

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

[Docket No. FWS-R4-ES-2021-0053;
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RIN 1018-BF38

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Miami Tiger Beetle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Miami tiger beetle (*Cicindelia floridana*) under the Endangered Species Act of 1973 (Act), as amended. In total, approximately 1,869 acres (756 hectares) in Miami-Dade County, Florida, fall within the boundaries of the critical habitat designation. This rule extends the Act's protections to the Miami tiger beetle's critical habitat.

DATES: This rule is effective June 22, 2023.

ADDRESSES: This final rule is available on the internet at <https://www.regulations.gov> and <https://www.fws.gov/office/florida-ecological-services/library>. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053.

For the critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the decision file and are available at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053, at <https://www.fws.gov/office/florida-ecological-services/library>, and at the Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Lourdes Mena, Division Manager, Florida Classification and Recovery, U.S. Fish and Wildlife Service, Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256-7517; telephone 904-731-3134. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TTDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make

international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:**Executive Summary**

Why we need to publish a rule. Under the Act, any species that is determined to be an endangered or a threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

What this document does. We are designating critical habitat for the Miami tiger beetle, which is listed as an endangered species.

The basis for our action. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

Previous Federal Actions

Please refer to the final rule to list the Miami tiger beetle as an endangered species (81 FR 68985; October 5, 2016) and the proposed rule to designate critical habitat for the Miami tiger beetle (86 FR 49945; September 7, 2021) for a detailed description of previous Federal actions concerning this species.

Summary of Changes From the Proposed Rule

The following are specific changes that we make in this final rule to designate critical habitat for the Miami tiger beetle based on public comments on, and information made available since the development and publication of, our September 7, 2021, proposed rule (86 FR 49945):

(1) We correct the name of Unit 3 from Deering Estate South Edition to Deering Estate South Addition.

(2) We change the name of Unit 13 from Camp Matecumbe to Boystown Pineland Preserve.

(3) We adjust the boundaries of Unit 14 at the Coral Reef Commons property to avoid small areas (less than 0.5 acre) of development and align with the habitat conservation plan (HCP) on-site preserve and mitigation area.

(4) We are excluding the Coral Reef Commons HCP on-site preserve and off-site mitigation area in Unit 14 from this final designation pursuant to section 4(b)(2) of the Act (16 U.S.C. 1531 *et seq.*) based on the provisions of the HCP. This amounts to a decrease of approximately 109.3 acres (ac) (44.2 hectares (ha)) from the critical habitat areas we proposed. In addition, we obtained new property boundary information from Miami-Dade County (Miami-Dade County open data hub; accessed February 4, 2022) and information from the public comments to help refine the specific boundaries of critical habitat around the on-site preserves. Because of this exclusion, in this rule, we present revised index and Unit 14 maps, and in our supporting documents at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053, we provide updated coordinates or plot points from which those maps were generated.

(5) We specify that "managed lawns" are not included in this critical habitat designation.

(6) In the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h), we revise the information in the "Where listed" column for the Miami tiger beetle to read, "Wherever found." This corrects the entry in the List to accurately reflect that this species' listing is not a population-based listing but a listing of the species in its entirety. This correction does not change the description, distribution, or endangered status of the Miami tiger beetle.

(7) We also made several nonsubstantive, editorial corrections for clarity and increased readability.

Summary of Comments and Recommendations

In the proposed rule published on September 7, 2021 (86 FR 49945), we requested that all interested parties submit written comments on the proposal by November 8, 2021. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. A newspaper notice inviting the general public to comment on our proposal was published in the Miami Herald on September 13, 2021.

During the public comment period, we received a request for a public hearing on the proposal, and on November 8, 2021, we published in the **Federal Register** a document (86 FR 61745) extending the public comment period on the proposal to December 23, 2021, and announcing a December 2, 2021, public hearing on the proposal. A subsequent notice was published in the *Miami Herald* on November 9, 2021, announcing the extension of the public comment period on the proposal and the public hearing, and inviting public comment. As announced, we held the public hearing on December 2, 2021.

We received a total of more than 850 public comments on our proposal, inclusive of the public hearing testimony, including two peer reviewer, three State, and two Miami-Dade County comments; a supportive post card campaign (more than 800 comments); and other members of the public (through written comments or public hearing testimony from individuals). We did not receive any comments from Federal agencies or Tribal entities. All substantive information we received during the full comment period on the proposal has either been incorporated directly into this final rule or is addressed below.

Peer Reviewer Comments

We solicited comments from four peer reviewers on our proposal to designate critical habitat for the Miami tiger beetle and subsequently received responses from two of the peer reviewers. We reviewed the responses from the peer reviewers for substantive information and comments directly related to the species and our proposal. The two respondents generally found our proposal was well-supported. Peer reviewer comments are addressed in the following summary and were incorporated into this final rule, as appropriate.

(1) Comment: One peer reviewer noted that management of habitat to maintain it as open and suitable for the Miami tiger beetle is a very critical concern; the reviewer added that management of habitat at the two sites currently occupied by the species has been insufficient, resulting in low population sizes, and thus can be a serious threat to the survival of the species. The reviewer and others suggested that prescribed fire at frequent intervals may be the best management method but acknowledged that manual removal of leaf litter and vegetation may also be a suitable method.

Our Response: Appropriate habitat management using different disturbance regimes (*i.e.*, methods), as appropriate,

to maintain a mosaic of suitable sandy and disturbed habitat is essential for the Miami tiger beetle's survival and conservation. Controlled burning is the preferred method of maintaining the habitat, but this technique is not always available or the most prudent for specific parcels. That is why we also acknowledge the importance of other methods of maintaining habitat in appropriate disturbance mosaics, such as manual clearing and removal of leaf litter and encroaching vegetation. To highlight the importance of maintaining the appropriate disturbance regime of pine rockland habitat for the Miami tiger beetle, both in the September 7, 2021, proposed rule and in this final rule, we include maintenance by natural or prescribed fire or other disturbance regimes in one of the physical or biological features essential to the beetle's conservation (see Physical or Biological Features Essential to the Conservation of the Species, below).

(2) Comment: One peer reviewer, in addition to the Florida Natural Areas Inventory (FNAI; a State agency) and others, commented that additional parcels that are currently unoccupied by the Miami tiger beetle have appropriate pine rockland habitat for the species and should be included in the critical habitat designation. In particular, the reviewer and others focused on the inclusion of Ludlam Pineland Preserve and the adjacent Florida Power and Light (FPL) lands.

Our Response: We may designate critical habitat that is outside the geographical area occupied by the species if we determine it to be essential for the conservation of the species. Accordingly, during the development of our September 7, 2021, proposed rule, we evaluated numerous parcels outside the species' current range containing pine rockland habitat to determine if they may meet the criteria we established for inclusion in critical habitat, which includes size of parcel, quality of existing pine rockland habitat, appropriate soils, and existing or potential for long-term habitat management either through prescribed fire or manual methods. Many of the parcels of remnant pine rocklands within the historical range of the Miami tiger beetle in south Florida initially considered for inclusion in the proposed critical habitat designation were removed from further consideration due to a combination of factors, including poor quality of habitat (*i.e.*, extensive infestation of invasive vegetation, significantly overgrown), and lack of the appropriate soil types, and lack of existing protections and management. Many areas were too

overgrown with native and invasive vegetation and the intensive, long-term management necessary to provide quality habitat was determined to be not practicable, due to several factors including land ownership, access, and purpose or mission of the lands. Thus, we determined those areas did not meet the definition of critical habitat for the Miami tiger beetle. Consequently, the unoccupied parcels we found essential for the conservation of the Miami tiger beetle are those that we determined to have the best opportunity for supporting existing and future populations of the Miami tiger beetle and that had a high probability of having long-term management for the species and its habitat.

As indicated above, numerous commenters, including a peer reviewer and FNAI, recommended that Ludlum Pineland Preserve and the adjacent FPL lands be included in the critical habitat designation for the Miami tiger beetle. Our initial assessment of the Ludlum Pineland Preserve suggested that while it meets the size criteria, includes the appropriate soil types, and has some management potential, the site is extensively overgrown with invasive species, and the long-term management potential for the Miami tiger beetle and its specific habitat needs is uncertain. As a result, the site ultimately was not considered further. Previous field surveys (Knisley 2014, p. 42) of Ludlum Pineland Preserve indicated that the site was disturbed with a heavy pine overstory and thick understory of saw palmetto; surveyors concluded there was minimal habitat for the Miami tiger beetle. In fact, one surveyor gave it an overall grade of "D" for habitat suitability. A subsequent survey conducted in late August 2021 by representatives from FNAI (FNAI 2021, entire), the results of which were provided to us during the public comment period on our September 7, 2021, proposed rule, further confirmed that the site is extensively overgrown with vegetation, both canopy and understory, and has a deep layer of leaf litter, thus making it unsuitable for the Miami tiger beetle at this time. Even though the parcel is currently being managed for pine rockland habitat, the management is insufficient for the Miami tiger beetle and its preferred habitat. While we recognize that with extensive management, this parcel could have future habitat potential for the Miami tiger beetle, we do not consider it to meet the definition of critical habitat for the Miami tiger beetle. As a result, we find that it does not currently meet the criteria for

inclusion in a critical habitat designation for the species.

Our initial evaluation of the FPL parcel was comparable to that of the Ludlum Pineland Preserve parcel in that the existing habitat may not be of high quality, and the long-term management potential for the Miami tiger beetle is limited due to land ownership and the use or mission of the property. As such, we did not include the FPL parcel in our proposed critical habitat designation for the Miami tiger beetle. During the public comment period on our September 7, 2021, proposed rule, FNAI provided results of an August 2021 field survey of the FPL parcel. The field survey identified that the areas under the powerlines contain a dense understory of vegetation, but some adjacent areas consist of suitable open sandy substrates, suggesting potential suitable habitat for the Miami tiger beetle. Even though the parcel may contain some suitable habitat for the beetle, we have determined that the FPL parcel is not essential for the conservation of the species. While the parcel is subjected to a certain level of management and disturbance, which maintains the lands for the utility and provides some habitat for the beetle, we find that the type and level of management may not be fully consistent with the beetle's long-term needs. Further, the mission or purpose of the parcel is to be maintained for the utility, suggesting that management may be inconsistent with the conservation needs of the beetle. Consequently, we concluded that this parcel doesn't meet the definition of critical habitat for Miami tiger beetle. Therefore, we are not including the FPL parcel in this critical habitat designation for the species. However, like Ludlum Pineland Preserve and similar parcels containing disturbed pine rockland habitat, this parcel could provide habitat for the Miami tiger beetle if managed appropriately.

Comments From States

We received three comments from State agencies on our proposal, two from FNAI and one from the Florida Fish and Wildlife Conservation Commission (FFWCC). The comments from FNAI focused primarily on the recommendation to include Ludlum Pineland Preserve, discussed above, but to not include Gould's Pineland Preserve, discussed below. The comments from FFWCC provided a statement of support for the criteria used in the development of our proposal to identify specific areas as critical habitat for the Miami tiger beetle; provided some editorial comments;

sought clarification of proposed Unit 14, Richmond Pine Rocklands, and the treatment of the Coral Reef Commons HCP and other parcels therein; discussed habitat management for the Miami tiger beetle and provided some recommendations; and discussed captive propagation of the species.

(3) *Comment:* FNAI recommended that Gould's Pineland Preserve not be included due to current site conditions based on recent survey information. However, numerous other commenters recommended that the parcel be considered for inclusion in critical habitat. Further, commenters also recommended that additional areas be considered for inclusion in critical habitat. These include, but are not limited to, Boystown Pineland Preserve, R. Hardy Matheson Preserve, pine rockland habitat on Miami Executive Airport, Camp Choe, lands containing pine rockland habitat adjacent to the University of Miami's Center for Southeastern Tropical Advanced Remote Sensing (CSTARS) facility, and Coral Reef Park.

Our Response: Since Gould's Pineland Preserve is outside the geographical area occupied by the species at the time of listing, it must be essential for the conservation of the Miami tiger beetle in order to meet the Act's definition of critical habitat. As discussed above, during the development of our proposal, we evaluated numerous unoccupied parcels containing pine rockland habitat to determine if they are essential for inclusion in critical habitat; our evaluations included size of parcel, quality of existing pine rockland habitat, soil type(s), and existing protections and management either through prescribed fire or manual methods. Many of the parcels of remnant pine rocklands within the historical range of the Miami tiger beetle in south Florida initially considered for critical habitat were removed from further consideration due to a combination of factors including containing poor quality of habitat (*i.e.*, extensive infestation of invasive vegetation, significantly overgrown), lack of the appropriate soil types, and lack of existing protections and management. Many areas were too overgrown with vegetation, and the intensive, long-term management necessary to provide quality habitat was determined to be not practicable, due to several factors including land ownership and access. Thus, we determined those areas were not essential for the conservation of the Miami tiger beetle. Consequently, the unoccupied parcels we found essential to the conservation of the Miami tiger

beetle are those parcels in our proposal that we determined to have the best opportunity for supporting existing and future populations of the Miami tiger beetle.

Like Ludlum Pineland Preserve, Gould's Pineland Preserve was initially evaluated for inclusion in critical habitat for the Miami tiger beetle but was summarily rejected due to current site/habitat conditions based on field survey information. Surveys from 2015 provided information that the site contained very thick canopy and midstory of vegetation and that leaf litter/thatch on the ground was too thick, thus rendering the site unsuitable for the Miami tiger beetle. At that time one surveyor gave it an overall grade of D-F for habitat suitability. A subsequent survey conducted in late August 2021 by representatives from FNAI, the results of which were provided to us during the public comment period on our September 7, 2021, proposed rule, further confirmed that the site is extensively overgrown with vegetation, both canopy and understory, and has a deep layer of leaf litter, thus making it unsuitable for the Miami tiger beetle. The site also appears to be too rocky with little mixed sand areas, so even with extensive management, the site may not support the beetle. While we recognize that with extensive long-term management of this parcel, it could provide limited habitat for the Miami tiger beetle, we currently do not consider it to be essential for the conservation of the beetle. As a result, we do not find that Gould's Pineland Preserve meets the Act's definition of critical habitat for the Miami tiger beetle.

Likewise, Boystown Pineland Preserve, R. Hardy Matheson Preserve, pine rockland habitat on Miami Executive Airport, Camp Choe, and Coral Reef Park each were initially considered for inclusion in critical habitat. Boystown Pineland Preserve was included in our September 7, 2021, proposed rule but incorrectly identified as Camp Matecumbe (proposed Unit 13). In this final rule, the name of the unit has been corrected to Boystown Pineland Preserve. As for the other areas:

(1) R. Hardy Matheson Preserve is considered rockland hammock, not pine rockland, and has the wrong soil type for the Miami tiger beetle; therefore, it is not considered to be essential for the species.

(2) Pine rockland habitat on Miami Executive Airport consists of private land that is currently being managed for airport use, which is not consistent with the needs of the Miami tiger beetle.

Therefore, the parcel is not considered essential habitat for the beetle.

(3) Camp Choe is a privately owned Girl Scout camp whose mission does not include protection and management for the beetle or its habitat, and therefore it is not considered essential habitat.

(4) We did determine that the pine rocklands adjacent to the University of Miami CSTARS facility is essential to the conservation of the Miami tiger beetle. This land is associated with the mitigation area for the Coral Reef Common HCP and is being conserved and managed for the beetle and its essential habitat features. As discussed below, this mitigation area is being excluded from this final critical habitat designation pursuant to section 4(b)(2) of the Act based on the conservation provisions of the HCP (see Consideration of Impacts under Section 4(b)(2) of the Act, below).

(5) Coral Reef Park is an urban park with some marginal rocky habitat with some sand along the periphery, and as such we do not find it to be essential habitat for the beetle.

Consequently, these areas are not included in this final designation of critical habitat for the Miami tiger beetle as we have concluded they do not meet the definition of critical habitat or are being excluded pursuant to section 4(b)(2) of the Act. As previously discussed above, additional parcels not specifically named in this rule were evaluated during the development of the proposal and for this final rule, but we did not find them essential for the conservation of the species because they do not meet the habitat requirements for the Miami tiger beetle, such as presence of one or more of the essential physical or biological features.

(4) *Comment:* FFWCC and other commenters recommended that the pine rockland habitat within the Coral Reef Commons HCP preserve and mitigation area parcels be included in the final critical habitat designation to emphasize their significance to the management of, and their connectivity to, the Richmond Pine Rocklands (Unit 14).

Our Response: We agree with FFWCC's assessment that the habitat within the Coral Reef Commons HCP preserve and mitigation areas is central to the long-term conservation of the Miami tiger beetle and that the proper management and conservation of the habitat within these two parcels is paramount. However, consistent with our section 4(b)(2) policy (81 FR 7226; February 11, 2016), if a signed conservation plan or program provides for the necessary long-term conservation and management of habitat for a species

for which critical habitat is being considered, then we may choose to conduct an analysis pursuant to section 4(b)(2) of the Act to determine if the benefits of excluding the specific area under consideration outweigh the benefits of including the area in critical habitat. We have determined through our analysis that the provisions set forth in the Coral Reef Commons HCP, as implemented, will provide for the appropriate long-term management and conservation of this habitat such that the benefits of its inclusion are significantly reduced. Accordingly, we determined that the benefits of excluding these specific parcels from this critical habitat designation outweigh the benefit of their inclusion in the designation. (See Consideration of Impacts under Section 4(b)(2) of the Act, below, for more information.) As a result, the preserve and mitigation areas associated with the Coral Reef Commons HCP have been excluded from this final critical habitat designation pursuant to section 4(b)(2) of the Act.

(5) *Comment:* FFWCC recommended that we clarify the specific parcels and landownership within Unit 14 (Richmond Pine Rocklands), conduct surveys on parcels in which the occupancy by the Miami tiger beetle has not been verified, and manage the habitat on each parcel to benefit the species.

Our Response: In developing our September 7, 2021, proposed rule, we used the best information and mapping data available from the county and other sources to determine landownership within this unit. We recognize that, for some parcels, landownership was vague or boundaries imprecise, but this was the best data available to us at that time. We have obtained more recent 2022 parcel or landownership information from Miami-Dade County for use in the development of this final rule; however, these parcel data did not provide any further clarification on property ownership within Unit 14.

We also agree with FFWCC that further surveys should be conducted throughout Unit 14 to verify and document the extent of occupancy by the Miami tiger beetle and identify those areas where habitat restoration or management may be a priority. However, since some of the land, such as the University of Miami CSTARS and Coral Reef Commons, is private, we do not have access to the parcels to directly conduct such field surveys and are thus reliant on the property owners for either granting access for conducting field surveys or providing specific information concerning habitat quality

and potential for occupancy by the beetle. Other parcels are federally owned, but have limited access due to security constraints, such as the Federal prison and U.S. Coast Guard areas. Further, known occurrences of Miami tiger beetle in this unit suggest beetles are capable of moving throughout this unit such that all the areas within the unit meet the definition of the "geographical area occupied by the species," which is defined in title 50 of the Code of Federal Regulations (CFR) at 424.02 (50 CFR 424.02) as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.*, range). As the regulations provide, the occupied areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis, including migratory corridors. Accordingly, although we agree that additional surveys would be helpful to identify the extent of occupancy, we clarify that we consider the entire unit to be within the geographical area occupied by the species.

Public Comments

(6) *Comment:* A commenter indicated that the boundaries of proposed critical habitat were not accurately aligned with the boundaries of the Coral Reef Commons HCP preserve and mitigation areas and requested that we ensure that the boundaries are aligned in the final rule.

Our Response: It was our intent that the boundaries of the proposed critical habitat for the Miami tiger beetle avoid the developed areas in the Coral Reef Commons property and align with those of the preserve and mitigation areas established in the Coral Reef Commons HCP. However, given the scale of the maps for publication in the **Federal Register**, it may appear in this document that the boundaries are not aligned. We have verified their alignment in this final rule. The coordinates or plot points or both from which the maps are generated are included in the decision file and are available at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053, at <https://www.fws.gov/office/florida-ecological-services/library>, and at the Florida Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

(7) *Comment:* Several commenters expressed concern about the long-term viability of pine rockland habitat and conservation potential for the Miami tiger beetle given the impacts of climate change (*i.e.*, more frequent and severe storm and hurricane events, sea level rise, and saltwater intrusion).

Our Response: Such factors as increased extreme weather events and hurricanes, sea level rise, and saltwater intrusion, along with other possible effects of climate change, do raise serious concerns not only for the Miami tiger beetle but for many of the endangered, threatened, and at-risk species in south Florida. These factors were considered in the development of our September 7, 2021, proposed rule. Many of the critical habitat units are at elevations above projected sea level rise; however, there could be impacts due to salinization of the water table and shifts in vegetation. Specifically, numerous parcels of pine rockland habitat were identified that either have good quality habitat for the beetle or have a high potential for restoration and management so that, ultimately, through the process of translocation and introduction, additional populations of the beetle can be established. With currently only two known extant populations of the Miami tiger beetle, it is our expectation that multiple populations distributed across the species' historical range will help protect the long-term survivability of the species from stochastic events and impacts from these climate-related factors.

(8) Comment: Several commenters suggested that the proposed critical habitat within Unit 14 (Richmond Pine Rocklands) includes roadways, pathways, pavement, buildings, and other structures that lack the physical or biological features essential to the conservation of the Miami tiger beetle.

Our Response: As explained in our September 7, 2021, proposed rule and this final rule, critical habitat does not include human-made structures (such as buildings, aqueducts, runways, roads, and other paved areas) or the land on which they are located, so these features within designated units are not considered critical habitat. In developing and delineating critical habitat for the Miami tiger beetle, we used the most current mapping and survey information available to us to focus on identifying the specific areas that contain the essential physical or biological features for the species and made every attempt to not include developed areas such as roads, pavement, buildings, and other such areas. In developing this final rule, we obtained new property boundary information from Miami-Dade County (Miami-Dade County open data hub; accessed February 4, 2022) and information from public comments on our September 7, 2021, proposed rule to help refine the specific boundaries of critical habitat. As indicated in our

proposal and reiterated in this rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Miami tiger beetle. 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.

To help clarify and facilitate implementation, specifically for Unit 14 of this final rule, this critical habitat designation does not include maintained asphalt roads and paths or buildings and structures associated with the Gold Coast Railroad Museum, Military Museum, and Zoo Miami, or managed fields comprised of dense lawn grass used for Zoo Miami operations. Further, any such lands inadvertently left inside critical habitat boundaries shown on the maps of this 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 will affect the physical or biological features essential to the Miami tiger beetle in the adjacent critical habitat. In contrast, this critical habitat designation for the Miami tiger beetle includes areas that contain degraded asphalt, gravel, dirt roads, dirt paths, or dirt firebreaks, and vegetated areas not containing dense, frequently maintained lawn grass used for Zoo Miami operations.

(9) Comment: One commenter indicated that the boundaries we identified in the Unit 14 (Richmond Pine Rocklands) of our proposed critical habitat for the Miami tiger beetle overlap with small portions (a total of 0.3 acres (1.21 hectares)) of land identified as areas to be developed (*i.e.*, not preserve or mitigation area) as part of the Coral Reef Commons HCP. The commenter requested that we align the boundaries of critical habitat with those for the HCP to remove the areas to be developed. The commenter further provided a map showing the areas of overlap to facilitate their removal from the critical habitat unit's boundaries.

Our Response: We appreciate the information and map provided by the commenter. In this final rule, we align the boundaries of critical habitat within Unit 14 (Richmond Pine Rocklands) to remove those areas identified in the Coral Reef Commons HCP as areas to be developed.

(10) Comment: A commenter on behalf of the Miami Wilds proposed development stated that the Miami Wilds development footprint for the project only includes paved surfaces and undeveloped areas of densely overgrown, invasive vegetation, and that portions of the development footprint are included within the boundaries of the proposed critical habitat designation for the Miami tiger beetle. The commenter further indicated that they compared the boundaries of the proposed critical habitat designation with information they have from field surveys conducted within the development footprint and the results of that comparison suggest that the proposed critical habitat designation includes areas that do not contain habitat for the beetle and are not known to be occupied by the beetle. The commenter recommended that only areas known to contain the essential habitat for the Miami tiger beetle in Unit 14 should be included in the final critical habitat designation and the "non-habitat" areas should be removed. The commenter further suggested that the entirety of Unit 14 (Richmond Pine Rocklands) is not occupied by the Miami tiger beetle as the September 7, 2021, proposed rule indicates. The commenter cites information from surveys conducted in portions of Unit 14 in 2020 and 2021 following the 2015 Survey Guidelines for the Miami Tiger Beetle that were negative for the beetle. The commenter recommended that only areas known to be occupied by the Miami tiger beetle in Unit 14 be identified as occupied and those areas not known to be occupied, or where there is negative survey information, be labeled as unoccupied.

Our Response: In our September 7, 2021, proposed rule, we identified Unit 14 (Richmond Pine Rocklands) as occupied by the Miami tiger beetle based on the known, documented presence of the beetle at several locations throughout the unit and the unit contains one or more of the physical and biological features. As discussed above in our response to *(5) Comment*, the "geographical area occupied by the species" is defined at 50 CFR 424.02 as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.*, range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.*, migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals). While the entirety of Unit 14 may not be

occupied at all times, the known occurrences of the Miami tiger beetle in this unit suggest they are capable of moving throughout this area given the suitable habitat and lack of barriers to dispersal such that the area comprising Unit 14 meets the definition of the “geographical area occupied by the species” for the Miami tiger beetle. It is also likely that there may be additional populations in the unsurveyed and undersurveyed areas of this unit due to the suitable habitat present within the unit. For example, in the summer of 2021, surveyors discovered Miami tiger beetles in a new area of the Miami Zoo property, over 0.6 miles (1 kilometer) from the closest known areas. However, given the concerns related to the extent of occupancy within Unit 14, we also considered whether these areas would meet the standard for critical habitat if we assumed the areas were not occupied. We find they would. The Miami tiger beetle currently requires additional populations if it is to recover to the point that it could be removed from the Federal List of Endangered and Threatened Wildlife. Due to the limited remaining suitable habitat for this species and the proximity of these areas to documented occurrences, the continuity of habitat, and presence of the physical or biological features essential to the Miami tiger beetle, these areas are essential for the conservation of the Miami tiger beetle. Further, given the scale of mapping for this critical habitat designation, it is difficult to extract small areas of non-habitat. Please refer to our response to (8) *Comment*, above for clarification on the treatment of certain areas within critical habitat.

(11) *Comment*: One commenter suggested that the draft economic analysis for the proposed critical habitat designation for the Miami tiger beetle is flawed, specifically with regards to Unit 14 (Richmond Pine Rocklands). The commenter asserted the flaws result from the analysis relying on: (1) Overestimating the extent of current occupation by the beetle in Unit 14, thereby overestimating the extent of existing baseline protection due to listing of the species; (2) overestimating the extent of overlap with other listed species and their designated critical habitats in Unit 14, thereby overestimating the extent of existing baseline protection due to the presence of other listed species; (3) overstating the presence of essential habitat features for the beetle on numerous roadways, pathways, pavement, buildings, and other structures in Unit 14, and therefore overstating the presence of other baseline protections in the unit;

and (4) limiting evaluation of potential perception-related impacts to privately owned lands and lack of consideration for incremental costs for private development on county-owned leased lands.

Our Response: As discussed in our response to (10) *Comment*, above, we identified Unit 14 as occupied by the Miami tiger beetle based on the documented presence of the beetle at several locations throughout the unit and the likelihood of the species’ ability to disperse within this unit. Based on our knowledge of this species, we believe that at any given time, suitable habitat in the unit can be occupied either temporarily or permanently by the species. Further, given the contiguous habitat with few barriers to dispersal, frequent adult movement among individuals is likely, and the occupied Richmond parcels likely represent a single population (Knisley 2015a, p. 10). Thus, we consider the entirety of Unit 14 to be within the geographical area occupied by the species, and we have treated the entire unit as being occupied for the designation of critical habitat, with the exception of those areas discussed in response to (8) *Comment* that would not be considered critical habitat.

We recognize, however, that the species may not be present in all areas of this unit at all times. Accordingly, the economic effects of a consultation resulting from this critical habitat designation could be considered incremental if there is a future action with a Federal nexus in an area where the species is not present and there would be no effects to the species itself from the proposed action. That said, since we have determined that these areas contain at least one of the physical or biological features essential to the Miami tiger beetle, future proposed projects are likely to affect the species itself by affecting the features it depends on. Thus, the outcome of the consultation would likely be the same as it would be if the species were to be present at the time of consultation. We would recommend protective measures be established for the Miami tiger beetle regardless of critical habitat designation in this unit because of potential impacts to the features the species depends on. Given this, we agree with the draft economic analysis that the incremental costs resulting from the designation of critical habitat would be expected to be minimal above those in place due to the presence of the listed species.

However, even if we assumed no occupancy of Miami tiger beetles for the purposes of considering the economic impacts, the commentor did not provide

us with specific information about any costs that may be incurred. Further, these areas, as the last remaining pine rocklands directly adjacent and within dispersal proximity to the occurrence of one of only two populations of the beetle, are vitally essential to the conservation of this species and are likely to be critical habitat regardless of potential economic impacts.

It is also well-documented that numerous other federally listed species occupy habitat in Unit 14 (Richmond Pine Rocklands). Some of these species are narrowly restricted in their mobility and in their specific habitat needs, while other are more mobile and can utilize pine rockland habitat of various quality. Further, critical habitat has been designated for a number of these species, as the commenter notes. Although these existing critical habitat designations have defined boundaries, many of the other listed species currently without critical habitat designations can occupy habitat throughout the unit at any given time. Thus, the presence of other listed species and critical habitat designations for other species are likely to result in protective measures in this unit even absent designated critical habitat for the Miami tiger beetle.

The commenter further asserted that developed areas within the unit (*e.g.*, roadways, pathways, pavement, buildings, and other structures) do not contain pine rockland habitat and are not subject to baseline protections, such as Miami-Dade County’s Natural Forest Communities designation. These areas are addressed above in our response to (8) *Comment*.

Lastly, the commenter asserts that our draft economic analysis did not take into consideration the incremental costs to a developer for private development on county-owned leased lands. 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 out by the Federal agency is not likely to destroy or adversely modify critical habitat. A private development project on county-owned leased lands would only have a regulatory, and therefore incremental, effect if there is a Federal nexus (*e.g.*, Federal funding, Federal permit, Federal land transfer, etc.) for the project, or if the designation of critical habitat triggers regulatory compliance under State or local laws, or if there are perception effects associated with regulatory uncertainty. As the commenter notes, the draft economic analysis specifically discusses

perception-related impacts as related to privately owned lands. We revised the draft economic analysis to acknowledge that perception-related effects are also possible on county-owned lands leased to private developers. However, any such costs are speculative, and the economic analysis was unable to quantify them. The commenter also did not provide any cost-specific information on the perceptions or incremental impacts to private development of county-owned lands. Regardless, because of the presence of the Miami tiger beetle and other listed species and existing designated critical habitats in the vicinity of these lands, incremental impacts, including perception-related impacts, on these leased lands appears unlikely.

(12) *Comment:* As a consequence of the issues raised in (10) *Comment* and (11) *Comment*, above, one commenter stated that the benefits of excluding specific “non-habitat” areas from Unit 14 outweigh the potential conservation benefits to the Miami tiger beetle. The commenter requested that we exclude those specific “non-habitat” areas from the final designation of critical habitat for the Miami tiger beetle.

Our Response: In our responses to (10) *Comment* and (11) *Comment*, above, as well as other comments, we discuss the occupancy by the Miami tiger beetle within Unit 14 (Richmond Pine Rocklands) and the suitability of habitat within that unit. We acknowledge that the unit contains a mosaic of good quality habitat and lesser quality habitat, and that certain “non-habitat” areas of human-made structures (such as buildings, aqueducts, runways, roads, other paved areas, and managed lawns) or the land on which they are located appear to be included in this critical habitat designation due to the scale of mapping. However, as we explain in our response to (8) *Comment*, those areas are not included in critical habitat through the text of this rule (see Regulation Promulgation, below).

We also recognize that excluding the other specific areas identified by the commenter may relieve some potential perceived regulatory and cost (financial, time, resource) burdens. However, additional information on why these specific areas should be excluded under section 4(b)(2) of the Act has not been provided to us and therefore we were unable to conduct an analysis to balance or weigh the benefits of excluding the area against the benefits of including that area in the designation. These areas provide dispersal corridors for the Richmond population of the Miami tiger beetle, provide potential habitat for population expansion, and support prey

populations. The Secretary may exclude an area from critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (2016 Policy; 81 FR 7226, February 11, 2016), both of which we published jointly with the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration. Following this guidance, as noted in our response to (11) *Comment*, incremental economic impacts appear to be unlikely. Furthermore, critical habitat does not appear to impact national security in these areas. Finally, we have no evidence that the specific areas requested by the commenter to be excluded from this designation are under an existing conservation agreement, habitat conservation plan, safe harbor agreement, or other instrument, or that there is a proven track record of conservation by the requester that indicates the lands would continue to provide an important contribution to the conservation and recovery of the Miami tiger beetle. As such, we are not excluding these lands from this critical habitat designation.

Background

Section 4(a)(3) of the Act requires that, to the maximum extent prudent and determinable, we designate a species’ critical habitat concurrently with listing the species. 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.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species’ occurrences, as determined by the Secretary (*i.e.*, range). Such areas may include those areas used throughout all or part of the species’ life cycle, even if not used on a regular basis (*e.g.*, migratory corridors, seasonal habitats,

and habitats used periodically, but not solely by vagrant individuals).

Our September 7, 2021, proposed rule to designate critical habitat for the Miami tiger beetle (86 FR 49945) published when the regulations defining “habitat” (see 85 FR 81411; December 16, 2020) and governing the 4(b)(2) exclusion process for the Service (see 85 FR 82376; December 18, 2020) were in place and in effect. However, those two regulations have since been rescinded (see 87 FR 37757, June 24, 2022; 87 FR 43433, July 21, 2022) and no longer apply to any designations of critical habitat. Therefore, for this final rule designating critical habitat for the Miami tiger beetle, we apply the regulations at 50 CFR 424.19 and the 2016 Policy (81 FR 7226; February 11, 2016).

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 also 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 Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would likely result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not

required to abandon the proposed activity, or to restore or recover the species; instead, they must 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). 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.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific 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 any generalized conservation strategy, criteria, or outline that may have been developed for the species; 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, will 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) the prohibitions found in section 9 of the Act. 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 this species. 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 Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection. The regulations at 50 CFR 424.02 define “physical or biological features essential to the conservation of the species” as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single

habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or absence of particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, we may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

Space for Individual and Population Growth and for Normal Behavior

The Miami tiger beetle is endemic to pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge in Miami-Dade County in South Florida. Descriptions of this habitat and its associated native plant species are provided in the *Habitat* discussion in the proposed listing rule (80 FR 79533, December 22, 2015, pp. 79537–79538). Additional discussion may be found in the final listing rule (81 FR 68985; October 5, 2016). The Miami tiger beetle requires open or sparsely vegetated sandy areas within pine rockland habitat for thermoregulation (regulation of body temperature), foraging, reproduction, and larval development.

As a group, tiger beetles (Coleoptera: Cicindelidae) occupy ephemeral

habitats where local extinction from habitat loss or degradation is common, so dispersal to establish new populations in distant habitat patches is a likely life-history strategy for most species (Knisley 2015b, p. 10). Therefore, individuals of the species must be sufficiently abundant and occur within an appropriate dispersal distance to adjacent suitable habitat so they can repopulate areas following local extirpations. Barriers to dispersal can disrupt otherwise normal metapopulation dynamics and contribute to imperilment.

Development and agriculture have reduced pine rockland habitat by 90 percent in mainland south Florida. Pine rockland habitat decreased from approximately 183,000 acres (ac) (74,000 hectares (ha)) in the early 1900s to only 3,707 ac (1,500 ha) in 2014 (Possley et al. 2014, p. 154). The largest remaining intact pine rockland (approximately 5,716 ac (2,313 ha)) is Long Pine Key in Everglades National Park (Everglades). Outside of the Everglades, less than 2 percent of pine rocklands on the Miami Rock Ridge remain, and much of what is left are small remnants scattered throughout the Miami metropolitan area that are isolated from other natural areas (Herndon 1998, p. 1; URS Corporation Southern 2007, p. 1).

The extreme rarity of high-quality pine rockland habitats supporting the Miami tiger beetle elevates the importance of remnant sites that still retain some pine rockland species. We consider pine rockland habitat to be the primary habitat for the Miami tiger beetle.

We do not have specific information regarding a minimum viable population size for the Miami tiger beetle or the amount of habitat needed to sustain a viable population. Recovery plans for *Cicindela puritana* (Puritan tiger beetle) and *C. dorsalis* (Northeastern beach tiger beetle) consider a minimum viable population size to be at least 500–1,000 adults (Hill and Knisley 1993, p. 23; Hill and Knisley 1994, p. 31). A minimum viable population size of 500 adults was estimated for the Salt Creek tiger beetle (*Cicindela nevadica lincolniana*) (79 FR 26014; May 6, 2014). The best available data regarding the minimum area and number of individuals necessary for a viable population for the Miami tiger beetle come from information regarding the closely related Highlands tiger beetle (*Cicindelidia highlandensis*); the information describes estimates of a minimum of 100 adult Highlands tiger beetles in an area of at least 2.5 to 5.0 ac (1.0 to 2.0 ha) (Knisley and Hill 2013, p. 42). This estimate is based on

observations of population stability for the Highlands tiger beetle, as well as survey data and literature from other tiger beetle species (Knisley and Hill 2013, p. 42).

The Miami tiger beetle requires open or sparsely vegetated sandy areas within pine rockland habitat to meet its life-history requirements, as well as adjacent undeveloped habitat to facilitate dispersal and protect core habitat. Therefore, based on the information in the previous paragraph, we identify pine rockland habitats of at least 2.5 ac (1.0 ha) in size as a necessary physical feature for this species.

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

Food—Miami tiger beetles are active diurnal predators that use their keen vision to detect movement of small arthropods and run quickly to capture prey with their well-developed jaws (mandibles). Although we do not have specific information on Miami tiger beetle diets, observations by various entomologists indicate small arthropods, especially ants, are the most common prey for tiger beetles. Over 30 kinds of insects from many families have been identified as prey for tiger beetles, and scavenging is also common in some species (Knisley and Schultz 1997, pp. 39, 103; Willis 1967, pp. 196–197). Ants were the most common prey of tiger beetles in Florida (Choate 1996, p. 2). Miami tiger beetle larvae are sedentary sit-and-wait predators that capture small prey passing over or near (within a few inches (in) (centimeters (cm) of) their burrows on the soil surface. Larvae prey on small arthropods, similar to adults. Alterations or reductions in the prey base through pesticide exposure could affect foraging of Miami tiger beetles.

Water—The Miami tiger beetle requires inland sandy pine rockland habitat that has moderately drained to well-drained terrain. Rainfall varies from an annual average of over 64 in (163 cm) in the northwest portion of Miami-Dade County to between 48 and 56 in (122 and 143 cm), respectively, in the rest of the county (Service 1999, p. 3–167). The water table in the Miami Rock Ridge outside of the Everglades seldom reaches the surface (Service 1999, p. 3–167). The existence of larvae in shallow permanent burrows throughout their development makes them susceptible to changes in groundwater levels. The effects of climate change and sea level rise, which predict higher intensity storms, more erratic rainfall (*i.e.*, alterations to the amount and seasonality and rainfall),

and especially changes in water levels due to storm surge and salinization of the water table, could result in vegetation shifts that may impact the species. Based on this, we identify water (particularly appropriate hydrological regimes) as a necessary feature for the Miami tiger beetle to carry out its life processes.

Light—Miami tiger beetles require open areas of pine rockland habitat with ample sunlight for behavioral thermoregulation so that they can successfully perform their normal activities, such as foraging, mating, and oviposition. Vegetation encroachment and lack of adequate pine rockland management threatens the amount of light necessary for the Miami tiger beetle. We identify light as a necessary feature for the Miami tiger beetle to carry out its life processes.

Soil—The Miami tiger beetle is endemic to pine rockland habitat within the Miami Rock Ridge. The Miami Rock Ridge has oolitic limestone (composed of spherical grains packed tightly) at or very near the surface and solution holes occasionally from where the surface limestone is dissolved by organic acids. There is typically very little soil development, consisting primarily of accumulations of low-nutrient sand, marl, clayey loam, and organic debris found in solution holes, depressions, and crevices on the limestone surface (FNAI 2010, p. 62). However, sandy pockets can be found at the northern end of the Miami Rock Ridge (Northern Biscayne Pinelands), beginning from approximately North Miami Beach and extending south to approximately SW 216th Street (Service 1999, p. 3–162).

These sandy substrates provide the appropriate nutrients, moisture regime, and soil chemistry necessary for Miami tiger beetle reproduction. Burrows in the sand are used for eggs and developing larvae. In addition, these sandy areas support a community of insect prey that allows the species to persist. Soil compaction could impact the species and its habitat. Therefore, we identify substrates derived from calcareous limestone that provide habitat for the Miami tiger beetle to carry out its life processes to be a necessary feature for the Miami tiger beetle.

Summary—Based on the best available information, we conclude that the Miami tiger beetle requires open sandy areas in pine rockland habitat with little to no vegetation for thermoregulation, foraging, egg-laying, and larval development. We identify these characteristics as necessary physical or biological features for the species.

Cover or Shelter

The life cycle of the Miami tiger beetle occurs entirely within pine rocklands. Females place a single egg into a shallow burrow dug into the soil. The egg hatches, apparently after sufficient soil moisture, and the first instar larva digs a burrow at the site of oviposition (egg-laying). Larvae are closely associated with their burrows, which provide cover and shelter for anywhere from 2 months to 1 year or more, depending on climate, food availability, and the number of cohorts per year (Knisley 2015a, p. 28). Larvae remain in their burrows until they are adults, only extending beyond the burrow entrance to subdue arthropod prey. The adult flight period for the Miami tiger beetle lasts approximately 5 months (mid-May to mid-October) (Knisley 2015a, p. 27). Both larvae and adults are visual predators and require open habitat to locate prey. Open areas with dense vegetation no longer provide suitable habitat. However, vegetation adjacent to open sandy areas may also be important, as it may provide thermal refugia for the beetles to escape from high ground temperatures (Knisley 2014, p. 1). Miami tiger beetle habitat can also be impacted from trampling, which causes soil compaction and can lead to lethal impacts to adults or larvae or impacts to their habitat.

Based on the best available information, we conclude that the Miami tiger beetle requires pine rocklands, specifically those containing open or sparsely vegetated sandy patches.

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

Miami tiger beetle reproduction and larval development occurs entirely within pine rocklands. Both larvae and adults occupy the same habitats, open sandy patches interspersed with vegetation. Vegetation encroachment into the open sandy habitat patches, barriers to dispersal, trampling of the surface soil, reductions in prey base, and collection of beetles are factors that may reduce the reproductive potential of the species. Therefore, based on the information above, we identify pine rockland habitats that can support the species' growth, distribution, and population expansion as required for this species.

Habitats Representative of the Historical, Geographical, and Ecological Distributions of the Species

The Miami tiger beetle continues to occur in pine rockland habitats that are protected from incompatible human-

use, but these areas are only partially representative of the species' historical, geographical, and ecological distribution because its range within these habitats has been reduced. The species is still found in pine rockland habitats, with open sandy areas of at least 2.5 to 5.0 ac (1.0 to 2.0 ha) in size. Representative pine rocklands are located on Federal, local, and private conservation lands that implement conservation measures benefitting the beetle.

Pine rockland habitat is dependent on some degree of disturbance, most importantly from natural or prescribed fires (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; FNAI 2010, p. 62). These fires are a vital component in maintaining native vegetation and creating or maintaining open or sparsely vegetated sandy areas, within this ecosystem. Fires have historically burned in intervals of approximately 3 to 7 years (FNAI 2010, p. 3) and were typically started by lightning strikes during the frequent summer thunderstorms (FNAI 2010, p. 3). Without fire, successional climax from tropical pineland to rockland hammock is rapid, and the open areas required by the species are encroached with vegetation and leaf litter. In addition, displacement of native species by invasive, nonnative plants often occurs.

Mechanical control or thinning of pine rockland vegetation may be another means of maintaining pine rockland habitat, but it cannot entirely replace fire because it does not have the same benefits related to removal of leaf litter and nutrient cycling. In addition, mechanical control or thinning may lead to trampling of adult or larval tiger beetles. Natural and prescribed fire remains the primary and ecologically preferred method for maintaining pine rockland habitat.

Hurricanes and other significant weather events can contribute to openings in the pine rockland habitat (FNAI 2010, p. 62) needed by the Miami tiger beetle; however, they can also be a source of significant and direct risk to the species. Given the few, isolated populations of the Miami tiger beetle within a location prone to storm influences (located approximately 5 miles (8 kilometers) from the coast), the species is at substantial risk from stochastic environmental events such as hurricanes, storm surges, and other extreme weather that can affect recruitment, population growth, and other population parameters. The substantial reduction in the historical range of the beetle in the past 80 years,

and the few remaining populations, make the species less resilient to impacts than when its distribution was more widespread.

Therefore, based on the information above, we identify pine rockland management through natural or prescribed fire, or other disturbance regimes that maintain pine rockland habitat, such as weather events, to be necessary for this species.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the Miami tiger beetle from studies of the species' habitat, ecology, and life history. We have determined that the following physical or biological features are essential to the conservation of the Miami tiger beetle:

1. South Florida pine rockland habitat of at least 2.5 ac (1 ha) in size that is maintained by natural or prescribed fire or other disturbance regimes; and

2. Open sandy areas within or directly adjacent to the south Florida pine rockland habitat with little to no vegetation that allows for or facilitates normal behavior and growth such as thermoregulation, foraging, egg-laying, larval development, and habitat connectivity, which promotes the overall distribution and expansion of the species.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of this species may require special management considerations or protection to reduce the following threats: vegetation encroachment of pine rockland habitat; loss of pine rockland habitat due to development that further fragments or degrades the few remaining pine rockland parcels in Miami-Dade County; climate change and sea level rise; and pesticide exposure. These threats are exacerbated by having only two small populations in a restricted geographic range, making this species particularly susceptible to extinction. For a detailed discussion of threats, see Summary of Factors Affecting the Species in our proposed listing rule (80 FR 79533, December 22, 2015, pp. 79540–79551). Additional information may be found in the final listing rule (81 FR 68985; October 5, 2016).

Some of these threats can be addressed by special management considerations or protection while others (e.g., sea level rise, hurricanes, storm surge) are beyond the control of landowners and land managers. However, even when landowners or land managers may not be able to control all the threats directly, they may be able to address the impacts of those threats.

Destruction of rock pinelands for economic development has reduced pine rockland habitat on the Miami Rock Ridge outside of the Everglades by over 98 percent, and remaining habitat in this area is highly fragmented. The Miami tiger beetle occurs on a mix of privately and publicly owned lands, only some of which are managed for conservation. Any occurrences of the beetle on private land or non-conservation public land are vulnerable to the effects of habitat degradation if natural disturbance regimes are disrupted because the species requires active management to keep the habitat functional in the absence of such disturbances. Prolonged lack of fire in pine rockland habitat leads to vegetation encroachment into the open or sparsely vegetated sandy areas that are required by the beetle. Further development and degradation of pine rocklands increases fragmentation and decreases the conservation value of the remaining functioning pine rockland habitat. In addition, pine rocklands are expected to be further degraded and fragmented due to anticipated sea level rise, which would fully or partially inundate some pine rocklands within the Miami Rock Ridge and cause increases in the salinity of the water table and soils, resulting in vegetation shifts. Also, portions of the Richmond Pine Rocklands are proposed for commercial development and some existing pine rockland areas are projected to be developed for housing as the human population grows and adjusts to changing sea levels.

Pesticides used in and around pine rockland habitat are a potential threat to the Miami tiger beetle through direct exposure to adults and larvae; secondary exposure from insect prey; an overall reduction in availability of adult and larval prey, thus limiting foraging opportunities; or any combination of these factors. Based on Miami-Dade Mosquito Control's implementation of spray buffers around pine rocklands occupied by the Miami tiger beetle, mosquito control pesticides are not considered a current threat for the species. However, if these buffers were to change or Miami tiger beetles were found in habitat without restrictions of

pesticide applications, then the threat of exposure would need to be reevaluated.

The features essential to the conservation of the Miami tiger beetle (i.e., open or sparsely vegetated areas of pine rockland habitat that are at least 2.5 ac (1.0 ha) in size) may require special management considerations or protection to reduce threats. Actions that could ameliorate threats include, but are not limited to:

(1) Restoration and management of existing and potential Miami tiger beetle habitats throughout the Miami Rock Ridge using prescribed fire and control of invasive, nonnative plants;

(2) Protection of habitat adjacent to existing and new occurrences of the species to provide dispersal corridors, support the prey base, protect core habitat, and allow for appropriate habitat management;

(3) Use of pesticide spray buffers to prevent potential exposure to the species and probable limitation of foraging opportunities; and

Criteria Used To Identify Critical Habitat

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 specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat. We are designating critical habitat in areas within the geographical area occupied by the species at the time of listing and that contain one or more of the physical or biological features that are essential to support life-history processes of the species. We have determined that occupied areas are inadequate to ensure the conservation of the species. Therefore, we are designating additional areas as unoccupied critical habitat. Although we do not have definitive information that these areas were historically or are currently occupied by the Miami tiger beetle, they are within the historical range of the species and contain remnant south Florida pine rockland habitat. We have determined that it is reasonably certain that the unoccupied areas will both contribute to the conservation of the species and contain at least one physical or biological feature essential to the conservation of the species. Accordingly, we find these areas to be

essential for the conservation of the species, as further discussed below.

The historical range of the Miami tiger beetle is limited to Miami-Dade County, Florida, specifically within the Northern Biscayne Pinelands of the Miami Rock Ridge. Over 98 percent of the Miami Rock Ridge pine rocklands outside of the Everglades has been lost to development, reducing the current range of the Miami tiger beetle to the southern portion of the Northern Biscayne Pinelands, in the Richmond Pine Rocklands and Nixon Smiley Pineland Preserve.

We anticipate that recovery will require not only continued protection of the remaining extant populations and remnant pine rockland habitat but also establishment of populations in additional areas of Miami-Dade County to ensure there are adequate numbers of beetles and stable populations occurring over the entire geographic range of the Miami tiger beetle. This will help to reduce the chance that catastrophic events, such as storms, will simultaneously affect all known populations.

The two extant Miami tiger beetle populations are small and at risk of adverse effects from reduced genetic variation, an increased risk of inbreeding depression, and reduced reproductive output. In addition, the two populations are isolated from each other, decreasing the likelihood that they could be naturally reestablished if extirpation from one location would occur.

In selecting areas for critical habitat, we used the conservation principles of the "three Rs"—resiliency, redundancy, and representation (Shaffer and Stein 2000, entire)—for conserving imperiled species. Resiliency is the ability to sustain populations through the natural range of favorable and unfavorable conditions. Redundancy ensures an adequate number of sites with resilient populations such that the species has the ability to withstand catastrophic events. Representation ensures adaptive capacity within a species and allows it to respond to environmental changes. This can be facilitated by conserving not just genetic diversity, but also the species' associated habitat type variation. Implementation of this methodology has been widely accepted as a reasonable conservation strategy (Tear et al. 2005, p. 841).

To ensure sufficient representation for the Miami tiger beetle, we described the physical or biological features (as discussed above) and identified areas of habitat that may provide for reintroduction and expansion of the Miami tiger beetle. Redundancy can be

improved through the introduction of additional populations of the Miami tiger beetle at other pine rockland sites. However, throughout the species' range, the amount of suitable remaining pine rockland is limited (low resiliency), and much of the remaining habitat may be significantly altered because of climate change over the next century. Therefore, we reviewed available sites containing pine rockland habitat within the historical range of the species and evaluated each site for its potential conservation contribution based on quality of habitat, spatial arrangement relative to the two extant populations and each other, and potential for supporting introduced Miami tiger beetle populations, as evidenced by existing protections and management of the habitat and sites, to determine additional areas that are essential for the Miami tiger beetle's conservation.

Sources of Data To Identify Critical Habitat Boundaries

We have determined that the areas known to be occupied at the time of listing should be designated as critical habitat for the Miami tiger beetle. However, because the species' redundancy and representation are currently low, we also used habitat and historical occurrence data to identify unoccupied habitat areas that are essential for the conservation of the species. To determine the general extent, location, and boundaries of critical habitat, the Service used Esri ArcGIS mapping software for mapping and calculating areas (Albers Conical Equal Area (Florida Geographic Data Library), North American Datum of 1983 (NAD 83) High Accuracy Reference Network (HARN)) along with the following spatial data layers:

(1) Historical and current records of Miami tiger beetle occurrences and distributions found in publications, reports, personal communications, and associated voucher specimens housed at museums and private collections (Knisley 2015a, entire);

(2) Geographic information system (GIS) data showing the location and extent of documented occurrences of pine rockland habitat (Cooperative Land Cover Version 3.3. FWC and FNAI 2018);

(3) Aerial imagery (Esri ArcGIS online basemap World Imagery. South Florida Water Management District GIS Services, Earthstar Geographics, Miami-Dade County, Florida Department of Environmental Protection, Esri, HERE, Garmin, SafeGraph, Ministry of Economy, Trade, and Industry of Japan and the U.S. National Aeronautics and Space Administration, U.S. Geological

Survey, Environmental Protection Agency, National Park Service, U.S. Department of Agriculture 2019); and

(4) GIS data depicting soils and to determine the presence of the physical or biological features essential to the conservation of the Miami tiger beetle (U.S. Department of Agriculture 2020).

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 because any further degradation or loss of the extant populations or occupied habitat would increase the Miami tiger beetle's susceptibility to local extirpation and ultimately extinction. The species occurs in two populations, Richmond and Nixon Smiley, separated from each other by approximately 3.1 mi (5 km) of urban development.

We are also including pine rockland habitat within the Richmond Pine Rocklands directly adjacent to sites with documented occurrences in the Richmond population. Due to their proximity to documented occurrences, the continuity of habitat, and presence of all of the essential physical or biological features, we have determined these areas are within the geographical area occupied by the species consistent with 50 CFR 424.02. Additionally, these areas are essential for the conservation of the species because they protect the Richmond population, provide dispersal corridors for the Richmond population, provide potential habitat for population expansion, and support prey-base populations. These areas are important to ensure redundancy for the species, and they improve the species' viability.

Areas Outside of the Geographical Range at the Time of Listing

Lastly, we are including other suitable or potentially suitable pine rockland fragments outside of the Richmond Pine Rocklands and Nixon Smiley Pineland Preserve that are located within the beetle's historical range along the Northern Biscayne Pinelands of the Miami Rock Ridge but are not known to be currently occupied by the species. With only two known occupied areas, we have determined these areas are essential for the conservation of the species because they will enable the establishment of new populations in additional areas that more closely approximate the species' historical distribution. Establishment of new populations will help ensure that there are adequate numbers of beetles in multiple populations over a wide geographic area, so that catastrophic events, such as storms, would be less

likely to simultaneously affect all known populations.

The best available data regarding the minimum area and number of individuals necessary for a viable population come from information regarding the Highlands tiger beetle; the information describes estimates of a minimum of 100 adult Highlands tiger beetles in an area of at least 2.5 to 5.0 ac (1.0 to 2.0 ha) (Knisley and Hill 2013, p. 42). This estimate is based on observations of population stability for the Highlands tiger beetle, as well as survey data and literature from other tiger beetle species. From the remaining suitable or potentially suitable pine rockland fragments that were delineated for the Miami Rock Ridge, we excluded fragments below the 2.5-ac (1.0-ha) minimum area for a viable population. As such, we evaluated the remaining unoccupied pine rockland habitat within and directly adjacent to the Northern Biscayne Pinelands of the Miami Rock Ridge to identify remnant pine rocklands with the highest quality habitat potential (*i.e.*, actively managed to support pine rocklands) and of sufficient size (patches at least 2.5 ac (1.0 ha)) to provide for the conservation of the Miami tiger beetle.

The Miami tiger beetle has been extirpated from its type-locality (the place where the species was first discovered) in North Miami and is historically unknown from any other locations. In addition to including areas of the two extant populations (Richmond Pine Rocklands and Nixon Smiley Pineland Preserve) in critical habitat, we are also including 14 unoccupied critical habitat units that we have determined to be essential for the conservation of the Miami tiger beetle. These areas contain pine rockland habitat within the historical range in the Northern Biscayne Pinelands on the Miami Rock Ridge and encompass approximately 405 ac (164 ha) or 22 percent of critical habitat. These areas are habitat for the species and can support its life history needs. As discussed above, we have determined that recovery requires additional populations be established in high-quality pine rockland habitat that is protected and actively managed. Following a review of available sites containing pine rockland habitat within the historical range of the species, we evaluated each site for its potential conservation contribution based on quality of habitat (including presence of one or more of the essential physical or biological features), spatial arrangement relative to the two extant populations and each other, and potential for reintroduction, evidenced by existing

protections and management. This review led to our determination that the most viable sites for introduction and conservation of the Miami tiger beetle are the 14 unoccupied sites identified in this final rule. As a result, we concluded that these 14 sites are essential for the conservation of the species. Thus, we are including them as critical habitat for the Miami tiger beetle.

We used the best available data to delineate existing pine rockland habitat units that are of sufficient size to support introduced populations of Miami tiger beetles and that are spatially configured to support metapopulation dynamics and to minimize adverse impacts from stochastic events. In identifying these areas, we considered the following refining criteria:

(1) Areas of sufficient size to support ecosystem processes for populations of the Miami tiger beetle. The best available information indicates that appropriately sized units should be, at a minimum, 2.5 to 5.0 ac (1.0 to 2.0 ha). Large contiguous parcels of habitat are more likely to be resilient to ecological processes of disturbance and are more likely to support a viable population of the Miami tiger beetle. The unoccupied areas selected range from 7 ac (3 ha) in size to 89 ac (36 ha).

(2) Areas to maintain connectivity of habitat to allow for population expansion. Isolation of habitat can prevent recolonization of the Miami tiger beetle and result in local extirpation and ultimately extinction. To ameliorate the dangers associated with small populations or limited distributions, we have identified areas of critical habitat that will allow for the natural expansion of populations or support reintroductions.

(3) Restored pine rockland habitats may allow the Miami tiger beetle to disperse, recolonize, or expand from areas already occupied by the beetle. These restored areas generally are habitats within or adjacent to pine rocklands that have been affected by natural or anthropogenic factors but retain habitat features that make them suitable for the beetle. These areas would help offset the anticipated loss and degradation of habitat occurring or expected from natural succession in the absence of disturbance, effects of climate change (such as sea level rise), or development.

In summary, for areas within the geographical area occupied by the species at the time of listing, we delineated critical habitat unit boundaries using the following criteria:

(1) We evaluated habitat suitability of pine rockland habitat within the

geographical area occupied at the time of listing, and selected those areas that contain one or more of the physical or biological features to support life-history functions essential for conservation of the species; and

(2) We identified open sandy areas directly adjacent to occupied areas and with little to no vegetation that allow for or facilitate normal behavior and growth of the Miami tiger beetle, such as thermoregulation, foraging, egg-laying, larval development, and habitat connectivity, and which promote the overall distribution and expansion of the species.

The result was the inclusion of two units of critical habitat occupied by the Miami tiger beetle. Approximately 945 ac (383 ha) or 71 percent of the occupied units are existing critical habitat for other species.

For areas outside the geographical area occupied by the species at the time of listing, we delineated critical habitat unit boundaries using the following criteria:

(1) We identified areas with pine rockland habitat that contain habitat components used by the beetle and are of sufficient size to support introduced populations of the Miami tiger beetle; and

(2) We identified areas that are spatially configured to support metapopulation dynamics, minimize adverse impacts from stochastic events, and maintain representation of the historical range of the species.

The result was the inclusion of 14 units of critical habitat not occupied by the Miami tiger beetle at the time of listing. These 14 units encompass approximately 405 ac (164 ha) or 22 percent of critical habitat and overlap with approximately 388 ac (158 ha) of existing critical habitat for other listed species. All 14 units are either publicly owned or privately owned conservation lands (*i.e.*, Porter Pineland Preserve, which is owned and managed by the Audubon Society).

When determining critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Miami tiger beetle. 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 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 will affect the physical or biological features in the adjacent critical habitat.

We are designating as critical habitat areas that we have determined were occupied at the time of listing (and are currently occupied) and that contain one or more of the physical or biological features that are essential to support life-history processes of the species. We have determined that occupied areas are inadequate to ensure the conservation of the species. Therefore, we also identified and designated as critical habitat unoccupied areas that are essential for the conservation of the species.

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 under Regulation Promulgation. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053 and on our internet site at <https://www.fws.gov/office/florida-ecological-services/library>.

Final Critical Habitat Designation

We are designating 16 units as critical habitat for the Miami tiger beetle. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the Miami tiger beetle. The 16 areas we designate as critical habitat are: (1) Trinity Pineland, (2) Rockdale Pineland, (3) Deering Estate South Addition, (4) Ned Glenn Nature Preserve, (5) Deering Estate at Cutler, (6) Silver Palm Groves Pineland, (7) Quail Roost Pineland, (8) Eachus Pineland, (9) Bill Sadowski Park, (10) Tamiami Pineland Complex Addition, (11) Pine Shore Pineland Preserve, (12) Nixon Smiley Pineland Preserve, (13) Boystown Pineland Preserve, (14) Richmond Pine Rocklands, (15) Calderon Pineland, and (16) Porter Pineland Preserve. Table 1 shows the critical habitat units, the occupancy by the Miami tiger beetle at the time it was listed under the Act, the approximate area of each unit, and the extent of overlap with designated critical habitat for other federally listed species.

TABLE 1—CRITICAL HABITAT UNITS FOR THE MIAMI TIGER BEETLE, INCLUDING OCCUPANCY AND EXTENT OF OVERLAPPING CRITICAL HABITAT FOR OTHER FEDERALLY LISTED SPECIES

Unit No.	Unit name	Occupancy at time of listing	Total area (ac (ha))	Area of overlap with existing critical habitat (ac (ha))
1	Trinity Pineland	No	10 (4)	10 (4)
2	Rockdale Pineland	No	39 (16)	38 (15)
3	Deering Estate South Addition	No	16 (6)	15 (6)
4	Ned Glenn Nature Preserve	No	11 (5)	11 (5)
5	Deering Estate at Cutler	No	89 (36)	84 (34)
6	Silver Palm Groves Pineland	No	25 (10)	22 (9)
7	Quail Roost Pineland	No	48 (19)	47 (19)
8	Eachus Pineland	No	17 (7)	17 (7)
9	Bill Sadowski Park	No	20 (8)	19 (8)
10	Tamiami Pineland Complex Addition	No	21 (8)	19 (8)
11	Pine Shore Pineland Preserve	No	8 (3)	8 (3)
12	Nixon Smiley Pineland Preserve	Yes	117 (47)	115 (47)
13	Boystown Pineland Preserve	No	81 (33)	77 (31)
14	Richmond Pine Rocklands	Yes	1,347 (545)	830 (336)
15	Calderon Pineland	No	14 (6)	14 (6)
16	Porter Pineland Preserve	No	7 (3)	7 (3)
Total			1,869 (756)	1,335 (540)

Note: Area sizes may not sum due to rounding.

Approximately 71 percent (1,335 ac (540 ha)) of the critical habitat designated for the Miami tiger beetle overlaps with currently designated Federal critical habitat for the Carter’s small-flowered flax (*Linum carteri* var. *carteri*), the Florida brickell-bush (*Brickellia mosieri*), Bartram’s scrub-hairstreak butterfly (*Strymon acis bartrami*), and the Florida leafwing butterfly (*Anaea troglodyta floralidis*).

Further, approximately 4 percent (16 ac (7 ha)) of unoccupied critical habitat designated is unique to the Miami tiger beetle, *i.e.*, does not overlap with existing designated Federal critical habitat. Please refer to table 1, above, for the area of overlap with other federally designated critical habitat and to specific unit descriptions below for which currently designated Federal critical habitat overlaps with each

critical habitat unit for the Miami tiger beetle.

Tables 2 and 3, below, show the approximate land ownership for each critical habitat unit and the proportion of critical habitat for each landownership category, respectively. All but 1 ac (0.6 ha) of the area designated is either publicly owned or privately owned for conservation.

TABLE 2—CRITICAL HABITAT UNITS FOR THE MIAMI TIGER BEETLE BY LAND OWNERSHIP

Critical habitat unit	Area (ac (ha))	Land ownership			
		Federal	State	County	Private
1—Trinity Pineland	10 (4)		10 (4)		
2—Rockdale Pineland	39 (16)		38 (15)	1 (<1)	
3—Deering Estate South Addition	16 (6)		16 (6)		
4—Ned Glenn Nature Preserve	11 (5)			11 (5)	
5—Deering Estate at Cutler	89 (36)			89 (36)	
6—Silver Palm Groves Pineland	25 (10)		20 (8)	5 (2)	
7—Quail Roost Pineland	48 (19)		48 (19)		
8—Eachus Pineland	17 (7)			17 (7)	
9—Bill Sadowski Park	20 (8)			20 (8)	
10—Tamiami Pineland Complex Addition	21 (8)		21 (8)		
11—Pine Shore Pineland Preserve	8 (3)			8 (3)	
12—Nixon Smiley Pineland Preserve	117 (47)			117 (47)	
13—Boystown Pineland Preserve	81 (33)		76 (31)	5 (2)	
14—Richmond Pine Rocklands	1,347 (545)	488 (197)		841 (340)	18 (7)
15—Calderon Pineland	14 (6)			14 (6)	
16—Porter Pineland Preserve	7 (3)				7 (3)
Total	1,869 (756)	488 (197)	229 (93)	1,127 (456)	26 (10)

Note: Area sizes may not sum due to rounding.

TABLE 3—PROPORTIONMENT OF LAND OWNERSHIP OF CRITICAL HABITAT FOR THE MIAMI TIGER BEETLE

Land ownership	Area (ac (ha))	Percent ownership
Federal	488 (197)	26
State	229 (93)	12
County	1,127 (456)	60
Private	26 (10)	1
Total	1,869 (756)

Note: Area sizes may not sum due to rounding.

In addition, over half of the designated critical habitat for the Miami tiger beetle (1,121 ac (454 ha), or 60 percent) is under a Miami-Dade County Natural Forest Communities (NFC) designation. Miami-Dade County’s NFC designation enacts regulations on habitat alterations to minimize damage to and protect environmentally sensitive forest lands, including pine rocklands. NFC regulations are designed to prevent clearing or destruction of native vegetation within preserved areas. Please see the unit descriptions below for the specific amount of each unit that is enrolled in the NFC program.

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

Unit 1: Trinity Pineland

Unit 1 consists of approximately 10 ac (4 ha) of State-owned land in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain a healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution

falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned or managed by Miami-Dade County, including this unit. These actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 1 overlaps with designated critical habitat for Carter’s small-flowered flax and Florida brickell-bush. Additionally, approximately 8 ac (3 ha), or 80 percent, of Unit 1 is enrolled in the NFC program.

Unit 2: Rockdale Pineland

Unit 2 consists of approximately 39 ac (16 ha) of lands owned by the State (38 ac (15 ha)) and county (1 ac (<1 ha)) in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions

help improve habitat that could support the Miami tiger beetle.

All but 1 ac (<1 ha) of Unit 2 overlaps with designated critical habitat for Carter’s small-flowered flax and Florida brickell-bush. Additionally, approximately 28 ac (11 ha), or 72 percent, of Unit 2 are enrolled in the NFC program.

Unit 3: Deering Estate South Addition

Unit 3 consists of approximately 16 ac (6 ha) of State-owned land in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned or managed by Miami-Dade County, including this unit. The actions help improve habitat that could support the Miami tiger beetle.

All but 1 ac (<1 ha) of Unit 3 overlaps with designated critical habitat for Carter’s small-flowered flax and Florida brickell-bush. Additionally, approximately 15 ac (6 ha), or 94 percent, of Unit 3 is enrolled in the NFC program.

Unit 4: Ned Glenn Nature Preserve

Unit 4 consists of approximately 11 ac (5 ha) of county-owned land in Miami-

Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 4 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 11 ac (5 ha), or 100 percent, of Unit 4 is enrolled in the NFC program.

Unit 5: Deering Estate at Cutler

Unit 5 consists of approximately 89 ac (36 ha) of county-owned land in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species

because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

All but 5 ac (2 ha) of Unit 5 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 84 ac (34 ha), or 94 percent, of Unit 5 is enrolled in the NFC program.

Unit 6: Silver Palm Groves Pineland

Unit 6 consists of approximately 25 ac (10 ha) of lands owned by the State (20 ac (8 ha)) and county (5 ac (2 ha)) in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is

protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

All but 3 ac (1 ha) of Unit 6 overlaps with designated critical habitat for Bartram's scrub-hairstreak butterfly, Carter's small-flowered flax, and Florida brickell-bush. Additionally, approximately 18 ac (7 ha), or 72 percent, of Unit 6 is enrolled in the NFC program.

Unit 7: Quail Roost Pineland

Unit 7 consists of approximately 48 ac (19 ha) of State-owned land in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned or

managed by Miami-Dade County, including this unit. The actions help improve habitat that could support the Miami tiger beetle.

All but 1 ac (<1 ha) of Unit 7 overlaps with designated critical habitat for Bartram's scrub-hairstreak butterfly, Carter's small-flowered flax, and Florida brickell-bush. Additionally, approximately 32 ac (13 ha), or 67 percent, of Unit 7 is enrolled in the NFC program.

Unit 8: Eachus Pineland

Unit 8 consists of approximately 17 ac (7 ha) of county-owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 8 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 14 ac (6 ha), or 82 percent, of Unit 8 is enrolled in the NFC program.

Unit 9: Bill Sadowski Park

Unit 9 consists of approximately 20 ac (8 ha) of county-owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

All but 1 ac (<1 ha) of Unit 9 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 19 ac (8 ha), or 95 percent, of Unit 9 is enrolled in the NFC program.

Unit 10: Tamiami Pineland Complex Addition

Unit 10 consists of approximately 21 ac (8 ha) of State-owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of

the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned or managed by Miami-Dade County, including this unit. The actions help improve habitat that could support the Miami tiger beetle.

All but 2 ac (<1 ha) of Unit 10 overlaps with designated critical habitat for Bartram's scrub-hairstreak butterfly, Carter's small-flowered flax, and Florida brickell-bush. Additionally, approximately 18 ac (7 ha), or 86 percent, of Unit 10 is enrolled in the NFC program.

Unit 11: Pine Shore Pineland Preserve

Unit 11 consists of approximately 8 ac (3 ha) of county-owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in

Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 11 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 7 ac (3 ha), or 86 percent, of Unit 11 is enrolled in the NFC program.

Unit 12: Nixon Smiley Pineland Preserve

Unit 12 consists of approximately 117 ac (47 ha) of county-owned lands in Miami-Dade County. Based on unpublished survey data that documented presence of the Miami tiger beetle (D. Cook 2015, pers. comm.), this unit was occupied at the time of listing and is currently occupied by the Miami tiger beetle. While surveys of this site have been inconsistent in level of effort, timing, and frequency, they have primarily focused on the habitat previously known to be occupied: The open, sandy areas on the western half of the property.

This occupied habitat contains all of the physical or biological features, including pine rockland habitat (of sufficient size) with open or sparsely vegetated sandy areas that allow for thermoregulation, foraging, egg-laying, larval development, species dispersal, and population expansion, and natural or artificial disturbance regimes. The physical or biological features in this unit are protected and actively managed to maintain healthy pine rockland habitat. They may require additional special management considerations or protection to address threats of habitat loss and fragmentation, inadequate fire management, vegetation encroachment, and sea level rise. In some cases, there are management actions being implemented to reduce some of these threats, and continued coordination with our partners and landowners are

ongoing to implement needed actions. This unit is occupied by one of two extant populations of Miami tiger beetle, contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

All but 2 ac (<1 ha) of Unit 12 overlaps with designated critical habitat for Bartram's scrub-hairstreak butterfly, Carter's small-flowered flax, and Florida brickell-bush. Additionally, approximately 112 ac (47 ha), or 96 percent, of Unit 12 is enrolled in the NFC program.

Unit 13: Boystown Pineland Preserve

Unit 13 consists of approximately 81 ac (33 ha) of lands owned by the State (76 ac (31 ha)) and county (5 ac (2 ha)) in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species

control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

All but 3 ac (1 ha) of Unit 13 overlaps with designated critical habitat for Bartram's scrub-hairstreak butterfly, Carter's small-flowered flax, and Florida brickell-bush. Additionally, approximately 62 ac (25 ha), or 77 percent, of Unit 13 is enrolled in the NFC program.

Unit 14: Richmond Pine Rocklands

Unit 14 consists of approximately 1,347 ac (545 ha) in Miami-Dade County. Landownership in this unit is split among Federal (488 ac (197 ha)), county (841 ac (340 ha)), and private (18 ac (7 ha)). We excluded approximately 109.3 ac (44.2 ha) from the unit (a decrease of approximately 109.3 ac [44.2 ha] from the proposed rule) (see *Coral Reef Commons Habitat Conservation Plan*, below). Based on survey data that documented presence of the Miami tiger beetle, this unit is currently occupied by the Miami tiger beetle, which has been documented from four contiguous parcels within the Richmond Pine Rocklands: Zoo Miami Pine Rockland Preserve (Zoo Miami), Larry and Penny Thompson Park, U.S. Coast Guard, and University of Miami's CSTARS. Miami tiger beetles within the four contiguous occupied parcels in the Richmond population are within close proximity to each other, with connecting patches of habitat with few or no barriers between parcels. Given the contiguous habitat with few barriers to dispersal, frequent adult movement among individuals is likely, and the occupied Richmond parcels likely represent a single population (Knisley 2015a, p. 10).

The unit also includes areas of pine rockland habitat containing all of the physical or biological features essential to the conservation of the species that are adjacent to sites with documented occurrences. The complex, including these parcels, contains all of the essential features (physical or biological features)—including pine rockland habitat (of sufficient size) with open or sparsely vegetated sandy areas that allow for thermoregulation, foraging, egg-laying, larval development, species dispersal, and population expansion, and natural or artificial disturbance regimes. The complex as a whole protects the occupied sites within the Richmond population, provides dispersal corridors for the Richmond population, provides potential habitat for population expansion, and supports prey-base populations. Being only one of two sites known to be currently

occupied by the Miami tiger beetle, this complex is important to the Miami tiger beetle to ensure redundancy for the species and to contribute to the species' viability.

The physical or biological features in this unit may require additional special management considerations or protection to address threats of habitat loss and fragmentation, inadequate fire management, vegetation encroachment, and sea level rise. In some cases, these threats are being addressed or coordinated with our partners and landowners to implement needed actions.

Approximately 678 ac (274 ha), or 50 percent, of Unit 14 is enrolled in the NFC program. In addition, of the approximately 1,347 ac (545 ha) of critical habitat designated for the Miami tiger beetle in Unit 14, about 830 ac (336 ha) overlap with designated critical habitat for Bartram's scrub-hairstreak butterfly, Florida leafwing butterfly, Carter's small-flowered flax, and Florida brickell-bush. Therefore, approximately 517 ac (209 ha) of designated critical habitat in Unit 14 is unique to the Miami tiger beetle.

Unit 15: Calderon Pineland

Unit 15 consists of approximately 14 ac (6 ha) of county-owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Natural Areas Management Division of Miami-Dade County Parks, Recreation and Open Spaces Department conducts nonnative species control, prescribed fire, and mechanical vegetation treatments on lands owned by Miami-Dade County. The actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 15 overlaps with designated critical habitat for Florida brickell-bush. Additionally, approximately 9 ac (4 ha), or 64 percent, of Unit 15 is enrolled in the NFC program.

Unit 16: Porter Pineland Preserve

Unit 16 consists of approximately 7 ac (3 ha) of privately owned lands in Miami-Dade County. The unit is within the historical range of the Miami tiger beetle (*i.e.*, pine rockland habitat within the Northern Biscayne Pinelands of the Miami Rock Ridge), although we are not aware of any records of historical occupancy of the unit. This unit includes all the physical or biological features essential to the conservation of the species and is protected and actively managed to maintain healthy pine rockland habitat.

This unit is currently unoccupied by the Miami tiger beetle but is essential for the conservation of the species because it serves to protect habitat needed to recover the species, reestablish wild populations within the historical range of the species, and maintain populations throughout the historical distribution of the species in Miami-Dade County. It also provides habitat for recovery in the case of stochastic events, should the Miami tiger beetle be extirpated from one of its current locations. Given this unit contains essential habitat features (all of the physical or biological features), is protected and actively managed, and has an appropriate spatial distribution falling within the range of the species, we are reasonably certain that the lands and habitat within this unit will contribute to the conservation of the Miami tiger beetle.

The Audubon Society, with the help of volunteers and other conservation groups, conduct nonnative species control, prescribed fire, and mechanical vegetation treatments on this privately owned parcel. The actions help improve habitat that could support the Miami tiger beetle.

The entirety of Unit 16 overlaps with designated critical habitat for Carter's small-flowered flax and Florida brickell-bush. Additionally, approximately 6 ac (2 ha), or 86 percent, of Unit 16 is enrolled in the NFC program.

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.

We published a final rule revising the definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed 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 (USACE) 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, authorized, or carried out by a Federal agency—do not require section 7 consultation.

Compliance with the requirements of section 7(a)(2) is documented 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 Service 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 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, if subsequent to the previous consultation: (a) if the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.

In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but Congress also enacted some exceptions in 2018 to the requirement to reinitiate consultation on certain land management plans on the basis of a new species listing or new designation of critical habitat that may be affected by the subject Federal action. See 2018 Consolidated Appropriations Act, Public Law 115–141, Div. O, 132 Stat. 1066 and 1067 (2018).

Application of the "Adverse Modification" Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the

designated critical habitat in a way that appreciably diminishes the value of the critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that the Service may, during a consultation under section 7(a)(2) of the Act, consider likely to destroy or adversely modify critical habitat include, but are not limited to:

(1) Actions that would significantly alter the hydrology or substrate, such as ditching or filling. Such activities may include, but are not limited to, road construction or maintenance, and residential, commercial, or recreational development.

(2) Actions that would significantly alter vegetation structure or composition. Such activities may include, but are not limited to, preventing the ability to conduct prescribed burns, residential and commercial development, and recreational facilities and trails.

(3) Actions that would introduce chemical pesticides into the pine rockland ecosystem in a manner that impacts the Miami tiger beetle. Such activities may include, but are not limited to, mosquito control and agricultural pesticide applications.

(4) Actions that would introduce nonnative species that would significantly alter vegetation structure or composition or the life history of the Miami tiger beetle. Such activities may include, but are not limited to, release of parasitic or predator species (flies or wasps) for use in agriculture-based biological control programs.

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 geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to an integrated natural resources management plan (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 designated. There are no DoD lands with a completed INRMP within the final critical habitat designation.

Further, we are not aware of any DoD lands subject to an INRMP within the boundaries of the critical habitat designation. We have determined that the U.S. Army Corps of Engineers (USACE), a branch of the DoD, retains ownership over a 121-ac (49-ha) parcel in Unit 14 of the designation of critical habitat; of this parcel, 85 ac (34 ha) are forested but not managed for preservation of natural resources. These USACE lands are not considered a military installation under the Sikes Act subject to an INRMP, so they do not meet the standards of section 4(a)(3)(B)(i) of the Act. As a result, we are not exempting any lands from this designation of critical habitat for the Miami tiger beetle pursuant to 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 based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the 2016 Policy (81 FR 7226; February 11, 2016)—both of which were developed jointly with the National Marine Fisheries Service. We also refer to a 2008 Department of the Interior Solicitor's opinion entitled, "The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under Section 4(b)(2) of the Endangered Species Act" (M–37016). We explain each decision to exclude areas, as well as decisions not to exclude, to demonstrate that the decision is reasonable.

The Secretary may exclude any particular area if she determines that the benefits of such exclusion outweigh the benefits of including 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 the determination to exclude a particular area, 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.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive due to the protection from destruction of adverse modification as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. In the case of the Miami tiger beetle, the benefits of critical habitat include public awareness of the presence of beetle and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for the species due to the protection from destruction or adverse modification of critical habitat.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation or in the continuation, strengthening, or encouragement of partnerships. Additionally, continued implementation of an ongoing management plan that provides equal to or more conservation than a critical habitat designation would reduce the benefits of including that specific area in the critical habitat designation.

We evaluate the existence of a conservation plan when considering the benefits of inclusion. We consider a variety of factors, including, but not limited to, whether the plan is finalized; how it provides for the conservation of the essential physical or biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction,

we will not exclude it from the designation.

Exclusions Based on Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis which, together with our narrative and interpretation of effects, we consider our draft economic analysis (DEA) of the critical habitat designation and related factors (IEc 2022 entire). The DEA was made available for public review from September 7, 2021, through December 23, 2021 (see 86 FR 49945, September 7, 2021, and 86 FR 61745, November 8, 2021). The DEA addressed probable economic impacts of critical habitat designation for the Miami tiger beetle. 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. Information relevant to the probable incremental economic impacts of critical habitat designation for the Miami tiger beetle is summarized below and available in the screening analysis (IEc 2022, entire), available at <https://www.regulations.gov>.

In our evaluation of the probable incremental economic impacts that may result from the designation of critical habitat for the Miami tiger beetle, first we identified, in the IEM dated April 28, 2021, probable incremental economic impacts associated with the following categories of activities: (1) Federal lands management (U.S. Coast Guard, USACE, Federal Bureau of Prisons (FBP), and National Oceanic and Atmospheric Administration (NOAA)); (2) roadway and bridge construction; (3) agriculture; (4) dredging; (5) storage and distribution of chemical pollutants; (6) commercial or residential development; and (7) recreation (including construction of recreation infrastructure). We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the Miami tiger beetle is present, Federal agencies already are required to consult with the

Service under section 7 of the Act on activities they fund, permit, or implement that may affect the species. With critical habitat for the Miami tiger beetle being finalized, our consultations will include an evaluation of measures to avoid the destruction or adverse modification of critical habitat.

In our IEM, we attempted to clarify the distinction between the effects that will result from the species being listed and those attributable to the critical habitat designation (*i.e.*, difference between the jeopardy and adverse modification standards) for the Miami tiger beetle's critical habitat. Because the designation of critical habitat for the Miami tiger beetle is being designated several years following the listing of the species, data, such as from consultation history, is available to help us discern which conservation efforts are attributable to the species being listed and those which will result solely from the designation of critical habitat. The following specific circumstances also help to inform our evaluation: (1) The essential physical or biological features identified for critical habitat are the same features essential for the life requisites of the species, and (2) any actions that would result in sufficient harm to constitute jeopardy to the Miami tiger beetle would also likely adversely affect the essential physical or biological features of critical habitat. The IEM outlines our rationale concerning this limited distinction between protections or economic impacts associated with listing and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this designation of critical habitat.

The critical habitat designation for the Miami tiger beetle totals approximately 1,869 ac (756 ha) in 16 units in Miami-Dade County, Florida. Two of the 16 units are currently occupied by the Miami tiger beetle; the remaining 14 units are within the beetle's historical range but were not occupied at the time the species was listed in 2016 and are not known to be currently occupied. As previously stated, the 14 unoccupied critical habitat units encompass approximately 405 ac (164 ha) or 22 percent of critical habitat for the Miami tiger beetle, of which only 16 ac (7 ha) or 4 percent are not currently designated as critical habitat for other federally listed species. Tables 1 through 3, above, set forth specific information concerning each unit, including occupancy, land ownership, and extent of overlap with existing Federal critical habitat.

Because the majority (78 percent) of the area designated is occupied, most actions that may adversely modify designated critical habitat may also adversely affect the species, and it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the Miami tiger beetle or minimize any take associated with the Federal action. Therefore, only administrative costs are expected in approximately 78 percent of the critical habitat designation. While the analysis for adverse modification of critical habitat will require time and resources by both the Federal action agency and the Service, it is believed that, in most circumstances, these costs would predominantly be administrative in nature and would not be significant.

The remaining designated area is unoccupied, but most (96 percent of the unoccupied area) of it overlaps with existing designated critical habitat for other pine rockland habitat species, including Carter's small-flowered flax, Florida brickell-bush, Bartram's scrub hairstreak butterfly, and the Florida leafwing butterfly. As a result, consultations for other listed species and critical habitats are likely to have already resulted in protections absent the critical habitat designation for the Miami tiger beetle, and recommendations for those species are anticipated to be sufficient to protect Miami tiger beetle's critical habitat. Further, any consultation requirements for listed species and resulting costs would be at least partially split among each overlapped species with not one species being the sole source of the entire costs. Accordingly, in these unoccupied areas, any conservation efforts or associated probable impacts would be considered incremental effects attributed to the critical habitat designation.

The probable incremental economic impacts of the Miami tiger beetle critical habitat designation are expected to be limited to additional administrative effort as well as minor costs of conservation efforts resulting from a small number of future section 7 consultations. This is due to two factors: (1) A large portion (78 percent) of critical habitat is considered to be occupied by the species, and incremental economic impacts of critical habitat designation, other than administrative costs, are unlikely; and (2) in areas that are not occupied by the Miami tiger beetle (22 percent of the designation), nearly all is designated

critical habitat for other pine rockland species and this designation is not likely to result in additional or different project modifications from those that would already be anticipated absent this designation. Because of the relatively small size of the critical habitat designation for the Miami tiger beetle, the volume of lands that are State, county, or privately owned, and the substantial amount of land that is already being managed for conservation, the numbers of section 7 consultations expected annually are modest (approximately 2 formal, 12 informal, and 14 technical assistance efforts annually across the designation).

Some potential private property value effects are possible due to public perception of impacts to private lands. The designation of critical habitat may cause some developers or landowners to perceive that private land will be subject to use restrictions or litigation from third parties, resulting in costs. However, approximately 1 percent of the critical habitat designation is privately owned land, leading to nominal incremental costs arising from changes in public perception of lands included in this designation.

Critical habitat designation for the Miami tiger beetle has been determined to not generate costs or benefits exceeding \$100 million in a single year. Therefore, this rule does not meet the threshold for an economically significant rule, with regard to costs, under E.O. 12866. In fact, the total annual incremental costs of critical habitat designation for the Miami tiger beetle are anticipated to be less than \$48,000 per year, and economic benefits are also anticipated to be small.

The Service considered the economic impacts of this critical habitat designation. The Secretary is not exercising her discretion to exclude any areas from this designation of critical habitat for the Miami tiger beetle based on economic impacts.

Exclusions Based on Impacts on National Security and Homeland Security

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (e.g., a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of "critical habitat." Nevertheless, when designating critical habitat under

section 4(b)(2) of the Act, we must consider impacts on national security, including homeland security, on lands or areas not covered by section 4(a)(3)(B)(i). Accordingly, we will always consider for exclusion from the designation areas for which DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns.

DHS Land Parcel

We have determined that some lands within Unit 14 of the designation of critical habitat for the Miami tiger beetle are owned, managed, or used by the U.S. Coast Guard, which is part of the DHS. The U.S. Coast Guard property is separated into two main areas: the Communication Station (COMMSTA) Miami and the Civil Engineering Unit (CEU). The COMMSTA houses transmitting and receiving antennas. The CEU plans and executes projects at regional shore facilities, such as construction and post-disaster assessments.

The U.S. Coast Guard parcel contains approximately 100 ac (40 ha) of standing pine rocklands. The remainder of the site, outside of the developed areas, is made up of scraped pine rocklands that are mowed three to four times per year for maintenance of a communications antenna field. While disturbed, this scraped area maintains sand substrate and many native pine rockland species, including documented occurrences of the Miami tiger beetle. As of May 2022, the U.S. Coast Guard parcel has a resource management plan that includes management of pine rockland habitats, including vegetation control, prescribed fire, and protection of lands from further development or degradation. In addition, the portions of the standing pine rockland area underwent vegetation thinning through an active recovery grant to the Institute for Regional Conservation. Under this grant, nearly 39 ac (16 ha) of standing pine rocklands underwent invasive vegetation control.

Based on a review of the specific mission of the U.S. Coast Guard facility in conjunction with the measures and efforts set forth in the draft management plan to preserve pine rockland habitat and protect sensitive and listed species, we have made a determination that it is unlikely that the designation of critical habitat would negatively impact the facility or its operations. As a result, we do not anticipate any impact on national security.

DoD Land Parcel

We have determined that USACE, a branch of the DoD, retains ownership over a 121-ac (49-ha) parcel in Unit 14 of the designation of critical habitat for the Miami tiger beetle. Over 85 ac (34 ha) of this parcel are forested but not managed for preservation of natural resources. The USACE does not have any specific management plan for the Miami tiger beetle or its habitat covering these lands. Activities conducted on this site are unknown, but we do not anticipate any impact on national security.

Following our process for coordinating with Federal partners, we contacted the DoD and DHS about this designation and shared the IEM for their feedback. Neither agency identified any potential national-security impact, nor requested an exclusion from critical habitat based on potential national-security impacts. Consequently, the Secretary is not exercising her discretion to exclude any areas from this designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether there are permitted conservation plans covering the species in the area such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs), or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at the existence of Tribal conservation plans and partnerships 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.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive due to the protection from destruction or adverse modification as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific

area is likely to result in conservation, or in the continuation, strengthening, or encouragement of partnerships.

In the case of the Miami tiger beetle, the benefits of critical habitat include public awareness of the presence of the Miami tiger beetle and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for the Miami tiger beetle due to protection from destruction or adverse modification of critical habitat. Continued implementation of an ongoing management plan that provides conservation equal to or more than the protections that result from a critical habitat designation would reduce those benefits of including that specific area in the critical habitat designation.

We evaluate the existence of a conservation plan when considering the benefits of inclusion. We consider a variety of factors, including, but not limited to, whether the plan is finalized; how it provides for the conservation of the essential physical or biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

Based on the information provided by entities seeking exclusion, as well as additional public comments we received, and the best scientific data available, we evaluated whether certain lands in proposed Unit 14 are appropriate for exclusion from this final designation under section 4(b)(2) of the Act. If the analysis indicates that the benefits of excluding lands from the final designation outweigh the benefits of designating those lands as critical habitat, then the Secretary may exercise her discretion to exclude the lands from the final designation. In the paragraphs below, we provide a detailed balancing analysis of the areas being excluded under section 4(b)(2) of the Act.

Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act

HCPs for incidental take permits under section 10(a)(1)(B) of the Act provide for partnerships with non-Federal entities to minimize and mitigate impacts to listed species and their habitat. In some cases, HCP permittees agree to do more for the conservation of the species and their habitats on private lands than designation of critical habitat would provide alone. We place great value on the partnerships that are developed during the preparation and implementation of HCPs.

CCAAs and SHAs are voluntary agreements designed to conserve candidate and listed species, respectively, on non-Federal lands. In exchange for actions that contribute to the conservation of species on non-Federal lands, participating property owners are covered by an "enhancement of survival" permit under section 10(a)(1)(A) of the Act, which authorizes incidental take of the covered species that may result from implementation of conservation actions, specific land uses, and, in the case of SHAs, the option to return to a baseline condition under the agreements. The Service also provides enrollees assurances that we will not impose further land-, water-, or resource-use restrictions, or require additional commitments of land, water, or finances, beyond those agreed to in the agreements.

When we undertake a discretionary section 4(b)(2) exclusion analysis, we will always consider areas covered by an approved CCAA/SHA/HCP and generally exclude such areas from a designation of critical habitat if three conditions are met:

(1) The permittee is properly implementing the CCAA/SHA/HCP and is expected to continue to do so for the term of the agreement. A CCAA/SHA/HCP is properly implemented if the permittee is, and has been, fully implementing the commitments and provisions in the CCAA/SHA/HCP, implementing agreement, and permit.

(2) The species for which critical habitat is being designated is a covered species in the CCAA/SHA/HCP, or very similar in its habitat requirements to a covered species. The recognition that the Service extends to such an agreement depends on the degree to which the conservation measures undertaken in the CCAA/SHA/HCP would also protect the habitat features of the similar species.

(3) The CCAA/SHA/HCP specifically addresses the habitat of the species for

which critical habitat is being designated and meets the conservation needs of the species in the planning area.

Coral Reef Commons Habitat Conservation Plan

We have determined that lands associated with the Coral Reef Commons HCP were included within the boundaries of the proposed critical habitat, within Unit 14 (Richmond Pine Rocklands), for the Miami tiger beetle.

Coral Reef Commons is a mixed-use community, which consists of 900 apartments, retail stores, restaurants, and parking. In 2017, an HCP and associated permit under section 10 of the Act were developed and issued for the Coral Reef Commons development. As part of the HCP and permit, an approximately 53-ac (21-ha) onsite preserve (included in the area for proposed critical habitat designation) was established under a conservation encumbrance that will be managed in perpetuity for pine rockland habitat and sensitive and listed species, including the Miami tiger beetle. An additional approximately 57 ac (23 ha) of the CSTARS site is an offsite mitigation area for Coral Reef Commons. Both the onsite preserve and the offsite mitigation area are being managed to maintain healthy pine rockland habitat using invasive, exotic plant management, mechanical treatment, and prescribed fire, addressing both the habitat and conservation needs of the species. Since initiating the Coral Reef Commons HCP, pine rockland restoration efforts have been conducted within all of the management units in both the onsite preserve and the offsite mitigation area. A second round of prescribed fire began in February 2021. Currently, the onsite preserve meets or exceeds the success criteria described for proper implementation of the HCP.

Critical habitat within Unit 14 that is associated with the Coral Reef Commons HCP is limited to the onsite preserve and offsite mitigation area. Based on our review of the HCP and critical habitat for the Miami tiger beetle, we do not anticipate requesting any additional conservation measures for the species beyond those that are currently in place. The Coral Reef Commons HCP covers the Miami tiger beetle, addresses the specific habitat of the species and meets the conservation needs of the species, and is currently being implemented properly.

Benefits of Inclusion

The primary benefit of including the onsite preserve and offsite mitigation area associated with the Coral Reef

Commons HCP is the potential additional regulatory oversight to ensure that the preserve and mitigation area are being protected and managed according to the provisions and measures set forth in the HCP. However, because there is an existing record that the Miami tiger beetle is a covered species under the HCP and because the provisions and measures set forth in the HCP for the management of these areas for pine rockland habitat and the Miami tiger beetle are being fully implemented, the additional benefits of the inclusion of these areas in designated critical habitat is estimated to be small. Further, as a result of the above and the continued productive partnership Coral Reef Commons has demonstrated, we do not anticipate requesting any additional conservation measures for the species and its habitat, thus additionally suggesting that the benefit of the inclusion of these parcels in critical habitat to be minimal.

A secondary benefit to the inclusion of the onsite preserve and offsite mitigation area in critical habitat for the Miami tiger beetle is an educational benefit through ensuring public awareness regarding the importance of these specific parcels to the Miami tiger beetle and its long-term conservation. Since there are only two known extant populations of the Miami tiger beetle, with this area being one, and with an excess of 90 percent of pine rockland habitat in south Florida being lost, the relative importance of these parcels to the species is high due to its long-term conservation and public interest.

Benefits of Exclusion

The Miami tiger beetle is a species included in the Coral Reef Commons HCP. As part of the HCP, the onsite preserve and offsite mitigation area were established to protect and conserve the species and its habitat. The conservation and protective measures established for these parcels as part of the HCP and section 10 permit are being fully implemented. We have determined that given the successful record of implementing the measures for the Miami tiger beetle on these parcels, we would, at this time, not seek any additional measures to protect the species or its habitat beyond those set forth in the HCP and accompanying permit, thus minimizing any additional regulatory benefit realized by their inclusion. Further, the conservation partnership with the Coral Reef Commons development advocate is well established and could be significantly harmed by the failure to acknowledge the conservation value of the HCP and that the conservation and protective

measures of the HCP and section 10 permit are being fully implemented. Additionally, failure to acknowledge and abide by these agreements would most likely send a chilling effect to other potential conservation partners, which could render conservation efforts in south Florida for the Miami tiger beetle and other listed and at-risk species more difficult and potentially harm species and sensitive habitats.

Benefits of Exclusion Outweigh the Benefits of Inclusion

We have found that on balance, the benefits of excluding the onsite preserve and offsite mitigation area associated with the Coral Reef Commons HCP outweigh the benefits of including the specific parcels in designated critical habitat for the Miami tiger beetle. We have determined that benefits from the preservation of the conservation partnership with Coral Reef Commons development and the continued ongoing conservation measures implemented on these parcels outweigh the potential additional regulatory benefits associated with their inclusion in critical habitat, which would most likely be in the form of regulatory oversight. Additionally, the acknowledgement of the productive cooperative partnership is important for not only this species and situation, but for other existing and future conservation efforts, and to not exclude these lands given that there is a signed HCP that covers the species, provides the necessary conservation measures, and is being fully implemented would have a detrimental effect on existing and future conservation partnerships. Further, while we find that the educational benefits associated with the parcels being in the final designation valuable, we have determined that the inclusion of these areas in the proposal has educated the public as to their importance to the species and will continue to do so. We anticipate minimal further benefit if they were to be included in this final designation. Therefore, we are excluding those specific lands associated with the Coral Reef Commons HCP that are in the onsite preserve and offsite mitigation area from this final designation of critical habitat for the Miami tiger beetle because we find that the benefit of excluding them from designated critical habitat outweighs the benefit of their inclusion.

Exclusion Will Not Result in Extinction of the Species

As discussed above, the conservation measures and provisions set forth in the Coral Reef Commons HCP to manage the onsite preserve and offsite mitigation

area for the Miami tiger beetle and pine rockland habitat are being fully and successfully implemented. There is a record that the project proponent is a cooperating partner in the conservation of the Miami tiger beetle. We have indicated that, at this time, we would not ask for any additional conservation measures for the species and its habitat and have determined that these areas are being fully protected for the Miami tiger beetle. As a result, we do not find that the exclusion of these specific areas from designated critical habitat is a threat to the viability of the Miami tiger beetle. Further, because the Miami tiger beetle is listed as an endangered species and these areas are occupied, if at any time the parcels are no longer being managed appropriately, the species continues to be protected by the

provisions of the Act and the permit for the HCP can be revisited. We conclude that the exclusion of these specific parcels from designated critical habitat will not result in the extinction of the Miami tiger beetle.

We have further determined that there are no additional HCPs or other management plans for the Miami tiger beetle within the critical habitat designation.

Tribal Lands

Several Executive Orders, Secretary’s Orders, and policies concern working with Tribes. These guidance documents generally confirm our trust responsibilities to Tribes, recognize that Tribes have sovereign authority to control Tribal lands, emphasize the importance of developing partnerships

with Tribal governments, and direct the Service to consult with Tribes on a government-to-government basis. However, we have not identified any Tribal lands associated with this final designation of critical habitat for the Miami tiger beetle.

Summary of Exclusions

As discussed above, based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands in the proposed critical habitat were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act. Table 4, below, shows the areas we are excluding from critical habitat designation for the Miami tiger beetle.

TABLE 4—AREAS EXCLUDED FROM CRITICAL HABITAT DESIGNATION BY CRITICAL HABITAT UNIT.

Unit	Specific area	Areas meeting the definition of critical habitat, in acres (hectares)	Areas excluded from critical habitat, in acres (hectares)
Unit 14—Richmond Pine Rocklands	Coral Reef Commons HCP onsite preserve and offsite mitigation area.	109.3 (44.2)	109.3 (44.2)

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA 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. E.O. 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 this designation 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.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies 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 out 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 would be directly regulated if we adopt the critical habitat designation. There is no requirement under the RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities will be 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.

In summary, we have considered whether this designation will result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that this critical habitat designation will not have a significant economic impact on a substantial number of small business entities. Therefore, 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. In our economic analysis, we did not find that this critical habitat designation will significantly affect energy supplies, distribution, or use. We do not foresee any energy development projects, supply distribution, or use that may affect the critical habitat units for the Miami tiger beetle. Further, in our evaluation of potential economic impacts, we did not find that this critical habitat designation will 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 finding:

(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 the government lands being designated as critical habitat are owned by the Federal Government, including the U.S. Coast Guard (DHS), USACE (DoD), NOAA, and FBP, or they are owned by State or local governments such as the State of Florida and Miami-Dade County. None of these government entities fit the definition of “small governmental jurisdiction.” Therefore, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Miami tiger beetle in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed for this final designation of critical habitat for the Miami tiger beetle, and it concludes that this designation of critical habitat does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 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. 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, this final 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 physical or biological features of the habitat necessary for 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 State and local governments in long-range planning because they 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) of the Act will 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 requirements of 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, this final rule identifies the physical or biological features essential to the conservation of the species. 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 information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) in connection with regulations adopted pursuant to section 4(a) of 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 Secretary’s Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for

healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We determined that there are no Tribal lands that were occupied by the Miami tiger beetle at the time of listing that contain the features essential for conservation of the species, and no Tribal lands unoccupied by the Miami tiger beetle that are essential for the conservation of the species. Therefore, we are not designating critical habitat for the Miami tiger beetle on Tribal lands. As a result, there are no Tribal lands affected by the designation of critical habitat for this species.

References Cited

A complete list of references cited in this rulemaking is available on the internet at <https://www.regulations.gov>.

Authors

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

List of Subjects in 50 CFR Part 17

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

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—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

Authority: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

■ 2. In § 17.11, amend paragraph (h) by revising the entry for “Beetle, Miami tiger” in the List of Endangered and Threatened Wildlife under INSECTS to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
*	*	*	*	*
INSECTS				
*	*	*	*	*
Beetle, Miami tiger	<i>Cicindelidia floridana</i>	Wherever found	E	81 FR 68985, 10/5/2016; 50 CFR 17.95(i). ^{CH}
*	*	*	*	*

■ 3. In § 17.95, amend paragraph (i) by adding an entry for “Miami Tiger Beetle (*Cicindelidia floridana*)” after the entry for “Helotes Mold Beetle (*Batrisodes venyivi*)” to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) *Insects.*

* * * * *

Miami tiger beetle (*Cicindelidia floridana*)

(1) Critical habitat units are depicted for Miami-Dade County, Florida, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of the Miami tiger beetle consist of the following components:

(i) South Florida pine rockland habitat of at least 2.5 acres (1 hectare) in size that is maintained by natural or

prescribed fire or other disturbance regimes; and

(ii) Open sandy areas within or directly adjacent to the south Florida pine rockland habitat described in paragraph (2)(i) of this entry. These areas have little to no vegetation to allow for normal behavior and growth, such as thermoregulation, foraging, egg-laying, and larval development, and to facilitate habitat connectivity.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, other paved areas, and managed lawns) and the land on which they are located existing within the legal boundaries on June 22, 2023.

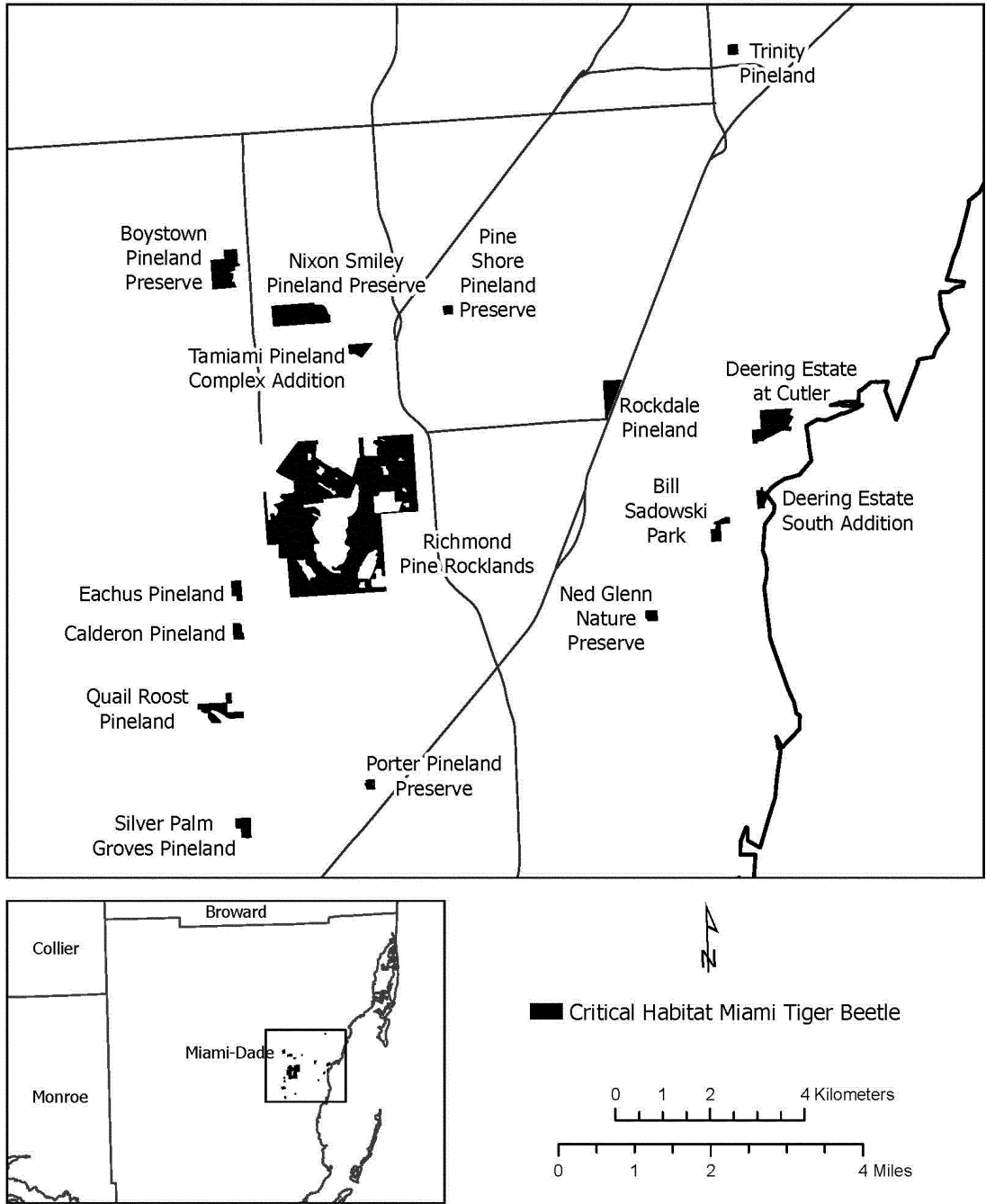
(4) Data layers defining map units were created using Esri ArcGIS mapping software. The projection used was Albers Conical Equal Area (Florida

Geographic Data Library), North American Datum of 1983 (NAD 83) High Accuracy Reference Network (HARN). The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2021-0053, at <https://www.fws.gov/office/florida-ecological-services/library>, 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.

BILLING CODE 4333-15-P

(5) Index map follows:
Figure 1 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (5)

Index of Critical Habitat Units for Miami Tiger Beetle (*Cicindelidia floridana*)



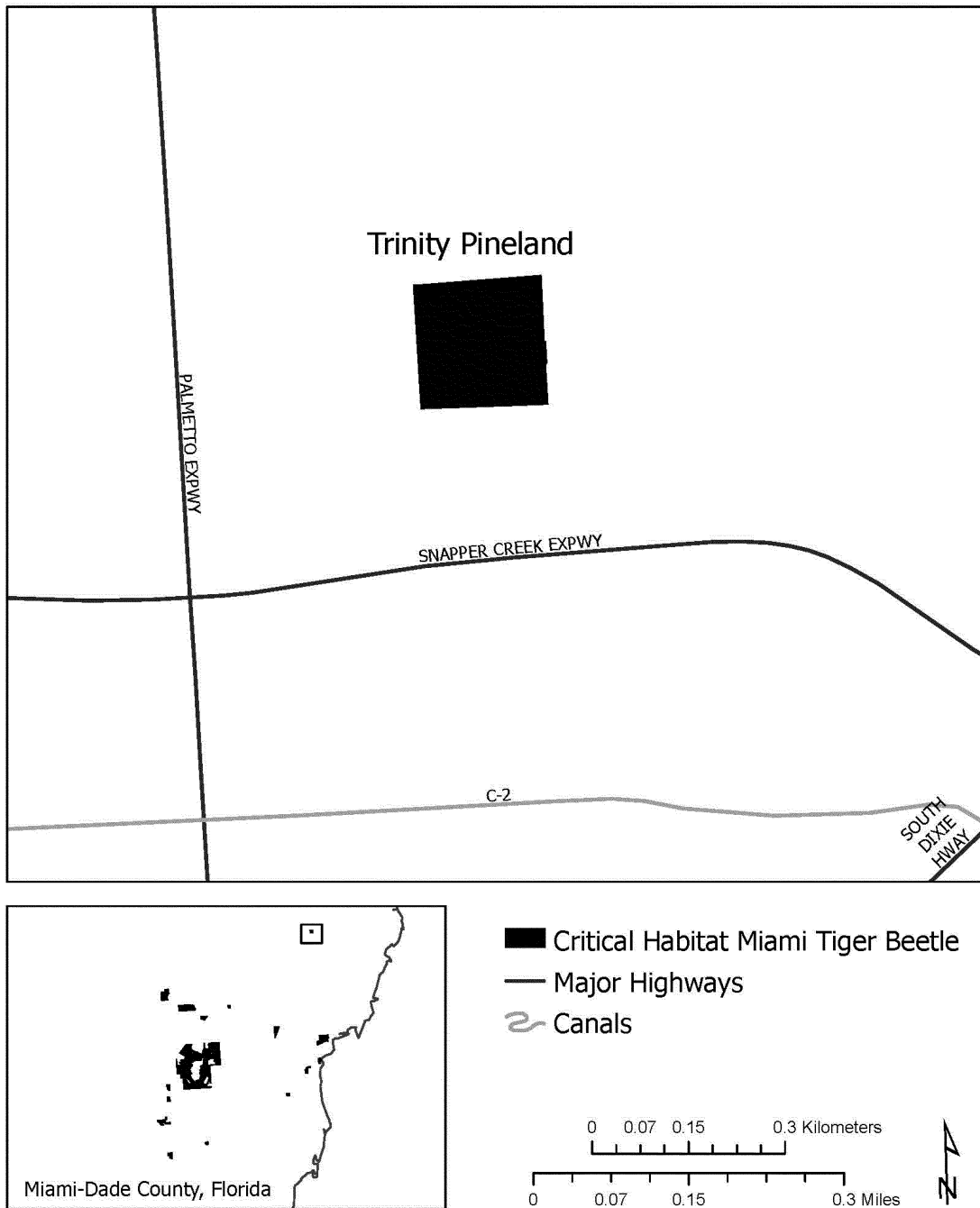
(6) Unit 1: Trinity Pineland, Miami-Dade County, Florida.

(i) Unit 1 consists of approximately 10 acres (ac) (4 hectares (ha)). The unit is

located between SW 72nd Street to the north, SW 80th Street to the south, South Dixie Highway to the east, and Palmetto Expressway to the west.

(ii) Map of Unit 1 follows: Figure 2 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (6)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 1: Trinity Pineland, Miami-Dade County, Florida

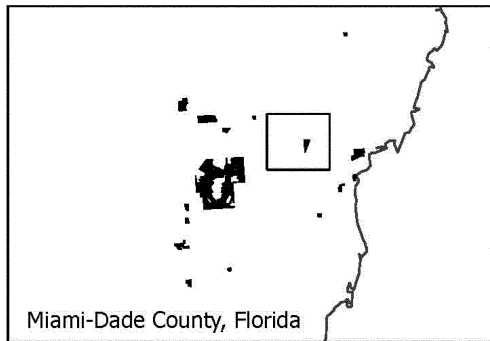
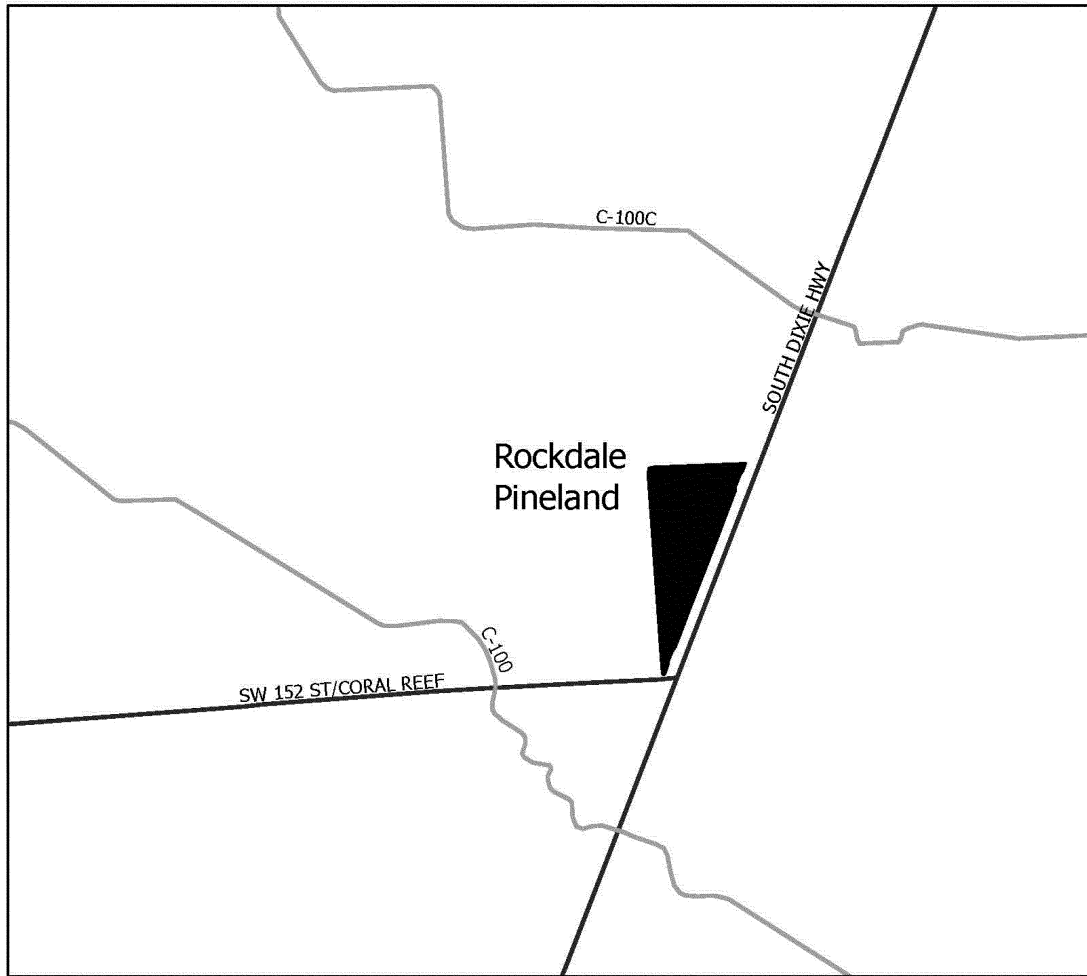


(7) Unit 2: Rockdale Pineland, Miami-Dade County, Florida.
 (i) Unit 2 consists of approximately 39 ac (16 ha). The unit is located directly

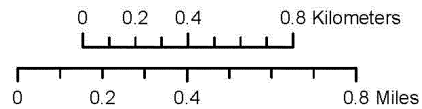
west of South Dixie Highway, between SW 144th Street to the north and SW 152nd Street to the south.
 (ii) Map of Unit 2 follows:

Figure 3 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (7)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
Unit 2: Rockdale Pineland, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 — Major Highways
 ~ Canals

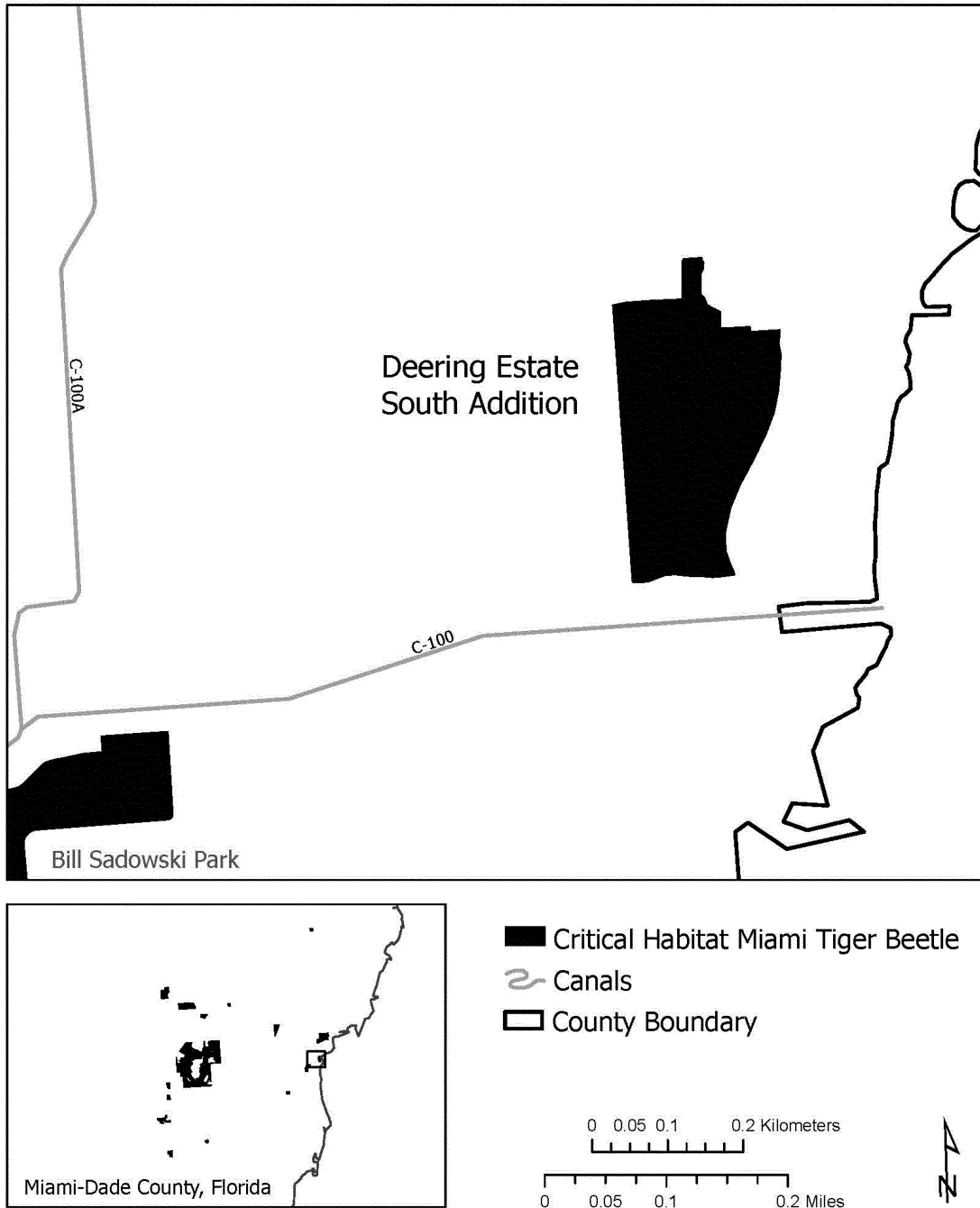


(8) Unit 3: Deering Estate South Addition, Miami-Dade County, Florida.
(i) Unit 3 consists of approximately 16 ac (6 ha). This unit is located just east

of Old Cutler Road and south of 168th Street.
(ii) Map of Unit 3 follows:

Figure 4 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (8)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 3: Deering Estate South Addition, Miami-Dade County, Florida

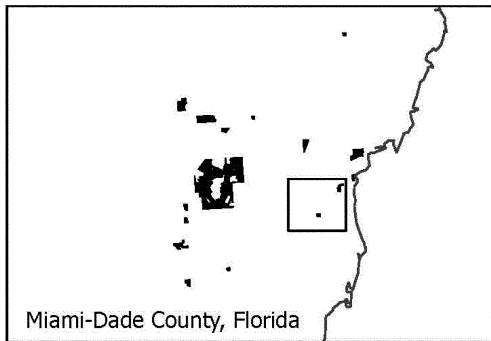
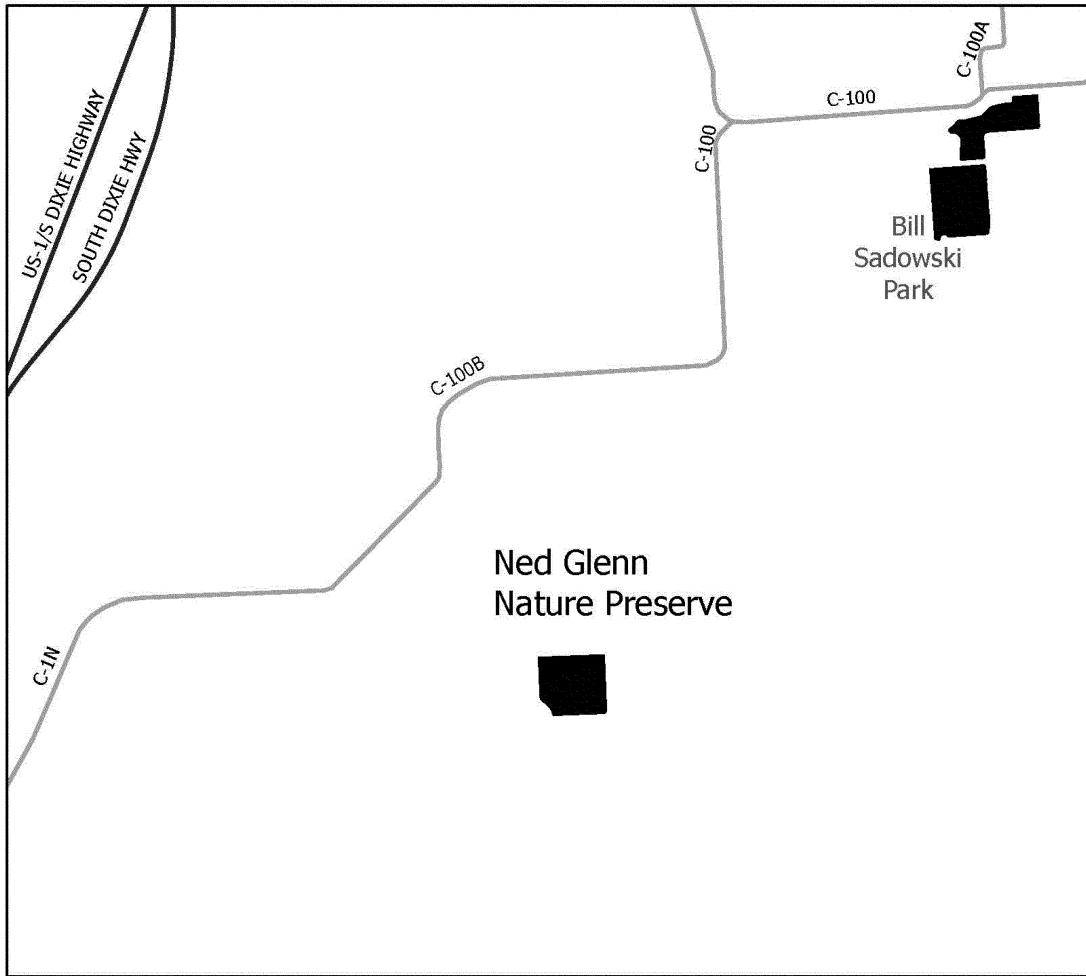


(9) Unit 4: Ned Glenn Nature Preserve, Miami-Dade County, Florida.
 (i) Unit 4 consists of approximately 11 ac (5 ha). The unit is located directly

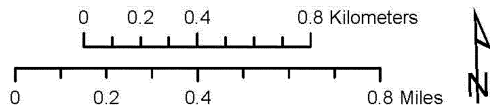
west of SW 87th Avenue, between 184th Street to the north, Old Cutler Road to the south, and Franjo Road to the west.
 (ii) Map of Unit 4 follows:

Figure 5 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (9)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
Unit 4: Ned Glenn Nature Preserve, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 — Major Highways
 Canals

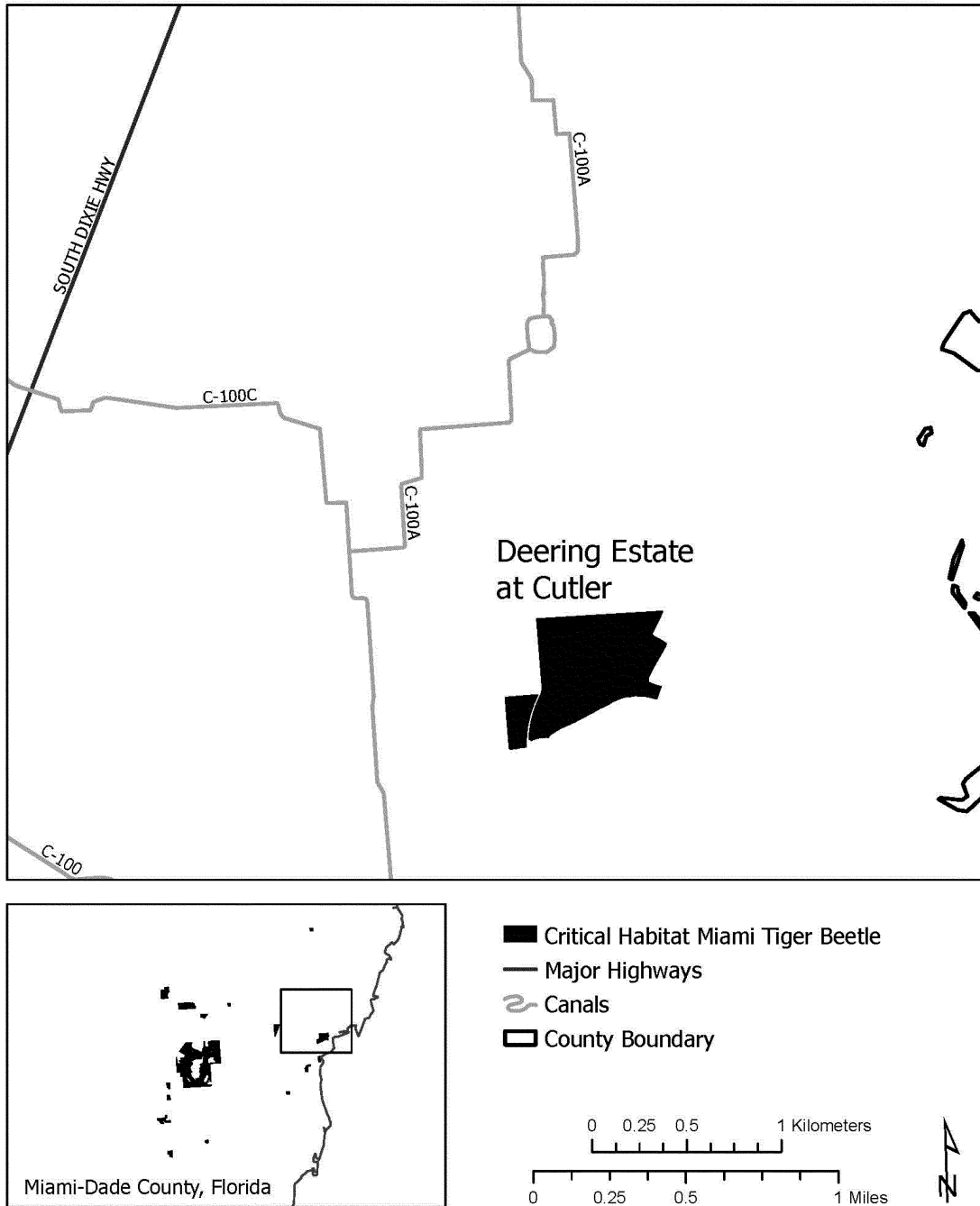


(10) Unit 5: Deering Estate at Cutler, Miami-Dade County, Florida.
 (i) Unit 5 consists of approximately 89 ac (36 ha). The unit is located southeast

of SW 152nd Street and Old Cutler Road.
 (ii) Map of Unit 5 follows:

Figure 6 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (10)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 5: Deering Estate at Cutler, Miami-Dade County, Florida



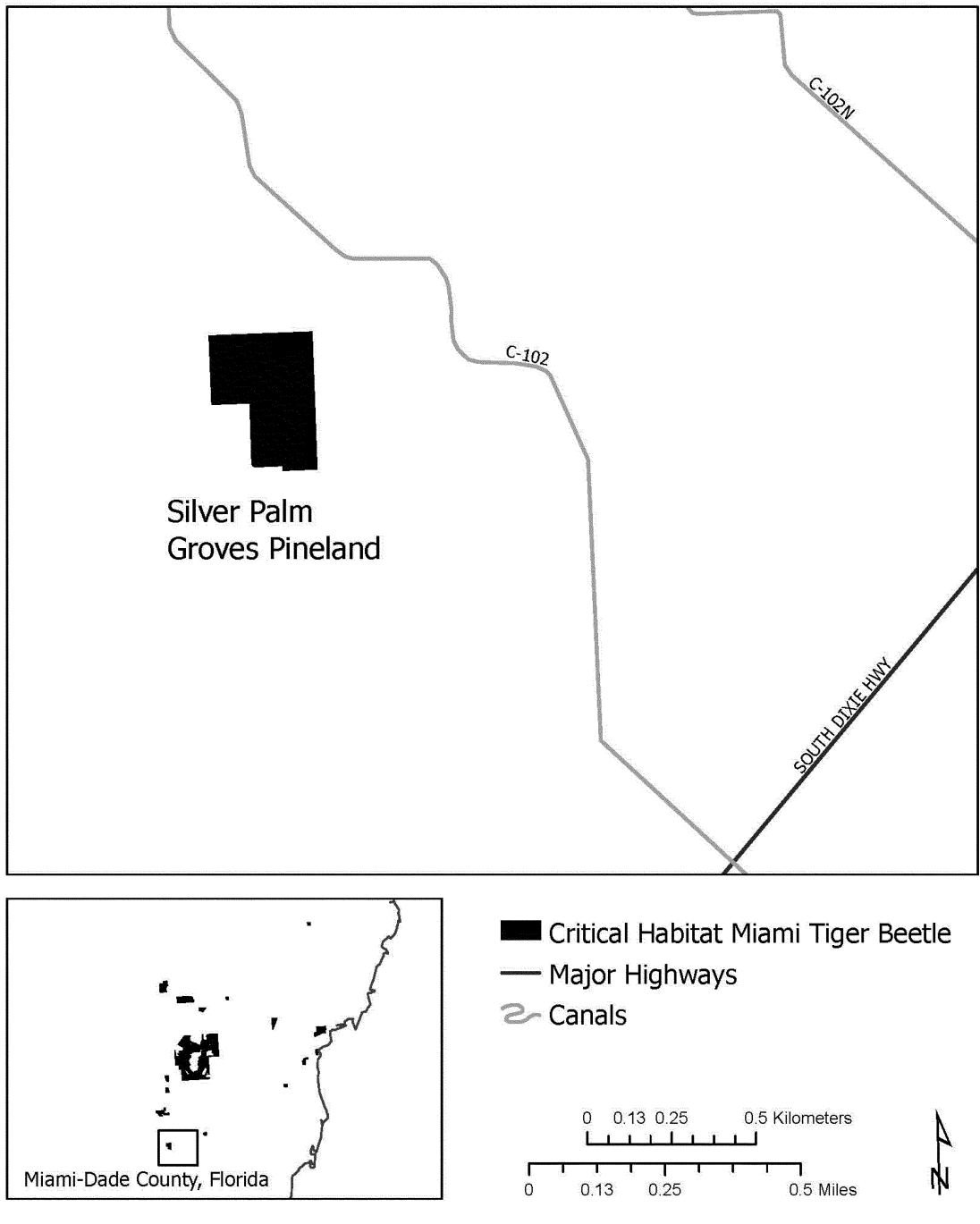
(11) Unit 6: Silver Palm Groves
 Pineland, Miami-Dade County, Florida.

(i) Unit 6 consists of approximately 25
 ac (10 ha). This unit is located just north

of SW 232nd Street, between SW 216th
 Street to the north, South Dixie
 Highway to the east, and SW 147th
 Avenue to the west.

(ii) Map of Unit 6 follows:
 Figure 7 to Miami Tiger Beetle
 (*Cicindelidia floridana*) paragraph
 (11)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 6: Silver Palm Groves Pineland, Miami-Dade County, Florida



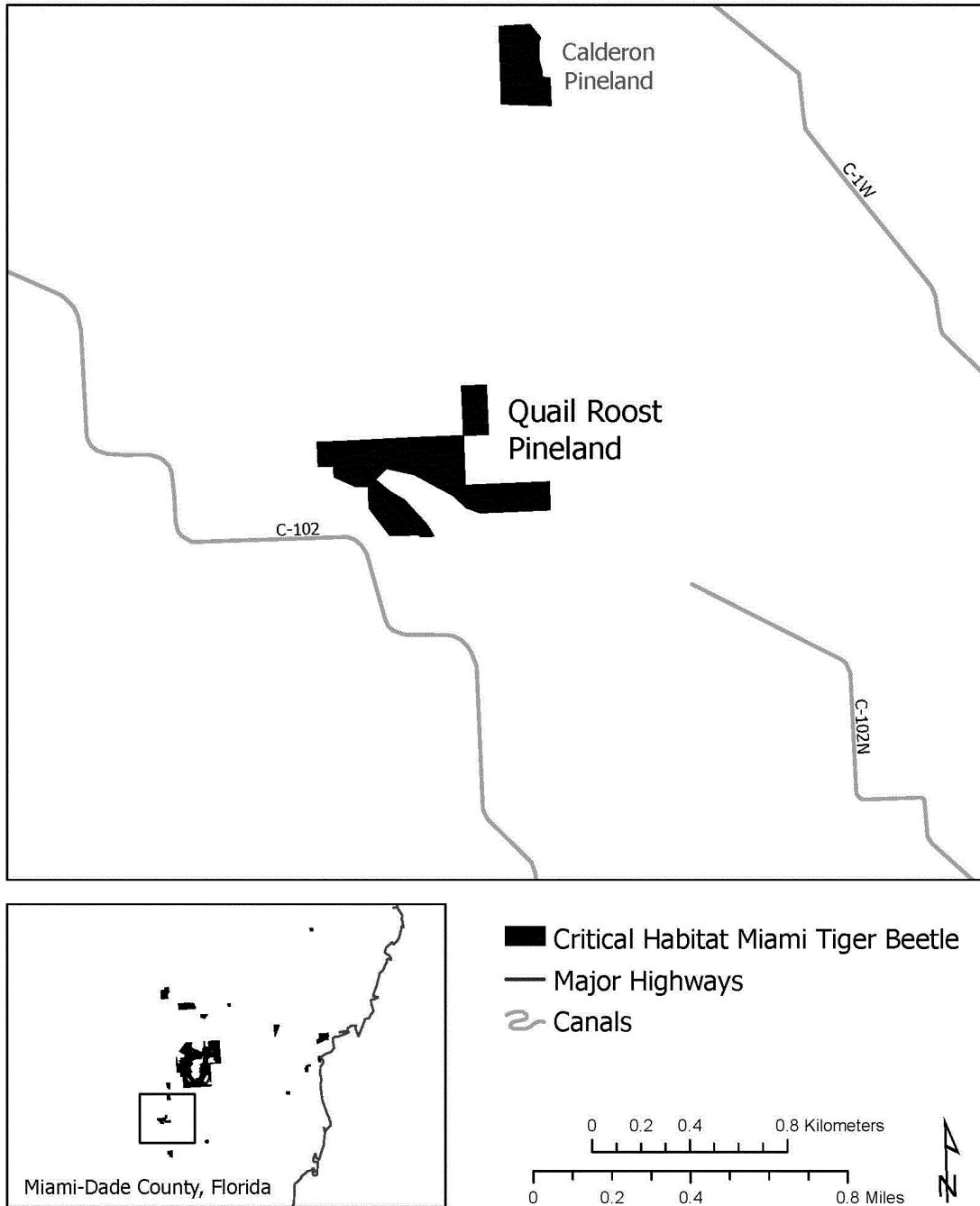
(12) Unit 7: Quail Roost Pineland, Miami-Dade County, Florida.

(i) Unit 7 consists of approximately 48 ac (19 ha). This unit is located between

SW 200th Street to the north, SW 127th Avenue to the east, SW 216th Street to the south, and SW 147th Avenue to the west.

(ii) Map of Unit 7 follows: Figure 8 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (12)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 7: Quail Roost Pineland, Miami-Dade County, Florida



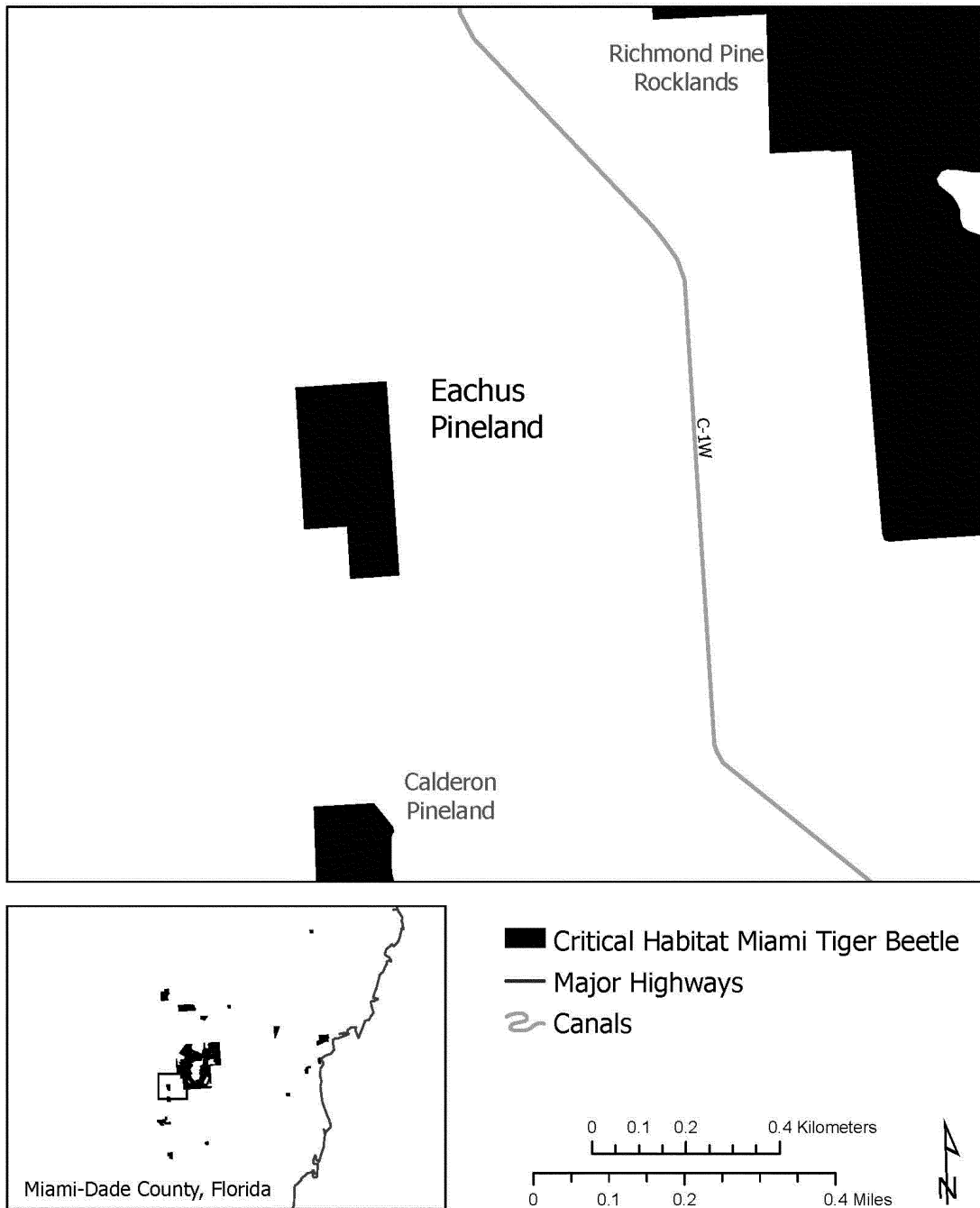
(13) Unit 8: Eachus Pineland, Miami-Dade County, Florida.

(i) Unit 8 consists of approximately 17 ac (7 ha). This unit is located between

SW 180th Street to the north, SW 137th Avenue to the east, SW 184th Street to the south, and SW 142nd Avenue to the east.

(ii) Map of Unit 8 follows: Figure 9 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (13)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelia floridana*)
 Unit 8: Eachus Pineland, Miami-Dade County, Florida



(14) Unit 9: Bill Sadowski Park, Miami-Dade County, Florida.

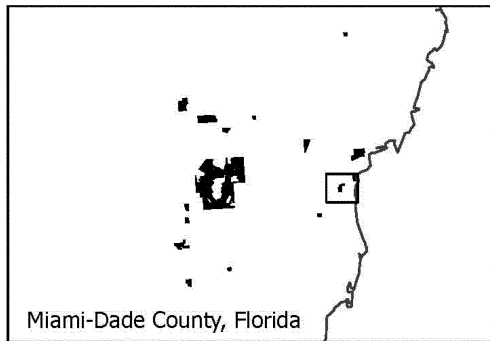
(i) Unit 9 consists of approximately 20 ac (8 ha). This unit is located south of

168th Street, west of Old Cutler Road, north of SW 184th Street, and east of SW 87th Avenue.

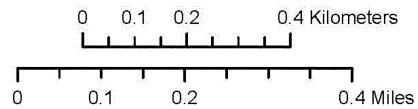
(ii) Map of Unit 9 follows:

Figure 10 to Miami Tiger Beetle (*Cicindelia floridana*) paragraph (14)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 9: Bill Sadowski Park, Miami-Dade County, Florida



- Critical Habitat Miami Tiger Beetle
- Major Highways
- ~ Canals
- County Boundary



(15) Unit 10: Tamiami Pineland Complex Addition, Miami-Dade County, Florida.

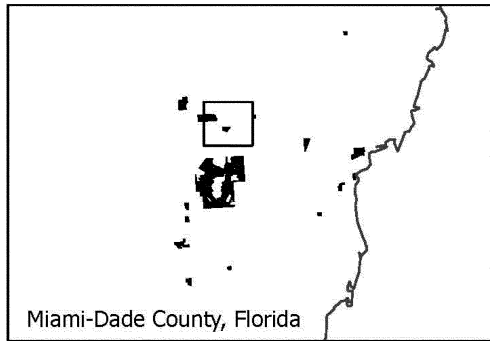
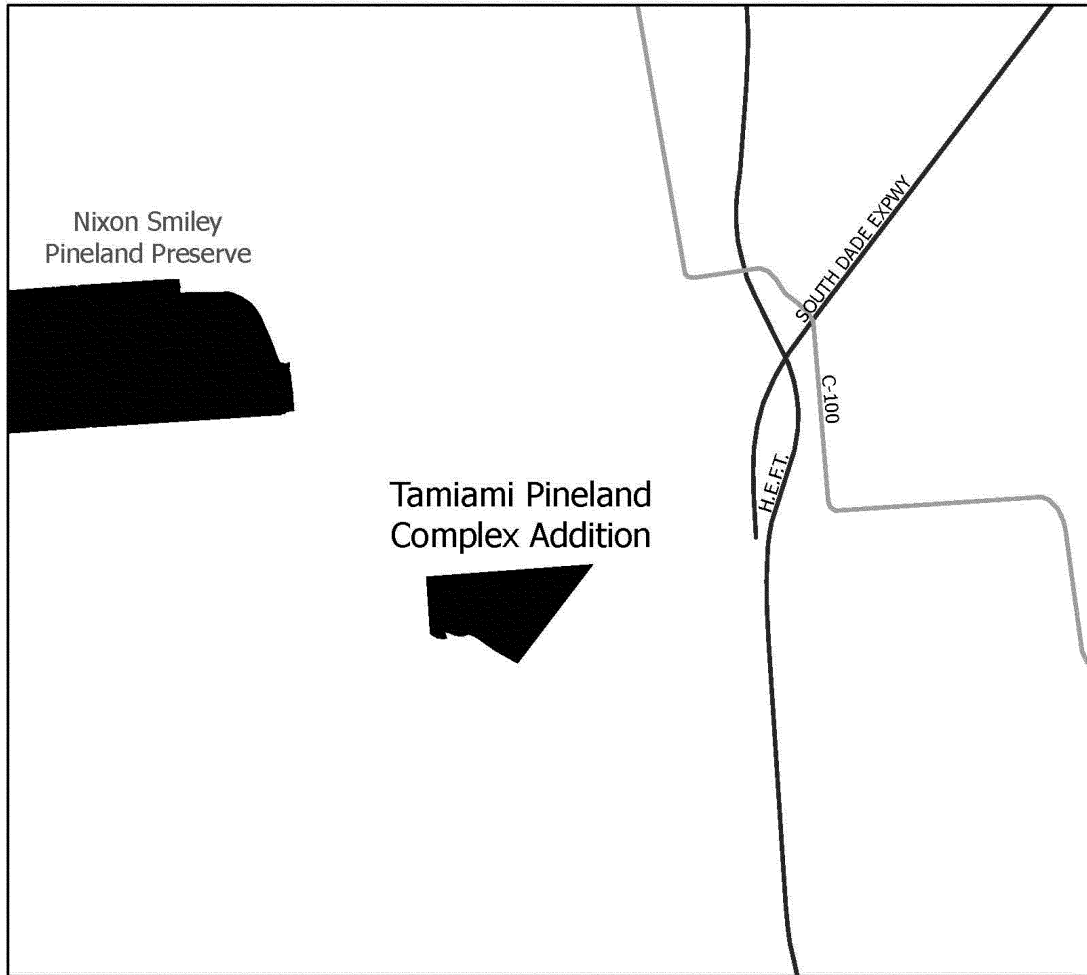
(i) Unit 10 consists of approximately 21 ac (8 ha). This unit is located south

of 128th Street, west of Florida's Turnpike, north of SW 136th Street, and east of SW 127th Avenue.

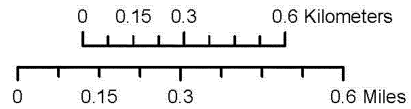
(ii) Map of Unit 10 follows:

Figure 11 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (15)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 10: Tamiami Pineland Complex Addition, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 Major Highways
 Canals

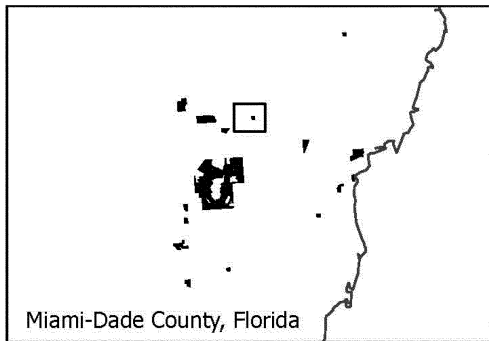
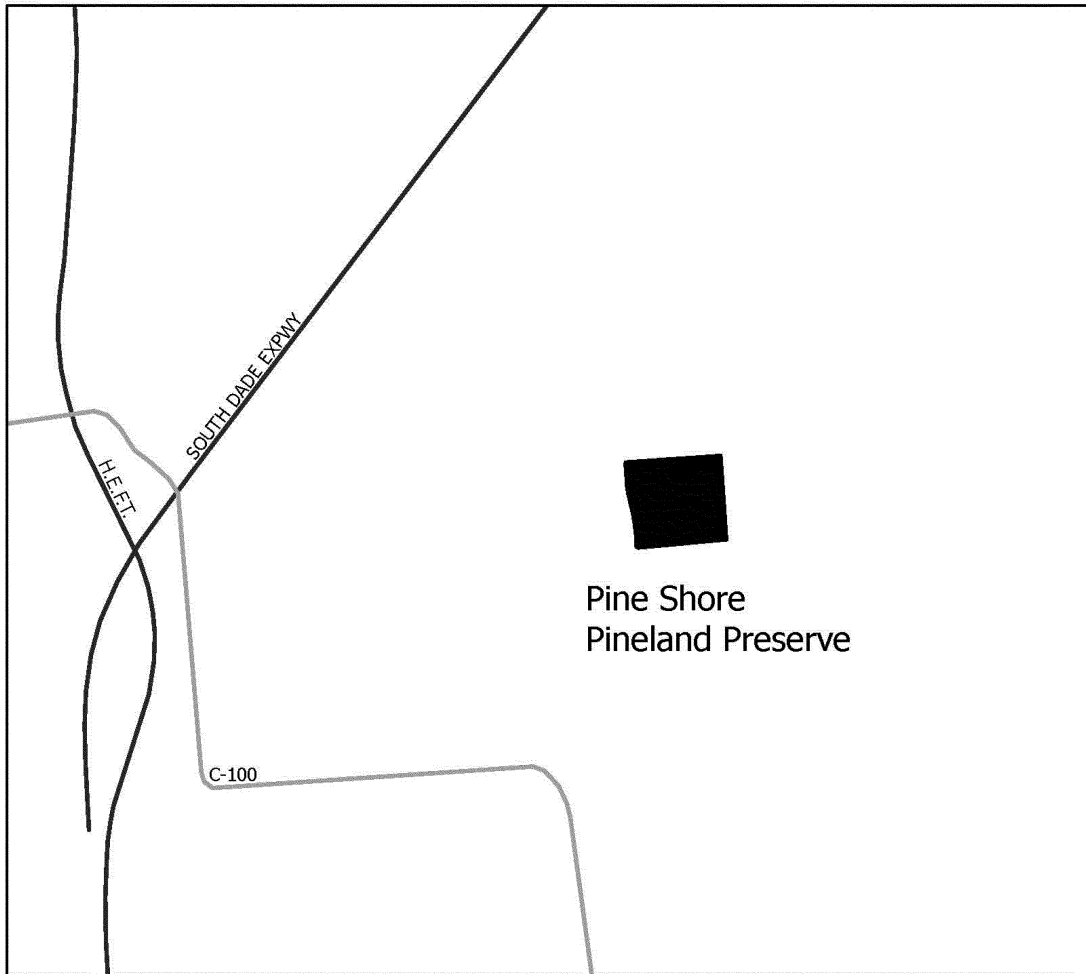


(16) Unit 11: Pine Shore Pineland Preserve, Miami-Dade County, Florida.
 (i) Unit 11 consists of approximately 8 ac (3 ha). This unit is located

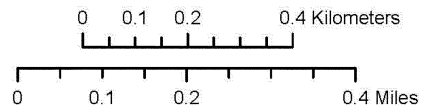
southwest of the Don Shula Expressway, west of SW 107th Avenue, and north of SW 128th Street.
 (ii) Map of Unit 11 follows:

Figure 12 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (16)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 11: Pine Shore Pineland Preserve, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 Major Highways
 Canals



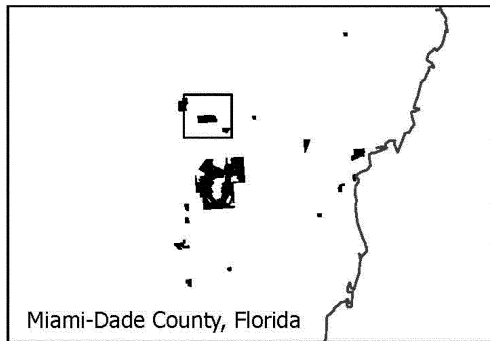
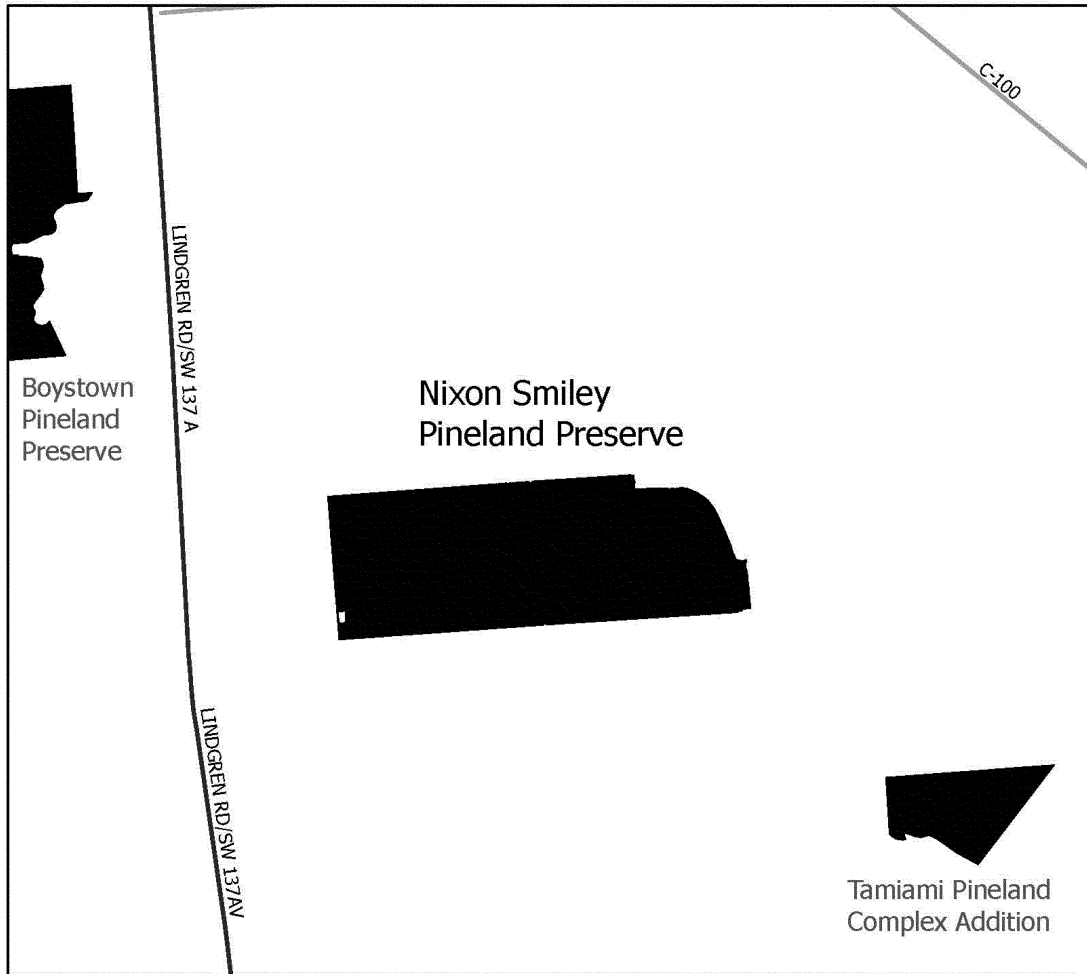
(17) Unit 12: Nixon Smiley Pineland Preserve, Miami-Dade County, Florida.

(i) Unit 12 consists of approximately 117 ac (47 ha). This unit is located

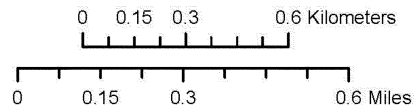
between SW 120th Street to the north, SW 127th Avenue to the east, SW 128th Street to the south, and SW 137th Avenue to the west.

(ii) Map of Unit 12 follows: Figure 13 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (17)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 12: Nixon Smiley Pineland Preserve, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 Major Highways
 Canals



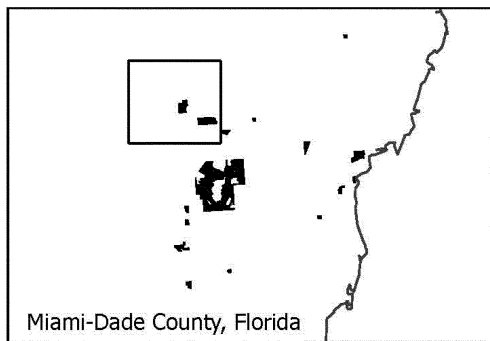
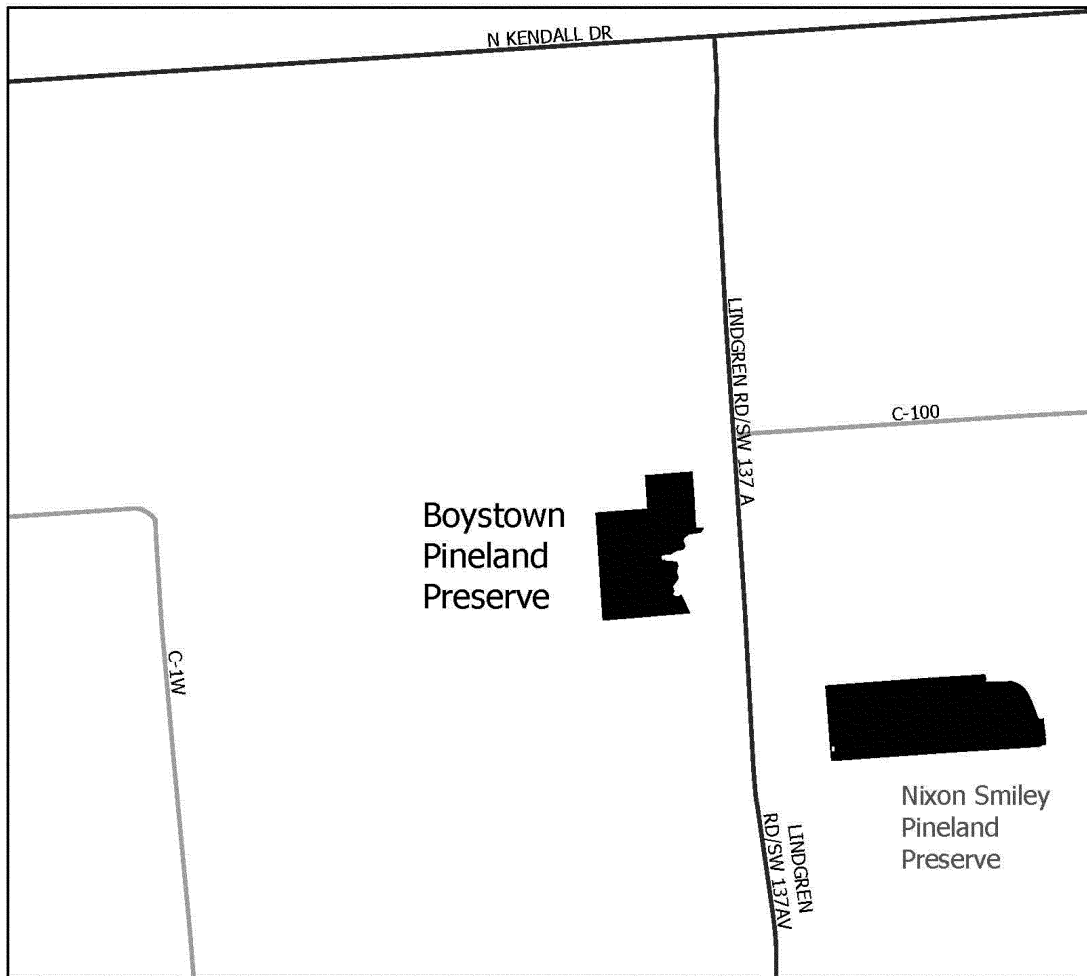
(18) Unit 13: Boystown Pineland Preserve, Miami-Dade County, Florida.

(i) Unit 13 consists of approximately 81 ac (33 ha). This unit is between SW

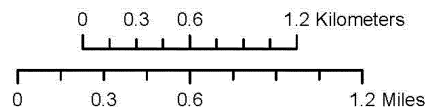
104th Street to the north, SW 137th Avenue to the east, SW 12th Street to the south, and SW 147th Avenue to the west.

(ii) Map of Unit 13 follows: Figure 14 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (18)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 13: Boystown Pineland Preserve, Miami-Dade County, Florida



Critical Habitat Miami Tiger Beetle
 Major Highways
 Canals



(19) Unit 14: Richmond Pine Rocklands, Miami-Dade County, Florida.

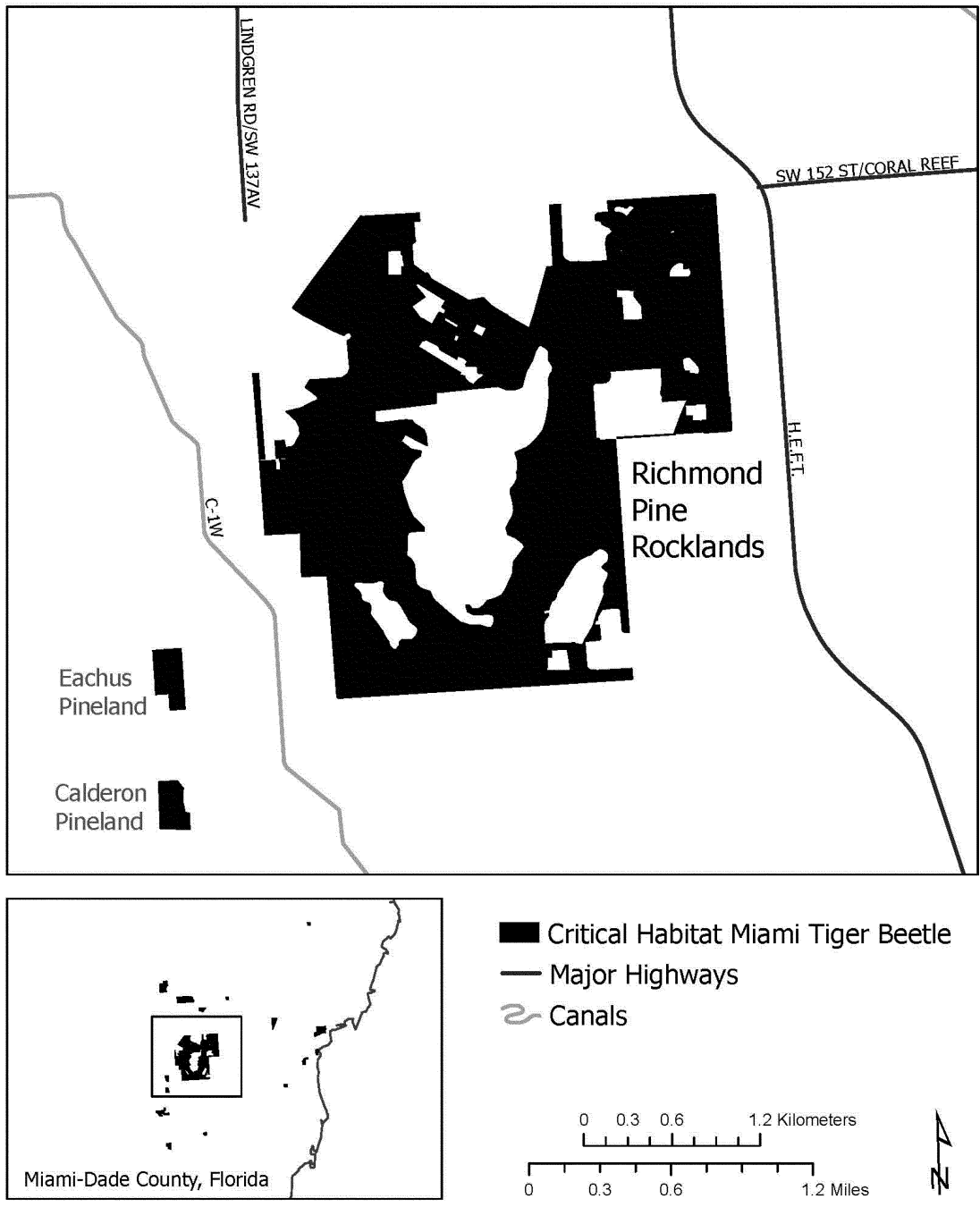
(i) Unit 14 consists of approximately 1,347 ac (545 ha). This unit is located

between SW 152nd Street to the north, SW 117th Avenue to the east, SW 185th Street to the south, and SW 137th Avenue to the west.

(ii) Map of Unit 14 follows:

Figure 15 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (19)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
 Unit 14: Richmond Pine Rocklands, Miami-Dade County, Florida



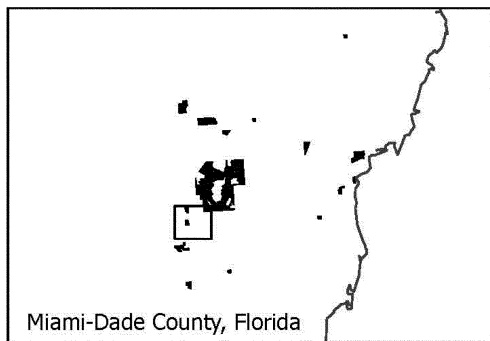
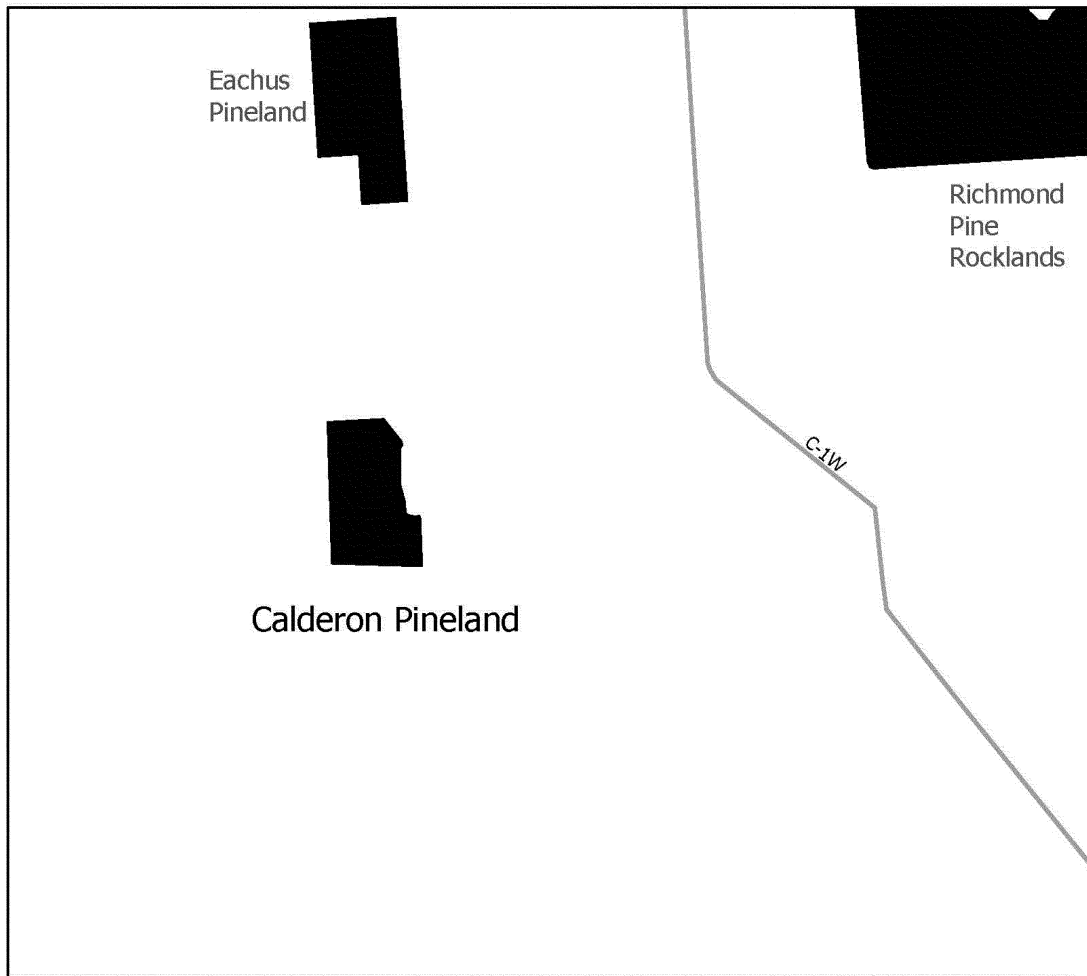
(20) Unit 15: Calderon Pineland, Miami-Dade County, Florida.

(i) Unit 15 consists of approximately 14 ac (6 ha). This unit is located

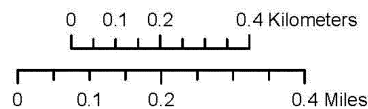
between SW 184th Street to the south, SW 137th Avenue to the east, SW 200th Street to the south, and SW 147th Avenue to the west.

(ii) Map of Unit 15 follows: Figure 16 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (20)(ii)

**Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
Unit 15: Calderon Pineland, Miami-Dade County, Florida**



Critical Habitat Miami Tiger Beetle
 Major Highways
 Canals



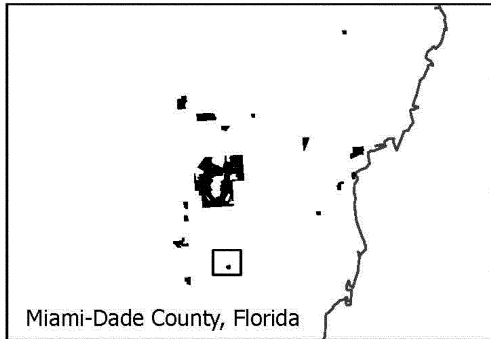
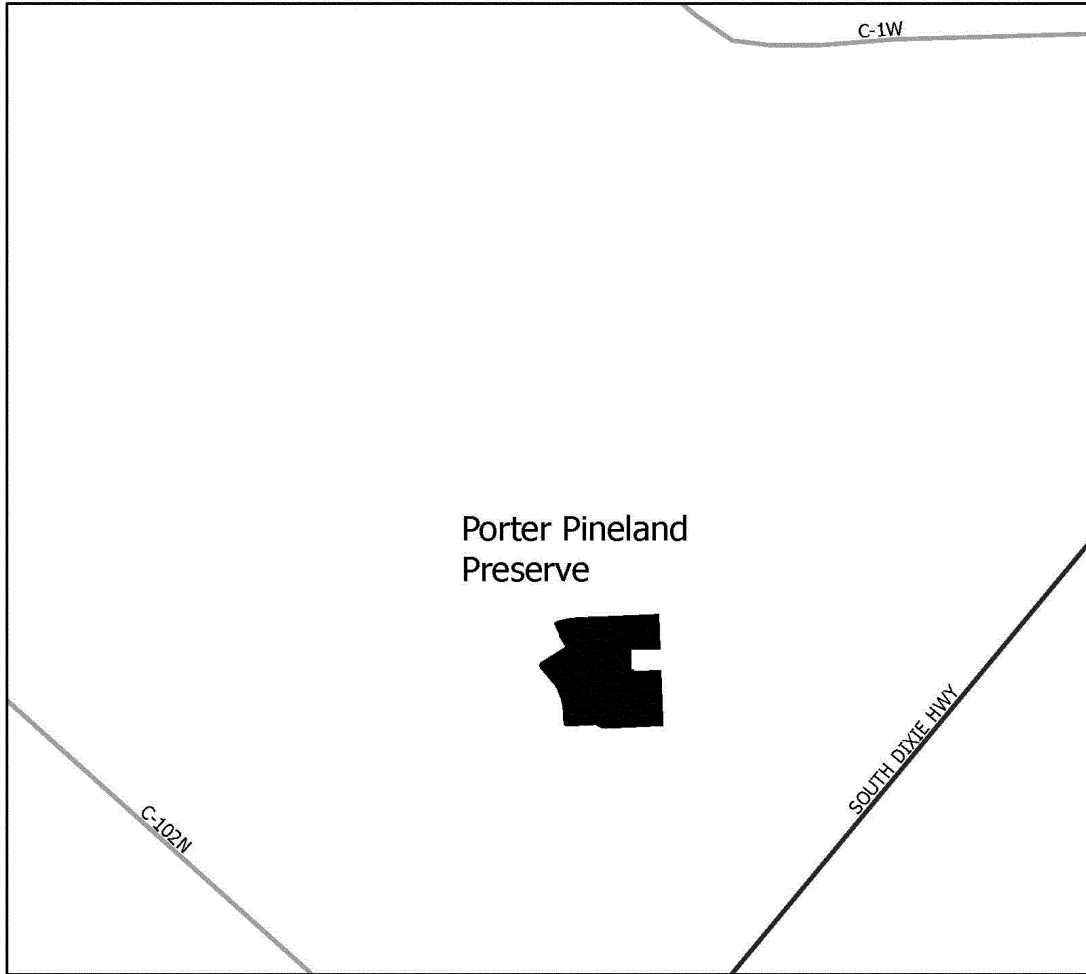
(21) Unit 16: Porter Pineland Preserve, Miami-Dade County, Florida.

(i) Unit 16 consists of approximately 7 ac (3 ha). This unit is located to the

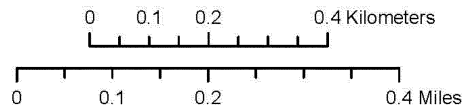
south of SW 216th Street, to the west of South Dixie Highway, to the north of SW 232nd Street, and to the east of SW 147th Avenue.

(ii) Map of Unit 16 follows: Figure 17 to Miami Tiger Beetle (*Cicindelidia floridana*) paragraph (21)(ii)

Critical Habitat Unit for Miami Tiger Beetle (*Cicindelidia floridana*)
Unit 16: Porter Pineland Preserve, Miami-Dade County, Florida



- Critical Habitat Miami Tiger Beetle
- Major Highways
- Canals



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Martha Williams,
Director, U.S. Fish and Wildlife Service.

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BILLING CODE 4333-15-C