DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R1–ES–2023–0017; FF09E21000 FXES1111090FEDR 234]

RIN 1018–BG65

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for 12 Species, and Not Prudent Determination for 2 Species, on Hawai'i Island

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for 12 federally endangered species on the island of Hawai'i under the Endangered Species Act of 1973 (Act), as amended. In total, approximately 122,277 acres (49,484 hectares) on the island of Hawai'i, in the State of Hawaii, fall within the boundaries of the proposed critical habitat designation. We announce a public informational meeting and public hearing on, and the availability of a draft economic analysis for, this proposed designation. In addition, we announce our determination that designation of critical habitat is not prudent for two federally endangered species on the island of Hawai'i under the Act.

DATES:

Comment submission: We will accept comments received or postmarked on or before May 30, 2023. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. eastern time on the closing date.

Public informational meeting and public hearing: On April 20, 2023, we will hold a public informational meeting from 6 to 6:45 p.m. Hawai'i time, followed by a public hearing from 6:45 to 8 p.m. Hawai'i time. See *Public Informational Meeting and Hearing,* under **SUPPLEMENTARY INFORMATION**, below, for more information.

ADDRESSES:

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

(1) *Electronically:* Go to the Federal eRulemaking Portal: *https://www.regulations.gov.* In the Search box, enter FWS–R1–ES–2023–0017, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on ''Comment.''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R1–ES–2023–0017, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on *https://www.regulations.gov.* This generally means that we will post any personal information you provide us (see Information Requested, below, for more information).

Availability of supporting materials: The draft recovery plan, 5-year status reviews, and other materials relating to this proposed critical habitat designation, including 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* under Docket No. FWS–R1–ES–2023–0017.

Public informational meeting and public hearing: We are holding the public informational meeting and public hearing via the Zoom online video platform and via teleconference so that participants can attend remotely. See *Public Informational Meeting and Hearing,* under **SUPPLEMENTARY INFORMATION**, below, for more information.

FOR FURTHER INFORMATION CONTACT: Earl Campbell, Project Leader, U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard Room 3–122, Honolulu, HI 96850; telephone 808–792–9400. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, 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, to the maximum extent prudent and determinable, we must designate critical habitat for any species that we determine to be an endangered or threatened species. Making a critical habitat determination can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

What this document does. This rule proposes to designate approximately 122,277 acres (ac) (49,484 hectares (ha)) as critical habitat for 12 federally endangered species (11 plants, 1 insect) on the island of Hawai'i. We are also making a determination that designation of critical habitat is not prudent for 2 federally endangered species (1 plant, 1 crustacean) on the island of Hawai'i in the State of Hawaii. In this proposed rule, we are exempting from critical habitat designation for one of the plant species 22,730 ac (9,198 ha) of habitat on Department of Defense (DoD) lands that are subject to the Pōhakuloa Training Area (PTA) Integrated Natural Resources Management Plan (INRMP), which provides a conservation benefit to this species. In addition, in this document, we describe exclusions totaling 4,224 ac (1,710 ha) that we are considering making at the final rule stage, based on permitted and non-permitted plans and agreements.

The basis for our action. Under section 4(a)(3) of the Act, if we determine that a species is an endangered or threatened species, the Secretary of the Interior (Secretary) must designate critical habitat to the maximum extent prudent and determinable. 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 essential to the conservation of the species and 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.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies; the Native Hawaiian community; Native American Tribes; the scientific community; industry; or

any other interested parties concerning this proposed rule.

Comments on the Determination That Designation of Critical Habitat Is Not Prudent for Two Species Addressed in This Proposed Rule

We particularly seek comments concerning:

(1) Information regarding our determination that designating critical habitat for the *Pritchardia lanigera* and *Vetericaris chaceorum* is not prudent.

Comments on the Proposed Critical Habitat Designation

For the 12 species for which we are proposing to designate critical habitat, we particularly seek comments concerning:

(1) Specific information on:

(a) The amount and distribution of the species' habitat;

(b) Any additional areas occurring within the range of the species that should be included in the designation because they (i) are occupied at the time of listing and contain the physical or biological features that are essential to the conservation of the species and that may require special management considerations, or (ii) are unoccupied at the time of listing and are essential for the conservation of the species;

(c) Special management considerations or protection that may be needed in the critical habitat areas we are proposing, including managing for the potential effects of climate change; and

(d) To evaluate the potential to include areas not occupied at the time of listing, we particularly seek comments regarding whether occupied areas are adequate for the conservation of the species. Additionally, please provide specific information regarding whether or not unoccupied areas would, with reasonable certainty, contribute to the conservation of the species and contain at least one physical or biological feature essential to the conservation of the species. We also seek comments or information regarding whether areas not occupied at the time of listing qualify as habitat for the species.

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

(3) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the related benefits of including or excluding specific areas.

(4) Information on the extent to which the description of probable economic impacts in the draft economic analysis (DEA) is a reasonable estimate of the likely economic impacts and any additional information regarding probable economic impacts that we should consider.

(5) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act. If you think we should exclude any additional areas, please provide information supporting a benefit of exclusion. We particularly seek comments on the exclusion from critical habitat designation of those areas addressed by a conservation program or plan. These may include Federal, Tribal, State, county, local, or private lands with permitted conservation plans covering the species in the area, such as habitat conservation plans, safe harbor agreements, or conservation easements, or nonpermitted conservation agreements and partnerships that would be encouraged by designation of or exclusion from critical habitat. Detailed information regarding these plans, agreements, easements, and partnerships is also requested, including:

(a) The location and size of lands covered by the plan, agreement, easement, or partnership;

(b) The duration of the plan, agreement, easement, or partnership;

(c) Who holds or manages the land;

(d) What management activities are conducted;

(e) What land uses are allowable; and

(f) If management activities are beneficial to the species and its habitat.

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

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide substantial information necessary to support a determination. Section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific data available.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**. If you submit information via *https://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *https://www.regulations.gov.*

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *https://www.regulations.gov.*

Because we will consider all comments and information we receive during the comment period, our final determinations may differ from this proposal. Based on the new information we receive (and any comments on that new information), our final designations may not include all areas proposed, may include some additional areas that meet the definition of critical habitat, or may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in the extinction of the species.

Public Informational Meeting and Public Hearing

We will hold a public informational meeting and public hearing on the date and at the times listed in **DATES**. We are holding the public informational meeting and public hearing via the Zoom online video platform and via teleconference so that participants can attend remotely. To listen and view the meeting and hearing via Zoom, listen to the meeting and hearing by telephone, or provide oral public comments at the public hearing via Zoom or by telephone, you must register. For information on how to register, or if you encounter problems joining Zoom the day of the meeting, visit *https://empsi.zoom.us/webinar/register/WN_qdw8pld2T06EnIInZ68e-g.* Registrants will receive the Zoom link and the telephone number for the public informational meeting and public hearing. If applicable, interested members of the public not familiar with the Zoom platform should view the Zoom video tutorials (*https://support.zoom.us/hc/en-us/articles/206618765-Zoom-video-tutorials*) prior

to the public informational meeting and public hearing.

At the public informational meeting, the Service will provide an overview of the proposed rule and describe the procedures for submitting comments. The public informational meeting will provide an opportunity for dialogue with the Service, but it will not be an opportunity to provide verbal comments on the proposed rule; that opportunity is only available at the public hearing. At the public hearing, the Service will provide interested persons an opportunity to present verbal testimony (formal, oral comments) on this proposed rule. The purpose of the public hearing is to provide a forum for accepting formal verbal testimony that will be recorded and transcribed and become part of the record for this proposed rule. In the event there is a large attendance at the public hearing, the Service may limit the time allotted for verbal testimony. Therefore, anyone wishing to provide verbal testimony at the public hearing is also encouraged to provide a prepared written copy of their statement to us through the Federal eRulemaking Portal or by U.S. mail (see **ADDRESSES**, above). There are no limits on the length of written comments submitted to us. Again, anyone wishing to provide verbal testimony at the public hearing must register before the hearing (*https://empsi.zoom.us/webinar/register/WN_qdw8pld2T06EnIInZ68e-g*). The use of virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

Reasonable Accommodation

The Service is committed to providing access to the public informational meeting and public hearing for all participants. Closed captioning will be available during the public informational meeting and public hearing. Further, a full audio and video recording and transcript of the public hearing will be posted online at *https://www.fws.gov/office/pacific-islands-fish-and-wildlife/what-we-do/projects-research* after the hearing. Participants will also have access to live audio during the public informational meeting and public hearing via their telephone or computer speakers. Persons with disabilities requiring reasonable accommodations to participate in the meeting and/or hearing should contact the person listed under **FOR FURTHER INFORMATION CONTACT** at least 5 business days prior to the date of the meeting and hearing to help ensure availability. An accessible version of the Service's public informational meeting presentation will also be posted online at *https://www.fws.gov/office/pacific-islands-fish-and-wildlife/what-we-do/projects-research* prior to the meeting and hearing (see **DATES**, above). See *https://www.fws.gov/office/pacific-islands-fish-and-wildlife/what-we-do/projects-research* for more information about reasonable accommodation.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure that our proposed critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designations of critical habitat. We will consider all comments and information we receive during the comment period on this proposed rule during our preparation of a final rule. Accordingly, our final decisions may differ from this proposal.

Previous Federal Actions

On October 17, 2012, we published in the **Federal Register** (77 FR 63928) a proposed rule to list 15 species, including the 14 species that are the subjects of this proposed rule, on the island of Hawai'i as endangered species under the Act. On October 29, 2013, we published in the **Federal Register** (78 FR 64638) a final rule to list those 15 species as endangered species. See the October 17, 2012, proposed rule for information on previous Federal actions concerning the 14 species that are the subjects of this proposed rule.

In the October 27, 2012, proposed rule (77 FR 63928), we found that critical habitat was prudent but not determinable for the 14 species that are the subject of this proposed rule.

On October 28, 2019, the Center for Biological Diversity (CBD) filed a complaint in the U.S. District Court, District of Hawaii (Case No. 1:19–cv–00588), challenging the failure of the Service to designate critical habitat for the 14 species (consisting of 12 plants (*Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Pritchardia lanigera, Schiedea diffusa* ssp. *macraei, Schiedea hawaiiensis,* and *Stenogyne cranwelliae*) and 2 animals (*Drosophila digressa* and *Vetericaris chaceorum*)) within 1 additional year from the date of the proposed listing. We entered into a settlement agreement approved by the court on March 6, 2020, requiring that by February 28, 2023, we submit to the **Federal Register**, for publication, a determination concerning the designation of critical habitat for the 14 species and a proposed rule for any species for which the designation of critical habitat is prudent and determinable; the submission for publication of this proposed rule complies with the settlement agreement.

Background

For species with Hawaiian common names, we prefer to, and will, include Hawaiian language spellings, including diacritical marks, to the degree possible and appropriate in the preambles of our **Federal Register** documents. For the text to be codified in the Code of Federal Regulations (CFR), however, we will omit diacritical marks to ensure that no errors are inadvertently incorporated during the codification process.

We provide a brief description for each of the 14 species addressed in this proposed rule, below.

Bidens hillebrandiana ssp. *hillebrandiana* (koʻokoʻolau), a short-lived perennial herb in the sunflower family (Asteraceae), occurs only on the island of Hawai'i (Ganders and Nagata 1999, pp. 275–276). Historically, *B. hillebrandiana* ssp. *hillebrandiana* was known from two locations along the windward Kohala coastline, in the coastal and dry cliff ecosystems, often along rocks just above the ocean (Degener and Wiebke 1926, in litt.; Flynn 1988, in litt.).

Cyanea marksii (hāhā), a short-lived perennial palmlike shrub in the bellflower family (Campanulaceae), is found only on the island of Hawai'i. Historically, *C. marksii* was known from the Kona district, in the lowland wet and montane wet ecosystems (Lammers 1999, p. 457; Hawai'i Biodiversity Mapping Program (HBMP) database 2010b).

Cyanea tritomantha (ʻakū), a short-lived perennial palmlike shrub in the bellflower family (Campanulaceae), is known only from the island of Hawai'i (Pratt and Abbott 1997, p. 13; Lammers 2004, p. 89). Historically, this species was known from the windward slopes of Mauna Kea, Mauna Loa, Kīlauea, and the Kohala Mountains, in the lowland wet, montane wet, and wet cliff ecosystems (Pratt and Abbott 1997, p. 13).

Cyrtandra nanawaleensis (haʻiwale), a short-lived perennial shrub or small tree in the African violet family (Gesneriaceae), is known only from the island of Hawai'i (Wagner and Herbst 2003, p. 29; Wagner et al. 2005a). Historically, *C. nanawaleensis* was known only from the lowland wet ecosystems in the Puna district (St. John 1987, p. 500; Wagner et al. 1988, in litt.; HBMP 2010d).

Cyrtandra wagneri (haʻiwale), a short-lived perennial shrub or small tree in the African violet family (Gesneriaceae), occurs only on the island of Hawai'i (Lorence and Perlman 2007, p. 357). Historically, *C. wagneri* was known in the lowland wet ecosystem along the northeast side of the island (Lorence and Perlman 2007, p. 359).

Melicope remyi (no common name), a long-lived perennial shrub or shrubby tree in the rue family (Rutaceae), occurs only on the island of Hawai'i (Stone et al. 1999, p. 1210; Service 2010, pp. A–11, 4–74). Historically, *M. remyi* was known from a few scattered individuals on the windward slopes of the Kohala Mountains and several small populations on the windward slopes of Mauna Kea, in the lowland wet and montane wet ecosystems (Stone et al. 1999, p. 1210; HBMP 2010f). We will refer to *Melicope remyi* by this name in this proposed rule; this plant is currently listed as *Platydesma remyi,* but we recently published a direct final rule (88 FR 7134; February 2, 2023) to correct the scientific name to *Melicope remyi* on the List of Endangered and Threatened Plants.

Phyllostegia floribunda (no common name), a short-lived perennial subshrub in the mint family (Lamiaceae), is found only on the island of Hawai'i (Wagner 1999, p. 268; Wagner et al. 1999a, p. 815). Historically, *P. floribunda* was reported in the lowland wet, montane mesic, and montane wet ecosystems at scattered sites along the eastern side of the island.

Pittosporum hawaiiense (hōʻawa, hāʻawa), a small, long-lived perennial tree in the pittosporum family (Pittosporaceae), is known only from the island of Hawai'i (Wagner et al. 1999b, p. 1,044). Historically, *P. hawaiiense* was known from the leeward side of the island, from the Kohala Mountains south to Kaʻū, in the lowland mesic, montane mesic, and montane wet ecosystems (Wagner et al. 1999b, p. 1,044).

Pritchardia lanigera (loulu), a medium-sized, long-lived perennial tree in the palm family (Arecaceae), is found only on the island of Hawai'i (Read and Hodel 1999, p. 1,371; Hodel 2007, pp. 10, 24–25). Historically, *P. lanigera* was known from the Kohala Mountains, Hāmākua district, windward slopes of Mauna Kea, and southern slopes of Mauna Loa, in the lowland mesic, lowland wet, montane wet, and wet cliff ecosystems (Read and Hodel 1999, p. 1,371; National Park Service 2015, pp. 467–468)

Schiedea diffusa ssp. *macraei* (no common name), a short-lived perennial climbing herb in the pink family (Caryophyllaceae), is reported only from the island of Hawai'i (Wagner et al. 2005b; Wagner et al. 2005c, p. 106). Historically, *S. diffusa* ssp. *macraei* was known from the Kohala Mountains, the windward slopes of Mauna Loa, and the Olaa Tract of Hawai'i Volcanoes National Park, in the montane wet ecosystem (Perlman et al. 2001, in litt.; Wagner et al. 2005c, p. 106; HBMP 2010g).

Schiedea hawaiiensis (māʻoliʻoli), a short-lived perennial herb in the pink family (Caryophyllaceae), is known only from the island of Hawai'i (Wagner et al. 2005c, pp. 92–96). Historically, *S. hawaiiensis* was known from a single site between Mauna Loa and Mauna Kea mountains in the montane dry ecosystem (Hillebrand 1888, p. 33; Wagner et al. 2005c, pp. 92–96).

Stenogyne cranwelliae (no common name), a short-lived perennial vine in the mint family (Lamiaceae), is known only from the island of Hawai'i. Historically, *S. cranwelliae* was known from the Kohala Mountains, in the montane wet and wet cliff ecosystems (Weller and Sakai 1999, p. 837).

Drosophila digressa (Hawaiian picture-wing fly), a member of the family Drosophilidae, is found only on the island of Hawai'i and historically known from five locations on the island in elevations ranging from approximately 2,000 to 4,500 ft (610 to 1,370 m), in the lowland mesic, montane mesic, and montane wet ecosystems (Hardy and Kaneshiro 1968, p. 182; Montgomery 1975, p. 95; Magnacca 2012, pers. comm.). This species is small, with adults ranging in size from 0.15 to 0.19 in (4.0 to 5.0 mm) in length. Adults are brownish yellow in color and have yellow-colored legs and hyaline (shiny-clear) wings with prominent brown spots. Like many endemic Hawaiian Drosophilidae species, *D. digressa* are highly host-plant-specific (Magnacca et al. 2008, p. 1), relying on the decaying stems of *Charpentiera* spp., *Ceodes brunoniana* (previously known as *Pisonia brunoniana*), and *Rockia sandwicensis* (previously known as *Pisonia sandwicensis*) for reproduction and larval substrate (Magnacca et al. 2008, pp. 11, 13; Magnacca 2012, pers. comm.).

Vetericaris chaceorum (anchialine pool shrimp), a small shrimp in the family Procarididae, is endemic to anchialine pools. These pools are coastal land-locked bodies of water that have underground hydrological connections to the ocean, contain varying levels of salinity, and show tidal fluctuations in water level. *Vetericaris chaceorum* is one of seven described species of hypogeal (underground) shrimp found in the Hawaiian Islands that occur in anchialine pools (Brock 2004, p. 6) and is relatively large in size for a hypogeal shrimp species; adult *V. chaceorum* measure approximately 2.0 in (5.0 cm) in total body length, excluding the primary antennae, which are approximately the same length as the adult's body length (Kensley and Williams 1986, p. 419). The species lacks large chelapeds (claws) (Kensley and Williams 1986, p. 426), which are a key diagnostic characteristic of all other known shrimp species. *Vetericaris chaceorum* is largely devoid of pigment and lacks eyes, although eyestalks are present (Kensley and Williams 1986, p. 419).

Additional information about the descriptions of each species' occurrence can be found in the proposed (77 FR 63928, October 17, 2012) and final (78 FR 64638, October 29, 2013) listing rules for these 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).

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 from the species status reports and 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 the 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, or other species conservation planning efforts if new information available at the time of those planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the Secretary may, but is not required to, determine that a designation would not be prudent in the following circumstances:

(i) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(ii) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(iii) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

We are not aware of any threats to *Drosophila digressa, Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea marksii, Cyanea tritomantha,*

Cyrtandra nanawaleensis, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Schiedea hawaiiensis,* and *Stenogyne cranwelliae* that would be attributed to overutilization for commercial, recreational, scientific, or educational purposes. There is no documentation that these species are threatened by taking or other human activity, and we conclude there is currently no imminent threat of collection or vandalism identified for these species. Further, identification and mapping of critical habitat for these species is not expected to result in collection or vandalism. In our species reports and 2013 listing determination (78 FR 64638; October 29, 2013), we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat for these 12 species. These 12 species occur wholly in the jurisdiction of the United States, and we are able to identify areas that meet the definition of critical habitat. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) have been met and because the Secretary has not identified other circumstances for which this designation of critical habitat would be not prudent, we have determined that the designation of critical habitat is prudent for these 12 species.

When we listed *Pritchardia lanigera* and *Vetericaris chaceorum* as endangered (78 FR 64638; October 29, 2013, pp. 63978–63978) we had reason to believe that designation of critical habitat was prudent for these two species at that time; however, new information has become available highlighting a new threat to these two species in the form of collection and overutilization, as detailed below, that now make identification and mapping of critical habitat likely to increase the threat of collection. Designation of critical habitat requires the publication of maps and a narrative description of specific critical habitat areas in the **Federal Register**. The degree of detail in those maps and boundary descriptions would be greater than the general location descriptions provided in the 2013 final rule to list *P. lanigera* and *V. chaceorum* (78 FR 64638; October 29, 2013). Designation of critical habitat would more widely announce the exact locations of these two species to collectors. The publication of maps and descriptions outlining the locations of the species would likely further facilitate unauthorized collection and trade, as collectors would know the exact locations where these species occur.

Pritchardia species have become one of the most widely cultivated ornamental palm genera in the world (78 FR 64638; October 29, 2013). There are a number of websites that offer *Pritchardia* plants and seeds for sale, including 22 species of Hawaiian *Pritchardia.* Twelve of these species are federally protected, including *P. lanigera* (Shirey et al. 2013, p. 307; Weisenberger 2023, pers. comm.). *Pritchardia* species are tall, they can be visible from afar, and they are attractive to collectors of rare palms for their personal use or to trade or sell for personal gain (Shirey et al. 2013, p. 301–302). Distinguishing *Pritchardia* species from one another can be difficult, thus collection activities targeting *Prichardia* species, in general, has potential to also increase collection of *P. lanigera* (Weisenberger 2023, pers. comm.). Based on the collections of Hawaiian *Pritchardia* plants and seeds and the market for these collected specimens, *P. lanigera* are now vulnerable to overharvesting, with collection of *P. lanigera* posing a serious and ongoing threat to the species (Weisenberger 2023, pers. comm.). Although at the time of listing known locations of *P. lanigera* were extremely difficult to access (77 FR 63928, October 17, 2012, p. 63978), recent surveys have identified more accessible populations of *P. lanigera* and conservation management actions have increased accessibility in some instances (Weisenberger 2023, pers. comm.). Because of the narrow range, life history traits, and small population size of this species, any collection poses a threat to the species.

Coincidentally after listing *V. chaceorum* as endangered (78 FR 64638; October 29, 2013, pp. 63978–63978), popularity in the aquarium trade of another Hawaiian anchialine shrimp species, *Halocaridina rubra,* increased. This increase in collection activities of *Halocaridina rubra* has resulted in a risk to *V. chaceorum,* due to these two species sharing a similar appearance and habitat preferences. In the past several years, *Halocaridina rubra,* commonly called the Hawaiian red shrimp or volcano shrimp, has been increasingly prized by aquarists and companies in the pet trade industry worldwide (Yamamoto et al. 2015, p. 83). These anchialine shrimp are sought because of their ability to live in hermetically sealed containers (Yamamoto et al. 2015, p. 83) and as live feed for seahorses (Yamamoto et al. 2015, p. 83). While the shrimp that are being harvested are primarily *H. rubra,* which is not endangered, as the popularity of this business increases, there is risk that the endangered *Vetericaris chaceorum* may either intentionally or accidentally be harvested and become part of the aquarium trade. Collectors may target *V. chaceorum* due to its similar appearance, rarity and aesthetic, or collectors attempting to harvest the *H. rubra* that occur in the same pools as *V. chaceorum* may accidentally harvest both species (Sakihara 2012, entire). Because this shrimp is so rare, a single person with a hand-net could do irreparable damage to a population of *V. chaceorum* (Yamamoto 2015, pers. comm.). Despite the prohibition on collecting within Natural Area Reserves and the permitting process for collection elsewhere, the collection of *V. chaceorum* is considered an ongoing threat because collection can occur at any time owing to a lack of available resources for patrolling or other monitoring or enforcement at the pools where *V. chaceorum* occur.

Designating critical habitat would increase human threats to *Pritchardia lanigera* and *Vetericaris chaceorum* by increasing the vulnerability of these species to unauthorized collection and trade through public disclosure of their locations. The publication of maps and a specific narrative description outlining the locations of this species within critical habitat units in the **Federal Register**, as well as any associated publication of such information in local newspapers and on special interest websites, would facilitate unauthorized collection and trade by detailing the exact locations where *P. lanigera* and *V. chaceorum* occur. Publishing specific location information would provide a high level of assurance that any person going to a specific location would be able to successfully locate and collect specimens. Designating critical habitat could negate the current efforts of State and local conservation agencies to restrict access to location information that could significantly affect future efforts to control the threat of unauthorized collection and trade.

Summary of Prudency Determination for Pritchardia lanigera and Vetericaris chaceorum

We have determined that designating critical habitat for *Pritchardia lanigera* and *Vetericaris chaceorum* is not prudent. Designation of critical habitat would increase the threats to these species from unauthorized collection and trade. Due to the willingness of individuals to collect these species without authorization, we have

determined that any action that publicly discloses the location of *P. lanigera* and *V. chaceorum* (such as critical habitat) puts these species in further peril. Many populations of these two species are small. One of the basic measures to protect *P. lanigera* and *V. chaceorum* from unauthorized collection and trade is restricting access to information about the location of the species' populations. Publishing maps and narrative descriptions of critical habitat for these two species would significantly affect our ability to reduce the threat of unauthorized collection and trade. We have, therefore, determined in accordance with 50 CFR 424.12(a)(1) that it is not prudent to designate critical habitat for *P. lanigera* and *V. chaceorum.*

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 a 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.

In this proposed rule, the physical or biological features are based on the features of the six ecosystem types on which the 11 plant (*Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Schiedea hawaiiensis, Stenogyne cranwelliae*) and 1 animal (*Drosophila digressa*) species depend (see table 1, below). These six ecosystems are coastal, dry forest, mesic forest, wet forest, mesic grassland and shrubland, and wet grassland and shrubland; we summarize the descriptions of these ecosystems and our source for the descriptions below. The physical or biological features essential to the conservation of the species identified in this proposed rule are those features required for the successful functioning of the ecosystem in which these species occur or have historically occurred (see table 2, below). Although critical habitat is identified for each species individually, we have found that the conservation of each depends, at least in part, on the successful functioning of the commonly shared ecosystem. Ecosystem parameters include elevation, precipitation, substrate, and associated native plant genera. These ecosystem parameters describe the species-specific physical or biological features of the functioning ecosystems on which these listed species depend. For example, the associated native plant genera described as physical or biological features for these 12 listed species are representative of the native plant genera that occur in the functioning ecosystems on which these 12 species depend, and as such, the occurrence of these native plant genera indicate functioning native ecosystems that provide the fundamental biological requirements for the listed species in these areas. Additionally, *Drosophila digressa* relies on native plant genera, specifically *Charpentiera, Rockia,* and *Ceodes,* as native plant host resources, and without which this species would be highly vulnerable to mortality, reproductive failure, and cyclical population variation related to fluctuations in breeding resources (Magnacca et al. 2008, p. 32).

Coastal (as Described by Kim et al. 2020, p. 2)

Coastal ecosystems are defined as near-shore areas that are impacted by the ocean and generally occur within 328 feet (ft) (100 meters (m)) of high tide up to 984 ft (300 m) in elevation. Coastal ecosystems are found on all the main Hawaiian Islands and include coastal dry herblands, coastal dry grasslands, coastal mixed communities, coastal dry shrublands, coastal dry forests, and coastal wet-mesic forests. Coastal substrate includes well-drained talus, calcareous slopes, and dunes. Annual precipitation ranges from less than 47 inches (in) (120 centimeters (cm)) in coastal dry to 47 to 98 in (120 to 250 cm) in coastal mesic, and to more than 98 in (250 cm) in coastal wet ecosystem. *Bidens hillebrandiana* ssp. *hillebrandiana* is the only species addressed in this proposed rule known to occupy the coastal ecosystem.

Dry Forest (as Described by Javar-Salas et al. 2020, p. 2)

Dry forest ecosystems are found on all of the main Hawaiian Islands and include lowland dry forest and montane-alpine dry forest. Dry forest is found from 0 to 9,500 ft (0 to 2,900 m). Annual precipitation ranges from 12 to 79 in (30 to 200 cm). Substrates are generally well-drained, sandy loams from volcanic ash or cinder and weathered basaltic lava in lowland dry forest to well-drained, loams from volcanic ash, cinder, and weathered basaltic lava in montane-alpine dry forest. *Schiedea hawaiiensis* is the only species addressed in this proposed rule known to occupy the dry forest ecosystem.

Mesic Forest (as Described by Lowe et al. 2020, pp. 2–7)

Mesic forest ecosystems include lowland mesic forest and montane subalpine mesic forest. Elevation ranges from 98 to 5,249 ft (30 to 1,600 m) in lowland mesic forest to 2,953 to 6,562 ft (900 to 2,000 m) in montane subalpine mesic forest. Annual precipitation

ranges from 39 to 150 in (100 to 380 cm) in montane subalpine to 47 to 150 in (120 to 380 cm) in lowland mesic forest. Substrates are generally well-drained and include rocky, shallow, organic muck soils; steep rocky talus soils; shallow soils over weathered rock in steep gulches; deep soils over soft weathered rock; and gravelly alluvium. The plants *Cyrtandra nanawaleensis, Phyllostegia floribunda,* and *Pittosporum hawaiiense* addressed in this proposed rule are found in the mesic forest ecosystem. The picture-wing fly, *Drosophila digressa,* addressed in this proposed rule is also found in the mesic forest ecosystem.

Wet Forest (as Described by Clark et al. 2020, p. 2)

Wet forest ecosystems include lowland rainforest, montane rainforest, and montane cloud forest. Elevation ranges from 328 to 3,937 ft (100 to 1,200 m) in lowland rainforest; 2,700 to 7,218 ft (823 to 2,200 m) in montane rainforest; and 2,461 to 6,070 ft (750 to 1,830 m) in montane cloud forest. Annual precipitation is greater than 98 in (250 cm). Substrates range from very weathered soils to rocky substrate with classes of undeveloped and developed soil substrates formed from basalt lava. The plants *Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Melicope remyi, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* addressed in this proposed rule are found in the wet forest ecosystem. *Drosophila digressa* is also found in the wet forest ecosystem.

Mesic Grassland and Shrubland (as Described by Ball et al. 2020, p. 2)

Mesic grassland and shrubland ecosystems include lowland mesic shrubland, subalpine mesic shrubland, montane-subalpine mesic grassland, and lowland mesic grassland. Elevation ranges from 98 to 7,546 ft (30 to 2,300 m). Annual precipitation ranges from 39 to 98 in (100 to 250 cm). Substrates generally include shallow soils that frequently dry with rocky outcrops. *Cyrtandra nanawaleensis* is the only species addressed in this proposed rule known to occupy the mesic grassland and shrubland ecosystem.

Wet Grassland and Shrubland (as Described by Nelson et al. 2020, p. 3)

Wet grassland and shrubland ecosystems include native wet sedge and grassland and native wet cliff and crest shrubland. Elevation ranges from 656 to 2,953 ft (200 to 900 m). Annual precipitation ranges from 98 to 197 in (250 to 500 cm). Substrates range from older, weathered soils to younger, rocky substrates. The plants *Cyanea tritomantha* and *Phyllostegia floribunda* addressed in this proposed rule are found in the wet grassland and shrubland ecosystem.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the 12 species from studies of the species' habitat, ecology, and life history as described below. Additional information about the ecosystems containing these physical or biological features and descriptions of each species' occurrence within these ecosystems can be found in the proposed (77 FR 63928, October 17, 2012) and final (78 FR 64638, October 29, 2013) listing rules for these species. Each species identified in this rule requires the physical or biological features for each ecosystem in which that species occurs, as noted in table 1. Table 2, below, identifies the physical or biological features of a functioning ecosystem for each of the ecosystem types identified in this proposed rule. The physical or biological features are defined here by elevation, annual levels of precipitation, substrate type, and the characteristic native plant genera that are found in the canopy, subcanopy, and understory levels of the vegetative community where applicable. Due to our limited knowledge of the specific life-history requirements for the species that are little-studied and occur in remote and inaccessible areas, the physical or biological features described in this document that provide for the successful function of the ecosystem that is essential to the conservation of the species represents the best, and, in many cases, the only, scientific information available. Accordingly, the physical or biological features of a functioning ecosystem are, at least in part, the physical or biological features essential to the conservation of these 12 species.

TABLE 1—TWELVE SPECIES AND APPLICABLE ECOSYSTEMS

[Note: All species, except for Bidens hillebrandiana ssp. hillebrandiana and Schiedea hawaiiensis are found in multiple ecosystems.]

Ecosystem	Species
Coastal	*Bidens hillebrandiana* ssp. *hillebrandiana*.
Dry Forest	*Schiedea hawaiiensis*.
Mesic Forest	*Cyrtandra nanawaleensis, Phyllostegia floribunda, Pittosporum hawaiiense, Drosophila digressa*.
Wet Forest	*Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Drosophila digressa, Phyllostegia floribunda, Pittosporum hawaiiense, Melicope remyi, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*.
Mesic Grassland and Shrubland	*Cyrtandra nanawaleensis*.
Wet Grassland and Shrubland	*Cyanea tritomantha, Phyllostegia floribunda*.

TABLE 2—PHYSICAL OR BIOLOGICAL FEATURES FOR EACH ECOSYSTEM UPON WHICH THE 12 SPECIES DEPEND

[Read in association with table 1]

Ecosystem	Elevation	Annual precipitation	Substrate	Contain one or more of these associated native plant genera		
				Canopy	Subcanopy	Understory
Coastal	<980 ft (<300 m).	<47 to >98 in (<120 cm to >250 cm).	well-drained talus, calcareous slopes, dunes.	*Diospyros, Metrosideros, Myoporum, Pritchardia.*	*Chenopodium, Gossypium, Heliotropium, Santalum, Scaevola.*	*Eragrostis, Sesuvium, Sida, Sporobolus.*

TABLE 2—PHYSICAL OR BIOLOGICAL FEATURES FOR EACH ECOSYSTEM UPON WHICH THE 12 SPECIES DEPEND—Continued

[Read in association with table 1]

Ecosystem	Elevation	Annual precipitation	Substrate	Contain one or more of these associated native plant genera		
				Canopy	Subcanopy	Understory
Dry Forest	<9,500 ft (<2,900 m).	<79 in (<200 cm).	well-drained, sandy loams or loams from volcanic ash or cinder; weathered basaltic lava.	*Acacia, Colubrina, Diospyros, Erythrina, Melicope, Metrosideros, Myoporum, Myrsine, Sophora.*	*Achyranthes, Euphorbia, Leptecophylla, Nototrichium.*	*Dodonaea, Doryopteris, Heteropogon, Pellaea.*
Mesic Forest	<6,600 ft (<2,000 m).	39–150 in (100–380 cm).	rocky, shallow, organic muck soils; rocky talus soils; shallow soils over weathered rock; deep soils over soft weathered rock; gravelly alluvium.	*Acacia, Antidesma, Charpentiera, Chrysodracon, Metrosideros, Myrsine, Nestegis, Pisonia, Santalum.*	*Coprosma, Freycinetia, Leptecophylla, Myoporum, Pipturus, Rubus, Sadleria, Sophora.*	*Ctenitis, Doodia, Dryopteris, Pelea, Sadleria.*
Wet Forest	<7,300 ft (<2,225 m).	>98 in (>250 cm).	very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.	*Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*	*Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*	*Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*
Mesic Grassland and Shrubland.	100–7,500 ft (30–2,300 m).	39–98 in (100–250 cm).	shallow soils that frequently dry with rocky outcrops.	*Coprosma, Metrosideros, Wilkesia.*	*Dodonaea, Dubautia, Leptecophylla, Osteomeles, Sadleria, Vaccinium.*	*Bidens, Carex, Deschampsia, Dicranopteris, Dryopteris, Eragrostis, Euphorbia, Lipochaeta.*
Wet Grassland and Shrubland.	660–2,950 ft (200–900 m).	98–197 in (250–500 cm).	older, weathered soils to younger, rocky substrates.	*Ilex, Kadua, Melicope, Metrosideros, Myrsine.*	*Cibotium, Clermontia, Dubautia, Freycinetia, Hydrangea, Lobelia, Pipturus, Touchardia, Urera, Vaccinium.*	*Carex, Cladium, Deschampsia, Dicranopteris, Eragrostis, Peperomia, Phyllostegia, Scaevola.*

The physical or biological features identified in this proposed rule take into consideration the ecosystem types in which each species occurs, as described above, and also reflect a distribution that we believe is essential to achieving the species' recovery needs within those ecosystems. We considered the current population status of each species, to the extent it is known, and assessed its status relative to the recovery objectives for that species, in terms of population goals (numbers of populations and individuals in each population, which contributes to population resiliency) and distribution (whether the species occurs in habitats representative of its historic geographical and ecological distribution, and are sufficiently redundant to withstand the loss of some populations over time). This assessment informed us as to whether the species requires space for population growth and expansion in areas occupied at the time of listing, or whether additional areas unoccupied at the time of listing may be required for the reestablishment of populations to achieve conservation.

Some of the species addressed in this proposed rule occur in more than one ecosystem. The physical or biological features for these species are described separately for each ecosystem in which they occur. The reasoning behind this approach is that each species requires a different suite of environmental conditions depending upon the ecosystem in which it occurs. For example, *Cyrtandra nanawaleensis* will occur in association with different native plant species, depending on the mesic forest, wet forest, or mesic grassland and shrubland ecosystem type where it is found. Each of the physical or biological features described in each ecosystem in which the species occurs are essential to the conservation of the species, which includes the ability to support the geographical and ecological distribution across the different ecosystem types where the species occurs. Each physical or biological feature is also essential to retaining the genetic representation that allows this species to successfully adapt to different environmental conditions in various native ecosystems. Although some of these species occur in multiple native ecosystems, their declining abundance in the face of ongoing threats, such as increasing numbers of nonnative plant competitors, indicates that they are not such broad habitat generalists as to be able to persist in highly altered habitats. Based on an analysis of the best available scientific information, functioning native ecosystems provide the fundamental biological requirements for the narrow-range, island-endemic species that are addressed in this proposed rule.

Some examples may help to clarify our approach to describing the physical or biological features for each species. To understand the physical or biological features for the plant *Bidens hillebrandiana* ssp. *hillebrandiana,* for example, we first look at table 1 and see that *B. hillebrandiana* ssp. *hillebrandiana* depends on the coastal ecosystem. Table 2 indicates that the physical or biological features in the coastal ecosystem include elevations of less than 980 ft (300 m); annual precipitation ranges from less than 47 in (120 cm) to more than 98 in (250 cm); well-drained talus, calcareous slopes, and dunes; and contain one or more genera of the subcanopy and understory plants *Chenopodium, Eragrostis, Gossypium, Heliotropium, Santalum, Scaevola, Sesuvium, Sida,* and *Sporobolus,* and one or more of the genera of the canopy species *Diospyros, Metrosideros, Myoporum,* and *Pritchardia.* The specific physical or biological features for *B. hillebrandiana* ssp. *hillebrandiana* are intrinsically tied to the coastal ecosystem. The physical

or biological features of the coastal ecosystem best approximate the physical or biological features for *B. hillebrandiana* ssp. *hillebrandiana.* Thus, we use the physical and biological features provided in the ecosystem in which *B. hillebrandiana* ssp. *hillebrandiana* is found as the physical and biological features for *B. hillebrandiana* ssp. *hillebrandiana.*

As another example, table 1 indicates the physical or biological features for the plant *Phyllostegia floribunda* include the ecosystem-level physical or biological features for the mesic forest, wet forest, and wet grassland and shrubland ecosystems. The physical or biological features for *P. floribunda* are thus composed of the physical or biological features for each of the three ecosystems it occupies, as described in table 2 for the mesic forest, wet forest, and wet shrubland and grassland ecosystems. Table 1 is read in a similar fashion in conjunction with table 2 to describe the physical or biological features for each of the 12 species for which we are proposing critical habitat.

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 following discussion of special management needs is applicable to each of the 12 species on the island of Hawai'i for which we are designating critical habitat.

For the 11 plant species and *Drosophila digressa,* we have determined that the features essential to their conservation are those required for the successful functioning of the ecosystem in which they occur (see tables 1 and 2, above); conversely, threats that act at the ecosystem level also act at the species level. Special management considerations or protections may be required throughout the critical habitat areas proposed for designation here to avoid further degradation or destruction of the physical or biological features essential to the 12 species' conservation. Habitat degradation, including trampling and herbivory by introduced ungulates, fire, drought, and habitat modification by invasive plants, are the greatest threats to these 12 species, and these threats act at the ecosystem level. Threats specific to *Drosophila digressa* habitat include loss or lack of host plants from ungulates, drought, fire, alteration of microclimate by invasive plants or the plant disease referred to as rapid 'ōhi'a death (ROD), (78 FR 64638, October 29, 2013; Service 2021f, pp. 21–23). Some of these threats may be addressed by special management considerations or protection, while others (*e.g.,* sea level rise, hurricanes, drought, volcanic eruption) are beyond the control of landowners and managers. For a more detailed description of threats, please see the proposed listing rule (77 FR 63928, October 17, 2012, pp. 63941–63974), the final listing rule (78 FR 64638, October 29, 2013, pp. 64653–64686), and the draft recovery plan (Service 2022a, entire).

While the 12 species share many threats, impacts to individual species and the actions needed to eliminate or manage the threats may differ. Special management considerations or protections may thus be needed within critical habitat areas to address the threats for each of the 12 species. Management activities that could minimize or ameliorate these threats include, but are not limited to, ungulate removal and exclusion fencing; control or eradication of significant habitat-modifying, invasive plants; fire management planning and wildfire response; and measures to reduce of the spread of rapid 'ōhi'a death (ROD) and other plant pathogens. Management activities that could minimize or ameliorate threats specific to *Drosophila digressa* include control measures to reduce and eradicate invasive invertebrates, such as wasps and ants. These management actions would result in the protection of areas providing habitat for the 12 species.

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. For each of the 12 species for which we are proposing critical habitat, except *Schiedea hawaiiensis,* we are proposing to designate critical habitat in areas within the geographical area occupied by the species at the time of listing. For *Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea marksii,* and *Cyrtandra nanawaleensis,* we are not proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat for these species; no unoccupied areas had at least one physical or biological features essential to the conservation of the species and a reasonable certainty of contributing to conservation.

We are proposing to designate specific areas outside the geographical area occupied by the species at the time of its listing for nine species. For eight of these species, we are also proposing to designate critical habitat based on occupancy at the time of listing (*Drosophila digressa, Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*). We are not proposing any occupied areas a critical habitat for the ninth species, *Schiedea hawaiiensis.* For *Schiedea hawaiiensis,* we are proposing to designate only unoccupied critical habitat because the single area known to be occupied by the species at the time of listing is exempted from designation (see Exemptions, below, for more information) and the amount of occupied areas were determined to be inadequate to ensure conservation of the species. All other proposed unoccupied critical habitat areas overlap entirely with a geographical area for which we are proposing occupied critical habitat for at least 1 of the other 12 species. The proposed unoccupied critical habitat for *Schiedea hawaiiensis,* however, has no overlap in geographic occurrence with the other species addressed in this proposed rule.

We propose to designate areas outside the geographical area occupied by these species (*Drosophila digressa, Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Schiedea hawaiiensis*) due to small population sizes, few individuals, or reduced geographic range, which make these species vulnerable to stochastic events. Many of these species are so rare in the wild that they are at a high risk of extirpation or even extinction from various events, such as hurricanes or landslides. Therefore, supporting resilience and redundancy in these species through the establishment of multiple, robust populations is a key component of conservation of the species (Service 2022a, pp. 29–30, 35, 39, 48–49). A designation limited to occupied areas would be inadequate to ensure the conservation of these species. Areas that

may have been unoccupied at the time of listing, together with areas occupied at the time of listing, are reasonably certain to provide some or all of the habitat necessary for the expansion of existing wild populations and reestablishment of wild populations within the historical range of the species to achieve a level that could approach recovery. The best available scientific information suggests that the ecosystems in the unoccupied areas in which we are proposing critical habitat provide one or more of the physical or biological features that support life-history requirements of these nine species, and thus these unoccupied areas are considered habitat for the conservation of these nine species. These areas support recovery in the case of stochastic events that otherwise have potential to eliminate a species from the one, or more, of the locations where it is currently found. We find, therefore, that designation of these unoccupied areas as critical habitat is essential for the conservation of the species. Designating unoccupied areas as critical habitat for these species also promotes conservation actions to restore their historical, geographical, and ecological representation, necessary for their recovery.

In this proposed rule, we propose critical habitat for 12 species in 20 distinct areas that include 40 critical habitat units, with animal and plant units identified separately. Each proposed critical habitat unit contains all or some of the physical or biological features essential to the conservation of those individual species that occupy that particular unit, or areas essential for the conservation of those species identified that do not presently occupy that particular unit. The proposed critical habitat for all species includes the functioning ecosystems on which they depend; thus, for those species with life-history requirements that can be supported in multiple ecosystem types, we have identified areas of critical habitat in multiple ecosystem types. For example, the plant *Cyrtandra nanawaleensis* is found in multiple critical habitat units across three ecosystem types: mesic forest, mesic grassland and shrubland, and wet forest.

Because we have determined that the features essential to the conservation of the 12 species are those required for the successful functioning of the ecosystems in which they respectively occur, we grouped species by the commonly shared ecosystem type to delineate critical habitat units. We used similar methods to identify critical habitat unit boundaries for nine plant species: *Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae.* These nine species were considered together because spatial data used for delineating critical habitat are similar among these species, and these species all occur within mesic to wet ecosystems, whereas the remaining two plant species do not (see table 1, above). We considered each species separately within their shared dependence on the functioning ecosystems they have in common. We used separate methods to identify critical habitat unit boundaries for each of the remaining three species: *Bidens hillebrandiana* ssp. *hillebrandiana, Schiedea hawaiiensis,* and *Drosophila digressa. Bidens hillebrandiana* ssp. *hillebrandiana* and *Schiedea hawaiiensis* each occur in an ecosystem type not shared with any of the other 12 species, and *Drosophila digressa* was considered separately because of differences in taxonomy and life history from the plants. Critical habitat boundaries for all species were delineated to clearly depict and promote conservation of these species by identifying the functioning ecosystem on which they depend. Ecosystem types that support the species addressed here but that do not form a contiguous area are divided geographically into separate units. In units consisting of multiple ecosystem types, if a species' physical or biological features are provided by one of the ecosystem types, we propose to designate the entire area as critical habitat for that species. We took this approach because within these units, ecosystem types are patchily distributed at a relatively fine resolution, intermingled, and can be dynamic on a relatively short timescale in their distribution within the critical habitat area.

To delineate the proposed critical habitat units, we relied on an overall conservation strategy in which each of the 12 species was considered separately using a common approach for 9 plant species, and a separate approach for the remaining 2 plant species and *Drosophila digressa.* The goal of the conservation strategy was to identify the specific areas for each species that provide essential physical or biological features without which range-wide resiliency, redundancy, and representation could not be achieved. The conservation strategy considered (1) historical and current distribution of each of the 12 species; (2) assessments of resiliency, redundancy, and representation for each species from the most recent species reports (Service 2021a–n); and (3) recovery planning efforts (Service 2022a, entire). Some of the proposed critical habitat for these 12 species overlies critical habitat already designated for other species on the island of Hawai'i.

In summary, we completed the following basic steps to delineate critical habitat (specific methods follow below):

(1) We compiled the best scientific data available on observations and distributions of the 12 species that were extant at the time of listing;

(2) We compiled all available location and landcover data, including ecosystem type, within the range of the 12 species;

(3) We identified areas containing the physical or biological features that may require special management consideration or protection;

(4) We circumscribed boundaries of potential critical habitat units based on the above information; and

(5) We removed, to the extent practicable, all areas that did not have the specific physical or biological feature components, and therefore are not considered essential to the conservation of one or more of these 12 species.

Based on these five steps, for areas within and outside the geographic area occupied by the species at the time of listing, we delineated critical habitat unit boundaries using the following methods:

(1) Species observation and distribution data sources: We obtained observational and distributional data to include in our Geographic Information System database for each of the 12 species including the known locations of the species from the Hawai'i Biodiversity Mapping Program (HBMP) database (HBMP 2010a, entire; HBMP 2010b, entire; HBMP 2010c, entire; HBMP 2010d, entire; HBMP 2010e, entire; HBMP 2010f, entire; HBMP 2010g, entire; HBMP 2010h, entire), the Plant Extinction Prevention Program database (PEPP 2021, unpublished), and our own rare plant database. We also obtained and compiled species information from the plant database housed at National Tropical Botanical Garden (*https://ntbg.org/database/herbarium/*). We used Hawai'i Biodiversity Mapping Program's Geographic reference areas for the Hawaiian Islands in conjunction with known species' location data (Kam 2017, p. 1; Hawai'i Rare Plant Restoration Group 2020, p. 2). For plants, we obtained and compiled species range maps, as determined by plant species ranges in the Hawaiian

Islands (Price et al. 2012, entire), and our own plant species range layer adapted from Price et al. 2012 (Service 2022b–l, entire). For *Drosophila digressa,* we created our own potential species range layer using the U.S. Geological Survey's (USGS's) Carbon Assessment Landcover data of 2017 for mesic and wet forest habitats (Selmants et al. 2017, entire; Service 2021f) and the known elevational range of the species, which is between 2,000 to 4,500 ft (600 to 1,400 m). Lastly, we obtained recent biological surveys and reports and discussed that information with qualified individuals familiar with these 12 species and their ecosystems.

We used current and historical species distribution information to develop initial critical habitat boundaries in each of the six ecosystems that would provide for the conservation of the 12 species. The initial boundaries were superimposed over digital topographic maps of the island of Hawai'i and further evaluated. In general, land areas that were identified as highly degraded were removed from the proposed critical habitat units, and natural or constructed features (*e.g.,* ridge lines, valleys, streams, coastlines, roads, lava flows, obvious land features, etc.) were used to delineate the proposed critical habitat boundaries.

(2) Identified areas containing physical or biological features: We obtained and compiled island-wide elevation, annual precipitation, soil substrate, and associated native plant genera data sources (Gagne and Cuddihy 1999, pp. 45–114; LANDFIRE 2016, pp. 1177–1242; Ball et al. 2020, p. 2; Clark et al. 2020, p. 2; Javar-Salas et al. 2020, p. 2; Kim et al. 2020, p. 2; Lowe et al. 2020, pp. 2–7; Nelson et al. 2020, p. 3). We evaluated areas currently occupied by each species and whether they contain the physical or biological features essential to the conservation of the species and which may require special management considerations or protection. We considered the degree to which the physical or biological features were present or absent in areas as an indication of the successful functioning of the habitat.

(3) Landcover and ecosystem data sources: We obtained and compiled landcover and ecosystem data from the island-wide Geographic Information System coverage including USGS Carbon Assessment Landcover data of 2017 (Selmants et al. 2017, entire) and ArcGIS Esri World Imagery of 2022 (Esri 2023, entire); 1:24,000 scale digital raster graphics of USGS topographic quadrangles; and geospatial data sets associated with parcel data from Hawai'i County (Hawaii Statewide GIS Program 2013, entire). We evaluated areas currently occupied by each species. When a species occurs in more than one ecosystem type, we include the full range of ecosystem types within that species' range. For example, *Phyllostegia floribunda* is known from three of the six ecosystem types addressed in this proposed rule: mesic forest, wet forest, and wet grassland and shrubland ecosystem types.

(4) Circumscribed boundaries of potential critical habitat units: We considered several factors in the selection of specific boundaries for critical habitat for the 12 species. We determined critical habitat unit boundaries taking into consideration the information on known past and present locations of the species, landcover and ecosystem data sources by USGS Carbon Assessment Landcover Data (Selmants et al. 2017, entire), recovery areas described by the species' draft recovery plan, projections of geographic ranges of Hawaiian plant species and *Drosophila digressa* (Price et al. 2012, entire; Service 2021f, entire; Service 2022b–l, entire), and adequate habitat to allow for increases in numbers of individuals and for expansion of populations to provide for the minimum numbers required to reach delisting goals (as described in the draft recovery plan (Service 2022a, entire)). Critical habitat boundaries for all species were delineated to promote the conservation of these species by identifying the functioning ecosystems on which they depend.

(5) Removed areas lacking the identified physical or biological features: When determining proposed 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 the physical or biological features necessary for these 12 species. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations (CFR) may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat designations are finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the identified physical or biological features in the critical habitat units.

We propose to designate as critical habitat lands that we have determined are occupied 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 have also identified, and propose for designation as critical habitat, unoccupied areas that are essential for the conservation of nine of the species (see Proposed Critical Habitat Designation, below).

Units are proposed for designation based on one or more of the physical or biological features being present to support the life-history processes for 1 or more of the 12 species for which we propose critical habitat. Some units contain all of the identified physical or biological features and support multiple life-history processes. Some units contain only some elements of the physical or biological features necessary to support the species' particular use of that habitat.

The proposed 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 Proposed 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–R1–ES–2023–0017.

Proposed Critical Habitat Designation

We are proposing approximately 122,277 ac (49,484 ha) as critical habitat in 20 distinct areas that include 40 critical habitat units, with 9 animal and 31 plant units identified separately, for *Drosophila digressa, Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea marksii, Cyanea tritomantha, Cyrtandra nanawaleensis, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Schiedea hawaiiensis,* and *Stenogyne cranwelliae.* The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for each species. Table 3 shows the proposed critical habitat units and the approximate area of each unit by landowner type.

Within the 20 distinct areas, areas of proposed critical habitat for *Drosophila digressa* are described as 9 sequential

numbered units, whereas areas of proposed critical habitat for plants are described as 19 sequential numbered sections that are then split into 1 or more units, based on whether they overlap with existing designated critical habitat for other plant species on the island of Hawai'i. Some of the proposed critical habitat for *Drosophila digressa* overlays critical habitat already proposed or designated for plant species; however, critical habitat designations for wildlife species at 50 CFR 17.95 are organized differently than critical habitat designations for plant species on the island of Hawai'i at 50 CFR 17.99. Therefore, the proposed critical habitat for *Drosophila digressa* stands alone and is not incorporated into, or presented to address, any existing critical habitat units for other species. Areas of a section that overlay existing Hawaiian plant critical habitat units are assigned to that existing critical habitat unit name. Areas of a section that do not overlay existing Hawaiian plant critical habitat are assigned a sequential new critical habitat unit number. This distinction between existing and newly proposed critical habitat areas is necessary in order to be consistent with the critical habitat unit numbering system we established earlier for plants on the island of Hawai'i (see 50 CFR 17.99(k)). We provide the critical habitat section numbers, where applicable, as well as unit numbers and the corresponding map numbers that would appear at 50 CFR 17.99 if we adopt this rule as proposed for ease of reference in the CFR. All units in the proposed designation, with the exception of Unit 55 within *Schiedea hawaiiensis*—Section 19, are considered occupied at the time of listing (see 78 FR 64638; October 29, 2013) by 1 or more of the 12 species for which we are proposing critical habitat (table 4). Of the 20 distinct areas for which critical habitat is proposed, 13 include animal units or plant sections that are both occupied and unoccupied for 2 or more of the 12 Hawai'i island species.

The areas we propose as critical habitat are located in six ecosystem types: (1) coastal, (2) dry forest, (3) mesic forest, (4) wet forest, (5) mesic grassland and shrubland, and (6) wet grassland and shrubland. Critical habitat designations for plants and animals are published in separate sections of the CFR; however, the proposed critical habitat for the 11 plants and *Drosophila digressa* overlap each other in many areas on the island of Hawai'i. For example, ''*Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 1'' and ''*Drosophila digressa*—Unit 1'' overlap entirely within the same geographic area. Therefore, because the section and unit boundaries are the same, we describe them together to avoid redundancy and reduce publication costs for this proposed rule, as indicated by ''and'' following the section name in the following headings.

TABLE 3—PROPOSED CRITICAL HABITAT UNITS BY ECOSYSTEM, LAND OWNERSHIP, AND SIZE

[Area estimates reflect all land within critical habitat unit boundaries]

Animal unit	Plant section	Plant unit	Federal (ac (ha))	State (ac (ha))	Private/other (ac (ha))	Total (ac (ha))
Wet Forest						
Drosophila digressa—Unit 1.	*Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 1.	Unit 3	3,550 (1,436)	7,962 (3,222)	547 (221)	12,059 (4,880)
		Unit 52	548 (222)	2,682 (1,085)	984 (398)	4,213 (1,705)
Subtotal			4,097 (1,658)	10,644 (4,307)	1,531 (619)	16,272 (6,585)
Drosophila digressa—Unit 7.	*Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 4.	Unit 15		182 (73)		182 (73)
		Unit 39		1,021 (413)	144 (58)	1,164 (471)
Subtotal				1,202 (486)	144 (58)	1,346 (545)
Drosophila digressa—Unit 8.	*Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 5.	Unit 15		55 (22)	72 (29)	127 (51)
		Unit 38		298 (121)	236 (95)	534 (216)
Subtotal				353 (143)	308 (125)	661 (267)
Drosophila digressa—Unit 6.	*Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 6.	Unit 16		156 (63)		156 (63)
		Unit 40		1,239 (501)	4 (2)	1,243 (503)
Subtotal				1,395 (565)	4 (2)	1,399 (566)
Drosophila digressa—Unit 2.	*Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 11.	Unit 29		494 (200)		494 (200)
		Unit 30	7,235 (2,928)	6,498 (2,630)		13,732 (5,557)
		Unit 51	643 (260)	16,906 (6,841)	316 (128)	17,865 (7,230)
Subtotal			7,877 (3,188)	23,898 (9,671)	316 (128)	32,091 (12,987)
Drosophila digressa—Unit 9.	*Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 12.	Unit 37	1,906 (771)		<1 (<1)	1,906 (771)
Subtotal			1,906 (771)		<1 (<1)	1,906 (771)

TABLE 3—PROPOSED CRITICAL HABITAT UNITS BY ECOSYSTEM, LAND OWNERSHIP, AND SIZE—Continued
[Area estimates reflect all land within critical habitat unit boundaries]

Animal unit	Plant section	Plant unit	Federal (ac (ha))	State (ac (ha))	Private/other (ac (ha))	Total (ac (ha))
Drosophila digressa—Unit 5.	*Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 13.	Unit 41		411 (166)	3,001 (1,214)	3,412 (1,381)
Subtotal				411 (166)	3,001 (1,214)	3,412 (1,381)
	Cyrtandra nanawaleensis—Section 15	Unit 47		274 (111)		274 (111)
Subtotal				274 (111)		274 (111)
	Cyrtandra nanawaleensis—Section 16	Unit 48		582 (235)	7 (3)	589 (238)
Subtotal				582 (235)	7 (3)	589 (238)
Mesic Coastal						
	Bidens hillebrandiana ssp. *hillebrandiana*—Section 2.	Unit 6		2 (1)		2 (1)
		Unit 53		80 (33)	245 (99)	325 (132)
Subtotal				82 (33)	245 (99)	327 (132)
Wet Forest and Wet Grassland and Shrubland						
	Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3.	Unit 8		6,805 (2,754)		6,805 (2,754)
		Unit 9		<1 (<1)	1 (<1)	1 (<1)
		Unit 54		5,913 (2,392)	1,738 (703)	7,651 (3,096)
Subtotal				12,718 (5,147)	1,739 (704)	14,457 (5,851)
	Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense—Section 7.	Unit 23	9 (4)			9 (4)
		Unit 45	5,494 (2,223)			5,494 (2,223)
Subtotal			5,503 (2,227)			5,503 (2,227)
	Cyrtandra nanawaleensis, Cyrtandra wagneri, Phyllostegia floribunda—Section 10.	Unit 28		155 (63)		155 (63)
		Unit 46		12,213 (4,942)	6 (2)	12,219 (4,945)
Subtotal				12,368 (5,005)	6 (2)	12,374 (5,008)
Wet Forest and Mesic Forest						
	Cyanea tritomantha, Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 8.	Unit 24	1,956 (792)	125 (51)		2,081 (842)
		Unit 44	318 (129)	5,439 (2,201)	649 (263)	6,406 (2,593)
Subtotal			2,274 (920)	5,564 (2,252)	649 (263)	8,487 (3,435)
	Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 9.	Unit 24	36 (14)	65 (26)		101 (41)
		Unit 43	1,689 (683)	4,183 (1,693)		5,872 (2,376)
Subtotal			1,725 (698)	4,248 (1,719)		5,973 (2,417)
Drosophila digressa—Unit 3.	*Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae*—Section 14.	Unit 42	8,769 (3,549)	12 (5)		8,781 (3,554)
Subtotal			8,769 (3,549)	12 (5)		8,781 (3,554)
Wet Forest, Mesic Forest, and Mesic Grassland and Shrubland						
	Cyrtandra nanawaleensis—Section 17	Unit 49		875 (354)	1 (<1)	875 (354)
Subtotal				875 (354)	1 (<1)	875 (354)
	Cyrtandra nanawaleensis—Section 18	Unit 50		562 (227)	1 (<1)	562 (227)
Subtotal				562 (227)	1 (<1)	562 (227)
Dry Forest						
	Schiedea hawaiiensis—Section 19	Unit 55		6,822 (2,761)		6,822 (2,761)
Subtotal				6,822 (2,761)		6,822 (2,761)

TABLE 3—PROPOSED CRITICAL HABITAT UNITS BY ECOSYSTEM, LAND OWNERSHIP, AND SIZE—Continued
[Area estimates reflect all land within critical habitat unit boundaries]

Animal unit	Plant section	Plant unit	Federal (ac (ha))	State (ac (ha))	Private/other (ac (ha))	Total (ac (ha))
Mesic Forest						
Drosophila digressa—Unit 4.	.....	.....	.....	167 (67)	.....	167 (67)
Subtotal	.....	.....	.....	167 (67)	.....	167 (67)
Total	.....	.....	32,151 (13,011)	82,177 (33,256)	7,950 (3,217)	122,277 (49,484)

Note: Area sizes may not sum due to rounding.

TABLE 4—PROPOSED CRITICAL HABITAT UNITS FOR 11 HAWAI'I ISLAND PLANT SPECIES.
[O=occupied critical habitat, UN=unoccupied critical habitat.]

Plant Section	**Plant Unit**	***Bidens hillebrandiana* ssp. *hillebrandiana***	***Cyanea marksii***	***Cyanea tritomantha***	***Cyrtandra nanawaleensis***	***Cyrtandra wagneri***	***Melicope remyi***	***Phyllostegia floribunda***	***Pittosporum hawaiiense***	***Schiedea diffusa* ssp. *macraei***	***Schiedea hawaiiensis***	***Stenogyne cranwelliae***	**Corresponding critical habitat map in the Code of Federal Regulations (CFR)**
1	3	-	-	O	-	O	O	O	UN	UN	-	O	11a
	52	-	-	O	-	O	O	O	UN	UN	-	O	119
2	6	O	-	-	-	-	-	-	-	-	-	-	24a
	53	O	-	-	-	-	-	-	-	-	-	-	120
3	8	-	-	O	-	-	UN	UN	O	O	-	O	27a
	9	-	-	O	-	-	UN	UN	O	O	-	O	38a
	54	-	-	O	-	-	UN	UN	O	O	-	O	121
4	15	-	O	-	-	-	-	O	O	UN	-	UN	58a
	39	-	O	-	-	-	-	O	O	UN	-	UN	108
5	15	-	O	-	-	-	-	UN	UN	UN	-	UN	59a
	38	-	O	-	-	-	-	UN	UN	UN	-	UN	107
6	16	-	O	-	-	-	-	O	UN	UN	-	UN	60a
	40	-	O	-	-	-	-	O	UN	UN	-	UN	109
7	23	-	-	-	-	UN	-	O	O	-	-	-	73a
	45	-	-	-	-	UN	-	O	O	-	-	-	114
8	24	-	-	O	-	UN	-	-	O	O	-	UN	78a
	44	-	-	O	-	UN	-	-	O	O	-	UN	113
9	24	-	-	-	-	UN	-	-	O	O	-	UN	81a
	43	-	-	-	-	UN	-	-	O	O	-	UN	112
10	28	-	-	-	O	UN	-	O	-	-	-	-	89a
	46	-	-	-	O	UN	-	O	-	-	-	-	115
11	29	-	-	O	-	UN	-	O	O	O	-	UN	91a
	30	-	-	O	-	UN	-	O	O	O	-	UN	98a
	51	-	-	O	-	UN	-	O	O	O	-	UN	118
12	37	-	O	-	-	-	-	UN	UN	UN	-	UN	106
13	41	-	O	-	-	-	-	O	O	UN	-	UN	110
14	42	-	-	UN	-	UN	-	UN	O	O	-	UN	111
15	47	-	-	-	O	-	-	-	-	-	-	-	116
16	48	-	-	-	O	-	-	-	-	-	-	-	116
17	49	-	-	-	O	-	-	-	-	-	-	-	117
18	50	-	-	-	O	-	-	-	-	-	-	-	117
19	55	-	-	-	-	-	-	-	-	-	UN	-	122

TABLE 5—PROPOSED CRITICAL HABITAT UNITS FOR DROSOPHILA DIGRESSA (PICTURE-WING FLY)

Critical habitat unit	Occupied/unoccupied	Corresponding critical habitat map in the Code of Federal Regulations (CFR)
Drosophila digressa—Unit 1	Unoccupied	*Drosophila digressa*—Hawai'i Island, HI—Unit 1.
Drosophila digressa—Unit 2	Occupied	*Drosophila digressa*—Hawai'i Island, HI—Unit 2.
Drosophila digressa—Unit 3	Unoccupied	*Drosophila digressa*—Hawai'i Island, HI—Unit 3.
Drosophila digressa—Unit 4	Occupied	*Drosophila digressa*—Hawai'i Island, HI—Unit 4.
Drosophila digressa—Unit 5	Unoccupied	*Drosophila digressa*—Hawai'i Island, HI—Unit 5, Unit 6, Unit 7, Unit 8, Unit 9.
Drosophila digressa—Unit 6	Unoccupied.	
Drosophila digressa—Unit 7	Unoccupied.	
Drosophila digressa—Unit 8	Unoccupied.	
Drosophila digressa—Unit 9	Unoccupied.	

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat, for each of the 12 Hawai'i Island species, below.

Descriptions of Proposed Critical Habitat

We describe each section and unit separately, below, but first describe the common rationale for proposing areas of critical habitat as occupied and/or unoccupied critical habitat. All areas that are proposed as occupied habitat for a species are important for that species because these areas are either the last or one of the last remaining areas inhabited by the species and they meet the definition of critical habitat, making these areas necessary for maintaining the redundancy and representation for the species' conservation. This is the case for all sections and units, with the exception of *Schiedea hawaiiensis*—Section 19, which is proposed critical habitat, but is not currently occupied habitat for any of the 12 species. We note which areas are the last remaining area known to be inhabited by a species.

We analyzed whether occupied areas were adequate for the conservation of each of the 12 species based on conservation goals within the recovery plan (Service 2022a, entire). Occupied areas were not able to provide the space needed to meet the target number of reproductive populations and individuals for any of the 12 species, but for three species, no other areas containing physical or biological features are known, leaving nine species (*Drosophila digressa, Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Schiedea hawaiiensis*) for which additional areas containing at least one physical or biological feature essential to the conservation of the species are known. We have determined that all areas of unoccupied habitat that are proposed critical habitat for these species are essential for the conservation of these species because (1) they provide one or more of the physical or biological features necessary for the reestablishment of wild populations within their range, and (2) we have reasonable certainty that these areas will contribute to the conservation of the species by contributing to the areas needed to support the numbers of populations and reproducing individuals needed for recovery, thus helping to ensure resiliency, redundancy, and representation needed for conservation of these species. The establishment of multiple (redundancy), robust populations is a key component of conservation of these species (Service 2022a, pp. 29–30, 35, 39, 48–49). Due to the small numbers of individuals of each of these species, they require suitable habitat and space for expansion or introduction to achieve population levels that could approach recovery. Designating unoccupied areas as critical habitat for these species also supports recovery by allowing the habitat needed to establish additional populations able to withstand environmental stochasticity (resiliency) that otherwise has potential to eliminate a species from the one, or more, of the locations where it is currently found. Designating these unoccupied areas as critical habitat also promotes conservation actions to restore their historical, geographical, and ecological representation (representation), necessary for their recovery. For ease of reading and space efficiency, after first use of the full name of a plant section, we will refer to it by its section number only.

TABLE 6—LAND USE, THREATS TO HABITAT, AND POTENTIAL SPECIAL MANAGEMENT CONSIDERATIONS FOR CRITICAL HABITAT UNITS DESIGNATED FOR THE 12 HAWAI'I ISLAND SPECIES

Plant section	*Drosophila* unit	General land use	Threats	Special management
Section 1	Unit 1	A, B, C, D, E, F, G	O, P, Q	S, T, U.
Section 2		A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 3		A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 4	Unit 7	A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 5	Unit 8	A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 6	Unit 6	A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 7		A, B, C, D, F, H	O, P, Q, R	S, T, U.
Section 8		A, E, F, G, H, I, J, K, L	O, P, Q	S, T.
Section 9		A, E, F, H, I, J	O, P, Q, R	S, T, U.
Section 10		A, B, C, D, E, F, G, H, M	O, P, Q, R	S, T, U.
Section 11	Unit 2	A, B, C, D, E, F, H, K, N	O, P, Q, R	S, T, U.
Section 12	Unit 9	A, B, C, D, F, H	O, P, Q, R	S, T, U.
	Unit 4	A, B, C, D, E, F, H	O, P, Q, R	S, T, U.
Section 13	Unit 5	A, B, C, D, E, F, G, H	O, P, Q, R	S, T, U.
Section 14	Unit 3	A, E, F, H, I, J	O, P, Q, R	S, T, U.

TABLE 6—LAND USE, THREATS TO HABITAT, AND POTENTIAL SPECIAL MANAGEMENT CONSIDERATIONS FOR CRITICAL HABITAT UNITS DESIGNATED FOR THE 12 HAWAIʻI ISLAND SPECIES—Continued

Plant section	*Drosophila* unit	General land use	Threats	Special management
Section 15		A, B, C, D, E, F, N	O, P, Q, R	S, T, U.
Section 16		A, B, C, D, E, F, N	O, P, Q, R	S, T, U.
Section 17		A, B, C, D, E, F, N	O, P, Q, R	S, T, U.
Section 18		A, B, C, D, E, F, N	O, P, Q, R	S, T, U.
Section 19		A, B, C, D, E, F, H	O, P, Q, R	S, T, U.

Definition of Codes Used in Table 6

General land use:
(A) Watershed protection
(B) Ungulate and invasive plant control
(C) Natural resource monitoring
(D) Rare species protection and research
(E) Public hunting
(F) Public use and recreation
(G) Education and outreach
(H) Fire control
(I) Natural resource conservation including monitoring invasive plants and animals
(J) Enhancement of native rare plant resources
(K) Cultural uses
(L) Personal gathering
(M) Public use including traditional and customary rights of Native Hawaiians
(N) Timber management
Threats:
(O) Habitat degradation due to rooting by feral ungulates
(P) Intrusion of ecosystem altering invasive plants
(Q) Changes in canopy cover due to plant disease
(R) Fire
Special management considerations (see **Special Management Considerations or Protection**, in text above for additional detail):
(S) Feral ungulate control
(T Measures to control spread of invasive plants
(U) Fire management planning and wildfire response

Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 1 and Drosophila digressa—Unit 1

Section 1 and *Drosophila digressa*—Unit 1 consist of wet forest ecosystem from ʻŌʻōkala to Maulua Nui on the northeastern slope of Maunakea. Lands within this section and unit include approximately 25 percent in Federal ownership, 65 percent in State ownership, and 9 percent in private/other ownership (see table 3, above). Section 1 is comprised of two units: Unit 3 is a critical habitat unit within unit Hawaii 3 (see 50 CFR 17.99(k)(10) through (14)), which was previously designated for other plant species; and Unit 52 is a newly proposed critical habitat unit depicted on Map 119. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the Hilo Forest Reserve Humuʻula, Laupāhoehoe, and Pīhā Sections; the Laupāhoehoe Natural Area Reserve; and the Manowaialeʻe Forest Reserve. All Federal lands in this section and unit are managed by the Service within Hakalau Forest National Wildlife Refuge, Hakalau Forest Unit. For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats identified within this section and unit, see table 6, above (DLNR–DOFAW 2022, entire; DLNR and USDA 2016, p. 4; Service 2010, pp. 1–13, 1–33–1–34; Stewart 2010, entire). The State lands within this section and unit are managed under the Laupāhoehoe Forest Management Plan (DLNR and USDA 2016, entire) and the Mauna Kea Watershed Management Plan (Stewart 2010, entire). The Federal lands within this section and unit are managed under the Hakalau Forest National Wildlife Refuge Comprehensive Conservation Plan (Service 2010, pp. 2–20–2–40) and the Mauna Kea Watershed Management Plan (Stewart 2010, entire).

Section 1 is occupied by the plants *Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda,* and *Stenogyne cranwelliae.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Section 1 is important because it has the last remaining areas inhabited by *Cyrtandra wagneri* and *Melicope remyi,* and one of the last remaining areas inhabited by *Cyanea tritomantha, Phyllostegia floribunda,* and *Stenogyne cranwelliae,* making it an essential area for maintaining the redundancy and representation necessary for species' conservation. Although Section 1 is not known to be occupied by the plants *Pittosporum hawaiiense* and *Schiedea diffusa* ssp. *macraei,* and *Drosophila digressa*—Unit 1 is not known to be occupied by *Drosophila digressa,* this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, each plant species needs at least 10 populations, with at least 400 reproducing individuals per population for *Pittosporum hawaiiense* and 500 reproducing individuals per population for *Schiedea diffusa* ssp. *macraei* (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 12,059 ac (4,880 ha) of this section and unit overlap designated critical habitat for the federally endangered plants *Clermontia peleana, Cyanea platyphylla, Cyrtandra giffardii, Cyrtandra tintinnabula,* and *Phyllostegia warshaueri* (see 68 FR 39624; July 2, 2003).

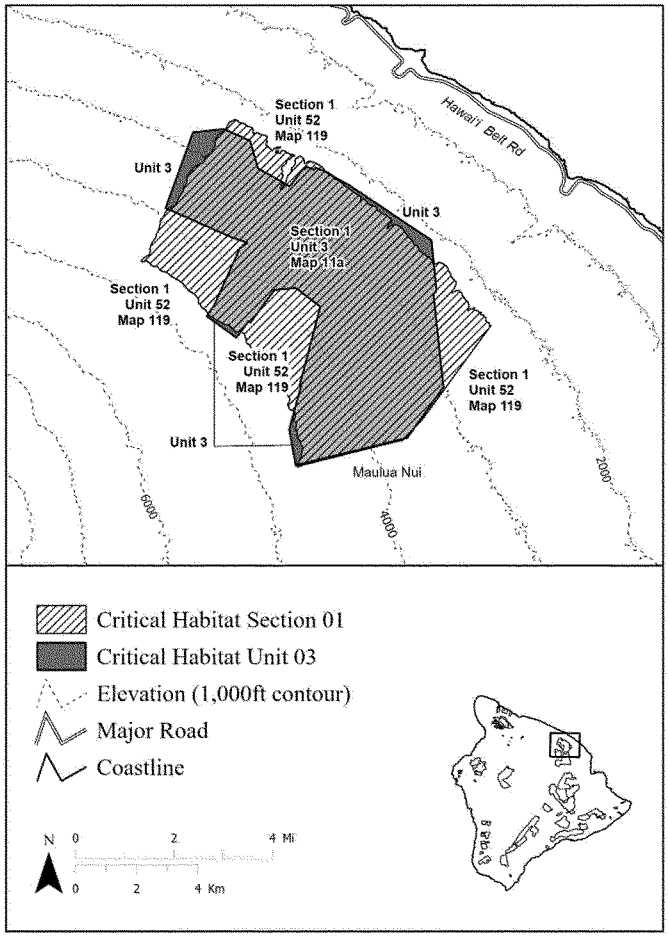


Figure 1. Area proposed as critical habitat for *Cyanea tritomantha*, *Cyrtandra wagneri*, *Melicope remyi*, *Phyllostegia floribunda*, *Pittosporum hawaiiense*, *Schiedea diffusa* ssp. *macraei*, *Stenogyne cranwelliae* in Section 1. Section 1 consists of multiple critical habitat units; a portion of an existing critical habitat unit on Hawai'i Island (Unit 3) and the area proposed as critical habitat on Hawai'i Island (Unit 52). Unit and map numbers for each section as published earlier (50 CFR 17.99(k)) are provided for ease of referencing.

Bidens hillebrandiana ssp. hillebrandiana—Section 2

Section 2 consists of coastal ecosystem from Pololū to Laupāhoehoe Iki on the northeastern slope of Kohala Mountain. Lands within this section include approximately 25 percent in State ownership and 75 percent in private/other ownership (see table 3, above). Section 2 is comprised of two units: Unit 6 is a critical habitat unit within unit Hawaii 6 (see 50 CFR 17.99(k)(25)), which was previously designated for another plant species; and Unit 53 is a newly proposed critical habitat unit depicted on Map 120. All State-owned lands in Section 2 are managed by the State of Hawaii as part of the Pololū Section of the Kohala Forest Reserve and the Pu'u o 'Umi Natural Area Reserve. The State lands within this section are managed under the Pu'u o 'Umi Management Plan (DLNR–DOFAW 1989, entire) and Kohala Mountain Watershed Management Plan Draft (Kohala Watershed Partnership [KWP] 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats identified within this section, see table 6, above (DLNR–DOFAW 1989, entire; KWP 2007, entire).

Section 2 is occupied by the plant *Bidens hillebrandiana* ssp. *hillebrandiana* and includes the coastal habitat, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the coastal ecosystem. This section is especially important because it is the last remaining area inhabited by the species, which makes it an important area for maintaining the redundancy and representation necessary for species' conservation. Approximately 2 ac (1 ha) of this section overlaps designated critical habitat for the federally endangered plant *Nothocestrum breviflorum* (see 68 FR 39624; July 2, 2003).

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 3

Section 3 consists of wet forest and wet grassland and shrubland ecosystems from Kahua to Puʻukapu on Kohala Mountain. Lands within this section include approximately 88 percent in State ownership and 12 percent in private/other ownership (see table 3, above). Section 3 is comprised of three units: Unit 8 and Unit 9 are critical habitat units within unit Hawaii 8 and unit Hawaii 9 (see 50 CFR 17.99(k)(27) through (38)), which were previously designated for other plant species; and Unit 54 is a newly proposed critical habitat unit depicted on Map 121. All State-owned lands in this section are managed by the State of Hawaii as part of the Kohala Forest Reserve, Kohala Watershed Forest Reserve, and Puʻu o ʻUmi Natural Area Reserve. The State lands within this section are managed under the Puʻu o ʻUmi Management Plan (DLNR–DOFAW 1989, entire) and the Kohala Mountain Watershed Management Plan Draft (KWP 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats identified within this section, see table 6, above (DLNR–DOFAW 1989, entire; KWP 2007, entire).

Section 3 is occupied by the plants *Cyanea tritomantha, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae,* and includes the wet forest and wet grassland and shrubland ecosystems, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest and wet grassland and shrubland ecosystems. Although Section 3 is not known to be occupied by *Melicope remyi* or *Phyllostegia floribunda,* this section contains unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, each species needs at least 10 populations, with at least 200 reproducing individuals per population for *Melicope remyi* and at least 500 reproducing individuals per population for *Phyllostegia floribunda* (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of these species and that this section contains one or more of the physical or biological features that are essential to the conservation of these species. Approximately 6,938 ac (2,808 ha) of this section overlaps designated critical habitat for the federally endangered plants *Clermontia drepanomorpha, Phyllostegia warshaueri,* and *Achyranthes mutica* (see 68 FR 39624; July 2, 2003); and for the picture-wing fly *Drosophila ochrobasis* Units 3 (Kohala Mountains East) and 4 (Kohala Mountains West) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 4 and Drosophila digressa—Unit 7

Section 4 and *Drosophila digressa*—Unit 7 consist of wet forest ecosystem from Kukuiopaʻe to ʻŌlelomoana on the southwestern slopes of Mauna Loa. Lands within this section and unit include approximately 89 percent in State ownership and 11 percent in private/other ownership (see table 3, above). Section 4 is comprised of two units: Unit 15 is a critical habitat unit within unit Hawaii 15 (see 50 CFR 17.99(k)(58) through (59)), which was previously designated for another plant species; and Unit 39 is a newly proposed critical habitat unit depicted on Map 108. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the South Kona Forest Reserve Kukuiopaʻe Section. The State lands within this section and unit are managed under the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats identified within this section and unit, see table 6, above (TMA 2007, pp. 26–37; DLNR–DOFAW 2022, entire).

Section 4 is occupied by the plants *Cyanea marksii, Phyllostegia floribunda,* and *Pittosporum hawaiiense.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 4 is not known to be occupied by the plants *Schiedea diffusa* ssp. *macraei* and *Stenogyne cranwelliae,* and *Drosophila digressa*—Unit 7 is not known to be occupied by *Drosophila digressa,* this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Schiedea diffusa* ssp. *macraei* needs at least 10 populations, with at least 500 reproducing individuals per population, and *Stenogyne cranwelliae* needs at least 20 populations, with at least 500 reproducing individuals per population (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 182 ac (73 ha) of this section and unit overlap designated critical habitat for the federally endangered plant *Cyanea stictophylla* (68 FR 39624; July 2, 2003).

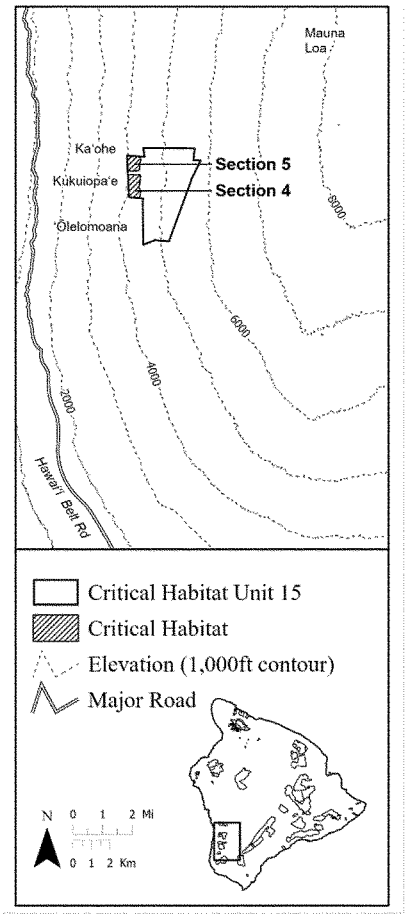


Figure 2. Area proposed as critical habitat for *Cyanea marksii*, *Phyllostegia floribunda*, *Pittosporum hawaiiense*, *Schiedea diffusa* ssp. *macraei*, and *Stenogyne cranwelliae* in the portion of Section 4 within Unit 15 and in the portion of Section 5 within Unit 15. Sections 4 and 5 both overlay Unit 15, which is an existing critical habitat unit on Hawai'i Island, but do not overlay each other.

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 5 and Drosophila digressa—Unit 8

Section 5 and *Drosophila digressa*—Unit 8 consist of wet forest ecosystem in Ka'ohe on the southwestern slopes of Mauna Loa. Lands within this section and unit include approximately 53 percent in State ownership and 47 percent in private/other ownership (see table 3, above). Section 5 is comprised of two units: Unit 15 is a critical habitat unit within unit Hawaii 15 (see 50 CFR 17.99(k)(58) through (59)), which was previously designated for another plant species; and Unit 38 is a newly proposed critical habitat unit depicted on Map 107. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the South Kona Forest Reserve, Ka'ohe Section and Kukuiopa'e Section. The State lands within this section and unit are managed under the Three Mountain Alliance Management Plan (TMA 2007, pp. 47–50). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats identified within this section and unit, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 26–37).

Section 5 is occupied by the plant *Cyanea marksii.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 5 is not known to be occupied by the plants *Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae,* and *Drosophila digressa*—Unit 8 is not known to be occupied by *Drosophila digressa,* this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Phyllostegia floribunda, Pittosporum hawaiiense,* and *Schiedea diffusa* ssp. *macraei* each need at least 10 populations, with at least 500 reproducing individuals per population for *Phyllostegia floribunda* and *Schiedea diffusa* ssp. *macraei* and at least 400 reproducing individuals per population for *Pittosporum hawaiiense* (Service 2022a, p. 43–44). For *Stenogyne cranwelliae,* at least 20 populations, each with at least 500 reproducing

individuals, are necessary for recovery (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 127 ac (51 ha) of this section and unit overlap designated critical habitat for the federally endangered plant *Cyanea stictophylla* (68 FR 39624; July 2, 2003).

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 6 and Drosophila digressa—Unit 6

Section 6 and *Drosophila digressa*—Unit 6 consist of wet forest ecosystem in Kīpāhoehoe on the southwestern slopes of Mauna Loa. Lands within this section and unit include approximately 99.7 percent in State ownership and 0.3 percent in private/other ownership (see table 3, above). Section 6 is comprised of two units: Unit 16 is a critical habitat unit within unit Hawaii 16 (see 50 CFR 17.99(k)(60) through (61)), which was previously designated for another plant species; and Unit 40 is a newly proposed critical habitat unit depicted on Map 109. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the Kīpāhoehoe Natural Area Reserve. The State lands within this section and unit are managed under the Kīpāhoehoe Natural Area Reserve Management Plan (DLNR–DOFAW 2002, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section and unit, see table 6, above (DLNR–DOFAW 2002, entire).

Section 6 is occupied by the plants *Cyanea marksii* and *Phyllostegia floribunda.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 6 is not known to be occupied by *Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* or *Stenogyne cranwelliae,* and *Drosophila digressa*—Unit 6 is not known to be occupied by *Drosophila digressa,* this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Pittosporum hawaiiense* and *Schiedea diffusa* ssp. *macraei* each need at least 10 populations, with at least 400 reproducing individuals per population for *Pittosporum hawaiiense* and at least 500 reproducing individuals per population for *Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 156 ac (63 ha) of this section and unit overlap designated critical habitat for the federally endangered plant *Cyanea stictophylla* (68 FR 39624; July 2, 2003).

Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense—Section 7

Section 7 consists of wet forest and wet grassland and shrubland ecosystems from Pānau Nui to Kamoamoa on eastern slope of Kīlauea Volcano, entirely on Federal land (see table 3, above). Section 7 is comprised of two units: Unit 23 is a critical habitat unit within unit Hawaii 23 (see 50 CFR 17.99(k)(74) through (75)), which was previously designated for another plant species; and Unit 45 is a newly proposed critical habitat unit depicted on Map 114. Lands within this section are entirely under Federal ownership managed by the National Park Service within Hawai'i Volcanoes National Park. Federal lands within this section are managed by the National Park Service under the Hawai'i Volcanoes National Park General Management Plan (National Park Service 2015, 2016, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (National Park Service 2015, 2016, entire).

Section 7 is occupied by the plants *Phyllostegia floribunda* and *Pittosporum hawaiiense* and includes the wet forest and wet grassland and shrubland ecosystems, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest and wet grassland and shrubland ecosystems. Although Section 7 is not known to be occupied by *Cyrtandra wagneri,* this section contains unoccupied habitat that is essential for the conservation of this species because it (1) is habitat for this species, (2) provides at least one the physical or biological features essential for the conservation of this species, and (3) contributes to the area of habitat needed to reestablish wild populations within its range in support of recovery criteria. At least 10 populations, each with at least 500 reproducing individuals are necessary for recovery of *Cyrtandra wagneri* (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of this species and that this section contains one or more of the physical or biological features that are essential to the conservation of this species. Approximately 9 ac (4 ha) of this section overlaps designated critical habitat for the federally endangered plant *Pleomele hawaiiensis* (68 FR 39624; July 2, 2003).

Cyanea tritomantha, Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 8

Section 8 consists of wet and mesic forest ecosystems from Nīnole to Pāhala on the southern slopes of Mauna Loa. Lands within this section include approximately 27 percent in Federal ownership, 66 percent in State ownership, and 8 percent in private/other ownership (see table 3, above). Section 8 is comprised of two units: Unit 24 is a critical habitat unit within unit Hawaii 24 (see 50 CFR 17.99(k)(76) through (81)), which was previously designated for another plant species; and Unit 44 is a newly proposed critical habitat unit depicted on Map 113. Federal lands in Section 8 are managed by the National Park Service within the Hawai'i Volcanoes National Park and in accordance with their Hawai'i Volcanoes National Park General Management Plan (National Park Service 2015, 2016, entire). All State-owned lands in this section are managed by the State of Hawaii, are part of the Ka'ū Forest Reserve, and are managed under the Ka'ū Forest Reserve Management Plan (DLNR–DOFAW 2012, entire). For general land use, threats, and special management considerations or protection measures to

reduce or alleviate the threats within Section 8, see table 6, above (DLNR–DOFAW 2012, p. 3; TMA 2007, pp. 44–46).

Section 8 is occupied by the plants *Cyanea tritomantha, Pittosporum hawaiiense,* and *Schiedea diffusa* ssp. *macraei* and includes the wet and mesic forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet and mesic forest ecosystems. Although Section 8 is not known to be occupied by the plants *Cyrtandra wagneri* or *Stenogyne cranwelliae,* this section contains unoccupied habitat that is essential for the conservation of these species because it (1) is habitat for these species, (2) provides at least one the physical or biological features essential for the conservation of each of these species, and (3) contributes to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Cyrtandra wagneri* needs at least 10 populations, each with at least 500 reproducing individuals, and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of these species and that this section contains one or more of the physical or biological features that are essential to the conservation of these species. Approximately 2,081 ac (842 ha) of the section overlaps designated critical habitat for the federally endangered plant *Argyroxiphium kauense* (68 FR 39624; July 2, 2003) and for the picture-wing fly *Drosophila heteroneura* Unit 1 (Kaʻū Forest) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

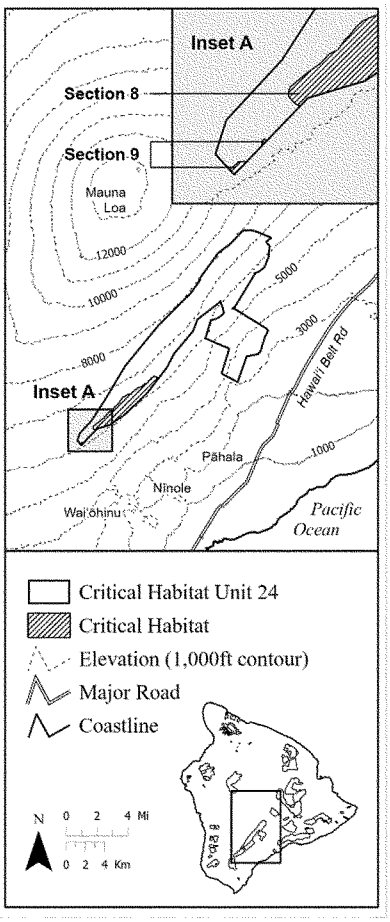


Figure 3. Area proposed as critical habitat for *Cyanea tritomantha*, *Cyrtandra wagneri*, *Pittosporum hawaiiense*, *Schiedea diffusa* ssp. *macraei*, and *Stenogyne cranwelliae* in the portion of Section 8 within Unit 24 and for *Cyrtandra wagneri*, *Pittosporum hawaiiense*, *Schiedea diffusa* ssp. *macraei*, and *Stenogyne cranwelliae* in the portion of Section 9 within Unit 24. Sections 8 and 9 both overlay Unit 24, which is an existing critical habitat unit on Hawai'i Island, but do not overlay each other.

Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 9

Section 9 consists of wet and mesic forest ecosystems from Waiʻōhinu to Nīnole on the southern slopes of Mauna Loa. Lands within this section include approximately 29 percent in Federal ownership and 71 percent in State ownership (see table 3, above). Section 9 is comprised of two units: Unit 24 is a critical habitat unit within unit Hawaii 24 (see 50 CFR 17.99(k)(76) through (81)), which was previously designated for another plant species; and Unit 43 is a newly proposed critical habitat unit depicted on Map 112. Federal lands in Section 9 are managed by the National Park Service within the Hawaiʻi Volcanoes National Park and in accordance with their Hawaiʻi Volcanoes National Park General Management Plan (National Park Service 2015, 2016, entire). All State-owned lands in this section are managed by the State of Hawaii, are part of the Kaʻū Forest Reserve, and are managed under the Kaʻū Forest Reserve Management Plan (DLNR–DOFAW 2012, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (TMA 2007, pp. 26–37; DLNR–DOFAW 2012, pp. 1–3; DLNR 2017, pp. 3–5).

Section 9 is occupied by the plants *Pittosporum hawaiiense* and *Schiedea diffusa* ssp. *macraei* and includes the wet and mesic forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet and mesic forest ecosystems. Although Section 9 is not known to be occupied by *Cyrtandra wagneri* or *Stenogyne cranwelliae,* this section contains unoccupied habitat that is essential for the conservation of these species because it (1) is habitat for these species, (2) provides at least one the physical or biological features essential for the conservation of each of these species, and (3) contributes to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Cyrtandra wagneri* needs at least 10 populations, each with at least 500 reproducing individuals, and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of these species and that this section contains one or more of the physical or biological features that are essential to the conservation of these species. Approximately 101 ac (41 ha) of this section overlap designated critical habitat for the federally endangered plant *Argyroxiphium kauense* (68 FR 39624; July 2, 2003) and for the picture-wing fly *Drosophila ochrobasis* Unit 5 (Upper Kahuku) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

Cyrtandra nanawaleensis, Cyrtandra wagneri, Phyllostegia floribunda—Section 10

Section 10 consists of wet forest and wet grassland and shrubland ecosystems from Kahaualeʻa to Wao Kele o Puna near the east rift zone of Kīlauea Volcano in the district of Puna. Lands within this section include approximately 100 percent in State ownership and less than 1 percent in private/other ownership (see table 3, above). Section 10 is comprised of two units: Unit 28 is a critical habitat unit within unit Hawaii 28 (see 50 CFR 17.99(k)(89)), which was previously designated for another plant species; and Unit 46 is a newly proposed critical habitat unit depicted on Map 115. Lands within this section are almost entirely under State ownership managed by the State of Hawaii within the Kahaualeʻa Natural Area Reserve and the State of Hawaii Office of Hawaiian Affairs within the Wao Kele o Puna Forest Reserve. The State lands within this section are managed under the Wao Kele o Puna Comprehensive Management Plan (Nālehualawakuʻulei 2017, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 26–37; Nālehualawakuʻulei 2017, entire).

Section 10 is occupied by the plants *Cyrtandra nanawaleensis* and *Phyllostegia floribunda* and includes the wet forest and wet grassland and shrubland, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest and wet grassland and shrubland ecosystems. Although Section 10 is not known to be occupied by *Cyrtandra wagneri,* this section contains unoccupied habitat that is essential for the conservation of this species because it (1) is habitat for this species, (2) provides at least one the physical or biological features essential for the conservation of this species, and (3) contributes to the area of habitat needed to reestablish wild populations within its range in support of recovery criteria. At least 10 populations, each with at least 500 reproducing individuals are necessary for recovery of *Cyrtandra wagneri* (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of this species and that this section contains one or more of the physical or biological features that are essential to the conservation of this species. Approximately 155 ac (63 ha) of this section overlaps designated critical habitat for the federally endangered plant *Adenophorus periens* (68 FR 39624; July 2, 2003).

Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 11 and Drosophila digressa—Unit 2

Section 11 and *Drosophila digressa*—Unit 2 consist of wet forest ecosystem from ʻŌlaʻa to Upper Waiākea on the eastern slope of Mauna Loa and partially on the northern slope of Kīlauea Volcano. Lands within this section and unit include approximately 25 percent in Federal ownership, 74 percent in State ownership, and 1 percent in private/other ownership (see table 3, above). Section 11 is comprised of three units: Unit 29 and Unit 30 are critical habitat units within unit Hawaii 29 and unit Hawaii 30 (see 50 CFR 17.99(k)(90) through (103)), which were previously designated for other plant species; and Unit 51 is a newly proposed critical habitat unit depicted on Map 118. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the Hilo Forest Reserve Kūkūau Section, ʻŌlaʻa Forest Reserve Mountain View Section, Upper Waiākea Forest Reserve, Waiākea Forest Reserve, Puʻu Makaʻala Natural Area Reserve, and Waiākea 1942 Lava Flow Natural Area Reserve. All Federal lands in this section and unit are managed by the National Park Service within the Hawaiʻi Volcanoes National Park. The State lands within this section and unit are managed under the Puʻu Makaʻala Natural Area Reserve Management Plan (DLNR–DOFAW 2013, entire) and the Three Mountain Alliance's Management Plan (TMA 2007, entire). The Federal lands within this section and unit are managed under the Hawaiʻi Volcanoes National Park General Management Plan (National Park Service 2015, 2016, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section and unit, see table 6 (National Park

Service 2015, 2016, entire; DLNR–DOFAW 2013, p. 21; DLNR–DOFAW 2022, entire; TMA 2007, pp. 40–43).

Section 11 is occupied by the plants *Cyanea tritomantha, Phyllostegia floribunda, Pittosporum hawaiiense,* and *Schiedea diffusa* ssp. *macraei,* and *Drosophila digressa*—Unit 2 is occupied by the picture-wing fly *Drosophila digressa.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 11 is not known to be occupied by *Cyrtandra wagneri* or *Stenogyne cranwelliae,* this section contains unoccupied habitat that is essential for the conservation of these species because it (1) is habitat for these species, (2) provides at least one the physical or biological features essential for the conservation of each of these species, and (3) contributes to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Cyrtandra wagneri* needs at least 10 populations, each with at least 500 reproducing individuals, and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of these species and that this section contains one or more of the physical or biological features that are essential to the conservation of these species. Approximately 14,665 ac (5,935 ha) of this section and unit overlaps designated critical habitat for the federally endangered plants *Clermontia peleana, Cyanea stictophylla, Cyrtandra giffardii, Phyllostegia velutina,* and *Sicyos alba* (68 FR 39624; July 2, 2003), and for the picture-wing fly *Drosophila mulli* Unit 1 (Olaʻa Forest) and Unit 3 (Waiākea Forest) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 12 and Drosophila digressa—Unit 9

Section 12 and *Drosophila digressa*—Unit 9 consist of wet forest ecosystem in Hoʻokena on the southwestern slopes of Mauna Loa. Newly proposed critical habitat for Section 12 is entirely within critical habitat Unit 37 depicted on Map 106 and includes approximately 100 percent Federal land with less than 1 ac (less than 1 ha) of land that is privately owned or has other ownership (see table 3, above). Lands within this section and unit are almost entirely managed by the Service within Hakalau Forest National Wildlife Refuge's Kona Forest Unit and in accordance with the Hakalau Forest National Wildlife Refuge Comprehensive Conservation Plan (Service 2010, pp. 2–13–2–19, 2–33–2–40). The State lands within this section and unit are managed under the Three Mountain Alliance Management Plan (TMA 2007, pp. 47–50). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section and unit, see table 6, above (Service 2010, entire; TMA 2007, pp. 26–37).

Section 12 is occupied by the plant *Cyanea marksii.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 12 is not known to be occupied by *Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* or *Stenogyne cranwelliae,* and *Drosophila digressa*—Unit 9 is not known to be occupied by *Drosophila digressa,* this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Phyllostegia floribunda* and *Schiedea diffusa* ssp. *macraei* each need at least 10 populations, with at least 500 reproducing individuals per population; *Pittosporum hawaiiense* needs at least 10 populations, each with at least 400 reproducing individuals; and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). For (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 1,482 ac (600 ha) of this section and unit overlap designated critical habitat for the picture-wing fly *Drosophila heteroneura* Unit 2 (Kona Refuge) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

Drosophila digressa—Unit 4

Drosophila digressa—Unit 4 consists of mesic forest ecosystem at Manukā on the southern slopes of Mauna Loa, with 100 percent of lands in State ownership (see table 3, above). All State-owned lands in this unit are managed by the State of Hawaii as part of the Manukā Natural Area Reserve, under the Manukā Natural Area Reserve Draft Management Plan (DLNR–DOFAW 1992, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this unit, see table 6, above (DLNR–DOFAW 1992, entire).

Drosophila digressa—Unit 4 is occupied by the picture-wing fly *Drosophila digressa* and includes the mesic forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the mesic forest ecosystem. This entire unit (167 ac, 67 ha) overlaps designated critical habitat (50 CFR 17.99(k)(64) through (69)) for the federally endangered plants *Colubrina oppositifolia, Diellia erecta* (now listed as *Asplenium dielerectum*), *Flueggea neowawraea, Gouania vitifolia, Neraudia ovata,* and *Pleomele hawaiiensis* (68 FR 39624; July 2, 2003).

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 13 and Drosophila digressa—Unit 5

Section 13 and *Drosophila digressa*—Unit 5 consist of wet forest ecosystem from Kīpāhoehoe to Honomalino on the southwestern slopes of Mauna Loa. Lands within this section and unit include approximately 12 percent in State ownership and 88 percent in private/other ownership (see table 3, above). Newly proposed critical habitat for Section 13 is entirely within critical habitat Unit 41 depicted on Map 110. All State-owned lands in this section and unit are managed by the State of Hawaii as part of the Kīpāhoehoe Natural Area Reserve and South Kona Forest Reserve Kapua-Manukā Section. Some private lands are owned by The Nature Conservancy, within the Kona Hema Preserve. The State lands within this section and unit are managed under the Kīpāhoehoe Natural Area Reserve Management Plan (DLNR–DOFAW 2002, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). The Nature Conservancy's land is managed under the Forest

Stewardship Management Plan for the Kona Hema Preserve (Giffin 2017, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section and unit, see table 6, above (DLNR–DOFAW 2002, entire).

Section 13 is occupied by the plants *Cyanea marksii, Phyllostegia floribunda,* and *Pittosporum hawaiiense.* This section and unit include the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. Although Section 13 is not known to be occupied by *Schiedea diffusa* ssp. *macraei* and *Stenogyne cranwelliae,* and *Drosophila digressa*—Unit 5 is not known to be occupied by *Drosophila digressa,* this section and unit contains unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Schiedea diffusa* ssp. *macraei* needs at least 10 populations, each with at least 500 reproducing individuals, and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. There is no critical habitat for other endangered or threatened species within this section and unit.

Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. macraei, Stenogyne cranwelliae—Section 14 and Drosophila digressa—Unit 3

Section 14 and *Drosophila digressa*—Unit 3 are entirely overlapping and consist of wet and mesic forest ecosystems at Kahuku on the southern slopes of Mauna Loa. Newly proposed critical habitat for Section 14 is comprised of a single unit of newly proposed critical habitat, Unit 42 depicted on Map 111. Lands within this section and unit include approximately 100 percent in Federal ownership and less than 1 percent in State ownership (see table 3, above). Federal lands are managed by the National Park Service within the Hawai'i Volcanoes National Park in accordance with the Hawai'i Volcanoes National Park General Management Plan (National Park Service 2015, 2016, entire). All State-owned lands in this section and unit are managed by the State of Hawaii, are part of the Ka'ū Forest Reserve, and are managed under the Ka'ū Forest Reserve Management Plan (DLNR–DOFAW 2012, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section and unit, see table 6, above (TMA 2007, pp. 26–37; DLNR–DOFAW 2012, pp. 1–3; DLNR 2017, pp. 3–5).

Section 14 is occupied by the plants *Pittosporum hawaiiense* and *Schiedea diffusa* ssp. *macraei.* This section and unit include the wet and mesic forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet and mesic forest ecosystems. Although Section 14 is not known to be occupied by the plants *Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda,* or *Stenogyne cranwelliae,* or by the picture-wing fly *Drosophila digressa* in *Drosophila digressa*—Unit 3, this section and unit contain unoccupied habitat that is essential for the conservation of these species because they (1) are habitat for these species, (2) provide at least one the physical or biological features essential for the conservation of each of these species, and (3) contribute to the area of habitat needed to reestablish wild populations within their range in support of recovery criteria for each of these species. For recovery, *Cyanea tritomantha, Cyrtandra wagneri,* and *Phyllostegia floribunda* each need at least 10 populations, with at least 500 reproducing individuals per population, and *Stenogyne cranwelliae* needs at least 20 populations, each with at least 500 reproducing individuals (Service 2022a, p. 43–44). *Drosophila digressa* needs at least 10 stable populations for recovery (Service 2022a, p. 49). Therefore, we are reasonably certain that this section and unit will contribute to the conservation of these species and that this section and unit contain one or more of the physical or biological features that are essential to the conservation of these species. Approximately 681 ac (275 ha) of this section and unit overlap designated critical habitat for the picture-wing fly *Drosophila heteroneura* Unit 3 (Lower Kahuku) (see 50 CFR 17.95(i) and 73 FR 73795, December 4, 2008).

Cyrtandra nanawaleensis—Section 15

Section 15 consists of wet forest ecosystem at Kamā'ili near the east rift zone of Kīlauea Volcano in the district of Puna. Lands within this section are entirely under State ownership managed by the State of Hawaii within the Keau'ohana Forest Reserve (see table 3, above). Section 15 is comprised of one unit: Unit 47, which is a newly proposed critical habitat unit depicted on Map 116. The State lands within this section are managed under the Three Mountain Alliance's Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 40–43).

Section 15 is occupied by the plant *Cyrtandra nanawaleensis* and includes the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. There is no critical habitat for other endangered or threatened species within the section.

Cyrtandra nanawaleensis—Section 16

Section 16 consists of wet forest ecosystem in Pāhoa near the east rift zone of Kīlauea Volcano in the district of Puna. Lands within this section include approximately 99 percent under State ownership and 1 percent in private/other ownership (see table 3, above). Section 16 is comprised of one unit: Unit 48, which is a newly proposed critical habitat unit depicted on Map 116. All State-owned lands in this section are managed by the State of Hawaii as part of the Nānāwale Forest Reserve, under the Three Mountain Alliance's Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 40–43).

Section 16 is occupied by the plant *Cyrtandra nanawaleensis* and includes the wet forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest ecosystem. There is no critical habitat for other endangered or threatened species within the section.

Cyrtandra nanawaleensis—Section 17

Section 17 consists of wet and mesic forest and mesic grassland and shrubland ecosystems at Malama-Kī near the east rift zone of Kīlauea Volcano in the district of Puna. Lands within this section include approximately 99 percent under State ownership and 1 percent in private/other ownership (see table 3, above). Section 17 is comprised of one unit: Unit 49, which is a newly proposed critical habitat unit depicted on Map 117. State-owned lands within this section are managed by the State of Hawaii within the Malama-Kī Forest Reserve, under the Three Mountain Alliance's Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 40–43).

Section 17 is occupied by the plant *Cyrtandra nanawaleensis* and includes the wet forest, mesic forest, and mesic grassland and shrubland; the moisture regime; and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest, mesic forest, and mesic grassland and shrubland ecosystems. There is no critical habitat for other endangered or threatened species within the section.

Cyrtandra nanawaleensis—Section 18

Section 18 consists of wet and mesic forest and mesic grassland and shrubland ecosystems at Kapoho near the east rift zone of Kīlauea Volcano in the district of Puna. Lands within this section include approximately 99 percent under State ownership and 1 percent in private/other ownership (see table 3, above). Section 18 is comprised of one unit: Unit 50, which is a newly proposed critical habitat unit depicted on Map 117. State-owned lands within this section are managed by the State of Hawaii within the Nānāwale Forest Reserve Halepuaʻa section, under the Three Mountain Alliance's Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2022, entire; TMA 2007, pp. 40–43).

Section 18 is occupied by the plant *Cyrtandra nanawaleensis* and includes the wet forest, mesic forest, and mesic grassland and shrubland; the moisture regime; and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the wet forest, mesic forest, and mesic grassland and shrubland ecosystems. There is no critical habitat for other endangered or threatened species within the section.

Schiedea hawaiiensis—Section 19

Section 19 consists of dry forest ecosystems adjacent to the Pōhakuloa Training Area in the saddle of Maunakea, Mauna Loa, and Hualālai. Lands within this section are entirely in State ownership (see table 3, above). Proposed critical habitat for Section 19 is entirely within proposed critical habitat Unit 55 depicted on Map 122. The State-owned lands in this section include the Puʻu Anahulu Game Management Area and are managed under the Mauna Kea Watershed Management Plan (Stewart 2010, entire) and the Three Mountain Alliance Management Plan (TMA 2007, entire). For general land use, threats, and special management considerations or protection measures to reduce or alleviate the threats within this section, see table 6, above (DLNR–DOFAW 2015, entire; TMA 2007, pp. 51–55).

Section 19 is not known to be occupied by *Schiedea hawaiiensis,* but this section includes the dry forest, the moisture regime, and canopy, subcanopy, and understory native plant species identified as the physical or biological features in the dry forest ecosystems. This section also provides an area for potential population establishment, which is essential for the conservation of *Schiedea hawaiiensis* because 10 populations are identified as part of the recovery criteria, but only 1 wild population and 3 reintroduced populations are extant. Although Section 19 contains unoccupied habitat for *Schiedea hawaiiensis,* we have determined this area is essential for the conservation of this species because it (1) is habitat for this species, (2) provides at least one the physical or biological features essential for the conservation of this species, and (3) contributes to the area of habitat needed to reestablish wild populations within its range in support of recovery criteria. At least 10 populations, each with at least 500 reproducing individuals for, are necessary for recovery (Service 2022a, p. 43–44). Therefore, we are reasonably certain that this section will contribute to the conservation of this species and that this section contains one or more of the physical or biological features that are essential to the conservation of this species. Section 19 does not overlap with existing critical habitat for other listed species.

Effects of Critical Habitat Designation

Section 7 Consultation

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

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 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 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, 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. 1059 (2018).

Application of the ''Destruction or 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, Federal actions that result in the removal or significant modification of designated critical habitat, or that would pose a risk of fire. Such activities could include, but are not limited to, military training activities with potential to cause wildland fires. We anticipate that most Federal activities that may cause effects to critical habitat will also cause effects to the listed species, and as such we will already be in consultation with the Federal agency as to whether or not the activity jeopardizes the listed species. The exception is the one area proposed for critical habitat designation that is presently unoccupied by any of the listed species, Section 19, which is proposed for designation for *Schiedea hawaiiensis.* There, as there is not already a section 7 consultation nexus, the effects of a Federal proposed action that could remove physical or biological features essential to the conservation of the species—specifically, the associated native plant genera that are part of a functioning ecosystem in which *S. hawaiiensis* occurs or has historically occurred—would trigger section 7(a)(2) consultation because of the critical habitat designation. Within occupied areas, we do not anticipate recommending any project modifications to avoid destruction or adverse modification of critical habitat that would be different from those for avoiding jeopardy.

Exemptions

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

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

(1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;

(2) A statement of goals and priorities;

(3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

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

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) 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 INRMP prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

We consult with the military on the development and implementation of INRMPs for installations with listed species. *Schiedea hawaiiensis* is the only species with an INRMP located within the range of its proposed critical habitat designation. The following area is DoD lands with a completed, Service-approved INRMP within the proposed critical habitat designation.

Approved INRMPs

Pōhakuloa Training Area, 132,193 ac (53,497 ha)

Pōhakuloa Training Area (PTA) is the sole installation under DoD jurisdiction on the island of Hawai'i. PTA is located in the north-central portion on the island of Hawai'i, west of the Humu'ula Saddle, in an area formed by the convergence of three volcanic mountains: Mauna Kea, Mauna Loa, and Hualālai. The PTA INRMP provides for wildlife management and habitat enhancement for four federally listed animal species and 20 federally listed plant species, including *Schiedea hawaiiensis,* found within PTA (PTA 2020, entire).

The current INRMP provides specific protections for *S. hawaiiensis*. Conservation actions to benefit *S. hawaiiensis* include collection and storage of seed from both wild and cultivated plants, propagation of plants from seed that are planted into suitable habitat off site, and quarterly monitoring of plants to gauge the efficacy of management actions. All known wild *S. hawaiiensis* individuals are protected in fenced enclosures and are monitored at least annually. Seeds from wild and propagated *S. hawaiiensis* plants have been collected and stored, and hundreds of propagated *S. hawaiiensis* individuals have been outplanted at PTA and in protected, off-site native habitats. With partnering agencies, PTA constructed 15 fenced units encompassing all known wild individuals of *S. hawaiiensis* in addition to other high-priority species. Combined, these units protect roughly 37,300 ac (15,095 ha) of predominantly native forest from ungulates. Invasive plants and rodents are also managed within these areas. The INRMP incorporates recommendations made in a 2008 biological opinion to reduce fire risk. For example, wildland fires caused by military training activities are minimized by managing vegetation along a system of fuel breaks and by controlling invasive grasses, which function as fine fuels, in buffers around *S. hawaiiensis* and other listed species.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the PTA INRMP and that conservation efforts identified in the INRMP will provide a conservation benefit to *S. hawaiiensis.* Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 22,730 ac (9,198 ha) of *S. hawaiiensis* habitat in this proposed critical habitat designation because of this exemption.

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 designated 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 (hereafter, the ''2016 Policy''; 81 FR 7226, February 11, 2016), both of which were developed jointly with the National Marine Fisheries Service (NMFS). 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). In a final rule, we explain each decision to exclude areas, as well as decisions not to exclude, to demonstrate that the decision is reasonable. Below, we provide information on the areas we are considering for exclusion.

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise discretion to exclude the area only if such exclusion would not 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. We describe below the process that we are taking to consider each category of impacts and our analyses of the relevant impacts.

Consideration of 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. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for the particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both ''with critical habitat'' and ''without critical habitat.''

The ''without critical habitat'' scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (*e.g.,* under the Federal listing as well as other Federal, State, and local regulations). Therefore, the baseline represents the costs of all efforts attributable to the listing of the species under the Act (*i.e.,* conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The ''with critical habitat'' scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct a discretionary 4(b)(2) exclusion analysis.

Executive Orders (E.O.s) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. Section 3(f) of E.O. 12866 identifies four criteria for when a regulation is considered a ''significant'' rulemaking, and requires additional

analysis, review, and approval if met. The criterion relevant here is whether the designation of critical habitat may have an economic effect of $100 million or more in any given year (section 3(f)(1)). Therefore, our consideration of economic impacts uses a screening analysis to assess whether a designation of critical habitat for the 12 Hawai'i species is likely to exceed the economically significant threshold.

For this particular designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the 12 Hawai'i species (Industrial Economics, Incorporated 2022). We began by conducting a screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographic areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. In particular, the screening analysis considers baseline costs (*i.e.,* absent critical habitat designation) and includes any probable incremental economic impacts where land and water use may already be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. The presence of the listed species in occupied areas of critical habitat means that any destruction or adverse modification of those areas is also likely to jeopardize the continued existence of the species. Therefore, designating occupied areas as critical habitat typically causes little if any incremental impacts above and beyond the impacts of listing the species. Therefore, the screening analysis focuses on areas of unoccupied critical habitat. If there are any unoccupied units in the proposed critical habitat designation, the screening analysis assesses whether any additional management or conservation efforts may incur incremental economic impacts. This screening analysis combined with the information contained in our IEM constitute what we consider to be our draft economic analysis (DEA) of the proposed critical habitat designation for the 12 Hawai'i Island species; our DEA is summarized in the narrative below.

As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat for the 12 Hawai'i Island species, first we identified, in the IEM dated November 20, 2022, probable incremental economic impacts associated with conservation activities with a Federal nexus that aim to enhance survival or recovery of any of the 12 Hawai'i Island species. We considered the Federal involvement in these activities. 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 any of these 12 species are present, Federal agencies would be required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect the species. If we also finalize this proposed critical habitat designation, Federal agencies would be required to consider the effects of their actions on the designated habitat, and if the Federal action may affect critical habitat, our consultations would 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 would result from the species being listed and those attributable to the critical habitat designation (*i.e.,* difference between the jeopardy and adverse modification standards). The following specific circumstances in this case 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 likely adversely affect the essential physical or biological features of occupied critical habitat are also likely to adversely affect any one of the 12 Hawai'i Island species. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for these species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation for the 12 Hawai'i Island species includes 20 distinct areas, subdivided into 40 units, totaling approximately 122,277 ac (49,484 ha). Lands within the designation are under Federal (26 percent), State (67 percent) and private/other (7 percent) ownership. All units except one were occupied by one or more species at the time of listing. The single proposed unoccupied unit (*Schiedea hawaiiensis*—Section 19) is not expected to result in incremental costs. We evaluated the proposed DoD activities in the PTA adjacent to this proposed unit and rendered a ''no jeopardy'' biological opinion (Service 2013, entire). That biological opinion included conservation measures that address the risk of wildland fires as a result of the Federal proposed action, and as such, we do not expect that the designation of Section 19 as critical habitat adjacent to the PTA will result in the need for additional conservation measures. Overall, the incremental costs of designating critical habitat for the 12 Hawai'i Island species are likely to be limited to additional administrative effort in conducting the adverse modification analysis. This additional administrative effort will be part of those section 7 consultations already required because of the Federal action's effects to listed species.

The additional administrative effort associated with considering adverse modification during the section 7 consultation process was estimated using data regarding level of effort needed in past consultations, including efforts to provide technical assistance to Federal agencies short of requiring consultation, as well as efforts involving informal and formal consultation. We estimate up to six requests for technical assistance, one informal consultation, and two formal consultations annually over the next 10 years. The maximum annual cost associated with these consultations is estimated not to exceed $48,000 (2022 dollars). Therefore, the annual administrative burden is highly unlikely to exceed $100 million or be considered economically significant.

In many instances, critical habitat designation is not likely to change our recommendation for project modification during future consultations. However, in some instances, we may recommend modifications associated specifically with minimizing adverse effects in order to avoid activities that may result in a

determination of destruction or adverse modification of critical habitat.

For activities with a Federal nexus that would involve entry into critical habitat that is susceptible to rapid ʻōhiʻa death (ROD), we anticipate recommending disinfecting gear to limit the transmission of fungal pathogens associated with rapid ʻōhiʻa death and limiting access into pristine areas. ROD disinfecting protocols are part of best practices promoted by the Service and widely adopted by other agencies and conservation organizations. Therefore, the recommendations are unlikely to result in incremental costs because they are already part of standard protocols absent critical habitat.

In unpredictable cases, a Federal agency may need to act in response to volcanic activity to save human lives and would subsequently consult with the Service under emergency consultation provisions. Under those circumstances, we may determine that the emergency response may adversely modify critical habitat and recommend restoration activities to address the damage to habitat that would not be undertaken absent critical habitat. If time allows, the Service may also be involved in designing the emergency response in order to consider the potential for effects on critical habitat, for example, for emergency access road placement. Data are not available to forecast costs associated with modifications to or restoration activities following emergency response efforts during volcanic activity. Even if historical costs were available, the incremental costs associated with any given emergency response activity are likely to vary widely and be highly fact- and context-specific.

The probable incremental economic impacts of the critical habitat designations for the 12 Hawaiʻi Island species 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 limited incremental economic impact is due to two factors: (1) A large portion (94 percent) of the proposed critical habitat is occupied by one or more of the 12 Hawaiʻi Island species, and incremental economic impacts of critical habitat designation, other than administrative costs, are unlikely; and (2) in proposed areas that are not occupied by the 12 Hawaiʻi Island species (6 percent), no actions are anticipated that would result in a need for section 7 consultation or associated project modifications. At approximately $30,000 or less per consultation, the burden resulting from the designation of critical habitat for the 12 Hawaiʻi Island species, based on the anticipated annual number of consultations and associated consultation costs, is not expected to exceed a total of $48,000 in most years, across all affected parties, including the Service and other Federal agencies, and any other involved party. These costs incorporate requests for technical assistance and informal and formal consultation. We are not aware of any State or local regulations that would add additional requirements to private activities as a result of the Federal designation of critical habitat. Thus, the annual administrative burden is low.

Although we do not anticipate incremental costs outside of the section 7 consultation process, additional incremental costs may occur if landowners or buyers perceive that the designation of critical habitat will restrict land or water use activities in some way and, therefore, lower the value or use of the land. Although we acknowledge the potential for these types of speculation-based costs, the likelihood of these potential future effects is uncertain, and data with which to estimate incremental costs are unavailable. Similarly, there may be economic impacts associated with the perceived beneficial effects of critical habitat on land values. However, the likelihood and magnitude of those such effects are also uncertain.

In summary, while the specific costs of critical habitat designation for the 12 Hawaiʻi Island species are subject to uncertainty, it is unlikely that if adopted as proposed, the rulemaking will generate costs exceeding $100 million in a single year. Therefore, this proposed rule is unlikely to meet the threshold for an economically significant rule, with regard to costs, under E.O. 12866.

We are soliciting data and comments from the public on the DEA discussed above. During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts we receive during the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2), our implementing regulations at 50 CFR 424.19, and the 2016 policy. We may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

Consideration of National Security Impacts

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), then national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of ''critical habitat.'' However, the Service must still consider impacts on national security, including homeland security, on those lands or areas not covered by section 4(a)(3)(B)(i) because section 4(b)(2) requires the Service to consider those impacts whenever it designates critical habitat. Accordingly, if DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns, or we have otherwise identified national-security or homeland-security impacts from designating particular areas as critical habitat, we generally have reason to consider excluding those areas.

However, we cannot automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, we must conduct an exclusion analysis if the Federal requester provides information, including a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If we conduct an exclusion analysis because the agency provides a reasonably specific justification or because we decide to exercise the discretion to conduct an exclusion analysis, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or

waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

Under section 4(b)(2) of the Act, we also consider whether a national security or homeland security impact might exist on lands owned or managed by DoD or DHS. In preparing this proposal, we have determined that, other than the land exempted under section 4(a)(3)(B)(i) of the Act based upon the existence of an approved INRMP (see Exemptions, above), the lands within the proposed designation of critical habitat for the 12 Hawai'i Island species are not owned or managed by DoD or DHS. Therefore, we anticipate no impact on national security or homeland security.

Consideration of 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 discussed above. To identify other relevant impacts that may affect the exclusion analysis, we consider a number of factors, including whether there are permitted conservation plans covering the species in the area—such as habitat conservation plans (HCPs), safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs)—or whether there are non-permitted conservation agreements and partnerships that may be impaired by designation of, or exclusion from, critical habitat. In addition, we look at whether Tribal conservation plans or partnerships, Tribal resources, or government-to-government relationships of the United States with Tribal entities may be affected by the designation; we consider whether applicable conservation plans or partnerships with the Native Hawaiian community may be affected by the designation. We also consider any State, local, social, or other impacts that might occur because of the designation.

When analyzing other relevant impacts of including a particular area in a designation of critical habitat, we weigh those impacts relative to the conservation value of the particular area. To determine the conservation value of designating a particular area, we consider a number of factors, including, but not limited to, the additional regulatory benefits that the 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.

In the case of the 12 Hawai'i Island species, the benefits of critical habitat include public awareness of the presence of these species and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for these species 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. 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.

Watershed Partnerships

An important factor for our decision to consider an area for proposed exclusion is whether the landowner participates in a watershed partnership. In 2003, the State of Hawaii formally established the Hawai'i Association of Watershed Partnerships, which consists of more than 60 public and private landowners throughout the State, who are committed to long-term protection and conservation of watershed areas. These watershed partnerships each have a conservation management plan that is updated every several years to include measurable objectives and a budget. Financial support for the watershed partnerships include various long-term State funds and other Federal and private sources. Of the 10 watershed partnerships in operation, 3 have lands within the proposed critical habitat designation: Kohala Watershed Alliance, Mauna Kea Watershed Alliance, and Three Mountain Alliance. These watershed partnerships fund and conduct conservation efforts, including ungulate control and removal, and invasive weed management, that support the 12 Hawai'i Island species.

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 habitats. 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. We also provide 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 based on permitted conservation plans (such as CCAAs, SHAs, and HCPs), we anticipate consistently excluding such areas if incidental take caused by the activities in those areas is covered by the permit under section 10 of the Act and the CCAA/SHA/HCP meets all of the following three factors (see the 2016 Policy for additional details):

a. 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.

b. 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 Services extend 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.

c. The CCAA/SHA/HCP specifically addresses that species' habitat and meets the conservation needs of the species in the planning area.

The proposed critical habitat designation includes areas that are covered by a permitted plan providing for the conservation of the 12 Hawai'i Island species, as discussed below.

Safe Harbor Agreement Trustees of the Estate of Bernice P. Bishop, DBA Kamehameha Schools Keauhou and Kīlauea Forest Lands Hawai'i Island, Hawai'i (Kamehameha Schools Keauhou and Kīlauea Forest Lands Safe Harbor Agreement), June 2017—The permit holder for this SHA is Kamehameha Schools. Kamehameha Schools was established in 1887, through the will of Princess Bernice Pauahi Paki Bishop. Kamehameha Schools owns over 362,000 ac (146,496 ha) of land throughout Hawai'i, and part of Kamehameha Schools' mission is to protect Hawai'i's environment through recognition of the significant cultural value of this land and its unique flora and fauna. In 2017, the SHA was approved by the Service and Hawai'i Department of Land and Natural Resources for the Kamehameha School's Keauhou and Kīlauea Forest lands, which comprise 32,280 ac (13,063 ha) on the east slope of Mauna Loa Volcano, on the island of Hawai'i. Under the SHA, koa (*Acacia koa*) tree silviculture will be conducted, including stand improvement through selective harvest and establishment of new or improvement of existing forest in formerly logged areas and degraded pasture lands (Kamehameha Schools 2017, pp. 22–23). The conservation actions of Kamehameha Schools benefit habitat for *Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa* by promoting forest regeneration, which increases soil-water retention capacity and improves ecosystem resilience to drying climate conditions; controlling feral ungulates, which reduces trampling of and predation on these plants, including the host plants of *Drosophila digressa;* controlling weeds, which improves recruitment of native trees, including those that host *Drosophila digressa;* and taking actions that reduce the incidence of fire, which benefits forest habitat for these species by minimizing damage to that habitat by wildfire.

Non-Permitted Conservation Plans, Agreements, or Partnerships

We sometimes exclude specific areas from critical habitat designations based in part on the existence of private or other non-Federal conservation plans or agreements and their attendant partnerships. A conservation plan or agreement describes actions that are designed to provide for the conservation needs of a species and its habitat, and may include actions to reduce or mitigate negative effects on the species caused by activities on or adjacent to the area covered by the plan. Conservation plans or agreements can be developed by private entities with no Service involvement, or in partnership with the Service.

Shown below is a non-exhaustive list of factors that we consider in evaluating how non-permitted plans or agreements affect the benefits of inclusion or exclusion. These are not required elements of plans or agreements. Rather, they are some of the factors we may consider, and not all of these factors apply to every plan or agreement.

(i) The degree to which the record of the plan, or information provided by proponents of an exclusion, supports a conclusion that a critical habitat designation would impair the realization of the benefits expected from the plan, agreement, or partnership.

(ii) The extent of public participation in the development of the conservation plan.

(iii) The degree to which agency review and required determinations (*e.g.,* State regulatory requirements) have been completed, as necessary and appropriate.

(iv) Whether National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) compliance was required.

(v) The demonstrated implementation and success of the chosen mechanism.

(vi) The degree to which the plan or agreement provides for the conservation of the essential physical or biological features for the species.

(vii) Whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan or agreement will be implemented.

(viii) Whether the plan or agreement contains a monitoring program and adaptive management to ensure that the conservation measures are effective and can be modified in the future in response to new information.

The proposed critical habitat designation includes areas that are covered by the following non-permitted management plans providing for the conservation of the 12 Hawai'i Island species:

Kamehameha Schools 'Āina Pauahi Natural Resources Management Program—Kamehameha Schools owns over 362,000 ac (146,496 ha) of land throughout Hawai'i. Part of Kamehameha Schools' mission is to protect Hawai'i's environment through recognition of the significant cultural value of this land and its unique flora and fauna. Accordingly, Kamehameha Schools established a sustainable stewardship policy to guide the use of its lands through their 'Āina Pauahi Natural Resources Management Program that includes the protection and conservation of natural resources, water resources, and ancestral places (Kamehameha Schools 2022, entire). Additionally, Kamehameha Schools is a member of the Mauna Kea Watershed Alliance and the Three Mountain Alliance. Between 2000 and 2015, Kamehameha Schools increased active stewardship of native ecosystems by over 35-fold, from 3,000 ac (1,124 ha) to 136,000 ac (55,037 ha); engaged in community collaborations to leverage external resources in support of culturally appropriate land stewardship; and developed and implemented its 2012 natural resource and cultural resource management plans representing Kamehameha Schools' responsibility to conduct prudent stewardship of the 'āina (land). Kamehameha Schools manages some of its forested lands for income generation through sustainable koa and 'iliahi or sandalwood (*Santalum album*) forestry and collaborates with county and other landowners in fire response planning to protect natural resources from fires. The conservation actions of Kamehameha Schools benefits habitat for *Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa* by promoting forest regeneration, which increases soil-water retention capacity and improves ecosystem resilience to drying climate conditions; controlling feral ungulates, which reduces trampling of and predation on these plants, including the host plants of *Drosophila digressa;* and controlling weeds, which improves recruitment of native trees for all these species. Fire suppression under this program benefits the coastal forest habitat where *Bidens hillebrandiana* ssp. *hillebrandiana* occurs by minimizing damage to this habitat by wildfire.

Mauna Kea Watershed Alliance—The Mauna Kea Watershed Alliance Watershed Partnership is a coalition of

private and public landowners and supporting agencies working to protect and restore watershed areas on Mauna Kea Volcano, Hawai'i (Mauna Kea Watershed Alliance 2022, entire). Lands that are managed by the Mauna Kea Watershed Alliance include over 500,000 ac (202,343 ha) on Mauna Kea Volcano on the island of Hawai'i. The Mauna Kea Watershed Alliance's shared vision is to protect and enhance watershed ecosystems, biodiversity, and natural resources through responsible management while promoting economic sustainability and providing recreational, subsistence, educational, and research opportunities. Staff of the Mauna Kea Watershed Alliance work cooperatively with members of the alliance to achieve this shared vision. Accordingly, fencing and ungulate control, control of introduced plants that are invasive, and reforestation efforts are conducted on lands within the Mauna Kea Watershed Alliance (Stewart 2010, p. viii). Ungulate control benefits habitat for *Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae* and *Drosophila digressa* by reducing trampling of and predation on these plants, including the host plants of *Drosophila digressa,* leading to improved forest regeneration. Nonnative plant control improves recruitment of native trees, including host plants of *Drosophila digressa,* and reforestation provides greater areas of native plant associations that contribute to habitat and increases soil-water retention capacity, improving ecosystem resilience to drying climate conditions.

Parker Ranch Sustainable Forestry Initiative—Parker Ranch was founded in 1847, and currently encompasses over 100,000 ac (40,469 ha) of land in the Hāmākua, North Kohala, and South Kohala Districts on Mauna Kea and the Kohala Mountains on the island of Hawai'i. Parker Ranch recognizes forest health as a key indicator of overall ecosystem health and, as result, announced in 2021 that it is seeking to collaborate with public and private partners to develop sustainable forestry programs on its lands (Parker Ranch 2021, entire). In 2018, Parker Ranch also hired a forestry manager to sustainably manage their forest lands (Parker Ranch 2021, pers. comm.). For its Waipunalei lands on the east slope of Mauna Kea, Parker Ranch is developing a sustainable koa forestry program and is seeking to rehabilitate forest areas damaged by history of cattle grazing (Parker Ranch 2022, pers. comm.). For its Waiemi lands on the Kohala Mountains, Parker Ranch is providing essential access and support to the State Department of Land and Natural Resources for priority watershed projects in Pu'u o Umi Natural Area Reserve and is supporting erosion control efforts above Pelekane Bay (Parker Ranch 2021, entire). Additionally, Parker Ranch is a member of the Mauna Kea Watershed Alliance. Koa forestry benefits forest habitat used by *Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa* by establishing new or improved forest in formerly logged areas and degraded pasture lands, increasing soil-water retention capacity, and improving ecosystem resilience to drying climate conditions through control of feral ungulates and weed control that improves recruitment of native trees, including the host plants of *Drosophila digressa.*

Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007—The Kohala Watershed Partnership is a coalition of private and public landowners and supporting agencies whose goal is to show improvements in water and environmental quality by enabling comprehensive and sustainable watershed management projects that address the threats to the watershed, while maintaining its integrity and protecting its economic, socio-cultural, and ecological resources (Kohala Watershed Partnership [KWP] 2007, p. 3). Lands that are managed by Kohala Mountain Watershed Management Plan include approximately 68,000 ac (27,519 ha) of forest and grass lands on the windward and leeward slopes of the Kohala Volcano on the island of Hawai'i (KWP 2007, p. 3). Conservation measures of this plan benefit habitat for *Bidens hillebrandiana* ssp. *hillebrandiana, Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* by promoting native forest and shrubland regeneration and increasing soil-water retention capacity through control of feral ungulates and weed control that improves recruitment of native trees and shrubs. Wildfire management and response benefits coastal forest, forest, and shrubland habitats used by these species by minimizing damage to these habitats by fire (KWP 2007, pp. 62–82).

Three Mountain Alliance Management Plan, December 31, 2007—The Three Mountain Alliance Watershed Partnership is a coalition of private and public landowners and supporting agencies that are working to protect and restore watershed areas on Hawai'i Island (Three Mountain Alliance Management Plan [TMA] 2007, entire). Lands that are managed by the Three Mountain Alliance are 1,116,300 ac (451,751 ha) on Mauna Loa, Kīlauea, and Hualālai Volcanoes or roughly 45 percent of the island of Hawai'i. Project funding for the Three Mountain Alliance currently comes from Three Mountain Alliance members (primarily the Service, Hawai'i's Division of Forestry and Wildlife, and Kamehameha Schools) and outside grants. Other Three Mountain Alliance members provide in-kind services to accomplish priority projects, for example, inmate labor or sharing personnel and equipment (TMA 2007, p. 56). Management under the Three Mountain Alliance Management Plan includes the following conservation actions: (1) strategic fencing and removal of ungulates; (2) regular monitoring for ungulates after fencing; (3) monitoring of habitat recovery; (4) surveys for rare taxa prior to new fence installations; (5) invasive, nonnative plant control; (6) reestablishment of native plant species; and (7) activities to reduce the threat of wildfire. Ungulate control reduces damage to native forests, including to host plants of *Drosophila digressa;* control of nonnative, invasive plants and out-planting of native plants, including host plants of *Drosophila digressa,* improves recruitment of native trees; and fire suppression activities reduce the damage from wildfires to habitats used by *Cyanea marksii, Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa.*

The Nature Conservancy Forest Stewardship Management Plan for the Kona Hema Preserve—The Nature Conservancy Kona Hema Preserve was established in 1999, in the South Kona District of the island of Hawai'i and is comprised of 8,076 ac (3,268 ha) in four management units. The management program for Kona Hema Preserve is documented in The Nature Conservancy's Forest Stewardship Management Plan for the Kona Hema Preserve, which details management measures to protect, restore, and enhance rare plants and animals and their habitats within the preserve and in adjacent areas (The Nature Conservancy 2017, entire). Primary management goals for the Kona Hema Preserve are to: (1) prevent degradation of native forest

and shrubland by reducing feral ungulate damage; (2) improve or maintain the integrity of native ecosystems in selected areas of the preserve by reducing the effects of nonnative plants; (3) conduct small mammal control and reduce the negative impacts of small mammals where possible; (4) monitor and track the biological and physical resources in the preserve, evaluate changes in these resources over time, and encourage biological and environmental research; (5) prevent extinction of rare species in the preserve; (6) build public understanding and support for the preservation of natural areas, and enlist volunteer assistance for preserve management; and (7) protect the resources from fires in and around the preserve (Giffin 2017, pp. 25–45). The Nature Conservancy is also a member of the Three Mountain Alliance. The conservation actions of The Nature Conservancy's Kona Hema Preserve benefit habitat for *Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa* by improved forest regeneration through control of feral ungulates, weed control that improves recruitment of native trees, including host plants of *Drosophila digressa,* and small mammal control (particularly rats (*Rattus* spp.), which reduces the potential for seed predation by rats on those plant species). Wildfire management and response also benefits forest habitat for *Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa* by minimizing damage to these habitats by wildfire.

After considering the factors described above, we have identified the areas that we have reason to consider excluding from the final designation of critical habitat because of non-permitted plans, agreements, or partnerships. Our consideration of an area for exclusion is based on all non-permitted plans, agreements, and/or partnerships for the area and the overall benefit these planning documents and associated conservation actions provide for the protection, maintenance, enhancement, and/or restoration of habitat for the 12 Hawai'i Island species. In all cases, we are considering excluding areas from the final designation where private landowners are actively participating in the restoration or management of habitats essential to conservation of these species, allowing surveys or monitoring of these species and their habitats, or taking steps to protect and increase numbers of these species that occur on their properties.

Specific benefits of conservation management and our rationale for considering exclusion are described below and summarized in table 7, below. Of the 40 proposed units, we are considering portions of six areas for exclusion under section 4(b)(2) of the Act, based on permitted and non-permitted plans and agreements. These areas total 4,224 ac (1,710 ha). We welcome any information regarding planning documents or other information we may have overlooked pertaining to the areas we are considering for exclusion and areas we are not considering for exclusion. We will work with landowners throughout this proposed rule's public comment period (see **DATES**, above) and during development of the final designation of critical habitat for the 12 Hawai'i Island species. We seek comments on whether the existing management and conservation efforts of landowners meet our criteria for exclusion from the final designation under section 4(b)(2) of the Act.

TABLE 7—AREAS CONSIDERED FOR EXCLUSION BY CRITICAL HABITAT UNIT

Plant section and unit	Drosophila unit	Landowner	Area owned that is being considered for exclusion		Associated plans and agreements
			Acres	Hectares	
Section 1, Unit 52 ...	Unit 1	Kamehameha Schools.	155	63	Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; Mauna Kea Watershed Alliance; Mauna Kea Watershed Management Plan, April 2010.
Section 1, Unit 52 ...	Unit 1	Parker Ranch Waipunalei, LLC.	402	163	Parker Ranch's Sustainable Forestry Initiative; Mauna Kea Watershed Alliance.
Section 2, Unit 53 ...	.....	Kamehameha Schools.	33	13	Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 2, Unit 53 ...	.....	Laupāhoehoe Nui ...	134	54	Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 3, Unit 54 ...	.....	State Department of Hawaiian Home Lands.	35	14	Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 3, Unit 54 ...	.....	Kahua Ranch	604	245	Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 3, Unit 54 ...	.....	Kamehameha Schools.	177	72	Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 3, Unit 54 ...	.....	Laupāhoehoe Nui ...	134	54	Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.

TABLE 7—AREAS CONSIDERED FOR EXCLUSION BY CRITICAL HABITAT UNIT—Continued

Plant section and unit	Drosophila unit	Landowner	Area owned that is being considered for exclusion		Associated plans and agreements
			Acres	Hectares	
Section 3, Unit 54 ...	.....	Parker Ranch Waiemi, LLC.	349	141	Parker Ranch's Sustainable Forestry Initiative; Kohala Mountain Watershed Management Plan, December 2007.
Section 3, Unit 54 ...	.....	Queen Emma Foundation.	474	192	Kohala Watershed Partnership; Kohala Mountain Watershed Management Plan, December 2007.
Section 8, Unit 44 ...	.....	Kamehameha Schools.	649	263	Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; Three Mountain Alliance Management Plan, December 31, 2007.
Section 11, Unit 51	Unit 2	Kamehameha Schools.	92	37	Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; the Three Mountain Alliance Management Plan, December 31, 2007; Safe Harbor Agreement Trustees of the Estate of Bernice P. Bishop, Kamehameha Schools Keauhou and Kīlauea Forest Lands Safe Harbor Agreement, June 2017.
Section 13, Unit 41	Unit 5	The Nature Conservancy.	986	399	Forest Stewardship Management Plan for The Kona Hema Preserve; Three Mountain Alliance Management Plan, December 31, 2007.
Totals	.....	.....	4,224	1,710	

Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 1 and *Drosophila digressa*—Unit 1; Kamehameha Schools—The Kamehameha Schools own 155 ac (63 ha) of land included in the proposed designation for the plant species within Section 1 and *Drosophila digressa*—Unit 1. Conservation management activities on these lands include those associated with the Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program, the Mauna Kea Watershed Alliance, and the Mauna Kea Watershed Management Plan, April 2010. For more information on the conservation actions of these groups and plans, see *Kamehameha Schools ʻAina Pauahi Natural Resources Management Program* and *Mauna Kea Watershed Alliance,* above. As described above, the conservation actions of Kamehameha Schools benefit habitat for *Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa.*

Based on Kamehameha Schools' management of its lands under the ʻĀina Pauahi Natural Resources Management Program; Mauna Kea Watershed Management Plan, April 2010; and Mauna Kea Watershed Alliance, we are considering excluding 155 ac (63 ha) of Kamehameha Schools lands within Section 1, Unit 52 and *Drosophila digressa*—Unit 1 from the final designation.

Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 1 and *Drosophila digressa*—Unit 1; Parker Ranch Waipunalei, LLC—Parker Ranch owns 950 ac (384 ha) of land included in the proposed designation for the plant species within Section 1, of which 402 ac (163 ha) are within newly proposed critical habitat unit 52 and *Drosophila digressa*—Unit 1. We are not considering for exclusion the remaining portions of the 950 ac (384 ha) because these lands overlap existing critical habitat units. Conservation management activities on these 402 acres include those associated with Parker Ranch's Sustainable Forestry Initiative and Mauna Kea Watershed Alliance. For more information on the conservation actions of these groups and their plans, see *Parker Ranch's Sustainable Forestry Initiative* and *Mauna Kea Watershed Alliance,* above. As described above, the conservation measures of Parker Ranch, through its Sustainable Forestry Initiative, benefit habitat for *Cyanea tritomantha, Cyrtandra wagneri, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa.*

Based on Parker Ranch's management, Parker Ranch's Sustainable Forestry Initiative and participation in the Mauna Kea Watershed Alliance, we are considering excluding 402 acres of the Parker Ranch's lands within Section 1 and *Drosophila digressa*—Unit 1 from the final designation.

Bidens hillebrandiana ssp. *hillebrandiana*—Section 2; Kamehameha Schools—The Kamehameha Schools owns 33 ac (13 ha) of land included in the proposed designation for *Bidens hillebrandiana* ssp. *hillebrandiana* within Section 2. Conservation management activities on these lands include those associated with the Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program, Kohala Watershed Partnership, and the Kohala Mountain Watershed Management Plan, December 2007. For more information on the conservation actions of these groups and plans, see *Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program* and *Kohala Watershed Partnership and Kohala Mountain Watershed Management Plan,* above. As described above, the conservation actions of Kamehameha Schools benefit habitat for *Bidens hillebrandiana* ssp. *hillebrandiana.*

Based on Kamehameha Schools' management of its lands under the ʻĀina

Pauahi Natural Resources Management Program; Kohala Mountain Watershed Management Plan, December 2007; and Kohala Watershed Partnership, we are considering excluding Kamehameha Schools lands within Section 2 from the final designation.

Bidens hillebrandiana ssp. *hillebrandiana*—Section 2; Laupāhoehoe Nui, LLC—Laupāhoehoe Nui, LLC owns 134 ac (54 ha) of land included in the proposed designation for *Bidens hillebrandiana* ssp. *hillebrandiana* within Section 2. Conservation management activities on these lands include those associated with the Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.

Laupāhoehoe Nui, LLC, is a private corporation with a conservation land management purpose. Laupāhoehoe Nui, LLC, is a member of the Kohala Watershed Partnership. For more information on the conservation actions of the Kohala Watershed Partnership, see *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan,* above. The conservation measures of Laupāhoehoe Nui, LLC, through the Kohala Mountain Watershed Management Plan benefit habitat used by *Bidens hillebrandiana* ssp. *hillebrandiana* as described above under *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.*

Based on Laupāhoehoe Nui, LLC's management of its lands under the Kohala Mountain Watershed Management Plan, December 2007, and the Kohala Watershed Partnership, we are considering excluding Laupāhoehoe Nui, LLC, lands within Section 2 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Department of Hawaiian Home Lands—The Department of Hawaiian Home Lands owns 35 ac (14 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those under Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.

The Department of Hawaiian Home Lands is a member of the Kohala Watershed Partnership. For more information on the conservation actions of the Kohala Watershed Partnership, see *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan,* above. The conservation measures of the Department of Hawaiian Home Lands through the Kohala Mountain Watershed Management Plan benefit habitat used by *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* as described above under *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.*

Based on the Department of Hawaiian Home Lands' management of its lands under the Kohala Mountain Watershed Management Plan, December 2007, and the Kohala Watershed Partnership, we are considering excluding lands of the Department of Hawaiian Home Lands within Section 3 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Kahua Ranch—Kahua Ranch owns 604 ac (245 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those under Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.

Founded in 1928 by Atherton Richards, Kahua Ranch focused on cattle ranching activities. In addition to cattle ranch farming, Kahua Ranch also engages in tourism, which includes all-terrain vehicle (ATV) riding, horseback riding, and renting facilities for events. Kahua Ranch is a member of the Kohala Watershed Partnership. For more information on the conservation actions of the Kohala Watershed Partnership, see *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007,* above. Kahua Ranch, Kohala Watershed Partnership, and volunteers established the 270 ac (109 ha) Puʻu Pili Biodiversity Preserve (The Kohala Center 2019, p. 3), which includes 262 ac (106 ha) of this area considered for exclusion. The conservation measures of Kahua Ranch through the Kohala Mountain Watershed Management Plan benefit habitat used by *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* as described above under *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.*

Based on the Kahua Ranch's management of its lands under the Kohala Mountain Watershed Management Plan, December 2007, and the Kohala Watershed Partnership, we are considering excluding Kahua Ranch lands within Section 3 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Kamehameha Schools—The Kamehameha Schools own 177 ac (72 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those associated with the Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program, Kohala Watershed Partnership, and the Kohala Mountain Watershed Management Plan, December 2007. For more information on the conservation actions of these groups and plans, see *Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program* and *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan,* above. As described above, the conservation actions of Kamehameha Schools benefit habitat for *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae.*

Based on Kamehameha Schools' management of its lands under the ʻĀina Pauahi Natural Resources Management Program; Kohala Mountain Watershed Management Plan, December 2007; and Kohala Watershed Partnership, we are considering excluding Kamehameha Schools lands within Section 3 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Laupāhoehoe Nui, LLC—Laupāhoehoe Nui, LLC, owns 134 ac (54 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those associated with the Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.

Laupāhoehoe Nui, LLC, is a private corporation with a conservation land management purpose. Laupāhoehoe Nui, LLC, is a member of the Kohala Watershed Partnership. For more information on the conservation actions of these groups and their plans, see *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007,* above. Laupāhoehoe Nui, LLC, and the Kohala Watershed Partnership protected 2,000 ac (809 ha) at Upper Laupāhoehoe Nui Watershed Reserve, which includes

important aquifer recharge areas on Kohala Mountain, globally rare montane bog ecosystems, seabird nesting areas, and rare and endangered native plants (The Kohala Center 2019, p. 3); all 134 ac (54 ha) of this considered exclusion are within this protected area. The conservation measures of Laupāhoehoe Nui, LLC, through the Kohala Mountain Watershed Management Plan benefit habitat for *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* as described above under *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan.*

Based on Laupāhoehoe Nui, LLC's management of its lands under the Kohala Mountain Watershed Management Plan, December 2007, and the Kohala Watershed Partnership, we are considering excluding Laupāhoehoe Nui, LLC, lands within Section 3 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Parker Ranch Waiemi, LLC—Parker Ranch owns 349 ac (141 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those associated with Parker Ranch's Sustainable Forestry Initiative and the Kohala Mountain Watershed Management Plan, December 2007. For more information on the conservation actions of these groups and their plans, see *Parker Ranch Sustainable Forestry Initiative* and *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan,* above.

Parker Ranch provides essential access and support to the State Department of Land and Natural Resources to install and maintain priority watershed projects in Puʻu o Umi Natural Area Reserve. The conservation measures of Parker Ranch through its Sustainable Forestry Initiative benefit habitat for *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* as described above under *Parker Ranch Sustainable Forestry Initiative* and *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan.*

Based on Parker Ranch's management, Parker Ranch's Sustainable Forestry Initiative, and their participation in the Kohala Watershed Partnership, we are considering excluding Parker Ranch's lands within Section 3 from the final designation.

Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 3; Queen Emma Foundation—The Queen Emma Foundation owns 474 ac (192 ha) of land included in the proposed designation for the plant species within Section 3. Conservation management activities on these lands include those under Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.

The Queen Emma Foundation is a nonprofit subsidiary of The Queen's Health Systems and manages more than 12,000 ac (4,856 ha) on the islands of Oʻahu and Hawaiʻi. The lands were handed down in trust by the Queen upon her death in 1885. The Queen Emma Foundation is a member of the Kohala Watershed Partnership. For more information on the conservation actions of the Kohala Watershed Partnership, see *Kohala Watershed Partnership and the Kohala Mountain Watershed Plan, December 2007,* above. The Queen Emma Foundation and Kohala Watershed Partnership implemented the Pelekane Bay Watershed Restoration Project on approximately 2,300 ac (930 ha) of Queen Emma Foundation lands, of which approximately 100 ac (40 ha) are within the area of this considered exclusion. The conservation measures of the Queen Emma Foundation through the Kohala Watershed Partnership benefit habitat used by *Cyanea tritomantha, Melicope remyi, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae* as described above under *Kohala Watershed Partnership and the Kohala Mountain Watershed Management Plan, December 2007.*

Based on the Queen Emma Foundation's management of its lands under the Kohala Mountain Watershed Management Plan, December 2007, and the Kohala Watershed Partnership, we are considering excluding Queen Emma Foundation lands within Section 3 from the final designation.

Cyanea tritomantha, Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 8; Kamehameha Schools—The Kamehameha Schools own 649 ac (263 ha) of land included in the proposed designation for the plant species within Section 8. Conservation management activities on these lands include those associated with the Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program and the Three Mountain Alliance Management Plan, December 31, 2007. For more information on the conservation actions of these groups and their plans, see *Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program* and the *Three Mountain Alliance Management Plan, December 31, 2007,* above. As described above, the conservation actions of Kamehameha Schools benefit habitat for *Cyanea tritomantha, Cyrtandra wagneri, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei,* and *Stenogyne cranwelliae.*

Based on Kamehameha Schools' management of its lands under the ʻĀina Pauahi Natural Resources Management Program; Three Mountain Alliance Management Plan, December 31, 2007; and Three Mountain Alliance membership, we are considering excluding Kamehameha Schools lands within Section 8 from the final designation.

Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 11 and *Drosophila digressa*—Unit 2; Kamehameha Schools—The Kamehameha Schools own 92 ac (37 ha) of land included in the proposed designation the plant species within Section 11 and *Drosophila digressa*—Unit 2. Conservation management activities on these lands include those associated with the Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; the Three Mountain Alliance Management Plan, December 31, 2007; and the Safe Harbor Agreement Trustees of the Estate of Bernice P. Bishop, DBA Kamehameha Schools Keauhou and Kīlauea Forest Lands Hawaiʻi Island, Hawaiʻi (Kamehameha Schools Keauhou and Kīlauea Forest Lands Safe Harbor Agreement), June 2017. For more information on the conservation actions of these groups and plans, see *Kamehameha Schools ʻĀina Pauahi Natural Resources Management Program; Three Mountain Alliance Management Plan, December 31, 2007;* and *Safe Harbor Agreement Trustees of the Estate of Bernice P. Bishop, DBA Kamehameha Schools Keauhou and Kīlauea Forest Lands Hawaiʻi Island, Hawaiʻi (Kamehameha Schools Keauhou and Kīlauea Forest Lands Safe Harbor Agreement), June 2017,* above. As described above, the conservation actions of Kamehameha Schools benefit habitat for *Cyanea tritomantha, Cyrtandra wagneri, Phyllostegia floribunda, Pittosporum hawaiiense,*

Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa.*

Based on Kamehameha Schools' management of its lands under the ʻĀina Pauahi Natural Resources Management Program; Three Mountain Alliance Management Plan, December 31, 2007; and Kamehameha Schools Keauhou and Kīlauea Forest Lands Safe Harbor Agreement, we are considering excluding Kamehameha Schools lands within Section 11 and *Drosophila digressa*—Unit 2 from the final designation.

Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa ssp. *macraei, Stenogyne cranwelliae*—Section 13 and *Drosophila digressa*—Unit 5; The Nature Conservancy—The Nature Conservancy owns 986 ac (399 ha) of land included in the proposed designation for the plant species within Section 13 and *Drosophila digressa*—Unit 5. Conservation management activities on these lands include those associated with the Forest Stewardship Management Plan for The Kona Hema Preserve and the Three Mountain Alliance Management Plan, December 31, 2007. For more information on the conservation actions of these groups and their plans, see *The Nature Conservancy Forest Stewardship Management Plan for the Kona Hema Preserve* and *Three Mountain Alliance Management Plan, December 31, 2007,* above. As described above, the conservation actions of The Nature Conservancy's Kona Hema Preserve benefit habitat for *Cyanea marksii, Phyllostegia floribunda, Pittosporum hawaiiense, Schiedea diffusa* ssp. *macraei, Stenogyne cranwelliae,* and *Drosophila digressa.*

Based on The Nature Conservancy's management of the Kona Hema Preserve under the Forest Stewardship Management Plan for The Kona Hema Preserve and the Three Mountain Alliance Management Plan, December 31, 2007, we are considering excluding The Nature Conservancy's Kona Hema Preserve lands within Section 13 and *Drosophila digressa*—Unit 5 from the final designation.

We will continue to work with all entities identified above throughout this proposed rule's public comment period (see **DATES**, above) and during development of the final designation of critical habitat for the 12 species. We are currently seeking comment on whether the existing management and conservation efforts of each area identified above meet our criteria for exclusion from the final designation under section 4(b)(2) of the Act.

Summary of Exclusions Considered Under Section 4(b)(2) of the Act

In conclusion, we have reason to consider excluding the areas described in table 7, above, under section 4(b)(2) of the Act from the final critical habitat designation for the 12 species based on other relevant impacts.

We specifically solicit comments on the inclusion or exclusion of such areas. However, if through this proposed rule's public comment period we receive information that we determine indicates that there are potential economic, national security, or other relevant impacts from designating particular areas as critical habitat, then as part of developing the final designation of critical habitat, we will evaluate that information and may conduct a discretionary exclusion analysis to determine whether to exclude those areas under the authority of section 4(b)(2) of the Act and our implementing regulations at 50 CFR 424.19. If we receive a request for exclusion of a particular area and after evaluation of supporting information we do not exclude, we will fully describe our decision in the final rule for this action.

Required Determinations

Clarity of the Rule

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

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

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

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 proposed 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 whether 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 proposed critical habitat designation. The RFA does not require evaluation of the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the Service certifies that, if made final as proposed, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would 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, if made final, the proposed critical habitat designation would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial 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 draft economic analysis, we did not find that this proposed critical habitat designation would significantly affect energy supplies, distribution, or use. The proposed critical habitat units are in remote wilderness areas that are not used for energy generation. 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 proposed rule would 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 are not likely to 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 proposed rule would significantly or uniquely affect small governments. Small governments would be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. 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 12 Hawai'i Island species 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 the proposed designation of critical habitat for 12 Hawai'i Island species, and it concludes that, if adopted, 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 proposed 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 proposed 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, the proposed rule does not have substantial direct effects either on the States, or on the relationship between the Federal government and the States, or on the distribution of powers and responsibilities among the various levels of government. The proposed 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 would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the proposed rule would not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this proposed rule identifies the physical or biological features essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed 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.)

Regulations adopted pursuant to section 4(a) of the Act are exempt from the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) and do not require an environmental analysis under NEPA. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This includes listing, delisting, and reclassification rules, as well as critical habitat designations. In a line of cases starting with *Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), the courts have upheld this position.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), E.O. 13175 (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 federally-recognized Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the 12 Hawai'i Island species, so no Tribal lands would be affected by the proposed designation.

References Cited

A complete list of references cited in this rulemaking is available on the internet at *https://www.regulations.gov* and upon request from the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Pacific Islands Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—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, in paragraph (h), amend the table ''List of Endangered and Threatened Wildlife'' by revising the entry for ''Fly, Hawaiian picture-wing'' (*Drosophila digressa*) 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		
* *	* *	*	*	* *
Fly, Hawaiian picture-wing	*Drosophila digressa*	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.95(i).[CH]
* *	* *	*	*	* *

■ 3. In § 17.12, in paragraph (h), amend the table ''List of Endangered and Threatened Plants'' by revising the entries for ''*Bidens hillebrandiana* ssp. *hillebrandiana*'', ''*Cyanea marksii*'', ''*Cyanea tritomantha*'', ''*Cyrtandra nanawaleensis*'', ''*Cyrtandra wagneri*'', ''*Melicope remyi*'' (as added February 2, 2023, at 88 FR 7134, and effective May 3, 2023), ''*Phyllostegia floribunda*'', ''*Pittosporum hawaiiense*'', ''*Schiedea diffusa* ssp. *macraei*'', ''*Schiedea hawaiiensis*'', and ''*Stenogyne cranwelliae*'' under FLOWERING PLANTS to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Scientific name	Common name	Where listed	Status	Listing citations and applicable rules
FLOWERING PLANTS				
* *	*	*	*	* *
Bidens hillebrandiana ssp. *hillebrandiana.*	Kookoolau	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Cyanea marksii	Haha	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Cyanea tritomantha	Aku	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Cyrtandra nanawaleensis	Haiwale	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Cyrtandra wagneri	Haiwale	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Melicope remyi	No common name	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Phyllostegia floribunda	No common name	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Pittosporum hawaiiense	Hoawa, haawa	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Schiedea diffusa ssp. *macraei*	No common name	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Schiedea hawaiiensis	Maolioli	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *
Stenogyne cranwelliae	No common name	Wherever found	E	78 FR 64638, 10/29/2013; 50 CFR 17.99(k).[CH]
* *	*	*	*	* *

■ 4. In § 17.95, amend paragraph (i) by adding an entry for ''Hawaiian picture-wing fly (*Drosophila digressa*)'', following the entry for ''Hawaiian picture-wing fly (*Drosophila differens*)'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) * * *

Hawaiian picture-wing fly (*Drosophila digressa*)

(1) Critical habitat units are depicted for Hawaii County, Hawaii, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of Hawaiian picture-wing fly consist of the following components:

(i) In units 1, 2, 5, 6, 7, 8, and 9, the physical or biological features essential to the conservation of Hawaiian picture-wing fly, which are the features of the wet forest ecosystem, are:

(A) Elevation of less than 7,300 feet (ft) (2,225 meters (m)).

(B) Annual precipitation that is greater than 98 inches (in) (250 centimeters (cm)).

(C) Substrate of very weathered soils to rocky substrate, basaltic lava, undeveloped soils, or developed soils.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

(ii) In unit 3, the physical or biological features essential to the conservation of Hawaiian picture-wing fly, which are features of both the wet forest ecosystem and the mesic forest ecosystem, are the physical and biological features described in paragraph (2)(i)(A) through (F) of this entry for units 1, 2, 5, 6, 7, 8, and 9, and in paragraph (2)(iii)(A) through (F) of this entry for unit 4.

(iii) In unit 4, the physical or biological features essential to the conservation of Hawaiian picture-wing fly, which are features of the mesic forest ecosystem, are:

(A) Elevation of less than 6,600 ft (2,000 m).

(B) Annual precipitation of 39 to 150 in (100 to 380 cm).

(C) Substrate of rocky, shallow, organic muck soils; rocky talus soils; shallow soils over weathered rock; deep soils over soft weathered rock; or gravelly alluvium.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Charpentiera, Chrysodracon, Metrosideros, Myrsine, Nestegis, Pisonia, Santalum.*

(E) Subcanopy contains one or more of the following native plant genera: *Coprosma, Freycinetia, Leptecophylla, Myoporum, Pipturus, Rubus, Sadleria, Sophora.*

(F) Understory contains one or more of the following native plant genera: *Ctenitis, Doodia, Dryopteris, Pelea, Sadleria.*

(3) Existing humanmade features and structures, such as buildings, aqueducts, runways, roads, and other paved areas, and the land on which they are located existing within the legal boundaries are not included in the critical habitat designation.

(4) Data layers defining map units were created based on summaries of occurrences and landcover layers including habitat characteristics that indicate the physical or biological features essential to the conservation of the Hawaiian picture-wing fly. Coordinates were created using World Geodetic System 1984 (WGS84). 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–R1–ES–2023–0017, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

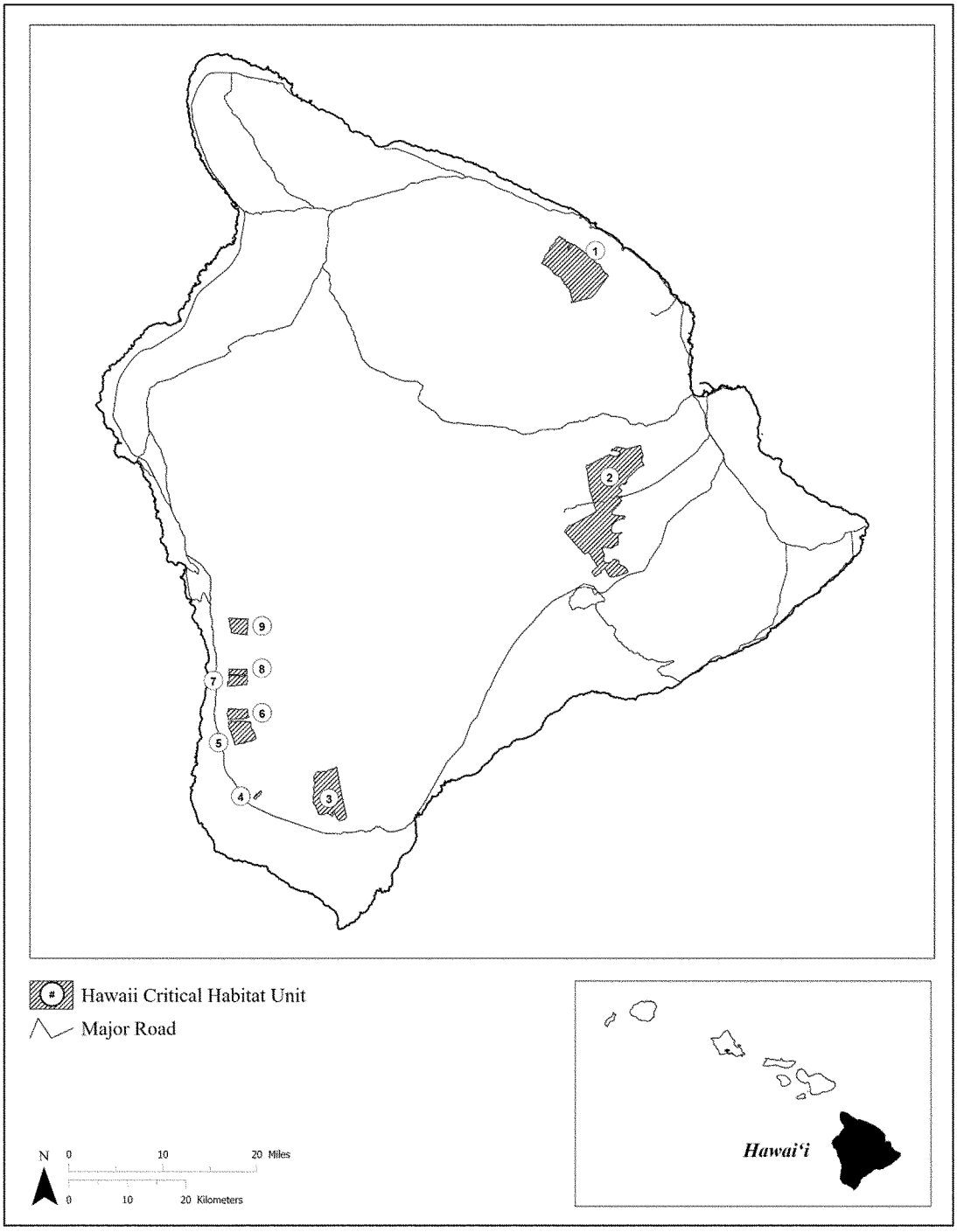
BILLING CODE 4333–15–P

Figure 1 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (5)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Index Map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Hawaii Critical Habitat Unit
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Hawai'i

(6) *Drosophila digressa*—Unit 1, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 1 consists of 16,272 ac (6,585 ha) of wet forest ecosystem from Ookala to Maulua Nui on the northeastern slope of Maunakea. Lands within this unit include approximately 4,097 ac (1,658 ha) in Federal ownership, 10,644 ac (4,307 ha) in State ownership, and 1,531 ac (619 ha) in private or other ownership. Federal lands within this unit are within the Hakalau Forest National Wildlife Refuge Hakalau Forest Unit. State lands within this unit are part of the Hilo Forest Reserve Humuula, Laupahoehoe, and Piha Sections; the Laupahoehoe Natural Area Reserve; and the Manowaialee Forest Reserve.

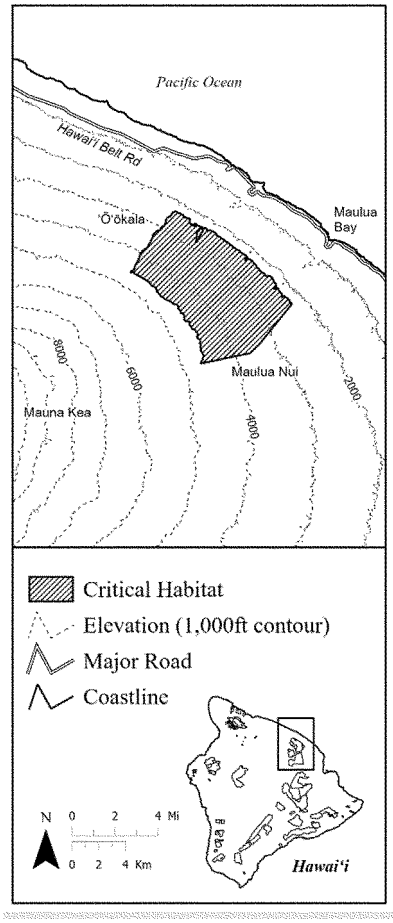
(ii) Map of *Drosophila digressa*—Unit 1 follows:

Figure 2 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (6)(ii)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Unit 1



(7) *Drosophila digressa*—Unit 2, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 2 consists of 32,091 ac (12,987 ha) of wet forest ecosystem from Olaa to Upper Waiakea on the eastern slope of Mauna Loa and partially on the northern slope of Kilauea Volcano. Lands within this unit include approximately 7,877 ac (3,188 ha) in Federal ownership, 23,898 ac (9,671 ha) in State ownership, and 316 ac (128 ha) in private or other ownership. Federal lands in this unit are within the Hawaii Volcanoes National Park. State lands in this unit are part of the Hilo Forest Reserve Kukuau Section, Olaa Forest Reserve Mountain View Section, Upper Waiākea Forest Reserve, Waiākea Forest Reserve, Puu Makaala Natural Area Reserve, and Waiakea 1942 Lava Flow Natural Area Reserve.

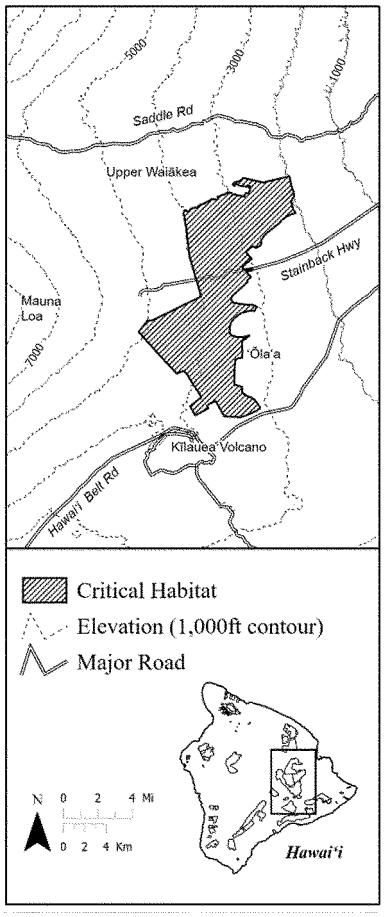
(ii) Map of *Drosophila digressa*—Unit 2 follows:

Figure 3 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (7)(ii)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Unit 2



(8) *Drosophila digressa*—Unit 3, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 3 consists of 8,781 ac (3,554 ha) of wet and mesic forest ecosystems at Kahuku on the southern slopes of Mauna Loa. Lands within this unit include approximately 8,769 ac (3,549 ha) in Federal ownership and 12 ac (5 ha) in State ownership. Federal lands within this unit are within Hawaii Volcanoes National Park. State-owned lands in this unit are part of the Kaʻū Forest Reserve.

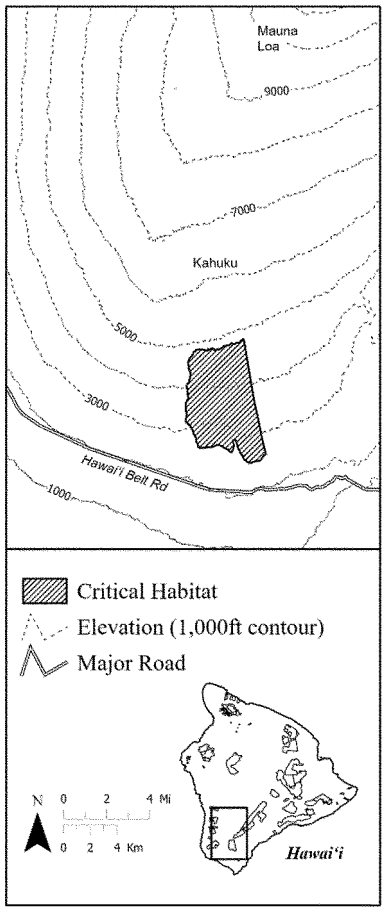
(ii) Map of *Drosophila digressa*—Unit 3 follows:

Figure 4 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (8)(ii)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Unit 3



(9) *Drosophila digressa*—Unit 4, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 4 consists of 167 ac (67 ha) of mesic forest ecosystem at Manuka on the southern slopes of Mauna Loa. Lands within this unit are entirely in State ownership and are part of the Manuka Natural Area Reserve.

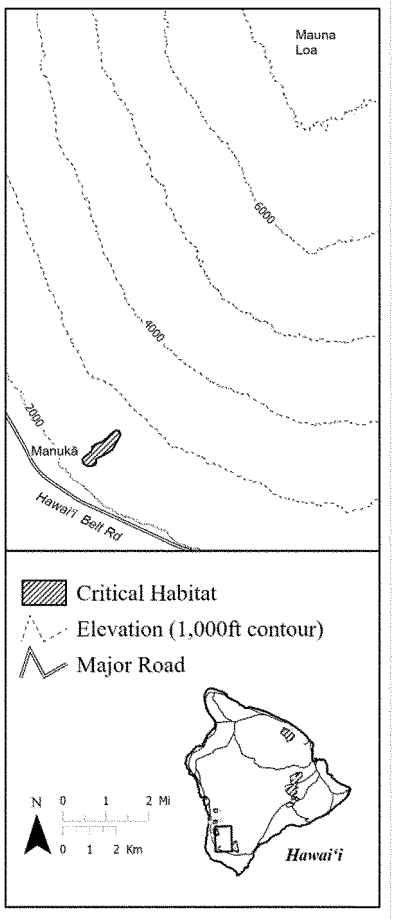
(ii) Map of *Drosophila digressa*—Unit 4 follows:

Figure 5 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (9)(ii)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Unit 4



(10) *Drosophila digressa*—Unit 5, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 5 consists of 3,412 ac (1,381 ha) of wet forest ecosystem from Kipahoehoe to Honomalino on the southwestern slopes of Mauna Loa. Lands within this unit include approximately 411 ac (166 ha) in State ownership and 3,001 ac (1,214 ha) in private or other ownership . State-owned lands in this unit are part of the Kipahoehoe Natural Area Reserve and South Kona Forest Reserve Kapua-Manukā Section. Some private lands are owned by The Nature Conservancy, within the Kona Hema Preserve.

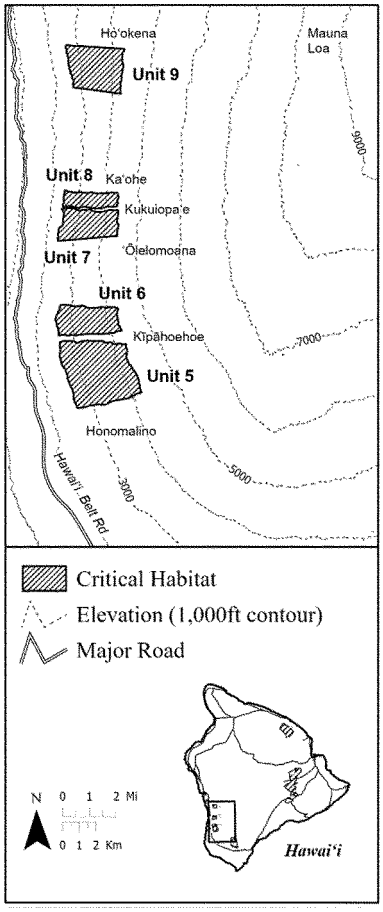
(ii) Map of *Drosophila digressa*—Unit 5, *Drosophila digressa*—Unit 6, *Drosophila digressa*—Unit 7, *Drosophila digressa*—Unit 8, and *Drosophila digressa*—Unit 9 follows:

Figure 6 to Hawaiian picture-wing fly (*Drosophila digressa*) paragraph (10)(ii)

Critical Habitat for *Drosophila digressa*

Hawaii Island, HI

Unit 5, Unit 6, Unit 7, Unit 8, and Unit 9



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(11) *Drosophila digressa*—Unit 6, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 6 consists of 1,399 ac (566 ha) of wet forest ecosystem in Kipahoehoe on the southwestern slopes of Mauna Loa. Lands within this unit include approximately 1,395 ac (565 ha) in State ownership and 4 ac (2 ha) in private or other ownership. State-owned lands in this unit are managed by the State of Hawaii as part of the Kipahoehoe Natural Area Reserve.

(ii) Map of *Drosophila digressa*—Unit 6 is provided at paragraph (10)(ii) of this entry.

(12) *Drosophila digressa*—Unit 7, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 7 consists of 1,346 ac (545 ha) of wet forest ecosystem from Kukuiopae to Olelomoana on the southwestern slopes of Mauna Loa. Lands within this unit include approximately 1,202 ac (486 ha) in State ownership and 144 ac (58 ha) in private or other ownership. State-owned lands in this unit are part of the South Kona Forest Reserve Kukuiopae Section.

(ii) Map of *Drosophila digressa*—Unit 7 is provided at paragraph (10)(ii) of this entry.

(13) *Drosophila digressa*—Unit 8, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 8 consists of 661 ac (267 ha) of wet forest ecosystem in Kaohe on the southwestern slopes of Mauna Loa. Lands within this unit include approximately 353 ac (143 ha) in State ownership and 308 ac (125 ha) in private or other ownership. State-owned lands in this unit are part of the South Kona Forest Reserve, Kaohe Section and Kukuiopae Section.

(ii) Map of *Drosophila digressa*—Unit 8 is provided at paragraph (10)(ii) of this entry.

(14) *Drosophila digressa*—Unit 9, Hawaii County, Hawaii.

(i) *Drosophila digressa*—Unit 9 consists of 1,906 ac (771 ha) of wet forest ecosystem in Hookena on the southwestern slopes of Mauna Loa. Lands within this unit include 1,906 ac (771 ha) of Federal land within Hakalau Forest National Wildlife Refuge Kona Forest Unit and less than 1 ac (less than 1 ha) of land that is privately owned or has other ownership.

(ii) Map of *Drosophila digressa*—Unit 9 is provided at paragraph (10)(ii) of this entry.

* * * * *

■ 5. Amend § 17.99 by:

■ a. Revising paragraphs (k) introductory text and (k)(1);

■ b. Redesignating paragraphs (k)(115) and (116) as paragraphs (k)(248) and (249), respectively;

■ c. Redesignating paragraphs (k)(12) through (114) as paragraphs (k)(13) through (115), respectively;

■ d. Adding a new paragraph (k)(12);

■ e. Redesignating newly redesignated paragraphs (k)(15) through (115) as paragraphs (k)(18) through (118), respectively;

■ f. Adding new paragraphs (k)(15) through (17);

■ g. Redesignating newly redesignated paragraphs (k)(19) through (118) as paragraphs (k)(22) through (121), respectively;

■ h. Adding new paragraphs (k)(19) through (21);

■ i. Redesignating newly redesignated paragraphs (k)(32) through (121) as paragraphs (k)(33) through (122), respectively;

■ j. Adding a new paragraph (k)(32);

■ k. Redesignating newly redesignated paragraphs (k)(36) through (122) as paragraphs (k)(39) through (125), respectively;

■ l. Adding new paragraphs (k)(36) through (38);
■ m. Redesignating newly redesignated paragraphs (k)(40) through (125) as paragraphs (k)(43) through (128), respectively;
■ n. Adding new paragraphs (k)(40) through (42);
■ o. Redesignating newly redesignated paragraphs (k)(53) through (128) as paragraphs (k)(59) through (134), respectively;
■ p. Adding new paragraphs (k)(53) through (58);
■ q. Redesignating newly redesignated paragraphs (k)(79) through (134) as paragraphs (k)(81) through (136), respectively;
■ r. Adding new paragraphs (k)(79) and (80);
■ s. Redesignating newly redesignated paragraphs (k)(82) through (136) as paragraphs (k)(90) through (144), respectively;
■ t. Redesignating newly redesignated paragraphs (k)(91) through (144) as paragraphs (k)(92) through (145), respectively;
■ u. Adding a new paragraph (k)(91);
■ v. Redesignating newly redesignated paragraphs (k)(93) through (145) as paragraphs (k)(97) through (149), respectively;
■ w. Adding new paragraphs (k)(93) through (96);
■ x. Redesignating newly redesignated paragraphs (k)(109) through (149) as paragraphs (k)(112) through (152), respectively;
■ y. Adding new paragraphs (k)(109) through (111);
■ z. Redesignating newly redesignated paragraphs (k)(117) through (152) as paragraphs (k)(120) through (155), respectively;
■ aa. Adding new paragraphs (k)(117) through (119);
■ bb. Redesignating newly redesignated paragraphs (k)(122) through (155) as paragraphs (k)(124) through (157), respectively;
■ cc. Adding new paragraphs (k)(122) and (123);
■ dd. Redesignating newly redesignated paragraphs (k)(125) through (157) as paragraphs (k)(129) through (161), respectively;
■ ee. Adding new paragraphs (k)(125) through (128);
■ ff. Redesignating newly redesignated paragraphs (k)(137) through (161) as paragraphs (k)(140) through (164), respectively;
■ gg. Adding new paragraphs (k)(137) through (139);
■ hh. Redesignating newly redesignated paragraphs (k)(142) through (164) as paragraphs (k)(143) through (165), respectively;
■ ii. Adding a new paragraph (k)(142);
■ jj. Redesignating newly redesignated paragraphs (k)(145) through (165) as paragraphs (k)(150) through (170), respectively;
■ kk. Adding new paragraphs (k)(145) through (149);
■ ll. Redesignating newly redesignated paragraphs (k)(155) through (170) as paragraphs (k)(156) through (171), respectively;
■ mm. Adding a new paragraph (k)(155);
■ nn. Redesignating newly redesignated paragraphs (k)(157) through (171) as paragraphs (k)(159) through (173), respectively;
■ oo. Adding new paragraphs (k)(157) and (158);
■ pp. Redesignating newly redesignated paragraphs (k)(161) through (173) as paragraphs (k)(162) through (174), respectively;
■ qq. Adding a new paragraph (k)(161);
■ rr. Redesignating newly redesignated paragraphs (k)(163) through (174) as paragraphs (k)(164) through (175), respectively;
■ ss. Adding a new paragraph (k)(163);
■ tt. Redesignating newly redesignated paragraphs (k)(165) through (175) as paragraphs (k)(166) through (176), respectively;
■ uu. Adding a new paragraph (k)(165);
■ vv. Adding new paragraphs (k)(177) through (247);
■ ww. Revising newly redesignated paragraph (k)(248); and
■ xx. In paragraph (l)(1), adding in alphabetical order entries for ''Family Asteraceae: *Bidens hillebrandiana* ssp. *hillebrandiana* (KOOKOOLAU)'', ''Family Campanulaceae: *Cyanea marksii* (HAHA)'', ''Family Campanulaceae: *Cyanea tritomantha* (AKU)'', ''Family Caryophyllaceae: *Schiedea diffusa* ssp. *macraei* (no common name)'', ''Family Caryophyllaceae: *Schiedea hawaiiensis* (MAOLIOLI)'', ''Family Gesneriaceae: *Cyrtandra nanawaleensis* (HAIWALE)'', Family Gesneriaceae: *Cyrtandra wagneri* (HAIWALE)'', ''Family Lamiaceae: *Phyllostegia floribunda* (no common name)'', ''Family Lamiaceae: *Stenogyne cranwelliae* (no common name)'', ''Family Pittosporaceae: *Pittosporum hawaiiense* (HOAWA, HAAWA)'', and ''Family Rutaceae: *Melicope remyi* (no common name)''.

The revisions and additions read as follows:

§ 17.99 Critical habitat; plants on the Hawaiian Islands, HI.

* * * * *

(k) *Maps and critical habitat unit descriptions for the island of Hawaii, HI.* Critical habitat units are described below. Coordinates were created using World Geodetic System 1984 (WGS84). The following map shows the general locations of the critical habitat units designated on the island of Hawaii. Existing humanmade features and structures, such as buildings, aqueducts, runways, roads, and other paved areas, and the land on which they are located existing within the legal boundaries are not included in the critical habitat designation. Federal actions limited to those areas, therefore, would not trigger a consultation under section 7 of the Act unless they may affect the species or physical or biological features in adjacent critical habitat.

(1) Note: Map 1, Index map, follows:

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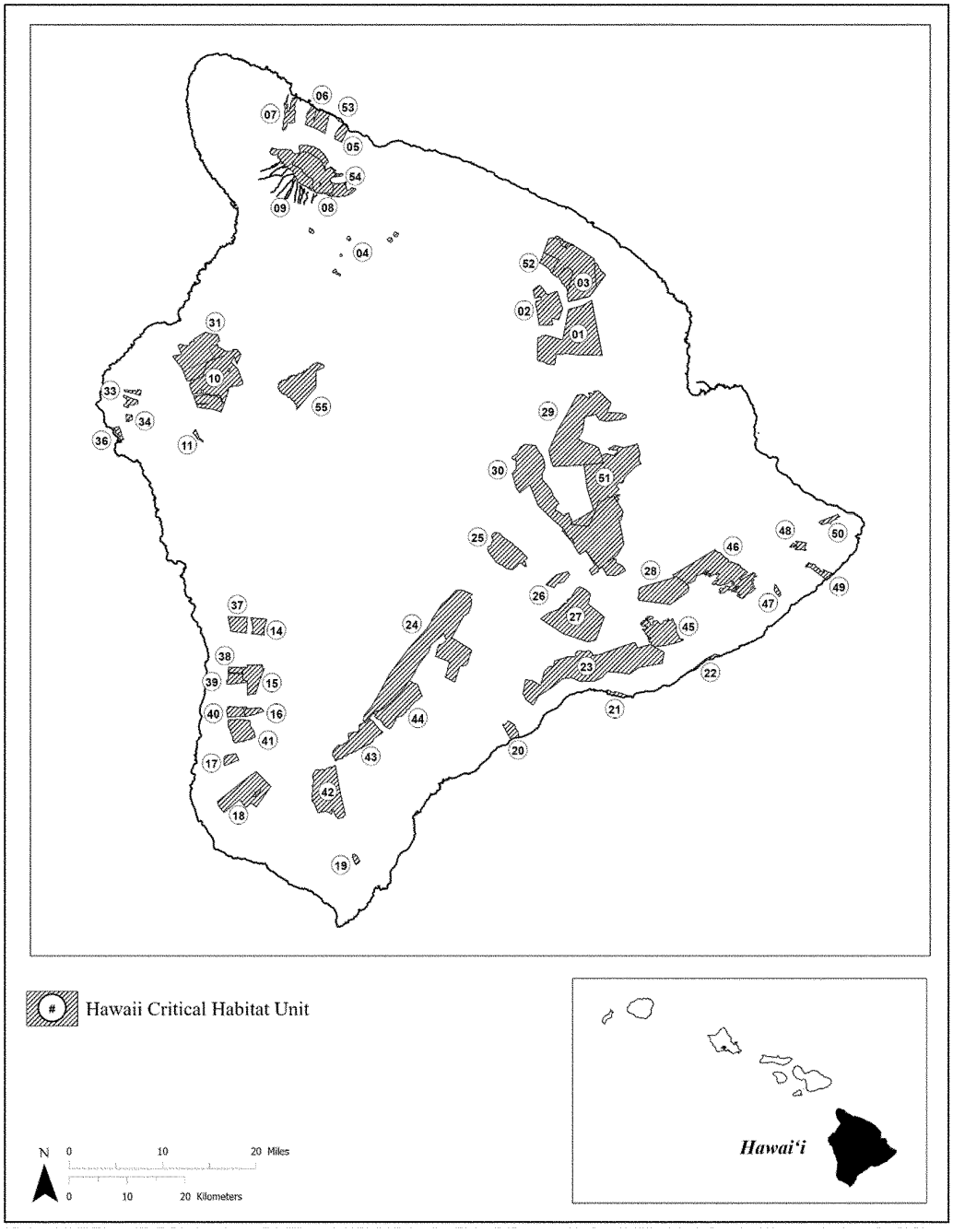
Map 1

Hawaii Critical Habitat—Island Index Map


Hawaii Critical Habitat Unit
N
0 10 20 Miles
0 10 20 Kilometers
Hawai'i

* * * * *

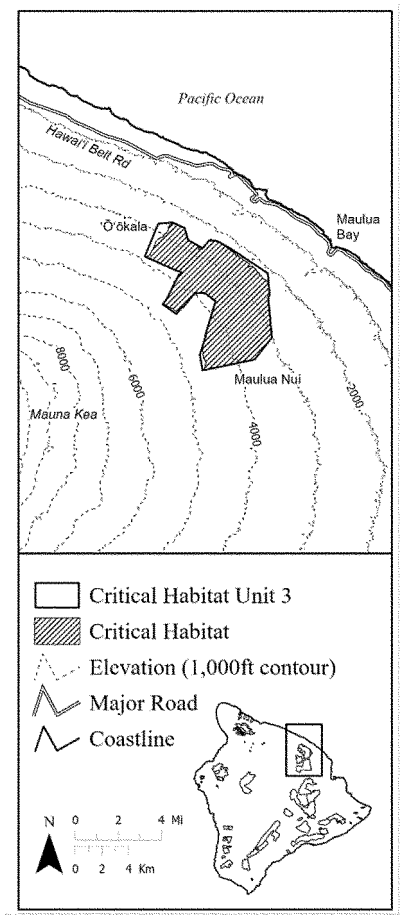
(12) Hawaii 3–*Cyanea tritomantha*-a (12,059 ac; 4,880 ha).

(i) This unit is also critical habitat for Hawaii 3–*Cyrtandra wagneri*-a, Hawaii 3–*Melicope remyi*-a, Hawaii 3–*Phyllostegia floribunda*-a, Hawaii 3–*Pittosporum hawaiiense*-a, Hawaii 3–*Schiedea diffusa* ssp. *macraei*-a, and Hawaii 3–*Stenogyne cranwelliae*-a (see paragraphs (k)(15), (k)(16), (k)(17), (k)(19), (k)(20), (k)(21), respectively, of this section).

(ii) Map 11a follows:

Map 11a

Hawaii 3–*Cyanea tritomantha*-a, Hawaii 3–*Cyrtandra wagneri*-a, Hawaii 3–*Melicope remyi*-a, Hawaii 3–*Phyllostegia floribunda*-a, Hawaii 3–*Pittosporum hawaiiense*-a, Hawaii 3–*Schiedea diffusa* ssp. *macraei-a,* Hawaii 3–*Stenogyne cranwelliae*-a



* * * * *

(15) Hawaii 3–*Cyrtandra wagneri*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

(16) Hawaii 3–*Melicope remyi*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

(17) Hawaii 3–*Phyllostegia floribunda*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

* * * * *

(19) Hawaii 3–*Pittosporum hawaiiense*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

(20) Hawaii 3–*Schiedea diffusa* ssp. *macraei*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

(21) Hawaii 3–*Stenogyne cranwelliae*-a (12,059 ac; 4,880 ha). See paragraph (k)(12)(ii) of this section for the map of this unit.

* * * * *

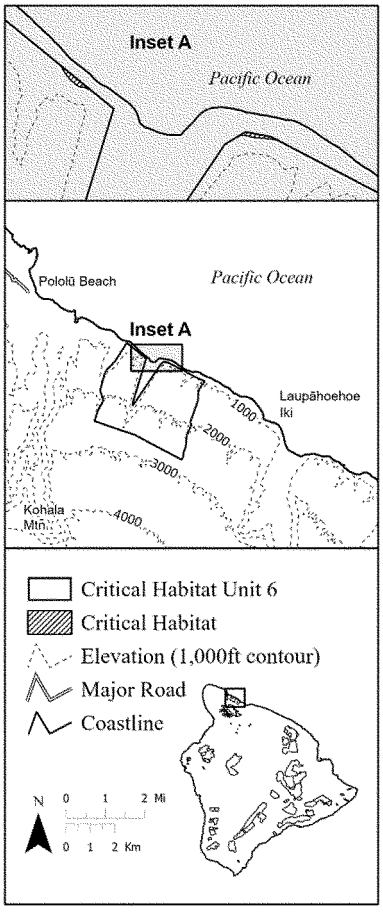
(32) Hawaii 6–*Bidens hillebrandiana* ssp. *hillebrandiana*-a (2 ac; 1 ha).

(i) [Reserved].

(ii) Map 24a follows:

Map 24a

Hawaii 6–*Bidens hillebrandiana* ssp. *hillebrandiana*-a



* * * * *

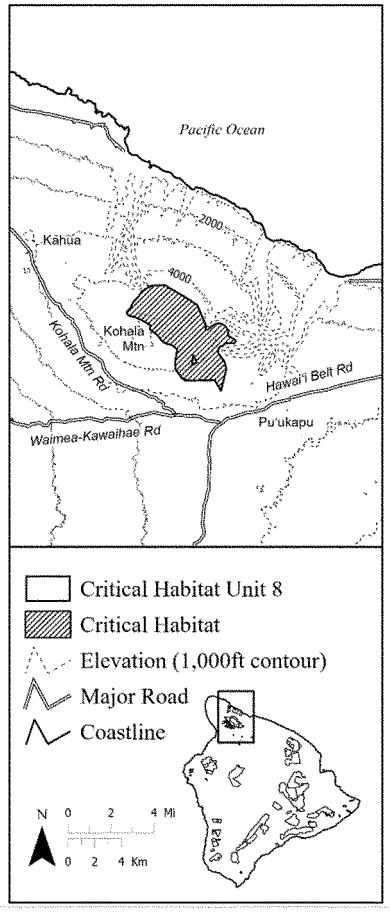
(36) Hawaii 8–*Cyanea tritomantha*-b (6,805 ac; 2,754 ha).

(i) This unit is also critical habitat for Hawaii 8–*Melicope remyi*-b, Hawaii 8–*Phyllostegia floribunda*-b, Hawaii 8–*Pittosporum hawaiiense*-b, Hawaii 8–*Schiedea diffusa* ssp. *macraei*-b, and Hawaii 8–*Stenogyne cranwelliae*-b (see paragraphs (k)(37), (k)(38), (k)(40), (k)(41), and (k)(42), respectively, of this section).

(ii) Map 27a follows:

Map 27a

Hawaii 8–*Cyanea tritomantha*-b, Hawaii 8–*Melicope remyi*-b, Hawaii 8–*Phyllostegia floribunda*-b, Hawaii 8–*Pittosporum hawaiiense*-b, Hawaii 8–*Schiedea diffusa* ssp. *macraei-b,* Hawaii 8–*Stenogyne cranwelliae*-b



(37) Hawaii 8–*Melicope remyi*-b (6,805 ac; 2,754 ha). See paragraph (k)(36)(ii) of this section for the map of this unit.

(38) Hawaii 8–*Phyllostegia floribunda*-b (6,805 ac; 2,754 ha). See paragraph (k)(36)(ii) of this section for the map of this unit.

* * * * *

(40) Hawaii 8–*Pittosporum hawaiiense*-b (6,805 ac; 2,754 ha). See paragraph (k)(36)(ii) of this section for the map of this unit.

(41) Hawaii 8–*Schiedea diffusa* ssp. *macraei*-b (6,805 ac; 2,754 ha). See paragraph (k)(36)(ii) of this section for the map of this unit.

(42) Hawaii 8–*Stenogyne cranwelliae*-b (6,805 ac; 2,754 ha). See paragraph

(k)(36)(ii) of this section for the map of this unit.

* * * * *

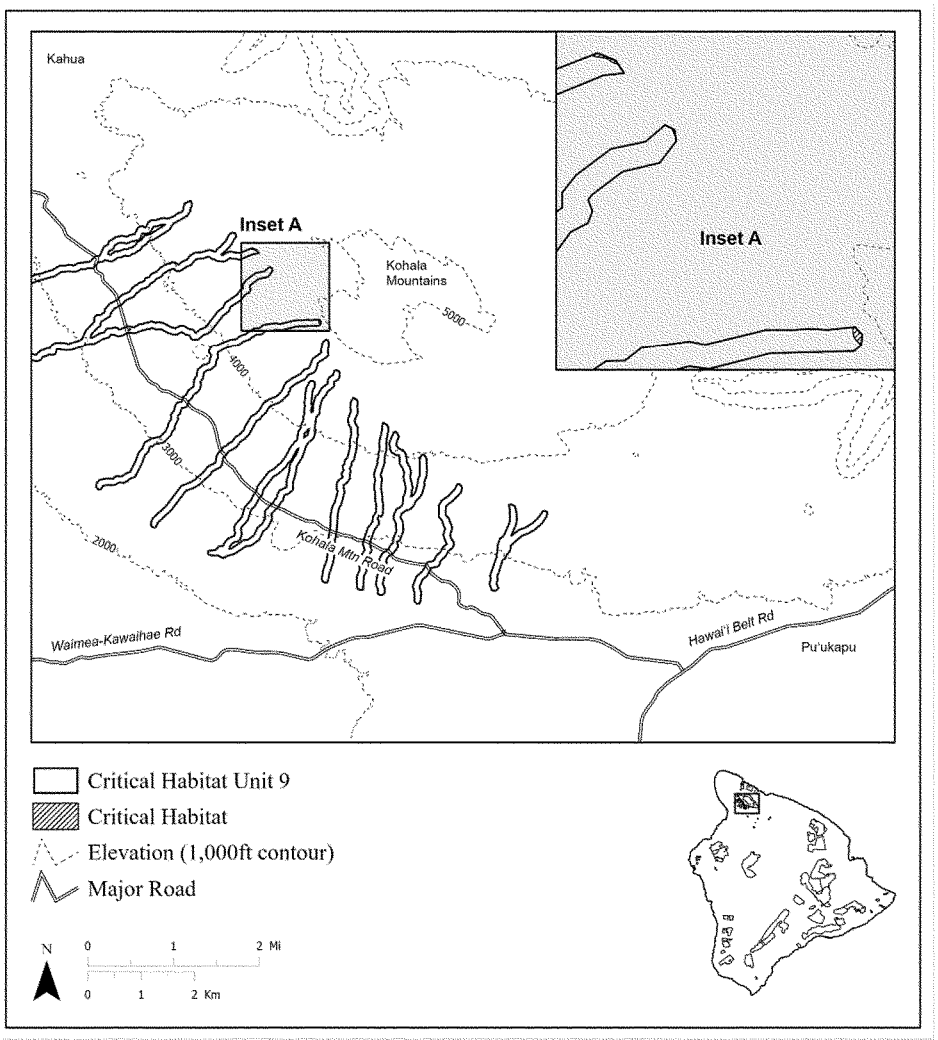
(53) Hawaii 9–*Cyanea tritomantha*-c (1 ac; <1 ha).

(i) This unit is also critical habitat for Hawaii 9–*Melicope remyi*-c, Hawaii 9–*Phyllostegia floribunda*-c, Hawaii 9–*Pittosporum hawaiiense*-c, Hawaii 9–*Schiedea diffusa* ssp. *macraei*-c, and Hawaii 9–*Stenogyne cranwelliae*-c (see paragraphs (k)(54), (k)(55), (k)(56), (k)(57), and (k)(58) respectively, of this section).

(ii) Map 38a follows:

Map 38a

Hawaii 9–*Cyanea tritomantha*-c, Hawaii 9–*Melicope remyi*-c, Hawaii 9–*Phyllostegia floribunda*-c, Hawaii 9–*Pittosporum hawaiiense*-c, Hawaii 9–*Schiedea diffusa* ssp. *macraei*-c, Hawaii 9–*Stenogyne cranwelliae*-c



(54) Hawaii 9–*Melicope remyi*-c (1 ac; <1 ha). See paragraph (k)(53)(ii) of this section for the map of this unit.

(55) Hawaii 9–*Phyllostegia floribunda*-c (1 ac; <1 ha). See paragraph (k)(53)(ii) of this section for the map of this unit.

(56) Hawaii 9–*Pittosporum hawaiiense*-c (1 ac; <1 ha). See paragraph (k)(53)(ii) of this section for the map of this unit.

(57) Hawaii 9–*Schiedea diffusa* ssp. *macraei*-c (1 ac; <1 ha). See paragraph (k)(53)(ii) of this section for the map of this unit.

(58) Hawaii 9–*Stenogyne cranwelliae*-c (1 ac; <1 ha). See paragraph (k)(53)(ii) of this section for the map of this unit.

* * * * *

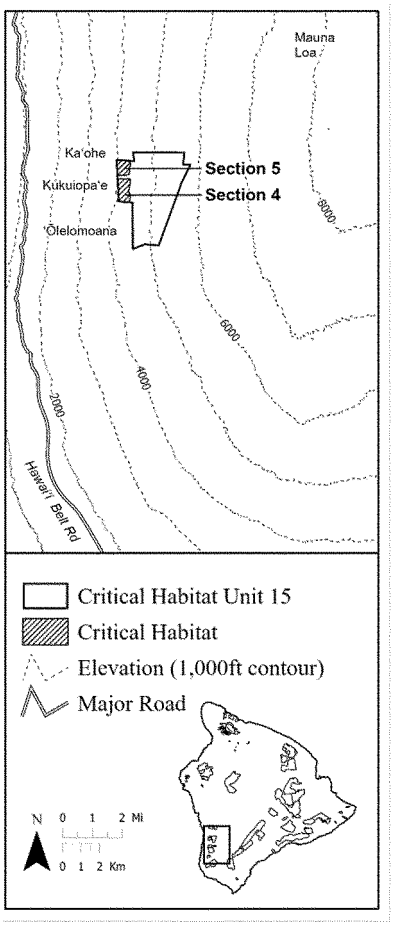
(79) Hawaii 15–*Cyanea marksii*-a-Section 4 (182 ac; 73 ha).

(i) This unit is also critical habitat for Hawaii 15–*Phyllostegia floribunda*-d-Section 4, Hawaii 15–*Pittosporum hawaiiense*-d-Section 4, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-d-Section 4, and Hawaii 15–*Stenogyne cranwelliae*-d-Section 4 (see paragraphs (k)(82), (k)(84), (k)(86), and (k)(88), respectively, of this section).

(ii) Map 58a follows:

Map 58a

Hawaii 15–*Cyanea marksii*-a-Section 4, Hawaii 15–*Cyanea marksii*-b-Section 5, Hawaii 15–*Phyllostegia floribunda*-d-Section 4, Hawaii 15–*Phyllostegia floribunda*-e-Section 5, Hawaii 15–*Pittosporum hawaiiense*-d-Section 4, Hawaii 15–*Pittosporum hawaiiense*-e-Section 5, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-d-Section 4, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-e-Section 5, Hawaii 15–*Stenogyne cranwelliae*-d-Section 4, Hawaii 15–*Stenogyne cranwelliae*-e-Section 5



(80) Hawaii 15–*Cyanea marksii*-b-Section 5 (127 ac; 51 ha).

(i) This unit is also critical habitat for Hawaii 15–*Phyllostegia floribunda*-e-Section 5, Hawaii 15–*Pittosporum hawaiiense*-e-Section 5, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-e-Section 5, and Hawaii 15–*Stenogyne cranwelliae*-e-Section 5 (see paragraphs (k)(83), (k)(85), (k)(87), and (k)(89), respectively, of this section).

(ii) See paragraph (k)(79)(ii) of this section for the map of this unit.

* * * * *

(82) Hawaii 15–*Phyllostegia floribunda*-d-Section 4 (182 ac; 73 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(83) Hawaii 15–*Phyllostegia floribunda*-e-Section 5 (127 ac; 51 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(84) Hawaii 15–*Pittosporum hawaiiense*-d-Section 4 (182 ac; 73 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(85) Hawaii 15–*Pittosporum hawaiiense*-e-Section 5 (127 ac; 51 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(86) Hawaii 15–*Schiedea diffusa* ssp. *macraei*-d-Section 4 (182 ac; 73 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(87) Hawaii 15–*Schiedea diffusa* ssp. *macraei*-e-Section 5 (127 ac; 51 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(88) Hawaii 15–*Stenogyne cranwelliae*-d-Section 4 (182 ac; 73 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

(89) Hawaii 15–*Stenogyne cranwelliae*-e-Section 5 (127 ac; 51 ha). See paragraph (k)(79)(ii) of this section for the map of this unit.

* * * * *

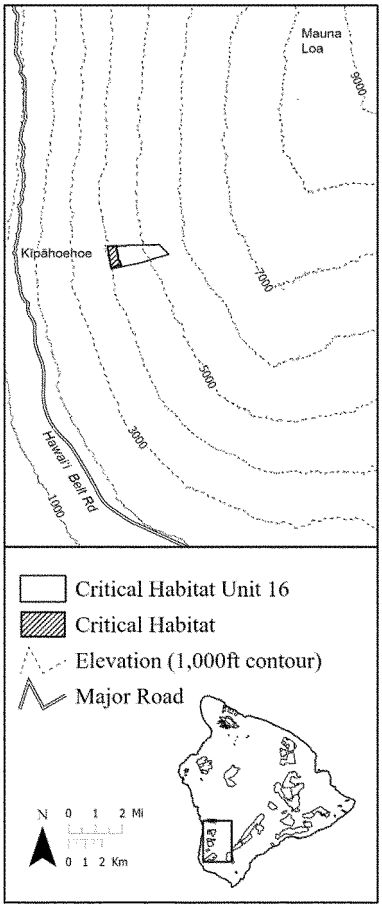
(91) Hawaii 16–*Cyanea marksii*-c (156 ac; 63 ha).

(i) This unit is also critical habitat for Hawaii 16–*Phyllostegia floribunda*-f, Hawaii 16–*Pittosporum hawaiiense*-f, Hawaii 16–*Schiedea diffusa* ssp. *macraei*-f, and Hawaii 16–*Stenogyne cranwelliae*-f (see paragraphs (k)(93), (k)(94), (k)(95), and (k)(96), respectively, of this section).

(ii) Map 60a follows:

Map 60a

Hawaii 16–*Cyanea marksii*-c, Hawaii 16–*Phyllostegia floribunda*-f, Hawaii 16–*Pittosporum hawaiiense*-f, Hawaii 16–*Schiedea diffusa* ssp. *macraei*-f, Hawaii 16–*Stenogyne cranwelliae*-f



* * * * *

(93) Hawaii 16–*Phyllostegia floribunda*-f (156 ac; 63 ha). See paragraph (k)(91)(ii) of this section for the map of this unit.

(94) Hawaii 16–*Pittosporum hawaiiense*-f (156 ac; 63 ha). See paragraph (k)(91)(ii) of this section for the map of this unit.

(95) Hawaii 16–*Schiedea diffusa* ssp. *macraei*-f (156 ac; 63 ha). See paragraph (k)(91)(ii) of this section for the map of this unit.

(96) Hawaii 16–*Stenogyne cranwelliae*-f (156 ac; 63 ha). See paragraph (k)(91)(ii) of this section for the map of this unit.

* * * * *

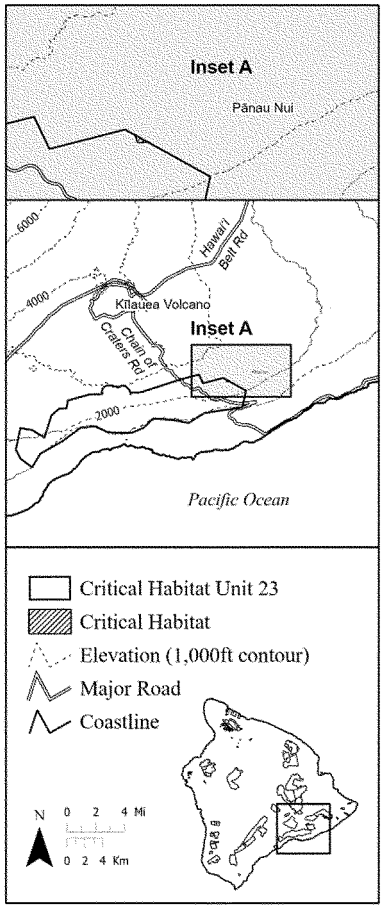
(109) Hawaii 23–*Cyrtandra wagneri*-b (9 ac; 4 ha).

(i) This unit is also critical habitat for Hawaii 23–*Phyllostegia floribunda*-g and Hawaii 23–*Pittosporum hawaiiense*-g (see paragraphs (k)(110) and (k)(111), respectively, of this section).

(ii) Map 73a follows:

Map 73a

Hawaii 23–*Cyrtandra wagneri*-b, Hawaii 23–*Phyllostegia floribunda*-g, Hawaii 23–*Pittosporum hawaiiense*-g



(110) Hawaii 23–*Phyllostegia floribunda*-g (9 ac; 4 ha). See paragraph (k)(109)(ii) of this section for the map of this unit.

(111) Hawaii 23–*Pittosporum hawaiiense*-g (9 ac; 4 ha). See paragraph (k)(109)(ii) of this section for the map of this unit.

* * * * *

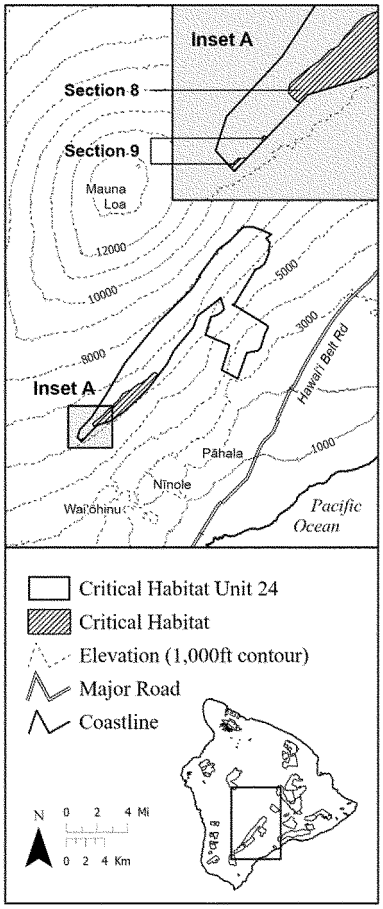
(117) Hawaii 24–*Cyanea tritomantha*-d-Section 8 (2,081 ac; 842 ha).

(i) This unit is also critical habitat for Hawaii 24–*Cyrtandra wagneri*-c-Section 8, Hawaii 24–*Pittosporum hawaiiense*-h-Section 8, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-g-Section 8, and Hawaii 24–*Stenogyne cranwelliae*-g-Section 8 (see paragraphs (k)(118), (k)(122), (k)(125), and (k)(127), respectively, of this section).

(ii) Map 78a follows:

Map 78a

Hawaii 24–*Cyanea tritomantha*-d-Section 8, Hawaii 24–*Cyrtandra wagneri*-c-Section 8, Hawaii 24–*Cyrtandra wagneri*-d-Section 9, Hawaii 24–*Pittosporum hawaiiense*-h-Section 8, Hawaii 24–*Pittosporum hawaiiense*-i-Section 9, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-g-Section 8, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-h-Section 9, Hawaii 24–*Stenogyne cranwelliae*-g-Section 8, Hawaii 24–*Stenogyne cranwelliae*-h-Section 9



(118) Hawaii 24–*Cyrtandra wagneri*-c-Section 8 (2,081 ac; 842 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

(119) Hawaii 24–*Cyrtandra wagneri*-d-Section 9 (101 ac; 41 ha)

(i) This unit is also critical habitat for Hawaii 24–*Pittosporum hawaiiense*-i-Section 9, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-h-Section 9, and Hawaii 24–*Stenogyne cranwelliae*-h-Section 9 (see paragraphs (k)(123), (k)(126), and (k)(128), respectively, of this section).

(ii) See paragraph (k)(117)(ii) of this section for the map of this unit.

* * * * *

(122) Hawaii 24–*Pittosporum hawaiiense*-h-Section 8 (2,081 ac; 842 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

(123) Hawaii 24–*Pittosporum hawaiiense*-i-Section 9 (101 ac; 41 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

* * * * *

(125) Hawaii 24–*Schiedea diffusa* ssp. *macraei*-g-Section 8 (2,081 ac; 842 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

(126) Hawaii 24–*Schiedea diffusa* ssp. *macraei*-h-Section 9 (101 ac; 41 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

(127) Hawaii 24–*Stenogyne cranwelliae*-g-Section 8 (2,081 ac; 842 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

(128) Hawaii 24–*Stenogyne cranwelliae*-h-Section 9 (101 ac; 41 ha). See paragraph (k)(117)(ii) of this section for the map of this unit.

* * * * *

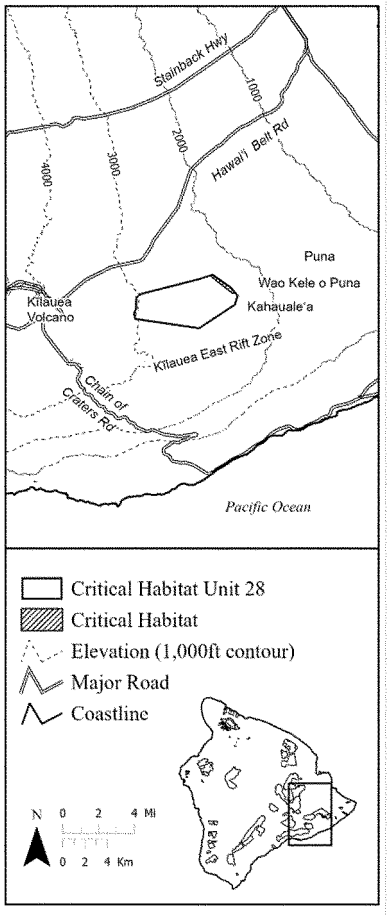
(137) Hawaii 28–*Cyrtandra nanawaleensis*-a (155 ac; 63 ha).

(i) This unit is also critical habitat for Hawaii 28–*Cyrtandra wagneri*-e and Hawaii 28–*Phyllostegia floribunda*-h (see paragraphs (k)(138) and (k)(139), respectively, of this section).

(ii) Map 89a follows:

Map 89a

Hawaii 28–*Cyrtandra nanawaleensis*-a, Hawaii 28–*Cyrtandra wagneri*-e, Hawaii 28–*Phyllostegia floribunda*-h



(138) Hawaii 28–*Cyrtandra wagneri*-e (155 ac; 63 ha). See paragraph (k)(137)(ii) of this section for the map of this unit.

(139) Hawaii 28–*Phyllostegia floribunda*-h (155 ac; 63 ha). See paragraph (k)(137)(ii) of this section for the map of this unit.

* * * * *

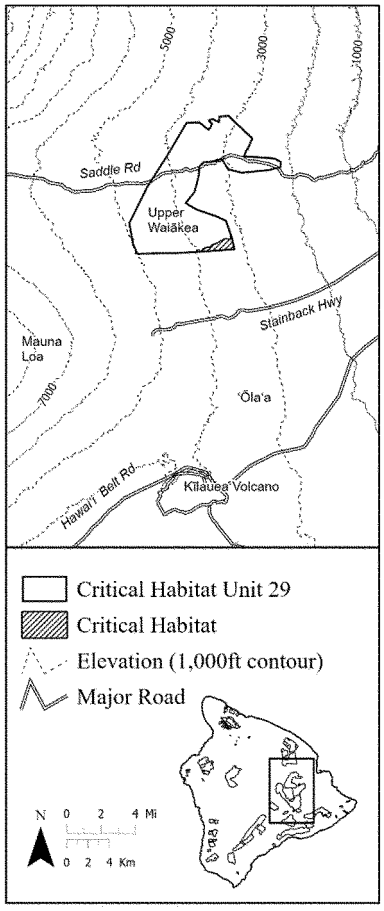
(142) Hawaii 29–*Cyanea tritomantha*-e (494 ac; 200 ha).

(i) This unit is also critical habitat for Hawaii 29–*Cyrtandra wagneri*-f, Hawaii 29–*Phyllostegia floribunda*-i, Hawaii 29–*Pittosporum hawaiiense*-j, Hawaii 29–*Schiedea diffusa* ssp. *macraei*-i, and Hawaii 29–*Stenogyne cranwelliae*-i (see paragraphs (k)(145), (k)(146), (k)(147), (k)(148), and (k)(149), respectively, of this section).

(ii) Map 91a follows:

Map 91a

Hawaii 29–*Cyanea tritomantha*-e, Hawaii 29–*Cyrtandra wagneri*-f, Hawaii 29–*Phyllostegia floribunda*-i, Hawaii 29–*Pittosporum hawaiiense*-j, Hawaii 29–*Schiedea diffusa* ssp. *macraei*-i, Hawaii 29–*Stenogyne cranwelliae*-i



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(145) Hawaii 29–*Cyrtandra wagneri*-f (494 ac; 200 ha). See paragraph (k)(142)(ii) of this section for the map of this unit.

(146) Hawaii 29–*Phyllostegia floribunda*-i (494 ac; 200 ha). See paragraph (k)(142)(ii) of this section for the map of this unit.

(147) Hawaii 29–*Pittosporum hawaiiense*-j (494 ac; 200 ha). See paragraph (k)(142)(ii) of this section for the map of this unit.

(148) Hawaii 29–*Schiedea diffusa* ssp. *macraei*-i (494 ac; 200 ha). See paragraph (k)(142)(ii) of this section for the map of this unit.

(149) Hawaii 29–*Stenogyne cranwelliae*-i (494 ac; 200 ha). See paragraph (k)(142)(ii) of this section for the map of this unit.

* * * * *

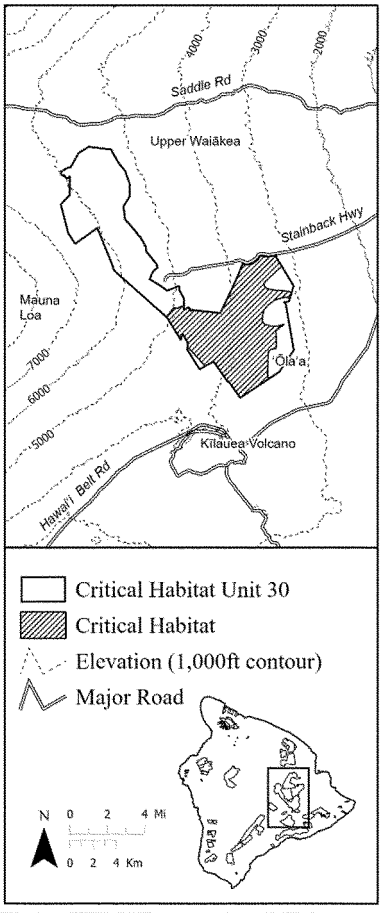
(155) Hawaii 30–*Cyanea tritomantha*-f (13,732 ac; 5,557 ha).

(i) This unit is also critical habitat for Hawaii 30–*Cyrtandra wagneri*-g, Hawaii 30–*Phyllostegia floribunda*-j, Hawaii 30–*Pittosporum hawaiiense*-k, Hawaii 30–*Schiedea diffusa* ssp. *macraei*-j, and Hawaii 30–*Stenogyne cranwelliae*-j (see paragraphs (k)(170), (k)(171), (k)(172), (k)(173), and (k)(174), respectively, of this section).

(ii) Map 98a follows:

Map 98a

Hawaii 30–*Cyanea tritomantha*-f, Hawaii 30–*Cyrtandra wagneri*-g, Hawaii 30–*Phyllostegia floribunda*-j, Hawaii 30–*Pittosporum hawaiiense*-k, Hawaii 30–*Schiedea diffusa* ssp. *macraei*-j, Hawaii 30–*Stenogyne cranwelliae*-j



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(157) Hawaii 30–*Cyrtandra wagneri*-g (13,732 ac; 5,557 ha). See paragraph (k)(155)(ii) of this section for the map of this unit.

(158) Hawaii 30–*Phyllostegia floribunda*-j (13,732 ac; 5,557 ha). See paragraph (k)(155)(ii) of this section for the map of this unit.

* * * * *

(161) Hawaii 30–*Pittosporum hawaiiense*-k (13,732 ac; 5,557 ha). See paragraph (k)(155)(ii) of this section for the map of this unit.

* * * * *

(163) Hawaii 30–*Schiedea diffusa* ssp. *macraei*-j (13,732 ac; 5,557 ha). See paragraph (k)(155)(ii) of this section for the map of this unit.

* * * * *

(165) Hawaii 30–*Stenogyne cranwelliae*-j (13,732 ac; 5,557 ha). See paragraph (k)(155)(ii) of this section for the map of this unit.

* * * * *

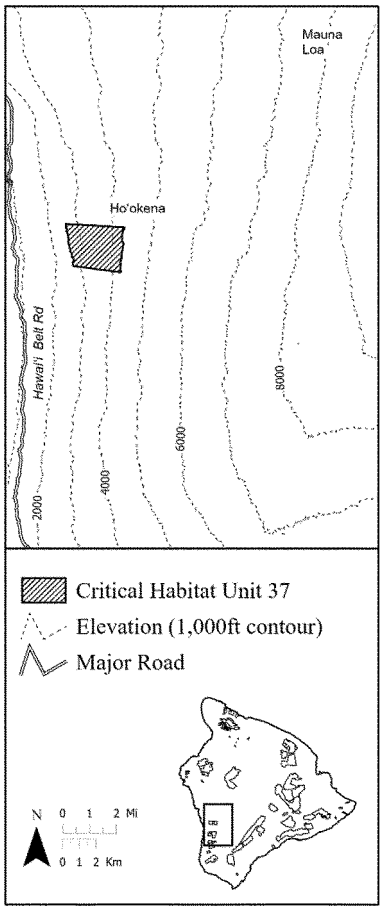
(177) Hawaii 37–*Cyanea marksii*-d (1,906 ac; 771 ha)

(i) This unit is also critical habitat for Hawaii 37–*Phyllostegia floribunda*-k, Hawaii 37–*Pittosporum hawaiiense*-l, Hawaii 37–*Schiedea diffusa* ssp. *macraei*-k, and Hawaii 37–*Stenogyne cranwelliae*-k (see paragraphs (k)(178), (k)(179), (k)(180), and (k)(181), respectively, of this section).

(ii) Map 106 follows:

Map 106

Hawaii 37–*Cyanea marksii*-d, Hawaii 37–*Phyllostegia floribunda*-k, Hawaii 37–*Pittosporum hawaiiense*-l, Hawaii 37–*Schiedea diffusa* ssp. *macraei*-k, Hawaii 37–*Stenogyne cranwelliae*-k



(178) Hawaii 37–*Phyllostegia floribunda*-k (1,906 ac; 771 ha). See paragraph (k)(177)(ii) of this section for the map of this unit.

(179) Hawaii 37–*Pittosporum hawaiiense*-l (1,906 ac; 771 ha). See paragraph (k)(177)(ii) of this section for the map of this unit.

(180) Hawaii 37–*Schiedea diffusa* ssp. *macraei*-k (1,906 ac; 771 ha). See paragraph (k)(177)(ii) of this section for the map of this unit.

(181) Hawaii 37–*Stenogyne cranwelliae*-k (1,906 ac; 771 ha). See paragraph (k)(177)(ii) of this section for the map of this unit.

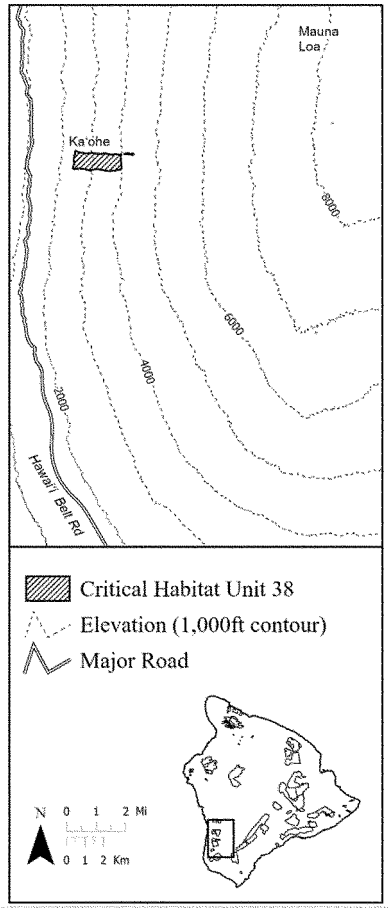
(182) Hawaii 38–*Cyanea marksii*-e (534 ac; 216 ha).

(i) This unit is also critical habitat for Hawaii 38–*Phyllostegia floribunda*-l, Hawaii 38–*Pittosporum hawaiiense*-m, Hawaii 38–*Schiedea diffusa* ssp. *macraei*-l, and Hawaii 38–*Stenogyne cranwelliae*-l (see paragraphs (k)(183), (k)(184), (k)(185), and (k)(186), respectively, of this section).

(ii) Map 107 follows:

Map 107

Hawaii 38–*Cyanea marksii*-e, Hawaii 38–*Phyllostegia floribunda*-l, Hawaii 38–*Pittosporum hawaiiense*-m, Hawaii 38–*Schiedea diffusa* ssp. *macraei*-l, Hawaii 38–*Stenogyne cranwelliae*-l



(183) Hawaii 38–*Phyllostegia floribunda*-l (534 ac; 216 ha). See paragraph (k)(182)(ii) of this section for the map of this unit.

(184) Hawaii 38–*Pittosporum hawaiiense*-m (534 ac; 216 ha). See paragraph (k)(182)(ii) of this section for the map of this unit.

(185) Hawaii 38–*Schiedea diffusa* ssp. *macraei*-l (534 ac; 216 ha). See paragraph (k)(182)(ii) of this section for the map of this unit.

(186) Hawaii 38–*Stenogyne cranwelliae*-l (534 ac; 216 ha). See paragraph (k)(182)(ii) of this section for the map of this unit.

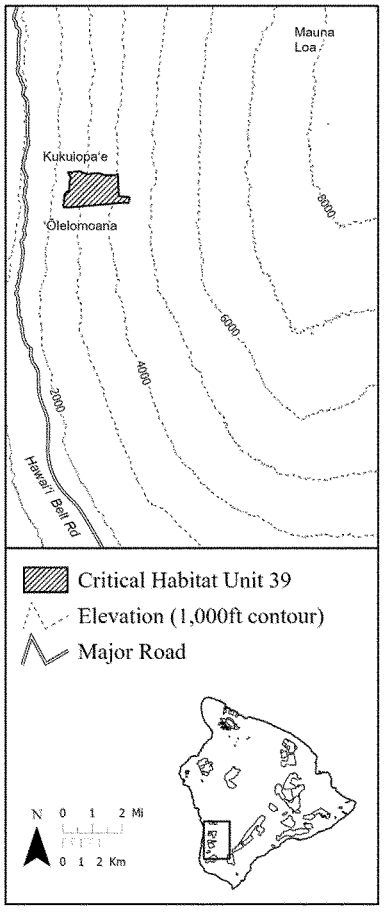
(187) Hawaii 39–*Cyanea marksii*-f (1,164 ac; 471 ha)

(i) This unit is also critical habitat for Hawaii 39–*Phyllostegia floribunda*-m, Hawaii 39–*Pittosporum hawaiiense*-n, Hawaii 39–*Schiedea diffusa* ssp. *macraei*-m, and Hawaii 39–*Stenogyne cranwelliae*-m (see paragraphs (k)(188), (k)(189), (k)(190), and (k)(191), respectively, of this section).

(ii) Map 108 follows:

Map 108

Hawaii 39–*Cyanea marksii*-f, Hawaii 39–*Phyllostegia floribunda*-m, Hawaii 39–*Pittosporum hawaiiense*-n, Hawaii 39–*Schiedea diffusa* ssp. *macraei*-m, Hawaii 39–*Stenogyne cranwelliae*-m



(188) Hawaii 39–*Phyllostegia floribunda*-m (1,164 ac; 471 ha). See paragraph (k)(187)(ii) of this section for the map of this unit.

(189) Hawaii 39–*Pittosporum hawaiiense*-n (1,164 ac; 471 ha). See paragraph (k)(187)(ii) of this section for the map of this unit.

(190) Hawaii 39–*Schiedea diffusa* ssp. *macraei*-m (1,164 ac; 471 ha). See paragraph (k)(187)(ii) of this section for the map of this unit.

(191) Hawaii 39–*Stenogyne cranwelliae*-m (1,164 ac; 471 ha). See paragraph (k)(187)(ii) of this section for the map of this unit.

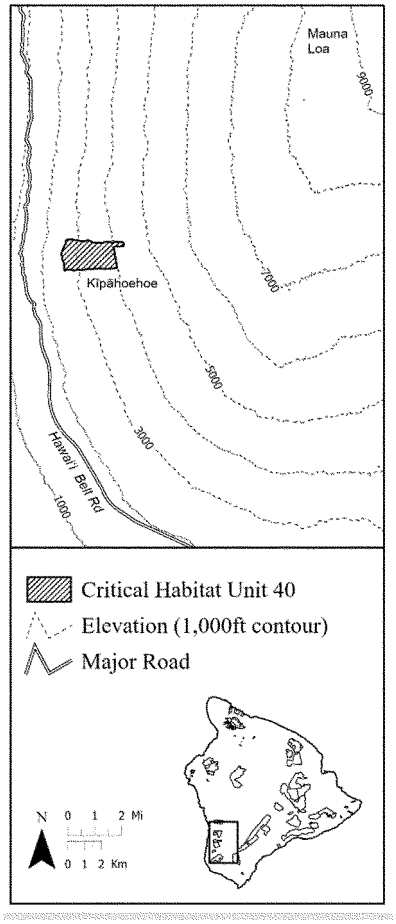
(192) Hawaii 40–*Cyanea marksii*-g (1,243 ac; 503 ha)

(i) This unit is also critical habitat for Hawaii 40–*Phyllostegia floribunda*-n, Hawaii 40–*Pittosporum hawaiiense*-o, Hawaii 40–*Schiedea diffusa ssp. macraei*-n, and Hawaii 40–*Stenogyne cranwelliae*-n (see paragraphs (k)(193), (k)(194), (k)(195), and (k)(196), respectively, of this section).

(ii) Map 109 follows:

Map 109

Hawaii 40–*Cyanea marksii*-g, Hawaii 40–*Phyllostegia floribunda*-n, Hawaii 40–*Pittosporum hawaiiense*-o, Hawaii 40–*Schiedea diffusa* ssp. *macraei*-n, Hawaii 40–*Stenogyne cranwelliae*-n



(193) Hawaii 40–*Phyllostegia floribunda*-n (1,243 ac; 503 ha). See paragraph (k)(192)(ii) of this section for the map of this unit.

(194) Hawaii 40–*Pittosporum hawaiiense*-o (1,243 ac; 503 ha). See

paragraph (k)(192)(ii) of this section for the map of this unit.

(195) Hawaii 40–*Schiedea diffusa* ssp. *macraei*-n (1,243 ac; 503 ha). See paragraph (k)(192)(ii) of this section for the map of this unit.

(196) Hawaii 40–*Stenogyne cranwelliae*-n (1,243 ac; 503 ha). See paragraph (k)(192)(ii) of this section for the map of this unit.

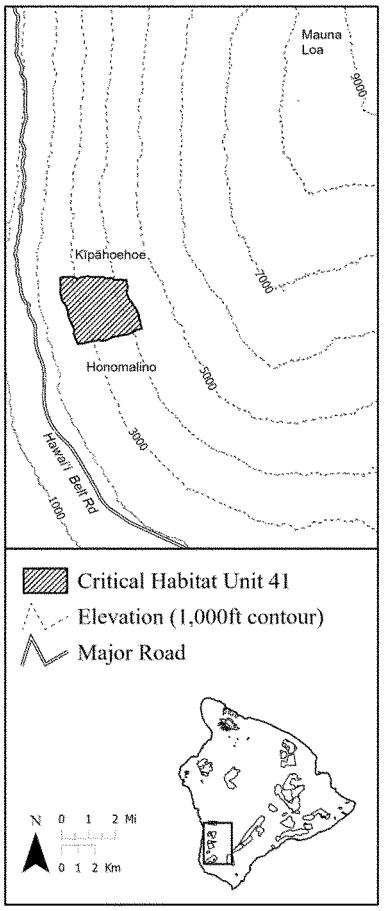
(197) Hawaii 41–*Cyanea marksii*-h (3,412 ac; 1,381 ha)

(i) This unit is also critical habitat for Hawaii 41–*Phyllostegia floribunda*-o, Hawaii 41–*Pittosporum hawaiiense*-p, Hawaii 41–*Schiedea diffusa* ssp. *macraei*-o, and Hawaii 41–*Stenogyne cranwelliae*-o (see paragraphs (k)(198), (k)(199), (k)(200), and (k)(201), respectively, of this section).

(ii) Map 110 follows:

Map 110

Hawaii 41–*Cyanea marksii*-h, Hawaii 41–*Phyllostegia floribunda*-o, Hawaii 41–*Pittosporum hawaiiense*-p, Hawaii 41–*Schiedea diffusa* ssp. *macraei*-o, Hawaii 41–*Stenogyne cranwelliae*-o



(198) Hawaii 41–*Phyllostegia floribunda*-o (3,412 ac; 1,381 ha). See paragraph (k)(197)(ii) of this section for the map of this unit.

(199) Hawaii 41–*Pittosporum hawaiiense*-p (3,412 ac; 1,381 ha). See paragraph (k)(197)(ii) of this section for the map of this unit.

(200) Hawaii 41–*Schiedea diffusa* ssp. *macraei*-o (3,412 ac; 1,381 ha). See paragraph (k)(197)(ii) of this section for the map of this unit.

(201) Hawaii 41–*Stenogyne cranwelliae*-o (3,412 ac; 1,381 ha). See paragraph (k)(197)(ii) of this section for the map of this unit.

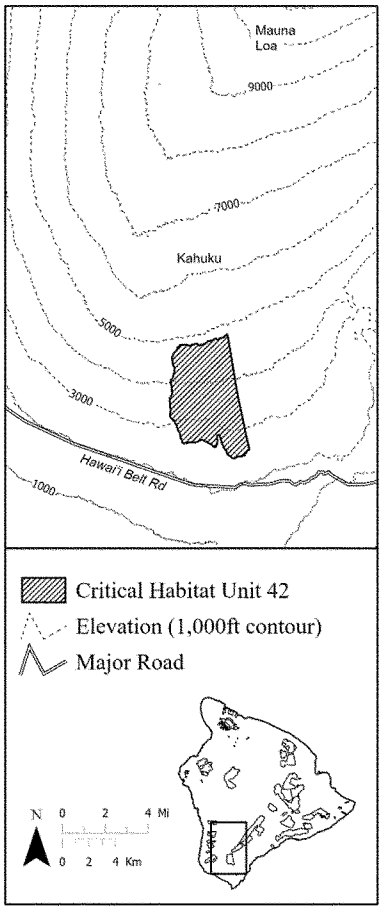
(202) Hawaii 42–*Cyanea tritomantha*-g (8,781 ac; 3,554 ha).

(i) This unit is also critical habitat for Hawaii 42–*Cyrtandra wagneri*-h, Hawaii 42–*Phyllostegia floribunda*-p, Hawaii 42–*Pittosporum hawaiiense*-q, Hawaii 42–*Schiedea diffusa* ssp. *macraei*-p, and Hawaii 42–*Stenogyne cranwelliae*-p (see paragraphs (k)(203), (k)(204), (k)(205), (k)(206), and (k)(207), respectively, of this section).

(ii) Map 111 follows:

Map 111

Hawaii 42–*Cyanea tritomantha*-g, Hawaii 42–*Cyrtandra wagneri*-h, Hawaii 42–*Phyllostegia floribunda*-p, Hawaii 42–*Pittosporum hawaiiense*-q, Hawaii 42–*Schiedea diffusa* ssp. *macraei*-p, Hawaii 42–*Stenogyne cranwelliae*-p



(203) Hawaii 42–*Cyrtandra wagneri*-h (8,781 ac; 3,554 ha). See paragraph (k)(202)(ii) of this section for the map of this unit.

(204) Hawaii 42–*Phyllostegia floribunda*-p (8,781 ac; 3,554 ha). See paragraph (k)(202)(ii) of this section for the map of this unit.

(205) Hawaii 42–*Pittosporum hawaiiense*-q (8,781 ac; 3,554 ha). See paragraph (k)(202)(ii) of this section for the map of this unit.

(206) Hawaii 42–*Schiedea diffusa* ssp. *macraei*-p (8,781 ac; 3,554 ha). See paragraph (k)(202)(ii) of this section for the map of this unit.

(207) Hawaii 42–*Stenogyne cranwelliae*-p (8,781 ac; 3,554 ha). See paragraph (k)(202)(ii) of this section for the map of this unit.

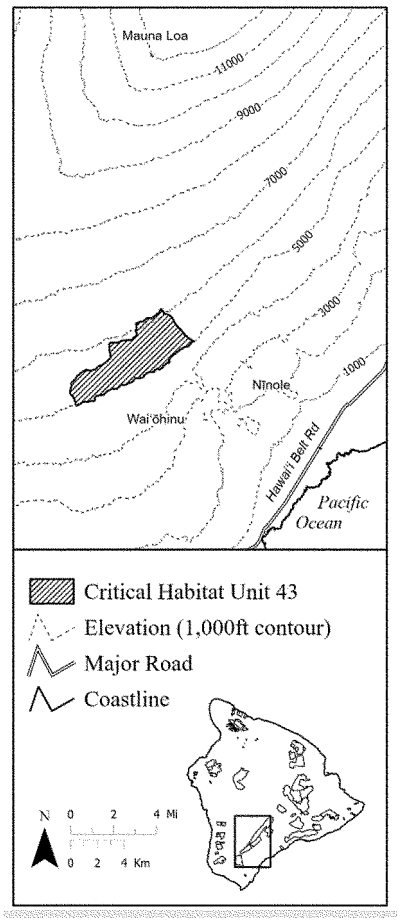
(208) Hawaii 43–*Cyrtandra wagneri*-i (5,872 ac; 2,376 ha).

(i) This unit is also critical habitat for Hawaii 43–*Pittosporum hawaiiense*-r, Hawaii 43–*Schiedea diffusa* ssp. *macraei*-q, and Hawaii 43–*Stenogyne cranwelliae*-q (see paragraphs (k)(209), (k)(210), and (k)(211), respectively, of this section).

(ii) Map 112 follows:

Map 112

Hawaii 43–*Cyrtandra wagneri*-i, Hawaii 43–*Pittosporum hawaiiense*-r, Hawaii 43–*Schiedea diffusa* ssp. *macraei*-q, Hawaii 43–*Stenogyne cranwelliae*-q



(209) Hawaii 43–*Pittosporum hawaiiense*-r (5,872 ac; 2,376 ha). See paragraph (k)(208)(ii) of this section for the map of this unit.

(210) Hawaii 43–*Schiedea diffusa* ssp. *macraei*-q (5,872 ac; 2,376 ha). See paragraph (k)(208)(ii) of this section for the map of this unit.

(211) Hawaii 43–*Stenogyne cranwelliae*-q (5,872 ac; 2,376 ha). See paragraph (k)(208)(ii) of this section for the map of this unit.

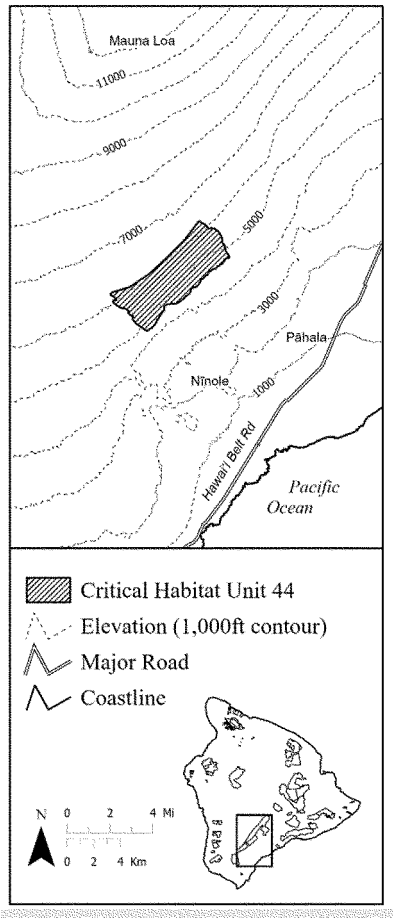
(212) Hawaii 44–*Cyanea tritomantha*-h (6,406 ac; 2,593 ha).

(i) This unit is also critical habitat for Hawaii 44–*Cyrtandra wagneri*-j, Hawaii 44–*Pittosporum hawaiiense*-s, Hawaii 44–*Schiedea diffusa* ssp. *macraei*-r, and Hawaii 44–*Stenogyne cranwelliae*-r (see paragraphs (k)(213), (k)(214), (k)(215), and (k)(216), respectively, of this section).

(ii) Map 113 follows:

Map 113

Hawaii 44–*Cyanea tritomantha*-h, Hawaii 44–*Cyrtandra wagneri*-j, Hawaii 44–*Pittosporum hawaiiense*-s, Hawaii 44–*Schiedea diffusa* ssp. *macraei*-r, Hawaii 44–*Stenogyne cranwelliae*-r



(213) Hawaii 44–*Cyrtandra wagneri*-j (6,406 ac; 2,593 ha). See paragraph (k)(212)(ii) of this section for the map of this unit.

(214) Hawaii 44–*Pittosporum hawaiiense*-s (6,406 ac; 2,593 ha). See paragraph (k)(212)(ii) of this section for the map of this unit.

(215) Hawaii 44–*Schiedea diffusa* ssp. *macraei*-r (6,406 ac; 2,593 ha). See paragraph (k)(212)(ii) of this section for the map of this unit.

(216) Hawaii 44–*Stenogyne cranwelliae*-r (6,406 ac; 2,593 ha). See paragraph (k)(212)(ii) of this section for the map of this unit.

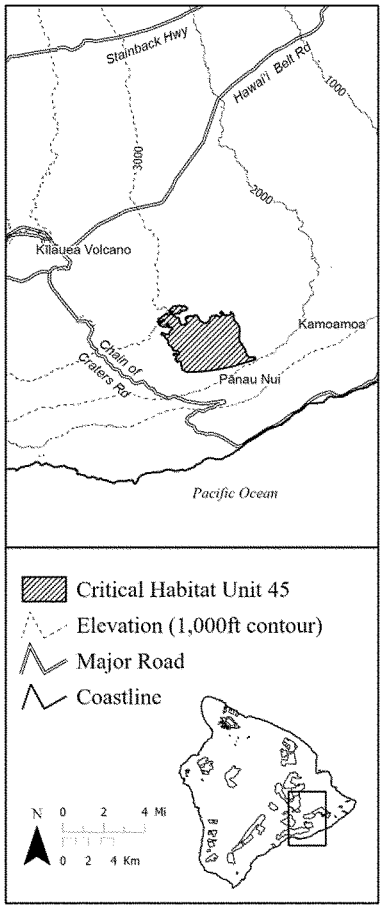
(217) Hawaii 45–*Cyrtandra wagneri*-k (5,494 ac; 2,223 ha).

(i) This unit is also critical habitat for Hawaii 45–*Phyllostegia floribunda*-q and Hawaii 45–*Pittosporum hawaiiense*-t (see paragraphs (k)(218) and (k)(219), respectively, of this section).

(ii) Map 114 follows:

Map 114

Hawaii 45–*Cyrtandra wagneri*-k, Hawaii 45–*Phyllostegia floribunda*-q, Hawaii 45–*Pittosporum hawaiiense*-t



(218) Hawaii 45–*Phyllostegia floribunda*-q (5,494 ac; 2,223 ha). See paragraph (k)(217)(ii) of this section for the map of this unit.

(219) Hawaii 45–*Pittosporum hawaiiense*-t (5,494 ac; 2,223 ha). See paragraph (k)(217)(ii) of this section for the map of this unit.

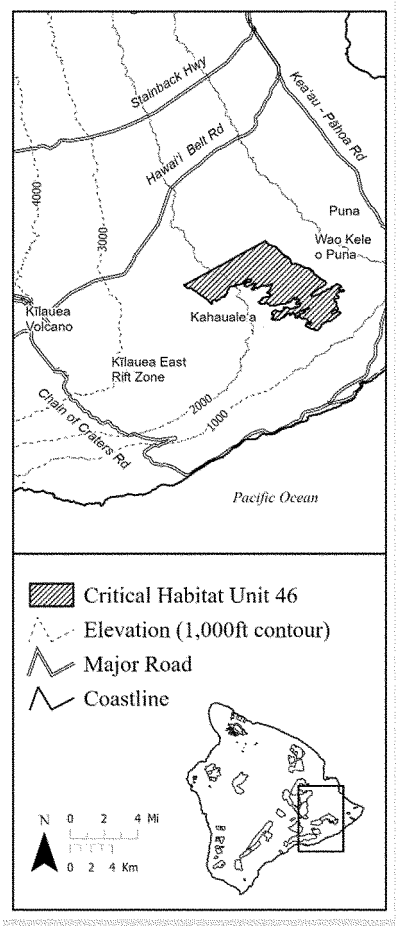
(220) Hawaii 46–*Cyrtandra nanawaleensis*-b (12,219 ac; 4,945 ha)

(i) This unit is also critical habitat for Hawaii 46–*Cyrtandra wagneri*-l and Hawaii 46–*Phyllostegia floribunda*-r (see paragraphs (k)(221) and (k)(222), respectively, of this section).

(ii) Map 115 follows:

Map 115

Hawaii 46–*Cyrtandra nanawaleensis*-b, Hawaii 46–*Cyrtandra wagneri*-l, Hawaii 46–*Phyllostegia floribunda*-r



(221) Hawaii 46–*Cyrtandra wagneri*-l (12,219 ac; 4,945 ha). See paragraph (k)(220)(ii) of this section for the map of this unit.

(222) Hawaii 46–*Phyllostegia floribunda*-r (12,219 ac; 4,945 ha). See paragraph (k)(220)(ii) of this section for the map of this unit.

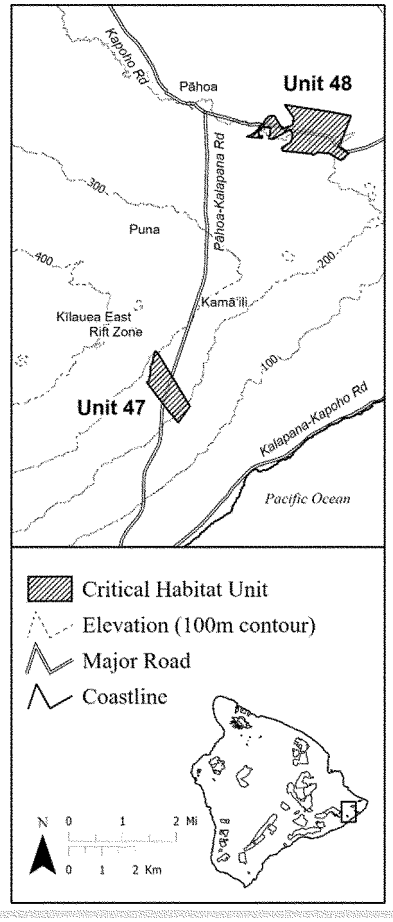
(223) Hawaii 47–*Cyrtandra nanawaleensis*-c (274 ac; 111 ha)

(i) [Reserved].

(ii) Map 116 follows:

Map 116

Hawaii 47–*Cyrtandra nanawaleensis*-c, Hawaii 48–*Cyrtandra nanawaleensis*-d



(224) Hawaii 48–*Cyrtandra nanawaleensis*-d (589 ac; 238 ha). See paragraph (k)(223)(ii) of this section for the map of this unit.

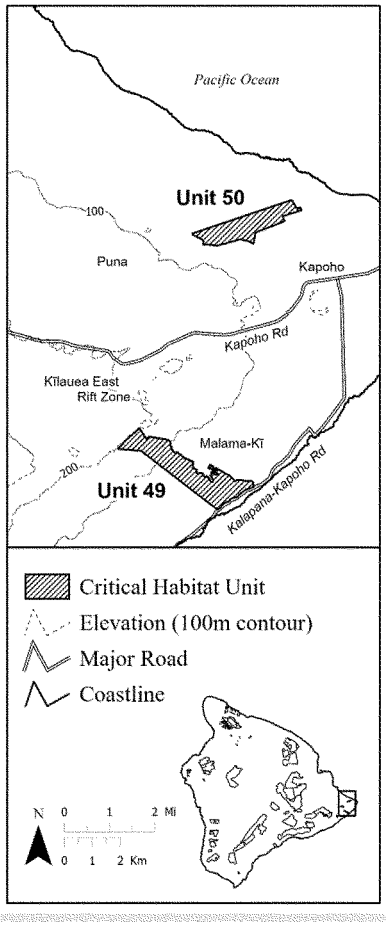
(225) Hawaii 49–*Cyrtandra nanawaleensis*-e (875 ac; 354 ha)

(i) [Reserved].

(ii) Map 117 follows:

Map 117

Hawaii 49–*Cyrtandra nanawaleensis*-e, Hawaii 50–*Cyrtandra nanawaleensis*-f



(226) Hawaii 50–*Cyrtandra nanawaleensis*-f (562 ac; 227 ha). See paragraph (k)(225)(ii) of this section for the map of this unit.

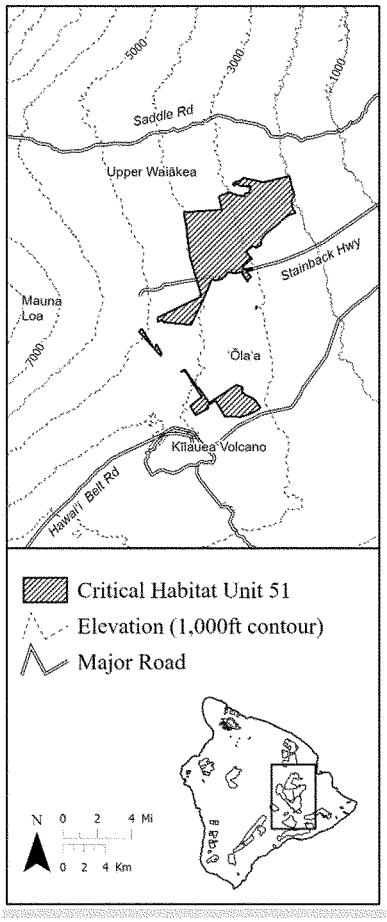
(227) Hawaii 51–*Cyanea tritomantha*-i (17,865 ac; 7,230 ha)

(i) This unit is also critical habitat for Hawaii 51–*Cyrtandra wagneri*-m, Hawaii 51–*Phyllostegia floribunda*-s, Hawaii 51–*Pittosporum hawaiiense*-u, Hawaii 51–*Schiedea diffusa* ssp. *macraei*-s, and Hawaii 51–*Stenogyne cranwelliae*-s (see paragraphs (k)(228), (k)(229), (k)(230), (k)(231), and (k)(232), respectively, of this section).

(ii) Map 118 follows:

Map 118

Hawaii 51–*Cyanea tritomantha*-i, Hawaii 51–*Cyrtandra wagneri*-m, Hawaii 51–*Phyllostegia floribunda*-s, Hawaii 51–*Pittosporum hawaiiense*-u, Hawaii 51–*Schiedea diffusa* ssp. *macraei*-s, Hawaii 51–*Stenogyne cranwelliae*-s



(228) Hawaii 51–*Cyrtandra wagneri*-m (17,865 ac; 7,230 ha). See paragraph (k)(227)(ii) of this section for the map of this unit.

(229) Hawaii 51–*Phyllostegia floribunda*-s (17,865 ac; 7,230 ha). See paragraph (k)(227)(ii) of this section for the map of this unit.

(230) Hawaii 51–*Pittosporum hawaiiense*-u (17,865 ac; 7,230 ha). See paragraph (k)(227)(ii) of this section for the map of this unit.

(231) Hawaii 51–*Schiedea diffusa* ssp. *macraei*-s (17,865 ac; 7,230 ha). See paragraph (k)(227)(ii) of this section for the map of this unit.

(232) Hawaii 51–*Stenogyne cranwelliae*-s (17,865 ac; 7,230 ha). See paragraph (k)(227)(ii) of this section for the map of this unit.

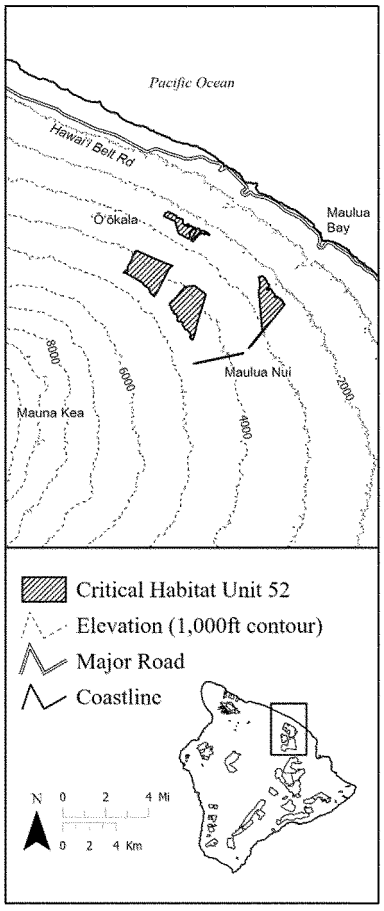
(233) Hawaii 52–*Cyanea tritomantha*-j (4,213 ac; 1,705 ha).

(i) This unit is also critical habitat for Hawaii 52–*Cyrtandra wagneri*-n, Hawaii 52–*Melicope remyi*-d, Hawaii 52–*Phyllostegia floribunda*-t, Hawaii 52–*Pittosporum hawaiiense*-v, Hawaii 52–*Schiedea diffusa* ssp. *macraei*-t, and Hawaii 52–*Stenogyne cranwelliae*-t (see paragraphs (k)(234), (k)(235), (k)(236), (k)(237), (k)(238), and (k)(239), respectively, of this section).

(ii) Map 119 follows:

Map 119

Hawaii 52–*Cyanea tritomantha*-j, Hawaii 52–*Cyrtandra wagneri*-n, Hawaii 52–*Melicope remyi*-d, Hawaii 52–*Phyllostegia floribunda*-t, Hawaii 52–*Pittosporum hawaiiense*-v, Hawaii 52–*Schiedea diffusa* ssp. *macraei*-t, Hawaii 52–*Stenogyne cranwelliae*-t



(234) Hawaii 52–*Cyrtandra wagneri*-n (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

(235) Hawaii 52–*Melicope remyi*-d (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

(236) Hawaii 52–*Phyllostegia floribunda*-t (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

(237) Hawaii 52–*Pittosporum hawaiiense*-v (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

(238) Hawaii 52–*Schiedea diffusa* ssp. *macraei*-t (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

(239) Hawaii 52–*Stenogyne cranwelliae*-t (4,213 ac; 1,705 ha). See paragraph (k)(233)(ii) of this section for the map of this unit.

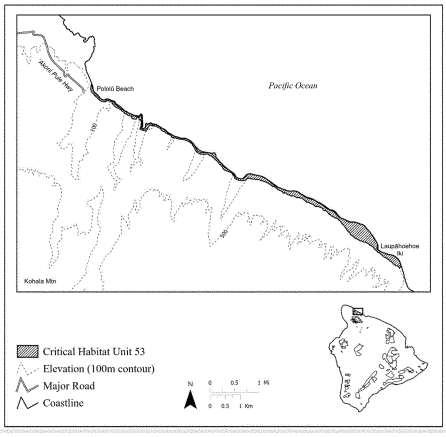
(240) Hawaii 53–*Bidens hillebrandiana* ssp. *hillebrandiana*-b (325 ac; 132 ha)

(i) [Reserved].

(ii) Map 120 follows:

Map 120

Hawaii 53–*Bidens hillebrandiana* ssp. *hillebrandiana*-b



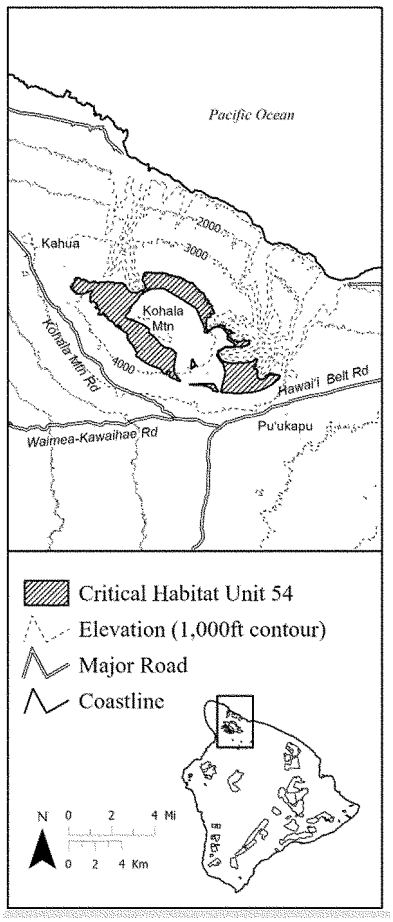
(241) Hawaii 54–*Cyanea tritomantha*-k (7,651 ac; 3,096 ha)

(i) This unit is also critical habitat for Hawaii 54–*Melicope remyi*-e, Hawaii 54–*Phyllostegia floribunda*-u, Hawaii 54–*Pittosporum hawaiiense*-w, Hawaii 54–*Schiedea diffusa* ssp. *macraei*-u, and Hawaii 54–*Stenogyne cranwelliae*-u (see paragraphs (k)(242), (k)(243), (k)(244), (k)(245), and (k)(246), respectively, of this section).

(ii) Map 121 follows:

Map 121

Hawaii 54–*Cyanea tritomantha*-k, Hawaii 54–*Melicope remyi*-e, Hawaii 54–*Phyllostegia floribunda*-u, Hawaii 54–*Pittosporum hawaiiense*-w, Hawaii 54–*Schiedea diffusa* ssp. *macraei*-u, Hawaii 54–*Stenogyne cranwelliae*-u



(242) Hawaii 54–*Melicope remyi*-e (7,651 ac; 3,096 ha). See paragraph (k)(241)(ii) of this section for the map of this unit.

(243) Hawaii 54–*Phyllostegia floribunda*-u (7,651 ac; 3,096 ha). See paragraph (k)(241)(ii) of this section for the map of this unit.

(244) Hawaii 54–*Pittosporum hawaiiense*-w (7,651 ac; 3,096 ha). See paragraph (k)(241)(ii) of this section for the map of this unit.

(245) Hawaii 54–*Schiedea diffusa* ssp. *macraei*-u (7,651 ac; 3,096 ha). See paragraph (k)(241)(ii) of this section for the map of this unit.

(246) Hawaii 54–*Stenogyne cranwelliae*-u (7,651 ac; 3,096 ha). See paragraph (k)(241)(ii) of this section for the map of this unit.

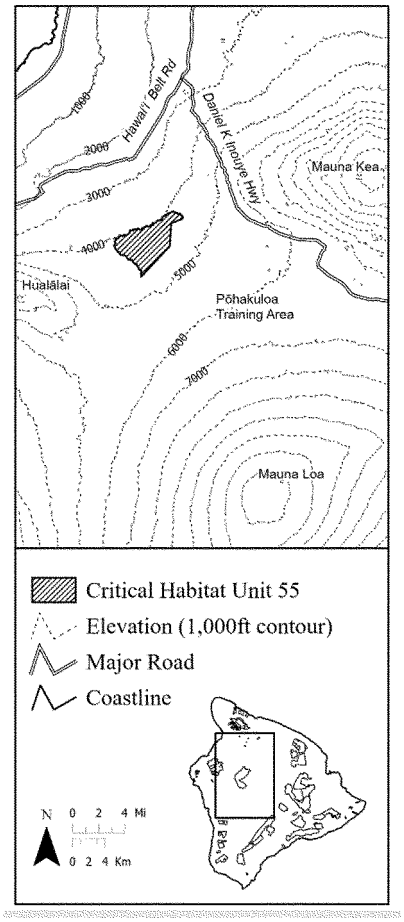
(247) Hawaii 55–*Schiedea hawaiiensis*-a (6,822 ac; 2,761 ha)

(i) [Reserved].

(ii) Map 122 follows:

Map 122

Hawaii 55–*Schiedea hawaiiensis*-a



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(248) Table of Protected Species Within Each Critical Habitat Unit for the Island of Hawaii.

Unit name	Species occupied	Species unoccupied
Hawaii 1—*Clermontia lindseyana*–a	*Clermontia lindseyana*	*Clermontia lindseyana.*
Hawaii 1—*Clermontia peleana*–a	*Clermontia peleana*	*Clermontia peleana.*
Hawaii 1—*Clermontia pyrularia*–a		*Clermontia pyrularia.*
Hawaii 1—*Cyanea shipmanii*–a	*Cyanea shipmanii*	*Cyanea shipmanii.*
Hawaii 1—*Phyllostegia racemosa*–a	*Phyllostegia racemosa*	*Phyllostegia racemosa.*
Hawaii 2—*Clermontia lindseyana*–b	*Clermontia lindseyana*	*Clermontia lindseyana.*
Hawaii 2—*Clermontia pyrularia*–b	*Clermontia pyrularia*	*Clermontia pyrularia.*
Hawaii 2—*Phyllostegia racemosa*–b	*Phyllostegia racemosa*	*Phyllostegia racemosa.*
Hawaii 3—*Clermontia peleana*–b	*Clermontia peleana*	*Clermontia peleana.*
Hawaii 3—*Cyanea platyphylla*–a	*Cyanea platyphylla*	*Cyanea platyphylla.*
Hawaii 3—*Cyanea tritomantha*–a	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 3—*Cyrtandra giffardii*–a	*Cyrtandra giffardii*	*Cyrtandra giffardii.*
Hawaii 3—*Cyrtandra tintinnabula*–a	*Cyrtandra tintinnabula*	*Cyrtandra tintinnabula.*
Hawaii 3—*Cyrtandra wagneri*–a	*Cyrtandra wagneri*	*Cyrtandra wagneri.*
Hawaii 3—*Melicope remyi*–a	*Melicope remyi*	*Melicope remyi.*
Hawaii 3—*Phyllostegia floribunda*–a	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 3—*Phyllostegia warshaueri*–a	*Phyllostegia warshaueri*	*Phyllostegia warshaueri.*
Hawaii 3—*Pittosporum hawaiiense*–a		*Pittosporum hawaiiense.*
Hawaii 3—*Schiedea diffusa* ssp. *macraei*–a		*Schiedea diffusa* ssp. *macraei.*
Hawaii 3—*Stenogyne cranwelliae*–a	*Stenogyne cranwelliae*	*Stenogyne cranwelliae.*
Hawaii 4—*Isodendrion hosakae*–a		*Isodendrion hosakae.*
Hawaii 4—*Isodendrion hosakae*–b		*Isodendrion hosakae.*
Hawaii 4—*Isodendrion hosakae*–c		*Isodendrion hosakae.*
Hawaii 4—*Isodendrion hosakae*–d		*Isodendrion hosakae.*
Hawaii 4—*Isodendrion hosakae*–e		*Isodendrion hosakae.*
Hawaii 4—*Isodendrion hosakae*–f	*Isodendrion hosakae*	*Isodendrion hosakae.*
Hawaii 4—*Vigna o-wahuensis*–a		*Vigna o-wahuensis.*
Hawaii 4—*Vigna o-wahuensis*–b		*Vigna o-wahuensis.*
Hawaii 4—*Vigna o-wahuensis*–c		*Vigna o-wahuensis.*
Hawaii 5—*Nothocestrum breviflorum*–a		*Nothocestrum breviflorum.*

Unit name	Species occupied	Species unoccupied
Hawaii 6—*Bidens hillebrandiana* ssp. *hillebrandiana*–a.	*Bidens hillebrandiana* ssp. *hillebrandiana*	*Bidens hillebrandiana* ssp. *hillebrandiana.*
Hawaii 6—*Nothocestrum breviflorum*–b	*Nothocestrum breviflorum*	*Nothocestrum breviflorum.*
Hawaii 7—*Pleomele hawaiiensis*–a	*Pleomele hawaiiensis*	*Pleomele hawaiiensis.*
Hawaii 8—*Clermontia drepanomorpha*–a	*Clermontia drepanomorpha*	*Clermontia drepanomorpha.*
Hawaii 8—*Cyanea tritomantha*–b	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 8—*Melicope remyi*–b		*Melicope remyi.*
Hawaii 8—*Phyllostegia floribunda*–b		*Phyllostegia floribunda.*
Hawaii 8—*Phyllostegia warshaueri*–b	*Phyllostegia warshaueri*	*Phyllostegia warshaueri.*
Hawaii 8—*Pittosporum hawaiiense*–b,	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 8—*Schiedea diffusa* ssp. *macraei*–b	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 8—*Stenogyne cranwelliae*–b	*Stenogyne cranwelliae*	*Stenogyne cranwelliae.*
Hawaii 9—*Achyranthes mutica*–a		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–b	*Achyranthes mutica*	*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–c		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–d		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–e		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–f		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–g		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–h		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–i		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*–j		*Achyranthes mutica.*
Hawaii 9—*Cyanea tritomantha*–c	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 9—*Melicope remyi*–c		*Melicope remyi.*
Hawaii 9—*Phyllostegia floribunda*–c		*Phyllostegia floribunda.*
Hawaii 9—*Pittosporum hawaiiense*–c	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 9—*Schiedea diffusa* ssp. *macraei*–c	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 9—*Stenogyne cranwelliae*–c	*Stenogyne cranwelliae*	*Stenogyne cranwelliae.*
Hawaii 10—*Argyroxiphium kauense*–a		*Argyroxiphium kauense.*
Hawaii 10—*Bidens micrantha* ssp. *ctenophylla*–a.		*Bidens micrantha* ssp. *ctenophylla.*
Hawaii 10—*Bonamia menziesii*–a		*Bonamia menziesii.*
Hawaii 10—*Colubrina oppositifolia*–a	*Colubrina oppositifolia*	*Colubrina oppositifolia.*
Hawaii 10—*Delissea undulata*–a		*Delissea undulata.*
Hawaii 10—*Delissea undulata*–b	*Delissea undulata*	*Delissea undulata.*
Hawaii 10—*Hibiscadelphus hualalaiensis*–a	*Hibiscadelphus hualalaiensis*	*Hibiscadelphus hualalaiensis.*
Hawaii 10—*Hibiscus brackenridgei*–a	*Hibiscus brackenridgei*	*Hibiscus brackenridgei.*
Hawaii 10—*Isodendrion pyrifolium*–a		*Isodendrion pyrifolium.*
Hawaii 10—*Mezoneuron kavaiense*–a	*Mezoneuron kavaiense*	*Mezoneuron kavaiense.*
Hawaii 10—*Neraudia ovata*–a		*Neraudia ovata.*
Hawaii 10—*Nothocestrum breviflorum*–c	*Nothocestrum breviflorum*	*Nothocestrum breviflorum.*
Hawaii 10—*Pleomele hawaiiensis*–b	*Pleomele hawaiiensis*	*Pleomele hawaiiensis.*
Hawaii 10—*Solanum incompletum*–a		*Solanum incompletum.*
Hawaii 10—*Zanthoxylum dipetalum* ssp. *tomentosum*–a.	*Zanthoxylum dipetalum* ssp. *tomentosum*	*Zanthoxylum dipetalum* ssp. *tomentosum.*
Hawaii 11—*Cyanea hamatiflora* ssp. *carlsonii*–a	*Cyanea hamatiflora* ssp. *carlsonii*	*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 11—*Solanum incompletum*–b		*Solanum incompletum.*
Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*–b		*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*–c		*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 15—*Cyanea marksii*–a-Section 4	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 15—*Cyanea marksii*–b-Section 5	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 15—*Cyanea stictophylla*–a	*Cyanea stictophylla*	*Cyanea stictophylla.*
Hawaii 15—*Phyllostegia floribunda*–d-Section 4	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 15—*Phyllostegia floribunda*–e-Section 5		*Phyllostegia floribunda.*
Hawaii 15—*Pittosporum hawaiiense*–d-Section 4.	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 15—*Pittosporum hawaiiense*–e-Section 5.		*Pittosporum hawaiiense.*
Hawaii 15—*Schiedea diffusa* ssp. *macraei*–d-Section 4.		*Schiedea diffusa* ssp. *macraei.*
Hawaii 15—*Schiedea diffusa* ssp. *macraei*–e-Section 5.		*Schiedea diffusa* ssp. *macraei.*
Hawaii 15—*Stenogyne cranwelliae*–d-Section 4		*Stenogyne cranwelliae.*
Hawaii 15—*Stenogyne cranwelliae*–e-Section 5		*Stenogyne cranwelliae.*
Hawaii 16—*Cyanea hamatiflora* ssp. *carlsonii*–d	*Cyanea hamatiflora* ssp. *carlsonii*	*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 16—*Cyanea marksii*–c	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 16—*Cyanea stictophylla*–b	*Cyanea stictophylla*	*Cyanea stictophylla.*
Hawaii 16—*Phyllostegia floribunda*–f	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 16—*Pittosporum hawaiiense*–f		*Pittosporum hawaiiense.*
Hawaii 16—*Schiedea diffusa* ssp. *macraei*–f		*Schiedea diffusa* ssp. *macraei.*
Hawaii 16—*Stenogyne cranwelliae*–f		*Stenogyne cranwelliae.*
Hawaii 17—*Diellia erecta*–a	*Diellia erecta*	*Diellia erecta.*
Hawaii 17—*Flueggea neowawraea*–a	*Flueggea neowawraea*	*Flueggea neowawraea.*
Hawaii 18—*Colubrina oppositifolia*–b	*Colubrina oppositifolia*	*Colubrina oppositifolia.*

Unit name	Species occupied	Species unoccupied
Hawaii 18—*Diellia erecta*–b	*Diellia erecta*	*Diellia erecta.*
Hawaii 18—*Flueggea neowawraea*–b	*Flueggea neowawraea*	*Flueggea neowawraea.*
Hawaii 18—*Gouania vitifolia*–a	*Gouania vitifolia*	*Gouania vitifolia.*
Hawaii 18—*Neraudia ovata*–d	*Neraudia ovata*	*Neraudia ovata.*
Hawaii 18—*Pleomele hawaiiensis*–c	*Pleomele hawaiiensis*	*Pleomele hawaiiensis.*
Hawaii 19—*Mariscus fauriei*–a	*Mariscus fauriei*	*Mariscus fauriei.*
Hawaii 20—*Sesbania tomentosa*–a	*Sesbania tomentosa*	*Sesbania tomentosa.*
Hawaii 21—*Ischaemum byrone*–a		*Ischaemum byrone.*
Hawaii 22—*Ischaemum byrone*–b	*Ischaemum byrone*	*Ischaemum byrone.*
Hawaii 23—*Cyrtandra wagneri*–b		*Cyrtandra wagneri.*
Hawaii 23—*Phyllostegia floribunda*–g	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 23—*Pittosporum hawaiiense*–g	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 23—*Pleomele hawaiiensis*–d	*Pleomele hawaiiensis*	*Pleomele hawaiiensis.*
Hawaii 23—*Sesbania tomentosa*–b	*Sesbania tomentosa*	*Sesbania tomentosa.*
Hawaii 24—*Argyroxiphium kauense*–b	*Argyroxiphium kauense*	*Argyroxiphium kauense.*
Hawaii 24—*Asplenium fragile* var. *insulare*–a	*Asplenium fragile* var. *insulare*	*Asplenium fragile* var. *insulare.*
Hawaii 24—*Cyanea stictophylla*–c		*Cyanea stictophylla.*
Hawaii 24—*Cyanea tritomantha*–d-Section 8	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 24—*Cyrtandra wagneri*–c-Section 8		*Cyrtandra wagneri.*
Hawaii 24—*Cyrtandra wagneri*–d-Section 9		*Cyrtandra wagneri.*
Hawaii 24—*Melicope zahlbruckneri*–a		*Melicope zahlbruckneri.*
Hawaii 24—*Phyllostegia velutina*–a	*Phyllostegia velutina*	*Phyllostegia velutina.*
Hawaii 24—*Pittosporum hawaiiense*–h-Section 8.	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 24—*Pittosporum hawaiiense*–i-Section 9	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 24—*Plantago hawaiensis*–a	*Plantago hawaiensis*	*Plantago hawaiensis.*
Hawaii 24—*Schiedea diffusa* ssp. *macraei*–g-Section 8.	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 24—*Schiedea diffusa* ssp. *macraei*–h-Section 9.	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 24—*Stenogyne cranwelliae*–g-Section 8		*Stenogyne cranwelliae.*
Hawaii 24—*Stenogyne cranwelliae*–h-Section 9		*Stenogyne cranwelliae.*
Hawaii 25—*Argyroxiphium kauense*–c	*Argyroxiphium kauense*	*Argyroxiphium kauense.*
Hawaii 25—*Plantago hawaiensis*–b	*Plantago hawaiensis*	*Plantago hawaiensis.*
Hawaii 25—*Silene hawaiiensis*–a	*Silene hawaiiensis*	*Silene hawaiiensis.*
Hawaii 26—*Hibiscadelphus giffardianus*–a	*Hibiscadelphus giffardianus*	*Hibiscadelphus giffardianus.*
Hawaii 26—*Melicope zahlbruckneri*–b	*Melicope zahlbruckneri*	*Melicope zahlbruckneri.*
Hawaii 27—*Portulaca sclerocarpa*–a	*Portulaca sclerocarpa*	*Portulaca sclerocarpa.*
Hawaii 27—*Silene hawaiiensis*–b	*Silene hawaiiensis*	*Silene hawaiiensis.*
Hawaii 28—*Adenophorus periens*–a	*Adenophorus periens*	*Adenophorus periens.*
Hawaii 28—*Cyrtandra nanawaleensis*–a	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 28—*Cyrtandra wagneri*–e		*Cyrtandra wagneri.*
Hawaii 28—*Phyllostegia floribunda*–h	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 29—*Clermontia peleana*–c	*Clermontia peleana*	*Clermontia peleana.*
Hawaii 29—*Cyanea platyphylla*–b	*Cyanea platyphylla*	*Cyanea platyphylla.*
Hawaii 29—*Cyanea tritomantha*-e	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 29—*Cyrtandra giffardii*–b		*Cyrtandra giffardii.*
Hawaii 29—*Cyrtandra tintinnabula*–b		*Cyrtandra tintinnabula.*
Hawaii 29—*Cyrtandra wagneri*–f		*Cyrtandra wagneri.*
Hawaii 29—*Phyllostegia floribunda*–i	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 29—*Pittosporum hawaiiense*–j	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 29—*Schiedea diffusa* ssp. *macraei*–i	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 29—*Stenogyne cranwelliae*–i		*Stenogyne cranwelliae.*
Hawaii 30—*Argyroxiphium kauense*–d	*Argyroxiphium kauense*	*Argyroxiphium kauense.*
Hawaii 30—*Clermontia lindseyana*–c	*Clermontia lindseyana*	*Clermontia lindseyana.*
Hawaii 30—*Cyanea shipmanii*–b	*Cyanea shipmanii*	*Cyanea shipmanii.*
Hawaii 30—*Cyanea shipmanii*–c		*Cyanea shipmanii.*
Hawaii 30—*Cyanea stictophylla*–d		*Cyanea stictophylla.*
Hawaii 30—*Cyanea tritomantha*–f	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 30—*Cyrtandra giffardii*–c	*Cyrtandra giffardii*	*Cyrtandra giffardii.*
Hawaii 30—*Cyrtandra wagneri*–g		*Cyrtandra wagneri.*
Hawaii 30—*Phyllostegia floribunda*–j	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 30—*Phyllostegia racemosa*–c		*Phyllostegia racemosa.*
Hawaii 30—*Phyllostegia velutina*–b	*Phyllostegia velutina*	*Phyllostegia velutina.*
Hawaii 30—*Pittosporum hawaiiense*–k	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 30—*Plantago hawaiensis*–c	*Plantago hawaiensis*	*Plantago hawaiensis.*
Hawaii 30—*Schiedea diffusa* ssp. *macraei*–j	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 30—*Sicyos alba*–a	*Sicyos alba*	*Sicyos alba.*
Hawaii 30—*Stenogyne cranwelliae*–j		*Stenogyne cranwelliae.*
Hawaii 31—*Bidens micrantha* ssp. *ctenophylla*–b.		*Bidens micrantha* ssp. *ctenophylla.*
Hawaii 31—*Isodendrion pyrifolium*–b		*Isodendrion pyrifolium.*
Hawaii 31—*Mezoneuron kavaiense*–b	*Mezoneuron kavaiense*	*Mezoneuron kavaiense.*
Hawaii 33—*Bidens micrantha* ssp. *ctenophylla*–d.		*Bidens micrantha* ssp. *ctenophylla*

Unit name	Species occupied	Species unoccupied
Hawaii 33—*Isodendrion pyrifolium*–d		*Isodendrion pyrifolium.*
Hawaii 33—*Mezoneuron kavaiense*–d		*Mezoneuron kavaiense.*
Hawaii 34—*Bidens micrantha* ssp. *ctenophylla*–e.		*Bidens micrantha* ssp. *ctenophylla.*
Hawaii 34—*Isodendrion pyrifolium*–e		*Isodendrion pyrifolium.*
Hawaii 34—*Mezoneuron kavaiense*–e		*Mezoneuron kavaiense.*
Hawaii 36—*Bidens micrantha* ssp. *ctenophylla*–g.	*Bidens micrantha* ssp. *ctenophylla*	*Bidens micrantha* ssp. *ctenophylla.*
Hawaii 36—*Isodendrion pyrifolium*–g		*Isodendrion pyrifolium.*
Hawaii 37—*Cyanea marksii*–d	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 37—*Phyllostegia floribunda*–k		*Phyllostegia floribunda.*
Hawaii 37—*Pittosporum hawaiiense*–l		*Pittosporum hawaiiense.*
Hawaii 37—*Schiedea diffusa* ssp. *macraei*–k		*Schiedea diffusa* ssp. *macraei.*
Hawaii 37—*Stenogyne cranwelliae*–k		*Stenogyne cranwelliae.*
Hawaii 38—*Cyanea marksii*–e	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 38—*Phyllostegia floribunda*–l		*Phyllostegia floribunda.*
Hawaii 38—*Pittosporum hawaiiense*–m		*Pittosporum hawaiiense.*
Hawaii 38—*Schiedea diffusa* ssp. *macraei*–l		*Schiedea diffusa* ssp. *macraei.*
Hawaii 38—*Stenogyne cranwelliae*–l		*Stenogyne cranwelliae.*
Hawaii 39—*Cyanea marksii*–f	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 39—*Phyllostegia floribunda*–m	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 39—*Pittosporum hawaiiense*–n	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 39—*Schiedea diffusa* ssp. *macraei*–m		*Schiedea diffusa* ssp. *macraei.*
Hawaii 39—*Stenogyne cranwelliae*–m		*Stenogyne cranwelliae.*
Hawaii 40—*Cyanea marksii*–g	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 40—*Phyllostegia floribunda*–n	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 40—*Pittosporum hawaiiense*–o		*Pittosporum hawaiiense.*
Hawaii 40—*Schiedea diffusa ssp. macraei*–n		*Schiedea diffusa ssp. macraei.*
Hawaii 40—*Stenogyne cranwelliae*–n		*Stenogyne cranwelliae.*
Hawaii 41—*Cyanea marksii*–h	*Cyanea marksii*	*Cyanea marksii.*
Hawaii 41—*Phyllostegia floribunda*–o	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 41—*Pittosporum hawaiiense*–p	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 41—*Schiedea diffusa* ssp. *macraei*–o		*Schiedea diffusa* ssp. *macraei.*
Hawaii 41—*Stenogyne cranwelliae*–o		*Stenogyne cranwelliae.*
Hawaii 42—*Cyanea tritomantha*–g		*Cyanea tritomantha.*
Hawaii 42—*Cyrtandra wagneri*–h		*Cyrtandra wagneri.*
Hawaii 42—*Phyllostegia floribunda*–p		*Phyllostegia floribunda.*
Hawaii 42—*Pittosporum hawaiiense*–q	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 42—*Schiedea diffusa* ssp. *macraei*–p	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 42—*Stenogyne cranwelliae*–p		*Stenogyne cranwelliae.*
Hawaii 43—*Cyrtandra wagneri*–i		*Cyrtandra wagneri.*
Hawaii 43—*Pittosporum hawaiiense*–r	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 43—*Schiedea diffusa* ssp. *macraei*–q	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 43—*Stenogyne cranwelliae*–q		*Stenogyne cranwelliae.*
Hawaii 44—*Cyanea tritomantha*–h	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 44—*Cyrtandra wagneri*–j		*Cyrtandra wagneri.*
Hawaii 44—*Pittosporum hawaiiense*–s	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 44—*Schiedea diffusa* ssp. *macraei*–r	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 44—*Stenogyne cranwelliae*–r		*Stenogyne cranwelliae.*
Hawaii 45—*Cyrtandra wagneri*–k		*Cyrtandra wagneri.*
Hawaii 45—*Phyllostegia floribunda*–q	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 45—*Pittosporum hawaiiense*–t	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 46—*Cyrtandra nanawaleensis*–b	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 46—*Cyrtandra wagneri*–l		*Cyrtandra wagneri.*
Hawaii 46—*Phyllostegia floribunda*–r	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 47—*Cyrtandra nanawaleensis*–c	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 48—*Cyrtandra nanawaleensis*–d	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 49—*Cyrtandra nanawaleensis*–e	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 50—*Cyrtandra nanawaleensis*–f	*Cyrtandra nanawaleensis*	*Cyrtandra nanawaleensis.*
Hawaii 51—*Cyanea tritomantha*–i	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 51—*Cyrtandra wagneri*–m		*Cyrtandra wagneri.*
Hawaii 51—*Phyllostegia floribunda*–s	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 51—*Pittosporum hawaiiense*–u	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 51—*Schiedea diffusa* ssp. *macraei*–s	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 51—*Stenogyne cranwelliae*–s		*Stenogyne cranwelliae.*
Hawaii 52—*Cyanea tritomantha*–j	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 52—*Cyrtandra wagneri*–n	*Cyrtandra wagneri*	*Cyrtandra wagneri.*
Hawaii 52—*Melicope remyi*–d	*Melicope remyi*	*Melicope remyi.*
Hawaii 52—*Phyllostegia floribunda*–t	*Phyllostegia floribunda*	*Phyllostegia floribunda.*
Hawaii 52—*Pittosporum hawaiiense*–v		*Pittosporum hawaiiense.*
Hawaii 52—*Schiedea diffusa* ssp. *macraei*–t		*Schiedea diffusa* ssp. *macraei.*
Hawaii 52—*Stenogyne cranwelliae*–t	*Stenogyne cranwelliae*	*Stenogyne cranwelliae.*
Hawaii 53—*Bidens hillebrandiana* ssp. *hillebrandiana*–b.	*Bidens hillebrandiana* ssp. *hillebrandiana*	*Bidens hillebrandiana* ssp. *hillebrandiana.*

Unit name	Species occupied	Species unoccupied
Hawaii 54—*Cyanea tritomantha*–k	*Cyanea tritomantha*	*Cyanea tritomantha.*
Hawaii 54—*Melicope remyi*–e		*Melicope remyi.*
Hawaii 54—*Phyllostegia floribunda*–u		*Phyllostegia floribunda.*
Hawaii 54—*Pittosporum hawaiiense*–w	*Pittosporum hawaiiense*	*Pittosporum hawaiiense.*
Hawaii 54—*Schiedea diffusa* ssp. *macraei*–u	*Schiedea diffusa* ssp. *macraei*	*Schiedea diffusa* ssp. *macraei.*
Hawaii 54—*Stenogyne cranwelliae*–u	*Stenogyne cranwelliae*	*Stenogyne cranwelliae.*
Hawaii 55—*Schiedea hawaiiensis*–a		*Schiedea hawaiiensis.*

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(1) *Plants on the island of Hawaii; Constituent elements.*—(1) *Flowering plants.*

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Family Asteraceae: Bidens hillebrandiana ssp. hillebrandiana (KOOKOOLAU)

Hawaii 6–*Bidens hillebrandiana* ssp. *hillebrandiana*-a and Hawaii 53–*Bidens hillebrandiana* ssp. *hillebrandiana*-b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Bidens hillebrandiana* ssp. *hillebrandiana* on Hawaii Island. In units Hawaii 6–*Bidens hillebrandiana* ssp. *hillebrandiana*-a and Hawaii 53–*Bidens hillebrandiana* ssp. *hillebrandiana*-b, the physical and biological features of critical habitat in coastal ecosystem are:

(i) Elevation: Less than 980 feet (ft) (300 meters (m)).

(ii) Annual precipitation: Less than 47 inches (in) (120 centimeters (cm)) to greater than 98 in (250 cm).

(iii) Substrate: Well-drained talus, calcareous slopes, dunes.

(iv) Canopy contains one or more of the following native plant genera: *Diospyros, Metrosideros, Myoporum, Pritchardia.*

(v) Subcanopy contains one or more of the following native plant genera: *Chenopodium, Gossypium, Heliotropium, Santalum, Scaevola.*

(vi) Understory contains one or more of the following native plant genera: *Eragrostis, Sesuvium, Sida, Sporobolus.*

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Family Campanulaceae: Cyanea marksii (HAHA)

Hawaii 15–*Cyanea marksii*-a-Section 4, Hawaii 15–*Cyanea marksii*-b-Section 5, Hawaii 16–*Cyanea marksii*-c, Hawaii 37–*Cyanea marksii*-d, Hawaii 38–*Cyanea marksii*-e, Hawaii 39–*Cyanea marksii*-f, Hawaii 40–*Cyanea marksii*-g, and Hawaii 41–*Cyanea marksii*-h, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea marksii* on Hawaii Island. In units Hawaii 15–*Cyanea marksii*-a-Section 4, Hawaii 15–*Cyanea marksii*-b-Section 5, Hawaii 16–*Cyanea marksii*-c, Hawaii 37–*Cyanea marksii*-d, Hawaii 38–*Cyanea marksii*-e, Hawaii 39–*Cyanea marksii*-f, Hawaii 40–*Cyanea marksii*-g, and Hawaii 41–*Cyanea marksii*-h, the physical and biological features of critical habitat in wet forest ecosystem are:

(i) Elevation: Less than 7,300 ft (2,225 m).

(ii) Annual precipitation: Greater than 98 in (250 cm).

(iii) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(iv) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(v) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(vi) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

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Family Campanulaceae: Cyanea tritomantha (AKU)

Hawaii 3–*Cyanea tritomantha*-a, Hawaii 8–*Cyanea tritomantha*-b, Hawaii 9–*Cyanea tritomantha*-c, Hawaii 24–*Cyanea tritomantha*-d, Hawaii 29–*Cyanea tritomantha*-e, Hawaii 30–*Cyanea tritomantha*-f, Hawaii 42–*Cyanea tritomantha*-g, Hawaii 44–*Cyanea tritomantha*-h, Hawaii 51–*Cyanea tritomantha*-i, Hawaii 52–*Cyanea tritomantha*-j, and Hawaii 54–*Cyanea tritomantha*-k, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea tritomantha* on Hawaii Island.

(i) In units Hawaii 3–*Cyanea tritomantha*-a, Hawaii 24–*Cyanea tritomantha*-d, Hawaii 29–*Cyanea tritomantha*-e, Hawaii 30–*Cyanea tritomantha*-f, Hawaii 42–*Cyanea tritomantha*-g, Hawaii 44–*Cyanea tritomantha*-h, Hawaii 51–*Cyanea tritomantha*-i, and Hawaii 52–*Cyanea tritomantha*-j, the physical and biological features of critical habitat in wet forest ecosystem are:

(A) Elevation: Less than 7,300 ft (2,225 m).

(B) Annual precipitation: Greater than 98 in (250 cm).

(C) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

(ii) In units Hawaii 8–*Cyanea tritomantha*-b, Hawaii 9–*Cyanea tritomantha*-c, and Hawaii 54–*Cyanea tritomantha*-k, the physical and biological features of critical habitat in wet forest ecosystem are those provided above in paragraphs (i)(A) through (F) of this entry, and in wet grassland and shrubland ecosystem are:

(A) Elevation: 660 to 2,950 ft (200 to 900 m).

(B) Annual precipitation: 98 to 197 in (250 to 500 cm).

(C) Substrate: Older, weathered soils to younger, rocky substrates.

(D) Canopy contains one or more of the following native plant genera: *Ilex, Kadua, Melicope, Metrosideros, Myrsine.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Dubautia, Freycinetia, Hydrangea, Lobelia, Pipturus, Touchardia, Urera, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Carex, Cladium, Deschampsia, Dicranopteris, Eragrostis, Peperomia, Phyllostegia, Scaevola.*

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Family Caryophyllaceae: Schiedea diffusa ssp. macraei (no common name)

Hawaii 3–*Schiedea diffusa* ssp. *macraei*-a, Hawaii 8–*Schiedea diffusa*

ssp. *macraei*-b, Hawaii 9–*Schiedea diffusa* ssp. *macraei*-c, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-d-Section 4, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-e-Section 5, Hawaii 16–*Schiedea diffusa* ssp. *macraei*-f, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-g-Section 8, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-h-Section 9, Hawaii 29–*Schiedea diffusa* ssp. *macraei*-i, Hawaii 30–*Schiedea diffusa* ssp. *macraei*-j, Hawaii 37–*Schiedea diffusa* ssp. *macraei*-k, Hawaii 38–*Schiedea diffusa* ssp. *macraei*-l, Hawaii 39–*Schiedea diffusa* ssp. *macraei*-m, Hawaii 40–*Schiedea diffusa* ssp. *macraei*-n, Hawaii 41–*Schiedea diffusa* ssp. *macraei*-o, Hawaii 42–*Schiedea diffusa* ssp. *macraei*-p, Hawaii 43–*Schiedea diffusa* ssp. *macraei*-q, Hawaii 44–*Schiedea diffusa* ssp. *macraei*-r, Hawaii 51–*Schiedea diffusa* ssp. *macraei*-s, Hawaii 52–*Schiedea diffusa* ssp. *macraei*-t, and Hawaii 54–*Schiedea diffusa* ssp. *macraei*-u, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Schiedea diffusa* ssp. *macraei* on Hawaii Island. In units Hawaii 3–*Schiedea diffusa* ssp. *macraei*-a, Hawaii 8–*Schiedea diffusa* ssp. *macraei*-b, Hawaii 9–*Schiedea diffusa* ssp. *macraei*-c, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-d-Section 4, Hawaii 15–*Schiedea diffusa* ssp. *macraei*-e-Section 5, Hawaii 16–*Schiedea diffusa* ssp. *macraei*-f, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-g-Section 8, Hawaii 24–*Schiedea diffusa* ssp. *macraei*-h-Section 9, Hawaii 29–*Schiedea diffusa* ssp. *macraei*-i, Hawaii 30–*Schiedea diffusa* ssp. *macraei*-j, Hawaii 37–*Schiedea diffusa* ssp. *macraei*-k, Hawaii 38–*Schiedea diffusa* ssp. *macraei*-l, Hawaii 39–*Schiedea diffusa* ssp. *macraei*-m, Hawaii 40–*Schiedea diffusa* ssp. *macraei*-n, Hawaii 41–*Schiedea diffusa* ssp. *macraei*-o, Hawaii 42–*Schiedea diffusa* ssp. *macraei*-p, Hawaii 43–*Schiedea diffusa* ssp. *macraei*-q, Hawaii 44–*Schiedea diffusa* ssp. *macraei*-r, Hawaii 51–*Schiedea diffusa* ssp. *macraei*-s, Hawaii 52–*Schiedea diffusa* ssp. *macraei*-t, and Hawaii 54–*Schiedea diffusa* ssp. *macraei*-u, the physical and biological features of critical habitat in wet forest ecosystem are:

(i) Elevation: Less than 7,300 ft (2,225 m).

(ii) Annual precipitation: Greater than 98 in (250 cm).

(iii) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(iv) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(v) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(vi) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

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Family Caryophyllaceae: Schiedea hawaiiensis (MAOLIOLI)

Hawaii 55–*Schiedea hawaiiensis*-a, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Schiedea hawaiiensis* on Hawaii Island. In unit Hawaii 55–*Schiedea hawaiiensis*-a, the physical and biological features of critical habitat in dry forest ecosystem are:

(i) Elevation: Less than 9,500 ft (2,900 m).

(ii) Annual precipitation: Less than 79 in (200 cm).

(iii) Substrate: Well-drained, sandy loams or loams from volcanic ash or cinder; weathered basaltic lava.

(iv) Canopy contains one or more of the following native plant genera: *Acacia, Colubrina, Diospyros, Erythrina, Melicope, Metrosideros, Myoporum, Myrsine, Sophora.*

(v) Subcanopy contains one or more of the following native plant genera: *Achyranthes, Euphorbia, Leptecophylla, Nototrichium.*

(vi) Understory contains one or more of the following native plant genera: *Dodonaea, Doryopteris, Heteropogon, Pellaea.*

* * * * *

Family Gesneriaceae: Cyrtandra nanawaleensis (HAIWALE)

Hawaii 28–*Cyrtandra nanawaleensis*-a, Hawaii 46–*Cyrtandra nanawaleensis*-b, Hawaii 47–*Cyrtandra nanawaleensis*-c, Hawaii 48–*Cyrtandra nanawaleensis*-d, Hawaii 49–*Cyrtandra nanawaleensis*-e, and Hawaii 50–*Cyrtandra nanawaleensis*-f, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra nanawaleensis* on Hawaii Island.

(i) In units Hawaii 28–*Cyrtandra nanawaleensis*-a, Hawaii 46–*Cyrtandra nanawaleensis*-b, Hawaii 47–*Cyrtandra nanawaleensis*-c, and Hawaii 48–*Cyrtandra nanawaleensis*-d, the physical and biological features of critical habitat in wet forest ecosystem are:

(A) Elevation: Less than 7,300 ft (2,225 m).

(B) Annual precipitation: Greater than 98 in (250 cm).

(C) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

(ii) In units Hawaii 49–*Cyrtandra nanawaleensis*-e and Hawaii 50–*Cyrtandra nanawaleensis*-f, the physical and biological features of critical habitat in wet forest ecosystem are those provided above in paragraphs (i)(A) through (F) of this entry, and in the mesic forest ecosystem and mesic grassland and shrubland ecosystem are:

(A) Elevation: Less than 6,600 ft (2,000 m) in mesic forest ecosystem, and 100 to 7,500 ft (30 to 2,300 m) in mesic grassland and shrubland ecosystem.

(B) Annual precipitation: 39 to 150 in (100 to 380 cm) in mesic forest ecosystem, and 39 to 98 in (100 to 250 cm) in mesic grassland and shrubland ecosystem.

(C) Substrate: Rocky, shallow, organic muck soils; rocky talus soils; shallow soils over weathered rock; deep soils over soft weathered rock; and gravelly alluvium in mesic forest ecosystem; and shallow soils that frequently dry with rocky outcrops in mesic grassland and shrubland ecosystem.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Charpentiera, Chrysodracon, Metrosideros, Myrsine, Nestegis, Pisonia, Santalum* in mesic forest ecosystem; and *Coprosma, Metrosideros, Wilkesia* in mesic grassland and shrubland ecosystem.

(E) Subcanopy contains one or more of the following native plant genera: *Coprosma, Freycinetia, Leptecophylla, Myoporum, Pipturus, Rubus, Sadleria, Sophora* in mesic forest ecosystem; and *Dodonaea, Dubautia, Leptecophylla, Osteomeles, Sadleria, Vaccinium* in mesic grassland and shrubland ecosystem.

(F) Understory contains one or more of the following native plant genera: *Ctenitis, Doodia, Dryopteris, Pelea, Sadleria* in mesic forest ecosystem; and *Bidens, Carex, Deschampsia, Dicranopteris, Dryopteris, Eragrostis,*

Euphorbia, Lipochaeta in mesic grassland and shrubland ecosystem.

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Family Gesneriaceae: Cyrtandra wagneri (HAIWALE)

Hawaii 3–*Cyrtandra wagneri*-a, Hawaii 23–*Cyrtandra wagneri*-b, Hawaii 24–*Cyrtandra wagneri*-c-Section 8, Hawaii 24–*Cyrtandra wagneri*-d-Section 9, Hawaii 28–*Cyrtandra wagneri*-e, Hawaii 29–*Cyrtandra wagneri*-f, Hawaii 30–*Cyrtandra wagneri*-g, Hawaii 42–*Cyrtandra wagneri*-h, Hawaii 43–*Cyrtandra wagneri*-i, Hawaii 44–*Cyrtandra wagneri*-j, Hawaii 45–*Cyrtandra wagneri*-k, Hawaii 46–*Cyrtandra wagneri*-l, Hawaii 51–*Cyrtandra wagneri*-m, and Hawaii 52–*Cyrtandra wagneri*-n, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra wagneri* on Hawaii Island. In units Hawaii 3–*Cyrtandra wagneri*-a, Hawaii 23–*Cyrtandra wagneri*-b, Hawaii 24–*Cyrtandra wagneri*-c-Section 8, Hawaii 24–*Cyrtandra wagneri*-d-Section 9, Hawaii 28–*Cyrtandra wagneri*-e, Hawaii 29–*Cyrtandra wagneri*-f, Hawaii 30–*Cyrtandra wagneri*-g, Hawaii 42–*Cyrtandra wagneri*-h, Hawaii 43–*Cyrtandra wagneri*-i, Hawaii 44–*Cyrtandra wagneri*-j, Hawaii 45–*Cyrtandra wagneri*-k, Hawaii 46–*Cyrtandra wagneri*-l, Hawaii 51–*Cyrtandra wagneri*-m, and Hawaii 52–*Cyrtandra wagneri*-n, the physical and biological features of critical habitat in wet forest ecosystem are:

(i) Elevation: Less than 7,300 ft (2,225 m).

(ii) Annual precipitation: Greater than 98 in (250 cm).

(iii) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(iv) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(v) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(vi) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

* * * * *

Family Lamiaceae: Phyllostegia floribunda (no common name)

Hawaii 3–*Phyllostegia floribunda*-a, Hawaii 8–*Phyllostegia floribund*a-b, Hawaii 9–*Phyllostegia floribunda*-c, Hawaii 15–*Phyllostegia floribunda*-d-Section 4, Hawaii 15–*Phyllostegia floribunda*-e-Section 5, Hawaii 16–*Phyllostegia floribunda*-f, Hawaii 23–*Phyllostegia floribunda*-g, Hawaii 28–*Phyllostegia floribunda*-h, Hawaii 29–*Phyllostegia floribunda*-i, Hawaii 30–*Phyllostegia floribunda*-j, Hawaii 37–*Phyllostegia floribunda*-k, Hawaii 38–*Phyllostegia floribunda*-l, Hawaii 39–*Phyllostegia floribunda*-m, Hawaii 40–*Phyllostegia floribunda*-n, Hawaii 41–*Phyllostegia floribunda*-o, Hawaii 42–*Phyllostegia floribunda*-p, Hawaii 45–*Phyllostegia floribunda*-q, Hawaii 46–*Phyllostegia floribunda*-r, Hawaii 51–*Phyllostegia floribunda*-s, Hawaii 52–*Phyllostegia floribunda*-t, and Hawaii 54–*Phyllostegia floribunda*-u, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia floribunda* on Hawaii Island.

(i) In units Hawaii 3–*Phyllostegia floribunda*-a, Hawaii 15–*Phyllostegia floribunda*-d-Section 4, Hawaii 15–*Phyllostegia floribunda*-e-Section 5, Hawaii 16–*Phyllostegia floribunda*-f, Hawaii 29–*Phyllostegia floribunda*-i, Hawaii 30–*Phyllostegia floribunda*-j, Hawaii 37–*Phyllostegia floribunda*-k, Hawaii 38–*Phyllostegia floribunda*-l, Hawaii 39–*Phyllostegia floribunda*-m, Hawaii 40–*Phyllostegia floribunda*-n, Hawaii 41–*Phyllostegia floribunda*-o, Hawaii 51–*Phyllostegia floribunda*-s, and Hawaii 52–*Phyllostegia floribunda*-t, the physical and biological features of critical habitat in wet forest ecosystem are:

(A) Elevation: Less than 7,300 ft (2,225 m).

(B) Annual precipitation: Greater than 98 in (250 cm).

(C) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

(ii) In units Hawaii 8–*Phyllostegia floribund*a-b, Hawaii 9–*Phyllostegia floribunda*-c, Hawaii 23–*Phyllostegia floribunda*-g, Hawaii 28–*Phyllostegia floribunda*-h, Hawaii 45–*Phyllostegia floribunda*-q, Hawaii 46–*Phyllostegia floribunda*-r, and Hawaii 54–*Phyllostegia floribunda*-u, the physical and biological features of critical habitat in wet forest ecosystem are those provided above in paragraphs (i)(A) through (F) of this entry, and in wet grassland and shrubland ecosystem are:

(A) Elevation: 660 to 2,950 ft (200 to 900 m).

(B) Annual precipitation: 98 to 197 in (250 to 500 cm).

(C) Substrate: Older, weathered soils to younger, rocky substrates.

(D) Canopy contains one or more of the following native plant genera: *Ilex, Kadua, Melicope, Metrosideros, Myrsine.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Dubautia, Freycinetia, Hydrangea, Lobelia, Pipturus, Touchardia, Urera, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Carex, Cladium, Deschampsia, Dicranopteris, Eragrostis, Peperomia, Phyllostegia, Scaevola.*

(iii) In unit Hawaii 42–*Phyllostegia floribunda*-p, the physical and biological features of critical habitat in wet forest ecosystem are those provided above in paragraphs (i)(A) through (F) of this entry, and in mesic forest ecosystem are:

(A) Elevation of less than 6,600 ft (2,000 m).

(B) Annual precipitation of 39 to 150 in (100 to 380 cm).

(C) Substrate of rocky, shallow, organic muck soils; rocky talus soils; shallow soils over weathered rock; deep soils over soft weathered rock; or gravelly alluvium.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Charpentiera, Chrysodracon, Metrosideros, Myrsine, Nestegis, Pisonia, Santalum.*

(E) Subcanopy contains one or more of the following native plant genera: *Coprosma, Freycinetia, Leptecophylla, Myoporum, Pipturus, Rubus, Sadleria, Sophora.*

(F) Understory contains one or more of the following native plant genera: *Ctenitis, Doodia, Dryopteris, Pelea, Sadleria.*

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Family Lamiaceae: Stenogyne cranwelliae (no common name)

Hawaii 3–*Stenogyne cranwelliae*-a, Hawaii 8–*Stenogyne cranwelliae*-b, Hawaii 9–*Stenogyne cranwelliae*-c, Hawaii 15–*Stenogyne cranwelliae*-d-Section 4, Hawaii 15–*Stenogyne cranwelliae*-e-Section 5, Hawaii 16–*Stenogyne cranwelliae*-f, Hawaii 24–*Stenogyne cranwelliae*-g-Section 8,

Hawaii 24–*Stenogyne cranwelliae*-h-Section 9, Hawaii 29–*Stenogyne cranwelliae*-i, Hawaii 30–*Stenogyne cranwelliae*-j, Hawaii 37–*Stenogyne cranwelliae*-k, Hawaii 38–*Stenogyne cranwelliae*-l, Hawaii 39–*Stenogyne cranwelliae*-m, Hawaii 40–*Stenogyne cranwelliae*-n, Hawaii 41–*Stenogyne cranwelliae*-o, Hawaii 42–*Stenogyne cranwelliae*-p, Hawaii 43–*Stenogyne cranwelliae*-q, Hawaii 44–*Stenogyne cranwelliae*-r, Hawaii 51–*Stenogyne cranwelliae*-s, Hawaii 52–*Stenogyne cranwelliae*-t, and Hawaii 54–*Stenogyne cranwelliae*-u, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Stenogyne cranwelliae* on Hawaii Island. In units Hawaii 3–*Stenogyne cranwelliae*-a, Hawaii 8–*Stenogyne cranwelliae*-b, Hawaii 9–*Stenogyne cranwelliae*-c, Hawaii 15–*Stenogyne cranwelliae*-d-Section 4, Hawaii 15–*Stenogyne cranwelliae*-e-Section 5, Hawaii 16–*Stenogyne cranwelliae*-f, Hawaii 24–*Stenogyne cranwelliae*-g-Section 8, Hawaii 24–*Stenogyne cranwelliae*-h-Section 9, Hawaii 29–*Stenogyne cranwelliae*-i, Hawaii 30–*Stenogyne cranwelliae*-j, Hawaii 37–*Stenogyne cranwelliae*-k, Hawaii 38–*Stenogyne cranwelliae*-l, Hawaii 39–*Stenogyne cranwelliae*-m, Hawaii 40–*Stenogyne cranwelliae*-n, Hawaii 41–*Stenogyne cranwelliae*-o, Hawaii 42–*Stenogyne cranwelliae*-p, Hawaii 43–*Stenogyne cranwelliae*-q, Hawaii 44–*Stenogyne cranwelliae*-r, Hawaii 51–*Stenogyne cranwelliae*-s, Hawaii 52–*Stenogyne cranwelliae*-t, and Hawaii 54–*Stenogyne cranwelliae*-u, the physical and biological features of critical habitat in wet forest ecosystem are:

(i) Elevation: Less than 7,300 ft (2,225 m).

(ii) Annual precipitation: Greater than 98 in (250 cm).

(iii) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(iv) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(v) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(vi) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

* * * * *

Family Pittosporaceae: Pittosporum hawaiiense (HOAWA, HAAWA)

Hawaii 3–*Pittosporum hawaiiense*-a, Hawaii 8–*Pittosporum hawaiiense*-b, Hawaii 9–*Pittosporum hawaiiense*-c, Hawaii 15–*Pittosporum hawaiiense*-d-Section 4, Hawaii 15–*Pittosporum hawaiiense*-e-Section 5, Hawaii 16–*Pittosporum hawaiiense*-f, Hawaii 23–*Pittosporum hawaiiense*-g, Hawaii 24–*Pittosporum hawaiiense*-h-Section 8, Hawaii 24–*Pittosporum hawaiiense*-i-Section 9, Hawaii 29–*Pittosporum hawaiiense*-j, Hawaii 30–*Pittosporum hawaiiense*-k, Hawaii 37–*Pittosporum hawaiiense*-l, Hawaii 38–*Pittosporum hawaiiense*-m, Hawaii 39–*Pittosporum hawaiiense*-n, Hawaii 40–*Pittosporum hawaiiense*-o, Hawaii 41–*Pittosporum hawaiiense*-p, Hawaii 42–*Pittosporum hawaiiense*-q, Hawaii 43–*Pittosporum hawaiiense*-r, Hawaii 44–*Pittosporum hawaiiense*-s, Hawaii 45–*Pittosporum hawaiiense*-t, Hawaii 51–*Pittosporum hawaiiense*-u, Hawaii 52–*Pittosporum hawaiiense*-v, and Hawaii 54–*Pittosporum hawaiiense*-w, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Pittosporum hawaiiense* on Hawaii Island.

(i) In units Hawaii 3–*Pittosporum hawaiiense*-a, Hawaii 8–*Pittosporum hawaiiense*-b, Hawaii 9–*Pittosporum hawaiiense*-c, Hawaii 15–*Pittosporum hawaiiense*-d-Section 4, Hawaii 15–*Pittosporum hawaiiense*-e-Section 5, Hawaii 16–*Pittosporum hawaiiense*-f, Hawaii 23–*Pittosporum hawaiiense*-g, Hawaii 29–*Pittosporum hawaiiense*-j, Hawaii 30–*Pittosporum hawaiiense*-k, Hawaii 37–*Pittosporum hawaiiense*-l, Hawaii 38–*Pittosporum hawaiiense*-m, Hawaii 39–*Pittosporum hawaiiense*-n, Hawaii 40–*Pittosporum hawaiiense*-o, Hawaii 41–*Pittosporum hawaiiense*-p, Hawaii 45–*Pittosporum hawaiiense*-t, Hawaii 51–*Pittosporum hawaiiense*-u, Hawaii 52–*Pittosporum hawaiiense*-v, and Hawaii 54–*Pittosporum hawaiiense*-w, the physical and biological features of critical habitat in wet forest ecosystem are:

(A) Elevation: Less than 7,300 ft (2,225 m).

(B) Annual precipitation: Greater than 98 in (250 cm).

(C) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.*

(E) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(F) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

(ii) In units Hawaii 24–*Pittosporum hawaiiense*-h-Section 8, Hawaii 24–*Pittosporum hawaiiense*-i-Section 9, Hawaii 42–*Pittosporum hawaiiense*-q, Hawaii 43–*Pittosporum hawaiiense*-r, and Hawaii 44–*Pittosporum hawaiiense*-s, the physical and biological features of critical habitat in wet forest ecosystem are those provided above in paragraphs (i)(A) through (F) of this entry, and in mesic forest ecosystem are:

(A) Elevation: Less than 6,600 ft (2,000 m).

(B) Annual precipitation: 39 to 150 in (100 to 380 cm).

(C) Substrate: Rocky, shallow, organic muck soils; rocky talus soils; shallow soils over weathered rock; deep soils over soft weathered rock; gravelly alluvium.

(D) Canopy contains one or more of the following native plant genera: *Acacia, Antidesma, Charpentiera, Chrysodracon, Metrosideros, Myrsine, Nestegis, Pisonia, Santalum.*

(E) Subcanopy contains one or more of the following native plant genera: *Coprosma, Freycinetia, Leptecophylla, Myoporum, Pipturus, Rubus, Sadleria, Sophora.*

(F) Understory contains one or more of the following native plant genera: *Ctenitis, Doodia, Dryopteris, Pelea, Sadleria.*

* * * * *

Family Rutaceae: Melicope remyi (no common name)

Hawaii 3–*Melicope remyi*-a, Hawaii 8–*Melicope remyi*-b, Hawaii 9–*Melicope remyi*-c, Hawaii 52–*Melicope remyi*-d, and Hawaii 54–*Melicope remyi*-e, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Melicope remyi* on Hawaii Island. In units Hawaii 3–*Melicope remyi*-a, Hawaii 8–*Melicope remyi*-b, Hawaii 9–*Melicope remyi*-c, Hawaii 52–*Melicope remyi*-d, and Hawaii 54–*Melicope remyi*-e, the physical and biological features of critical habitat in wet forest ecosystem are:

(i) Elevation: Less than 7,300 ft (2,225 m).

(ii) Annual precipitation: Greater than 98 in (250 cm).

(iii) Substrate: Very weathered soils to rocky substrate, basaltic lava, undeveloped soils, developed soils.

(iv) Canopy contains one or more of the following native plant genera:

Acacia, Antidesma, Cheirodendron, Ilex, Melicope, Metrosideros, Myrsine, Pittosporum, Psychotria.

(v) Subcanopy contains one or more of the following native plant genera: *Cibotium, Clermontia, Coprosma, Cyanea, Freycinetia, Hydrangea, Vaccinium.*

(vi) Understory contains one or more of the following native plant genera: *Adenophorus, Cibotium, Cyrtandra, Dicranopteris, Huperzia, Peperomia, Stenogyne.*

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