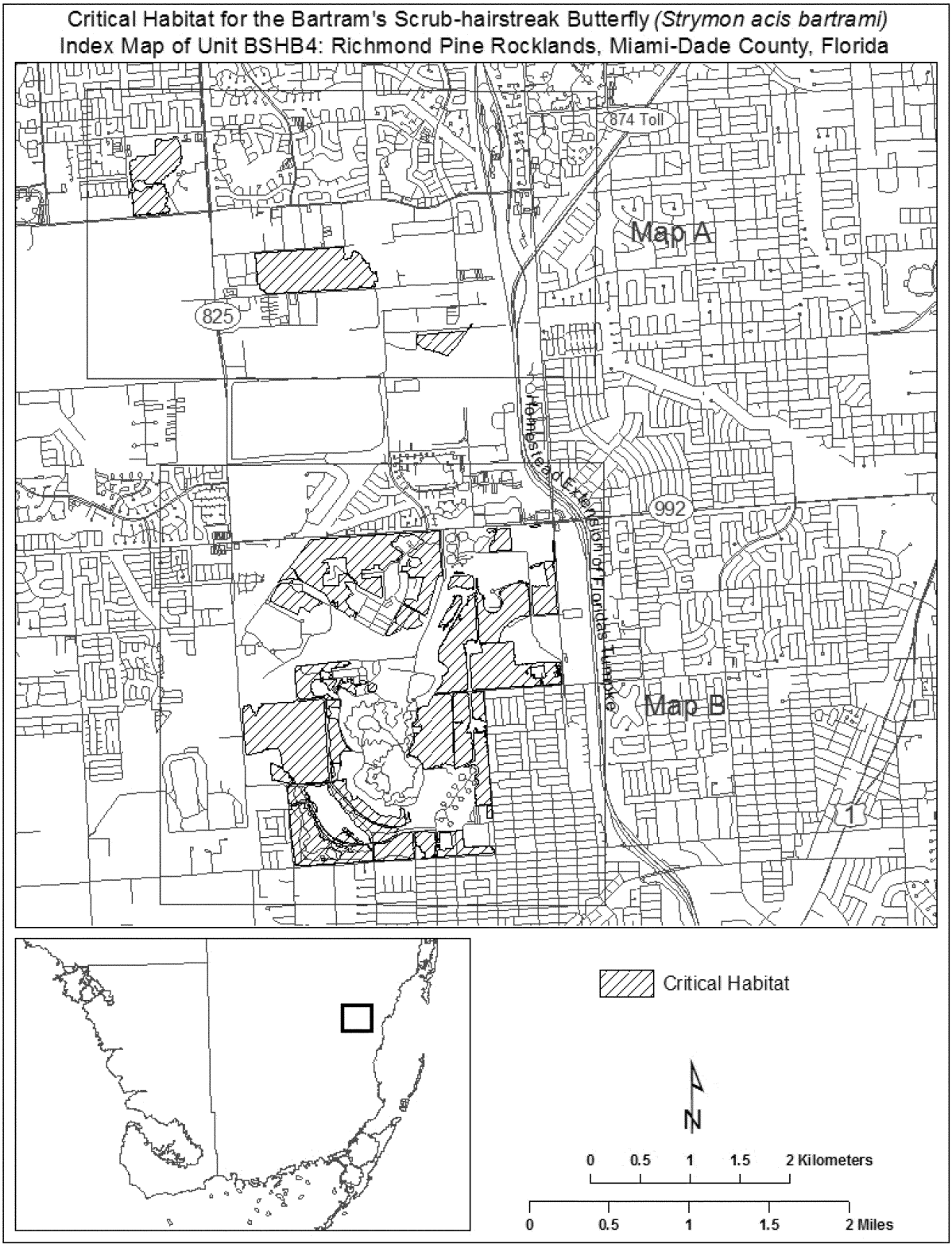
(ii) Map of Unit BSHB3 follows:



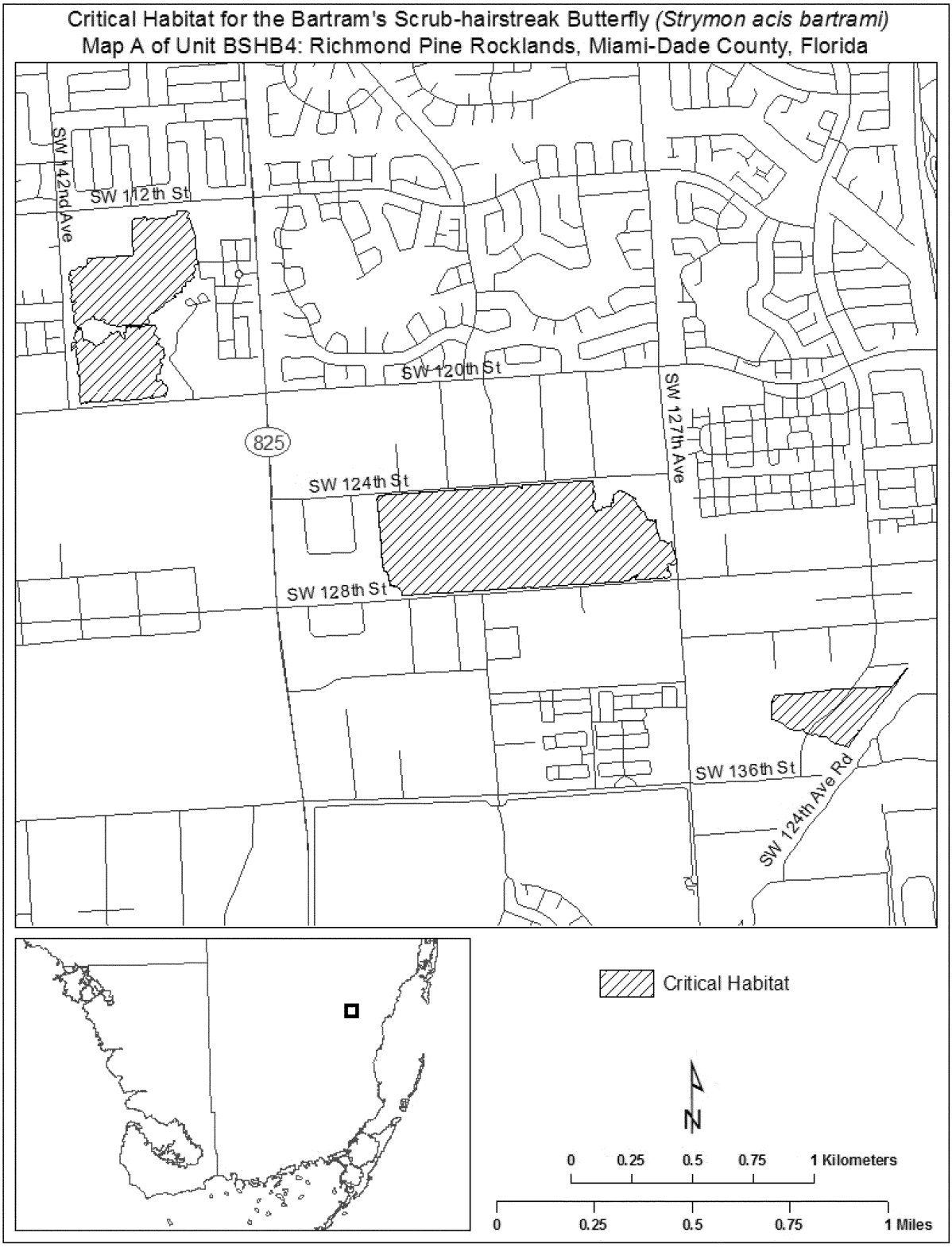
(9) Unit BSHB4: Richmond Pine Rocklands, Miami-Dade County, Florida.

(i) *General description:* Unit BSHB4 consists of 438 ha (1,082 ac) in Miami-Dade County and is composed of lands in Federal (U. S. Coast Guard, U.S. Army Corps of Engineers, Federal Bureau of Prisons, and National Oceanic and Atmospheric Administration (50 ha (122 ac)), State (32 ha (79 ac)) and private or other (356 ha (881 ac)) ownership.

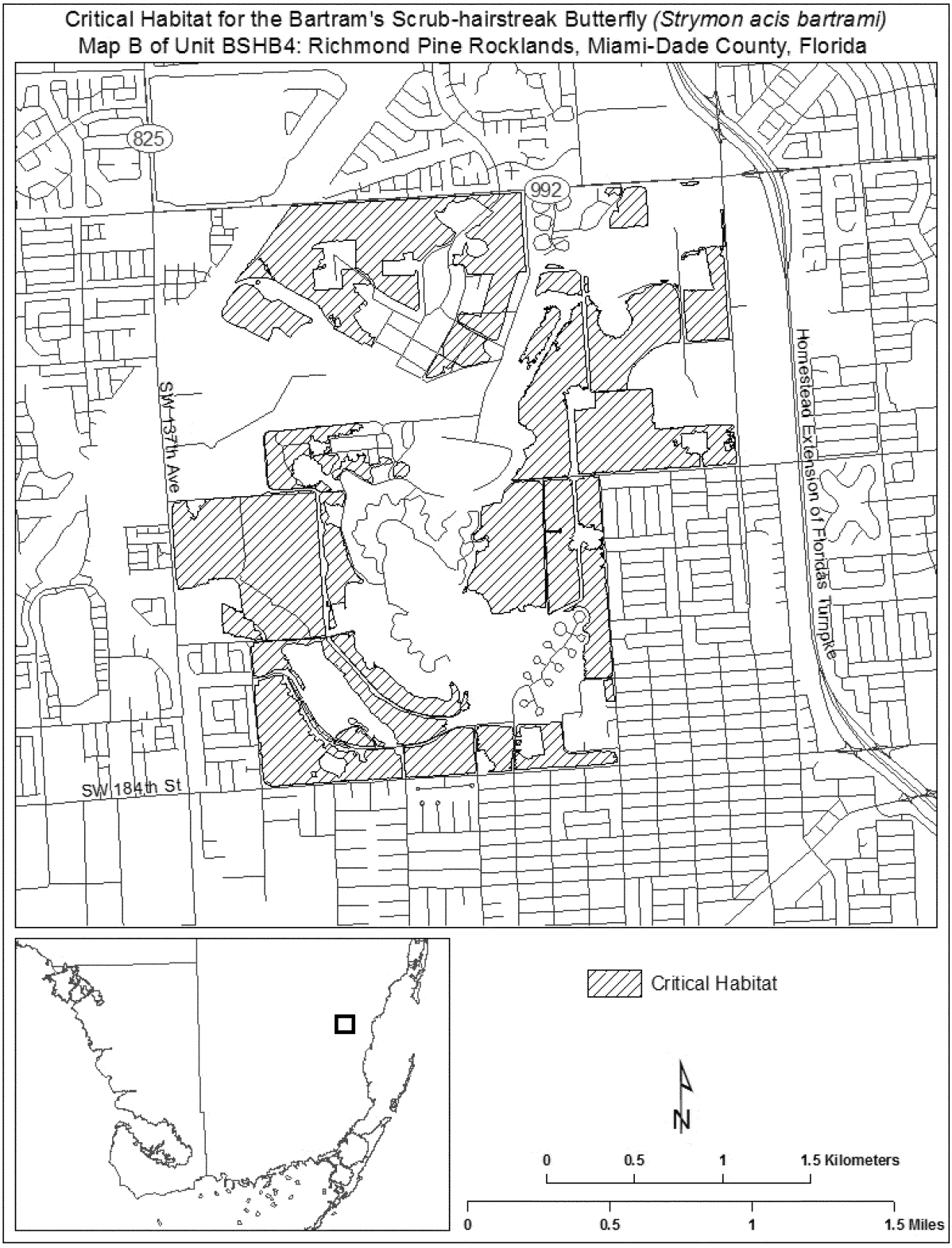
(ii) Index map of Unit BSHB4 follows:



(A) Map A of Unit BSHB4 follows:



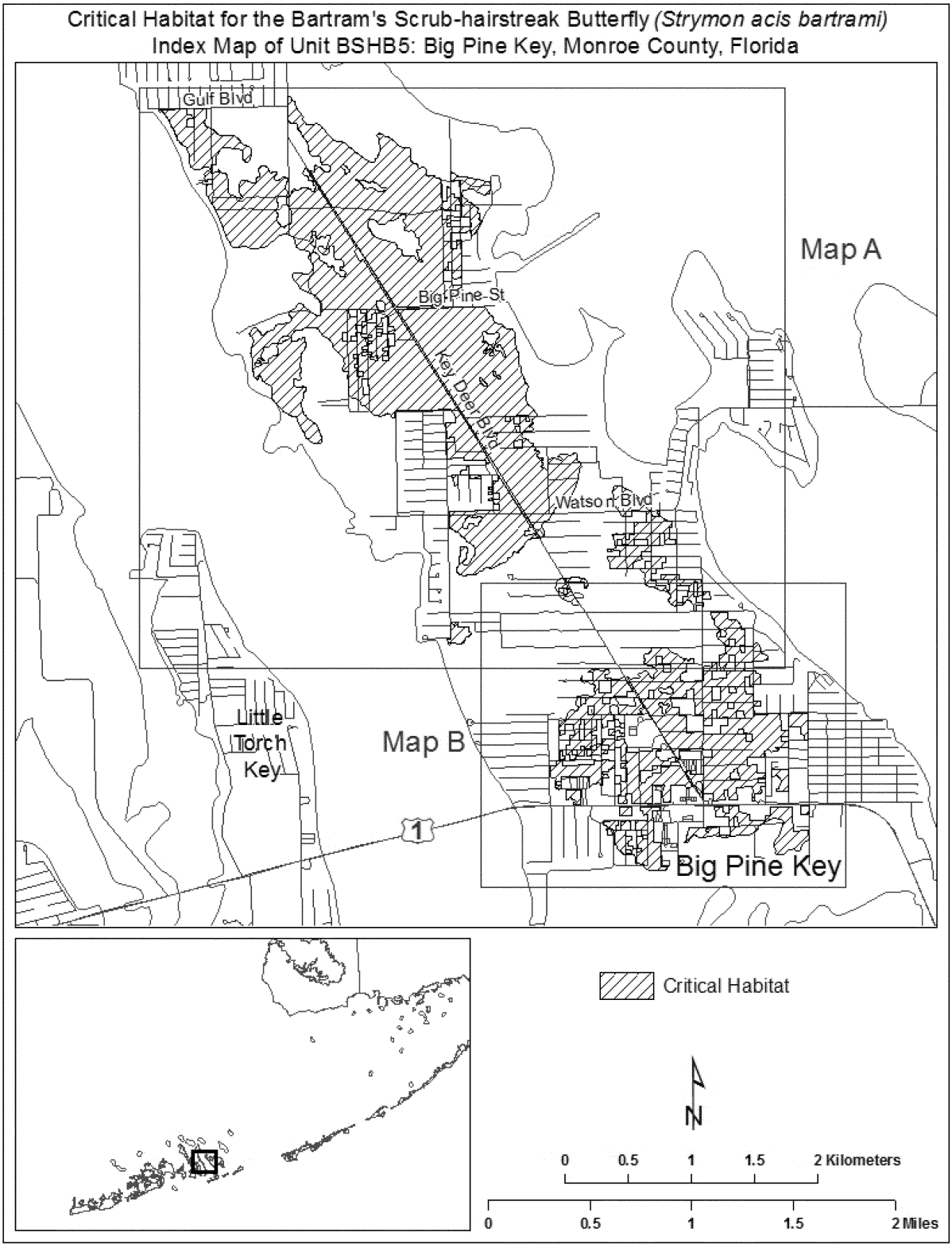
(B) Map B of Unit BSHB4 follows:



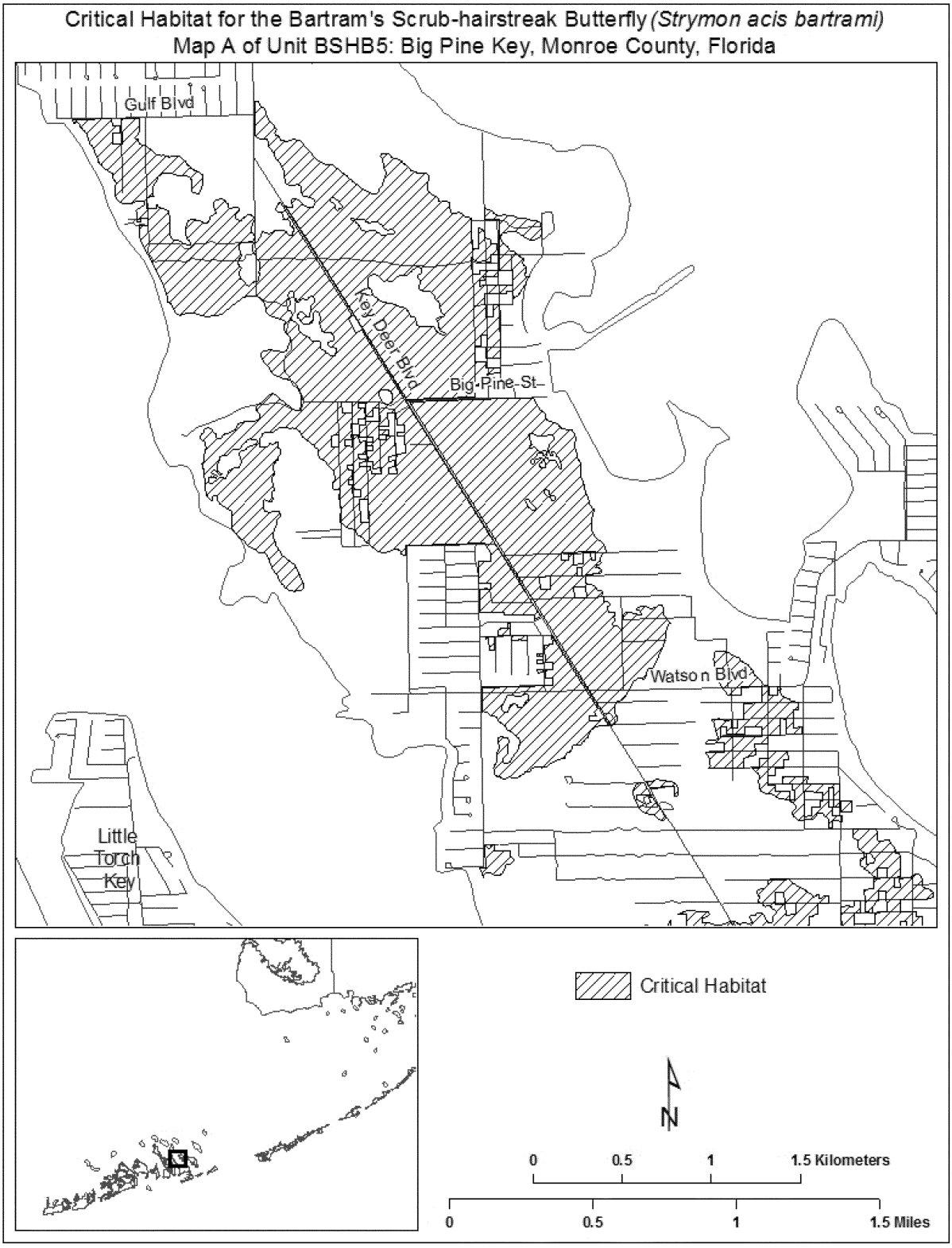
(10) Unit BSHB5: Big Pine Key, Monroe County, Florida.

(i) *General description:* Unit BSHB5 consists of 559 ha (1,382 ac) in Monroe County and is composed of lands in National Key Deer Refuge (NKDR) (365 ha (901 ac)), State ownership (90 ha (223 ac)), and private or other ownership (104 ha (258 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge.

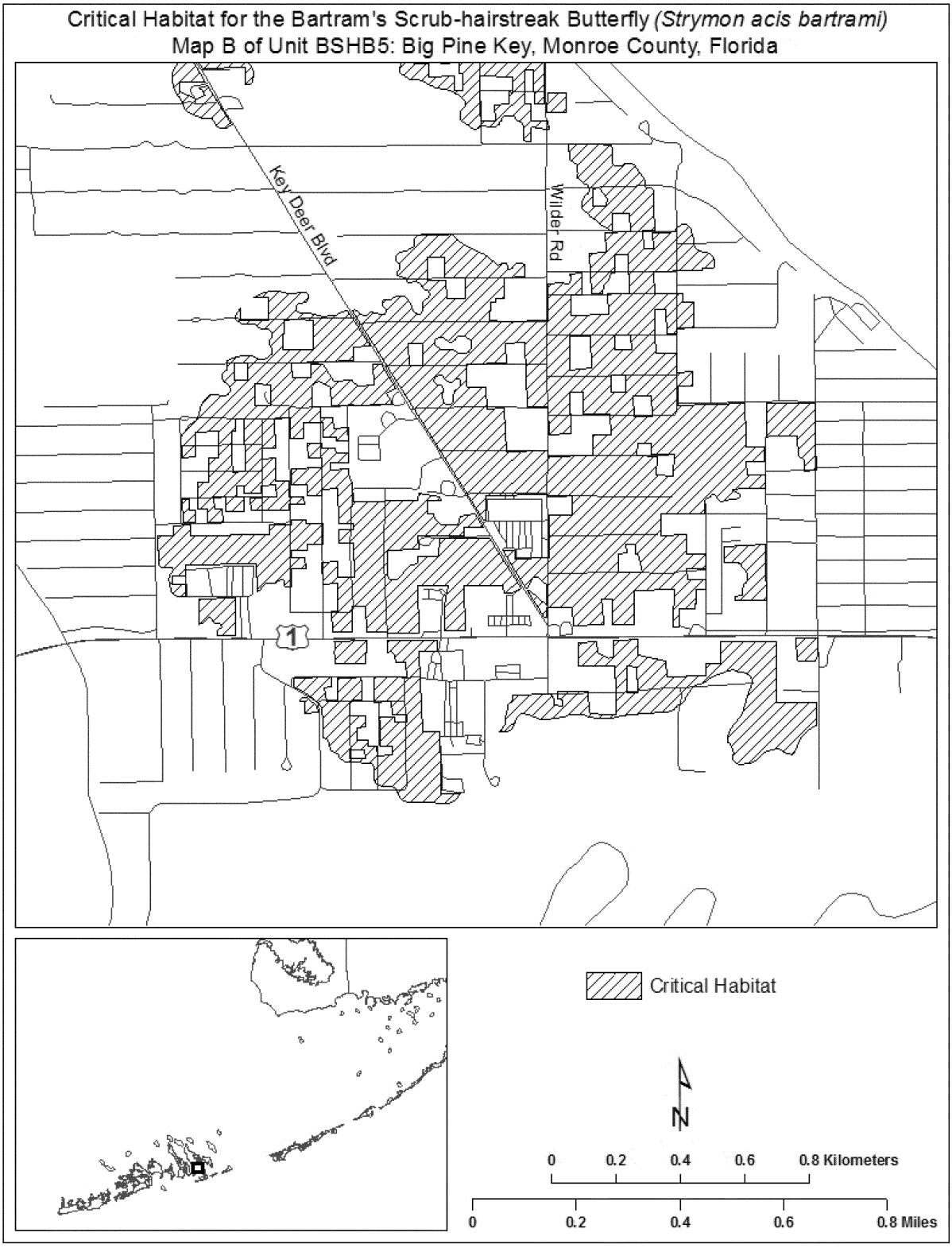
(ii) Index map of Unit BSHB5 follows:



(A) Map A of Unit BSHB5 follows:



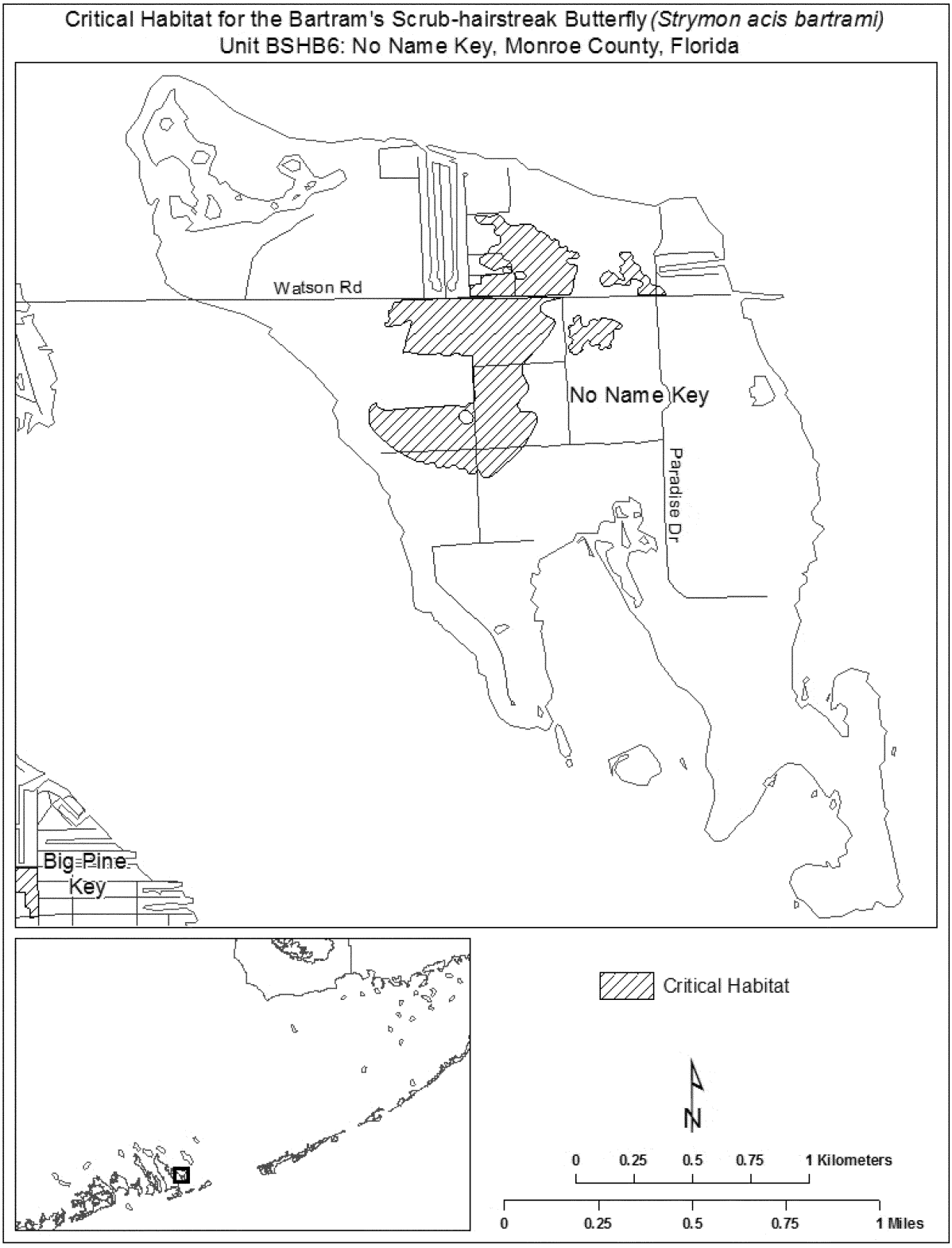
(B) Map B of Unit BSHB5 follows:



(11) Unit BSHB6: No Name Key, Monroe County, Florida.

(i) *General description:* Unit BSHB6 consists of 50 ha (123 ac) in Monroe County and is composed of lands in National Key Deer Refuge (NKDR) (30 ha (75 ac)), State ownership (9 ha (22 ac)), and private or other ownership (11 ha (26 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge.

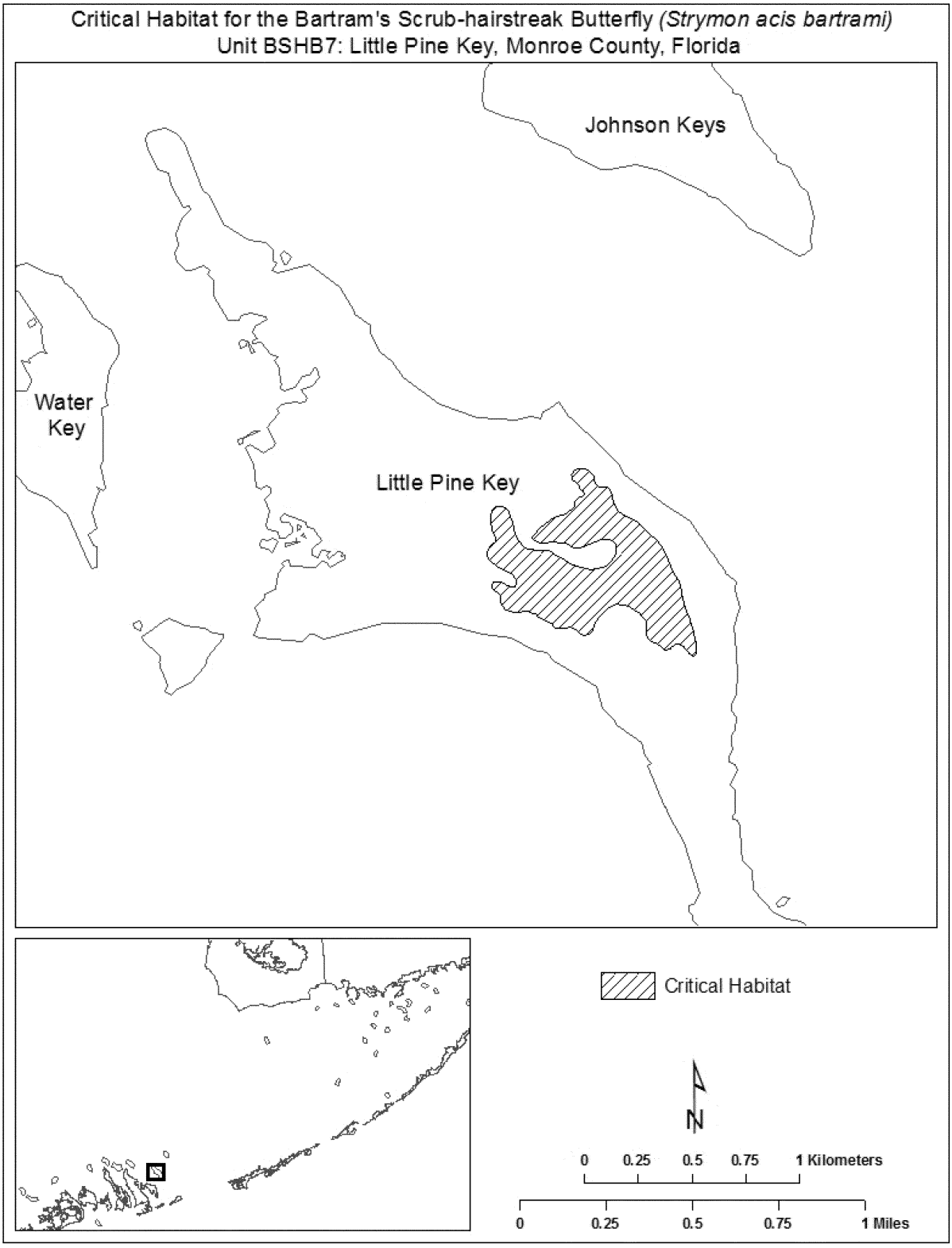
(ii) Map of Unit BSHB6 follows:



(12) Unit BSHB 7: Little Pine Key, Monroe County, Florida.

(i) *General description:* Unit BSHB7 consists of 39 ha (97 ac) in Monroe County. This unit is composed entirely of lands in Federal ownership, 100 percent of which are located within National Key Deer Refuge.

(ii) Map of Unit BSHB7 follows:



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Florida Leafwing Butterfly *(Anaea troglodyta floridalis)*

(1) Critical habitat units are depicted for Miami-Dade and Monroe Counties, Florida, on the maps below.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the Florida leafwing butterfly consist of six components:

(i) Areas of pine rockland habitat, and in some locations, associated rockland hammocks and hydric pine flatwoods.

(A) Pine rockland habitat contains:

(*1*) Open canopy, semi-open subcanopy, and understory.

(*2*) Substrate of oolitic limestone rock.

(*3*) A plant community of predominately native vegetation.

(B) Rockland hammock habitat associated with pine rocklands contains:

(*1*) Canopy gaps and edges with an open to semi-open canopy, subcanopy, and understory.

(*2*) Substrate with a thin layer of highly organic soil covering limestone or organic matter that accumulates on top of the underlying limestone rock.

(*3*) A plant community of predominately native vegetation.

(C) Hydric pine flatwood habitat associated with pine rocklands contains:

(*1*) Open canopy with a sparse or absent subcanopy, and dense understory.

(*2*) Substrate with a thin layer of poorly drained sands and organic materials that accumulates on top of the underlying limestone or calcareous rock.

(*3*) A plant community of predominately native vegetation.

(ii) Competitive nonnative plant species in quantities low enough to have minimal effect on survival of the Florida leafwing butterfly.

(iii) The presence of the butterfly's hostplant, pineland croton, in sufficient abundance for larval recruitment, development, and food resources, and for adult butterfly roosting habitat and reproduction.

(iv) A dynamic natural disturbance regime or one that artificially duplicates natural ecological processes (e.g., fire, hurricanes or other weather events, at appropriate intervals) that maintains the pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities.

(v) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities sufficient in size to sustain viable Florida leafwing populations.

(vi) Pine rockland habitat and associated rockland hammock and hydric pine flatwood plant communities with levels of pesticide low enough to have minimal effect on the survival of the butterfly or its ability to occupy the habitat.

(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 September 11, 2014.

(4) *Critical habitat map units.* Data layers defining map units were created using ESRI ArcGIS mapping software along with various spatial data layers. ArcGIS was also used to calculate the size of habitat areas. The projection used in mapping and calculating distances and locations within the units was North American Albers Equal Area Conic, NAD 83. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates, plot points, or both on which each map is based are available to the public at the Service's Internet site (*http://www.fws.gov/verobeach*), the Federal eRulemaking Portal (*http://www.regulations.gov* at Docket No. FWS–R4–ES–2013–0031), and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map of all critical habitat units for the Florida leafwing butterfly follows:

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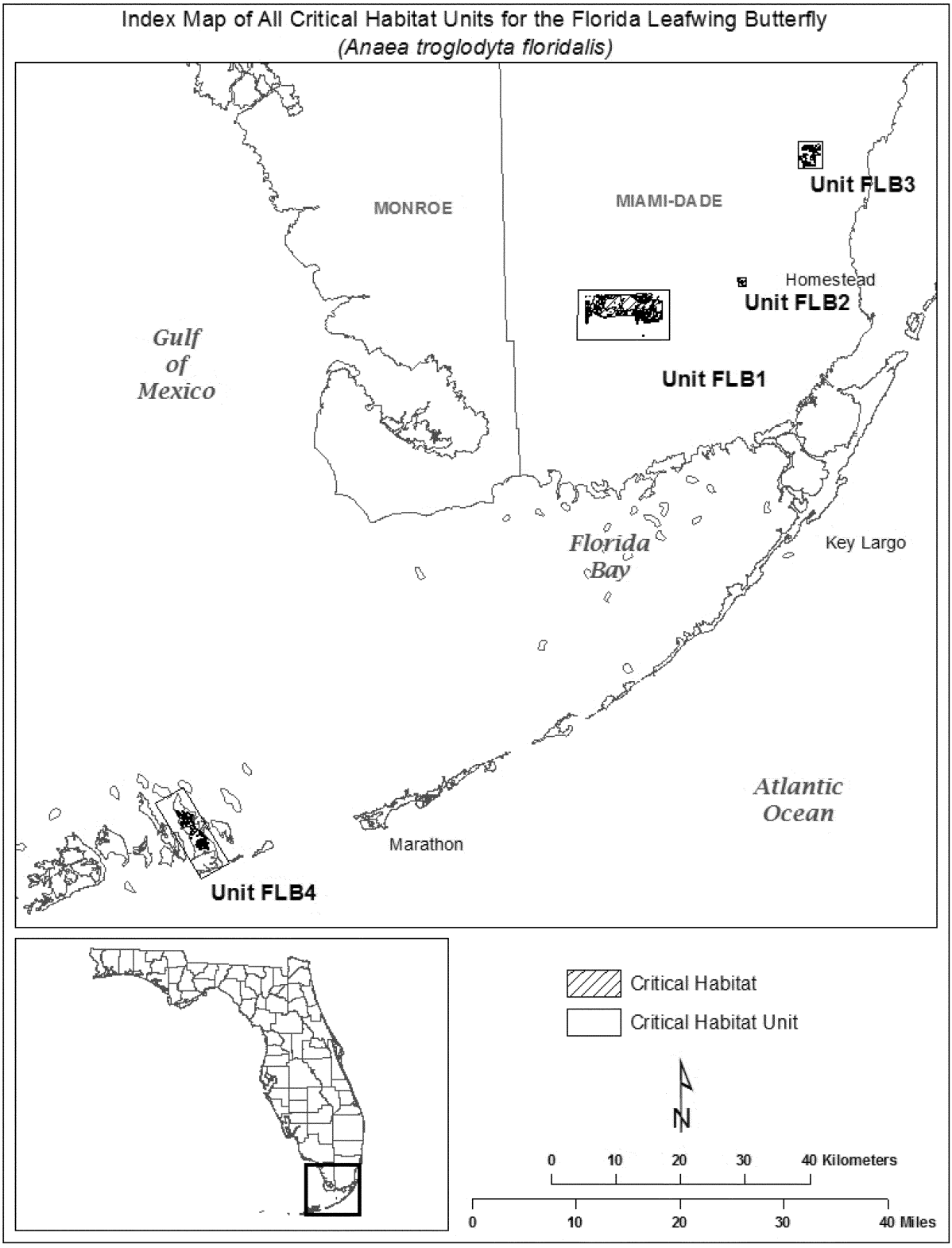
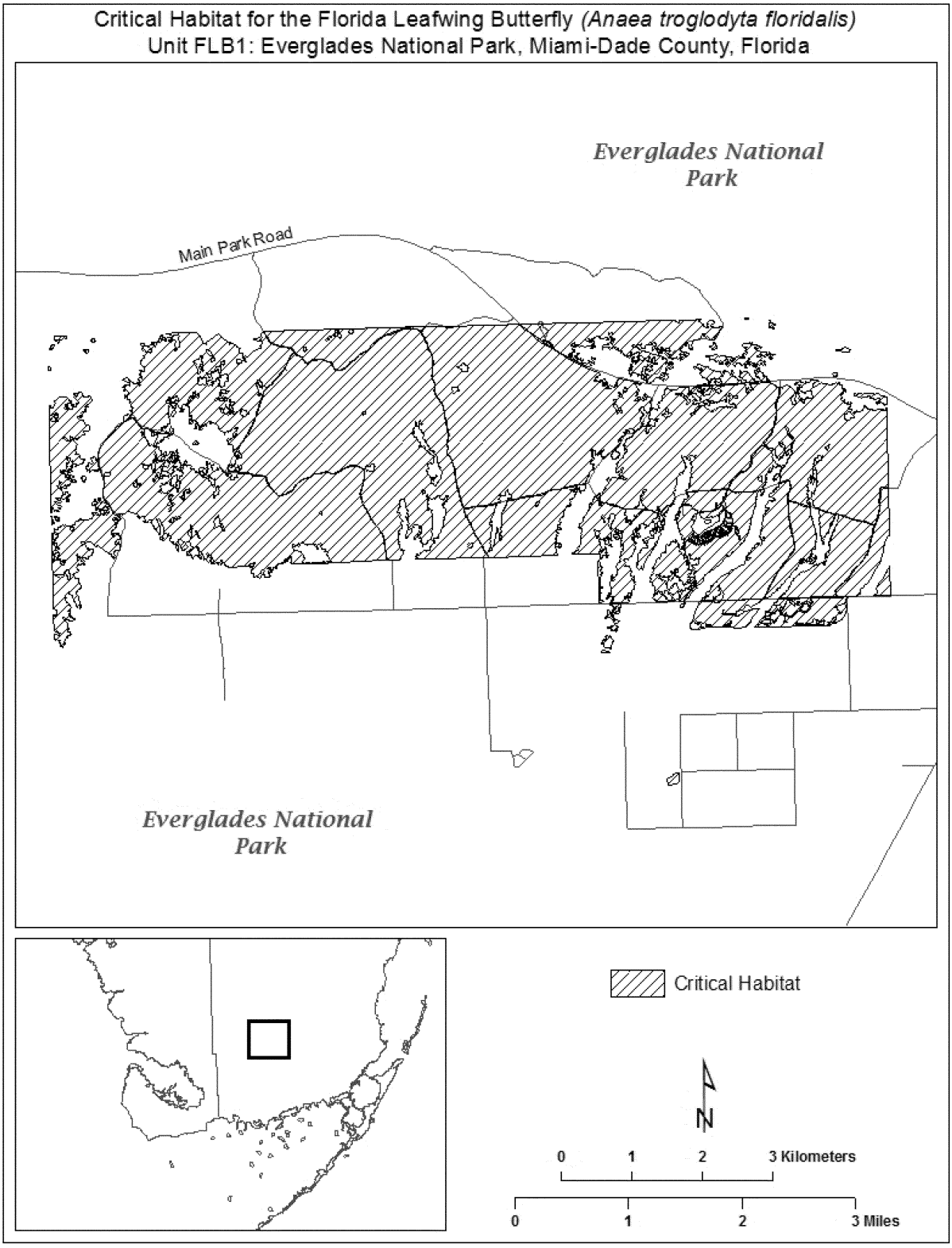


(6) Unit FLB1: Everglades National Park, Miami-Dade County, Florida.

(i) *General description:* Unit FLB1 consists of 3,235 ha (7,994 ac) composed entirely of lands in Federal ownership, 100 percent of which are located within the Long Pine Key region of Everglades National Park.

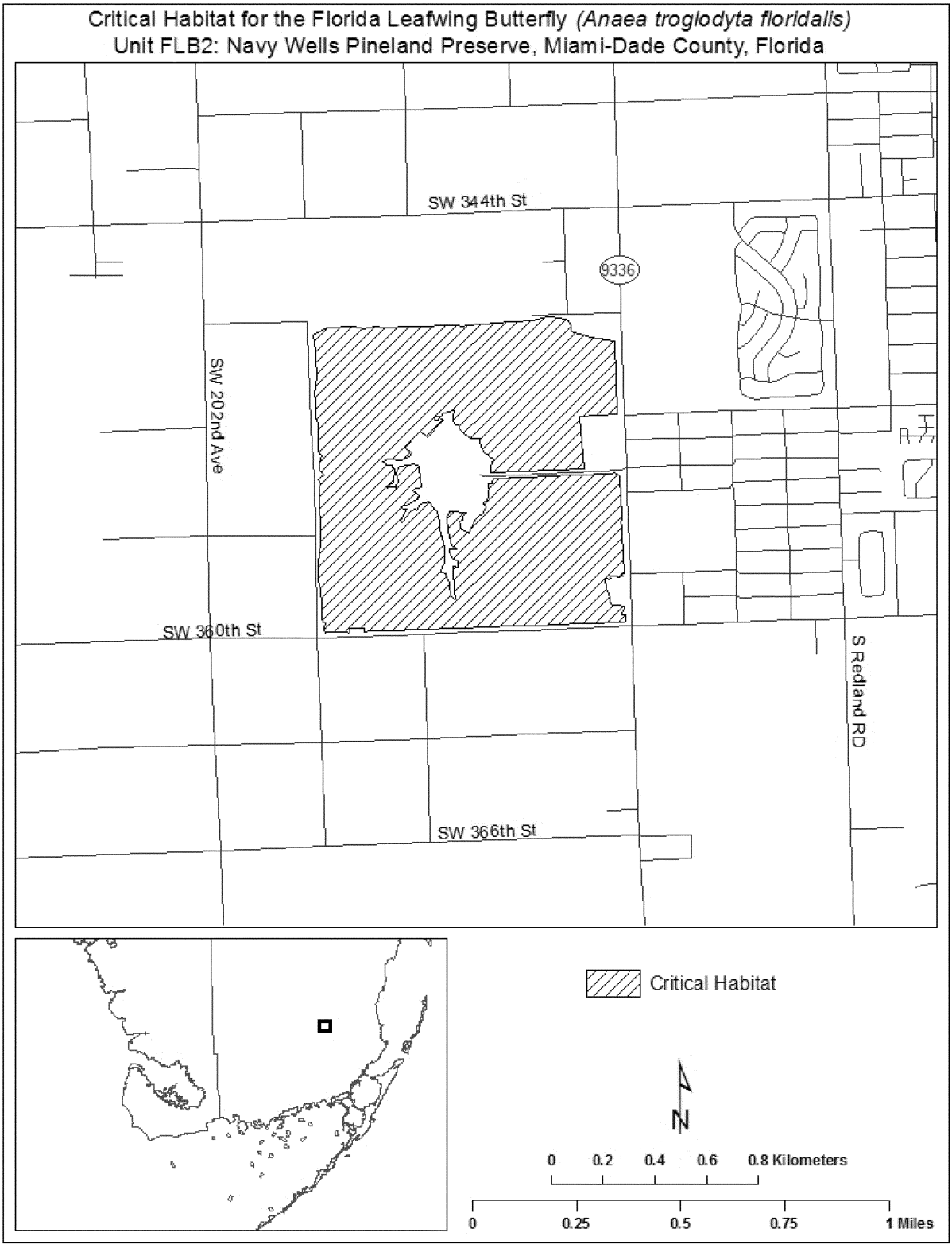
(ii) Map of Unit FLB1 follows:



(7) Unit FLB2: Navy Wells Pineland Preserve, Miami-Dade County, Florida.

(i) *General description:* Unit FLB2 consists of 120 ha (296 ac) in Miami-Dade County and is composed of lands in State (35 ha (85 ac)), and private or other ownership (85 ha (211 ac)).

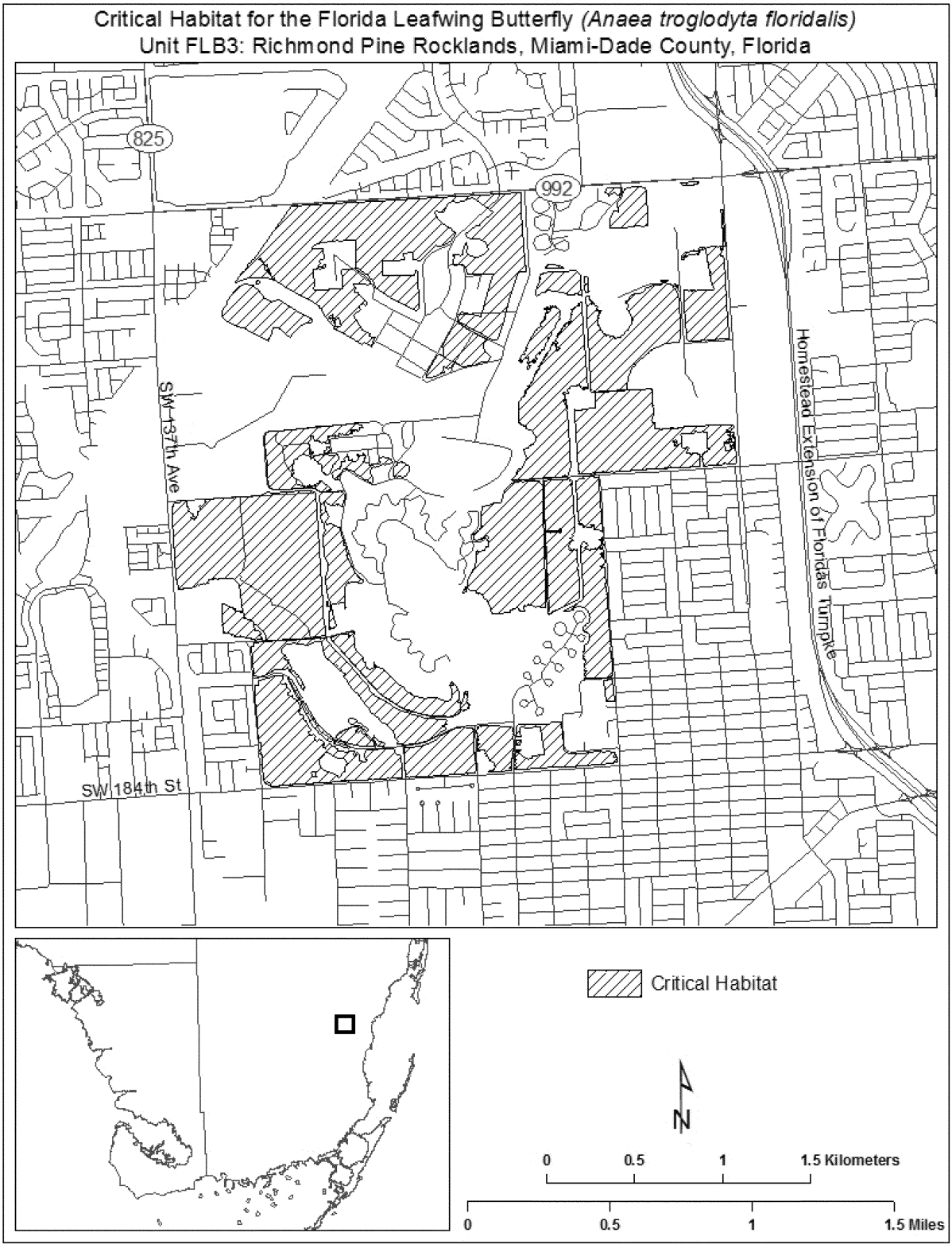
(ii) Map of Unit FLB2 follows:



(8) Unit FLB3: Richmond Pine Rocklands, Miami-Dade County, Florida.

(i) *General description:* Unit FLB3 consists of 359 ha (889 ac) in Miami-Dade County composed of lands in Federal (U.S. Coast Guard, U.S. Army Corps of Engineers, Federal Bureau of Prisons, and National Oceanic and Atmospheric Administration) (50 ha (122 ac)) and private or other (309 ha (767 ac)) ownership.

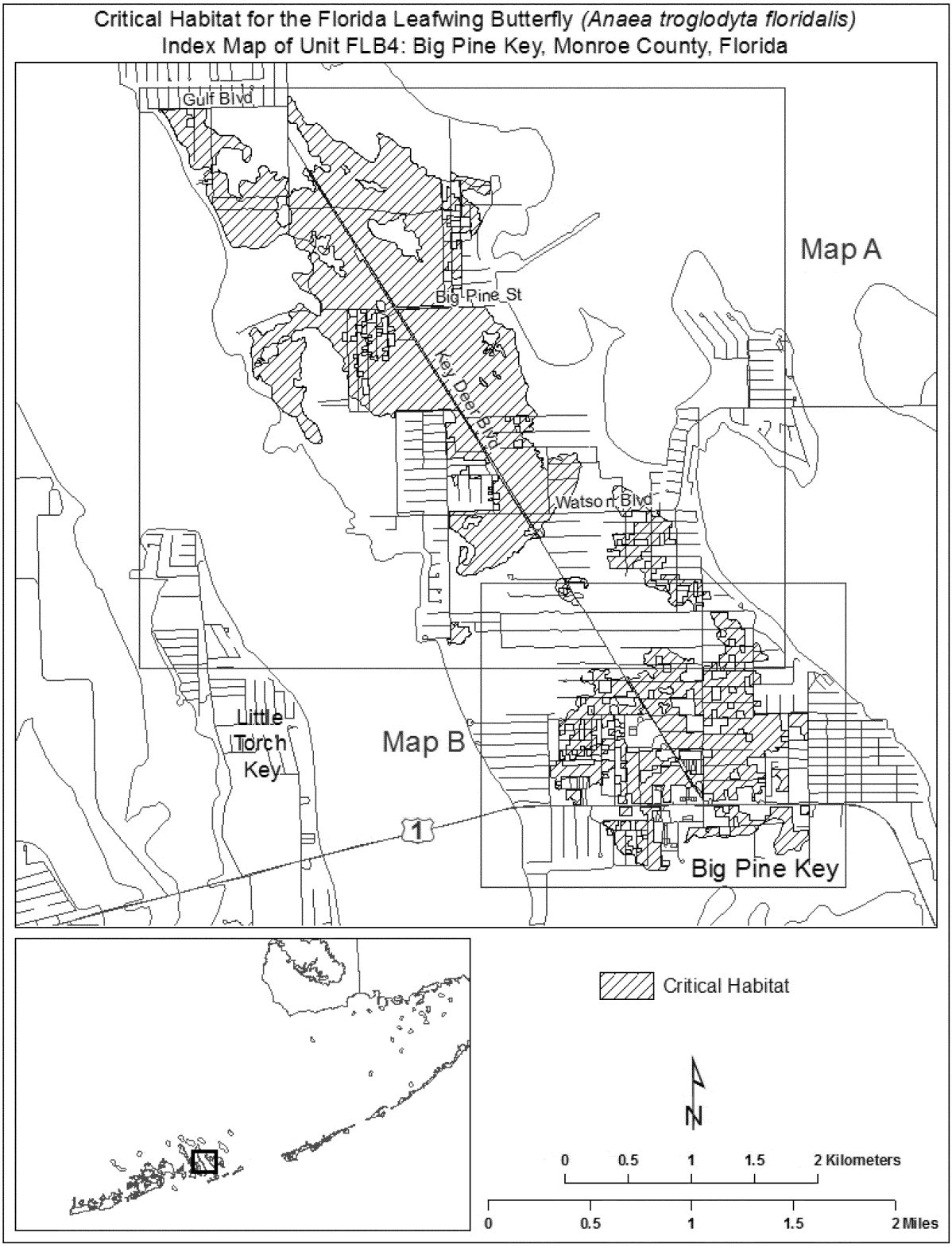
(ii) Map of Unit FLB3 follows:



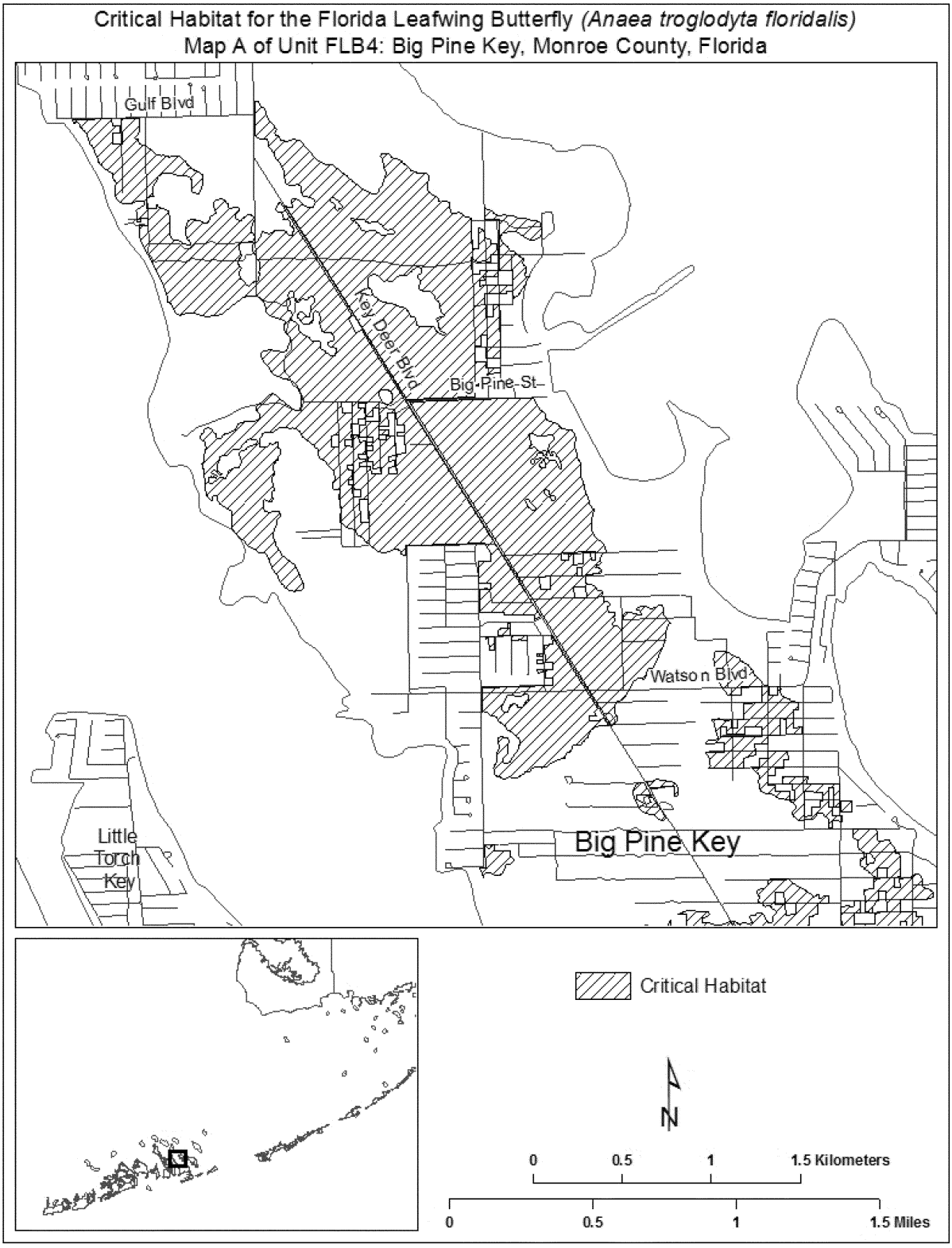
(9) Unit FLB4: Big Pine Key, Monroe County, Florida.

(i) *General description:* Unit FLB4 consists of 559 ha (1,382 ac) in Monroe County composed of National Key Deer Refuge (NKDR) (365 ha (901 ac)), State lands (90 ha (223 ac)), and property in private or other ownership (104 ha (258 ac)). State lands are interspersed within NKDR lands and managed as part of the Refuge.

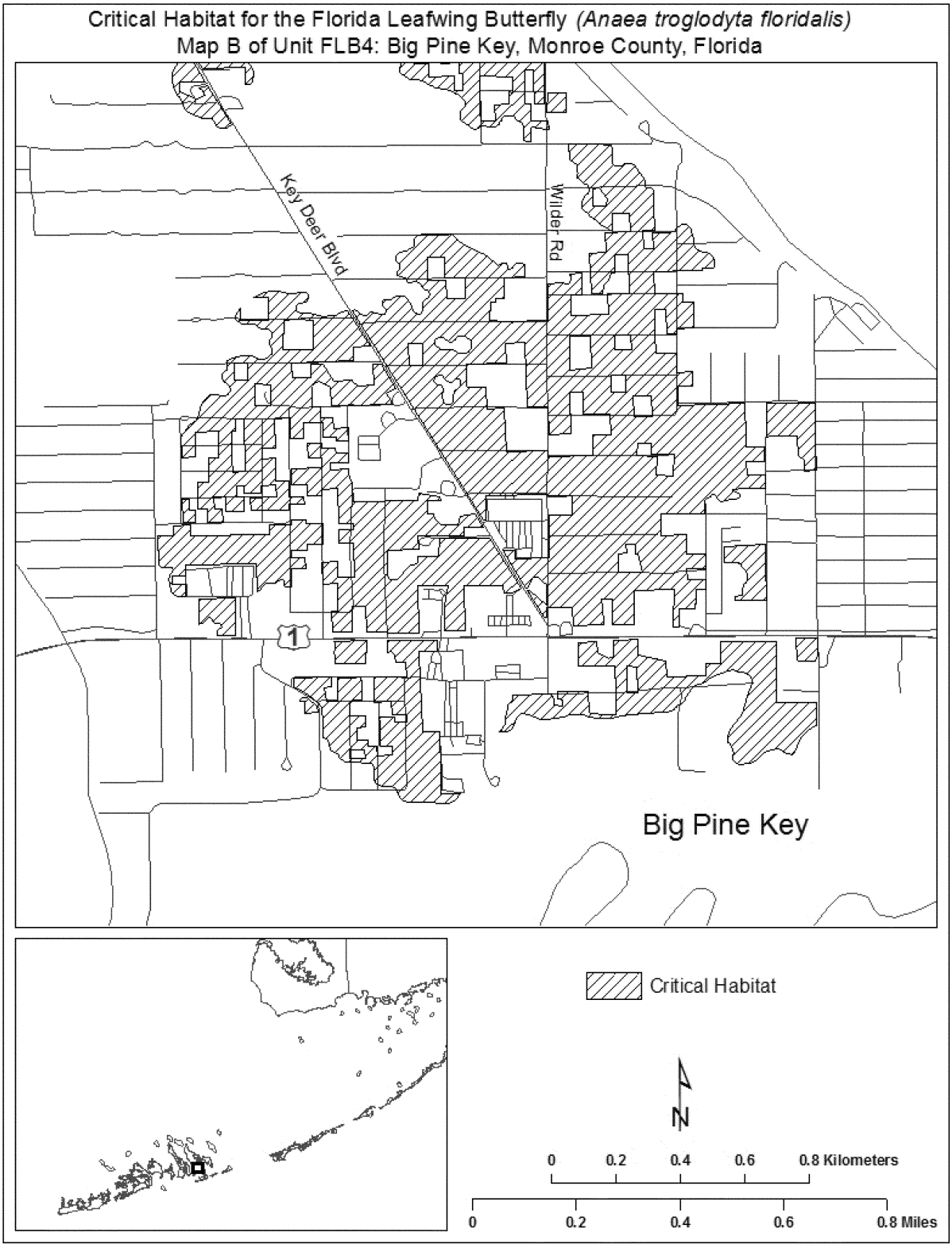
(ii) Index map of Unit FLB4 follows:



(A) Map A of Unit FLB4 follows:



(B) Map B of Unit FLB4 follows:



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Dated: July 23, 2014.

Rachel Jacobson,

Principal Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2014–18611 Filed 8–11–14; 8:45 am]

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