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Title 50—Wildlife and Fisheries

(This book contains part 17, §17.99(i) to end of part 17)

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

SOURCE: 40 FR 44415, Sept. 26, 1975, unless otherwise noted.

Subpart I—Interagency Cooperation (Continued)

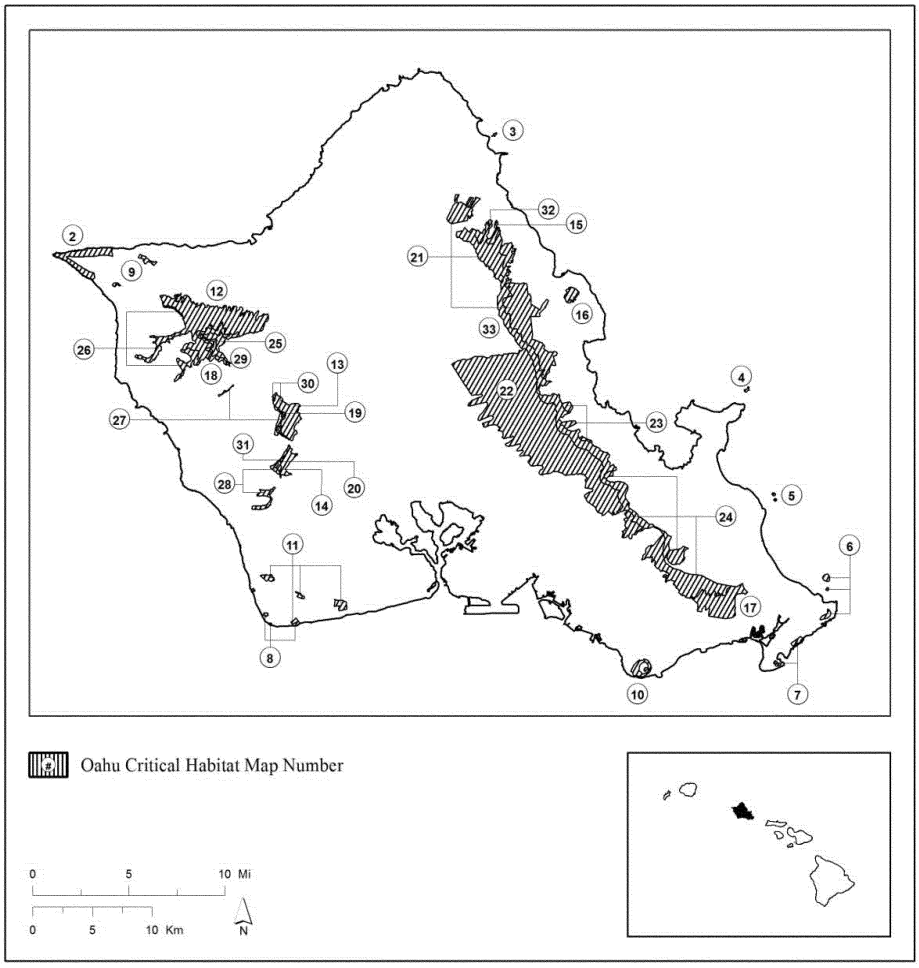
EDITORIAL NOTE: Paragraphs (a)–(h) of §17.99 appear in 50 Part 17, §§17.99(a) to 17.99(h).

§17.99 Critical habitat; plants on the islands of Kauai, Niihau, Molokai, Maui, Kahoolawe, Oahu, and Hawaii, HI, and on the Northwestern Hawaiian Islands. (Continued)

(i) *Oahu*. Critical habitat units are described below. Maps were created in GIS, with coordinates in UTM Zone 4 with units in meters using North American Datum of 1983 (NAD83). 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 the Service's Internet site, *http://www.fws.gov/pacificislands*; at *http://www.regulations.gov* at Docket No. FWS–R1–ES–2010–0043; and at the field office responsible for the 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. Existing manmade features and structures, such as buildings, roads, railroads, airports, runways, other paved areas, lawns, and other urban landscaped areas, existing trails, campgrounds and their immediate surrounding landscaped area, scenic lookouts, remote helicopter landing sites, and existing fences are not included in the critical habiat 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) Map 1—Index map follows:

Map 1
Oahu Critical Habitat–Island Index Map

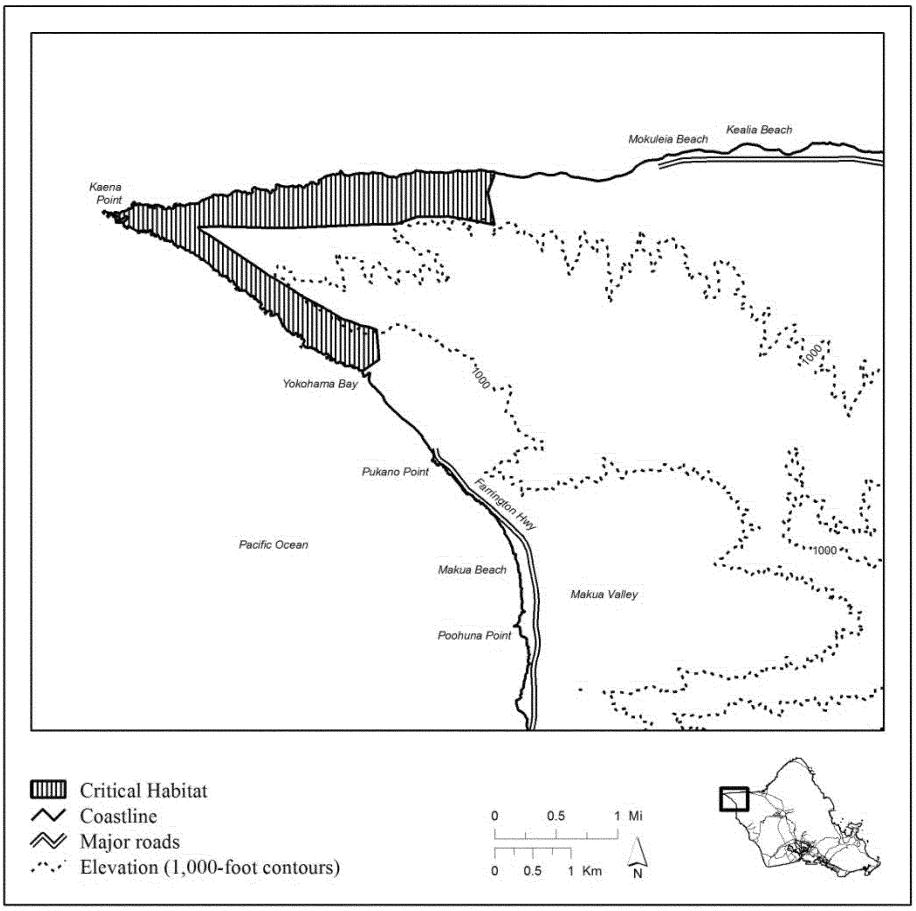


(2) Oahu—Coastal—Unit 1 (958 ac; 388 ha).

(i) This unit is critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Centaurium sebaeoides*, *Chamaesyce celastroides* var. *kaenana*, *Schiedea kealiae*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 1 (Map 2) follows:

Map 2
Oahu–Coastal
Unit 1

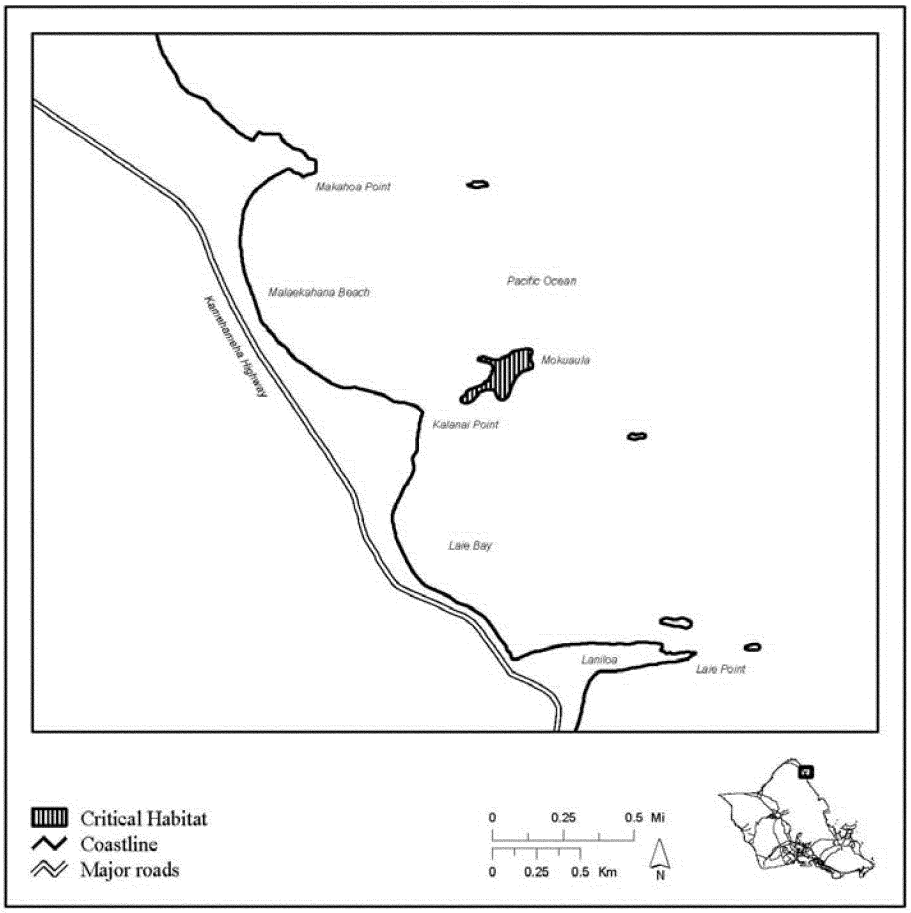


(3) Oahu—Coastal—Unit 2 (12 ac; 5 ha).

(i) This unit is critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 2 (Map 3) follows:

Map 3
Oahu–Coastal
Unit 2

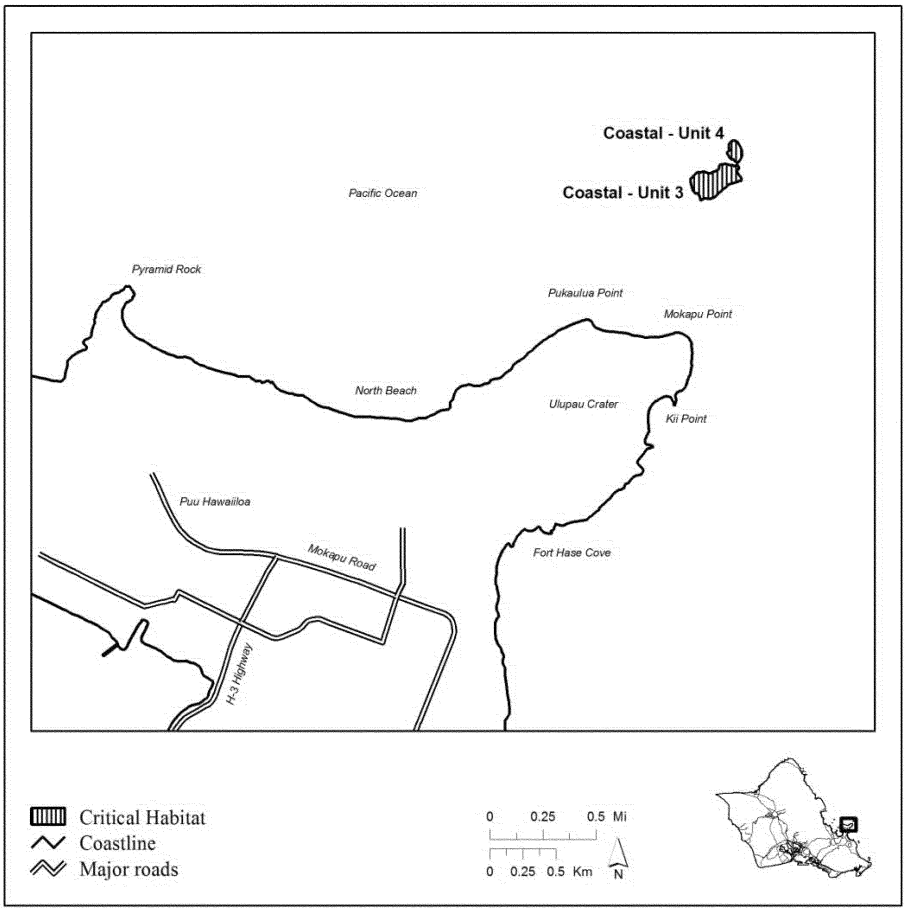


(4) Oahu—Coastal—Unit 3 (15 ac; 6 ha) and Oahu–Coastal–Unit 4 (3 ac; 1 ha).

(i) These units are critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 3 and Oahu—Coastal—Unit 4 (Map 4) follows:

Map 4
Oahu–Coastal Ecosystem
Unit 3 and Unit 4

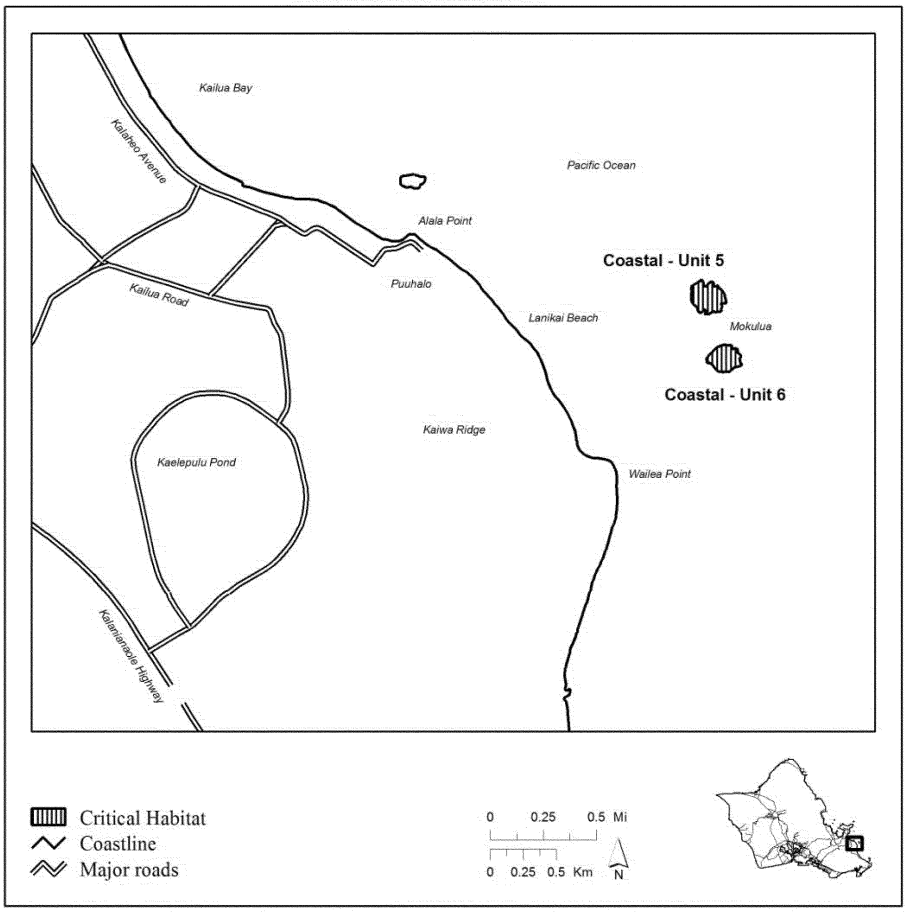


(5) Oahu—Coastal—Unit 5 (12 ac; 5 ha) and Oahu—Coastal—Unit 6 (9 ac; 4 ha).

(i) These units are critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 5 and Oahu—Coastal—Unit 6 (Map 5) follows:

Map 5
Oahu–Coastal
Unit 5 and Unit 6

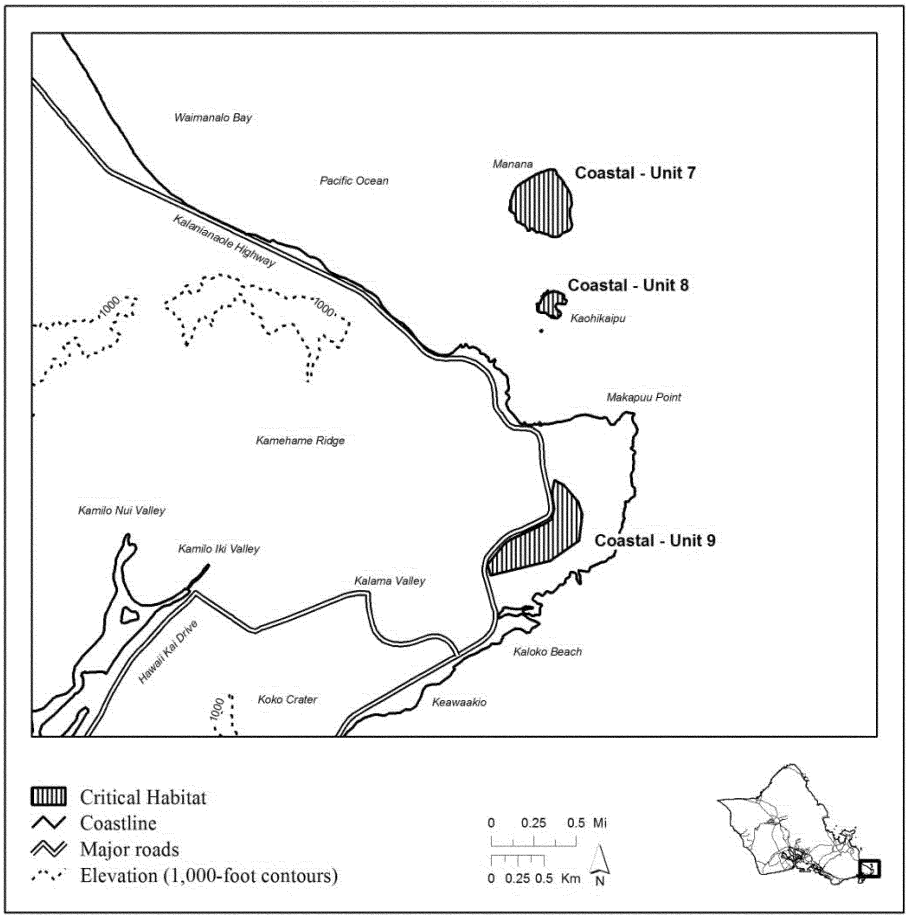


(6) Oahu—Coastal—Unit 7 (67 ac; 27 ha), Oahu—Coastal—Unit 8 (10 ac; 4 ha), and Oahu—Coastal—Unit 9 (80 ac; 33 ha).

(i) These units are critical habitat for, *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, and Oahu—Coastal—Unit 9 (Map 6) follows:

Map 6
Oahu–Coastal
Unit 7, Unit 8 and Unit 9



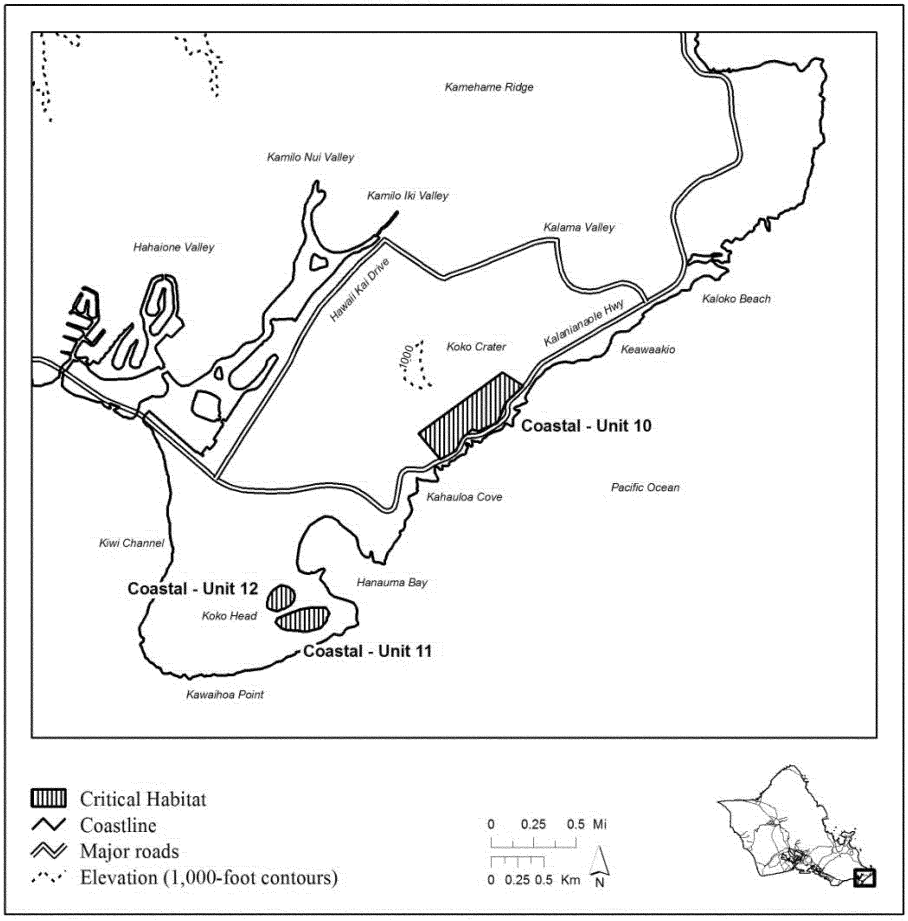
(7) Oahu—Coastal—Unit 10 (74 ac; 30 ha), Oahu—Coastal—Unit 11 (20 ac; 8 ha), and Oahu—Coastal—Unit 12 (11 ac; 5 ha).

(i) Oahu—Coastal—Unit 10 is critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Oahu—Coastal—Unit 11 and Oahu—Coastal—Unit 12 are critical habitat for *Centaurium sebaeoides*, *Chamaesyce kuwaleana*, *Cyperus trachysanthos*, *Marsilea villosa*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(iii) Map of Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12 (Map 7) follows:

Map 7
Oahu–Coastal
Unit 10, Unit 11 and Unit 12

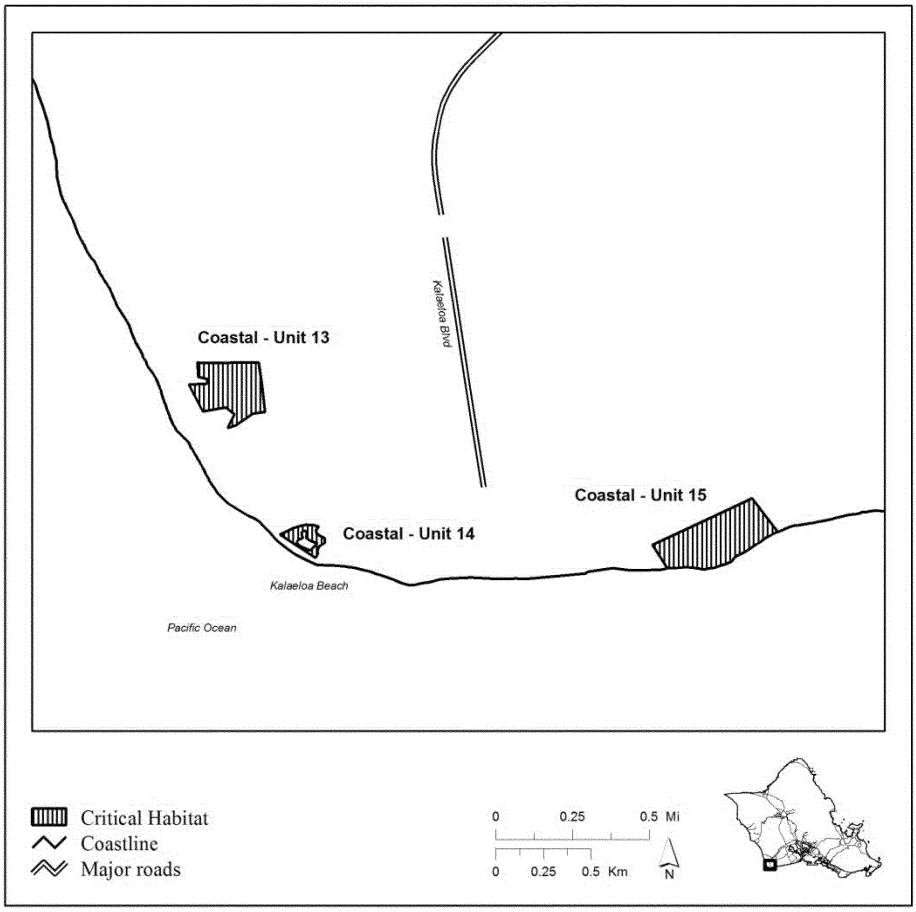


(8) Oahu—Coastal—Unit 13 (23 ac; 10 ha), Oahu—Coastal—Unit 14 (4 ac; 2 ha), and Oahu—Coastal—Unit 15 (33 ac; 13 ha).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Centaurium sebaeoides*, *Chamaesyce celastroides* var. *kaenana*, *Schiedea kealiae*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

(ii) Map of Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15 (Map 8) follows:

Map 8
Oahu–Coastal
Unit 13, Unit 14 and Unit 15

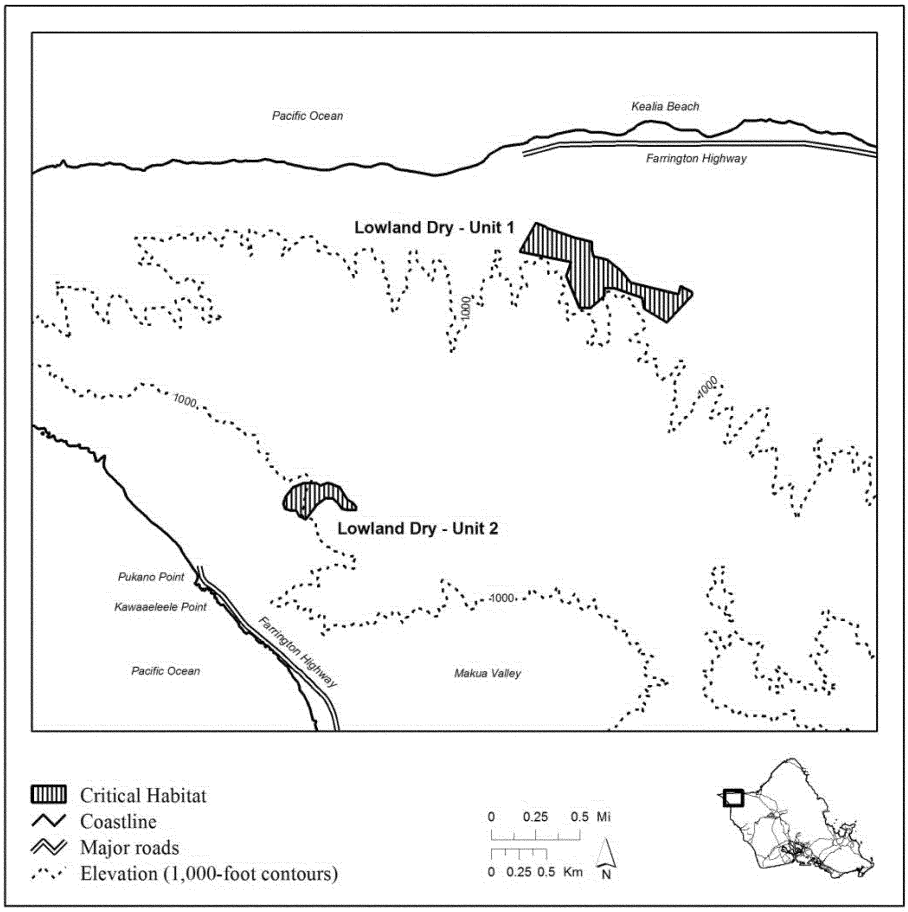


(9) Oahu—Lowland Dry—Unit 1 (102 ac; 41 ha) and Oahu—Lowland Dry—Unit 2 (29 ac; 12).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Euphorbia haeleeleana*, *Gouania meyenii*, *Gouania vitifolia*, *Hibiscus brackenridgei*, *Isodendrion pyrifolium*, *Melanthera tenuifolia*, *Neraudia angulata*, *Nototrichium humile*, *Pleomele forbesii*, *Schiedea hookeri*, *Schiedea kealiae*, and *Spermolepis hawaiiensis*.

(ii) Map of Oahu—Lowland Dry—Unit 1 and Oahu—Lowland Dry—Unit 2 (Map 9) follows:

Map 9
Oahu–Lowland Dry
Unit 1 and Unit 2



(10) [Reserved]

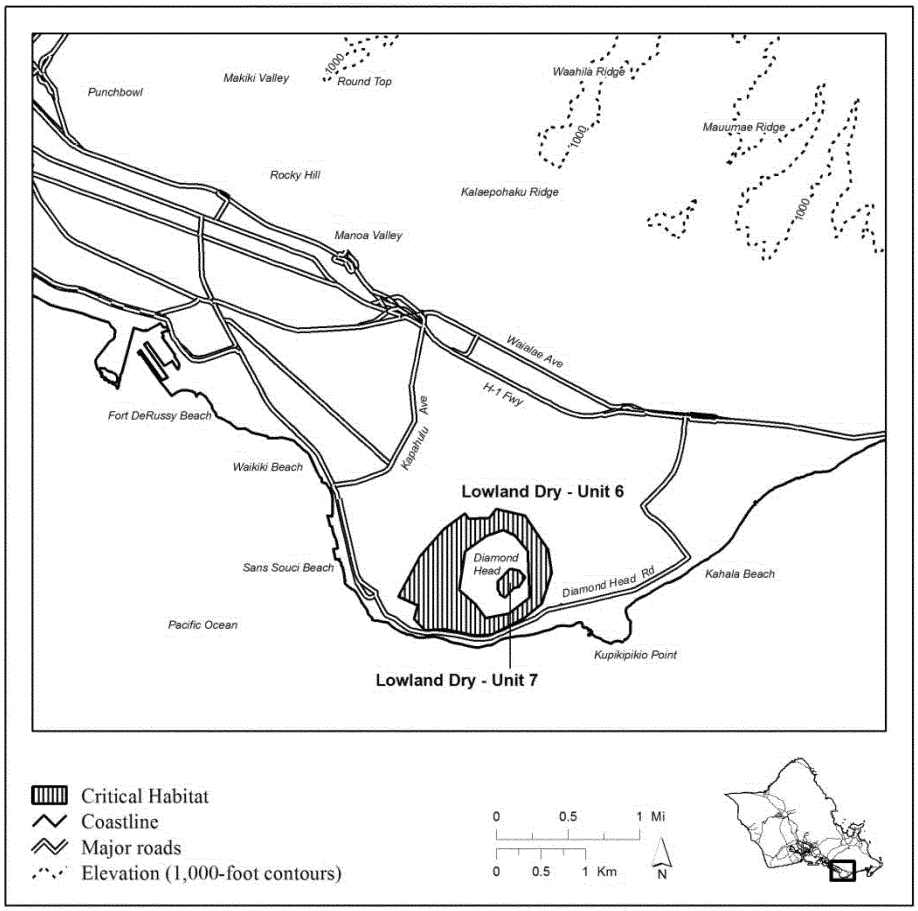
(11) Oahu—Lowland Dry—Unit 6 (287 ac; 116 ha) and Oahu—Lowland Dry—Unit 7 (15 ac; 6 ha).

(i) Oahu—Lowland Dry—Unit 6 is critical habitat for *Doryopteris takeuchii*, *Gouania meyenii*, and *Spermolepis hawaiiensis*.

(ii) Oahu—Lowland Dry—Unit 7 is critical habitat for *Cyperus trachysanthos*, *Doryopteris takeuchii*, *Gouania meyenii*, *Marsilea villosa*, and *Spermolepis hawaiiensis*.

(iii) Map of Oahu—Lowland Dry—Unit 6 and Oahu—Lowland Dry—Unit 7 (Map 10) follows:

Map 10
Oahu–Lowland Dry
Unit 6 and Unit 7

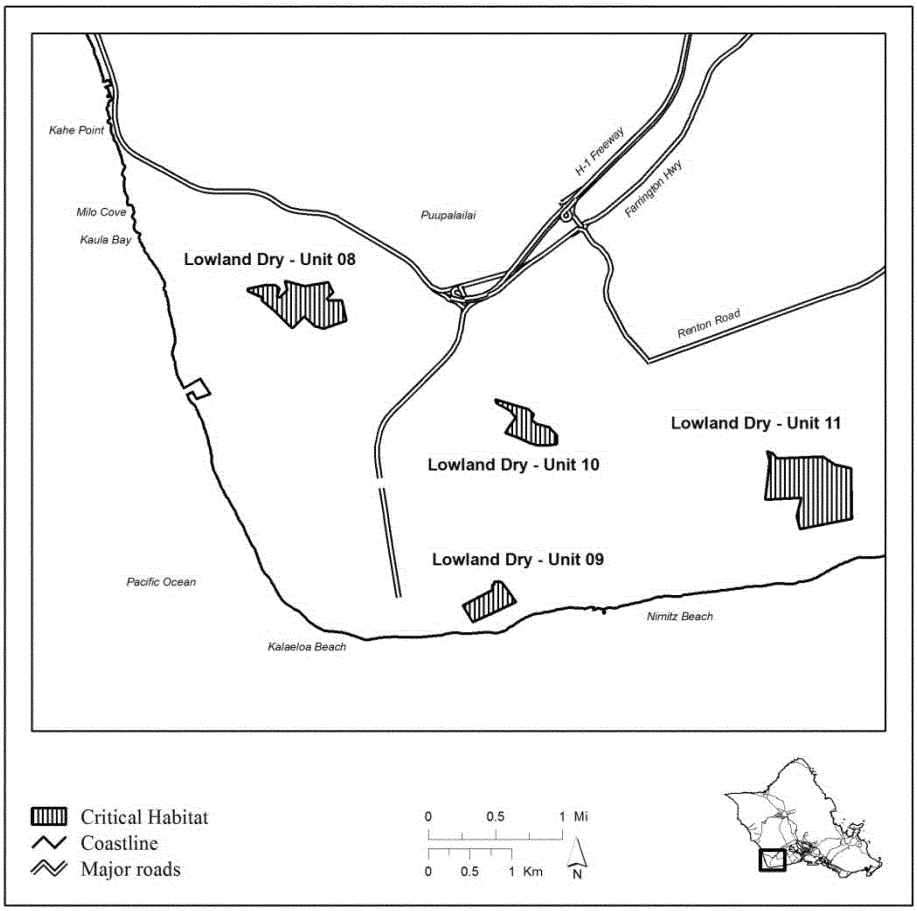


(12) Oahu—Lowland Dry—Unit 8 (99 ac; 40 ha), Oahu—Lowland Dry—Unit 9 (37 ac; 15 ha), Oahu—Lowland Dry—Unit 10 (43 ac; 17 ha), and Oahu—Lowland Dry—Unit 11 (166 ac; 67 ha).

(i) These units are critical habitat for *Achyranthes splendens* var. *rotundata*, *Bidens amplectens*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce skottsbergii* var. *skottsbergii*, *Euphorbia haeleeleana*, *Gouania meyenii*, *Gouania vitifolia*, *Hibiscus brackenridgei*, *Isodendrion pyrifolium*, *Melanthera tenuifolia*, *Neraudia angulata*, *Nototrichium humile*, *Schiedea hookeri*, *Schiedea kealiae*, and *Spermolepis hawaiiensis*.

(ii) Map of Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11 (Map 11) follows:

Map 11
Oahu–Lowland Dry
Unit 8, Unit, 9, Unit 10 and Unit 11

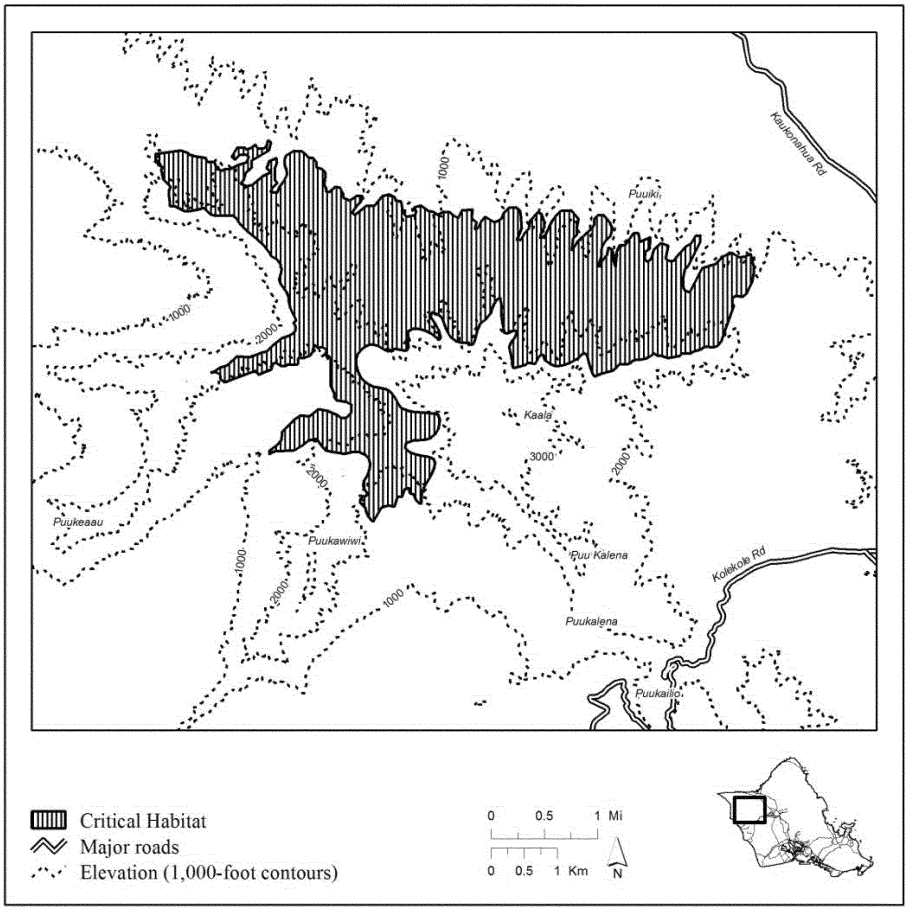


(13) Oahu—Lowland Mesic—Unit 1 (4,448 ac; 1,800 ha).

(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus pennatiformis*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*, *Labordia cyrtandrae*, *Lobelia niihauensis*,

Melanthera tenuifolia, *Melicope makahae*, *Melicope pallida*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Phyllostegia hirsuta*, *Phyllostegia kaalaensis*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *lydgatei*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea kaalae*, *Schiedea nuttallii*, *Schiedea obovata*, *Silene perlmanii*, *Solanum sandwicense*, *Stenogyne kanehoana*, *Tetramolopium lepidotum* ssp. *lepidotum*, *Urera kaalae*, and *Viola chamissoniana* ssp. *chamissoniana*. Map of Oahu—Lowland Mesic—Unit 1 (Map 12) follows:

Map 12
Oahu–Lowland Mesic
Unit 1



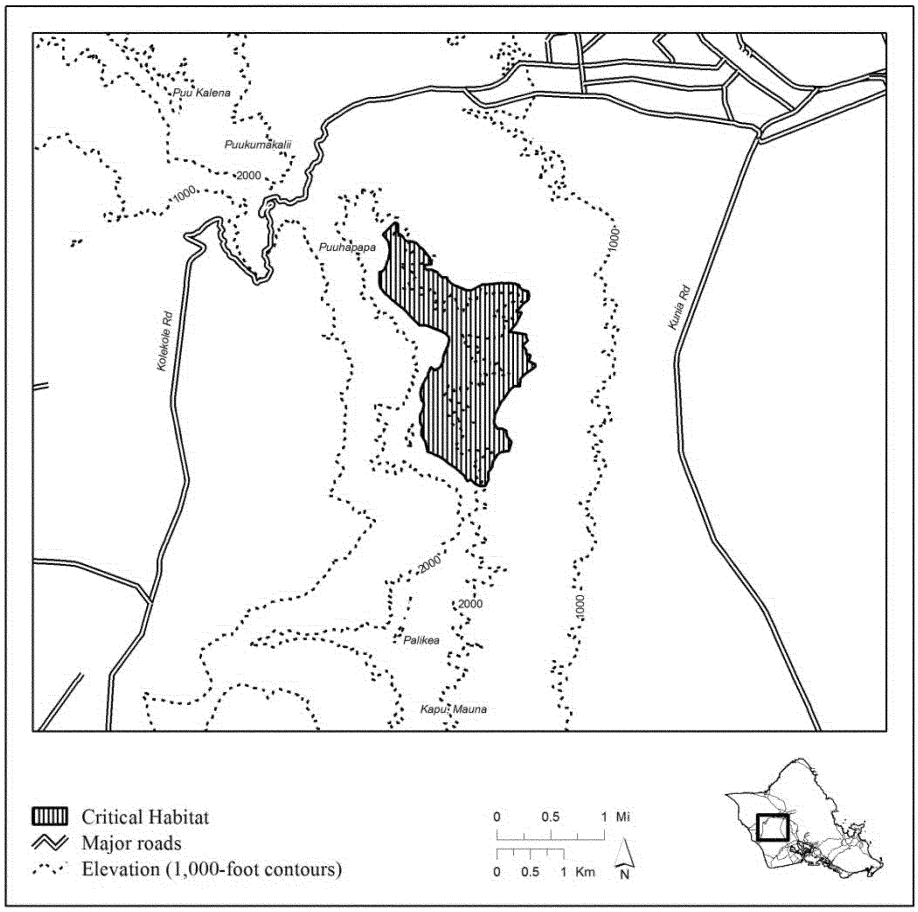
(14) Oahu—Lowland Mesic—Unit 2 (1,063 ac; 430 ha).

(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon*

macrococcus, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus pennatiformis*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*, *Labordia cyrtandrae*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope pallida*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Phyllostegia hirsuta*, *Phyllostegia kaalaensis*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *lydgatei*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea kaalae*, *Schiedea nuttallii*, *Schiedea obovata*, *Silene perlmanii*, *Solanum sandwicense*, *Stenogyne kanehoana*, *Tetramolopium lepidotum* ssp. *lepidotum*, *Urera kaalae*, *and Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Lowland Mesic—Unit 2 (Map 13) follows:

Map 13
Oahu–Lowland Mesic
Unit 2



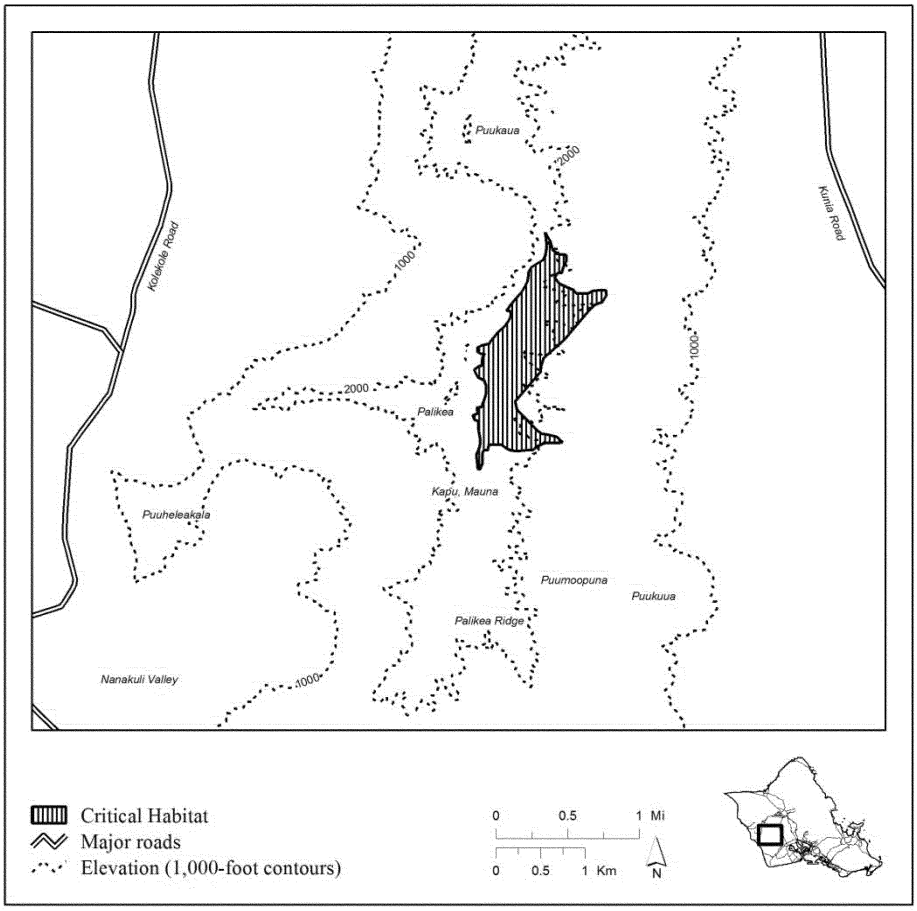
(15) Oahu—Lowland Mesic—Unit 3 (353 ac; 143 ha).

(i) This unit is critical habitat for *Abutilon sandwicense*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce celastroides* var. *kaenana*, *Chamaesyce herbstii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyanea longiflora*, *Cyanea pinnatifida*, *Cyanea superba*, *Cyperus pennatiformis*, *Cyrtandra dentata*, *Delissea subcordata*, *Diellia falcata*, *Diellia unisora*, *Diplazium molokaiense*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Eugenia koolauensis*, *Euphorbia haeleeleana*, *Flueggea neowawraea*, *Gardenia mannii*, *Gouania meyenii*, *Gouania vitifolia*, *Hesperomannia arborescens*, *Hesperomannia arbuscula*, *Hibiscus brackenridgei*, *Isodendrion longifolium*, *Kadua coriacea*, *Kadua degeneri*, *Kadua parvula*, *Labordia cyrtandrae*, *Lobelia niihauensis*, *Melanthera tenuifolia*,

Melicope makahae, *Melicope pallida*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Phyllostegia hirsuta*, *Phyllostegia kaalaensis*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *lydgatei*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea kaalae*, *Schiedea nuttallii*, *Schiedea obovata*, *Silene perlmanii*, *Solanum sandwicense*, *Stenogyne kanehoana*, *Tetramolopium lepidotum* ssp. *lepidotum*, *Urera kaalae*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Lowland Mesic—Unit 3 (Map 14) follows:

Map 14
Oahu–Lowland Mesic
Unit 3

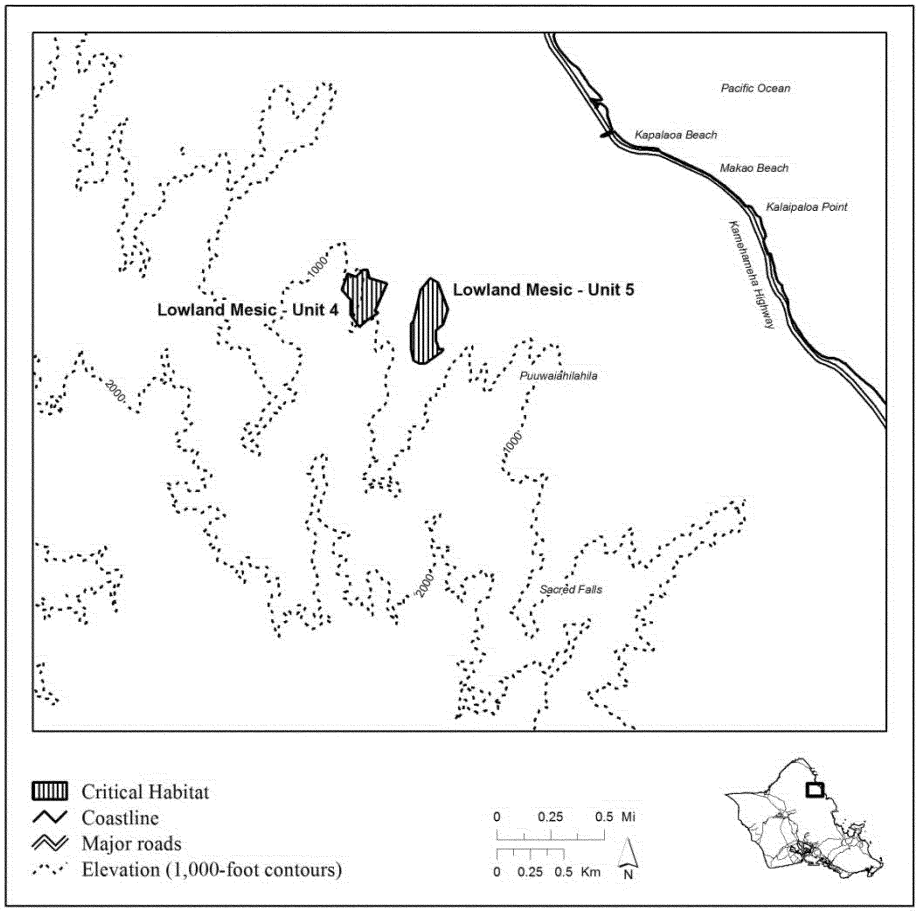


(16) Oahu—Lowland Mesic—Unit 4 (20 ac; 8 ha) and Oahu—Lowland Mesic—Unit 5 (29 ac; 12 ha).

(i) These units are critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea. calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*, *Hesperomannia arborescens*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Schiedea kaalae*, *Schiedea nuttallii*, *Solanum sandwicense*, *Tetraplasandra gymnocarpa*, and *Tetraplasandra lydgatei*.

(ii) Map of Oahu—Lowland Mesic—Unit 4 and Oahu—Lowland Mesic—Unit 5 (Map 15) follows:

Map 15
Oahu–Lowland Mesic
Unit 4 and Unit 5

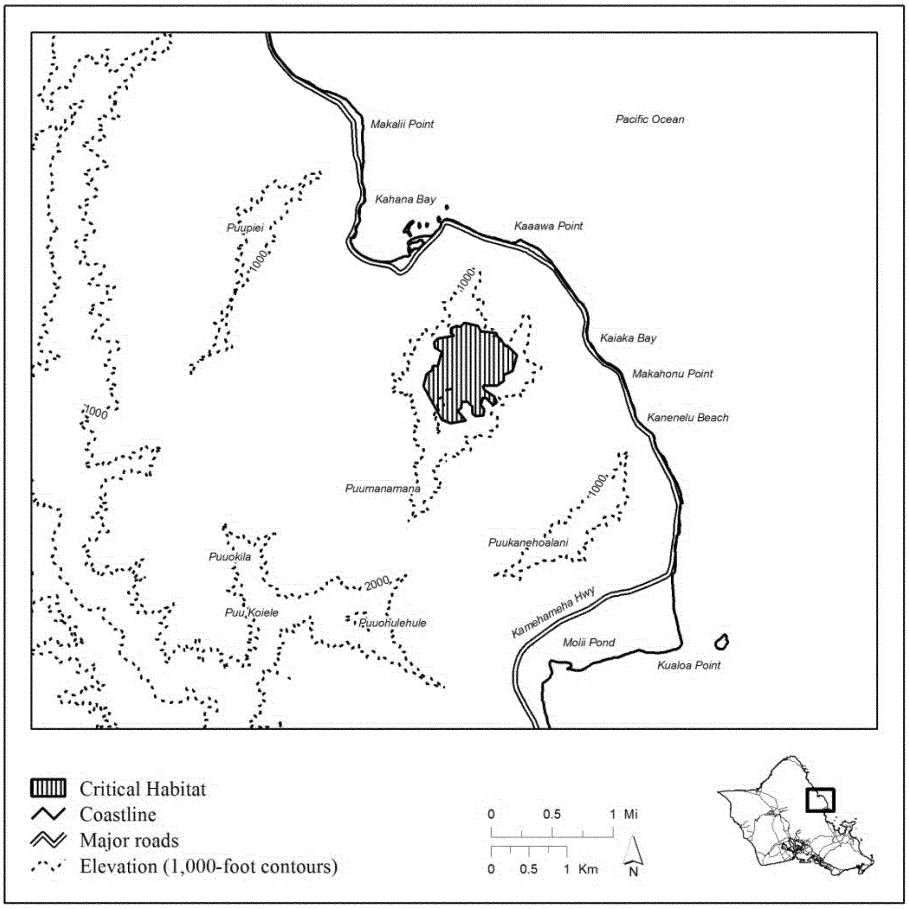


(17) Oahu—Lowland Mesic—Unit 6 (247 ac; 100 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*, *Hesperomannia arborescens*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Schiedea kaalae*, *Schiedea nuttallii*, *Solanum sandwicense*, *Tetraplasandra gymnocarpa*, and *Tetraplasandra lydgatei*.

(ii) Map of Oahu—Lowland Mesic—Unit 6 (Map 16) follows:

Map 16
Oahu–Lowland Mesic
Unit 6



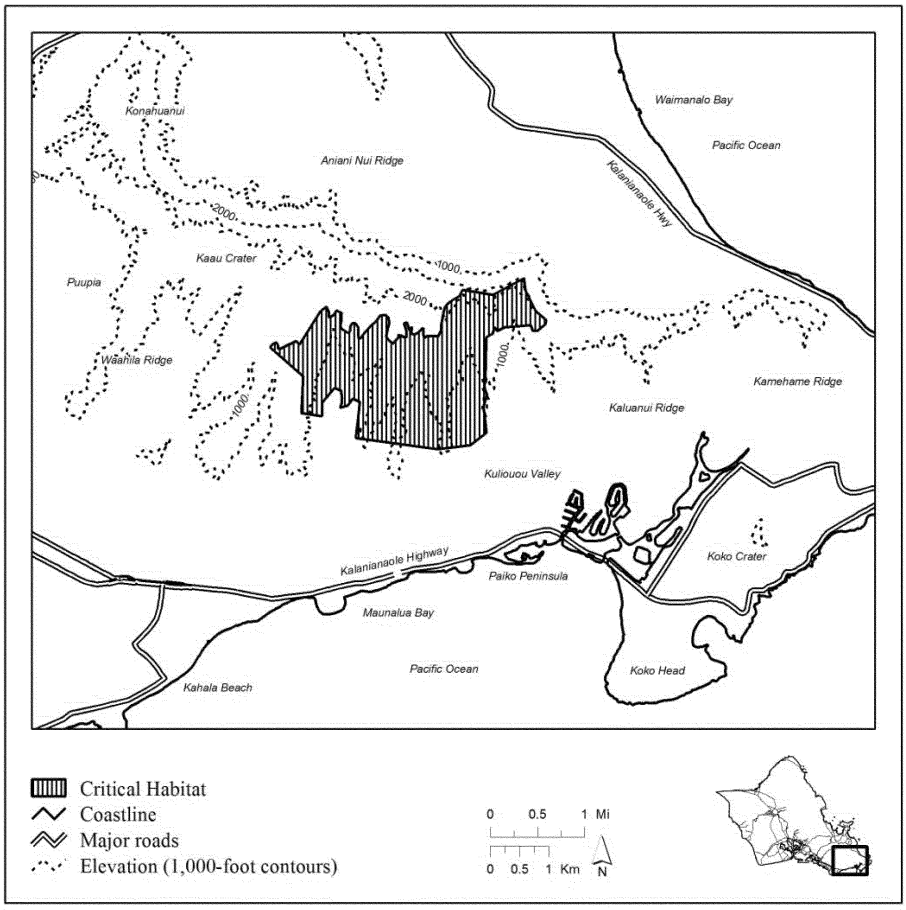
(18) Oahu—Lowland Mesic—Unit 7 (1,669 ac; 676 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Bonamia menziesii*, *Chamaesyce celastroides* var. *kaenana*, *Ctenitis squamigera*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea lanceolata*, *Cyanea longiflora*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra polyantha*, *Delissea subcordata*, *Diellia erecta*, *Diellia falcata*, *Eugenia koolauensis*, *Gardenia mannii*, *Hesperomannia arborescens*, *Isodendrion laurifolium*, *Isodendrion longifolium*, *Kadua coriacea*, *Labordia cyrtandrae*, *Lobelia monostachya*, *Melicope lydgatei*, *Melicope saint-johnii*, *Phyllostegia*

hirsuta, *Phyllostegia mollis*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Schiedea kaalae*, *Schiedea nuttallii*, *Solanum sandwicense*, *Tetraplasandra gymnocarpa*, and *Tetraplasandra lydgatei*.

(ii) Map of Oahu—Lowland Mesic—Unit 7 (Map 17) follows:

Map 17
Oahu–Lowland Mesic
Unit 7



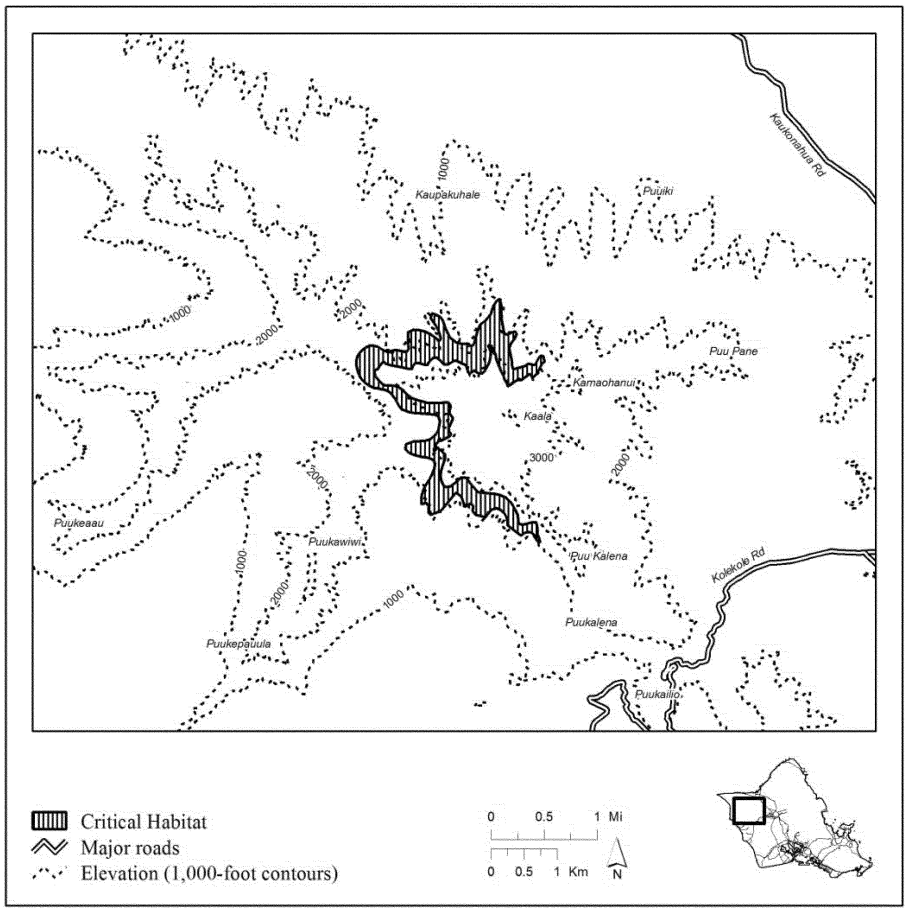
(19) Oahu—Lowland Wet—Unit 1 (541 ac; 219 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diplazium molokaiense*, *Gardenia mannii*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*,

Plantago princeps var. *princeps*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Urera kaalae*.

(ii) Map of Oahu—Lowland Wet—Unit 1 (Map 18) follows:

Map 18
Oahu–Lowland Wet
Unit 1



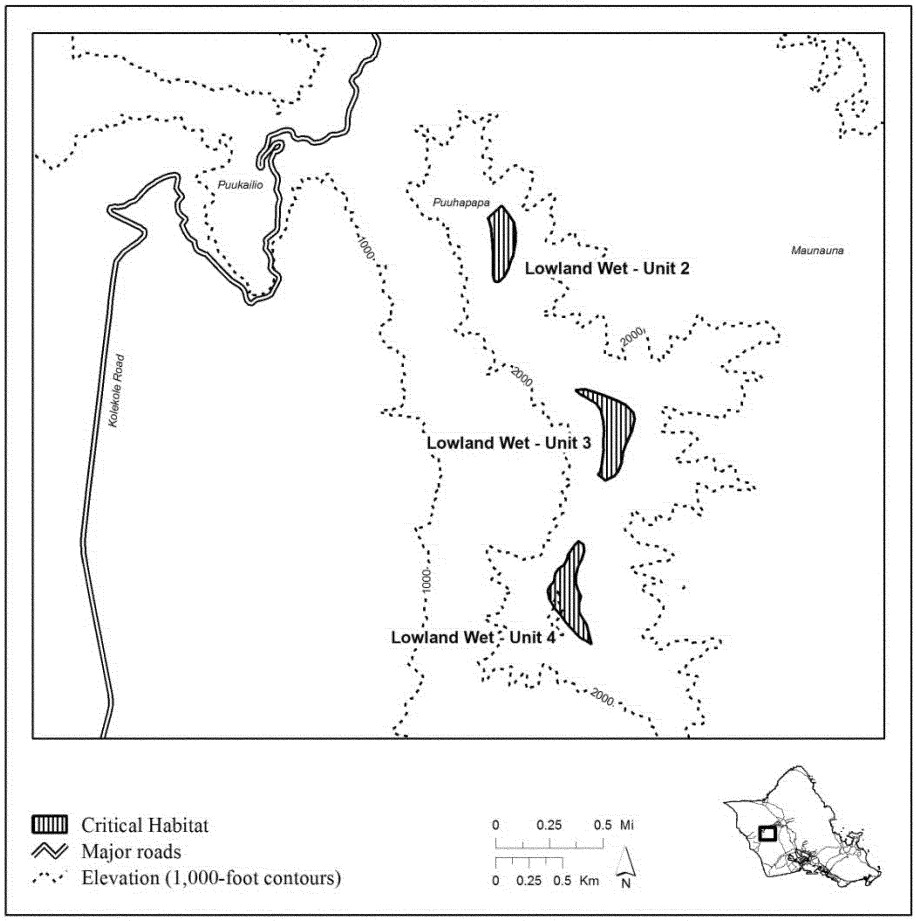
(20) Oahu—Lowland Wet—Unit 2 (20 ac; 8 ha), Oahu—Lowland Wet—Unit 3 (29 ac; 12 ha), and Oahu—Lowland Wet—Unit 4 (27 ac; 11 ha).

(i) These units are critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diplazium molokaiense*, *Gardenia mannii*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Plantago princeps* var. *princeps*,

Pteralyxia macrocarpa, *Schiedea hookeri*, *Schiedea kaalae*, and *Urera kaalae*.

(ii) Map of Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, and Oahu—Lowland Wet—Unit 4 (Map 19) follows:

Map 19
Oahu–Lowland Wet
Unit 2, Unit 3 and Unit 4



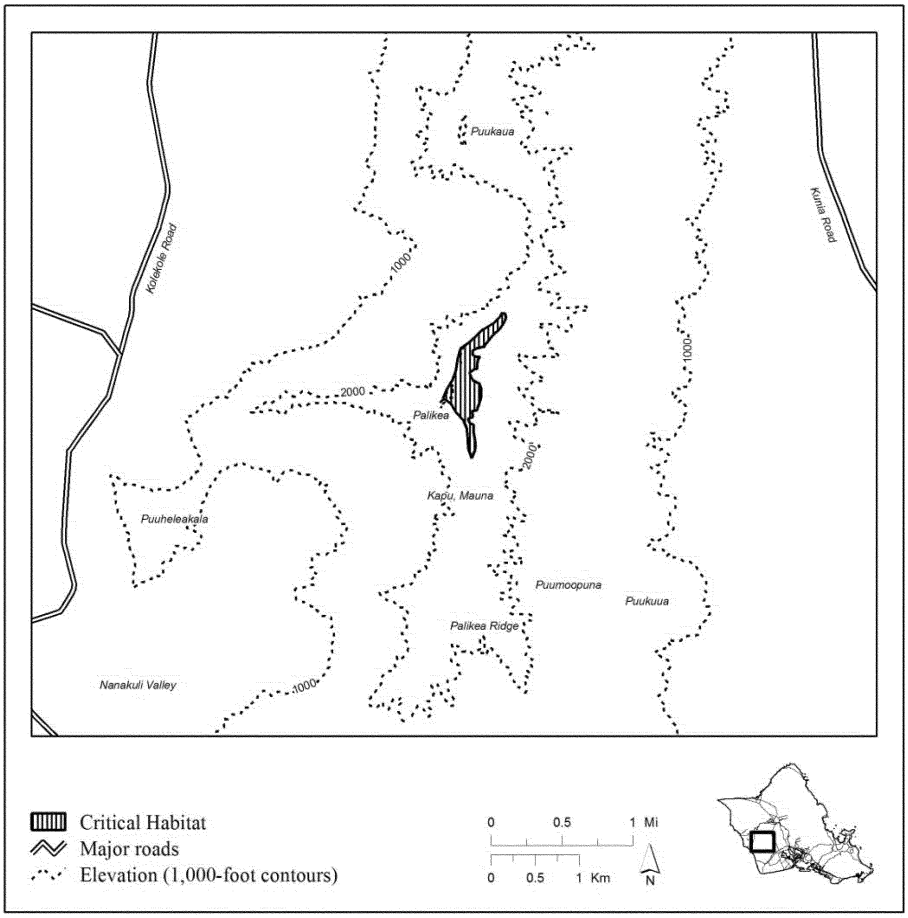
(21) Oahu—Lowland Wet—Unit 5 (74 ac; 30 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diplazium molokaiense*, *Gardenia mannii*, *Gouania vitifolia*, *Hesperomannia arbuscula*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Phyllostegia hirsuta*, *Phyllostegia mollis*, *Plantago princeps* var. *princeps*,

Pteralyxia macrocarpa, *Schiedea hookeri*, *Schiedea kaalae*, and *Urera kaalae*.

(ii) Map of Oahu—Lowland Wet—Unit 5 (Map 20) follows:

Map 20
Oahu–Lowland Wet
Unit 5



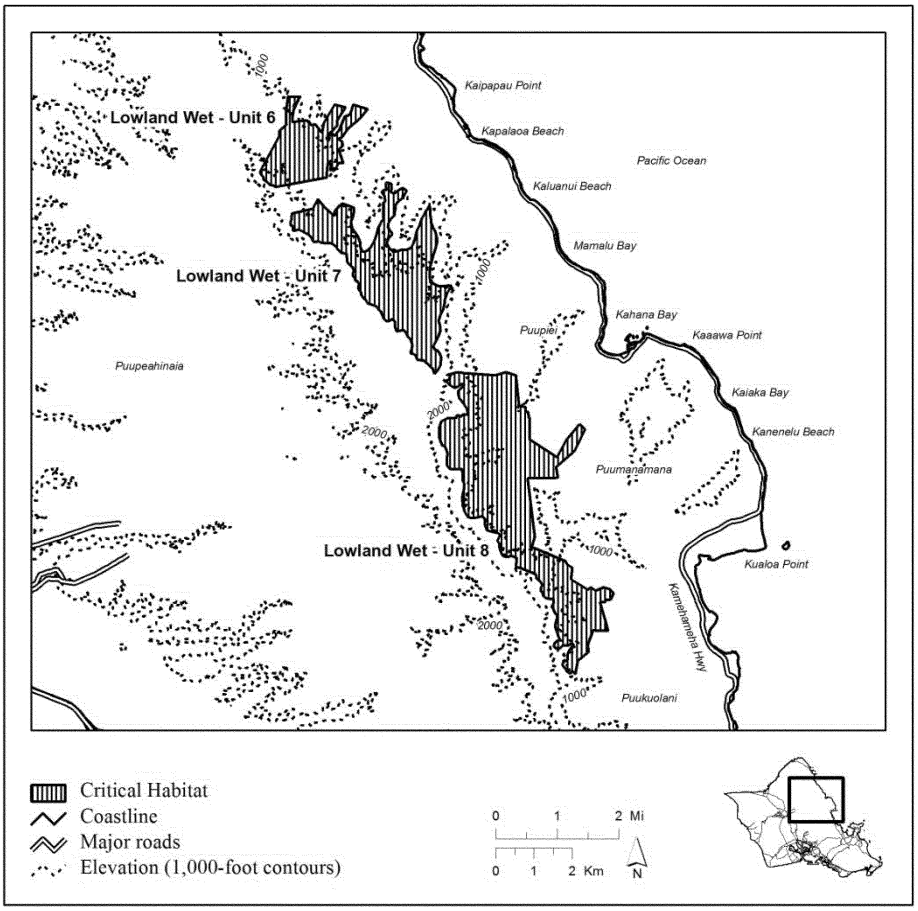
(22) Oahu—Lowland Wet—Unit 6 (790 ac; 320 ha), Oahu—Lowland Wet—Unit 7 (1,787 ac; 723 ha), and Oahu—Lowland Wet—Unit 8 (3,041 ac; 1,231 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*, *Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion*

longifolium, *Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*, *Platydesma cornuta* var. *cornuta*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Pteris lidgatei*, *Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, *Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, and Oahu—Lowland Wet—Unit 8 (Map 21) follows:

Map 21
Oahu–Lowland Wet
Unit 6, Unit 7 and Unit 8

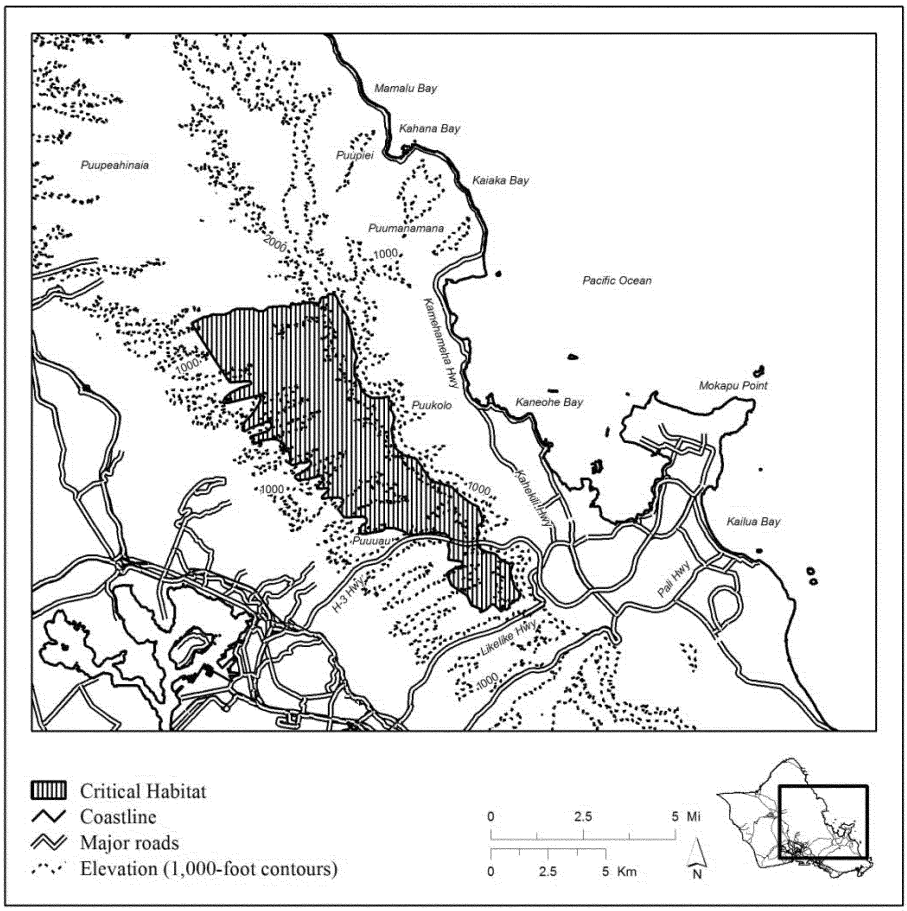


(23) Oahu—Lowland Wet—Unit 9 (15,728 ac; 6,365 ha).

(i) This unit is critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*, *Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*, *Platydesma cornuta* var. *cornuta*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Pteris lidgatei*, *Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, *Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 9 (Map 22) follows:

Map 22
Oahu–Lowland Wet
Unit 9



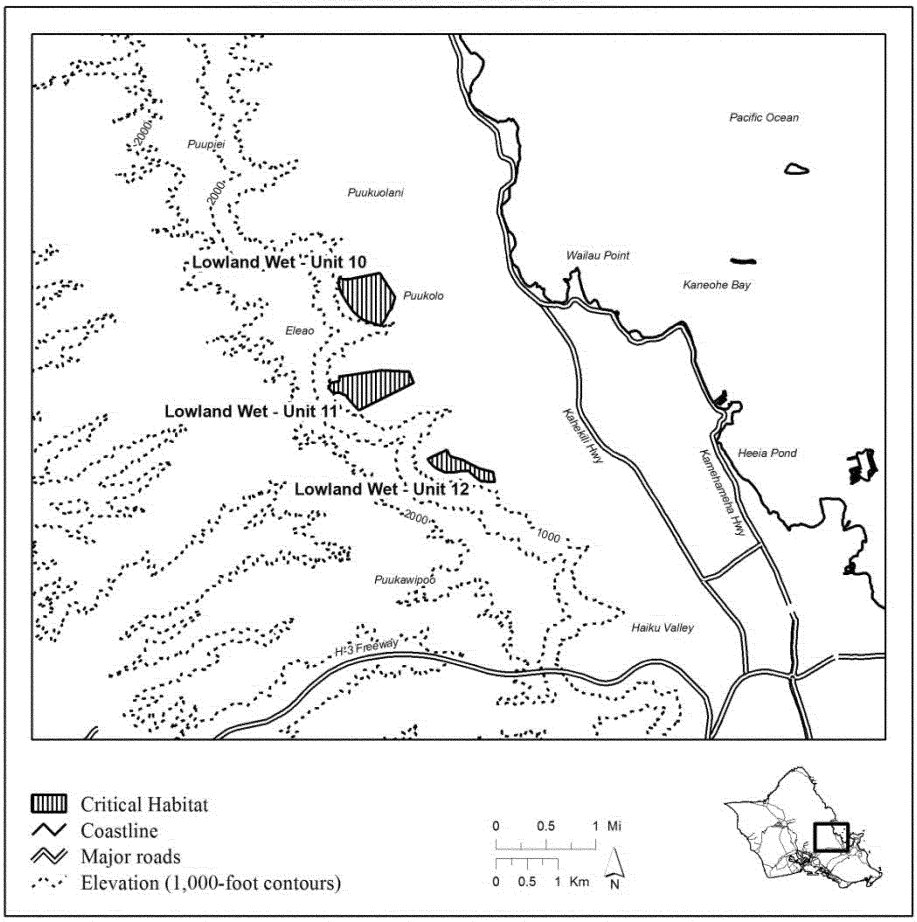
(24) Oahu—Lowland Wet—Unit 10 (124 ac; 50 ha), Oahu—Lowland Wet—Unit 11 (124 ac; 50 ha), and Oahu—Lowland Wet—Unit 12 (53 ac; 21 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*, *Cyanea koolauensis*, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*,

Platydesma cornuta var. *cornuta*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Pteris lidgatei*, *Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, *Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, and Oahu—Lowland Wet—Unit 12 (Map 23) follows:

Map 23
Oahu–Lowland Wet
Unit 10, Unit 11 and Unit 12



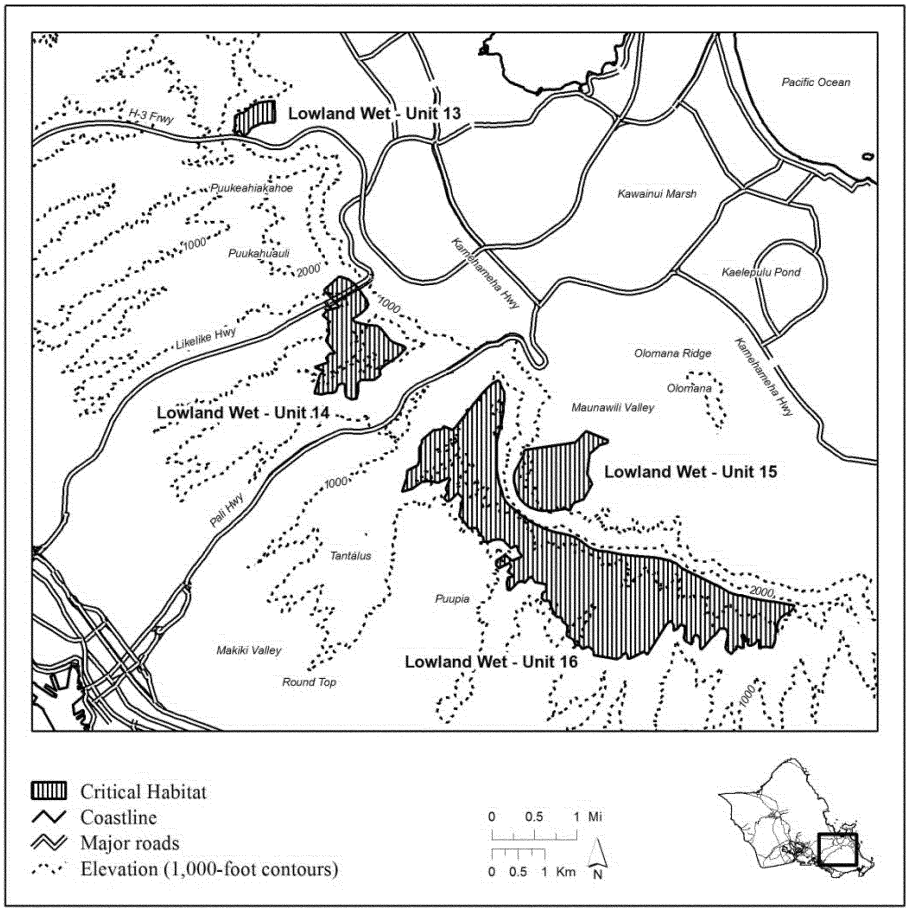
(25) Oahu—Lowland Wet—Unit 13 (75 ac; 30 ha), Oahu—Lowland Wet—Unit 14 (478 ac; 193 ha), Oahu—Lowland Wet—Unit 15 (407 ac; 165 ha), and Oahu—Lowland Wet—Unit 16 (2,507 ac; 1,014 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea grimesiana* ssp. *grimesiana*, *Cyanea humboldtiana*,

Cyanea koolauensis, *Cyanea lanceolata*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra dentata*, *Cyrtandra gracilis*, *Cyrtandra kaulantha*, *Cyrtandra polyantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Cyrtandra waiolani*, *Gardenia mannii*, *Hesperomannia arborescens*, *Huperzia nutans*, *Isodendrion longifolium*, *Labordia cyrtandrae*, *Lobelia gaudichaudii* ssp. *koolauensis*, *Lobelia oahuensis*, *Melicope hiiakae*, *Melicope lydgatei*, *Myrsine juddii*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *longibracteata*, *Plantago princeps* var. *princeps*, *Platanthera holochila*, *Platydesma cornuta* var. *cornuta*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Pteris lidgatei*, *Sanicula purpurea*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, *Viola oahuensis*, and *Zanthoxylum oahuense*.

(ii) Map of Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16 (Map 24) follows:

Map 24
Oahu–Lowland Wet
Unit 13, Unit 14, Unit 15 and Unit 16

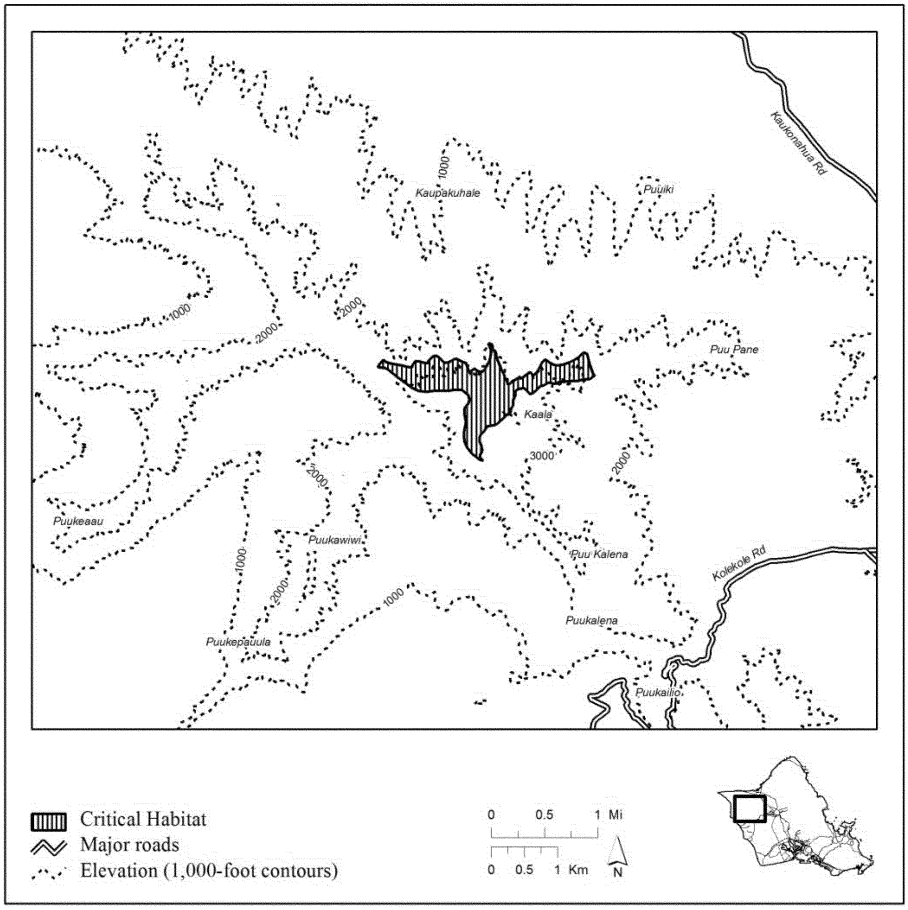


(26) Oahu—Montane Wet—Unit 1 (370 ac; 150 ha).

(i) This unit is critical habitat for *Alectryon macrococcus*, *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia hirsuta*, and *Schiedea trinervis*.

(ii) Map of Oahu—Montane Wet—Unit 1 (Map 25) follows:

Map 25
Oahu–Montane Wet
Unit 1



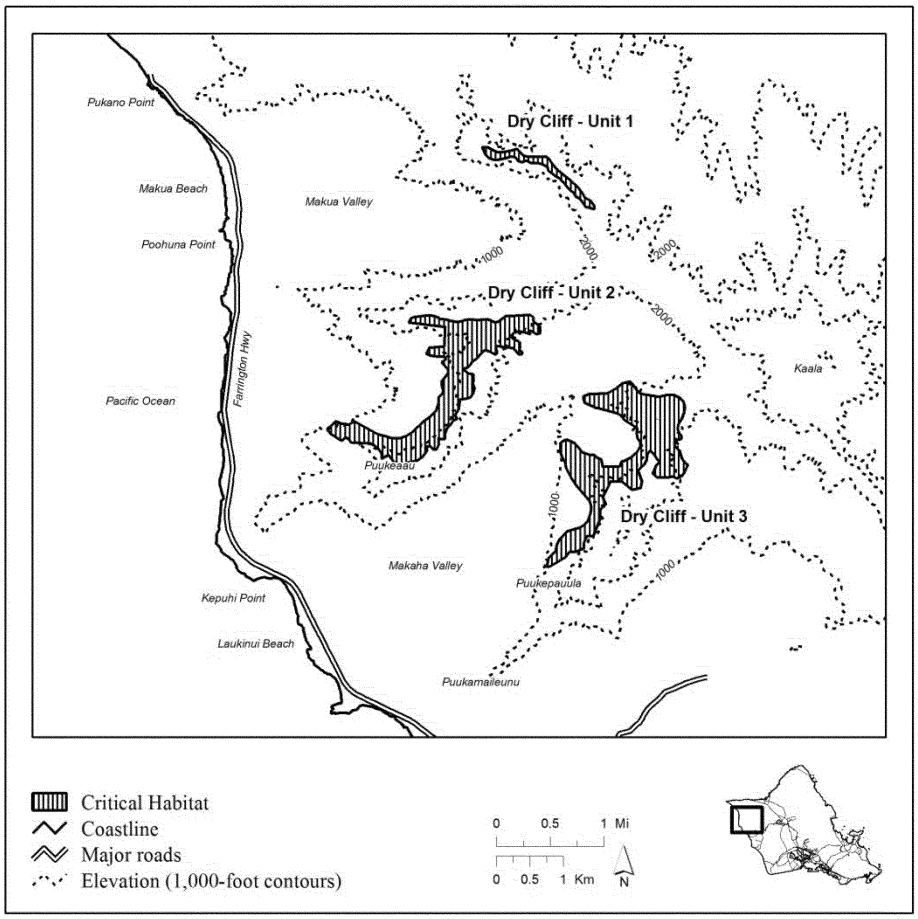
(27) Oahu—Dry Cliff—Unit 1 (49 ac; 20 ha), Oahu—Dry Cliff—Unit 2 (412 ac; 167 ha), and Oahu—Dry Cliff—Unit 3 (450 ac; 182 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Flueggea neowawraea*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var. *leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var.

decurrens, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea obovata*, *Schiedea trinervis*, *Silene lanceolata*, *Silene perlmanii*, *Spermolepis hawaiiensis*, *Tetramolopium filiforme*, *Tetramolopium lepidotum* ssp. *lepidotum*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, and Oahu—Dry Cliff—Unit 3 (Map 26) follows:

Map 26
Oahu–Dry Cliff
Unit 1, Unit 2 and Unit 3



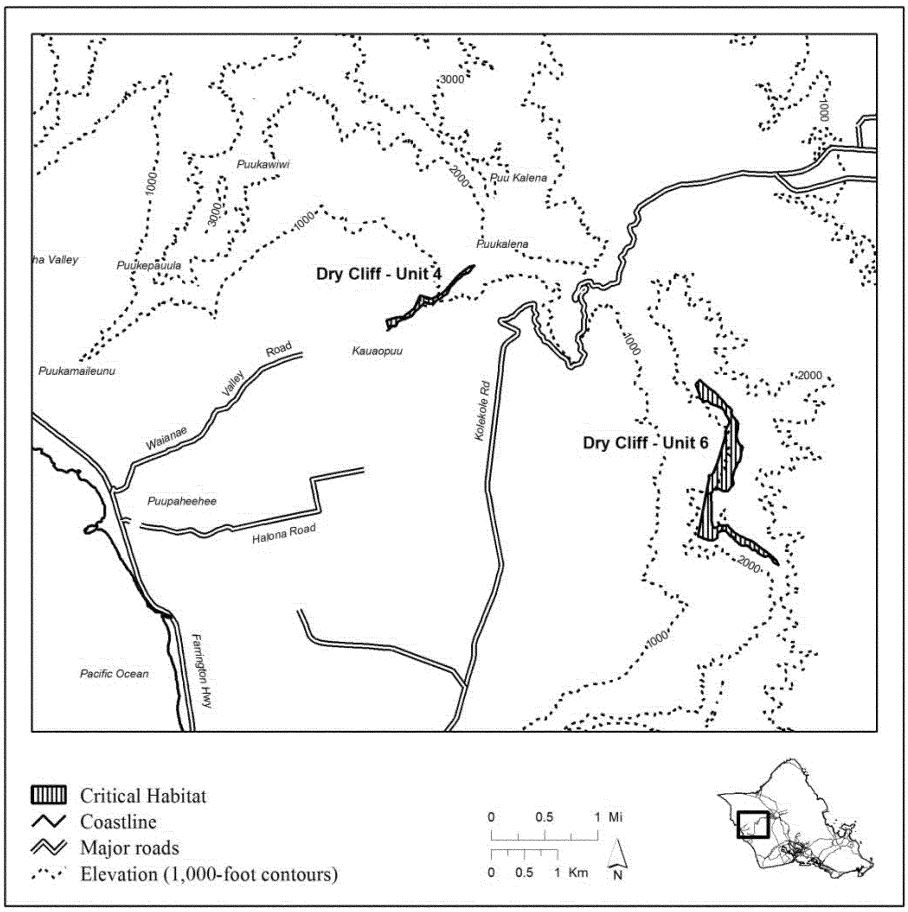
(28) Oahu—Dry Cliff—Unit 4 (24 ac; 10 ha) and Oahu—Dry Cliff—Unit 6 (149 ac; 60 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra*

dentata, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Flueggea neowawraea*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var. *leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea obovata*, *Schiedea trinervis*, *Silene lanceolata*, *Silene perlmanii*, *Spermolepis hawaiiensis*, *Tetramolopium filiforme*, *Tetramolopium lepidotum* ssp. *lepidotum*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Dry Cliff—Unit 4 and Oahu—Dry Cliff—Unit 6 (Map 27) follows:

Map 27
Oahu–Dry Cliff
Unit 4 and Unit 6

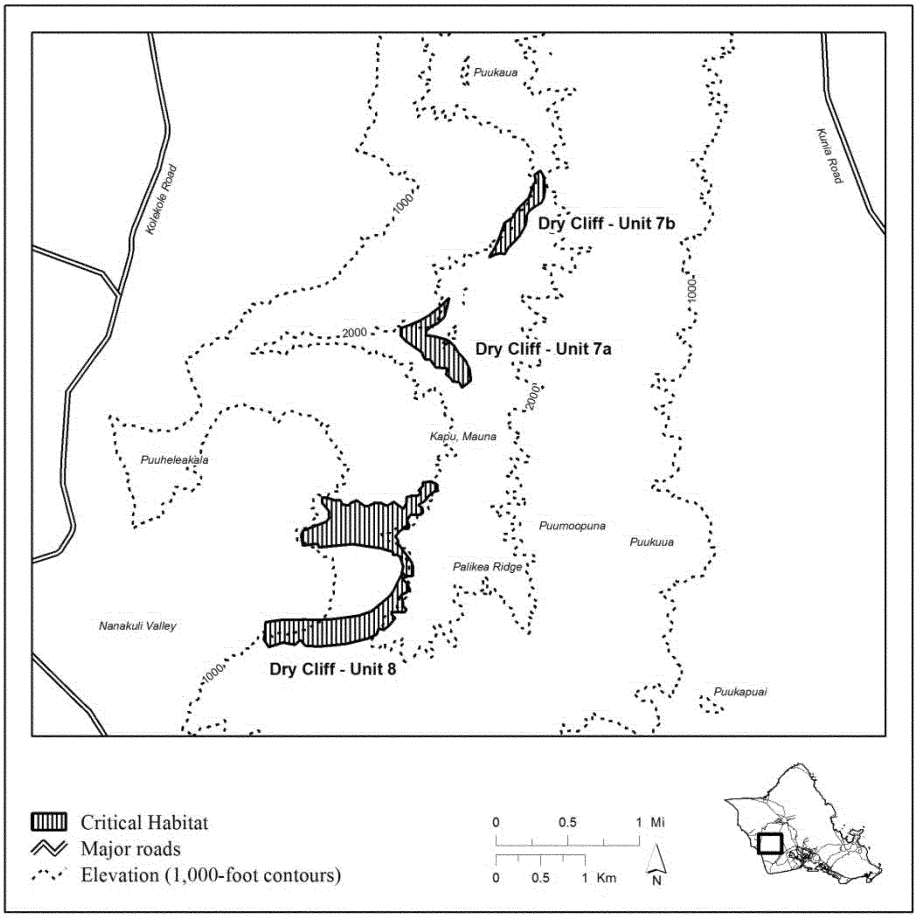


(29) Oahu—Dry Cliff—Unit 7a (68 ac; 27 ha), Oahu—Dry Cliff—Unit 7b (38 ac; 16 ha), and Oahu—Dry Cliff—Unit 8 (259 ac; 105 ha).

(i) These units are critical habitat for *Abutilon sandwicense*, *Achyranthes splendens* var. *rotundata*, *Alectryon macrococcus*, *Bonamia menziesii*, *Cenchrus agrimonioides*, *Chamaesyce herbstii*, *Chamaesyce kuwaleana*, *Cyanea grimesiana* ssp. *obatae*, *Cyrtandra dentata*, *Diellia falcata*, *Diellia unisora*, *Dubautia herbstobatae*, *Eragrostis fosbergii*, *Flueggea neowawraea*, *Gouania meyenii*, *Gouania vitifolia*, *Isodendrion laurifolium*, *Isodendrion pyrifolium*, *Kadua degeneri*, *Kadua parvula*, *Korthalsella degeneri*, *Lepidium arbuscula*, *Lipochaeta lobata* var. *leptophylla*, *Lobelia niihauensis*, *Melanthera tenuifolia*, *Melicope makahae*, *Melicope saint-johnii*, *Neraudia angulata*, *Nototrichium humile*, *Peucedanum sandwicense*, *Phyllostegia kaalaensis*, *Plantago princeps* var. *princeps*, *Platydesma cornuta* var. *decurrens*, *Pleomele forbesii*, *Pteralyxia macrocarpa*, *Sanicula mariversa*, *Schiedea hookeri*, *Schiedea obovata*, *Schiedea trinervis*, *Silene lanceolata*, *Silene perlmanii*, *Spermolepis hawaiiensis*, *Tetramolopium filiforme*, *Tetramolopium lepidotum* ssp. *lepidotum*, and *Viola chamissoniana* ssp. *chamissoniana*.

(ii) Map of Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8 (Map 28) follows:

Map 28
Oahu–Dry Cliff
Unit 7a, Unit 7b and Unit 8

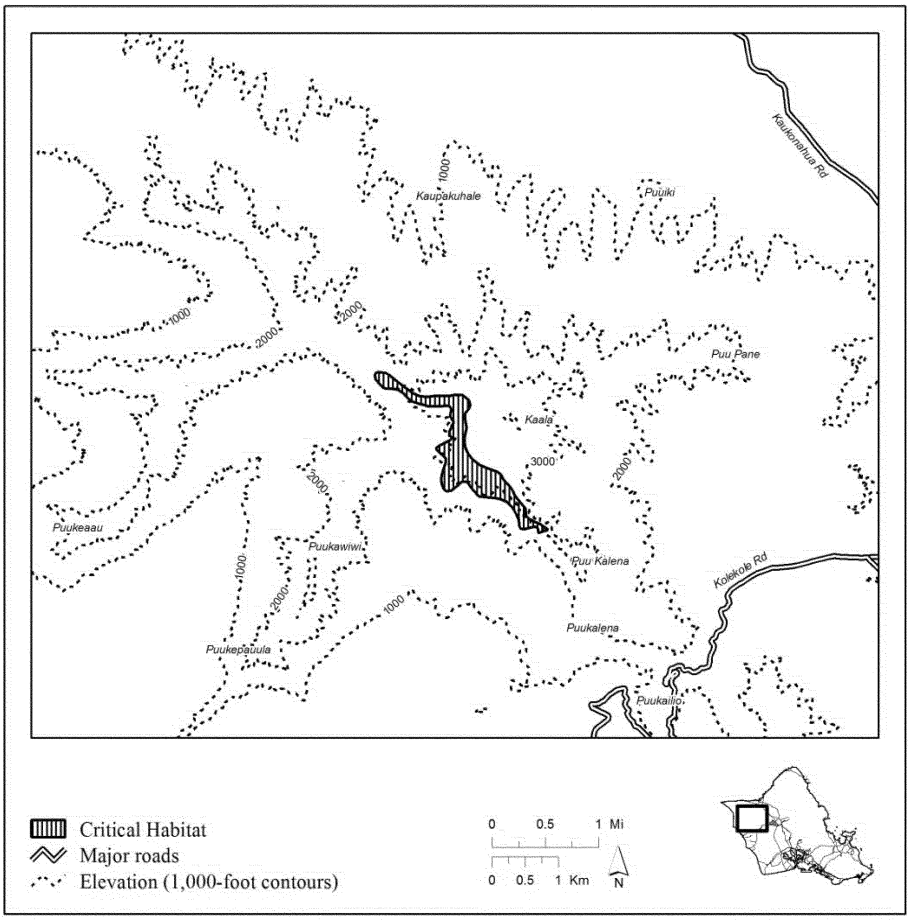


(30) Oahu—Wet Cliff—Unit 1 (235 ac; 95 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.

(ii) Map of Oahu—Wet Cliff—Unit 1 (Map 29) follows:

Map 29
Oahu–Wet Cliff
Unit 1

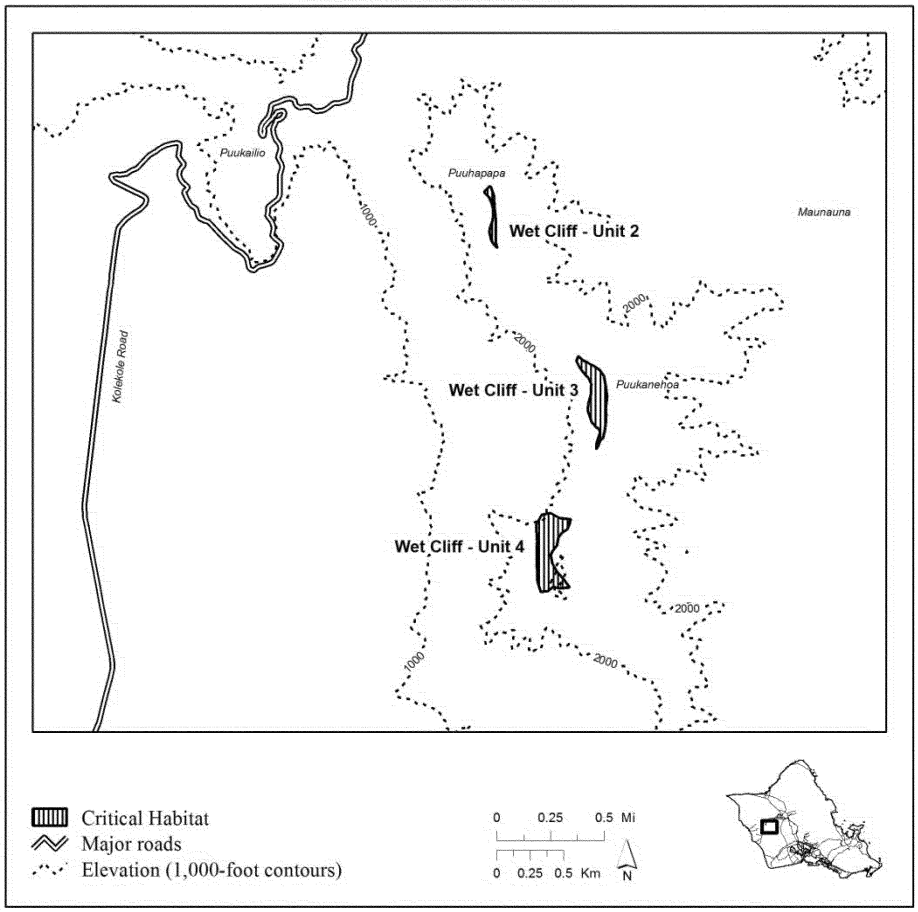


(31) Oahu—Wet Cliff—Unit 2 (3 ac; 1 ha), Oahu—Wet Cliff—Unit 3 (16 ac; 6 ha), and Oahu—Wet Cliff—Unit 4 (23 ac; 9 ha).

(i) These units are critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.

(ii) Map of Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, and Oahu—Wet Cliff—Unit 4 (Map 30) follows:

Map 30
Oahu–Wet Cliff
Unit 2, Unit 3 and Unit 4

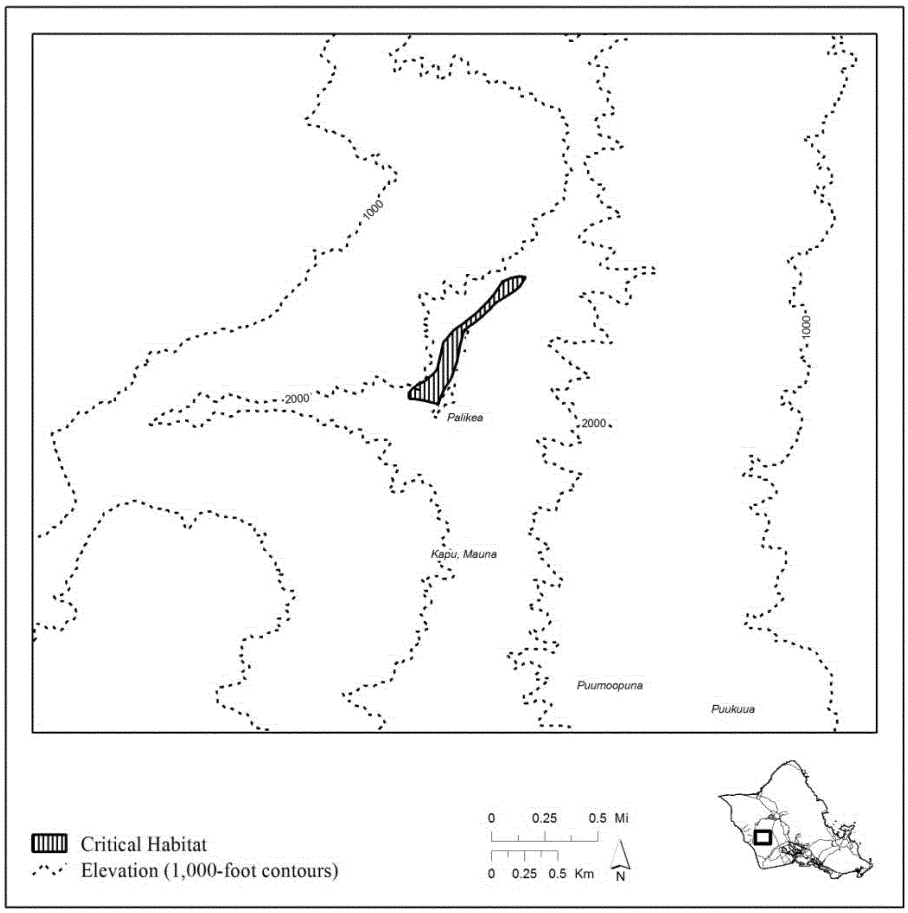


(32) Oahu—Wet Cliff—Unit 5 (31 ac; 13 ha).

(i) This unit is critical habitat for *Cyanea acuminata*, *Cyanea calycina*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Melicope christophersenii*, *Phyllostegia hirsuta*, *Pteralyxia macrocarpa*, *Schiedea hookeri*, *Schiedea kaalae*, and *Schiedea trinervis*.

(ii) Map of Oahu—Wet Cliff—Unit 5 (Map 31) follows:

Map 31
Oahu–Wet Cliff
Unit 5

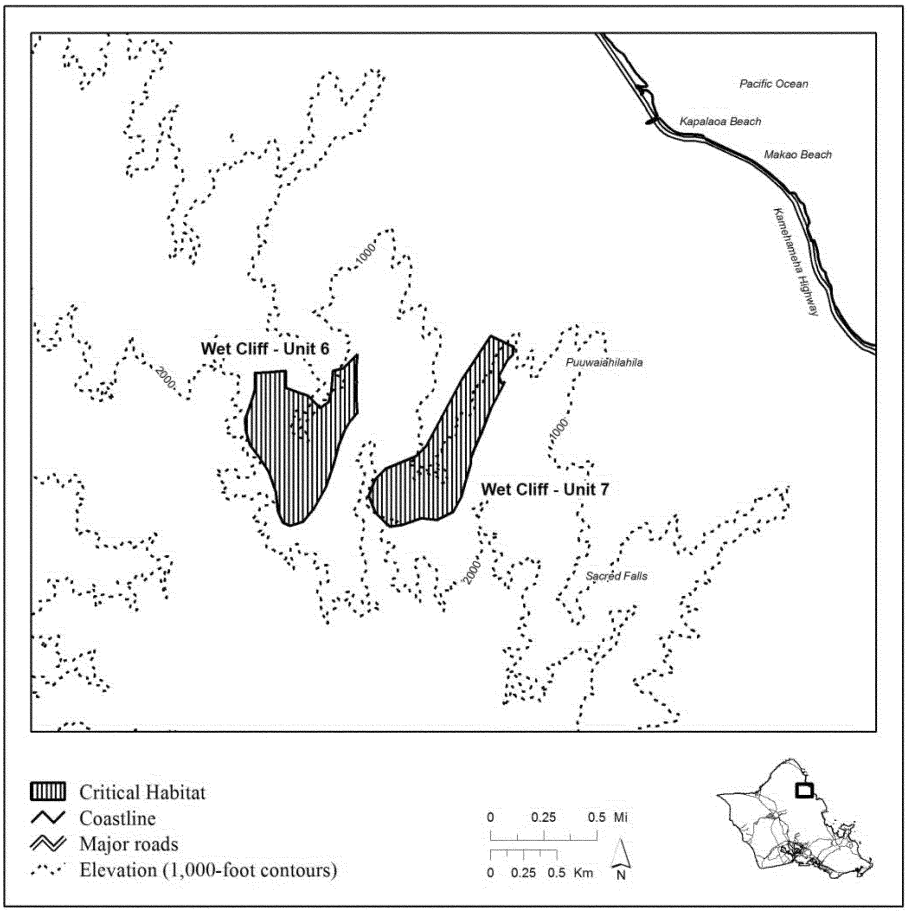


(33) Oahu—Wet Cliff—Unit 6 (151 ac; 61 ha) and Oahu—Wet Cliff—Unit 7 (144 ac; 58 ha).

(i) These units are critical habitat for *Adenophorus periens*, *Chamaesyce deppeana*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea humboldtiana*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra kaulantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Huperzia nutans*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Lysimachia filifolia*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Sanicula purpurea*, *Schiedea kaalae*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, and *Viola oahuensis*.

(ii) Map of Oahu—Wet Cliff—Unit 6 and Oahu—Wet Cliff—Unit 7 (Map 32) follows:

Map 32
Oahu–Wet Cliff
Unit 6 and Unit 7

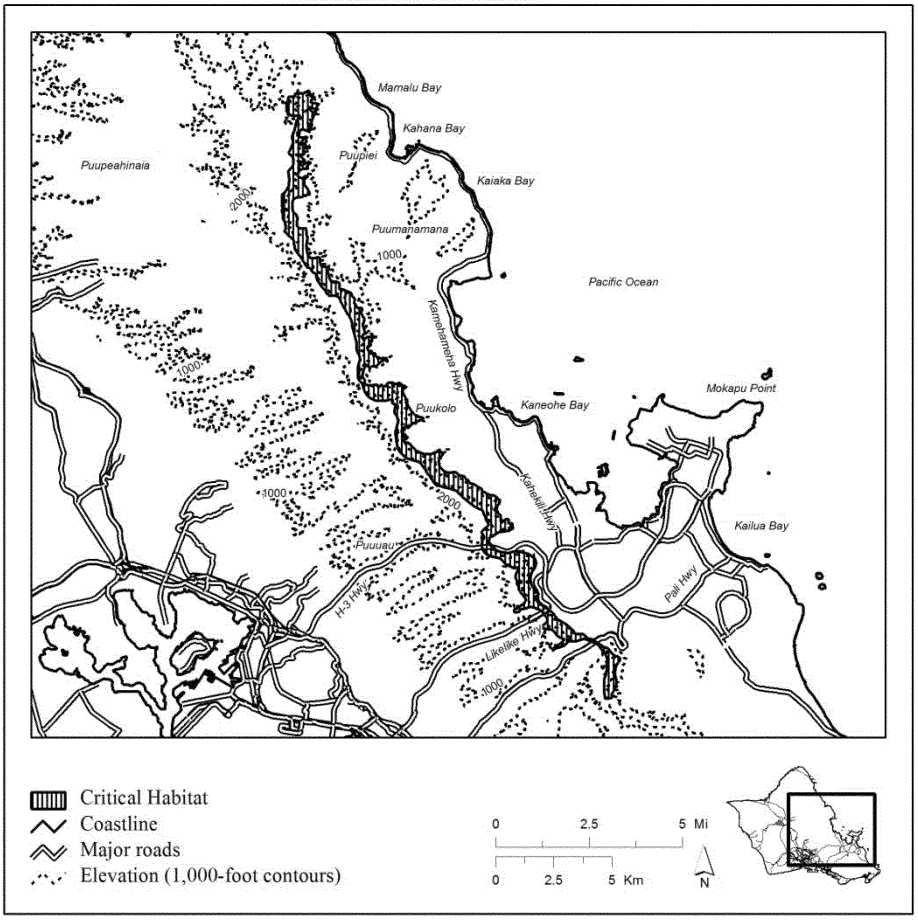


(34) Oahu—Wet Cliff—Unit 8 (4,649 ac; 1,881 ha).

(i) This unit is critical habitat for *Adenophorus periens*, *Chamaesyce deppeana*, *Chamaesyce rockii*, *Cyanea acuminata*, *Cyanea calycina*, *Cyanea crispa*, *Cyanea humboldtiana*, *Cyanea purpurellifolia*, *Cyanea st.-johnii*, *Cyanea truncata*, *Cyrtandra kaulantha*, *Cyrtandra sessilis*, *Cyrtandra subumbellata*, *Cyrtandra viridiflora*, *Huperzia nutans*, *Labordia cyrtandrae*, *Lobelia oahuensis*, *Lysimachia filifolia*, *Phyllostegia hirsuta*, *Phyllostegia parviflora* var. *parviflora*, *Plantago princeps* var. *princeps*, *Psychotria hexandra* ssp. *oahuensis*, *Pteralyxia macrocarpa*, *Sanicula purpurea*, *Schiedea kaalae*, *Tetraplasandra gymnocarpa*, *Trematolobelia singularis*, and *Viola oahuensis*.

(ii) Map of Oahu—Wet Cliff—Unit 8 (Map 33) follows:

Map 33
Oahu–Wet Cliff
Unit 8



(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU

Unit name	Species occupied	Species unoccupied
Oahu—Coastal—Unit 1		
	Achyranthes splendens var. *rotundata* ...	*Achyranthes splendens* var. *rotundata*
		Bidens amplectens
		Centaurium sebaeoides
	Chamaesyce celastroides var. *kaenana*	*Chamaesyce celastroides* var. *kaenana*
		Schiedea kealiae
	Sesbania tomentosa	*Sesbania tomentosa*
		Vigna o-wahuensis
Oahu—Coastal—Unit 2		
		Centaurium sebaeoides
		Chamaesyce kuwaleana
		Sesbania tomentosa
		Vigna o-wahuensis
Oahu—Coastal—Unit 3		

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Centaurium sebaeoides *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 4		*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 5		*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 6		*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 7		*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 8		*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 9	*Sesbania tomentosa*	*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Cyperus trachysanthos* *Marsilea villosa* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 10	*Cyperus trachysanthos* *Marsilea villosa*	*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 11	*Centaurium sebaeoides*	*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Cyperus trachysanthos* *Marsilea villosa* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 12	*Marsilea villosa*	*Centaurium sebaeoides* *Chamaesyce kuwaleana* *Cyperus trachysanthos* *Marsilea villosa* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 13	*Marsilea villosa*	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Centaurium sebaeoides* *Chamaesyce celastroides* var. *kaenana* *Schiedea kealiae* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 14	*Achyranthes splendens* var. *rotundata*	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Centaurium sebaeoides* *Chamaesyce celastroides* var. *kaenana* *Schiedea kealiae* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Coastal—Unit 15	*Achyranthes splendens* var. *rotundata*	

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
Oahu—Lowland Dry—Unit 1	*Achyranthes splendens* var. *rotundata* ...	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Centaurium sebaeoides* *Chamaesyce celastroides* var. *kaenana* *Schiedea kealiae* *Sesbania tomentosa* *Vigna o-wahuensis*
Oahu—Lowland Dry—Unit 2	*Bidens amplectens*	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Bonamia menziesii* *Chamaesyce celastroides* var. *kaenana* *Euphorbia haeleeleana* *Gouania meyenii* *Gouania vitifolia*
	Hibiscus brackenridgei	*Hibiscus brackenridgei* *Isodendrion pyrifolium* *Melanthera tenuifolia* *Neraudia angulata*
	Nototrichium humile	*Nototrichium humile* *Pleomele forbesii* *Schiedea hookeri*
	Schiedea kealiae	*Schiedea kealiae* *Spermolepis hawaiiensis*
Oahu—Lowland Dry—Unit 6	*Bonamia menziesii*	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Bonamia menziesii* *Chamaesyce celastroides* var. *kaenana* *Euphorbia haeleeleana* *Gouania meyenii* *Gouania vitifolia* *Hibiscus brackenridgei* *Isodendrion pyrifolium*
	Melanthera tenuifolia	*Melanthera tenuifolia* *Neraudia angulata*
	Nototrichium humile	*Nototrichium humile*
	Pleomele forbesii	*Pleomele forbesii* *Schiedea hookeri* *Schiedea kealiae* *Spermolepis hawaiiensis*
Oahu—Lowland Dry—Unit 7	*Doryopteris takeuchii*	*Doryopteris takeuchii* *Gouania meyenii*
	Spermolepis hawaiiensis	*Spermolepis hawaiiensis*
Oahu—Lowland Dry—Unit 8	*Cyperus trachysanthos*	*Cyperus trachysanthos* *Doryopteris takeuchii* *Gouania meyenii* *Marsilea villosa* *Spermolepis hawaiiensis*
Oahu—Lowland Dry—Unit 9	*Achyranthes splendens* var. *rotundata* ...	*Achyranthes splendens* var. *rotundata* *Bidens amplectens* *Bonamia menziesii* *Chamaesyce celastroides* var. *kaenana* *Chamaesyce skottsbergii* var. *skottsbergii* *Euphorbia haeleeleana* *Gouania meyenii* *Gouania vitifolia* *Hibiscus brackenridgei* *Isodendrion pyrifolium* *Melanthera tenuifolia* *Neraudia angulata* *Nototrichium humile* *Schiedea hookeri* *Schiedea kealiae* *Spermolepis hawaiiensis*
	Bidens amplectens	*Achyranthes splendens* var. *rotundata* *Bidens amplectens*

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Bonamia menziesii
		Chamaesyce celastroides var. *kaenana*
		Chamaesyce skottsbergii var. *skottsbergii*
		Euphorbia haeleeleana
		Gouania meyenii
		Gouania vitifolia
		Hibiscus brackenridgei
		Isodendrion pyrifolium
		Melanthera tenuifolia
		Neraudia angulata
		Nototrichium humile
		Schiedea hookeri
		Schiedea kealiae
		Spermolepis hawaiiensis
Oahu—Lowland Dry—Unit 10		
		Achyranthes splendens var. *rotundata*
		Bidens amplectens
		Bonamia menziesii
		Chamaesyce celastroides var. *kaenana*
	Chamaesyce skottsbergii var. *skottsbergii.*	*Chamaesyce skottsbergii* var. *skottsbergii*
		Euphorbia haeleeleana
		Gouania meyenii
		Gouania vitifolia
		Hibiscus brackenridgei
		Isodendrion pyrifolium
		Melanthera tenuifolia
		Neraudia angulata
		Nototrichium humile
		Schiedea hookeri
		Schiedea kealiae
		Spermolepis hawaiiensis
Oahu—Lowland Dry—Unit 11		
		Achyranthes splendens var. *rotundata*
		Bidens amplectens
		Bonamia menziesii
		Chamaesyce celastroides var. *kaenana*
	Chamaesyce skottsbergii var. *skottsbergii.*	*Chamaesyce skottsbergii* var. *skottsbergii*
		Euphorbia haeleeleana
		Gouania meyenii
		Gouania vitifolia
		Hibiscus brackenridgei
		Isodendrion pyrifolium
		Melanthera tenuifolia
		Neraudia angulata
		Nototrichium humile
		Schiedea hookeri
		Schiedea kealiae
		Spermolepis hawaiiensis
Oahu—Lowland Mesic—Unit 1		
	Abutilon sandwicense	*Abutilon sandwicense*
	Alectryon macrococcus	*Alectryon macrococcus*
	Bonamia menziesii	*Bonamia menziesii*
	Cenchrus agrimonioides	*Cenchrus agrimonioides*
		Chamaesyce celastroides var. *kaenana*
	Chamaesyce herbstii	*Chamaesyce herbstii*
	Colubrina oppositifolia	*Colubrina oppositifolia*
	Ctenitis squamigera	*Ctenitis squamigera*
	Cyanea acuminate	*Cyanea acuminata*
	Cyanea calycina	*Cyanea calycina*
	Cyanea grimesiana ssp. *Grimesiana*	*Cyanea grimesiana* ssp. *grimesiana*
	Cyanea grimesiana ssp. *Obatae*	*Cyanea grimesiana* ssp. *obatae*
	Cyanea longiflora	*Cyanea longiflora*
		Cyanea pinnatifida
	Cyanea superba	*Cyanea superba*
		Cyperus pennatiformis
	Cyrtandra dentate	*Cyrtandra dentata*
	Delissea subcordata	*Delissea subcordata*
	Diellia falcate	*Diellia falcata*
		Diellia unisora

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Diplazium molokaiense
	Dubautia herbstobatae	*Dubautia herbstobatae*
	Eragrostis fosbergii	*Eragrostis fosbergii*
		Eugenia koolauensis
	Euphorbia haeleeleana	*Euphorbia haeleeleana*
	Flueggea neowawraea	*Flueggea neowawraea*
		Gardenia mannii
		Gouania meyenii
		Gouania vitifolia
	Hesperomannia arborescens	*Hesperomannia arborescens*
	Hesperomannia arbuscula	*Hesperomannia arbuscula*
	Hibiscus brackenridgei	*Hibiscus brackenridgei*
	Isodendrion laurifolium	*Isodendrion laurifolium*
	Isodendrion longifolium	*Isodendrion longifolium*
		Kadua coriacea
	Kadua degeneri	*Kadua degeneri*
		Kadua parvula
		Labordia cyrtandrae
	Lobelia niihauensis	*Lobelia niihauensis*
	Melanthera tenuifolia	*Melanthera tenuifolia*
	Melicope makahae	*Melicope makahae*
	Melicope pallida	*Melicope pallida*
		Melicope saint-johnii
	Neraudia angulate	*Neraudia angulata*
	Nototrichium humile	*Nototrichium humile*
		Phyllostegia hirsuta
	Phyllostegia kaalaensis	*Phyllostegia kaalaensis*
		Phyllostegia mollis
		Phyllostegia parviflora
		Plantago princeps
	Platydesma cornuta var. *decurrens*	*Platydesma cornuta* var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula mariversa
	Schiedea hookeri	*Schiedea hookeri*
	Schiedea kaalae	*Schiedea kaalae*
	Schiedea nuttallii	*Schiedea nuttallii*
	Schiedea obovata	*Schiedea obovata*
		Silene perlmanii
		Solanum sandwicense
		Stenogyne kanehoana
		Tetramolopium lepidotum ssp. *lepidotum*
		Urera kaalae
	Viola chamissoniana ssp. *Chamissoniana.*	*Viola chamissoniana* ssp. *chamissoniana*
Oahu—Lowland Mesic—Unit 2		
	Abutilon sandwicense	*Abutilon sandwicense*
	Alectryon macrococcus	*Alectryon macrococcus*
		Bonamia menziesii
	Cenchrus agrimonioides	*Cenchrus agrimonioides*
		Chamaesyce celastroides var. *kaenana*
	Chamaesyce herbstii	*Chamaesyce herbstii*
		Colubrina oppositifolia
		Ctenitis squamigera
		Cyanea acuminata
	Cyanea calycina	*Cyanea calycina*
		Cyanea grimesiana ssp. *grimesiana*
	Cyanea grimesiana ssp. *Obatae*	*Cyanea grimesiana* ssp. *obatae*
		Cyanea longiflora
		Cyanea pinnatifida
		Cyanea superba
		Cyperus pennatiformis
		Cyrtandra dentata
	Delissea subcordata	*Delissea subcordata*
	Diellia falcate	*Diellia falcata*
		Diellia unisora
		Diplazium molokaiense
		Dubautia herbstobatae
		Eragrostis fosbergii
		Eugenia koolauensis
		Euphorbia haeleeleana
		Flueggea neowawraea

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
	Gardenia mannii	*Gardenia mannii*
		Gouania meyenii
		Gouania vitifolia
		Hesperomannia arborescens
		Hesperomannia arbuscula
		Hibiscus brackenridgei
		Isodendrion laurifolium
		Isodendrion longifolium
		Kadua coriacea
		Kadua degeneri
		Kadua parvula
		Labordia cyrtandrae
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
		Melicope pallida
		Melicope saint-johnii
		Neraudia angulata
		Nototrichium humile
	Phyllostegia hirsute	*Phyllostegia hirsuta*
	Phyllostegia kaalaensis	*Phyllostegia kaalaensis*
	Phyllostegia mollis	*Phyllostegia mollis*
		Phyllostegia parviflora
		Plantago princeps
	Platydesma cornuta var. *decurrens*	*Platydesma cornuta* var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula mariversa
	Schiedea hookeri	*Schiedea hookeri*
	Schiedea kaalae	*Schiedea kaalae*
		Schiedea nuttallii
		Schiedea obovata
		Silene perlmanii
	Solanum sandwicense	*Solanum sandwicense*
	Stenogyne kanehoana	*Stenogyne kanehoana*
		Tetramolopium lepidotum ssp. *lepidotum*
	Urera kaalae	*Urera kaalae*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Lowland Mesic—Unit 3		
		Abutilon sandwicense
	Alectryon macrococcus	*Alectryon macrococcus*
		Bonamia menziesii
	Cenchrus agrimonioides	*Cenchrus agrimonioides*
		Chamaesyce celastroides var. *kaenana*
		Chamaesyce herbstii
		Colubrina oppositifolia
		Ctenitis squamigera
		Cyanea acuminata
		Cyanea calycina
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea grimesiana ssp. *obatae*
		Cyanea longiflora
		Cyanea pinnatifida
		Cyanea superba
		Cyperus pennatiformis
		Cyrtandra dentata
	Delissea subcordata	*Delissea subcordata*
	Diellia falcate	*Diellia falcata*
	Diellia unisora	*Diellia unisora*
		Diplazium molokaiense
		Dubautia herbstobatae
		Eragrostis fosbergii
		Eugenia koolauensis
		Euphorbia haeleeleana
		Flueggea neowawraea
		Gardenia mannii
		Gouania meyenii
		Gouania vitifolia
		Hesperomannia arborescens
	Hesperomannia arbuscula	*Hesperomannia arbuscula*
		Hibiscus brackenridgei
		Isodendrion laurifolium

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Isodendrion longifolium
		Kadua coriacea
		Kadua degeneri
		Kadua parvula
		Labordia cyrtandrae
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
		Melicope pallida
	Melicope saint-johnii	*Melicope saint-johnii*
		Neraudia angulata
		Nototrichium humile
		Phyllostegia hirsuta
		Phyllostegia kaalaensis
	Phyllostegia mollis	*Phyllostegia mollis*
	Phyllostegia parviflora	*Phyllostegia parviflora*
	Plantago princeps	*Plantago princeps*
		Platydesma cornuta var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula mariversa
		Schiedea hookeri
	Schiedea kaalae	*Schiedea kaalae*
		Schiedea nuttallii
		Schiedea obovata
	Silene perlmanii	*Silene perlmanii*
		Solanum sandwicense
		Stenogyne kanehoana
		Tetramolopium lepidotum ssp. *lepidotum*
	Urera kaalae	*Urera kaalae*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Lowland Mesic—Unit 4		
		Alectryon macrococcus
		Bonamia menziesii
		Chamaesyce celastroides var. *kaenana*
		Ctenitis squamigera
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea lanceolata
		Cyanea longiflora
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra polyantha
		Delissea subcordata
		Diellia erecta
		Diellia falcata
		Eugenia koolauensis
		Gardenia mannii
		Hesperomannia arborescens
		Isodendrion laurifolium
		Isodendrion longifolium
		Kadua coriacea
		Labordia cyrtandrae
		Lobelia monostachya
		Melicope lydgatei
		Melicope saint-johnii
		Phyllostegia hirsuta
		Phyllostegia mollis
		Phyllostegia parviflora
		Plantago princeps
		Pleomele forbesii
		Pteralyxia macrocarpa
		Schiedea kaalae
		Schiedea nuttallii
		Solanum sandwicense
		Tetraplasandra gymnocarpa
		Tetraplasandra lydgatei
Oahu—Lowland Mesic—Unit 5		
		Alectryon macrococcus
		Bonamia menziesii

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Chamaesyce celastroides var. *kaenana*
		Ctenitis squamigera
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea lanceolata
		Cyanea longiflora
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra polyantha
		Delissea subcordata
		Diellia erecta
		Diellia falcata
		Eugenia koolauensis
		Gardenia mannii
		Hesperomannia arborescens
		Isodendrion laurifolium
		Isodendrion longifolium
		Kadua coriacea
		Labordia cyrtandrae
		Lobelia monostachya
		Melicope lydgatei
		Melicope saint-johnii
		Phyllostegia hirsuta
		Phyllostegia mollis
		Phyllostegia parviflora
		Plantago princeps
		Pleomele forbesii
		Pteralyxia macrocarpa
		Schiedea kaalae
		Schiedea nuttallii
		Solanum sandwicense
		Tetraplasandra gymnocarpa
		Tetraplasandra lydgatei
Oahu—Lowland Mesic—Unit 6		
		Alectryon macrococcus
		Bonamia menziesii
		Chamaesyce celastroides var. *kaenana*
		Ctenitis squamigera
	Cyanea acuminate	*Cyanea acuminata*
		Cyanea calycina
	Cyanea crispa	*Cyanea crispa*
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea lanceolata
		Cyanea longiflora
	Cyanea truncate	*Cyanea truncata*
		Cyrtandra dentata
		Cyrtandra polyantha
		Delissea subcordata
		Diellia erecta
		Diellia falcata
		Eugenia koolauensis
	Gardenia mannii	*Gardenia mannii*
		Hesperomannia arborescens
		Isodendrion laurifolium
		Isodendrion longifolium
		Kadua coriacea
		Labordia cyrtandrae
		Lobelia monostachya
		Melicope lydgatei
		Melicope saint-johnii
		Phyllostegia hirsuta
		Phyllostegia mollis
		Phyllostegia parviflora
		Plantago princeps
		Pleomele forbesii
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
	Schiedea kaalae	*Schiedea kaalae*
		Schiedea nuttallii
		Solanum sandwicense
		Tetraplasandra gymnocarpa

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Tetraplasandra lydgatei
Oahu—Lowland Mesic—Unit 7		
		Alectryon macrococcus
	Bonamia menziesii	*Bonamia menziesii*
		Chamaesyce celastroides var. *kaenana*
		Ctenitis squamigera
	Cyanea acuminate	*Cyanea acuminata*
		Cyanea calycina
		Cyanea crispa
	Cyanea grimesiana ssp. *Grimesiana*	*Cyanea grimesiana* ssp. *grimesiana*
	Cyanea lanceolata	*Cyanea lanceolata*
		Cyanea longiflora
		Cyanea truncata
		Cyrtandra dentata
	Cyrtandra polyantha	*Cyrtandra polyantha*
		Delissea subcordata
	Diellia erecta	*Diellia erecta*
		Diellia falcata
		Eugenia koolauensis
		Gardenia mannii
		Hesperomannia arborescens
		Isodendrion laurifolium
		Isodendrion longifolium
		Kadua coriacea
		Labordia cyrtandrae
	Lobelia monostachya	*Lobelia monostachya*
		Melicope lydgatei
		Melicope saint-johnii
		Phyllostegia hirsuta
		Phyllostegia mollis
		Phyllostegia parviflora
		Plantago princeps
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Schiedea kaalae
		Schiedea nuttallii
		Solanum sandwicense
		Tetraplasandra gymnocarpa
	Tetraplasandra lydgatei	*Tetraplasandra lydgatei*
Oahu—Lowland Wet—Unit 1		
		Cyanea acuminata
		Cyanea calycina
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diplazium molokaiense
		Gardenia mannii
	Gouania vitifolia	*Gouania vitifolia*
		Hesperomannia arbuscula
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia oahuensis
		Phyllostegia hirsuta
		Phyllostegia mollis
		Plantago princeps
		Pteralyxia macrocarpa
	Schiedea hookeri	*Schiedea hookeri*
		Schiedea kaalae
	Urera kaalae	*Urera kaalae*
Oahu—Lowland Wet—Unit 2		
		Cyanea acuminata
		Cyanea calycina
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diplazium molokaiense
		Gardenia mannii
		Gouania vitifolia
		Hesperomannia arbuscula
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia oahuensis

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
	Phyllostegia hirsute	*Phyllostegia hirsuta*
	Phyllostegia mollis	*Phyllostegia mollis*
		Plantago princeps
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
	Urera kaalae	*Urera kaalae*
Oahu—Lowland Wet—Unit 3		
		Cyanea acuminata
		Cyanea calycina
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diplazium molokaiense
		Gardenia mannii
		Gouania vitifolia
		Hesperomannia arbuscula
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia oahuensis
	Phyllostegia hirsute	*Phyllostegia hirsuta*
	Phyllostegia mollis	*Phyllostegia mollis*
		Plantago princeps
		Pteralyxia macrocarpa
	Schiedea hookeri	*Schiedea hookeri*
		Schiedea kaalae
		Urera kaalae
Oahu—Lowland Wet—Unit 4		
		Cyanea acuminata
		Cyanea calycina
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diplazium molokaiense
		Gardenia mannii
		Gouania vitifolia
		Hesperomannia arbuscula
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia oahuensis
		Phyllostegia hirsuta
	Phyllostegia mollis	*Phyllostegia mollis*
		Plantago princeps
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
		Urera kaalae
Oahu—Lowland Wet—Unit 5		
		Cyanea acuminata
	Cyanea calycina	*Cyanea calycina*
		Cyanea grimesiana ssp. *grimesiana*
	Cyanea grimesiana ssp. *Obatae*	*Cyanea grimesiana* ssp. *obatae*
		Cyrtandra dentata
		Diplazium molokaiense
		Gardenia mannii
		Gouania vitifolia
	Hesperomannia arbuscula	*Hesperomannia arbuscula*
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia oahuensis
		Phyllostegia hirsuta
		Phyllostegia mollis
		Plantago princeps
		Pteralyxia macrocarpa
		Schiedea hookeri
	Schiedea kaalae	*Schiedea kaalae*
		Urera kaalae
Oahu—Lowland Wet—Unit 6		
		Adenophorus periens
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea humboldtiana
		Cyanea koolauensis
		Cyanea lanceolata
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra gracilis
		Cyrtandra kaulantha
		Cyrtandra polyantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Cyrtandra waiolani
		Gardenia mannii
	Hesperomannia arborescens	*Hesperomannia arborescens*
		Huperzia nutans
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
		Platydesma cornuta var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
		Sanicula purpurea
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 7		
		Adenophorus periens
	Chamaesyce rockii	*Chamaesyce rockii*
	Cyanea acuminate	*Cyanea acuminata*
	Cyanea calycina	*Cyanea calycina*
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
	Cyanea humboldtiana	*Cyanea humboldtiana*
		Cyanea koolauensis
		Cyanea lanceolata
	Cyanea purpurellifolia	*Cyanea purpurellifolia*
		Cyanea st.-johnii
	Cyanea truncate	*Cyanea truncata*
		Cyrtandra dentata
		Cyrtandra gracilis
		Cyrtandra kaulantha
		Cyrtandra polyantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
	Cyrtandra viridiflora	*Cyrtandra viridiflora*
		Cyrtandra waiolani
	Gardenia mannii	*Gardenia mannii*
	Hesperomannia arborescens	*Hesperomannia arborescens*
	Huperzia nutans	*Huperzia nutans*
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
	Myrsine juddii	*Myrsine juddii*
	Phyllostegia hirsute	*Phyllostegia hirsuta*
		Phyllostegia parviflora

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Plantago princeps
		Platanthera holochila
	Platydesma cornuta var. *cornuta*	*Platydesma cornuta* var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
	Pteris lidgatei	*Pteris lidgatei*
		Sanicula purpurea
	Tetraplasandra gymnocarpa	*Tetraplasandra gymnocarpa*
		Trematolobelia singularis
	Viola oahuensis	*Viola oahuensis*
	Zanthoxylum oahuense	*Zanthoxylum oahuense*
Oahu—Lowland Wet—Unit 8		
		Adenophorus periens
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea humboldtiana
		Cyanea koolauensis
		Cyanea lanceolata
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra gracilis
	Cyrtandra kaulantha	*Cyrtandra kaulantha*
		Cyrtandra polyantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Cyrtandra waiolani
		Gardenia mannii
		Hesperomannia arborescens
		Huperzia nutans
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
		Platydesma cornuta var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
		Sanicula purpurea
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 9		
		Adenophorus periens
	Chamaesyce rockii	*Chamaesyce rockii*
		Cyanea acuminata
	Cyanea calycina	*Cyanea calycina*
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
	Cyanea humboldtiana	*Cyanea humboldtiana*
	Cyanea koolauensis	*Cyanea koolauensis*
		Cyanea lanceolata
		Cyanea purpurellifolia
	Cyanea st.-johnii	*Cyanea st.-johnii*
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra gracilis
		Cyrtandra kaulantha
		Cyrtandra polyantha

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Cyrtandra sessilis
		Cyrtandra subumbellata
	Cyrtandra viridiflora	*Cyrtandra viridiflora*
		Cyrtandra waiolani
	Gardenia mannii	*Gardenia mannii*
	Hesperomannia arborescens	*Hesperomannia arborescens*
		Huperzia nutans
		Isodendrion longifolium
	Labordia cyrtandrae	*Labordia cyrtandrae*
		Lobelia gaudichaudii ssp. *koolauensis*
	Lobelia oahuensis	*Lobelia oahuensis*
	Melicope hiiakae	*Melicope hiiakae*
	Melicope lydgatei	*Melicope lydgatei*
		Myrsine juddii
	Phyllostegia hirsute	*Phyllostegia hirsuta*
	Phyllostegia parviflora	*Phyllostegia parviflora*
	Plantago princeps	*Plantago princeps*
		Platanthera holochila
	Platydesma cornuta var. *cornuta*	*Platydesma cornuta* var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
	Pteris lidgatei	*Pteris lidgatei*
		Sanicula purpurea
	Tetraplasandra gymnocarpa	*Tetraplasandra gymnocarpa*
		Trematolobelia singularis
	Viola oahuensis	*Viola oahuensis*
	Zanthoxylum oahuense	*Zanthoxylum oahuense*
Oahu—Lowland Wet—Unit 10		
		Adenophorus periens
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea humboldtiana
		Cyanea koolauensis
		Cyanea lanceolata
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra gracilis
		Cyrtandra kaulantha
		Cyrtandra polyantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Cyrtandra waiolani
		Gardenia mannii
		Hesperomannia arborescens
		Huperzia nutans
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
		Platydesma cornuta var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
		Sanicula purpurea
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 11		

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Adenophorus periens *Chamaesyce rockii* *Cyanea acuminata* *Cyanea calycina* *Cyanea crispa* *Cyanea grimesiana* ssp. *grimesiana* *Cyanea humboldtiana* *Cyanea koolauensis* *Cyanea lanceolata* *Cyanea purpurellifolia* *Cyanea st.-johnii* *Cyanea truncata* *Cyrtandra dentata* *Cyrtandra gracilis* *Cyrtandra kaulantha* *Cyrtandra polyantha* *Cyrtandra sessilis* *Cyrtandra subumbellata* *Cyrtandra viridiflora* *Cyrtandra waiolani* *Gardenia mannii* *Hesperomannia arborescens* *Huperzia nutans* *Isodendrion longifolium* *Labordia cyrtandrae* *Lobelia gaudichaudii* ssp. *koolauensis* *Lobelia oahuensis* *Melicope hiiakae* *Melicope lydgatei* *Myrsine juddii* *Phyllostegia hirsuta* *Phyllostegia parviflora* *Plantago princeps* *Platanthera holochila* *Platydesma cornuta* var. *cornuta* *Psychotria hexandra* ssp. *oahuensis* *Pteralyxia macrocarpa* *Pteris lidgatei* *Sanicula purpurea* *Tetraplasandra gymnocarpa* *Trematolobelia singularis* *Viola oahuensis* *Zanthoxylum oahuense*
Oahu—Lowland Wet—Unit 12		*Adenophorus periens* *Chamaesyce rockii* *Cyanea acuminata* *Cyanea calycina* *Cyanea crispa* *Cyanea grimesiana* ssp. *grimesiana* *Cyanea humboldtiana* *Cyanea koolauensis* *Cyanea lanceolata* *Cyanea purpurellifolia* *Cyanea st.-johnii* *Cyanea truncata* *Cyrtandra dentata* *Cyrtandra gracilis* *Cyrtandra kaulantha* *Cyrtandra polyantha* *Cyrtandra sessilis* *Cyrtandra subumbellata* *Cyrtandra viridiflora* *Cyrtandra waiolani* *Gardenia mannii* *Hesperomannia arborescens* *Huperzia nutans* *Isodendrion longifolium* *Labordia cyrtandrae* *Lobelia gaudichaudii* ssp. *koolauensis* *Lobelia oahuensis* *Melicope hiiakae*

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
		Platydesma cornuta var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
		Sanicula purpurea
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 13		
		Adenophorus periens
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea humboldtiana
		Cyanea koolauensis
		Cyanea lanceolata
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra dentata
		Cyrtandra gracilis
		Cyrtandra kaulantha
		Cyrtandra polyantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Cyrtandra waiolani
		Gardenia mannii
		Hesperomannia arborescens
		Huperzia nutans
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
		Platydesma cornuta var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
		Sanicula purpurea
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 14		
		Adenophorus periens
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
		Cyanea crispa
		Cyanea grimesiana ssp. *grimesiana*
		Cyanea humboldtiana
	Cyanea koolauensis	*Cyanea koolauensis*
		Cyanea lanceolata
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Cyrtandra dentata *Cyrtandra gracilis* *Cyrtandra kaulantha* *Cyrtandra polyantha* *Cyrtandra sessilis* *Cyrtandra subumbellata* *Cyrtandra viridiflora* *Cyrtandra waiolani* *Gardenia mannii* *Hesperomannia arborescens* *Huperzia nutans* *Isodendrion longifolium* *Labordia cyrtandrae* *Lobelia gaudichaudii* ssp. *koolauensis* *Lobelia oahuensis* *Melicope hiiakae* *Melicope lydgatei* *Myrsine juddii* *Phyllostegia hirsuta* *Phyllostegia parviflora* *Plantago princeps* *Platanthera holochila* *Platydesma cornuta* var. *cornuta* *Psychotria hexandra* ssp. *oahuensis* *Pteralyxia macrocarpa* *Pteris lidgatei* *Sanicula purpurea* *Tetraplasandra gymnocarpa* *Trematolobelia singularis* *Viola oahuensis* *Zanthoxylum oahuense*
Oahu—Lowland Wet—Unit 15	*Cyanea crispa*	*Adenophorus periens* *Chamaesyce rockii* *Cyanea acuminata* *Cyanea calycina* *Cyanea crispa* *Cyanea grimesiana* ssp. *grimesiana* *Cyanea humboldtiana* *Cyanea koolauensis* *Cyanea lanceolata* *Cyanea purpurellifolia* *Cyanea st.-johnii* *Cyanea truncata* *Cyrtandra dentata* *Cyrtandra gracilis* *Cyrtandra kaulantha* *Cyrtandra polyantha* *Cyrtandra sessilis* *Cyrtandra subumbellata* *Cyrtandra viridiflora* *Cyrtandra waiolani* *Gardenia mannii* *Hesperomannia arborescens* *Huperzia nutans* *Isodendrion longifolium* *Labordia cyrtandrae* *Lobelia gaudichaudii* ssp. *koolauensis* *Lobelia oahuensis* *Melicope hiiakae* *Melicope lydgatei* *Myrsine juddii* *Phyllostegia hirsuta* *Phyllostegia parviflora* *Plantago princeps* *Platanthera holochila* *Platydesma cornuta* var. *cornuta* *Psychotria hexandra* ssp. *oahuensis* *Pteralyxia macrocarpa* *Pteris lidgatei* *Sanicula purpurea* *Tetraplasandra gymnocarpa*

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Lowland Wet—Unit 16		
		Adenophorus periens
		Chamaesyce rockii
	Cyanea acuminate	*Cyanea acuminata*
	Cyanea calycina	*Cyanea calycina*
	Cyanea crispa	*Cyanea crispa*
		Cyanea grimesiana ssp. *grimesiana*
	Cyanea humboldtiana	*Cyanea humboldtiana*
	Cyanea koolauensis	*Cyanea koolauensis*
	Cyanea lanceolata	*Cyanea lanceolata*
		Cyanea purpurellifolia
	Cyanea st.-johnii	*Cyanea st.-johnii*
		Cyanea truncata
		Cyrtandra dentata
	Cyrtandra gracilis	*Cyrtandra gracilis*
		Cyrtandra kaulantha
	Cyrtandra polyantha	*Cyrtandra polyantha*
	Cyrtandra sessilis	*Cyrtandra sessilis*
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Cyrtandra waiolani
	Gardenia mannii	*Gardenia mannii*
	Hesperomannia arborescens	*Hesperomannia arborescens*
		Huperzia nutans
		Isodendrion longifolium
		Labordia cyrtandrae
		Lobelia gaudichaudii ssp. *koolauensis*
		Lobelia oahuensis
		Melicope hiiakae
		Melicope lydgatei
		Myrsine juddii
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
		Platanthera holochila
	Platydesma cornuta var. *cornuta*	*Platydesma cornuta* var. *cornuta*
		Psychotria hexandra ssp. *oahuensis*
		Pteralyxia macrocarpa
		Pteris lidgatei
	Sanicula purpurea	*Sanicula purpurea*
	Tetraplasandra gymnocarpa	*Tetraplasandra gymnocarpa*
		Trematolobelia singularis
		Viola oahuensis
		Zanthoxylum oahuense
Oahu—Montane Wet—Unit 1		
		Alectryon macrococcus var. *macrococcus*
	Cyanea acuminate	*Cyanea acuminata*
	Cyanea calycina	*Cyanea calycina*
	Labordia cyrtandrae	*Labordia cyrtandrae*
		Lobelia oahuensis
	Melicope christophersenii	*Melicope christophersenii*
		Phyllostegia hirsuta
	Schiedea trinervis	*Schiedea trinervis*
Oahu—Dry Cliff—Unit 1		
		Abutilon sandwicense
		Achyranthes splendens var. *rotundata*
	Alectryon macrococcus	*Alectryon macrococcus*
		Bonamia menziesii
	Cenchrus agrimonioides	*Cenchrus agrimonioides*
	Chamaesyce herbstii	*Chamaesyce herbstii*
		Chamaesyce kuwaleana
	Cyanea grimesiana ssp. *Obatae*	*Cyanea grimesiana* ssp. *obatae*
	Cyrtandra dentate	*Cyrtandra dentata*
		Diellia falcata
		Diellia unisora
		Dubautia herbstobatae
		Eragrostis fosbergii
		Flueggea neowawraea

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium
	Kadua degeneri	*Kadua degeneri*
		Kadua parvula
		Korthalsella degeneri
		Lepidium arbuscula
		Lipochaeta lobata var. *leptophylla*
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
		Melicope saint-johnii
		Neraudia angulata
		Nototrichium humile
		Peucedanum sandwicense
		Phyllostegia kaalaensis
	Plantago princeps	*Plantago princeps*
		Platydesma cornuta var. *decurrens*
		Pleomele forbesii
		Pteralyxia macrocarpa
		Sanicula mariversa
		Schiedea hookeri
	Schiedea obovata	*Schiedea obovata*
		Schiedea trinervis
		Silene lanceolata
		Silene perlmanii
		Spermolepis hawaiiensis
		Tetramolopium filiforme
		Tetramolopium lepidotum ssp. *lepidotum*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 2		
	Abutilon sandwicense	*Abutilon sandwicense*
		Achyranthes splendens var. *rotundata*
	Alectryon macrococcus	*Alectryon macrococcus*
		Bonamia menziesii
		Cenchrus agrimonioides
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
		Diellia unisora
	Dubautia herbstobatae	*Dubautia herbstobatae*
		Eragrostis fosbergii
		Flueggea neowawraea
		Gouania meyenii
	Gouania vitifolia	*Gouania vitifolia*
		Isodendrion laurifolium
		Isodendrion pyrifolium
		Kadua degeneri
	Kadua parvula	*Kadua parvula*
		Korthalsella degeneri
	Lepidium arbuscula	*Lepidium arbuscula*
		Lipochaeta lobata var. *leptophylla*
	Lobelia niihauensis	*Lobelia niihauensis*
	Melanthera tenuifolia	*Melanthera tenuifolia*
	Melicope makahae	*Melicope makahae*
		Melicope saint-johnii
		Neraudia angulata
	Nototrichium humile	*Nototrichium humile*
	Peucedanum sandwicense	*Peucedanum sandwicense*
		Phyllostegia kaalaensis
		Plantago princeps
	Platydesma cornuta var. *decurrens*	*Platydesma cornuta* var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
		Pteralyxia macrocarpa
	Sanicula mariversa	*Sanicula mariversa*
	Schiedea hookeri	*Schiedea hookeri*
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Silene perlmanii
		Spermolepis hawaiiensis
	Tetramolopium filiforme	*Tetramolopium filiforme*
		Tetramolopium lepidotum ssp. *lepidotum*
	Viola chamissoniana ssp. *Chamissoniana.*	*Viola chamissoniana* ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 3		
	Abutilon sandwicense	*Abutilon sandwicense*
		Achyranthes splendens var. *rotundata*
	Alectryon macrococcus	*Alectryon macrococcus*
	Bonamia menziesii	*Bonamia menziesii*
		Cenchrus agrimonioides
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
	Diellia falcate	*Diellia falcata*
		Diellia unisora
	Dubautia herbstobatae	*Dubautia herbstobatae*
	Eragrostis fosbergii	*Eragrostis fosbergii*
	Flueggea neowawraea	*Flueggea neowawraea*
	Gouania meyenii	*Gouania meyenii*
		Gouania vitifolia
	Isodendrion laurifolium	*Isodendrion laurifolium*
		Isodendrion pyrifolium
		Kadua degeneri
		Kadua parvula
	Korthalsella degeneri	*Korthalsella degeneri*
	Lepidium arbuscula	*Lepidium arbuscula*
	Lipochaeta lobata var. *leptophylla*	*Lipochaeta lobata* var. *leptophylla*
	Lobelia niihauensis	*Lobelia niihauensis*
	Melanthera tenuifolia	*Melanthera tenuifolia*
	Melicope makahae	*Melicope makahae*
		Melicope saint-johnii
	Neraudia angulate	*Neraudia angulata*
	Nototrichium humile	*Nototrichium humile*
	Peucedanum sandwicense	*Peucedanum sandwicense*
	Phyllostegia kaalaensis	*Phyllostegia kaalaensis*
		Plantago princeps
		Platydesma cornuta var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula mariversa
	Schiedea hookeri	*Schiedea hookeri*
		Schiedea obovata
		Schiedea trinervis
	Silene lanceolata	*Silene lanceolata*
		Silene perlmanii
		Spermolepis hawaiiensis
	Tetramolopium filiforme	*Tetramolopium filiforme*
		Tetramolopium lepidotum ssp. *lepidotum*
	Viola chamissoniana ssp. *Chamissoniana.*	*Viola chamissoniana* ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 4		
		Abutilon sandwicense
		Achyranthes splendens var. *rotundata*
	Alectryon macrococcus	*Alectryon macrococcus*
		Bonamia menziesii
		Cenchrus agrimonioides
		Chamaesyce herbstii
	Chamaesyce kuwaleana	*Chamaesyce kuwaleana*
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
		Diellia unisora
		Dubautia herbstobatae
		Eragrostis fosbergii
		Flueggea neowawraea
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Kadua degeneri
		Kadua parvula
		Korthalsella degeneri
		Lepidium arbuscula
		Lipochaeta lobata var. *leptophylla*
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
		Melicope saint-johnii
		Neraudia angulata
		Nototrichium humile
		Peucedanum sandwicense
		Phyllostegia kaalaensis
		Plantago princeps
		Platydesma cornuta var. *decurrens*
		Pleomele forbesii
		Pteralyxia macrocarpa
		Sanicula mariversa
		Schiedea hookeri
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata
		Silene perlmanii
	Spermolepis hawaiiensis	*Spermolepis hawaiiensis*
		Tetramolopium filiforme
		Tetramolopium lepidotum ssp. *lepidotum*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 6		
		Abutilon sandwicense
		Achyranthes splendens var. *rotundata*
		Alectryon macrococcus
		Bonamia menziesii
	Cenchrus agrimonioides	*Cenchrus agrimonioides*
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
	Diellia unisora	*Diellia unisora*
		Dubautia herbstobatae
		Eragrostis fosbergii
	Flueggea neowawraea	*Flueggea neowawraea*
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium
		Kadua degeneri
		Kadua parvula
		Korthalsella degeneri
	Lepidium arbuscula	*Lepidium arbuscula*
		Lipochaeta lobata var. *leptophylla*
	Lobelia niihauensis	*Lobelia niihauensis*
		Melanthera tenuifolia
		Melicope makahae
	Melicope saint-johnii	*Melicope saint-johnii*
	Neraudia angulate	*Neraudia angulata*
		Nototrichium humile
		Peucedanum sandwicense
		Phyllostegia kaalaensis
	Plantago princeps	*Plantago princeps*
		Platydesma cornuta var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula mariversa
		Schiedea hookeri
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata
		Silene perlmanii
		Spermolepis hawaiiensis
		Tetramolopium filiforme
	Tetramolopium lepidotum ssp. *Lepidotum.*	*Tetramolopium lepidotum* ssp. *lepidotum*

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 7a		
		Abutilon sandwicense
		Achyranthes splendens var. *rotundata*
		Alectryon macrococcus
		Bonamia menziesii
		Cenchrus agrimonioides
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
		Diellia unisora
		Dubautia herbstobatae
		Eragrostis fosbergii
	Flueggea neowawraea	*Flueggea neowawraea*
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium
		Kadua degeneri
	Kadua parvula	*Kadua parvula*
		Korthalsella degeneri
		Lepidium arbuscula
		Lipochaeta lobata var. *leptophylla*
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
	Melicope saint-johnii	*Melicope saint-johnii*
		Neraudia angulata
		Nototrichium humile
		Peucedanum sandwicense
		Phyllostegia kaalaensis
	Plantago princeps	*Plantago princeps*
	Platydesma cornuta var. *decurrens*	*Platydesma cornuta* var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
		Pteralyxia macrocarpa
		Sanicula mariversa
		Schiedea hookeri
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata
	Silene perlmanii	*Silene perlmanii*
		Spermolepis hawaiiensis
		Tetramolopium filiforme
		Tetramolopium lepidotum ssp. *lepidotum*
	Viola chamissoniana ssp. *Chamissoniana.*	*Viola chamissoniana* ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 7b		
		Abutilon sandwicense
		Achyranthes splendens var. *rotundata*
		Alectryon macrococcus
		Bonamia menziesii
		Cenchrus agrimonioides
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
		Diellia unisora
		Dubautia herbstobatae
		Eragrostis fosbergii
		Flueggea neowawraea
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium
		Kadua degeneri
		Kadua parvula
		Korthalsella degeneri
		Lepidium arbuscula
		Lipochaeta lobata var. *leptophylla*

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Lobelia niihauensis
		Melanthera tenuifolia
		Melicope makahae
		Melicope saint-johnii
		Neraudia angulata
		Nototrichium humile
		Peucedanum sandwicense
		Phyllostegia kaalaensis
		Plantago princeps
		Platydesma cornuta var. *decurrens*
		Pleomele forbesii
		Pteralyxia macrocarpa
		Sanicula mariversa
		Schiedea hookeri
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata
		Silene perlmanii
		Spermolepis hawaiiensis
		Tetramolopium filiforme
		Tetramolopium lepidotum ssp. *lepidotum*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Dry Cliff—Unit 8		
	Abutilon sandwicense	*Abutilon sandwicense*
		Achyranthes splendens var. *rotundata*
		Alectryon macrococcus
	Bonamia menziesii	*Bonamia menziesii*
		Cenchrus agrimonioides
		Chamaesyce herbstii
		Chamaesyce kuwaleana
		Cyanea grimesiana ssp. *obatae*
		Cyrtandra dentata
		Diellia falcata
		Diellia unisora
		Dubautia herbstobatae
		Eragrostis fosbergii
	Flueggea neowawraea	*Flueggea neowawraea*
		Gouania meyenii
		Gouania vitifolia
		Isodendrion laurifolium
		Isodendrion pyrifolium
		Kadua degeneri
		Kadua parvula
		Korthalsella degeneri
		Lepidium arbuscula
		Lipochaeta lobata var. *leptophylla*
	Lobelia niihauensis	*Lobelia niihauensis*
		Melanthera tenuifolia
		Melicope makahae
		Melicope saint-johnii
	Neraudia angulate	*Neraudia angulata*
	Nototrichium humile	*Nototrichium humile*
		Peucedanum sandwicense
		Phyllostegia kaalaensis
		Plantago princeps
		Platydesma cornuta var. *decurrens*
	Pleomele forbesii	*Pleomele forbesii*
		Pteralyxia macrocarpa
		Sanicula mariversa
		Schiedea hookeri
		Schiedea obovata
		Schiedea trinervis
		Silene lanceolata
		Silene perlmanii
		Spermolepis hawaiiensis
		Tetramolopium filiforme
		Tetramolopium lepidotum ssp. *lepidotum*
		Viola chamissoniana ssp. *chamissoniana*
Oahu—Wet Cliff—Unit 1		
		Cyanea acuminata
	Cyanea calycina	*Cyanea calycina*
		Labordia cyrtandrae

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Lobelia oahuensis
	Melicope christophersenii	*Melicope christophersenii*
		Phyllostegia hirsuta
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
	Schiedea trinervis	*Schiedea trinervis*
Oahu—Wet Cliff—Unit 2		
		Cyanea acuminata
	Cyanea calycina	*Cyanea calycina*
		Labordia cyrtandrae
		Lobelia oahuensis
	Melicope christophersenii	*Melicope christophersenii*
		Phyllostegia hirsuta
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
		Schiedea trinervis
Oahu—Wet Cliff—Unit 3		
		Cyanea acuminata
		Cyanea calycina
		Labordia cyrtandrae
		Lobelia oahuensis
		Melicope christophersenii
		Phyllostegia hirsuta
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
		Schiedea trinervis
Oahu—Wet Cliff—Unit 4		
		Cyanea acuminata
		Cyanea calycina
		Labordia cyrtandrae
		Lobelia oahuensis
		Melicope christophersenii
	Phyllostegia hirsute	*Phyllostegia hirsuta*
		Pteralyxia macrocarpa
	Schiedea hookeri	*Schiedea hookeri*
		Schiedea kaalae
		Schiedea trinervis
Oahu—Wet Cliff—Unit 5		
		Cyanea acuminata
		Cyanea calycina
		Labordia cyrtandrae
		Lobelia oahuensis
		Melicope christophersenii
		Phyllostegia hirsuta
		Pteralyxia macrocarpa
		Schiedea hookeri
		Schiedea kaalae
		Schiedea trinervis
Oahu—Wet Cliff—Unit 6		
		Adenophorus periens
		Chamaesyce deppeana
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
	Cyanea crispa	*Cyanea crispa*
		Cyanea humboldtiana
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra kaulantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
	Huperzia nutans	*Huperzia nutans*
		Labordia cyrtandrae
		Lobelia oahuensis
		Lysimachia filifolia
		Phyllostegia hirsuta
		Phyllostegia parviflora

(35) TABLE OF PROTECTED SPECIES WITHIN EACH CRITICAL HABITAT UNIT FOR OAHU—Continued

Unit name	Species occupied	Species unoccupied
		Plantago princeps
		Psychotria hexandra ssp. *oahuensis*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
		Sanicula purpurea
	Schiedea kaalae	*Schiedea kaalae*
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
Oahu—Wet Cliff—Unit 7		
		Adenophorus periens
		Chamaesyce deppeana
		Chamaesyce rockii
		Cyanea acuminata
		Cyanea calycina
	Cyanea crispa	*Cyanea crispa*
		Cyanea humboldtiana
		Cyanea purpurellifolia
		Cyanea st.-johnii
		Cyanea truncata
		Cyrtandra kaulantha
		Cyrtandra sessilis
		Cyrtandra subumbellata
		Cyrtandra viridiflora
		Huperzia nutans
		Labordia cyrtandrae
		Lobelia oahuensis
		Lysimachia filifolia
		Phyllostegia hirsuta
		Phyllostegia parviflora
		Plantago princeps
	Psychotria hexandra ssp. *Oahuensis*	*Psychotria hexandra* ssp. *oahuensis*
		Pteralyxia macrocarpa
		Sanicula purpurea
	Schiedea kaalae	*Schiedea kaalae*
		Tetraplasandra gymnocarpa
		Trematolobelia singularis
		Viola oahuensis
Oahu—Wet Cliff—Unit 8		
		Adenophorus periens
		Chamaesyce deppeana
		Chamaesyce rockii
	Cyanea acuminate	*Cyanea acuminata*
	Cyanea calycina	*Cyanea calycina*
		Cyanea crispa
	Cyanea humboldtiana	*Cyanea humboldtiana*
	Cyanea purpurellifolia	*Cyanea purpurellifolia*
	Cyanea st.-johnii	*Cyanea st.-johnii*
		Cyanea truncata
	Cyrtandra kaulantha	*Cyrtandra kaulantha*
	Cyrtandra sessilis	*Cyrtandra sessilis*
	Cyrtandra subumbellata	*Cyrtandra subumbellata*
	Cyrtandra viridiflora	*Cyrtandra viridiflora*
	Huperzia nutans	*Huperzia nutans*
	Labordia cyrtandrae	*Labordia cyrtandrae*
	Lobelia oahuensis	*Lobelia oahuensis*
	Lysimachia filifolia	*Lysimachia filifolia*
	Phyllostegia hirsute	*Phyllostegia hirsuta*
	Phyllostegia parviflora	*Phyllostegia parviflora*
	Plantago princeps	*Plantago princeps*
		Psychotria hexandra ssp. *oahuensis*
	Pteralyxia macrocarpa	*Pteralyxia macrocarpa*
	Sanicula purpurea	*Sanicula purpurea*
		Schiedea kaalae
	Tetraplasandra gymnocarpa	*Tetraplasandra gymnocarpa*
	Trematolobelia singularis	*Trematolobelia singularis*
	Viola oahuensis	*Viola oahuensis*

(j) *Plants on Oahu; Constituent elements.*

(1) *Flowering plants.*

FAMILY AMARANTHACEAE

Achyranthes splendens var. *rotundata* (round-leaved chaff flower)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Achyranthes splendens* var. *rotundata* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Nototrichium humile (KULUI)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Nototrichium humile* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY APIACEAE

Peucedanum sandwicense (MAKOU)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Peucedanum sandwicense* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Sanicula mariversa (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sanicula mariversa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Sanicula purpurea (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sanicula purpurea* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava, bogs.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Spermolepis hawaiiensis (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Spermolepis hawaiiensis* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical or biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY APOCYNACEAE

Pteralyxia macrocarpa (KAULU)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pteralyxia macrocarpa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY ARALIACEAE

Tetraplasandra gymnocarpa (OHE OHE)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetraplasandra gymnocarpa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Tetraplasandra lydgatei (NCN)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetraplasandra lydgatei* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

FAMILY ASPARAGACEAE

Pleomele forbesii (HALA PEPE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pleomele forbesii* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1 and Oahu—Lowland Dry—Unit 2, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY ASTERACEAE

Bidens amplectens (KOOKOOLAU)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Bidens amplectens* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2,

Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

Dubautia herbstobatae (NAENAE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Dubautia herbstobatae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Hesperomannia arborescens (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Hesperomannia arborescens* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—

Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Hesperomannia arbuscula (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Hesperomannia arbuscula* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Lipochaeta lobata var. *leptophylla* (NEHE)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lipochaeta lobata* var. *leptophylla* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Melanthera tenuifolia (NEHE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melanthera tenuifolia* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland

Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Tetramolopium filiforme (NCN)

Oahu–Dry Cliff–Unit 1, Oahu–Dry Cliff–Unit 2, Oahu–Dry Cliff–Unit 3, Oahu–Dry Cliff–Unit 4, Oahu–Dry Cliff–Unit 6, Oahu–Dry Cliff–Unit 7a, Oahu–Dry Cliff–Unit 7b, and Oahu–Dry Cliff–Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetramolopium filiforme* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Tetramolopium lepidotum ssp. *lepidotum* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Tetramolopium lepidotum* ssp. *lepidotum* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY BRASSICACEAE

Lepidium arbuscula (ANAUNAU)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Lepidium arbuscula on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY CAMPANULACEAE

Cyanea acuminata (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea acuminata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Ferns, Bryophytes, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea calycina (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea calycina* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea crispa (NCN)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea crispa* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea grimesiana ssp. *grimesiana* (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea grimesiana* ssp. *grimesiana* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Cyanea grimesiana ssp. *obatae* (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea grimesiana* ssp. *obatae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Cyanea humboldtiana (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea humboldtiana* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea koolauensis (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Cyanea lanceolata (HAHA)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea lanceolata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Cyanea longiflora (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea longiflora* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Cyanea pinnatifida (HAHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea pinnatifida* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Cyanea purpurellifolia (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea purpurellifolia* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical or biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea st.-johnii (HAHA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea st.-johnii* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyanea superba (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea superba* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Cyanea truncata (HAHA)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyanea truncata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Delissea subcordata (OHA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Delissea subcordata on Oahu. Within these

units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Lobelia gaudichaudii ssp. *koolauensis* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia gaudichaudii* ssp. *koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Lobelia monostachya (NCN)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia monostachya* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Lobelia niihauensis (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia niihauensis* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Psydrax*, *Pleomele*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Lobelia oahuensis (NCN)

Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lobelia oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: Alyxia, Cyrtandra, Dicranopteris, Diplazium, Machaerina, Microlepia.

(ii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: *Ferns*, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Trematolobelia singularis (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Trematolobelia singularis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland

Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical or biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY CARYOPHYLLACEAE

Schiedea hookeri (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea hookeri* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(v) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Schiedea kaalae (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea kaalae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Schiedea kealiae (MAOLIOLI)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Schiedea kealiae on Oahu.

(i) In unit Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

Schiedea nuttallii (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Schiedea nuttallii on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Schiedea obovata (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea obovata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Schiedea trinervis (NCN)

Oahu—Montane Wet—Unit 1, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Schiedea trinervis* on Oahu.

(i) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(iii) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Silene lanceolata (NCN)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Silene lanceolata on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Silene perlmanii (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2,

Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Silene perlmanii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical or biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY CONVOLVULACEAE

Bonamia menziesii (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Bonamia menziesii* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry

Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY CYPERACEAE

Cyperus pennatiformis (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyperus pennatiformis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Cyperus trachysanthos (PUUKAA)

Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyperus trachysanthos* on Oahu.

(i) In units Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; seasonal wetlands; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In unit Oahu—Lowland Dry—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava, seasonal wetlands.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

FAMILY EUPHORBIACEAE

Chamaesyce celastroides var. *kaenana* (AKOKO)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, Oahu—Coastal—Unit 15, Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce celastroides* var. *kaenana* on Oahu.

(i) In units Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(iii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Chamaesyce deppeana (AKOKO)

Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce deppeana* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(iv) Canopy: None.

(v) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(vi) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Chamaesyce herbstii (AKOKO)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce herbstii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry

Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Chamaesyce kuwaleana (AKOKO)

Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce kuwaleana* on Oahu.

(i) In units Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Chamaesyce rockii (AKOKO)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce rockii* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—

Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Chamaesyce skottsbergii var. *skottsbergii* (EWA PLAINS AKOKO)

Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Chamaesyce skottsbergii* var. *skottsbergii* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Less than 50 in (130 cm).

(iii) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(iv) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(v) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(vi) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(vii) Coral outcrop substrate.

Euphorbia haeleeleana (AKOKO)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Euphorbia haeleeleana* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Flueggea neowawraea (MEHAMEHAME)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Flueggea neowawraea* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY FABACEAE

Sesbania tomentosa (OHAI)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Sesbania tomentosa* on Oahu. Within these units, the physical and biological features of critical habitat are:

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

(ii) Annual precipitation: Less than 20 in (50 cm).

(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

Vigna o-wahuensis (NCN)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Vigna o-wahuensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

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

(ii) Annual precipitation: Less than 20 in (50 cm).

(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

FAMILY GENTIANACEAE

Centaurium sebaeoides (AWIWI)

Oahu—Coastal—Unit 1, Oahu—Coastal—Unit 2, Oahu—Coastal—Unit 3, Oahu—Coastal—Unit 4, Oahu—Coastal—Unit 5, Oahu—Coastal—Unit 6, Oahu—Coastal—Unit 7, Oahu—Coastal—Unit 8, Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 10, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, Oahu—Coastal—Unit 13, Oahu—Coastal—Unit 14, and Oahu—Coastal—Unit 15, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Centaurium sebaeoides* on Oahu. Within these units, the physical and biological features of critical habitat are:

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

(ii) Annual precipitation: Less than 20 in (50 cm).

(iii) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; ephemeral pools; mudflats.

(iv) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(v) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(vi) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

FAMILY GESNERIACEAE

Cyrtandra dentata (HAIWALE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra dentata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Cyrtandra gracilis (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland

Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra gracilis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Cyrtandra kaulantha (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra kaulantha* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyrtandra polyantha (HAIWALE)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra polyantha* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Cyrtandra sessilis (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra sessilis* Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils, lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyrtandra subumbellata (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra subumbellata* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyrtandra viridiflora (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra viridiflora* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Cyrtandra waiolani (HAIWALE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cyrtandra waiolani* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY LAMIACEAE

Phyllostegia hirsuta (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—

Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Phyllostegia hirsuta* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Phyllostegia kaalaensis (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—

Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for Phyllostegia kaalaensis on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Phyllostegia mollis (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Phyllostegia mollis* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Phyllostegia parviflora (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in

paragraph (i) of this section, constitute critical habitat for *Phyllostegia parviflora* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *lydgatei* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: Carex, Dicranopteris, Diplazium, Elaphoglossum, Peperomia.

(ii) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat for *Phyllostegia parviflora* var. *parviflora* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Stenogyne kanehoana (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Stenogyne kanehoana* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

FAMILY LOGANIACEAE

Labordia cyrtandrae (KAMAKAHALA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Labordia cyrtandrae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus Rhynchospora*, *Vaccinium*.

(iv) In units Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, Oahu—Wet Cliff—Unit 5, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY MALVACEAE

Abutilon sandwicense (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Abutilon sandwicense* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Hibiscus brackenridgei (MAO HAU HELE)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Plumbago*, *Sicyos*, *Sida*, *Waltheria*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Hibiscus brackenridgei* var. *mokuleianus* and *Hibiscus brackenridgei* var. *molokaiana* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

FAMILY MYRSINACEAE

Myrsine juddii (KOLEA)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—

Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Myrsine juddii* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY MYRTACEAE

Eugenia koolauensis (NIOI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Eugenia koolauensis* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

FAMILY ORCHIDACEAE

Platanthera holochila (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platanthera holochila* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs and bog hummocks.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY PLANTAGINACEAE

Plantago princeps (LAUKAHI KUAHIWI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Dry Cliff—Unit 8, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the

legal descriptions in paragraph (i) of this section, constitute critical habitat for *Plantago princeps* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Plantago princeps* var. *longibracteata* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(v) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat for *Plantago princeps* var. *princeps* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY POACEAE

Cenchrus agrimonioides (KAMANOMANO)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Cenchrus agrimonioides* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Eragrostis fosbergii (FOSBERG'S LOVE GRASS)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Eragrostis fosbergii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY PRIMULACEAE

Lysimachia filifolia (NCN)

Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Lysimachia filifolia* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(iv) Canopy: None.

(v) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(vi) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY RHAMNACEAE

Colubrina oppositifolia (KAUILA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Colubrina oppositifolia* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Gouania meyenii (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gouania meyenii* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 6, Oahu—Lowland Dry—Unit 7, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Gouania vitifolia (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gouania vitifolia* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(iv) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY RUBIACEAE

Gardenia mannii (NANU)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5,

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Gardenia mannii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Kadua coriacea (KIOELE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua coriacea* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Kadua degeneri (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua degeneri* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Kadua parvula (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Kadua parvula* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Psychotria hexandra ssp. *oahuensis* (KOPIKO)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Psychotria hexandra* ssp. *oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY RUTACEAE

Melicope christophersenii (ALANI)

Oahu—Montane Wet—Unit 1, Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope christophersenii* on Oahu.

(i) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(ii) In unit Oahu—Wet Cliff—Unit 1, Oahu—Wet Cliff—Unit 2, Oahu—Wet Cliff—Unit 3, Oahu—Wet Cliff—Unit 4, and Oahu—Wet Cliff—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

Melicope hiiakae (ALANI)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope hiiakae* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Melicope lydgatei (ALANI)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope lydgatei* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Melicope makahae (ALANI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope makahae* on Oahu.

(i) In units Oahu Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Melicope pallida (ALANI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope pallida* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Melicope saint-johnii (ALANI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Melicope saint-johnii* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Platydesma cornuta var. *cornuta* (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platydesma cornuta* var. *cornuta* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Platydesma cornuta var. *decurrens* (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Platydesma cornuta* var. *decurrens* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Zanthoxylum oahuense (AE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Zanthoxylum oahuense* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY SAPINDACEAE

Alectryon macrococcus (MAHOE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Montane Wet—Unit 1, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Alectryon macrococcus* var. *macrococcus* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In unit Oahu—Montane Wet—Unit 1, the physical and biological features of critical habitat are:

(A) Elevation: 3,300 to 6,600 ft (1,000 to 2,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Well-developed soils, montane bogs.

(D) Canopy: *Acacia*, *Charpentiera*, *Cheirodendron*, *Metrosideros*.

(E) Subcanopy: *Broussaisia*, *Cibotium*, *Eurya*, *Ilex*, *Myrsine*.

(F) Understory: Ferns, *Carex*, *Coprosma*, *Leptecophylla*, *Oreobolus*, *Rhynchospora*, *Vaccinium*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

FAMILY SOLANACEAE

Solanum sandwicense (POPOLO, AIAKEAKUA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Solanum sandwicense* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

FAMILY URTICACEAE

Neraudia angulata (NCN)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Neraudia angulata* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata are:*

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata* are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(iii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat for *Neraudia angulata* var. *angulata* and *Neraudia angulata* var. *dentata* are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Urera kaalae (OPUHE)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Urera kaalae* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY VIOLACEAE

Isodendrion laurifolium (AUPAKA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion laurifolium* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Isodendrion longifolium (AUPAKA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion longifolium* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, Oahu—Lowland Wet—Unit 5, Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

Isodendrion pyrifolium (WAHINE NOHO KULA)

Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, Oahu—Lowland Dry—Unit 11, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Isodendrion pyrifolium* on Oahu.

(i) In units Oahu—Lowland Dry—Unit 1, Oahu—Lowland Dry—Unit 2, Oahu—Lowland Dry—Unit 8, Oahu—Lowland Dry—Unit 9, Oahu—Lowland Dry—Unit 10, and Oahu—Lowland Dry—Unit 11, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit

7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Viola chamissoniana ssp. *chamissoniana* (PAMAKANI)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Viola chamissoniana* ssp. *chamissoniana* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Viola oahuensis (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Viola oahuensis* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY VISCACEAE

Korthalsella degeneri (HULUMOA)

Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Korthalsella degeneri* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Unrestricted.

(ii) Annual precipitation: Less than 75 in (190 cm).

(iii) Substrate: Greater than 65 degree slope, rocky talus.

(iv) Canopy: None.

(v) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(vi) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

(vii) Host plants *Sapindus oahuensis* and *Nestigis sandwicensis*.

(2) *Ferns and allies*.

FAMILY ADIANTACEAE

Pteris lidgatei (NCN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Pteris lidgatei* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Greater than 75 in (190 cm).

(iii) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(iv) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(v) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(vi) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY ASPLENIACEAE

Ctenitis squamigera (PAUOA)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Ctenitis squamigera* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Diellia erecta (ASPLENIUM–LEAVED DIELLIA)

Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia erecta* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: 50 to 75 in (130 to 190 cm).

(iii) Substrate: Shallow soils, little to no herbaceous layer.

(iv) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(v) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(vi) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

Diellia falcata (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, Oahu—Lowland Mesic—Unit 7, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia falcata* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Lowland Mesic—Unit 4, Oahu—Lowland Mesic—Unit 5, Oahu—Lowland Mesic—Unit 6, and Oahu—Lowland Mesic—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Diellia unisora (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—Lowland Mesic—Unit 3, Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diellia unisora* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Dry Cliff—Unit 1, Oahu—Dry Cliff—Unit 2, Oahu—Dry Cliff—Unit 3, Oahu—Dry Cliff—Unit 4, Oahu—Dry Cliff—Unit 6, Oahu—Dry Cliff—Unit 7a, Oahu—Dry Cliff—Unit 7b, and Oahu—Dry Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Less than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, rocky talus.

(D) Canopy: None.

(E) Subcanopy: *Antidesma*, *Chamaesyce*, *Diospyros*, *Dodonaea*.

(F) Understory: *Bidens*, *Eragrostis*, *Melanthera*, *Schiedea*.

Diplazium molokaiense (NCN)

Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, Oahu—

Lowland Mesic—Unit 3, Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Diplazium molokaiense* on Oahu.

(i) In units Oahu—Lowland Mesic—Unit 1, Oahu—Lowland Mesic—Unit 2, and Oahu—Lowland Mesic—Unit 3, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: 50 to 75 in (130 to 190 cm).

(C) Substrate: Shallow soils, little to no herbaceous layer.

(D) Canopy: *Acacia*, *Diospyros*, *Metrosideros*, *Myrsine*, *Pouteria*, *Santalum*.

(E) Subcanopy: *Dodonaea*, *Freycinetia*, *Leptecophylla*, *Melanthera*, *Osteomeles*, *Pleomele*, *Psydrax*.

(F) Understory: *Carex*, *Dicranopteris*, *Diplazium*, *Elaphoglossum*, *Peperomia*.

(ii) In units Oahu—Lowland Wet—Unit 1, Oahu—Lowland Wet—Unit 2, Oahu—Lowland Wet—Unit 3, Oahu—Lowland Wet—Unit 4, and Oahu—Lowland Wet—Unit 5, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

FAMILY GRAMMITIDACEAE

Adenophorus periens (PENDANT KIHI FERN)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Adenophorus periens* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: Bryophytes, Ferns, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY LYCOPODIACEAE

Huperzia nutans (WAWAEIOLE)

Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15,

Oahu—Lowland Wet—Unit 16, Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Huperzia nutans* on Oahu.

(i) In units Oahu—Lowland Wet—Unit 6, Oahu—Lowland Wet—Unit 7, Oahu—Lowland Wet—Unit 8, Oahu—Lowland Wet—Unit 9, Oahu—Lowland Wet—Unit 10, Oahu—Lowland Wet—Unit 11, Oahu—Lowland Wet—Unit 12, Oahu—Lowland Wet—Unit 13, Oahu—Lowland Wet—Unit 14, Oahu—Lowland Wet—Unit 15, and Oahu—Lowland Wet—Unit 16, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Clays; ashbeds; deep, well-drained soils; lowland bogs.

(D) Canopy: *Antidesma*, *Metrosideros*, *Myrsine*, *Pisonia*, *Psychotria*.

(E) Subcanopy: *Cibotium*, *Claoxylon*, *Kadua*, *Melicope*.

(F) Understory: *Alyxia*, *Cyrtandra*, *Dicranopteris*, *Diplazium*, *Machaerina*, *Microlepia*.

(ii) In units Oahu—Wet Cliff—Unit 6, Oahu—Wet Cliff—Unit 7, and Oahu—Wet Cliff—Unit 8, the physical and biological features of critical habitat are:

(A) Elevation: Unrestricted.

(B) Annual precipitation: Greater than 75 in (190 cm).

(C) Substrate: Greater than 65 degree slope, shallow soils, weathered lava.

(D) Canopy: None.

(E) Subcanopy: *Broussaisia*, *Cheirodendron*, *Leptecophylla*, *Metrosideros*.

(F) Understory: *Bryophytes*, *Ferns*, *Coprosma*, *Dubautia*, *Kadua*, *Peperomia*.

FAMILY MARSILEACEAE

Marsilea villosa (IHI IHI)

Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, Oahu—Coastal—Unit 12, and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Marsilea villosa* on Oahu.

(i) In units Oahu—Coastal—Unit 9, Oahu—Coastal—Unit 11, and Oahu—Coastal—Unit 12, the physical and biological features of critical habitat are:

(A) Elevation: Less than 980 ft (300 m).

(B) Annual precipitation: Less than 20 in (50 cm).

(C) Substrate: Well-drained, calcareous, talus slopes; weathered clay soils; seasonal wetlands; mudflats.

(D) Canopy: *Hibiscus*, *Myoporum*, *Santalum*, *Scaevola*.

(E) Subcanopy: *Gossypium*, *Sida*, *Vitex*.

(F) Understory: *Eragrostis*, *Jacquemontia*, *Lyceum*, *Nama*, *Sesuvium*, *Sporobolus*, *Vigna*.

(ii) In unit Oahu—Lowland Dry—Unit 7, the physical and biological features of critical habitat are:

(A) Elevation: Less than 3,300 ft (1,000 m).

(B) Annual precipitation: Less than 50 in (130 cm).

(C) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava, seasonal wetlands.

(D) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(E) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(F) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

FAMILY PTERIDACEAE

Doryopteris takeuchii (NCN)

Oahu—Lowland Dry—Unit 6 and Oahu—Lowland Dry—Unit 7, identified in the legal descriptions in paragraph (i) of this section, constitute critical habitat for *Doryopteris takeuchii* on Oahu. Within these units, the physical and biological features of critical habitat are:

(i) Elevation: Less than 3,300 ft (1,000 m).

(ii) Annual precipitation: Less than 50 in (130 cm).

(iii) Substrate: Weathered silty loams to stony clay, rocky ledges, little-weathered lava.

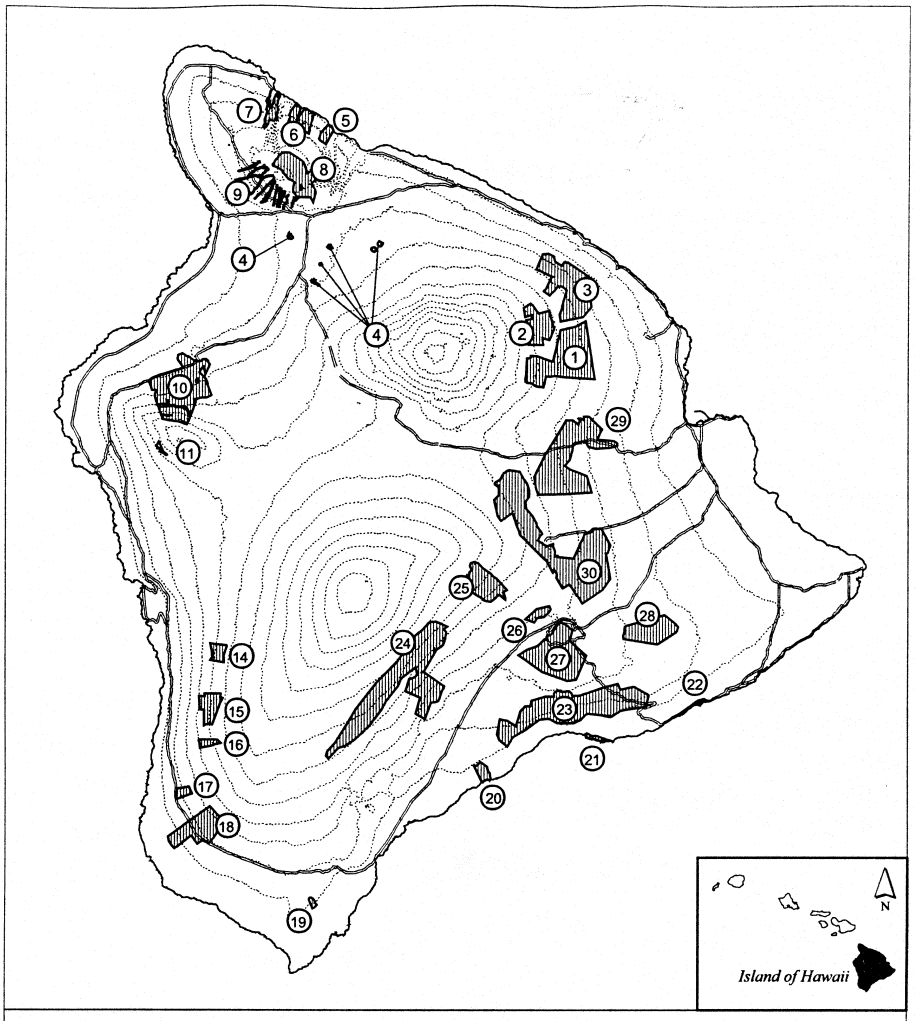
(iv) Canopy: *Diospyros*, *Myoporum*, *Pleomele*, *Santalum*, *Sapindus*.

(v) Subcanopy: *Chamaesyce*, *Dodonaea*, *Leptecophylla*, *Osteomeles*, *Psydrax*, *Scaevola*, *Wikstroemia*.

(vi) Understory: *Alyxia*, *Artemisia*, *Bidens*, *Chenopodium*, *Nephrolepis*, *Peperomia*, *Sicyos*.

(k) *Maps and critical habitat unit descriptions for the island of Hawaii, HI.* The following sections contain the legal descriptions of the critical habitat units designated for the island of Hawaii. Existing manmade features and structures within the boundaries of the mapped unit, such as buildings, roads, aqueducts and other water system features (including but not limited to pumping stations, irrigation ditches, pipelines, siphons, tunnels, water tanks, gaging stations, intakes, reservoirs, diversions, flumes, and wells; existing trails), campgrounds and their immediate surrounding landscaped area, scenic lookouts, remote helicopter landing sites, existing fences, telecommunications towers and associated structures and equipment, electrical power transmission lines and distribution and communication facilities and regularly maintained associated rights-of-way and access ways, radars, telemetry antennas, missile launch sites, arboreta and gardens, heiau (indigenous places of worship or shrines) and other archaeological sites, airports, other paved areas, and lawns and other rural residential landscaped areas do not contain the primary constituent elements described for each species in paragraph (l) of this section and therefore are not included in the critical habitat designations. Coordinates are in UTM Zone 5 with units in meters using North American Datum of 1983 (NAD83). The following map shows the general locations of the 99 critical habitat units designated on the island of Hawaii.

(1) NOTE: Map 1—Index map follows:



Map 1
Big Island Final Critical Habitat - Island Index Map

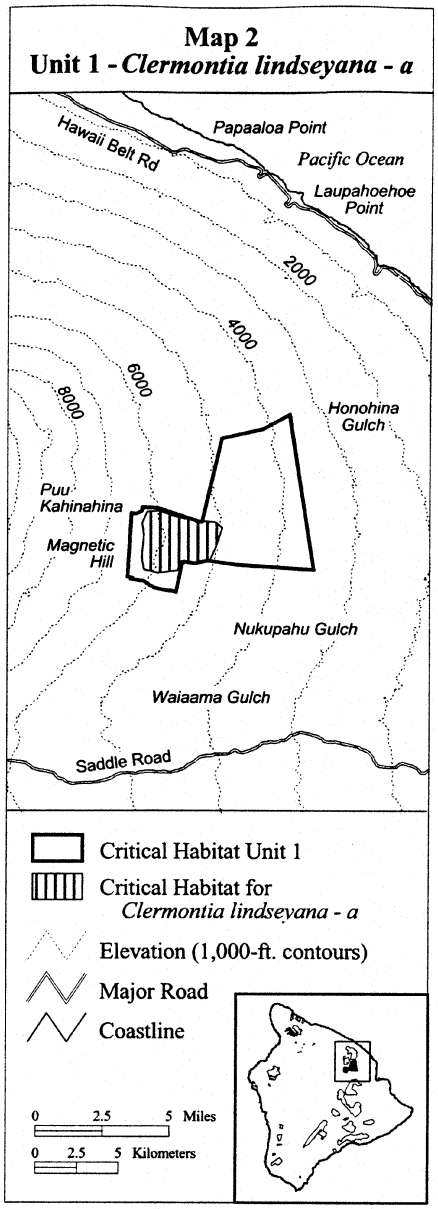
Final Big Island Critical Habitat Unit

Major Roads
Coastline
Elevation (500-ft. contours)

(2) Hawaii 1—*Clermontia lindseyana*—a (1,337 ha, 3,303 ac)

(i) Unit consists of the following 18 boundary points: Start at 259287, 2189980; 258514, 2190124; 258227, 2189531; 257076, 2189405; 256231, 2189611; 256096, 2190304; 256159, 2190978; 256258, 2191715; 256132, 2192452; 256438, 2193135; 257202, 2193171; 258074, 2192865; 259566, 2192515; 260015, 2192551; 260564, 2192488; 260937, 2192137; 260600, 2191095; 260195, 2190187; return to starting point.

(ii) NOTE: Map 2 follows:

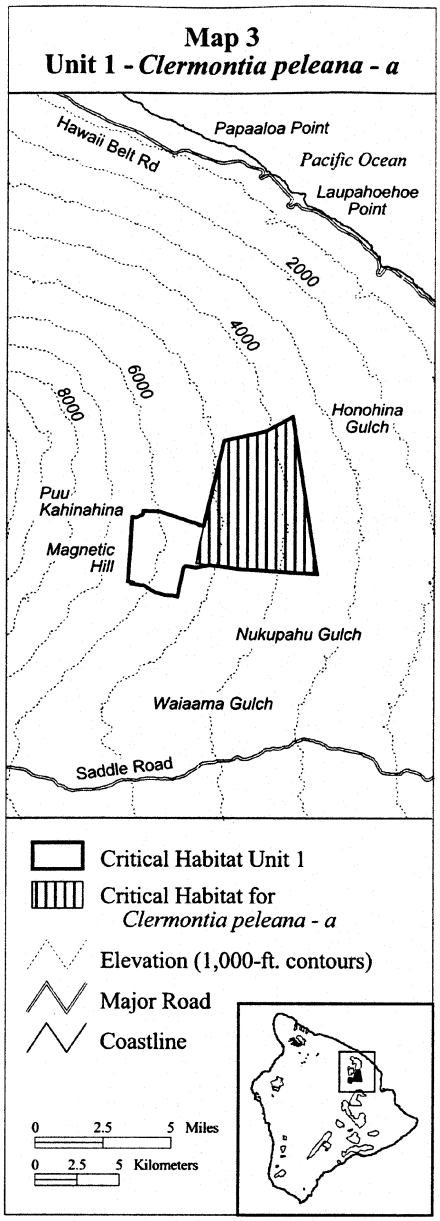


(3) Hawaii 1—*Clermontia peleana*—a (4,704 ha, 11,624 ac)

(i) Unit consists of the following seven boundary points: Start at 261799, 2189905; 259290, 2190265; 259437, 2191186; 260905, 2197592; 263380, 2198183; 264962,

2199047; 266443, 2189598; return to starting point.

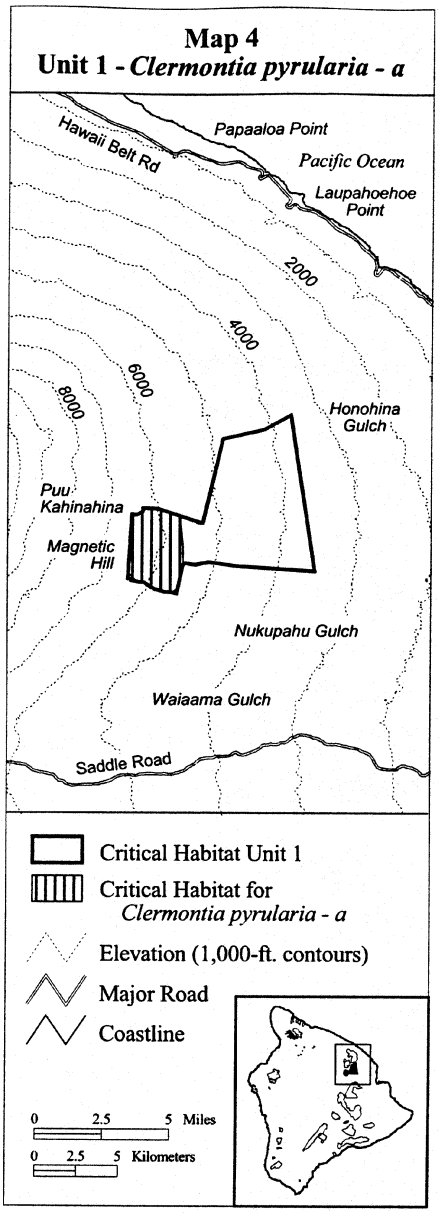
(ii) NOTE: Map 3 follows:



(4) Hawaii 1—*Clermontia pyrularia*—a (1,378 ha, 3,405 ac)

(i) Unit consists of the following 21 boundary points: Start at 258551, 2191038; 258529, 2189991; 258210, 2188565; 257890, 2188331; 257487, 2188365; 256896, 2188490; 256215, 2188925; 255931, 2188918; 255675, 2189060; 255456, 2189333; 255283, 2189470; 255306, 2189929; 255346, 2190140; 255408, 2190618; 255387, 2191557; 255496, 2193031; 255782, 2193009; 256122, 2193173; 256270, 2193339; 257054, 2193360; 258360, 2192915; return to starting point.

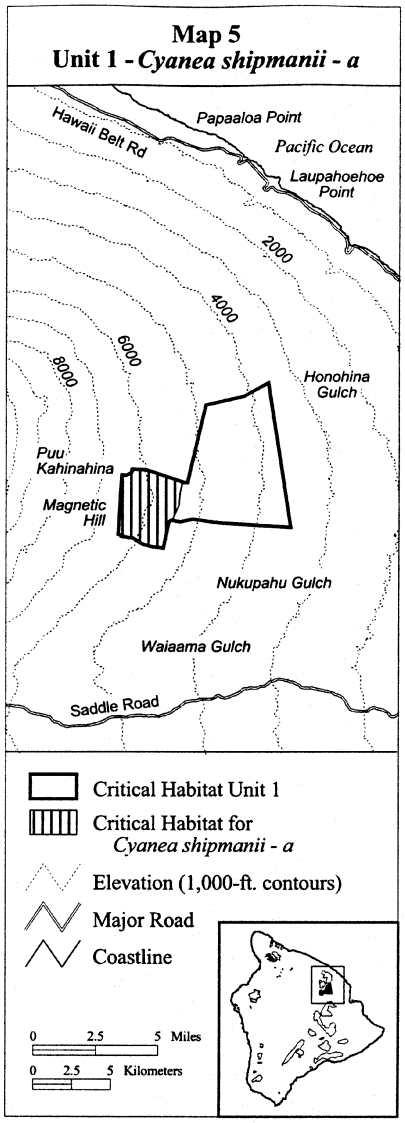
(ii) NOTE: Map 4 follows:



(5) Hawaii 1—*Cyanea shipmanii*—a (1,577 ha, 3,898 ac)

(i) Unit consists of the following 15 boundary points: Start at 258782, 2190167; 258548, 2189979; 258183, 2188260; 257434, 2188452; 256928, 2188480; 256188, 2188929; 255258, 2189156; 255505, 2193009; 255781, 2192991; 256152, 2193174; 256156, 2193377; 257053, 2193355; 259425, 2192593; 259263, 2191816; 259174, 2191010; return to starting point.

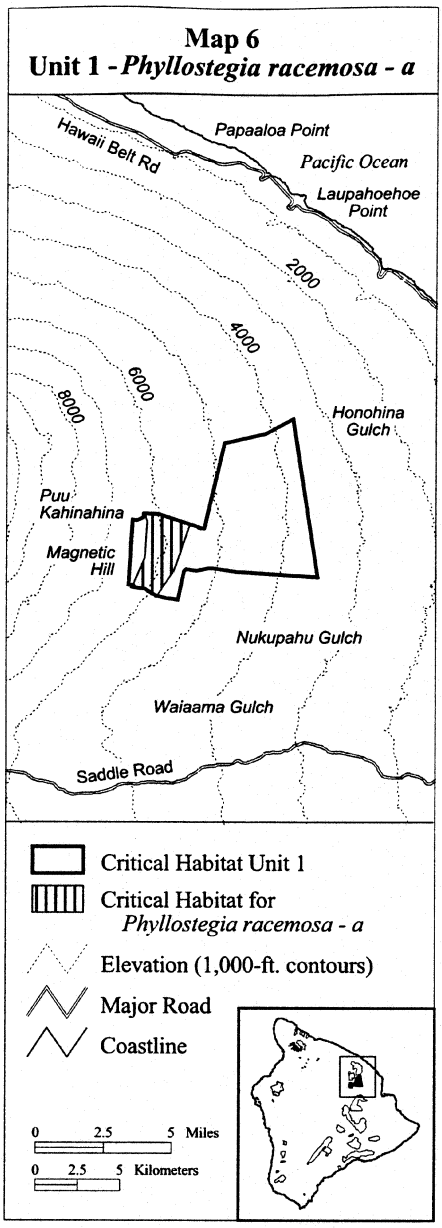
(ii) NOTE: Map 5 follows:



(6) Hawaii 1—*Phyllostegia racemosa*—a (938 ha, 2,317 ac)

(i) Unit consists of the following 14 boundary points: Start at 258101, 2190453; 257892, 2189913; 256913, 2188486; 256656, 2188640; 256222, 2188920; 255488, 2189023; 255638, 2189438; 256199, 2190746; 256201, 2190776; 256355, 2192927; 256193, 2193388; 257046, 2193366; 258868, 2192771; 258286, 2190933; return to starting point.

(ii) NOTE: Map 6 follows:

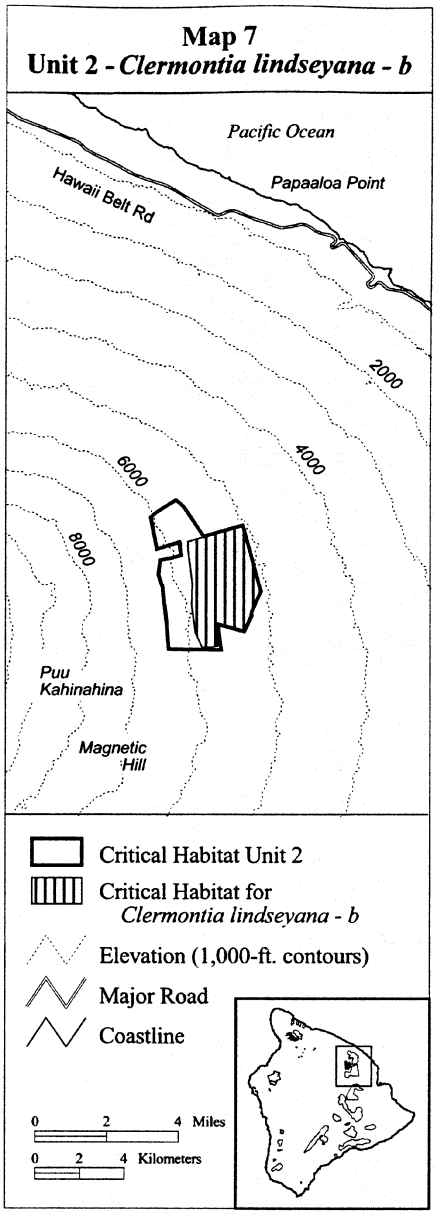


(7) Hawaii 2—*Clermontia lindseyana*—b (1,262 ha, 3,119 ac)

(i) Unit consists of the following 11 boundary points: Start at 257292, 2195256; 256959, 2195939; 256806, 2197162;

256815, 2198142; 256627, 2199661; 256609, 2200056; 259081, 2200802; 259908, 2197800; 259126, 2196047; 257939, 2196380; 257957, 2195319; return to starting point.

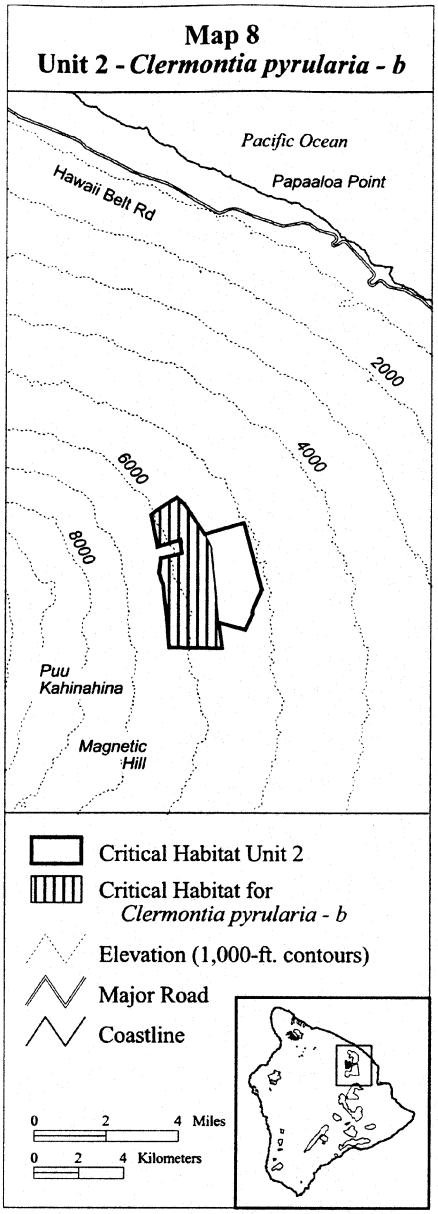
(ii) NOTE: Map 7 follows:



(8) Hawaii 2—*Clermontia pyrularia*—b (1,383 ha, 3,418 ac)

(i) Unit consists of the following 20 boundary points: Start at 255651, 2196455; 255597, 2196941; 255516, 2197725; 255512, 2197761; 255468, 2198050; 255421, 2198130; 255299, 2198552; 255372, 2199203; 256335, 2199414; 256242, 2200024; 255213, 2199704; 254946, 2201156; 255168, 2201360; 256079, 2201937; 256430, 2201672; 257336, 2200280; 257616, 2199751; 257968, 2196298; 258088, 2195186; 255745, 2195208; return to starting point.

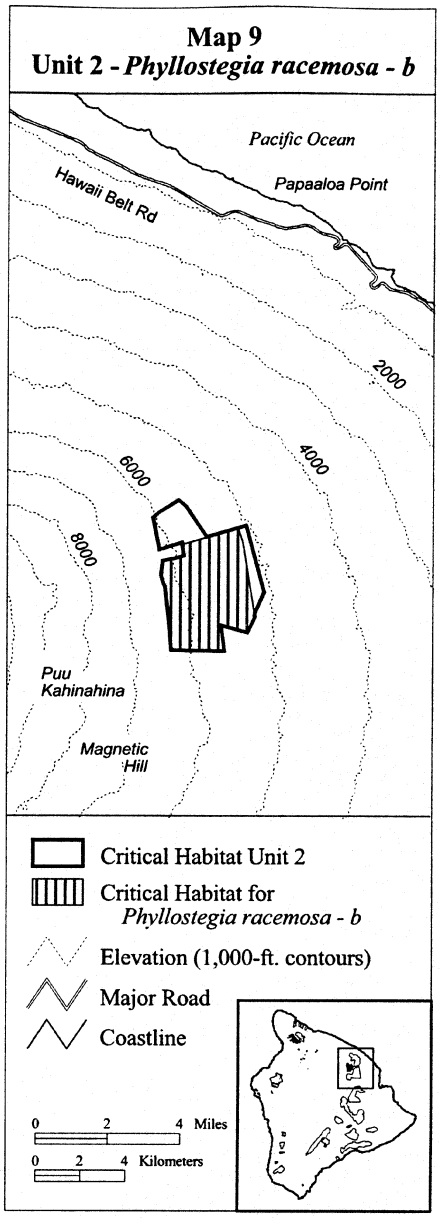
(ii) NOTE: Map 8 follows:



(9) Hawaii 2—*Phyllostegia racemosa*—b (1,683 ha, 4,158 ac)

(i) Unit consists of the following 13 boundary points: Start at 258723, 2200661; 258940, 2200060; 259480, 2196687; 259164, 2195977; 257990, 2196313; 258115, 2195161; 255794, 2195189; 255648, 2196936; 255554, 2197804; 255334, 2198495; 255397, 2199185; 256317, 2199426; 256234, 2199928; return to starting point.

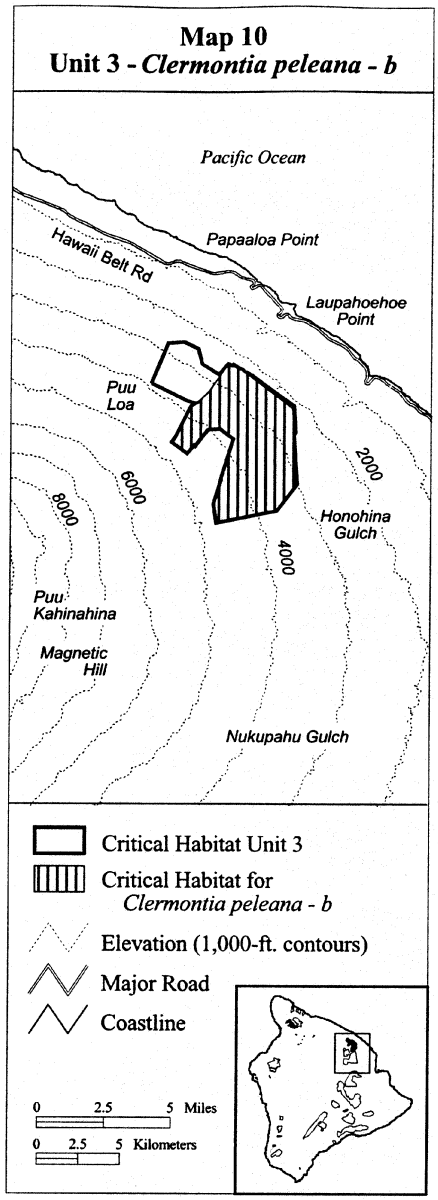
(ii) NOTE: Map 9 follows:



(10) Hawaii 3—*Clermontia peleana*—b (4,098 ha, 10,126 ac)

(i) Unit consists of the following 16 boundary points: Start at 265536, 2206014; 265870, 2201356; 264628, 2199741; 260958, 2198980; 260785, 2200155; 262026, 2204132; 261185, 2204813; 260398, 2204759; 259170, 2203211; 258222, 2203945; 258477, 2204289; 259386, 2206126; 259977, 2206520; 260443, 2206955; 261652, 2208710; 262533, 2208323; return to starting point.

(ii) NOTE: Map 10 follows:

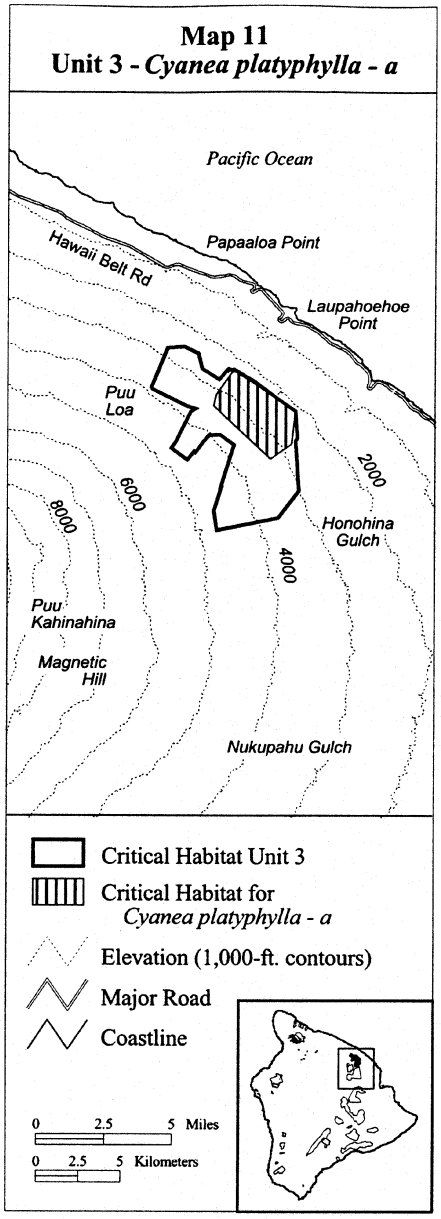


(11) Hawaii 3—*Cyanea platyphylla*—a (1,403 ha, 3,467 ac)

(i) Unit consists of the following eight boundary points: Start at 261936, 2208604; 263321, 2207740; 265617, 2206104; 265417, 2204172; 264174, 2203283; 260750,

2206482; 260875, 2207122; 261952, 2208637; return to starting point.

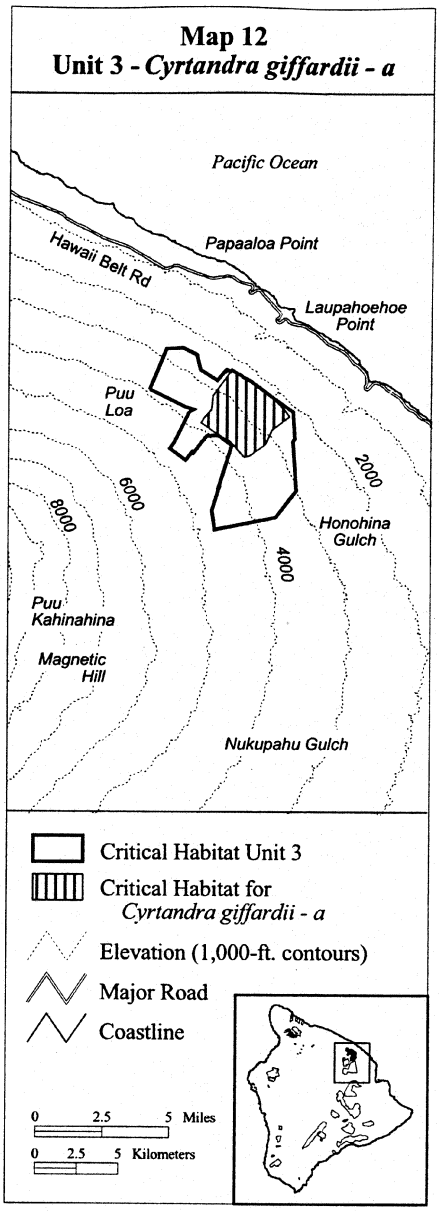
(ii) NOTE: Map 11 follows:



(12) Hawaii 3—*Cyrtandra giffardii*—a (1,510 ha, 3,731 ac)

(i) Unit consists of the following 22 boundary points: Start at 263977, 2204191; 263091, 2203511; 262736, 2203406; 261836, 2204431; 261358, 2204610; 261162, 2204774; 261114, 2204782; 260137, 2205484; 260269, 2205773; 260727, 2206307; 260808, 2207135; 261955, 2208667; 262335, 2208492; 262457, 2208405; 262682, 2208256; 262829, 2208171; 263062, 2208031; 264606, 2206914; 264702, 2206732; 265162, 2206251; 265443, 2205871; 264381, 2205051; return to starting point.

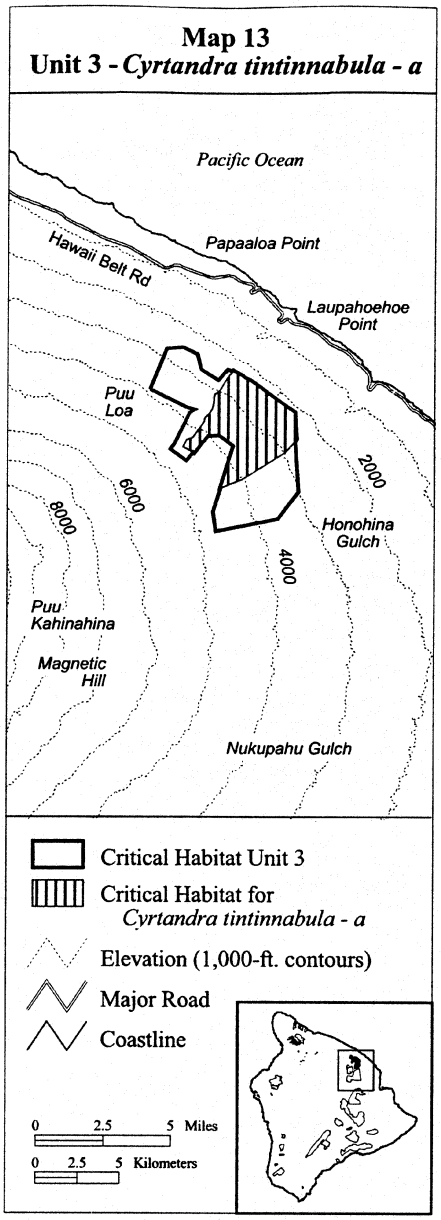
(ii) NOTE: Map 12 follows:



(13) Hawaii 3—*Cyrtandra tintinnabula*—a (2,322 ha, 5,738 ac)

(i) Unit consists of the following 30 boundary points: Start at 261996, 2208648; 262049, 2208624; 263522, 2207698; 265651, 2206158; 265754, 2204527; 265122, 2203759; 262570, 2202152; 261169, 2201554; 261944, 2204127; 261158, 2204766; 260467, 2204723; 260185, 2204367; 260136, 2204327; 260129, 2204298; 259641, 2203682; 259436, 2203822; 258995, 2204073; 259216, 2204499; 259562, 2204625; 259924, 2205129; 260239, 2205570; 260255, 2205790; 260539, 2206042; 260743, 2206373; 260822, 2206782; 260854, 2207176; 261184, 2207475; 261515, 2208026; 261720, 2208326; 261972, 2208593; return to starting point.

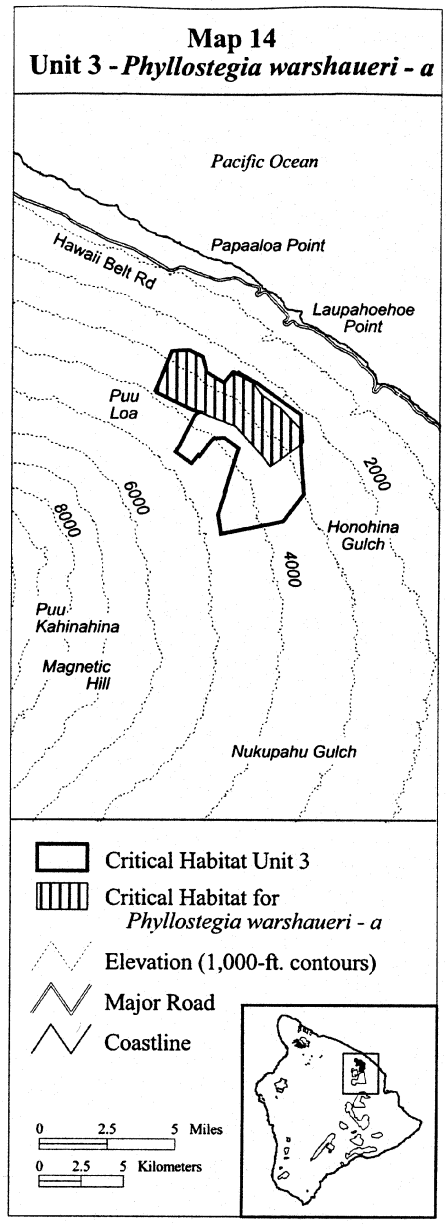
(ii) NOTE: Map 13 follows:



(14) Hawaii 3—*Phyllostegia warshaueri*—a (2,471 ha, 6,105 ac)

(i) Unit consists of the following 21 boundary points: Start at 257006, 2207522; 257019, 2207554; 257990, 2209960; 258969, 2210027; 258996, 2210030; 259000, 2210028; 259841, 2209621; 260070, 2208710; 261086, 2208085; 261545, 2208642; 262022, 2208476; 262839, 2208040; 263330, 2207359; 264502, 2206514; 265710, 2205217; 265744, 2204501; 265526, 2204234; 263864, 2203016; 263466, 2203598; 261804, 2205478; 259132, 2206487; return to starting point.

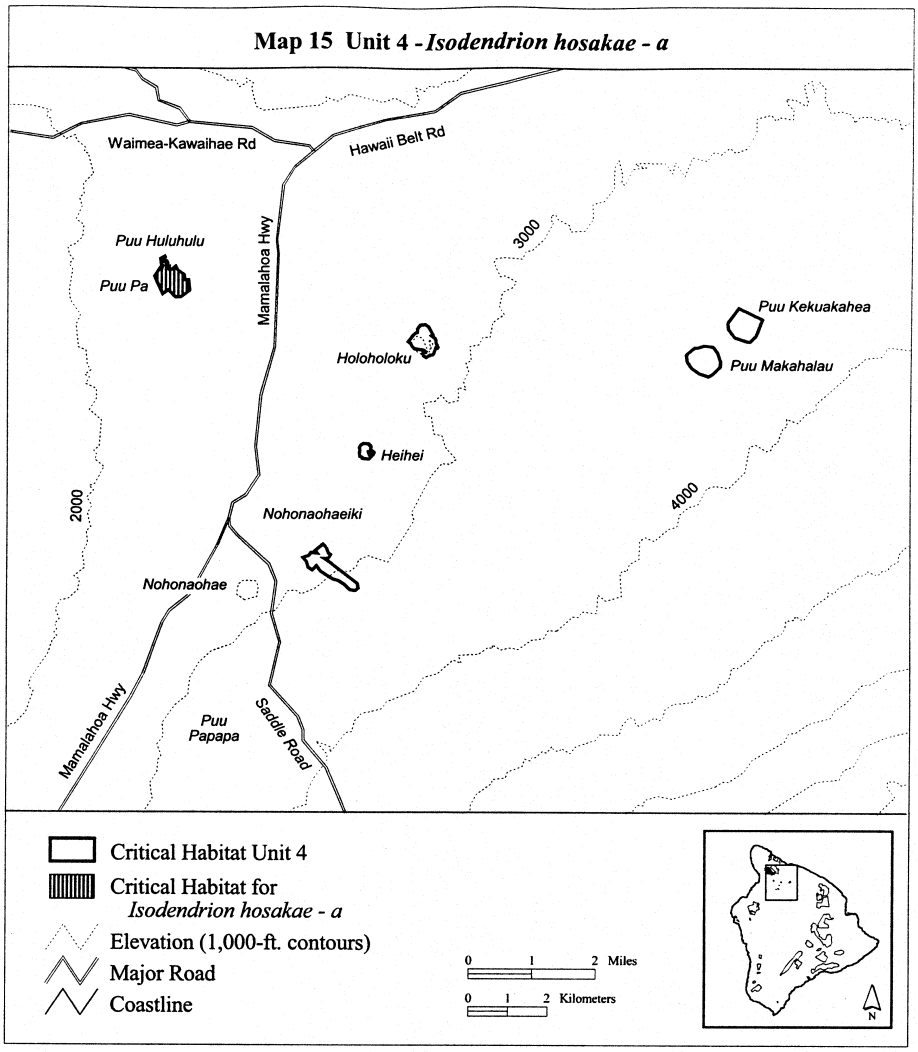
(ii) NOTE: Map 14 follows:



(15) Hawaii 4—*Isodendrion hosakae*—a (49 ha, 121 ac)

(i) Unit consists of the following 30 boundary points: Start at 216918, 2213235; 217016, 2213305; 217029, 2213274; 217005, 2213247; 217021, 2213158; 217073, 2213172; 217095, 2213120; 217071, 2213088; 217094, 2213045; 217129, 2213041; 217123, 2212977; 217141, 2212945; 217161, 2212966; 217207, 2212974; 217303, 2213051; 217353, 2212944; 217455, 2212885; 217511, 2212825; 217544, 2212704; 217624, 2212704; 217658, 2212443; 217423, 2212270; 217284, 2212268; 217105, 2212451; 216974, 2212346; 216772, 2212797; 216900, 2213009; 216946, 2212994; 216966, 2213060; 216928, 2213088; return to starting point.

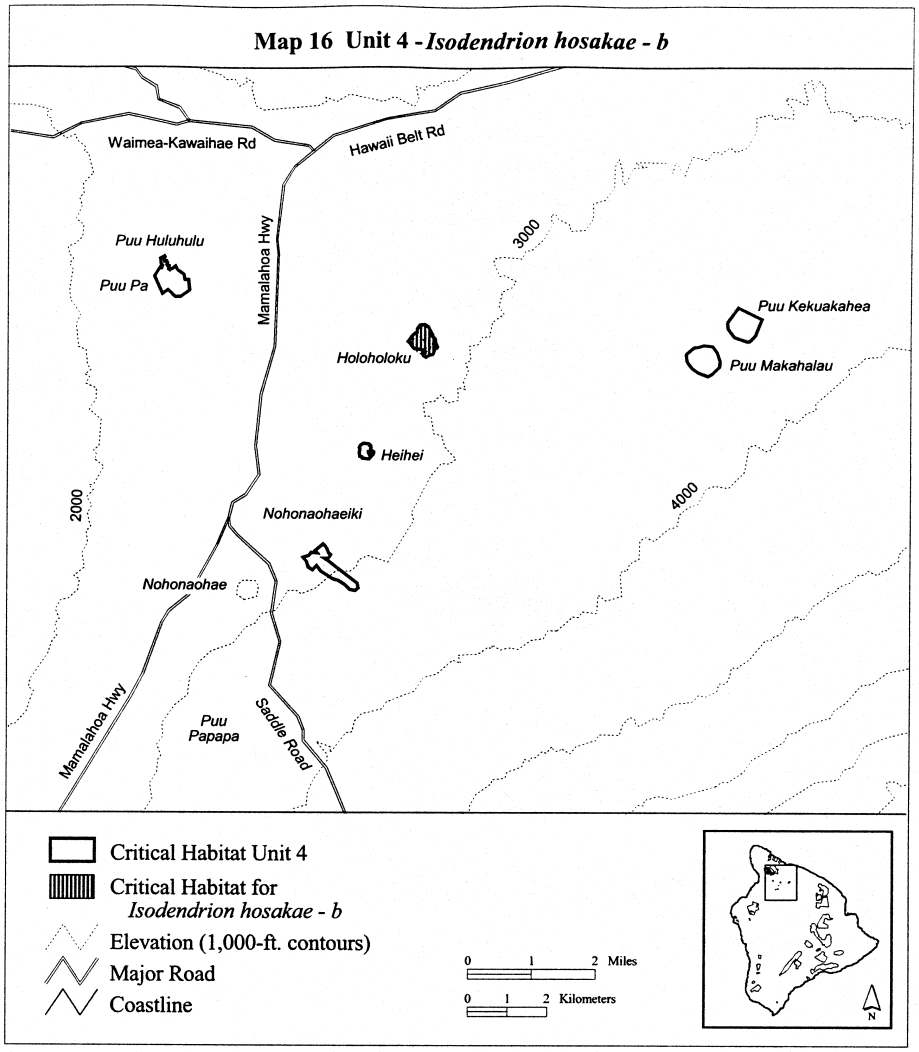
(ii) NOTE: Map 15 follows:



(16) Hawaii 4—*Isodendrion hosakae*—b (35 ha, 87 ac)

(i) Unit consists of the following 32 boundary points: Start at 223492, 2211567; 223608, 2211572; 223691, 2211528; 223727, 2211464; 223811, 2211316; 223763, 2211291; 223859, 2211232; 223887, 2211182; 223881, 2211116; 223938, 2211006; 223918, 2210977; 223876, 2210984; 223832, 2210851; 223809, 2210816; 223729, 2210799; 223636, 2210739; 223556, 2210796; 223552, 2210877; 223614, 2210869; 223630, 2210891; 223572, 2210924; 223506, 2210932; 223418, 2210946; 223338, 2210965; 223296, 2211003; 223244, 2211091; 223188, 2211145; 223294, 2211291; 223359, 2211352; 223406, 2211368; 223414, 2211415; 223415, 2211453; return to starting point.

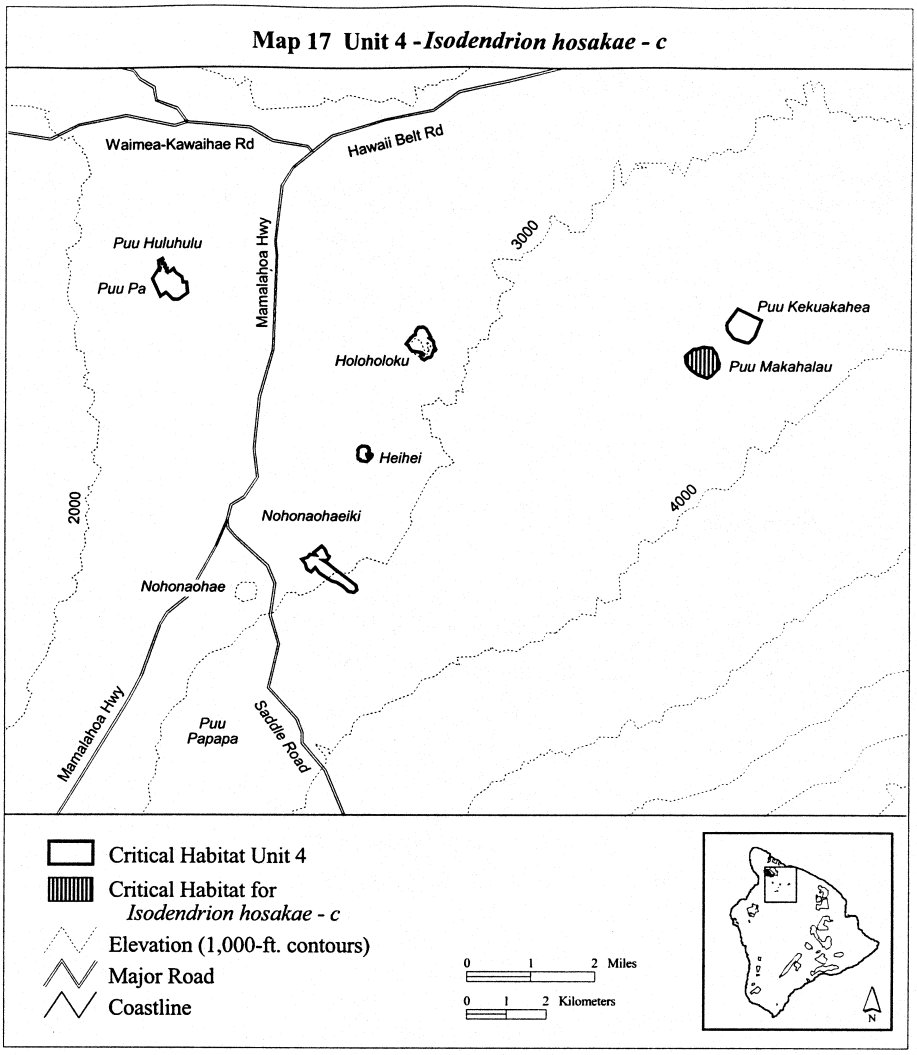
(ii) NOTE: Map 16 follows:



(17) Hawaii 4—*Isodendrion hosakae*—c (49 ha, 121 ac)

(i) Unit consists of the following 15 boundary points: Start at 230256, 2210857; 230438, 2210998; 230517, 2211001; 230682, 2211057; 230897, 2211021; 231011, 2210874; 231090, 2210642; 231078, 2210504; 230899, 2210322; 230783, 2210259; 230543, 2210360; 230357, 2210475; 230289, 2210576; 230244, 2210644; 230224, 2210817; return to starting point.

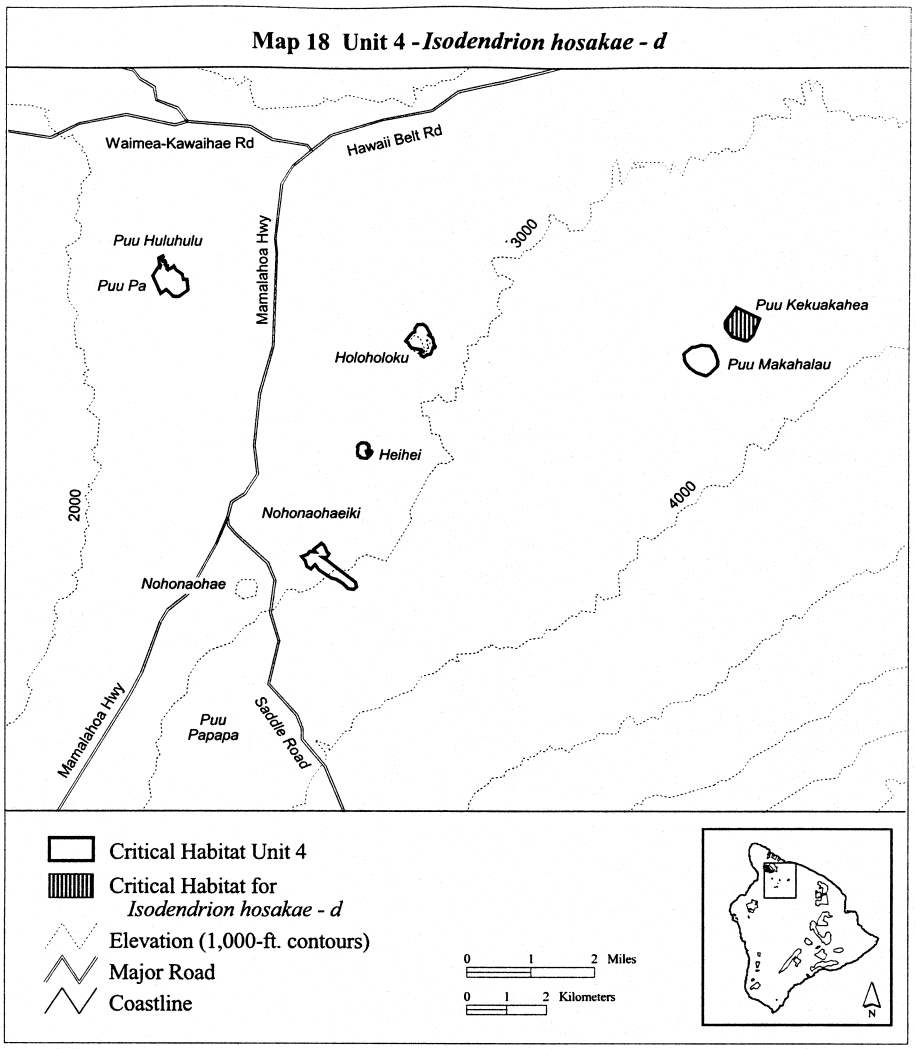
(ii) NOTE: Map 17 follows:



(18) Hawaii 4—*Isodendrion hosakae*—d (49 ha, 121 ac)

(i) Unit consists of the following nine boundary points: Start at 231266, 2211631; 231267, 2211631; 231537, 2212023; 232139, 2211722; 231979, 2211293; 231830, 2211149; 231774, 2211152; 231436, 2211271; 231277, 2211485; return to starting point.

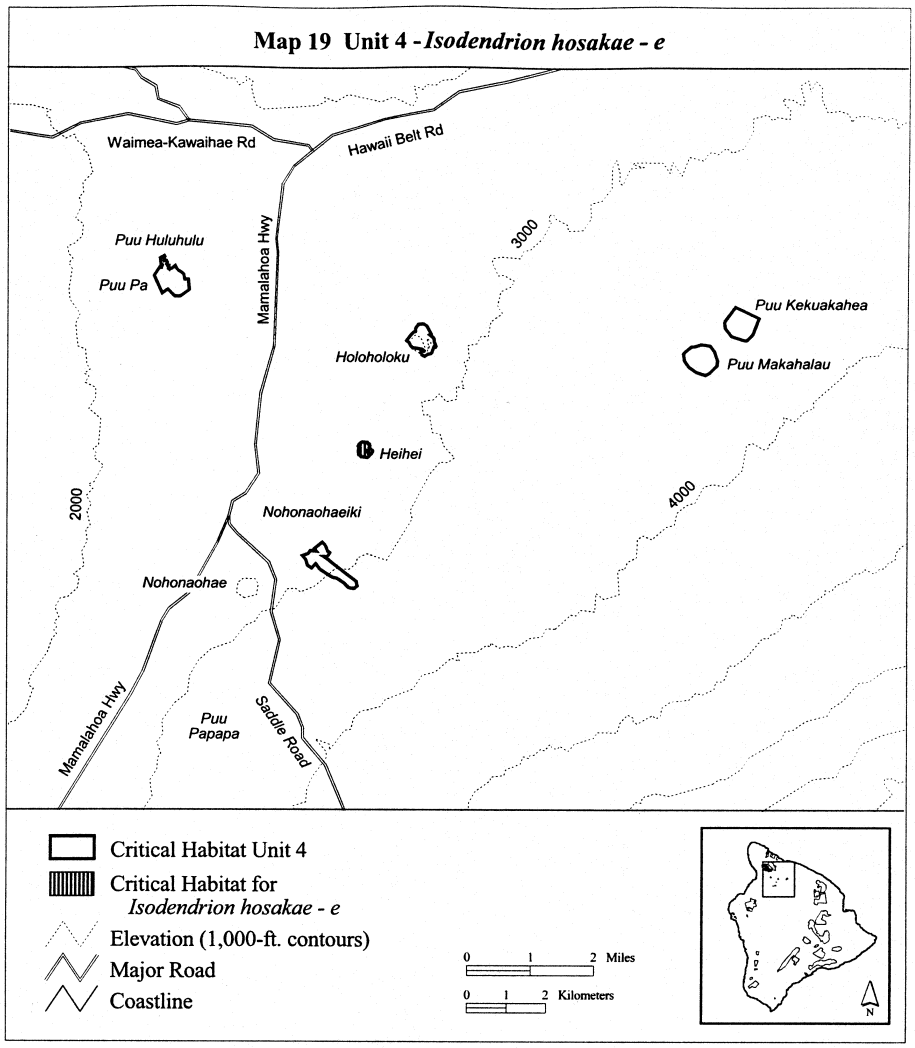
(ii) NOTE: Map 18 follows:



(19) Hawaii 4—*Isodendrion hosakae*—e (11 ha, 26 ac)

(i) Unit consists of the following 39 boundary points: Start at 222273, 2208478; 222265, 2208455; 222245, 2208415; 222245, 2208393; 222331, 2208332; 222330, 2208290; 222311, 2208248; 222279, 2208219; 222256, 2208215; 222254, 2208246; 222251, 2208259; 222230, 2208261; 222222, 2208286; 222213, 2208303; 222225, 2208306; 222227, 2208316; 222214, 2208320; 222209, 2208331; 222194, 2208337; 222189, 2208329; 222194, 2208324; 222202, 2208299; 222198, 2208283; 222219, 2208259; 222244, 2208216; 222238, 2208183; 222198, 2208149; 222045, 2208166; 222020, 2208212; 221971, 2208225; 221966, 2208306; 221969, 2208396; 221963, 2208440; 221988, 2208483; 222015, 2208509; 222077, 2208552; 222199, 2208535; 222218, 2208498; 222247, 2208498; return to starting point.

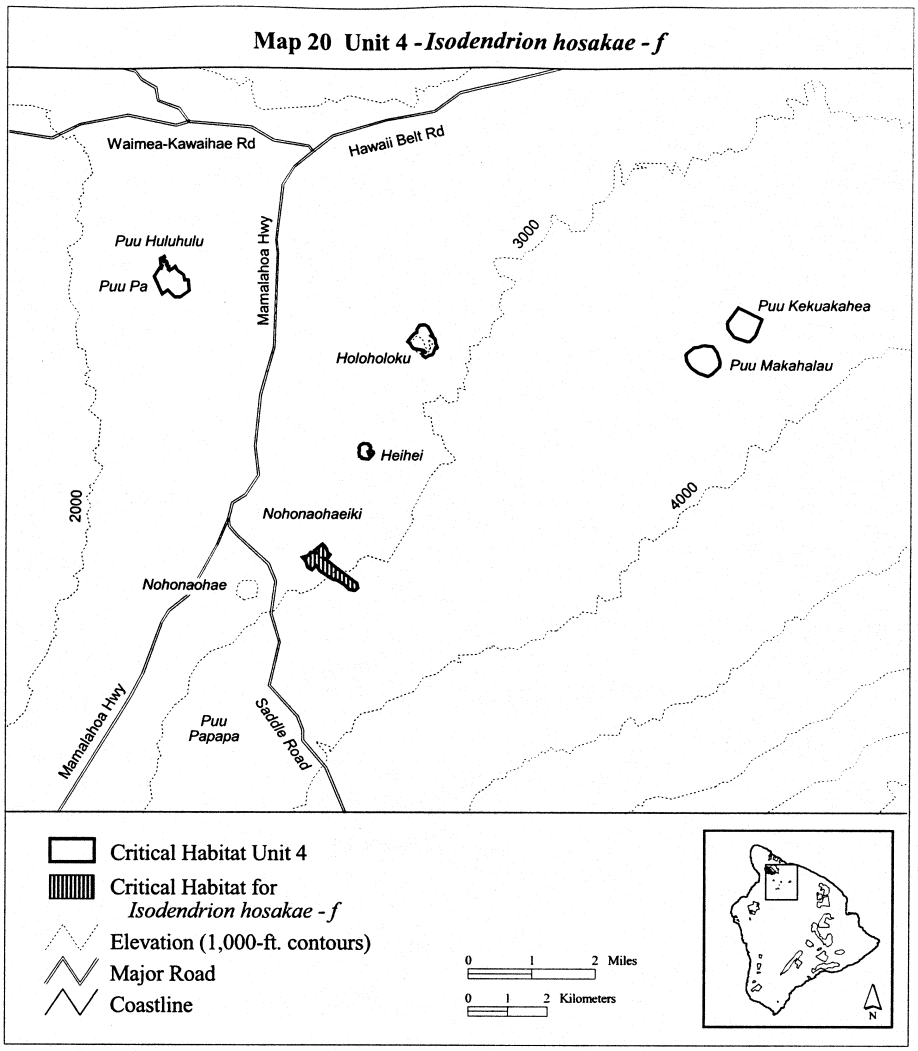
(ii) NOTE: Map 19 follows:



(20) Hawaii 4—*Isodendrion hosakae*—f (51 ha, 127 ac)

(i) Unit consists of the following 27 boundary points: Start at 221456, 2205056; 221315, 2205089; 220996, 2205294; 220895, 2205435; 220799, 2205324; 220680, 2205394; 220645, 2205535; 220550, 2205636; 220701, 2205687; 220754, 2205770; 220904, 2205756; 220861, 2205816; 221058, 2205989; 221139, 2205911; 221195, 2205756; 221253, 2205717; 221216, 2205641; 221179, 2205613; 221095, 2205611; 221197, 2205553; 221326, 2205451; 221675, 2205188; 221929, 2204996; 221948, 2204869; 221871, 2204802; 221737, 2204828; 221610, 2204957; return to starting point.

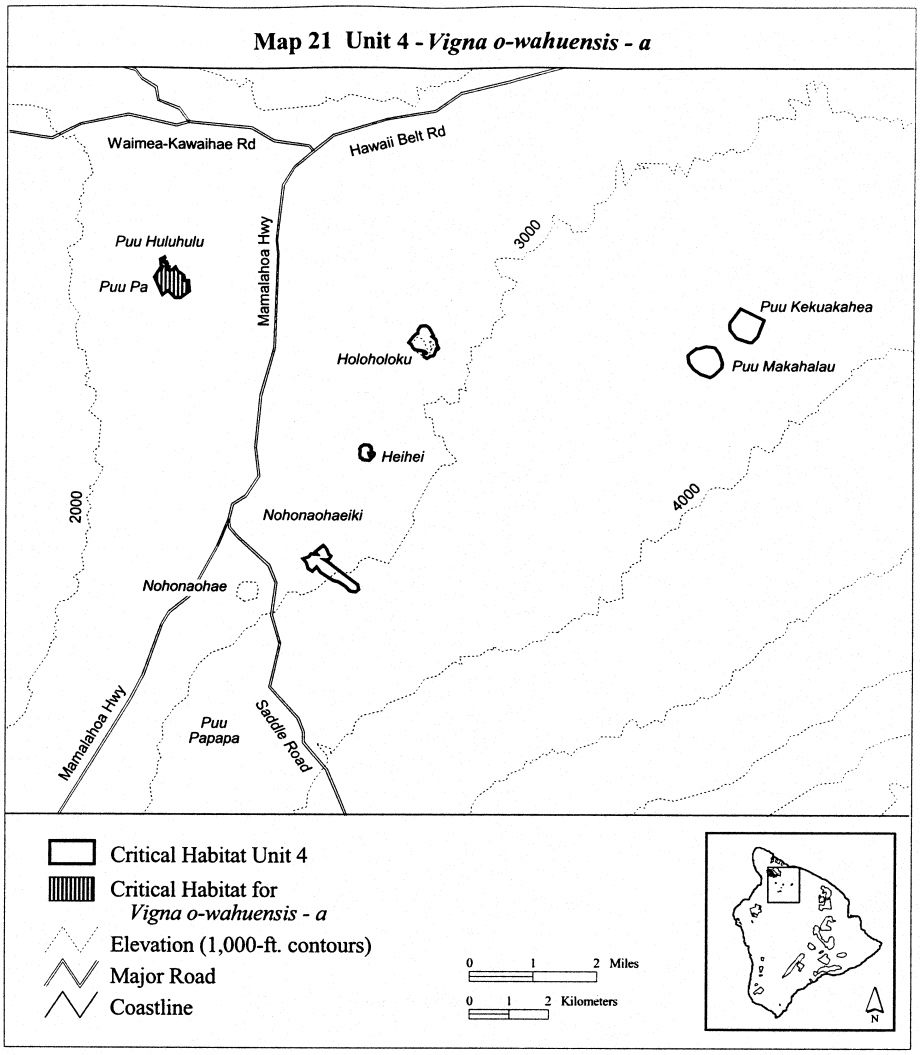
(ii) NOTE: Map 20 follows:



(21) Hawaii 4—*Vigna o-wahuensis*—a (49 ha, 121 ac)

(i) Unit consists of the following 30 boundary points: Start at 216918, 2213235; 217016, 2213305; 217029, 2213274; 217005, 2213247; 217021, 2213158; 217073, 2213172; 217095, 2213120; 217071, 2213088; 217094, 2213045; 217129, 2213041; 217123, 2212977; 217141, 2212945; 217161, 2212966; 217207, 2212974; 217303, 2213051; 217353, 2212944; 217455, 2212885; 217511, 2212825; 217544, 2212704; 217624, 2212704; 217658, 2212443; 217423, 2212270; 217284, 2212268; 217105, 2212451; 216974, 2212346; 216772, 2212797; 216900, 2213009; 216946, 2212994; 216966, 2213060; 216928, 2213088; return to starting point.

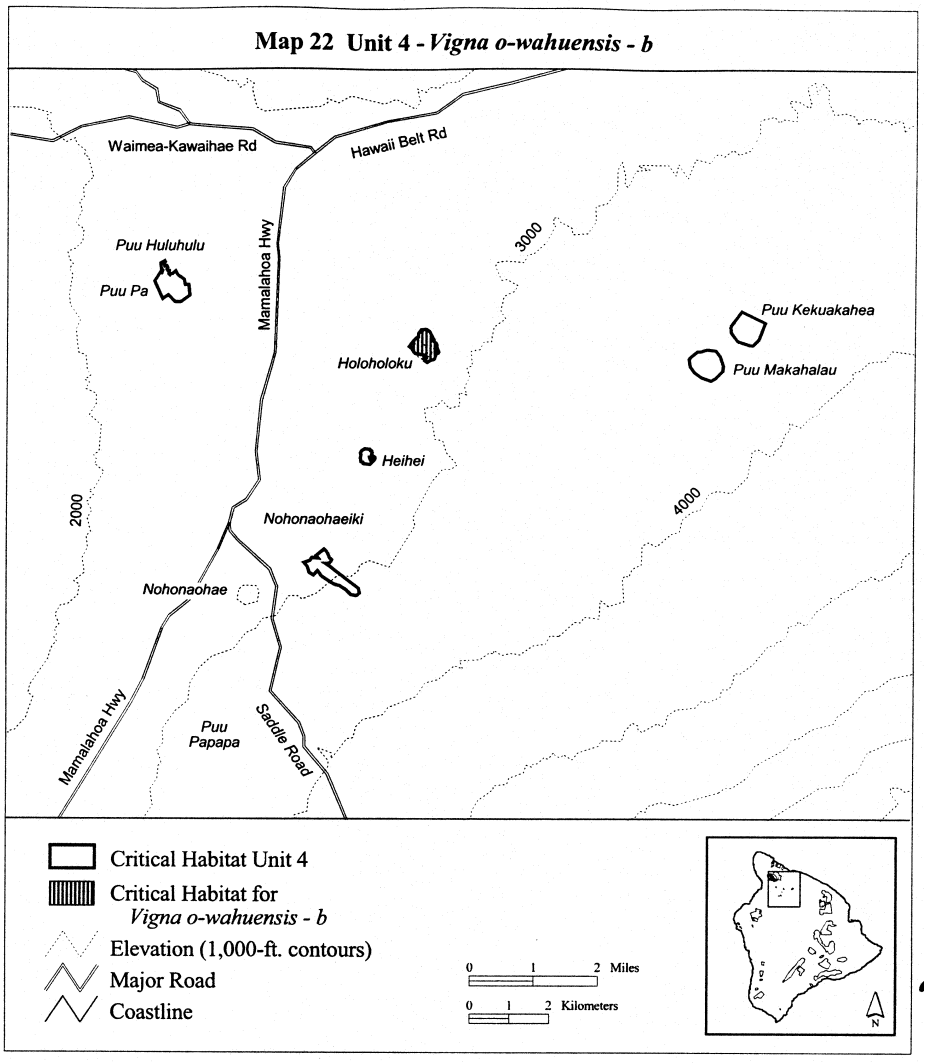
(ii) NOTE: Map 21 follows:



(22) Hawaii 4—*Vigna o-wahuensis*—b (35 ha, 87 ac)

(i) Unit consists of the following 32 boundary points: Start at 223492, 2211567; 223608, 2211572; 223691, 2211528; 223727, 2211464; 223811, 2211316; 223763, 2211291; 223859, 2211232; 223887, 2211182; 223881, 2211116; 223938, 2211006; 223918, 2210977; 223876, 2210984; 223832, 2210851; 223809, 2210816; 223729, 2210799; 223636, 2210739; 223556, 2210796; 223552, 2210877; 223614, 2210869; 223630, 2210891; 223572, 2210924; 223506, 2210932; 223418, 2210946; 223338, 2210965; 223296, 2211003; 223244, 2211091; 223188, 2211145; 223294, 2211291; 223359, 2211352; 223406, 2211368; 223414, 2211415; 223415, 2211453; return to starting point.

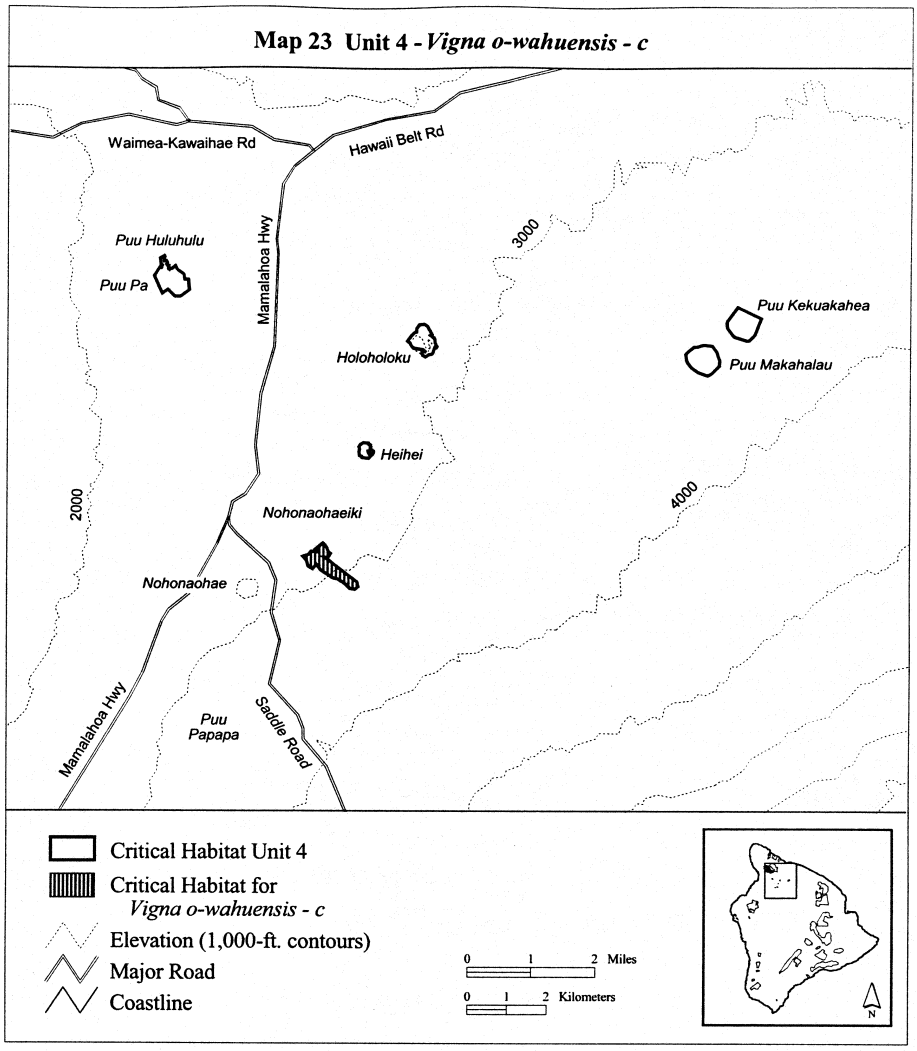
(ii) NOTE: Map 22 follows:



(23) Hawaii 4—*Vigna o-wahuensis*—c (51 ha, 127 ac)

(i) Unit consists of the following 27 boundary points: Start at 221456, 2205056; 221315, 2205089; 220996, 2205294; 220895, 2205435; 220799, 2205324; 220680, 2205394; 220645, 2205535; 220550, 2205636; 220701, 2205687; 220754, 2205770; 220904, 2205756; 220861, 2205816; 221058, 2205989; 221139, 2205911; 221195, 2205756; 221253, 2205717; 221216, 2205641; 221179, 2205613; 221095, 2205611; 221197, 2205553; 221326, 2205451; 221675, 2205188; 221929, 2204996; 221948, 2204869; 221871, 2204802; 221737, 2204828; 221610, 2204957; return to starting point.

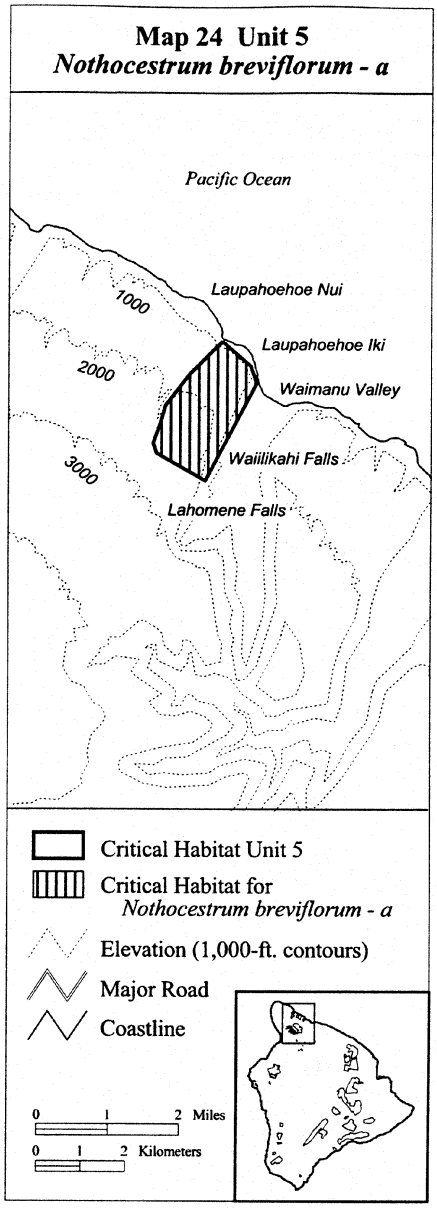
(ii) NOTE: Map 23 follows:


Map 23 Unit 4 - *Vigna o-wahuensis - c*
Waimea-Kawaihae Rd
Hawaii Belt Rd
Puu Huluhulu
Puu Pa
Mamalahoa Hwy
3000
Puu Kekuakahea
Holoholoku
Puu Makahalau
Heihei
2000
4000
Nohonaohaeiki
Nohonaohae
Mamalahoa Hwy
Puu Papapa
Saddle Road
Critical Habitat Unit 4
Critical Habitat for *Vigna o-wahuensis - c*
Elevation (1,000-ft. contours)
Major Road
Coastline
0 1 2 Miles
0 1 2 Kilometers
N

(24) Hawaii 5—*Nothocestrum breviflorum*—a (403 ha, 995 ac)

(i) Unit consists of the following 10 boundary points: Start at 223325, 2230961; 223717, 2230611; 223961, 2230395; 224099, 2230006; 222943, 2227775; 221847, 2228401; 221769, 2228638; 221914, 2229066; 222052, 2229490; 222606, 2230217; return to starting point.

(ii) NOTE: Map 24 follows:

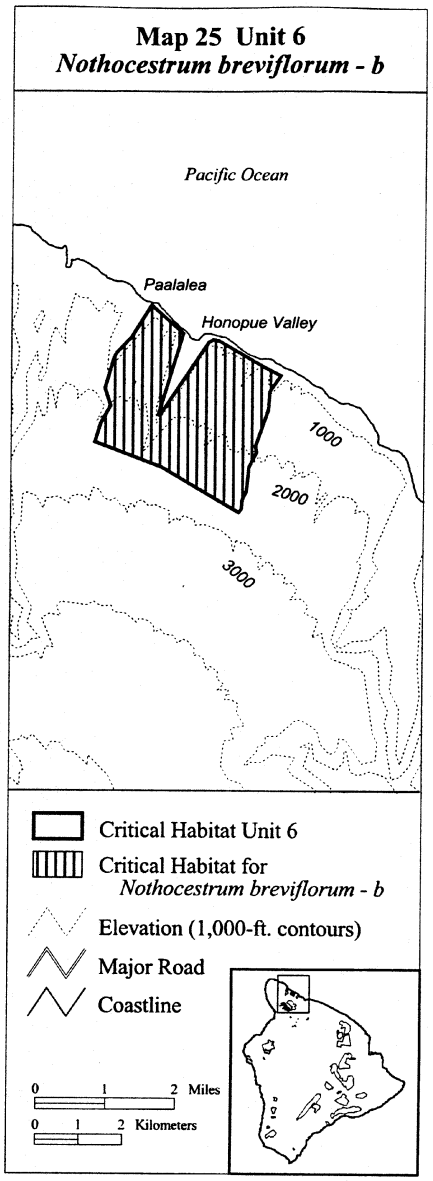


(25) Hawaii 6—*Nothocestrum breviflorum—b* (1,113 ha, 2,750 ac)

(i) Unit consists of the following 29 boundary points: Start at 217283, 2233128; 217629, 2233499; 218093, 2234242; 218828, 2233584; 218277, 2231773; 218266,

2231685; 218291, 2231675; 219411, 2233375; 219521, 2233443; 219655, 2233414; 220288, 2233050; 220656, 2232834; 221080, 2232612; 220999, 2232500; 220822, 2232233; 220802, 2231818; 220498, 2230963; 220529, 2230813; 220350, 2230453; 220296, 2229915; 220205, 2229697; 220190, 2229504; 220122, 2229416; 218354, 2230452; 216792, 2231049; 216919, 2231470; 217150, 2231890; 217026, 2232314; 217214, 2232981; return to starting point.

(ii) NOTE: Map 25 follows:

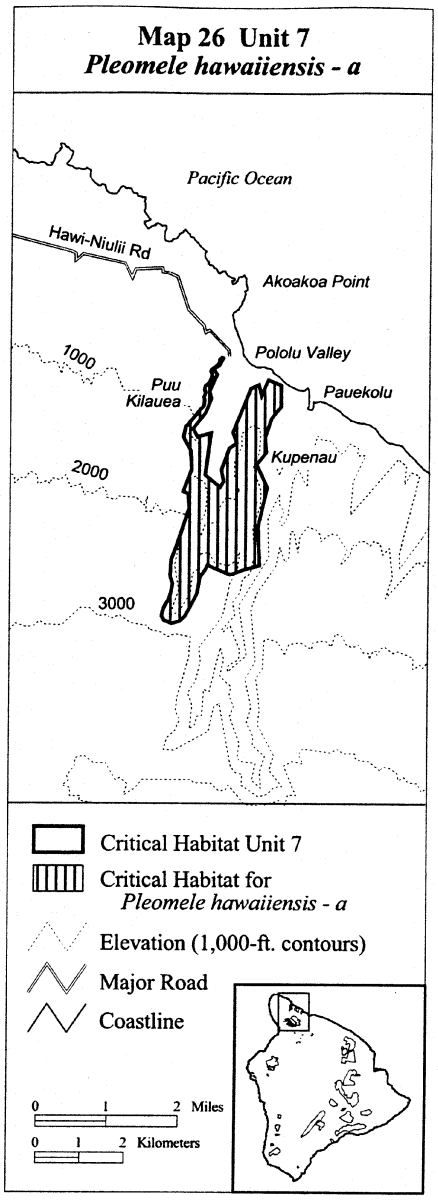


(26) Hawaii 7—*Pleomele hawaiiensis*—a (677 ha, 1,673 ac)

(i) Unit consists of the following 92 boundary points: Start at 213884, 2231521; 213842, 2231562; 213785, 2231427; 213666, 2231261; 213601, 2230893; 213453, 2230596; 213305, 2230350; 213204, 2230269;

213030, 2230210; 212859, 2230290; 212807, 2230381; 212812, 2230467; 212835, 2230541; 212877, 2230637; 212939, 2230736; 213011, 2230905; 213041, 2231129; 212997, 2231275; 213007, 2231651; 213147, 2232011; 213409, 2232858; 213387, 2233177; 213269, 2233218; 213462, 2233730; 213453, 2233976; 213443, 2234090; 213442, 2234162; 213373, 2234284; 213315, 2234388; 213271, 2234480; 213320, 2234721; 213371, 2234760; 213429, 2234835; 213464, 2234878; 213513, 2234943; 213559, 2235003; 213642, 2235106; 213659, 2235121; 213685, 2235147; 213724, 2235205; 213745, 2235328; 213734, 2235407; 213765, 2235497; 213747, 2235588; 213771, 2235662; 213817, 2235706; 213849, 2235729; 213891, 2235850; 213906, 2235884; 213908, 2235940; 213886, 2235998; 213892, 2236033; 214009, 2236115; 214062, 2236170; 214080, 2236202; 214083, 2236227; 214091, 2236260; 214140, 2236304; 214165, 2236296; 214069, 2236123; 213954, 2236053; 214016, 2235921; 213862, 2235537; 213901, 2235357; 213770, 2235029; 213484, 2234675; 213587, 2234485; 213891, 2234567; 213773, 2233608; 214112, 2233331; 214183, 2233458; 214141, 2233713; 214320, 2234212; 214483, 2234338; 214390, 2234581; 214802, 2235593; 214978, 2235684; 215037, 2235434; 215190, 2235808; 215483, 2235675; 215479, 2235179; 215269, 2234894; 215127, 2234463; 215158, 2234131; 214937, 2233848; 215182, 2233321; 214973, 2232427; 215018, 2231531; 214640, 2231432; 214495, 2231365; 214382, 2231329; 214332, 2231335; return to starting point.

(ii) NOTE: Map 26 follows:

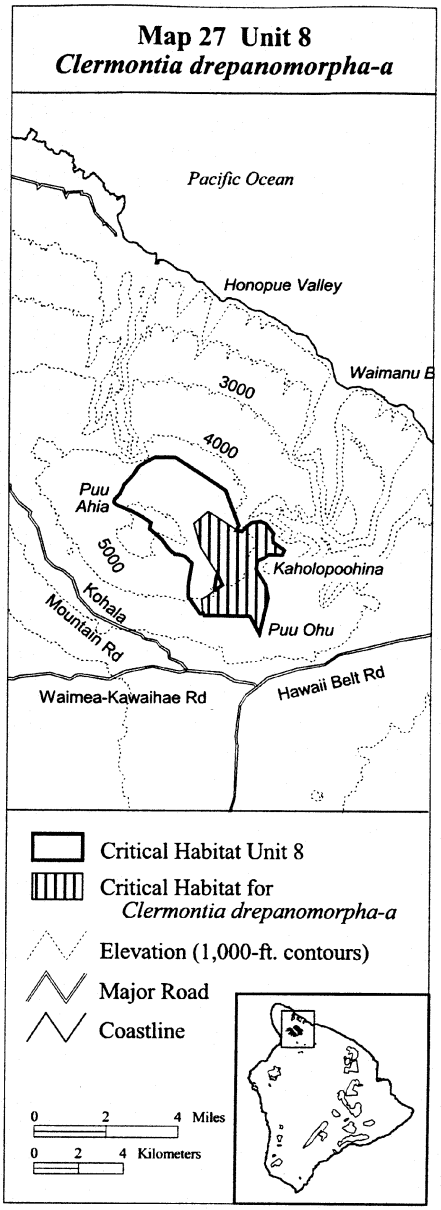


(27) Hawaii 8—*Clermontia drepanomorpha*—a (1,906 ha, 4,709 ac)

(i) Unit consists of the following 30 boundary points: Start at 214766, 2225082; 215176, 2225539; 215405, 2225905; 215716, 2226097; 216131, 2226318; 217035,

2226328; 218354, 2225470; 219286, 2224824; 219895, 2223228; 218899, 2220922; 218806, 2219907; 218769, 2219298; 218197, 2219271; 217672, 2220036; 217653, 2220562; 217819, 2221512; 217520, 2221821; 217378, 2221880; 217229, 2221937; 217063, 2221937; 216768, 2222158; 216463, 2222582; 215919, 2223071; 215956, 2223348; 215550, 2223643; 215070, 2223892; 214393, 2224156; 214299, 2224261; 214335, 2224407; 214570, 2224647; return to starting point.

(ii) NOTE: Map 27 follows:

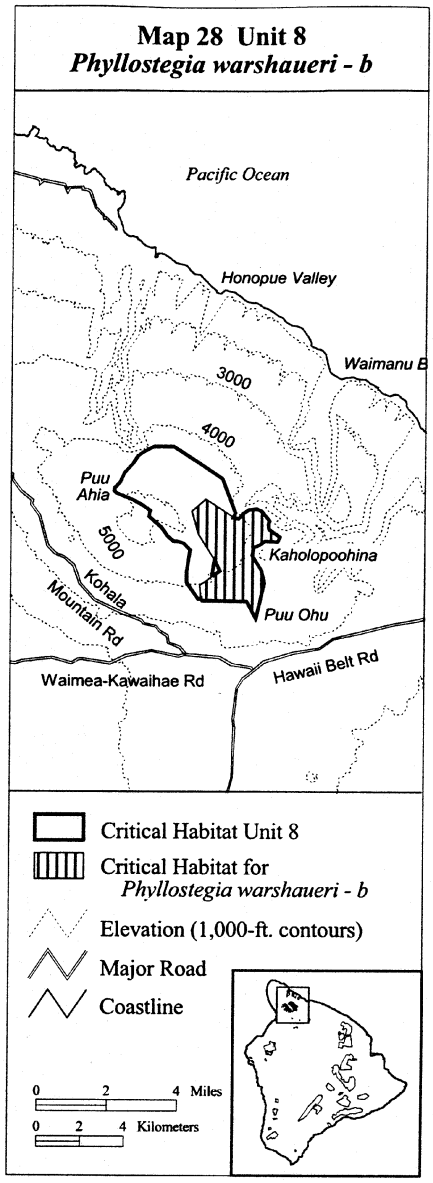


(28) Hawaii 8—*Phyllostegia warshaueri*—b (1,177 ha, 2,908 ac)

(i) Unit consists of the following 27 boundary points: Start at 218326, 2219182; 218265, 2219899; 218572, 2220103; 219186, 2220554; 218961, 2221066; 218183,

2222274; 217900, 2223294; 218531, 2223871; 219842, 2223011; 220052, 2222981; 220255, 2223197; 220513, 2223371; 220883, 2223437; 221142, 2223301; 221469, 2222879; 221431, 2222712; 221443, 2222484; 221956, 2222124; 221860, 2221917; 221276, 2221939; 221020, 2221746; 220775, 2221645; 220679, 2221263; 221125, 2220585; 221255, 2220003; 220857, 2218373; 220445, 2219168; return to starting point.

(ii) NOTE: Map 28 follows:



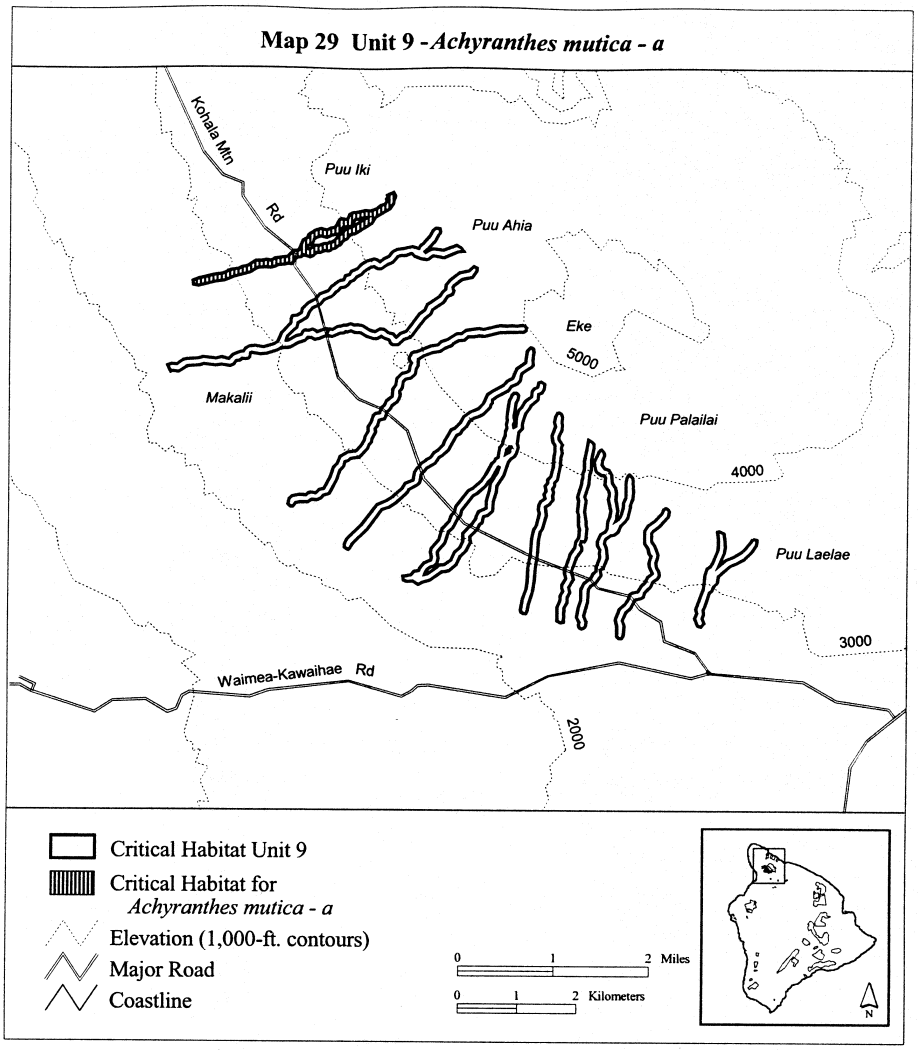
(29) Hawaii 9—*Achyranthes mutica*—a (63 ha, 157 ac)

(i) Unit consists of the following 82 boundary points: Start at 211908, 2224450; 211840, 2224339; 211562, 2224160; 211477, 2224142; 211418, 2224067; 211356, 2224034; 211319, 2223969; 211271, 2223951;

211220, 2223903; 211172, 2223900; 211144, 2223870; 211106, 2223860; 211053, 2223873; 210980, 2223837; 210916, 2223837; 210864, 2223788; 210802, 2223764; 210694, 2223796; 210650, 2223761; 210578, 2223756; 210489, 2223646; 210425, 2223652; 210359, 2223635; 210254, 2223626; 210218, 2223598; 210154, 2223584; 210056, 2223595; 209922, 2223585; 209805, 2223507; 209521, 2223432; 209365, 2223366; 209228, 2223347; 208930, 2223267; 208835, 2223286; 208830, 2223355; 208907, 2223389; 209205, 2223465; 209333, 2223482; 209483, 2223546; 209548, 2223555; 209606, 2223568; 209652, 2223593; 209761, 2223619; 209887, 2223699; 209956, 2223703; 209996, 2223703; 210057, 2223716; 210148, 2223704; 210219, 2223742; 210431, 2223770; 210529, 2223870; 210603, 2223875; 210683, 2224047; 210751, 2224079; 210773, 2224145; 210846, 2224182; 210875, 2224212; 210992, 2224241; 211084, 2224220; 211131, 2224248; 211225, 2224269; 211290, 2224395; 211339, 2224415; 211428, 2224394; 211464, 2224477; 211515, 2224517; 211607, 2224525; 211733, 2224561; 211824, 2224547; 211926, 2224590; 211986, 2224640; 212066, 2224670; 212094, 2224717; 212088, 2224750; 212115, 2224806; 212108, 2224823; 212219, 2224872; 212243, 2224820; 212243, 2224778; 212216, 2224731; 212213, 2224684; 212160, 2224595; return to starting point.

(ii) Excluding one area bounded by the following 31 points (8 ha, 19 ac): Start at 211235, 2224062; 211172, 2224016; 211129, 2224012; 211093, 2223986; 211042, 2223992; 210945, 2223954; 210872, 2223952; 210792, 2223885; 210751, 2223908; 210770, 2223960; 210841, 2223994; 210870, 2224063; 210928, 2224102; 210992, 2224116; 211080, 2224094; 211174, 2224135; 211293, 2224156; 211335, 2224196; 211345, 2224253; 211373, 2224282; 211439, 2224272; 211501, 2224297; 211562, 2224404; 211619, 2224407; 211657, 2224425; 211731, 2224441; 211766, 2224436; 211506, 2224267; 211403, 2224240; 211340, 2224159; 211274, 2224128; return to starting point.

(iii) NOTE: Map 29 follows:



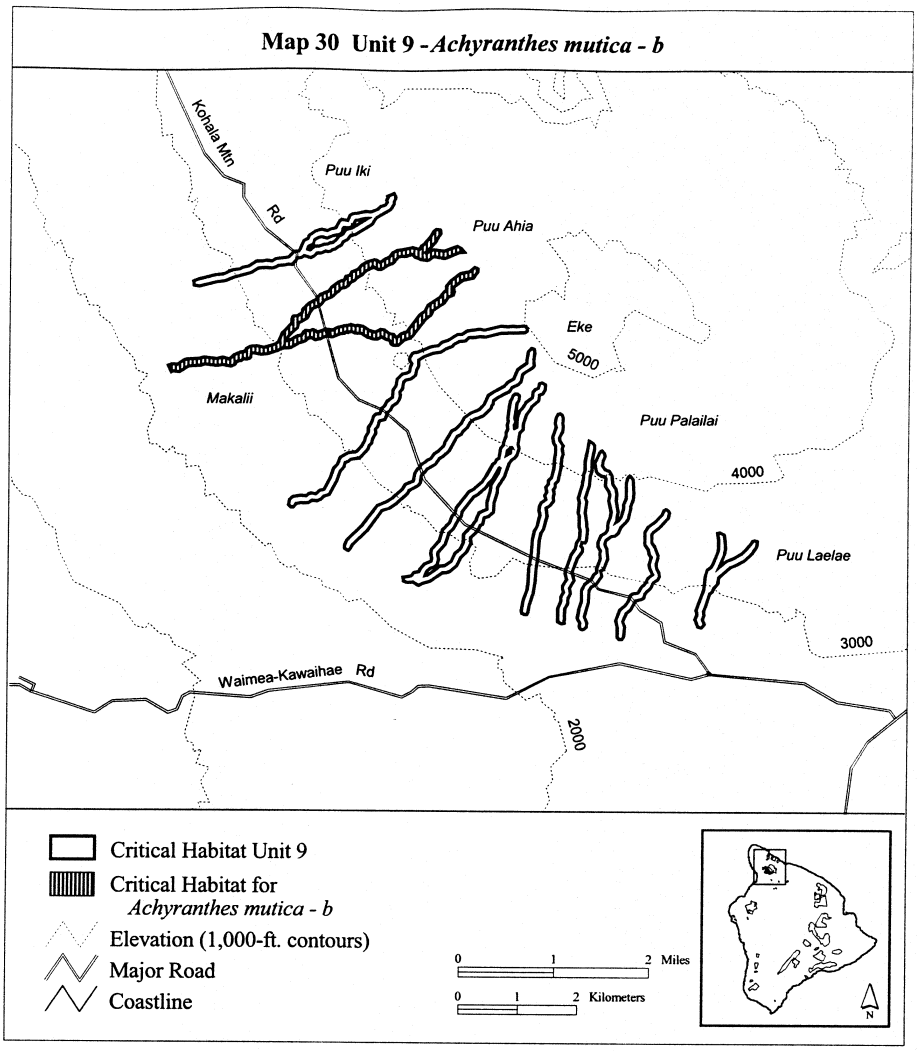
(30) Hawaii 9—*Achyranthes mutica*—b (124 ha, 306 ac)

(i) Unit consists of the following 211 boundary points: Start at 211305, 2223364; 211375, 2223384; 211403, 2223445; 211471, 2223464; 211508, 2223521; 211605, 2223565; 211667, 2223634; 211757, 2223690; 211885, 2223733; 211931, 2223724; 211986, 2223686; 212068, 2223746; 212139, 2223774; 212198, 2223854; 212277, 2223900; 212406, 2223912; 212539, 2223951; 212645, 2223915; 212681, 2223974; 212720, 2223994; 212836, 2224123; 212883, 2224222; 212935, 2224265; 213002, 2224253; 213015, 2224188; 212983, 2224154; 212926, 2224043; 212826, 2223931; 212746, 2223863; 212766, 2223847; 212819, 2223884; 212890, 2223915; 213075, 2223887; 213289, 2223971; 213371, 2223934; 213409, 2223871; 213316, 2223863; 213077, 2223764; 212894, 2223794; 212820, 2223740; 212780, 2223729; 212674, 2223741; 212626, 2223773; 212579, 2223781; 212533, 2223829; 212510, 2223825; 212439, 2223796; 212348, 2223795; 212294, 2223777; 212205, 2223673; 212125,

2223641; 212013, 2223563; 211957, 2223565; 211888, 2223610; 211803, 2223577; 211717, 2223519; 211686, 2223470; 211593, 2223426; 211549, 2223371; 211491, 2223344; 211458, 2223292; 211397, 2223257; 211323, 2223241; 211283, 2223193; 211242, 2223171; 211187, 2223097; 211045, 2223037; 210978, 2222957; 210854, 2222894; 210790, 2222817; 210763, 2222740; 210607, 2222645; 210591, 2222566; 210546, 2222536; 210433, 2222414; 210413, 2222350; 210443, 2222344; 210571, 2222422; 210666, 2222448; 210691, 2222500; 210725, 2222521; 210793, 2222517; 210852, 2222539; 210905, 2222517; 210925, 2222488; 211073, 2222553; 211191, 2222530; 211279, 2222586; 211348, 2222589; 211378, 2222610; 211441, 2222613; 211494, 2222638; 211568, 2222607; 211619, 2222618; 211712, 2222598; 211828, 2222527; 211912, 2222500; 212003, 2222547; 212069, 2222542; 212147, 2222486; 212228, 2222467; 212274, 2222404; 212348, 2222471; 212448, 2222511; 212668, 2222802; 212761, 2222874; 212802, 2222963; 213012, 2223108; 213060, 2223184; 213115, 2223225; 213115, 2223296; 213180, 2223380; 213342, 2223505; 213502, 2223538; 213592, 2223617; 213636, 2223593; 213643, 2223539; 213565, 2223434; 213394, 2223394; 213253, 2223285; 213234, 2223260; 213253, 2223205; 213231, 2223147; 213152, 2223106; 213084, 2223011; 212891, 2222882; 212863, 2222805; 212756, 2222719; 212535, 2222428; 212497, 2222398; 212412, 2222369; 212308, 2222279; 212217, 2222281; 212186, 2222304; 212160, 2222365; 212097, 2222377; 212025, 2222427; 211944, 2222384; 211894, 2222380; 211782, 2222415; 211678, 2222482; 211644, 2222482; 211575, 2222486; 211508, 2222513; 211448, 2222492; 211413, 2222496; 211386, 2222474; 211328, 2222470; 211194, 2222417; 211089, 2222433; 210981, 2222380; 210899, 2222365; 210832, 2222399; 210774, 2222396; 210736, 2222348; 210624, 2222314; 210481, 2222229; 210331, 2222220; 210250, 2222177; 210082, 2222125; 209980, 2222118; 209833, 2222142; 209813, 2222131; 209804, 2222071; 209776, 2222040; 209729, 2222030; 209675, 2222040; 209640, 2222012; 209577, 2222003; 209527, 2221938; 209471, 2221916; 209325, 2221943; 209234, 2221919; 209020, 2221948; 208952, 2221925; 208760, 2221918; 208599, 2221816; 208492, 2221827; 208460, 2221817; 208410, 2221927; 208484, 2221948; 208565, 2221936; 208676, 2222014; 208732, 2222035; 208927, 2222043; 209015, 2222068; 209236, 2222040; 209325, 2222064; 209449, 2222035; 209526, 2222112; 209647, 2222157; 209695, 2222158; 209723, 2222210; 209793, 2222256; 209892, 2222262; 210029, 2222239; 210205, 2222289; 210267, 2222326; 210332, 2222479; 210486, 2222645; 210485, 2222700; 210505, 2222750; 210534, 2222771; 210592, 2222771; 210670, 2222819; 210675, 2222877; 210775, 2222984; 210911, 2223056; 210970, 2223132; 211117, 2223195; 211175, 2223273; return to starting point.

(ii) Excluding one area bounded by the following five points (<1 ha, <1 ac): Start at 211099, 2222496; 211109, 2222499; 211114, 2222499; 211118, 2222497; 211103, 2222479; return to starting point.

(iii) NOTE: Map 30 follows:

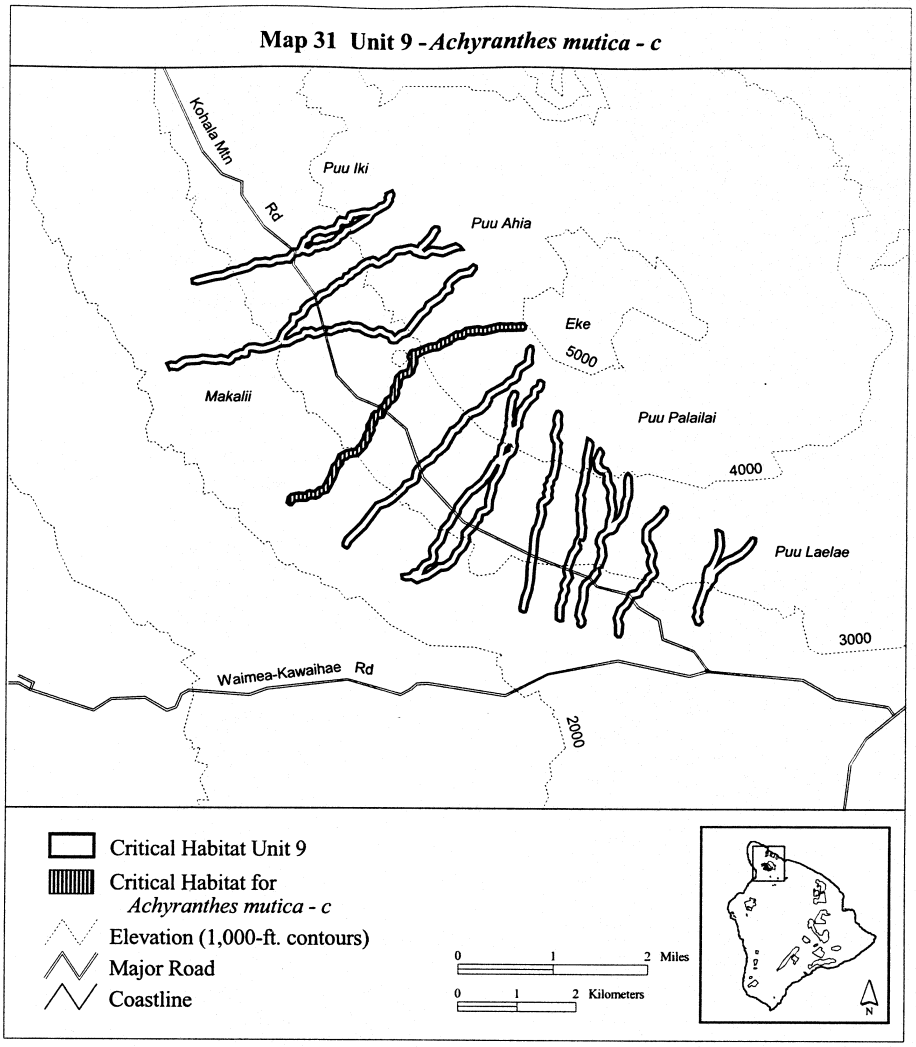


(31) Hawaii 9—*Achyranthes mutica*—c (67 ha, 166 ac)

(i) Unit consists of the following 114 boundary points: Start at 214447, 2222623; 214480, 2222585; 214474, 2222534; 214441, 2222505; 214055, 2222500; 213775, 2222429; 213683, 2222443; 213605, 2222423; 213500, 2222421; 213445, 2222367; 213339, 2222356; 213251, 2222303; 213225, 2222268; 213112, 2222232; 213029, 2222167; 212905, 2222150; 212752, 2222091; 212654, 2222033; 212657, 2221930; 212627, 2221876; 212610, 2221781; 212532, 2221714; 212449, 2221692; 212403, 2221653; 212384, 2221545; 212341, 2221489; 212348, 2221423; 212328, 2221349; 212298, 2221305; 212213, 2221243; 212181, 2221177; 212126, 2221131; 212117, 2221072; 212086, 2221019; 212000, 2220995; 211970, 2220899; 211930, 2220851; 211934, 2220790; 211874, 2220666; 211868, 2220609; 211830, 2220572; 211804, 2220499; 211669, 2220360; 211517, 2220331; 211480, 2220298; 211424, 2220284; 211404, 2220203; 211334, 2220125; 211281, 2219976; 211155, 2219728; 211059,

2219692; 211026, 2219657; 210955, 2219623; 210865, 2219627; 210798, 2219584; 210675, 2219589; 210587, 2219571; 210551, 2219507; 210505, 2219505; 210465, 2219555; 210482, 2219632; 210532, 2219684; 210655, 2219709; 210771, 2219702; 210805, 2219739; 210843, 2219752; 210929, 2219741; 210992, 2219793; 211068, 2219818; 211172, 2220027; 211227, 2220180; 211295, 2220255; 211335, 2220366; 211461, 2220440; 211611, 2220468; 211703, 2220566; 211753, 2220665; 211761, 2220714; 211810, 2220794; 211811, 2220884; 211862, 2220954; 211895, 2221066; 211936, 2221107; 212003, 2221115; 212026, 2221204; 212080, 2221243; 212124, 2221326; 212220, 2221402; 212224, 2221522; 212274, 2221597; 212292, 2221705; 212388, 2221798; 212459, 2221812; 212503, 2221840; 212510, 2221905; 212540, 2221974; 212507, 2222024; 212501, 2222072; 212543, 2222144; 212583, 2222162; 212627, 2222158; 212872, 2222265; 212987, 2222280; 213048, 2222334; 213150, 2222369; 213305, 2222475; 213389, 2222475; 213467, 2222537; 213685, 2222564; 213761, 2222548; 214042, 2222616; 214157, 2222613; 214239, 2222618; 214319, 2222611; return to starting point.

(ii) NOTE: Map 31 follows:

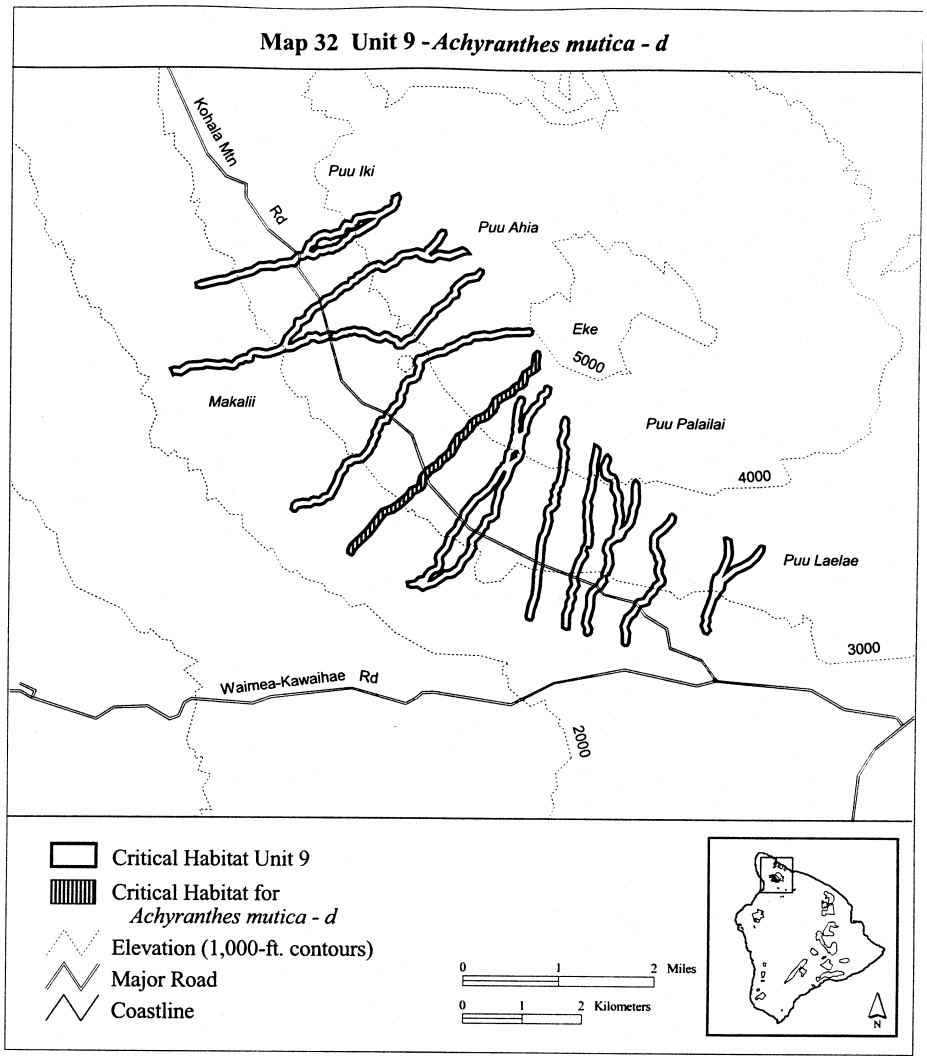


(32) Hawaii 9—*Achyranthes mutica*—d (58 ha, 143 ac)

(i) Unit consists of the following 83 boundary points: Start at 214438, 2221820; 214413, 2221797; 214386, 2221680; 214341, 2221624; 214236, 2221577; 214192, 2221506; 214008, 2221412; 213919, 2221344; 213917, 2221296; 213890, 2221262; 213884, 2221222; 213758, 2221097; 213685, 2221055; 213605, 2221031; 213535, 2220982; 213480, 2220882; 213407, 2220820; 213384, 2220774; 213316, 2220740; 213178, 2220485; 213084, 2220393; 213022, 2220355; 212956, 2220257; 212808, 2220171; 212777, 2220117; 212741, 2220090; 212715, 2220056; 212695, 2219935; 212668, 2219888; 212516, 2219808; 212489, 2219754; 212288, 2219567; 212179, 2219502; 212052, 2219459; 211790, 2219103; 211552, 2218878; 211513, 2218800; 211486, 2218774; 211451, 2218791; 211424, 2218818; 211424, 2218878; 211459, 2218955; 211700, 2219183; 211969, 2219547; 212135, 2219614; 212226, 2219670; 212391, 2219825; 212443, 2219903; 212578, 2219968; 212603, 2220105; 212654,

2220177; 212688, 2220198; 212709, 2220249; 212787, 2220293; 212824, 2220334; 212873, 2220352; 212940, 2220443; 213005, 2220484; 213090, 2220567; 213108, 2220631; 213225, 2220827; 213293, 2220862; 213379, 2220952; 213439, 2221062; 213540, 2221136; 213683, 2221191; 213768, 2221286; 213838, 2221437; 213939, 2221510; 214108, 2221602; 214163, 2221673; 214261, 2221717; 214322, 2221877; 214479, 2221995; 214474, 2222036; 214504, 2222187; 214564, 2222248; 214601, 2222232; 214615, 2222160; 214609, 2222121; 214595, 2222026; 214602, 2221949; 214578, 2221912; return to starting point.

(ii) NOTE: Map 32 follows:



(33) Hawaii 9—*Achyranthes mutica*—e (96 ha, 238 ac)

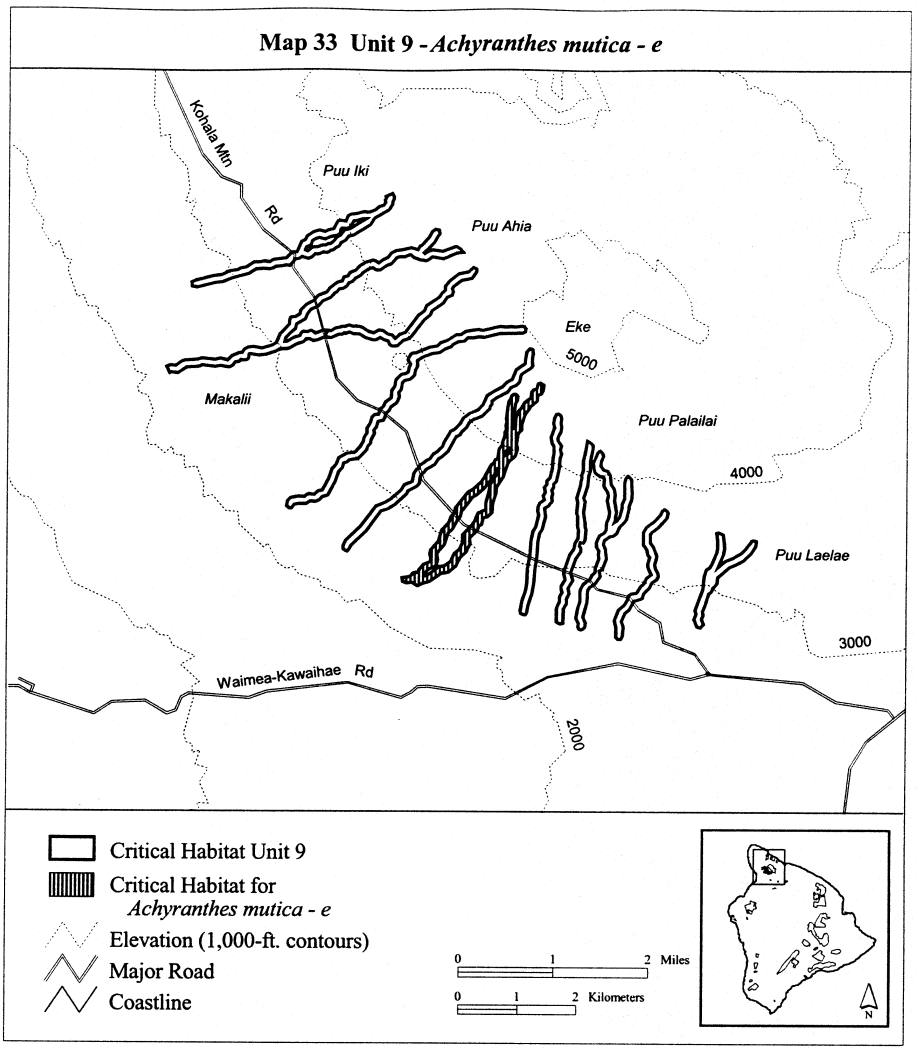
(i) Unit consists of the following 99 boundary points: Start at 214237, 2221396; 214246, 2221433; 214279, 2221468; 214325, 2221468; 214358, 2221436; 214355, 2221358; 214318, 2221305; 214305, 2221223; 214287, 2221049; 214300, 2220991; 214278, 2220930; 214286, 2220881; 214313, 2220902; 214322, 2221047; 214365, 2221179; 214410, 2221218; 214476, 2221333; 214576, 2221408; 214591, 2221498; 214624, 2221541; 214679, 2221569; 214698, 2221646; 214740, 2221664; 214796, 2221627; 214793, 2221531; 214759, 2221478; 214700, 2221448; 214690, 2221357; 214573, 2221258; 214555, 2221210; 214474, 2221113; 214430, 2220938; 214431, 2220859; 214371, 2220793; 214339, 2220598; 214356, 2220538; 214326, 2220426; 214294, 2220372; 214236, 2220332; 214188, 2220269; 214118, 2220061; 214005, 2219871; 213995, 2219762; 213945, 2219600; 213933, 2219438; 213852, 2219367; 213784, 2219348; 213756, 2219241; 213719, 2219214; 213680, 2219137; 213551, 2219003; 213560, 2218908; 213486, 2218751; 213396, 2218673; 213327, 2218524; 213204, 2218429; 213145, 2218404; 213092, 2218406; 212882, 2218263; 212764, 2218230; 212684, 2218191; 212589, 2218244; 212485, 2218242; 212425, 2218262; 212420, 2218327; 212558, 2218345; 212607, 2218406; 212693, 2218421; 212709, 2218465; 212774, 2218551; 212890, 2218603; 212903, 2218650; 212889, 2218747; 212904, 2218803; 213028, 2218949; 213082, 2219133; 213196, 2219265; 213245, 2219371; 213290, 2219423; 213311, 2219514; 213517, 2219786; 213597, 2219831; 213729, 2219948; 213812, 2220057; 213922, 2220266; 213959, 2220297; 213979, 2220340; 214024, 2220366; 214050, 2220531; 214097, 2220597; 214097, 2220637; 214143, 2220749; 214139, 2220807; 214167, 2220862; 214158, 2220933; 214175, 2221002; 214166, 2221051; 214187, 2221243; 214206, 2221349; return to starting point.

(ii) Excluding two areas:

(A) Bounded by the following seven points (1 ha, 1 ac): Start at 214223, 2220569; 214237, 2220545; 214219, 2220515; 214216, 2220461; 214146, 2220412; 214161, 2220500; 214199, 2220523; return to starting point.

(B) Bounded by the following 42 points (38 ha, 94 ac): Start at 214049, 2220213; 214008, 2220110; 213892, 2219916; 213877, 2219786; 213826, 2219614; 213823, 2219491; 213696, 2219433; 213663, 2219365; 213649, 2219307; 213619, 2219275; 213591, 2219218; 213434, 2219056; 213440, 2218923; 213385, 2218816; 213302, 2218748; 213232, 2218602; 213126, 2218523; 213033, 2218514; 212998, 2218479; 212834, 2218368; 212794, 2218356; 212809, 2218402; 212825, 2218431; 212855, 2218461; 212888, 2218485; 212953, 2218499; 212996, 2218545; 213022, 2218636; 213007, 2218725; 213013, 2218754; 213131, 2218887; 213194, 2219087; 213261, 2219149; 213346, 2219306; 213394, 2219361; 213412, 2219449; 213602, 2219700; 213668, 2219734; 213820, 2219870; 213852, 2219933; 213913, 2219992; 214024, 2220195; return to starting point.

(iii) NOTE: Map 33 follows:

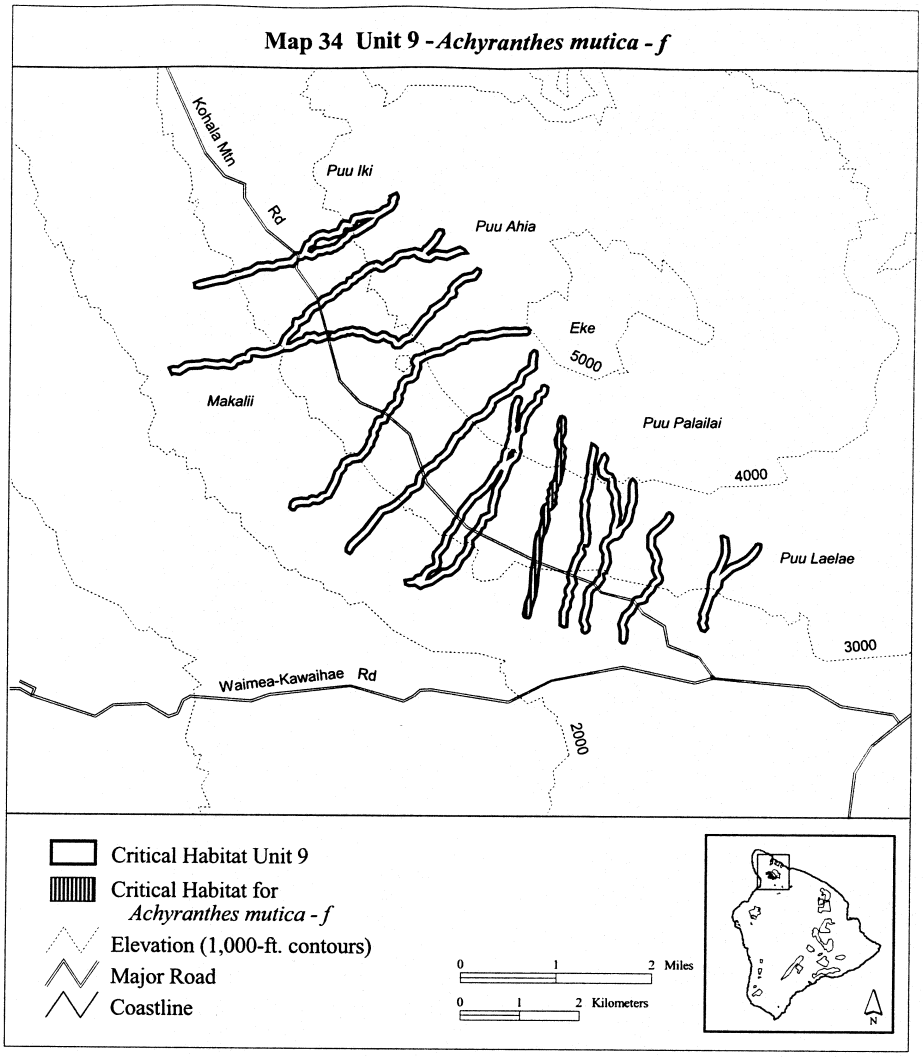


(34) Hawaii 9—*Achyranthes mutica*—f (43 ha, 105 ac)

(i) Unit consists of the following 65 boundary points: Start at 215029, 2221141; 215078, 2221118; 215100, 2221081; 215105, 2221047; 215092, 2220971; 215106, 2220903; 215094, 2220834; 215046, 2220727; 215049, 2220676; 215102, 2220585; 215091, 2220525; 215103, 2220441; 215078, 2220357; 215072, 2220203; 215020, 2219976; 214978, 2219936; 214975, 2219872; 214947, 2219833; 214959, 2219766; 214941, 2219705; 214948, 2219637; 214883, 2219550; 214829, 2219519; 214843, 2219377; 214782, 2219151; 214741, 2219084; 214717, 2218965; 214700, 2218708; 214660, 2218467; 214650, 2218237; 214625, 2218082; 214553, 2217870; 214527, 2217739; 214511, 2217708; 214476, 2217702; 214431, 2217728; 214417, 2217776; 214449, 2217955; 214510, 2218118; 214530, 2218247; 214540, 2218479; 214581, 2218725; 214598, 2218985; 214627, 2219125; 214669, 2219193; 214725, 2219396; 214706, 2219465; 214712, 2219549; 214738, 2219603; 214819, 2219663; 214796,

2219730; 214835, 2219788; 214819, 2219871; 214858, 2219922; 214862, 2219981; 214908, 2220033; 214951, 2220206; 214958, 2220369; 214981, 2220452; 214979, 2220577; 214947, 2220626; 214924, 2220735; 214985, 2220898; 214972, 2220976; 214987, 2221070; return to starting point.

(ii) NOTE: Map 34 follows:

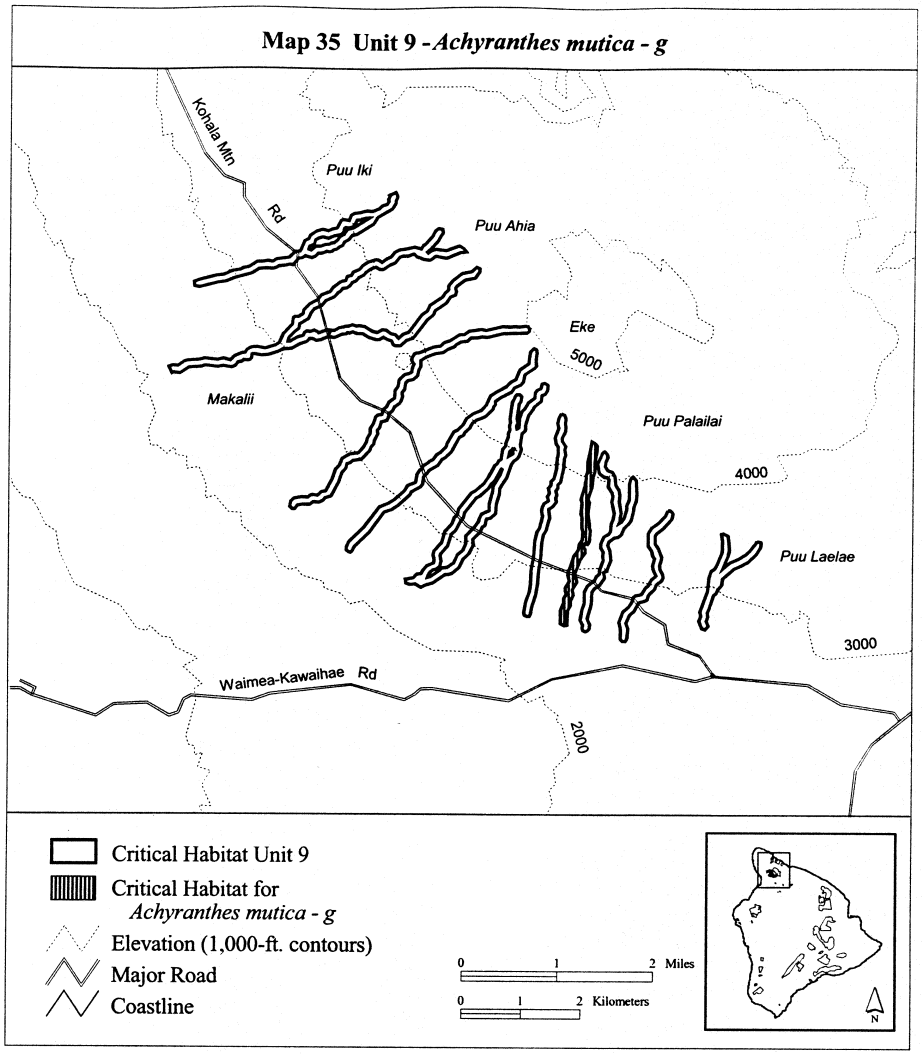


(35) Hawaii 9—*Achyranthes mutica*—g (37 ha, 92 ac)

(i) Unit consists of the following 58 boundary points: Start at 215603, 2220632; 215636, 2220594; 215638, 2220532; 215595, 2220313; 215594, 2220146; 215573, 2220086; 215557, 2219909; 215486, 2219693; 215509, 2219626; 215490, 2219443; 215514, 2219279; 215507, 2219212; 215525, 2219154; 215513, 2218965; 215487, 2218921; 215439, 2218935; 215421, 2218871; 215447, 2218842;

215441, 2218779; 215356, 2218664; 215275, 2218426; 215304, 2218286; 215233, 2218154; 215249, 2218060; 215206, 2217972; 215206, 2217897; 215158, 2217810; 215145, 2217560; 215094, 2217556; 215038, 2217584; 215038, 2217818; 215090, 2217932; 215089, 2218007; 215131, 2218085; 215109, 2218142; 215112, 2218184; 215185, 2218304; 215155, 2218404; 215160, 2218458; 215247, 2218714; 215328, 2218821; 215342, 2218926; 215394, 2219001; 215403, 2219144; 215387, 2219204; 215383, 2219387; 215367, 2219431; 215388, 2219616; 215365, 2219699; 215438, 2219924; 215431, 2219963; 215454, 2220022; 215453, 2220094; 215475, 2220163; 215474, 2220317; 215523, 2220516; 215533, 2220621; 215545, 2220669; return to starting point.

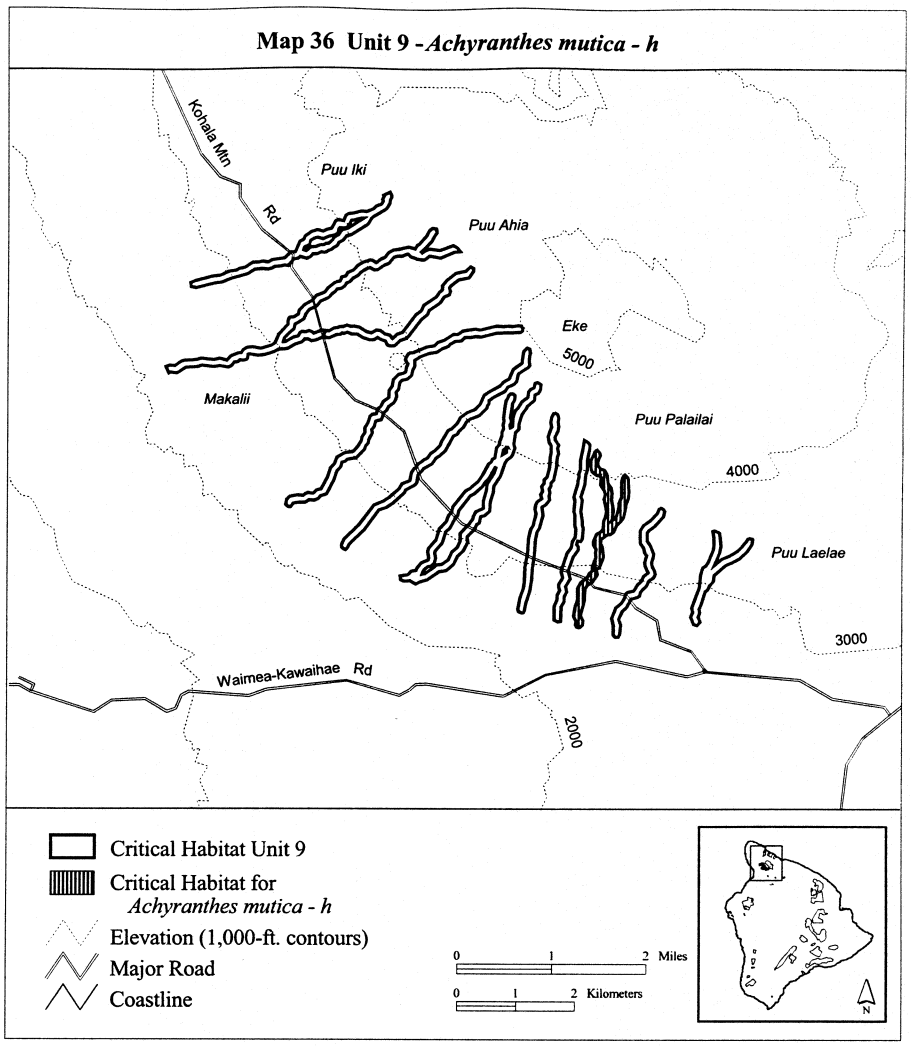
(ii) NOTE: Map 35 follows:



(36) Hawaii 9—*Achyranthes mutica*—h (51 ha, 127 ac)

(i) Unit consists of the following 89 boundary points: Start at 215734, 2220485; 215765, 2220497; 215804, 2220452; 215818, 2220397; 215784, 2220322; 215772, 2220245; 215817, 2220179; 215889, 2220150; 215937, 2220077; 215955, 2219923; 215999, 2219846; 216021, 2219758; 216009, 2219647; 216048, 2219449; 216024, 2219367; 216031, 2219325; 216010, 2219282; 216053, 2219305; 216094, 2219364; 216137, 2219519; 216139, 2219583; 216177, 2219682; 216178, 2219953; 216194, 2220018; 216223, 2220058; 216259, 2220059; 216289, 2220016; 216301, 2219987; 216298, 2219945; 216308, 2219773; 216295, 2219664; 216254, 2219549; 216260, 2219498; 216212, 2219335; 216179, 2219277; 216099, 2219197; 216052, 2219098; 215990, 2219041; 215937, 2219032; 215843, 2218966; 215826, 2218898; 215861, 2218819; 215873, 2218650; 215805, 2218472; 215755, 2218447; 215775, 2218360; 215691, 2218233; 215604, 2218175; 215561, 2218121; 215555, 2217915; 215490, 2217671; 215528, 2217566; 215517, 2217489; 215481, 2217456; 215448, 2217452; 215415, 2217471; 215399, 2217507; 215407, 2217557; 215371, 2217647; 215391, 2217794; 215436, 2217930; 215438, 2218124; 215486, 2218223; 215604, 2218316; 215641, 2218385; 215687, 2218427; 215688, 2218503; 215752, 2218652; 215738, 2218734; 215745, 2218785; 215706, 2218864; 215704, 2218932; 215753, 2219051; 215835, 2219097; 215867, 2219146; 215875, 2219268; 215910, 2219348; 215926, 2219453; 215888, 2219641; 215902, 2219734; 215881, 2219806; 215827, 2219895; 215830, 2220023; 215804, 2220057; 215765, 2220062; 215684, 2220120; 215664, 2220161; 215649, 2220293; 215707, 2220428; return to starting point.

(ii) NOTE: Map 36 follows:

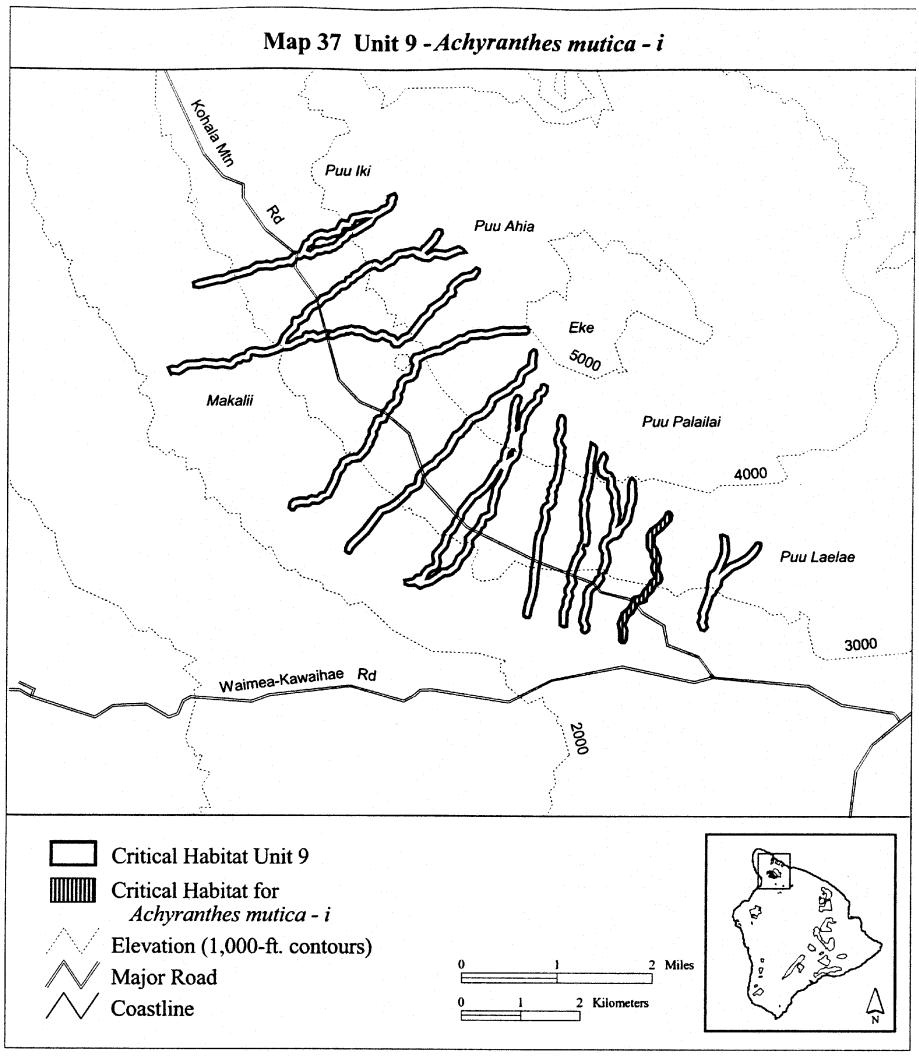


(37) Hawaii 9—*Achyranthes mutica*—i (31 ha, 76 ac)

(i) Unit consists of the following 54 boundary points: Start at 216834, 2219498; 216868, 2219502; 216901, 2219476; 216916, 2219442; 216903, 2219353; 216759, 2219197; 216646, 2219111; 216624, 2219076; 216621, 2218932; 216675, 2218863; 216728, 2218712; 216725, 2218649; 216696, 2218569; 216704, 2218501; 216752, 2218421; 216755, 2218361; 216727, 2218309; 216657, 2218257; 216603, 2218151; 216551, 2218112; 216511, 2218060; 216492, 2217991; 216451, 2217967; 216352, 2217946; 216275, 2217799; 216194, 2217733; 216138, 2217593; 216168, 2217500; 216154, 2217339; 216130, 2217288; 216078, 2217289; 216046, 2217330; 216047, 2217501; 216017, 2217608; 216088, 2217792; 216177, 2217870; 216230, 2217941; 216264, 2218034; 216303, 2218058; 216396, 2218077; 216458, 2218191; 216514, 2218232; 216562, 2218330; 216635, 2218388; 216586, 2218499; 216576, 2218561; 216609, 2218685; 216581, 2218726; 216562, 2218818; 216503, 2218897; 216504,

2219112; 216559, 2219201; 216683, 2219290; 216791, 2219410; return to starting point.

(ii) NOTE: Map 37 follows:

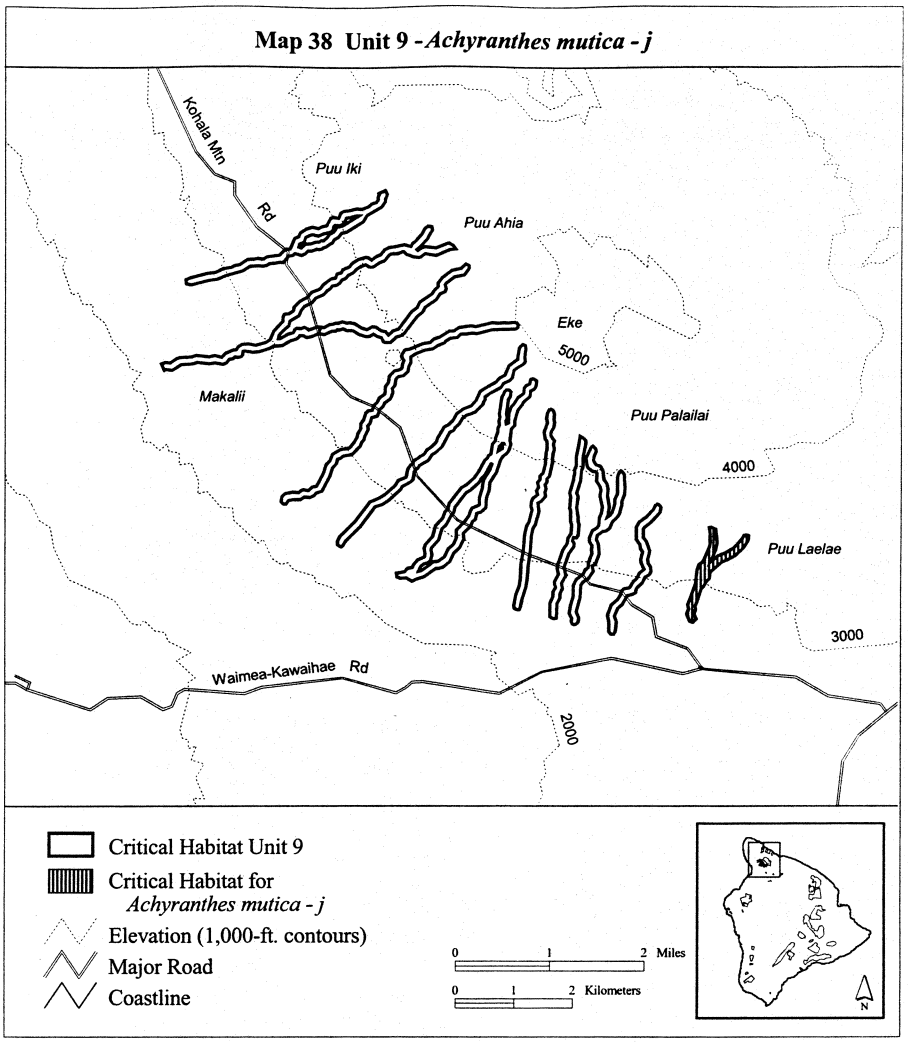


(38) Hawaii 9—*Achyranthes mutica*—j (33 ha, 81 ac)

(i) Unit consists of the following 45 boundary points: Start at 218342, 2218980; 218378, 2218973; 218407, 2218964; 218411, 2218929; 218400, 2218875; 218323, 2218752; 218189, 2218630; 218079, 2218566; 217956, 2218519; 217764, 2218345; 217745, 2218240; 217685, 2218167; 217657, 2218101; 217608, 2218068; 217537, 2217828; 217508, 2217776; 217518, 2217705; 217495, 2217636; 217530, 2217550; 217478, 2217497; 217416, 2217507; 217370, 2217634; 217398, 2217718; 217386, 2217786; 217509, 2218141; 217535, 2218373; 217570, 2218472; 217631, 2218518;

217662, 2218576; 217748, 2218779; 217756, 2218840; 217758, 2218986; 217738, 2219099; 217771, 2219108; 217806, 2219095; 217846, 2219075; 217869, 2218958; 217876, 2218841; 217861, 2218736; 217768, 2218520; 217898, 2218624; 218030, 2218675; 218152, 2218753; 218233, 2218832; 218305, 2218922; return to starting point.

(ii) NOTE: Map 38 follows:

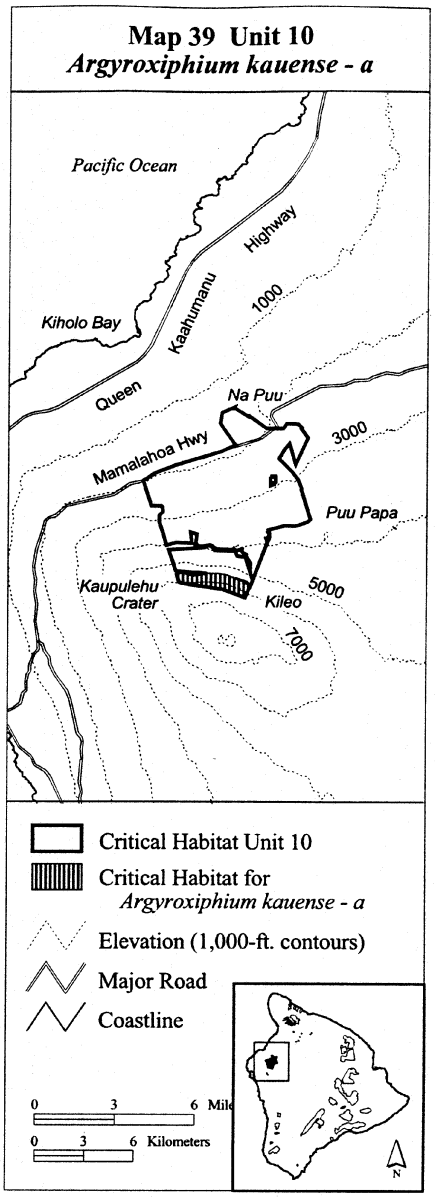


(39) Hawaii 10—*Argyroxiphium kauense*—a (349 ha, 861 ac)

(i) Unit consists of the following 22 boundary points: Start at 196364, 2183671; 196588, 2183730; 197040, 2183678; 197248, 2183609; 197370, 2183522; 197891, 2183644; 198395, 2183678; 198917, 2183661; 199421, 2183574; 199838, 2183400; 200064, 2183261; 200498, 2183174; 200689, 2183053; 200869, 2183009; 200548, 2182197; 199189,

2182675; 199188, 2182675; 198920, 2182722; 197323, 2182971; 196589, 2183108; 196526, 2183207; 196397, 2183572; return to starting point.

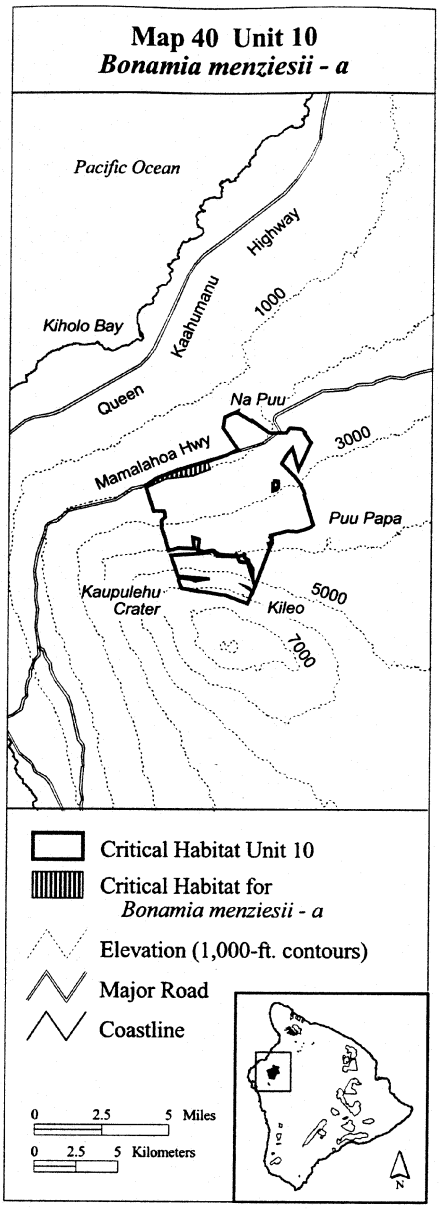
(ii) NOTE: Map 39 follows:



(40) Hawaii 10—*Bonamia menziesii*—a (163 ha, 402 ac)

(i) Unit consists of the following 12 boundary points: Start at 194344, 2189312; 194345, 2189312; 195096, 2189814; 195763, 2190048; 196316, 2190285; 198038, 2190803; 198120, 2190635; 198240, 2190325; 197169, 2189897; 195603, 2189733; 194504, 2189243; 194375, 2189221; return to starting point.

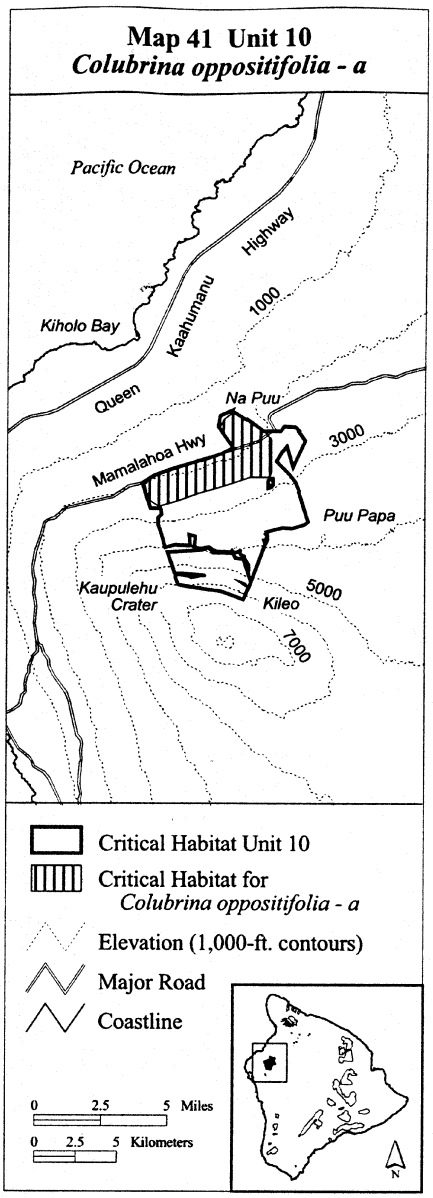
(ii) NOTE: Map 40 follows:



(41) Hawaii 10—*Colubrina oppositifolia*—a (1,918 ha, 4,740 ac)

(i) Unit consists of the following 23 boundary points: Start at 194733, 2188289; 194501, 2189318; 195028, 2189765; 196242, 2190221; 199593, 2191274; 200077, 2191445; 199462, 2192171; 199079, 2192786; 199311, 2193260; 199926, 2193724; 200763, 2193240; 201809, 2192548; 202245, 2192040; 202231, 2191144; 202231, 2190040; 202215, 2189832; 202071, 2189709; 200959, 2189699; 199966, 2189369; 199139, 2189093; 197714, 2188688; 196629, 2188284; 195353, 2187919; return to starting point.

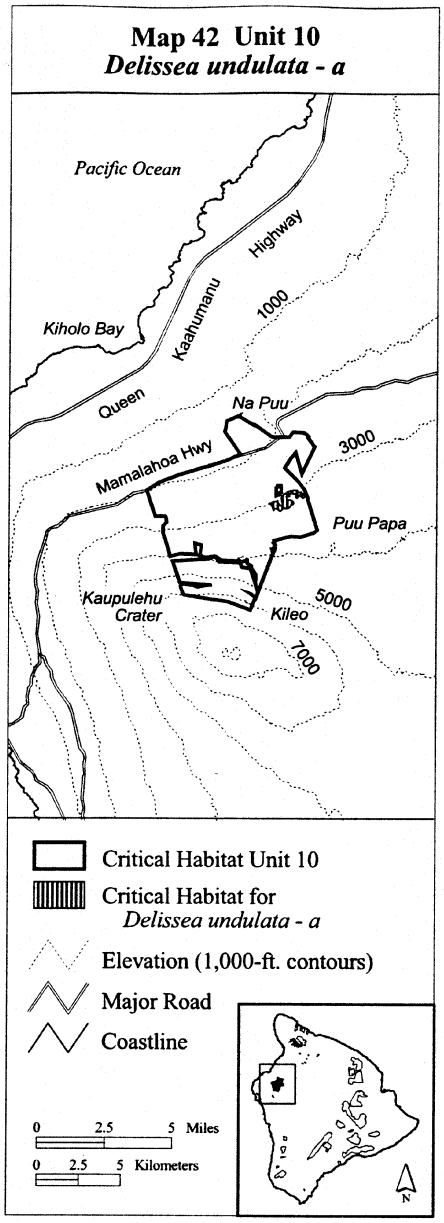
(ii) NOTE: Map 41 follows:



(42) Hawaii 10—*Delissea undulata*—a (92 ha, 227 ac)

(i) Unit consists of the following 50 boundary points: Start at 201717, 2188574; 201906, 2188644; 202144, 2188700; 202144, 2188602; 202284, 2188434; 202305, 2188399; 202452, 2188462; 202347, 2188728; 202326, 2188868; 202389, 2188952; 202459, 2189036; 202543, 2189120; 202683, 2189204; 202781, 2189288; 202922, 2189330; 203132, 2189365; 203279, 2189365; 203279, 2189260; 203454, 2189225; 203650, 2189113; 203776, 2188959; 203629, 2188868; 203419, 2189043; 203342, 2188910; 203258, 2188868; 203202, 2188945; 203272, 2189113; 203104, 2189120; 202886, 2189162; 202830, 2189099; 202865, 2189001; 202641, 2188966; 202711, 2188798; 202915, 2188742; 203041, 2188672; 203097, 2188602; 203041, 2188490; 202915, 2188497; 202901, 2188420; 202851, 2188322; 202627, 2188210; 202550, 2188280; 202382, 2188147; 202242, 2188070; 202095, 2188217; 201983, 2188231; 201913, 2188119; 201822, 2188224; 201850, 2188343; 201668, 2188553; return to starting point.

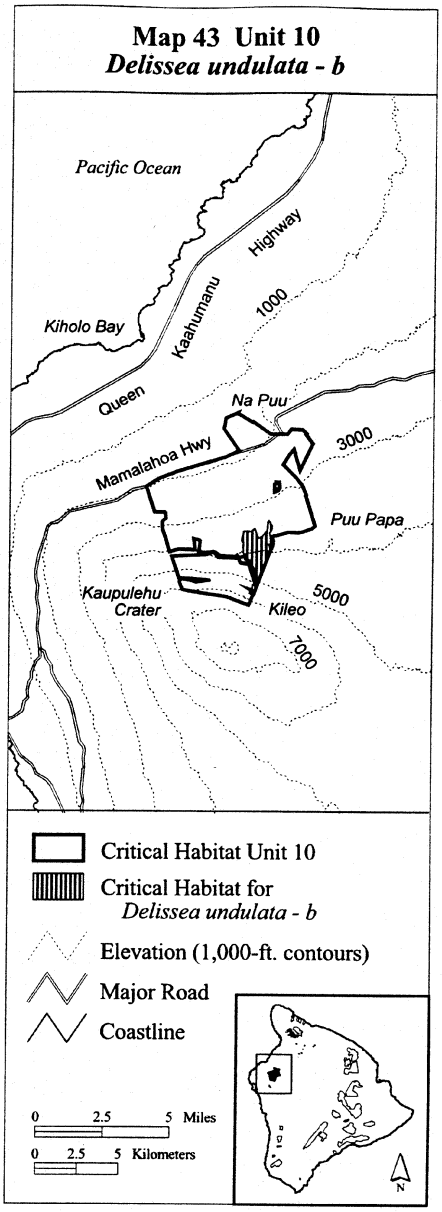
(ii) NOTE: Map 42 follows:



(43) Hawaii 10—*Delissea undulata*—b (379 ha, 938 ac)

(i) Unit consists of the following 46 boundary points: Start at 200358, 2186648; 200652, 2186613; 200897, 2186774; 201009, 2186431; 201114, 2186199; 201409, 2186389; 201640, 2186683; 201675, 2187187; 201738, 2187292; 201892, 2186998; 201913, 2186767; 201843, 2186571; 201780, 2186522; 201808, 2186312; 201913, 2186347; 201969, 2186227; 201899, 2186178; 201997, 2186038; 201934, 2185947; 201987, 2185871; 201923, 2185703; 201864, 2185800; 201794, 2185800; 201857, 2185569; 201871, 2185564; 200825, 2182788; 200596, 2182893; 200701, 2183146; 200785, 2183391; 200890, 2183440; 200841, 2183566; 200848, 2183755; 200806, 2183860; 200855, 2183958; 200862, 2184287; 200596, 2184708; 200596, 2184820; 200351, 2184974; 200316, 2185219; 200197, 2185261; 200183, 2185695; 200204, 2185919; 200092, 2186010; 200113, 2186199; 200169, 2186375; 200211, 2186634; return to starting point.

(ii) NOTE: Map 43 follows:

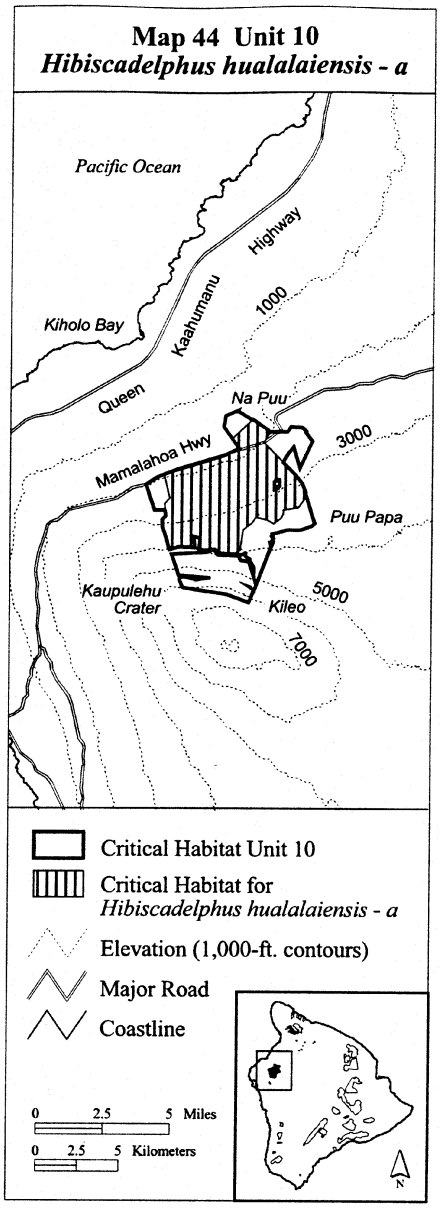


(44) Hawaii 10—*Hibiscadelphus hualalaiensis*—a (3,979 ha, 9,831 ac)

(i) Unit consists of the following 38 boundary points: Start at 195782, 2185368; 195522, 2186168; 195315, 2186796; 195326, 2187196; 195544, 2187388; 195469, 2188155; 195786, 2188492; 195432, 2189916; 199124, 2191069; 199983, 2191543; 199508, 2192106; 200761, 2193288; 201812, 2192545; 201404, 2191895; 203343, 2189879; 203681, 2189439; 203918, 2188866; 203785, 2188371; 203480, 2187932; 202574, 2187761; 202584, 2187526; 202456, 2187271; 201998, 2186930; 201572, 2187207; 200965, 2187345; 200731, 2186962; 200177, 2186557; 200011, 2185340; 199774, 2185089; 198932, 2185139; 198670, 2185243; 198391, 2185428; 198036, 2185330; 197566, 2185385; 197604, 2186079; 197221, 2186183; 197270, 2185549; 196319, 2185538; return to starting point.

(ii) Excluding one area bounded by the following 12 points (15 ha, 38 ac): Start at 202034, 2189562; 202141, 2189566; 202153, 2189649; 202308, 2189645; 202298, 2189564; 202339, 2189548; 202329, 2189219; 202193, 2189187; 202230, 2189088; 202042, 2189024; 202020, 2189151; 202024, 2189554; return to starting point.

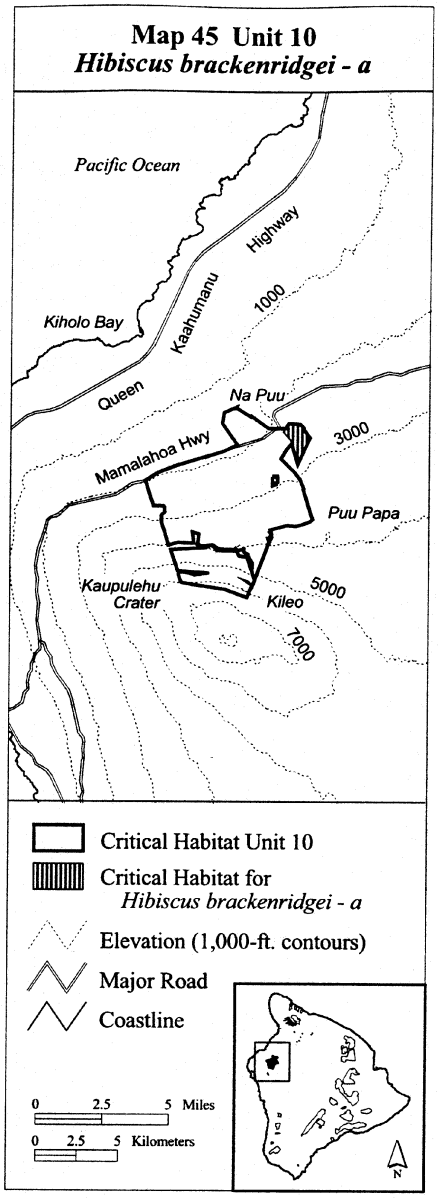
(iii) NOTE: Map 44 follows:



(45) Hawaii 10—*Hibiscus brackenridgei*—a (196 ha, 485 ac)

(i) Unit consists of the following six boundary points: Start at 202687, 2192346; 203014, 2192842; 203739, 2192737; 204306, 2191983; 203553, 2190355; 203111, 2191829; return to starting point.

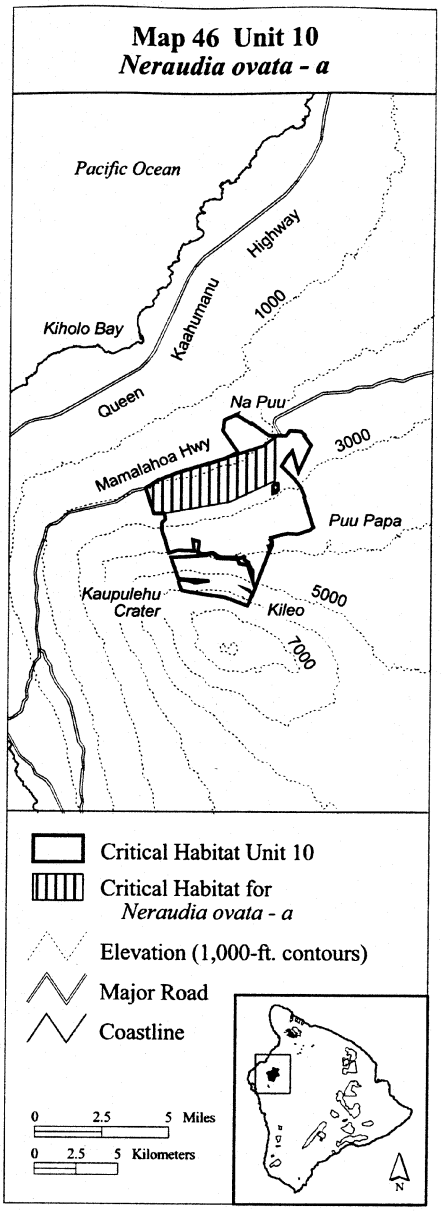
(ii) NOTE: Map 45 follows:



(46) Hawaii 10—*Neraudia ovata*—a (1,859 ha, 4,593 ac)

(i) Unit consists of the following 15 boundary points: Start at 194344, 2189314; 194343, 2189318; 194355, 2189326; 195020, 2189752; 195454, 2189938; 196227, 2190232; 199076, 2191106; 201428, 2191880; 202171, 2192469; 202165, 2191079; 202163, 2189814; 199428, 2188470; 195418, 2187770; 194855, 2187783; 194588, 2188581; return to starting point.

(ii) NOTE: Map 46 follows:

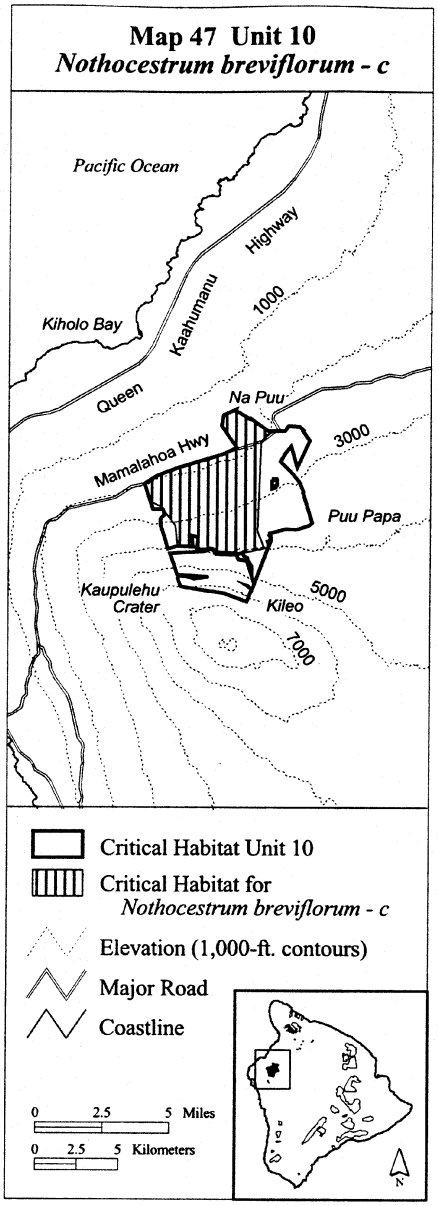


(47) Hawaii 10—*Nothocestrum breviflorum*—c (3,627 ha, 8,964 ac)

(i) Unit consists of the following 29 boundary points: Start at 194693, 2188269; 194383, 2189286; 195034, 2189776; 195460, 2189937; 196240, 2190194; 199103,

2191128; 199891, 2191533; 198991, 2192862; 199103, 2193492; 199824, 2193830; 199804, 2193770; 200696, 2193256; 201895, 2192456; 201355, 2191804; 201174, 2186424; 201586, 2185393; 199915, 2185040; 199838, 2185152; 198796, 2185246; 198417, 2185384; 197754, 2185341; 197538, 2185442; 197616, 2186073; 197228, 2186185; 197289, 2185505; 196333, 2185522; 196200, 2186785; 195323, 2187943; 194697, 2188256; return to starting point.

(ii) NOTE: Map 47 follows:

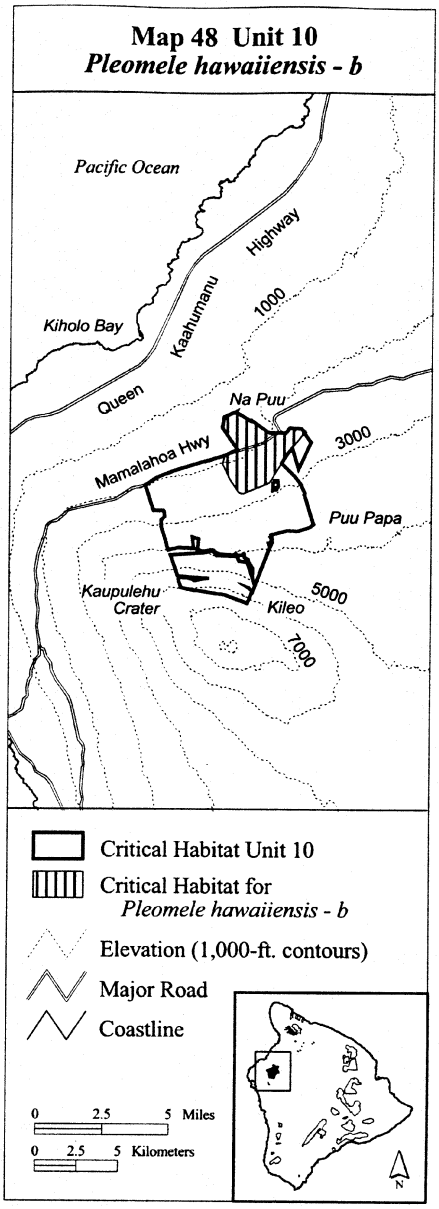


(48) Hawaii 10—*Pleomele hawaiiensis*—b (1,338 ha, 3,306 ac)

(i) Unit consists of the following 19 boundary points: Start at 199227, 2191119; 199931, 2191535; 199427, 2192287;

198994, 2192926; 199211, 2193518; 199835, 2193778; 201804, 2192540; 202800, 2192542; 203018, 2192863; 203684, 2192822; 203919, 2192569; 203588, 2192149; 202916, 2191296; 201823, 2189505; 200231, 2188809; 200012, 2188896; 199513, 2189670; 199023, 2190652; 199126, 2191046; return to starting point.

(ii) NOTE: Map 48 follows:

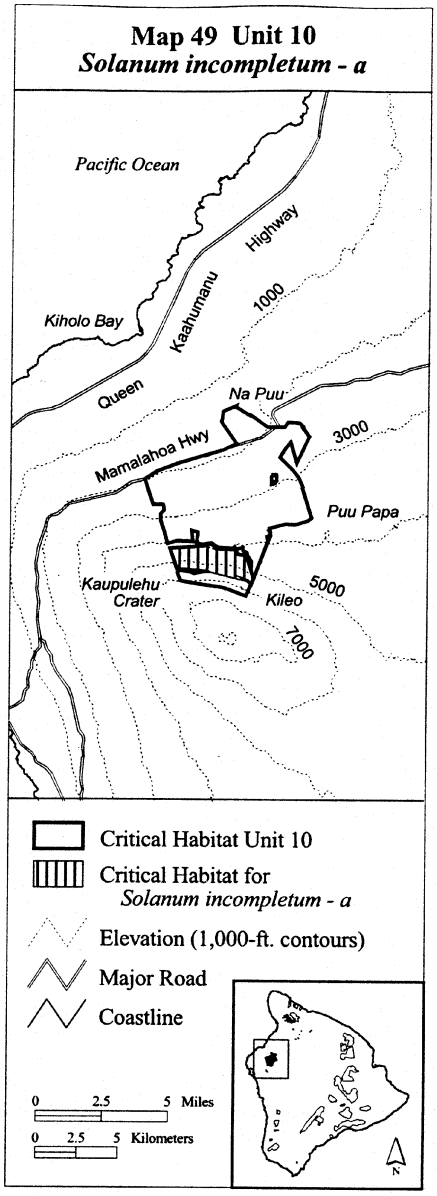


(49) Hawaii 10—*Solanum incompletum*—a (705 ha, 1,741 ac)

(i) Unit consists of the following 14 boundary points: Start at 200840, 2183071; 200105, 2183211; 198217, 2183674;

196354, 2183822; 195904, 2185079; 198074, 2185218; 198313, 2185355; 198524, 2185294; 198681, 2185062; 199717, 2185030; 199911, 2185024; 200028, 2184733; 200540, 2184657; 200956, 2183332; return to starting point.

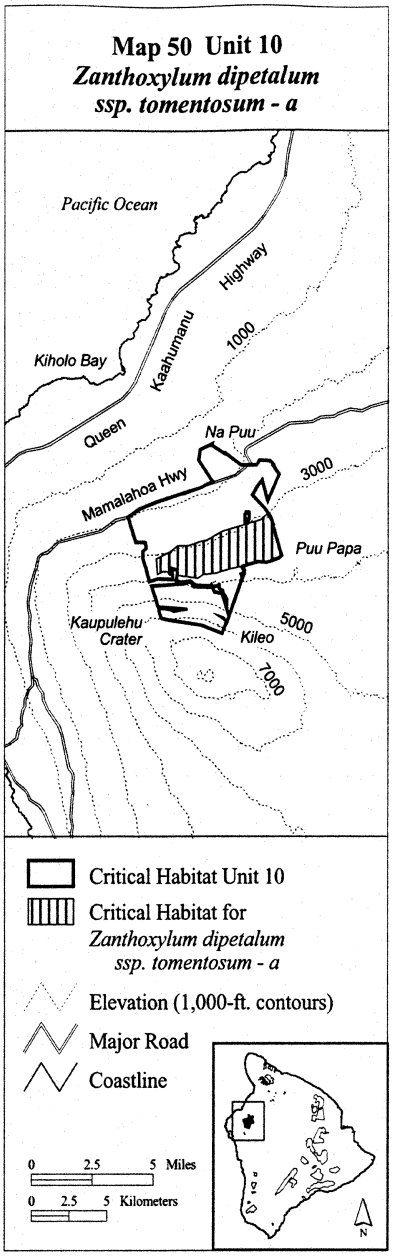
(ii) NOTE: Map 49 follows:



(50) Hawaii 10—*Zanthoxylum dipetalum* ssp. *tomentosum*—a (1,685 ha, 4,164 ac)

(i) Unit consists of the following 30 boundary points: Start at 204490, 2186961; 204259, 2186791; 203663, 2186586; 203502, 2186552; 202908, 2186594; 202064, 2186341; 200938, 2186115; 200094, 2185862; 199277, 2185806; 198968, 2185581; 197898, 2185721; 197620, 2185755; 197630, 2186116; 197213, 2186192; 197260, 2185765; 197082, 2185778; 196970, 2185975; 196660, 2185975; 196294, 2185806; 196217, 2186760; 197251, 2187269; 197645, 2187579; 198321, 2187579; 199334, 2187860; 199503, 2187860; 200544, 2188451; 203129, 2189150; 203527, 2189491; 203802, 2189055; 203972, 2188619; return to starting point.

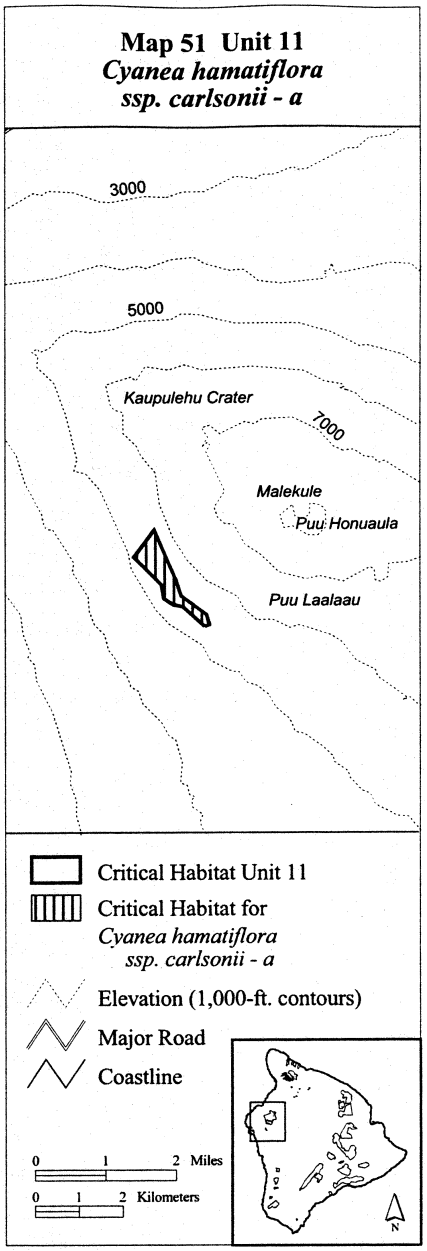
(ii) NOTE: Map 50 follows:



(51) Hawaii 11—*Cyanea hamatiflora* ssp. *carlsonii*—a (92 ha, 227 ac)

(i) Unit consists of the following 11 boundary points: Start at 197174, 2177104; 196674, 2177566; 196458, 2177613; 196239, 2177751; 196187, 2178067; 195553, 2178701; 196028, 2179334; 196530, 2178147; 196637, 2177811; 197221, 2177377; 197278, 2177142; return to starting point.

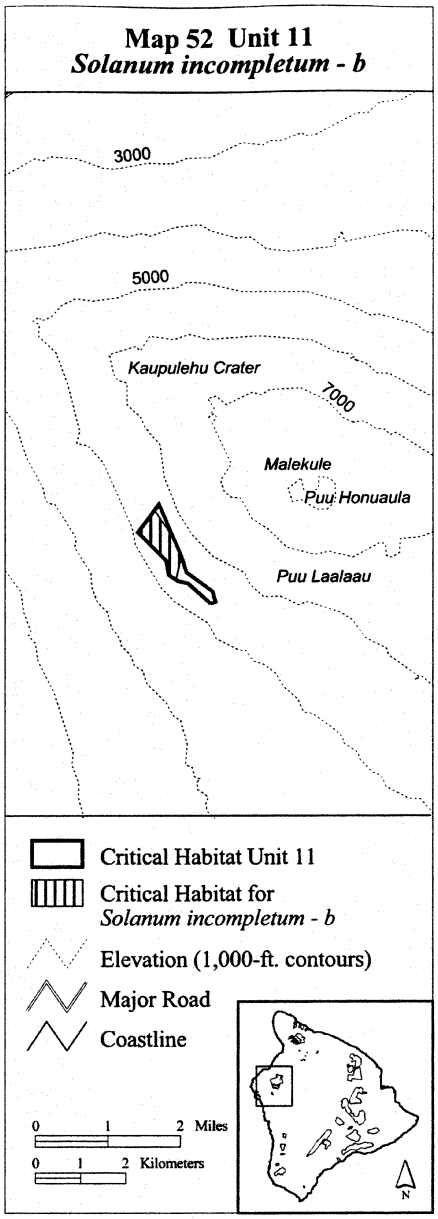
(ii) NOTE: Map 51 follows:



(52) Hawaii 11—*Solanum incompletum*—b (57 ha, 141 ac)

(i) Unit consists of the following seven boundary points: Start at 195939, 2179184; 196289, 2178679; 196513, 2178138; 196403, 2177670; 196252, 2177759; 196204, 2178081; 195581, 2178700; return to starting point.

(ii) NOTE: Map 52 follows:

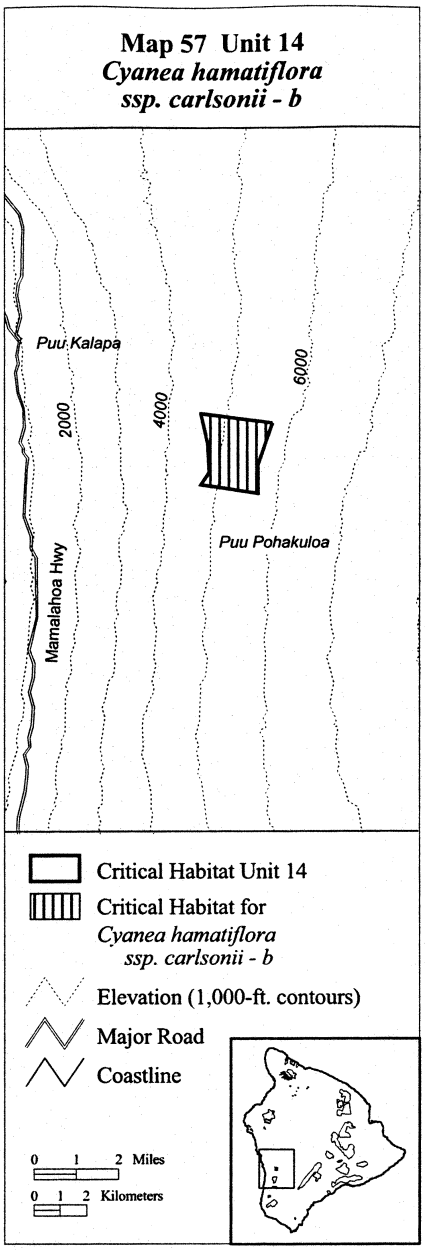


(53)–(56) [Reserved]

(57) Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*—b (597 ha, 1,475 ac)

(i) Unit consists of the following 10 boundary points: Start at 207156, 2146304; 207134, 2146239; 206598, 2144681; 206598, 2143570; 204429, 2143915; 204728, 2144393; 204674, 2145490; 204674, 2145491; 204426, 2146629; 204425, 2146649; return to starting point.

(ii) NOTE: Map 57 follows:

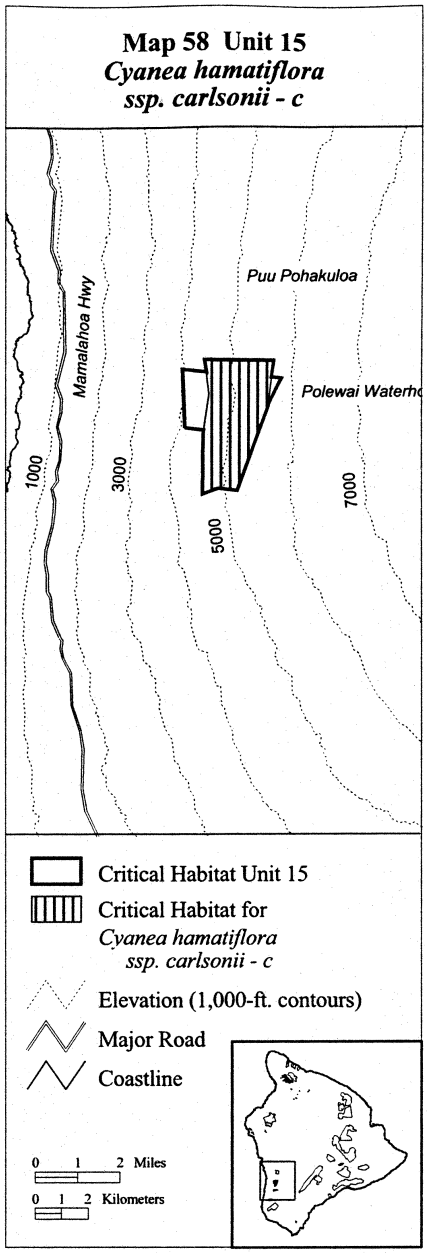


(58) Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*—c (1,045 ha, 2,583 ac)

(i) Unit consists of the following eight boundary points: Start at 205937,

2136720; 204747, 2133469; 204039, 2133547; 203420, 2133302; 203440, 2135670; 203670, 2137181; 203517, 2138526; 206149, 2138468; return to starting point.

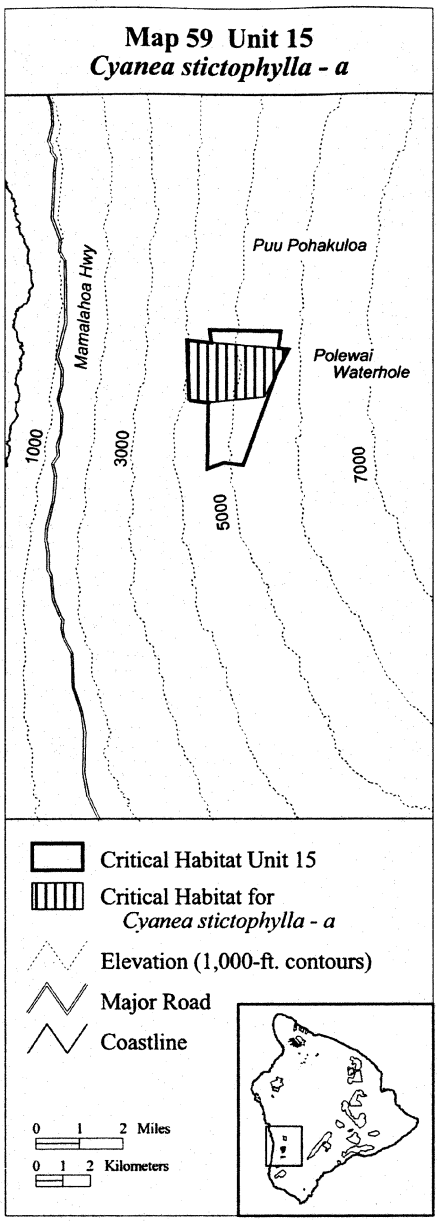
(ii) NOTE: Map 58 follows:



(59) Hawaii 15—*Cyanea stictophylla*—a (685 ha, 1,693 ac)

(i) Unit consists of the following five boundary points: Start at 202738, 2135888; 202669, 2138135; 206446, 2137807; 205568, 2136027; 203447, 2135810; return to starting point.

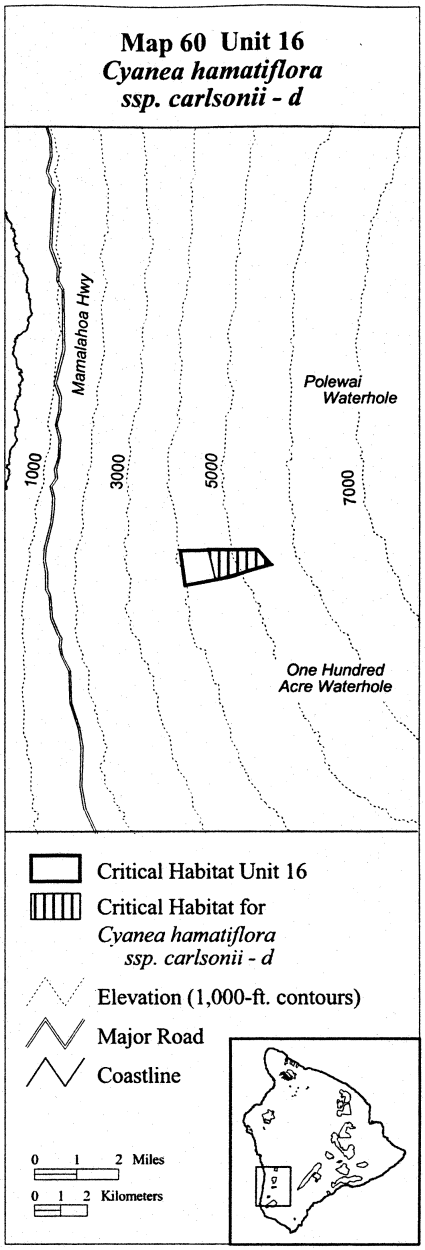
(ii) NOTE: Map 59 follows:



(60) Hawaii 16—*Cyanea hamatiflora* ssp. *carlsonii*—d (186 ha, 459 ac)

(i) Unit consists of the following four boundary points: Start at 203994, 2129916; 203715, 2131071; 205603, 2131073; 206118, 2130489; return to starting point.

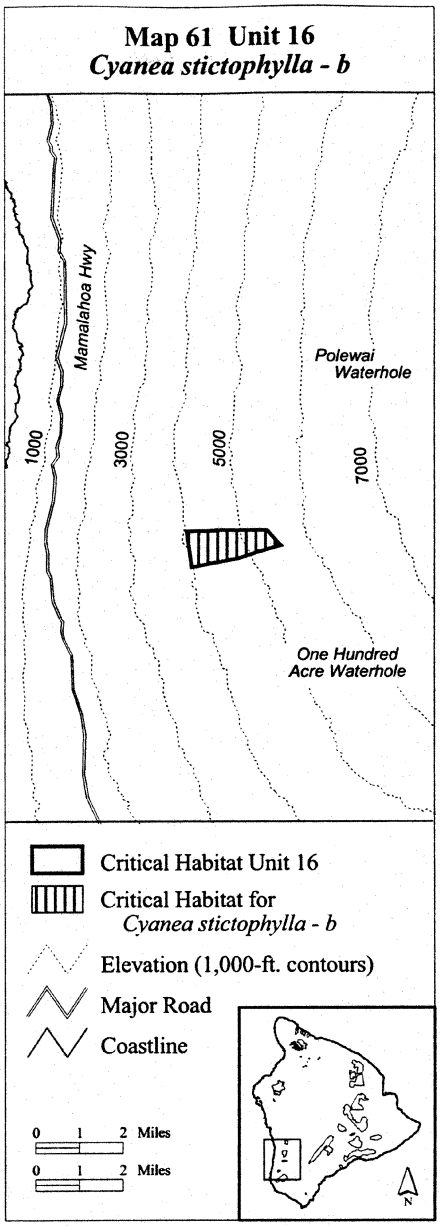
(ii) NOTE: Map 60 follows:



(61) Hawaii 16—*Cyanea stictophylla*—b (327 ha, 809 ac)

(i) Unit consists of the following five boundary points: Start at 206085, 2130525; 204548, 2130013; 202838, 2129682; 202649, 2131030; 205588, 2131077; return to starting point.

(ii) NOTE: Map 61 follows:

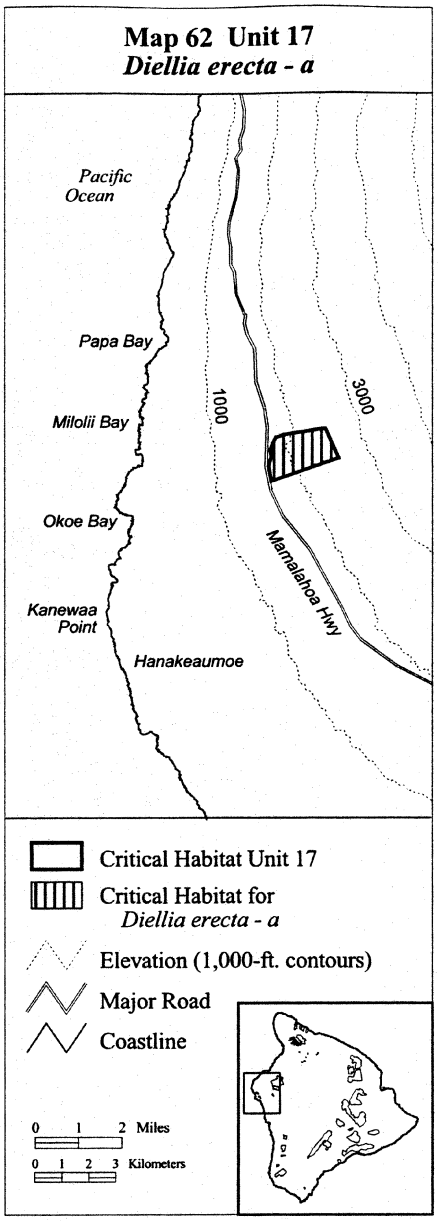


(62) Hawaii 17—*Diellia erecta*—a (329 ha, 814 ac)

(i) Unit consists of the following nine boundary points: Start at 199021, 2121439; 198916, 2122019; 199049, 2122319;

199008, 2122707; 199063, 2122847; 199186, 2123092; 199520, 2123204; 201031, 2123446; 201505, 2122323; return to starting point.

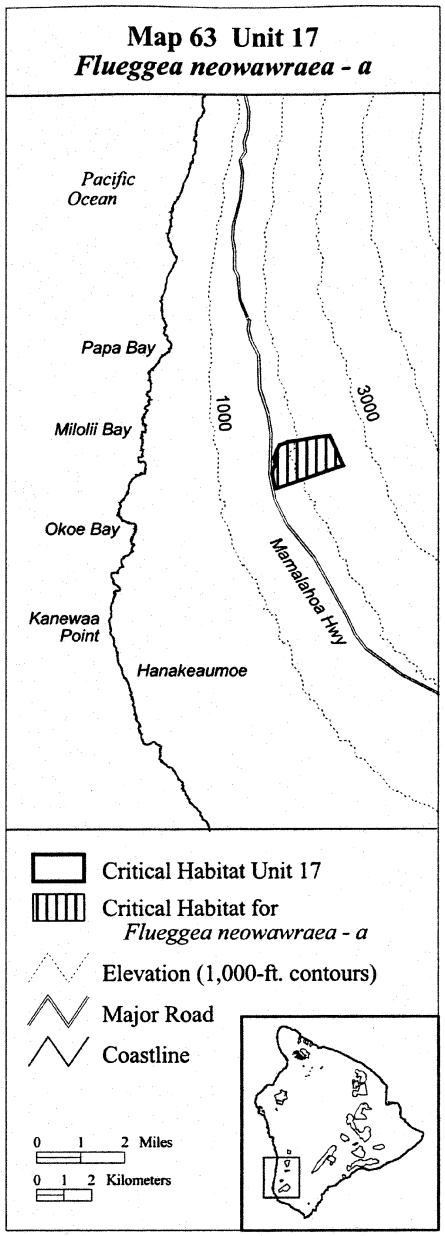
(ii) NOTE: Map 62 follows:



(63) Hawaii 17—*Flueggea neowawraea*—a (327 ha, 807 ac)

(i) Unit consists of the following eight boundary points: Start at 199031, 2121453; 198919, 2122094; 199007, 2122357; 198981, 2122641; 199188, 2123085; 199474, 2123194; 201018, 2123445; 201491, 2122325; return to starting point.

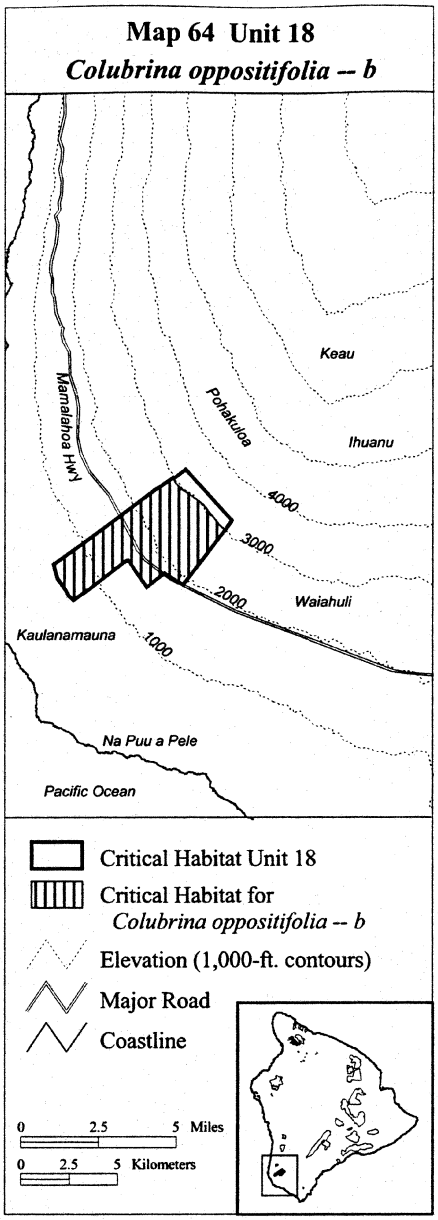
(ii) NOTE: Map 63 follows:



(64) Hawaii 18—*Colubrina oppositifolia*—b (2,717 ha, 6,713 ac)

(i) Unit consists of the following 15 boundary points: Start at 198394, 2113625; 198223, 2113930; 197796, 2114535; 197583, 2115280; 203752, 2119808; 203928, 2119514; 204315, 2119167; 205315, 2118433; 206212, 2117332; 206446, 2117067; 204284, 2114251; 203373, 2114863; 202434, 2114094; 201438, 2115531; 198636, 2113397; return to starting point.

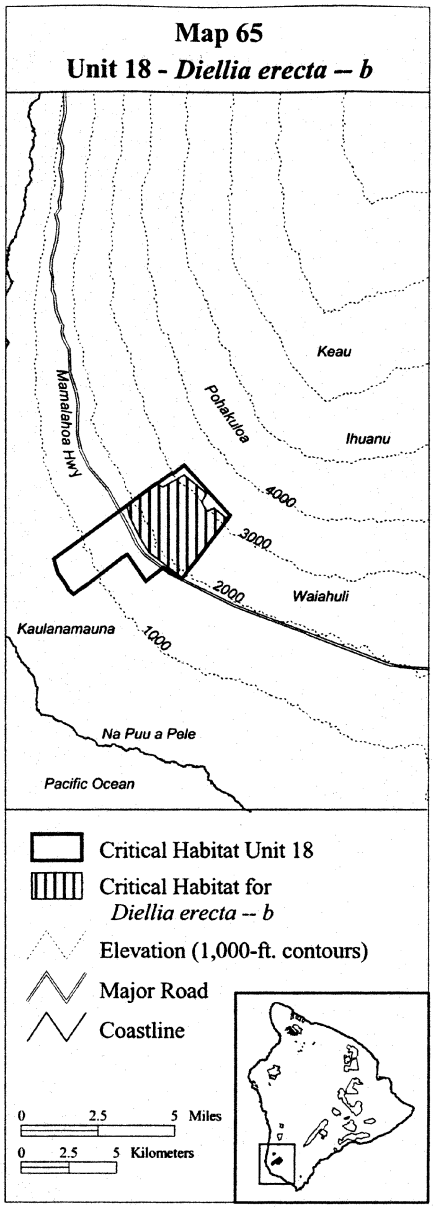
(ii) NOTE: Map 64 follows:



(65) Hawaii 18—*Diellia erecta*—b (1,615 ha, 3,992 ac)

(i) Unit consists of the following 13 boundary points: Start at 202997, 2119281; 203310, 2119053; 204449, 2119707; 205626, 2118736; 205346, 2118306; 205626, 2117783; 205999, 2117970; 206709, 2117375; 204354, 2114272; 202588, 2115599; 202097, 2116400; 201568, 2117511; 201401, 2118078; return to starting point.

(ii) NOTE: Map 65 follows:

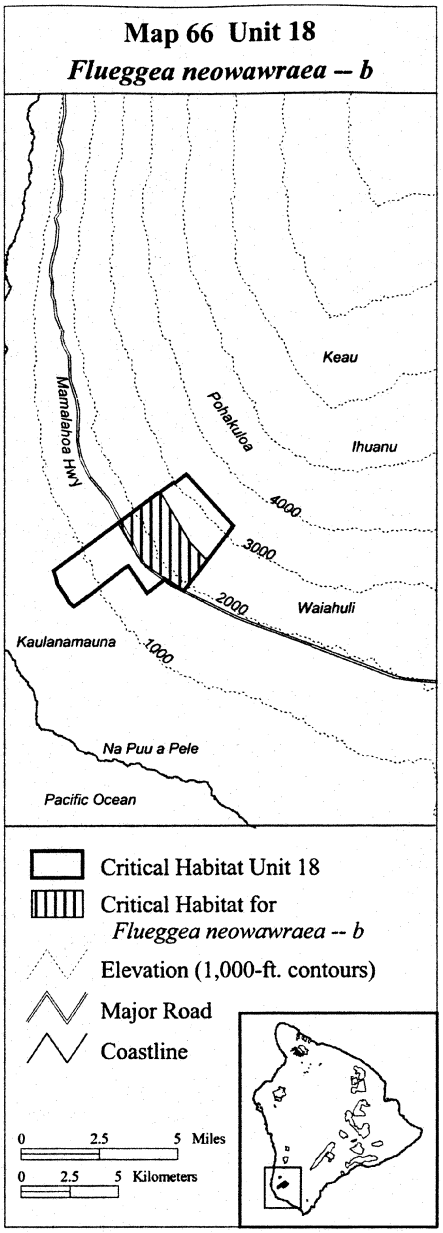


(66) Hawaii 18—*Flueggea neowawraea*—b (1,148 ha, 2,838 ac)

(i) Unit consists of the following six boundary points: Start at 203129, 2119316; 204604, 2116730; 205505, 2115780;

204286, 2114193; 202146, 2115653; 200912, 2117708; return to starting point.

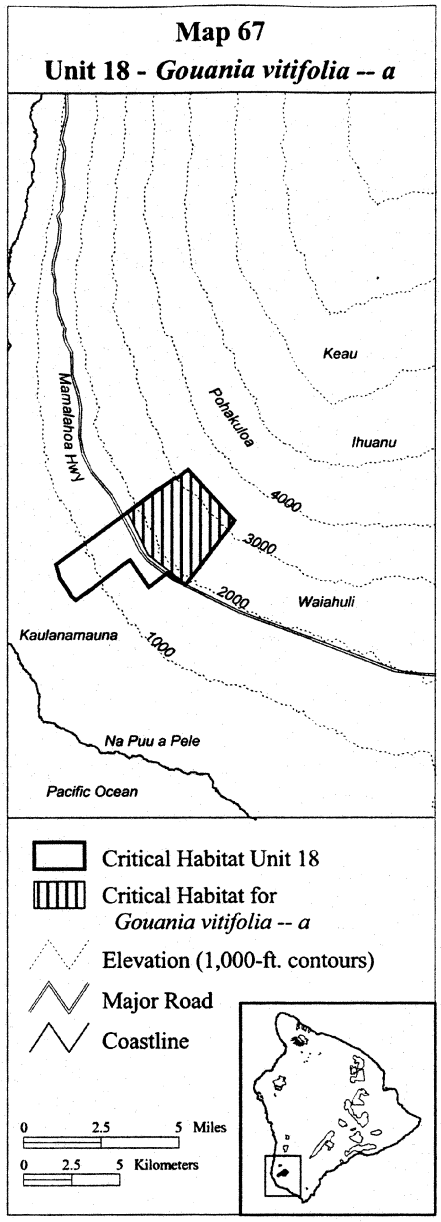
(ii) NOTE: Map 66 follows:



(67) Hawaii 18—*Gouania vitifolia*—a (1,785 ha, 4,412 ac)

(i) Unit consists of the following five boundary points: Start at 204444, 2120239; 206850, 2117574; 204309, 2114257; 202399, 2115771; 201311, 2117954; return to starting point.

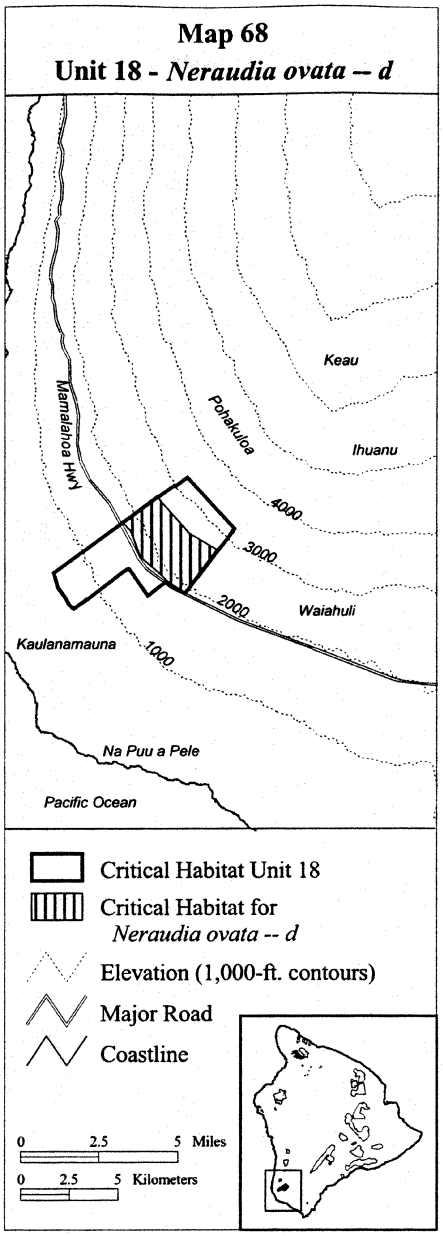
(ii) NOTE: Map 67 follows:



(68) Hawaii 18—*Neraudia ovata*—d (1,134 ha, 2,801 ac)

(i) Unit consists of the following 10 boundary points: Start at 201174, 2117843; 202959, 2119186; 204559, 2117309; 205954, 2116477; 204277, 2114280; 203399, 2114850; 202976, 2115309; 202698, 2115528; 202028, 2116090; 201532, 2117457; return to starting point.

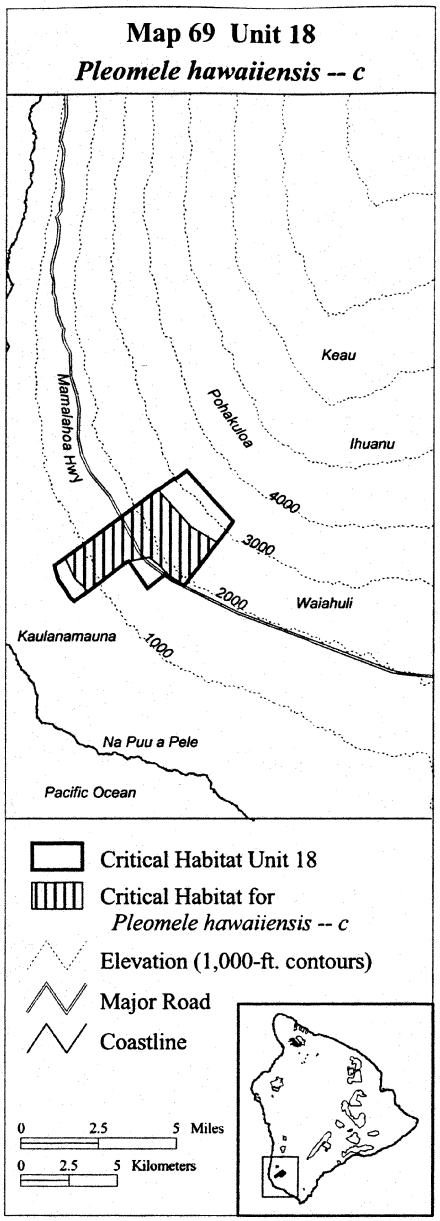
(ii) NOTE: Map 68 follows:



(69) Hawaii 18—*Pleomele hawaiiensis*—c (1,997 ha, 4,934 ac)

(i) Unit consists of the following 14 boundary points: Start at 202966, 2119257; 204672, 2117280; 206034, 2116476; 204325, 2114252; 203522, 2114753; 203049, 2115266; 202477, 2115720; 201375, 2115486; 199227, 2113813; 199190, 2114100; 198653, 2114587; 198378, 2115149; 198141, 2115661; 201104, 2117894; return to starting point.

(ii) NOTE: Map 69 follows:

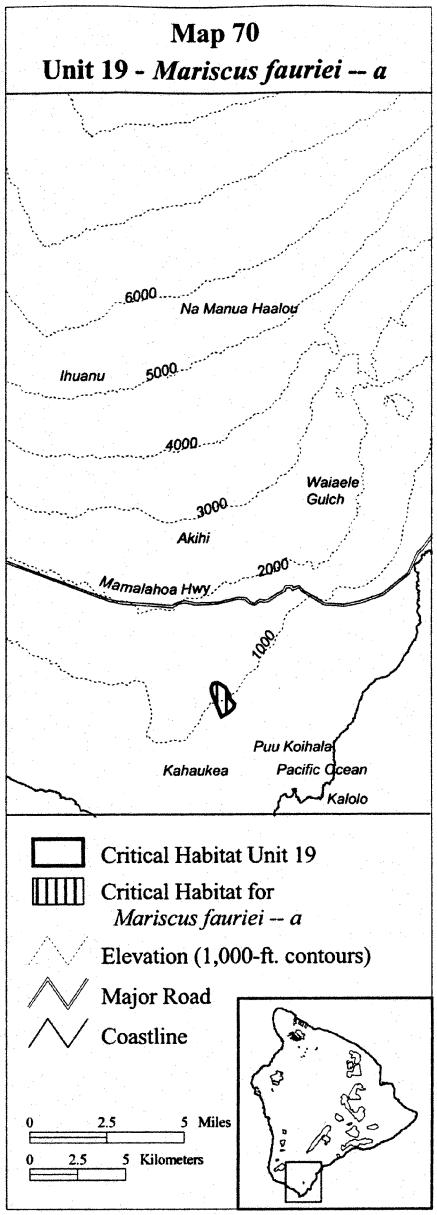


(70) Hawaii 19—*Mariscus fauriei*—a (127 ha, 313 ac)

(i) Unit consists of the following 14 boundary points: Start at 220519, 2105287; 220658, 2105408; 220821, 2105428;

221200, 2105198; 221467, 2104758; 221444, 2104588; 221445, 2104587; 221710, 2104303; 221694, 2104107; 221493, 2103896; 221254, 2103732; 221032, 2103615; 220535, 2104849; 220496, 2105093; return to starting point.

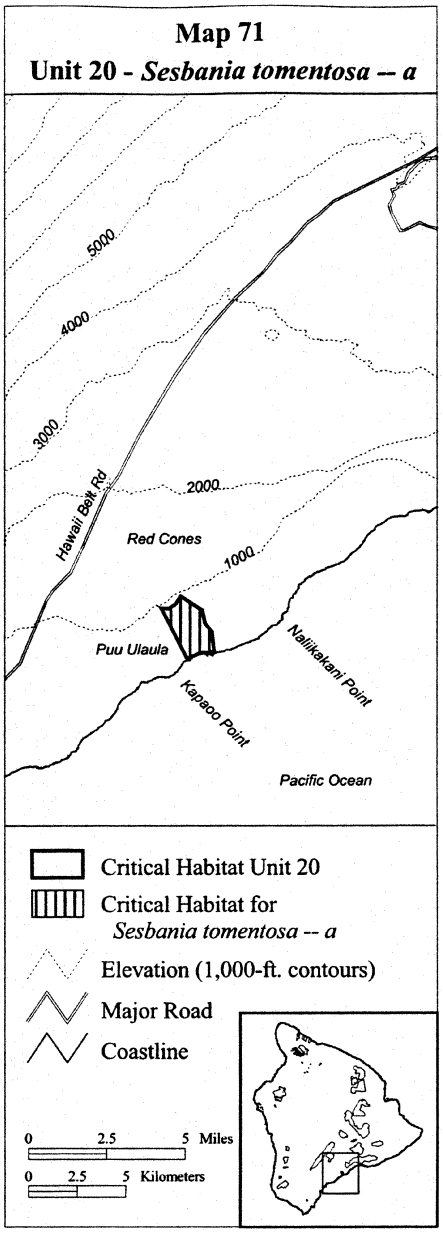
(ii) NOTE: Map 70 follows:



(71) Hawaii 20—*Sesbania tomentosa*—a (486 ha, 1,201 ac)

(i) Unit consists of the following nine boundary points: Coast; 249798, 2124556; 248451, 2124193; 247078, 2126859; 247458, 2126835; 247811, 2127062; 248104, 2127469; 249187, 2126745; 249330, 2126069; 249701, 2125632.

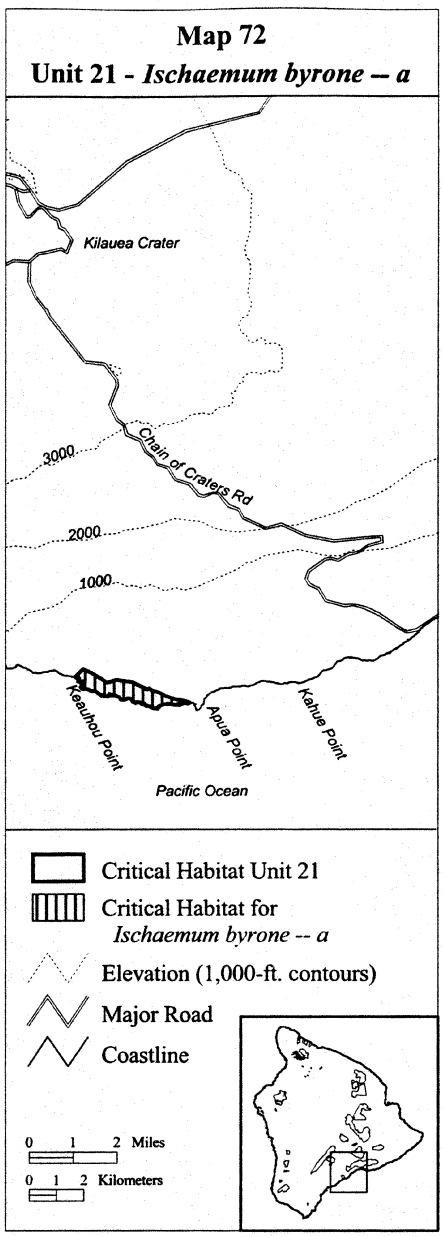
(ii) NOTE: Map 71 follows:



(72) Hawaii 21—*Ischaemum byrone*—a (206 ha, 510 ac)

(i) Unit consists of the following 16 boundary points: Start at 265058, 2131828; 265367, 2132139; 265624, 2132015; 265956, 2131806; 266250, 2131617; 266582, 2131721; 267180, 2131645; 267711, 2131370; 267789, 2131408; 267891, 2131332; 268138, 2131256; 268432, 2131114; 268755, 2131009; 269049, 2130962; 269248, 2130905; 269266, 2130849; return to starting point.

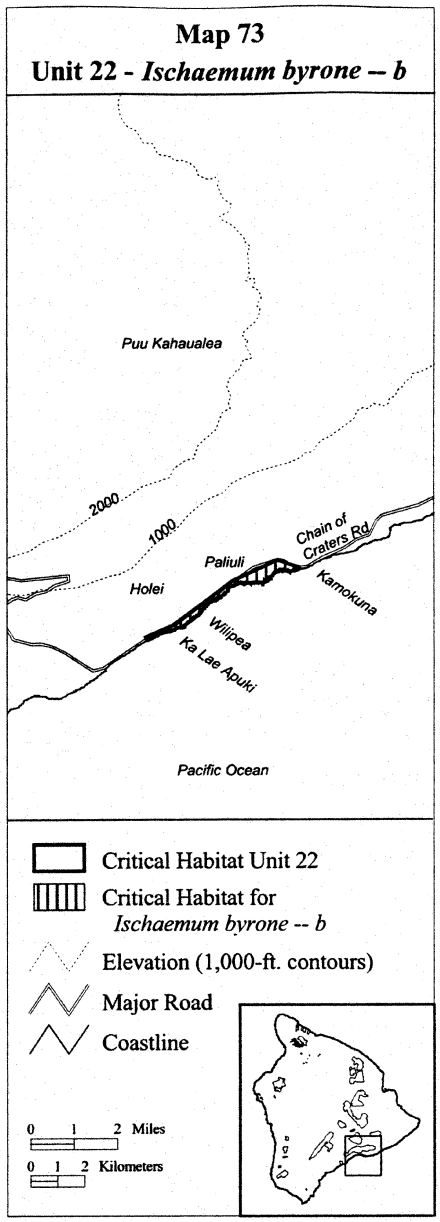
(ii) NOTE: Map 72 follows:



(73) Hawaii 22—*Ischaemum byrone*—b (159 ha, 393 ac)

(i) Unit consists of the following 11 boundary points: Coast; 284893, 2137276; 279221, 2134615; 279221, 2134615; 279175, 2134728; 280175, 2135157; 281315, 2136008; 282395, 2136841; 284061, 2137614; 284803, 2137355; 284850, 2137360; 284874, 2137349.

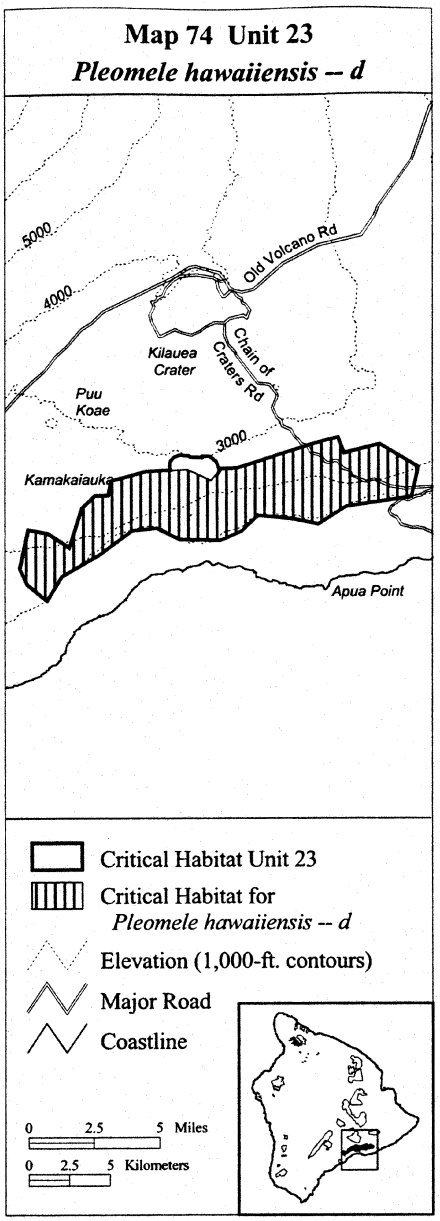
(ii) NOTE: Map 73 follows:



(74) Hawaii 23—*Pleomele hawaiiensis*—d
(8,943 ha, 22,097 ac)

(i) Unit consists of the following 33 boundary points: Start at 274892, 2136370; 270874, 2135790; 269174, 2134697; 267700, 2135019; 265425, 2135256; 264383, 2134214; 263150, 2133692; 260638, 2133740; 259217, 2134451; 257700, 2134309; 255757, 2132839; 253387, 2131465; 252487, 2129948; 251241, 2130960; 250795, 2131956; 251310, 2134361; 252547, 2134120; 253852, 2133261; 254607, 2135700; 255437, 2136482; 256222, 2136490; 256394, 2137383; 258592, 2138001; 261132, 2138090; 262576, 2137383; 263163, 2138161; 264146, 2138195; 268506, 2139617; 269645, 2139914; 270342, 2140091; 270763, 2139124; 272917, 2139676; 275306, 2138240; return to starting point.

(ii) NOTE: Map 74 follows:

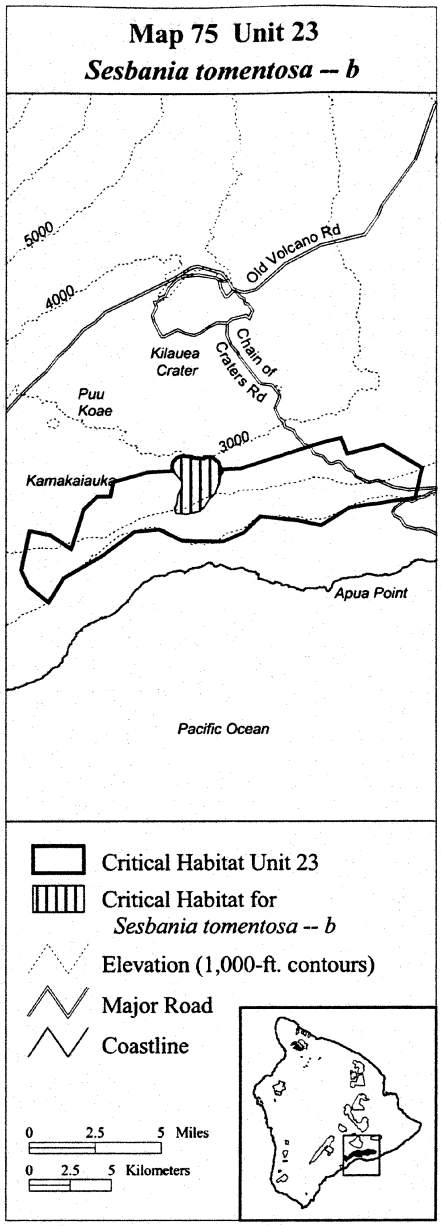


(75) Hawaii 23—*Sesbania tomentosa*—b
(803 ha, 1,984 ac)

(i) Unit consists of the following 27 boundary points: Start at 260007, 2138277; 260064, 2138614; 260288, 2138861; 260620, 2139007; 260945, 2138979; 261187,

2138985; 261288, 2138856; 261541, 2138867; 261945, 2138822; 262013, 2138945; 262440, 2138951; 262861, 2138592; 263063, 2138125; 262940, 2137446; 262614, 2136665; 262294, 2136266; 262007, 2135817; 261704, 2135564; 260951, 2135401; 260255, 2135424; 260176, 2135727; 260316, 2136075; 260361, 2136524; 260608, 2137002; 260580, 2137440; 260153, 2137906; 260058, 2138064; return to starting point.

(ii) NOTE: Map 75 follows:

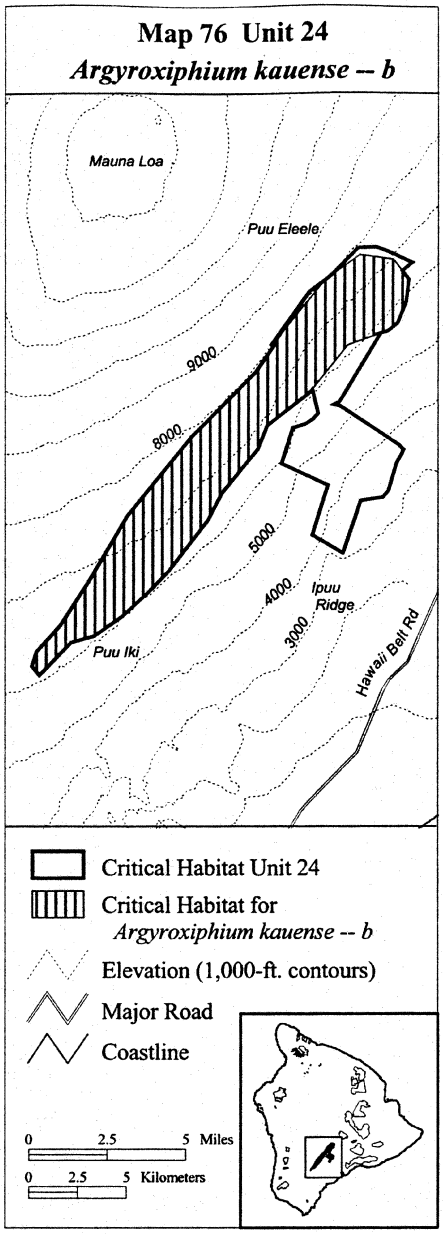


(76) Hawaii 24—*Argyroxiphium kauense*—b (7,795 ha, 19,261 ac)

(i) Unit consists of the following 27 boundary points: Start at 241932, 2146263; 241417, 2145847; 239409, 2145112;

237401, 2142639; 235247, 2140949; 234781, 2139725; 232871, 2137399; 232161, 2136003; 230227, 2133432; 229223, 2132403; 227778, 2131032; 226357, 2130052; 225133, 2129685; 223541, 2127995; 223150, 2128461; 223394, 2129220; 224594, 2130542; 226039, 2132819; 227998, 2136174; 231377, 2140386; 234659, 2143741; 236177, 2145945; 238210, 2148467; 239997, 2149789; 241711, 2149544; 242495, 2148491; 242372, 2147341; return to starting point.

(ii) NOTE: Map 76 follows:

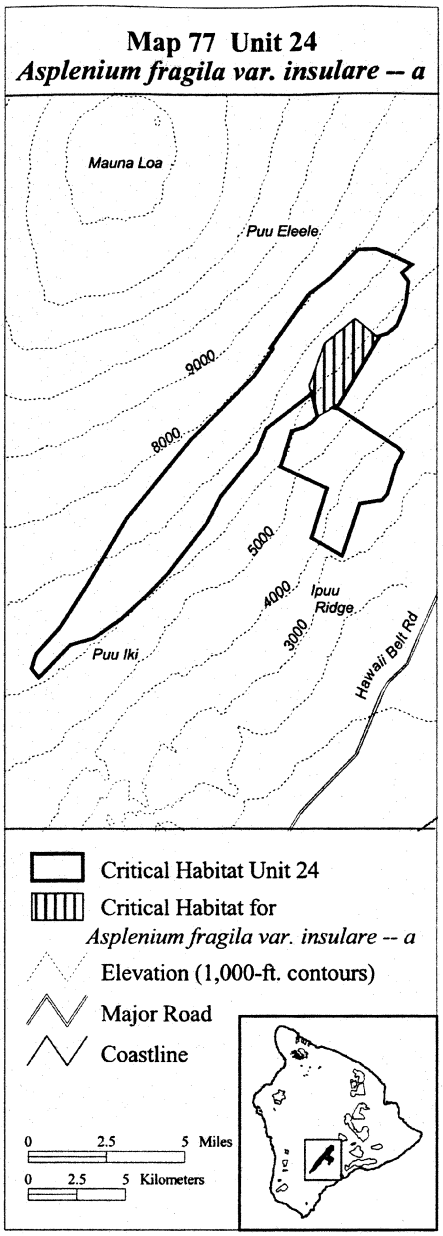


(77) Hawaii 24—*Asplenium fragile* var. *insulare*—a (907 ha, 2,241 ac)

(i) Unit consists of the following six boundary points: Start at 239781, 2146615; 241003, 2145626; 238959, 2142183;

237893, 2141565; 237452, 2143181; 238209, 2145335; return to starting point.

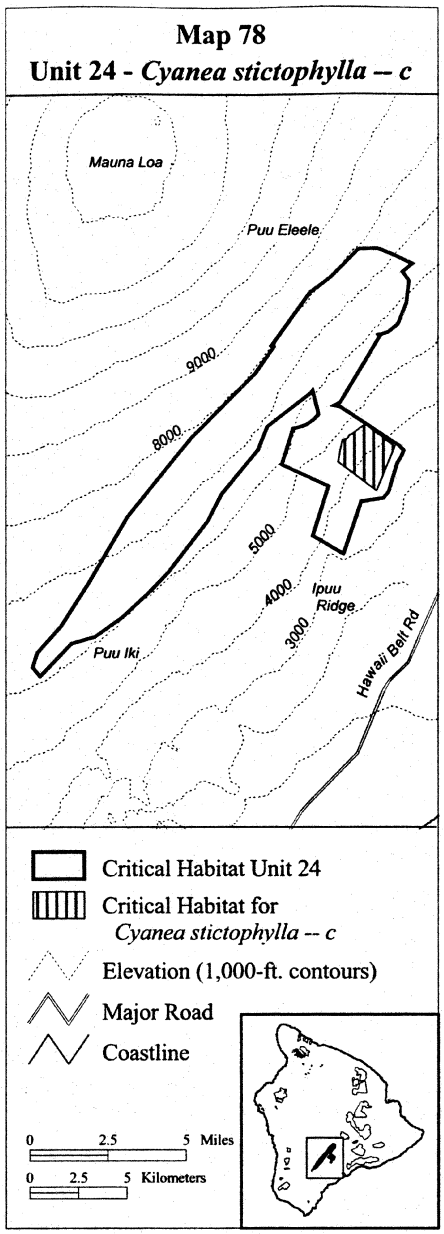
(ii) NOTE: Map 77 follows:



(78) Hawaii 24—*Cyanea stictophylla*—c (584 ha, 1,443 ac)

(i) Unit consists of the following nine boundary points: Start at 240250, 2141066; 241783, 2139920; 240835, 2137607; 238868, 2139097; 238947, 2139692; 239116, 2140248; 239332, 2140329; 239455, 2140496; 239602, 2140570; return to starting point.

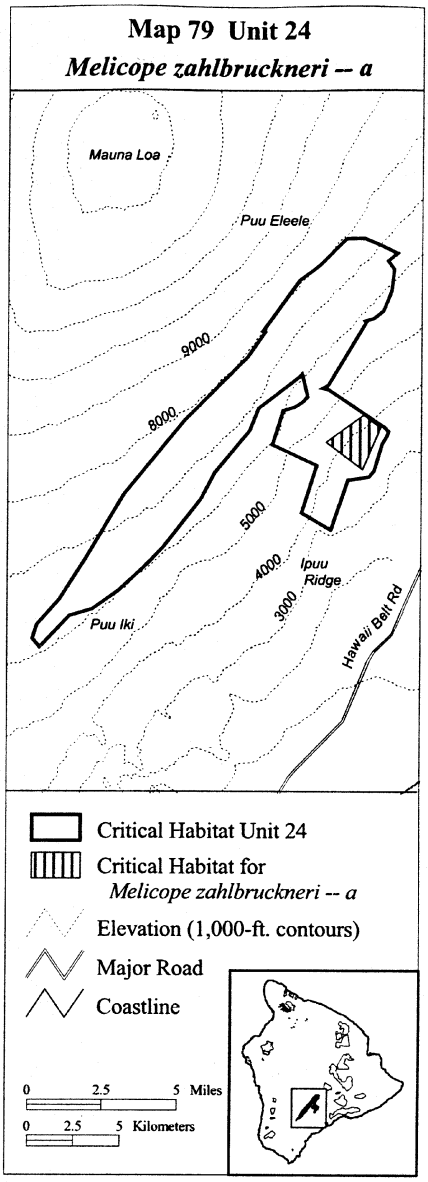
(ii) NOTE: Map 78 follows:



(79) Hawaii 24—*Melicope zahlbruckneri*—a (434 ha, 1,072 ac)

(i) Unit consists of the following four boundary points: Start at 238867, 2139105; 240894, 2140601; 241788, 2139910; 240819, 2137611; return to starting point.

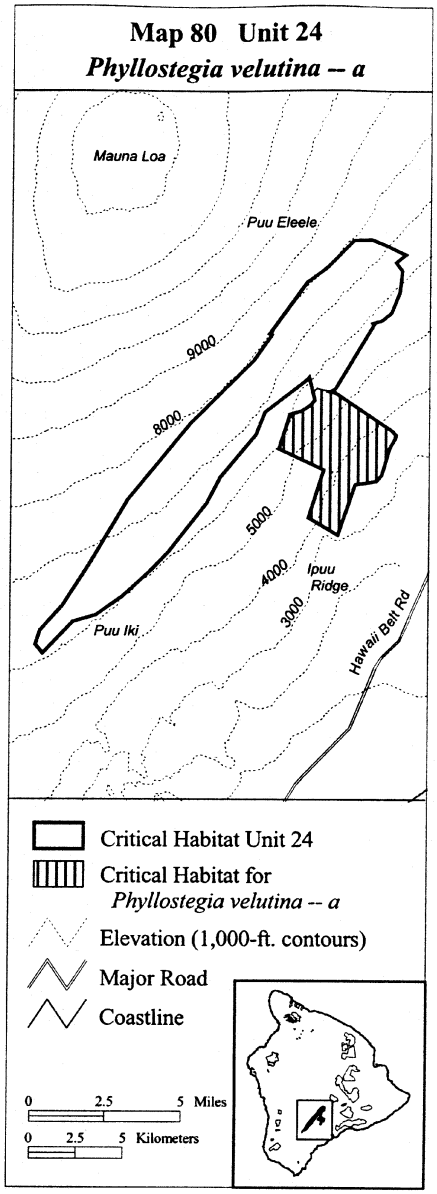
(ii) NOTE: Map 79 follows:



(80) Hawaii 24—*Phyllostegia velutina*—a (2,466 ha, 6,093 ac)

(i) Unit consists of the following 18 boundary points: Start at 238962, 2141970; 242007, 2139925; 242207, 2139714; 242118, 2139436; 241893, 2139030; 241440, 2137533; 241162, 2137224; 240062, 2137024; 239123, 2134346; 237550, 2135268; 238350, 2137847; 235994, 2138947; 236552, 2140823; 237172, 2141003; 237594, 2141281; 237850, 2141570; 237828, 2142070; 238005, 2142204; return to starting point.

(ii) NOTE: Map 80 follows:

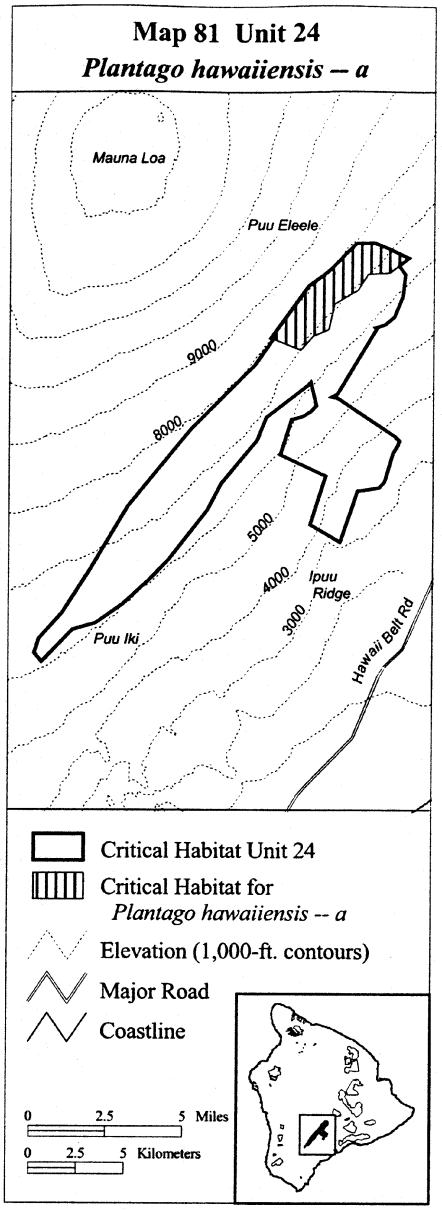


(81) Hawaii 24—*Plantago hawaiensis*—a (1,348 ha, 3,330 ac)

(i) Unit consists of the following 14 boundary points: Start at 239891, 2150141; 240843, 2150153; 241675, 2149824; 242668, 2149348; 241709, 2148593; 240533, 2148496; 240027, 2147666; 238765, 2146944;

238485, 2145606; 237676, 2145240; 237021, 2144491; 235459, 2145119; 237410, 2147869; 238480, 2148664; return to starting point.

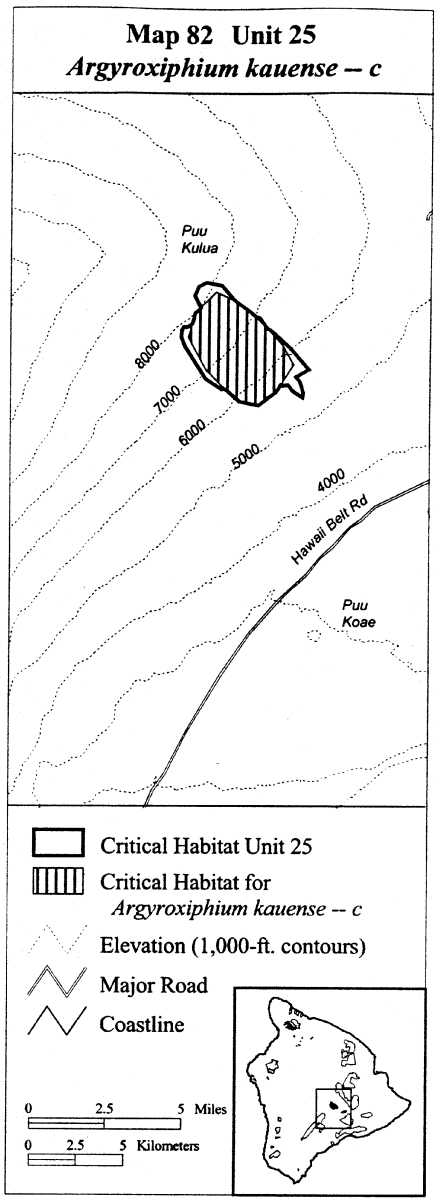
(ii) NOTE: Map 81 follows:



(82) Hawaii 25—*Argyroxiphium kauense*—c (2,006 ha, 4,957 ac)

(i) Unit consists of the following 13 boundary points: Start at 250289, 2157327; 251003, 2156578; 251595, 2155516; 250654, 2154088; 249731, 2153374; 248704, 2153565; 247907, 2154271; 246893, 2155307; 245987, 2156978; 246353, 2158267; 247468, 2159347; 248478, 2158877; 249279, 2158302; return to starting point.

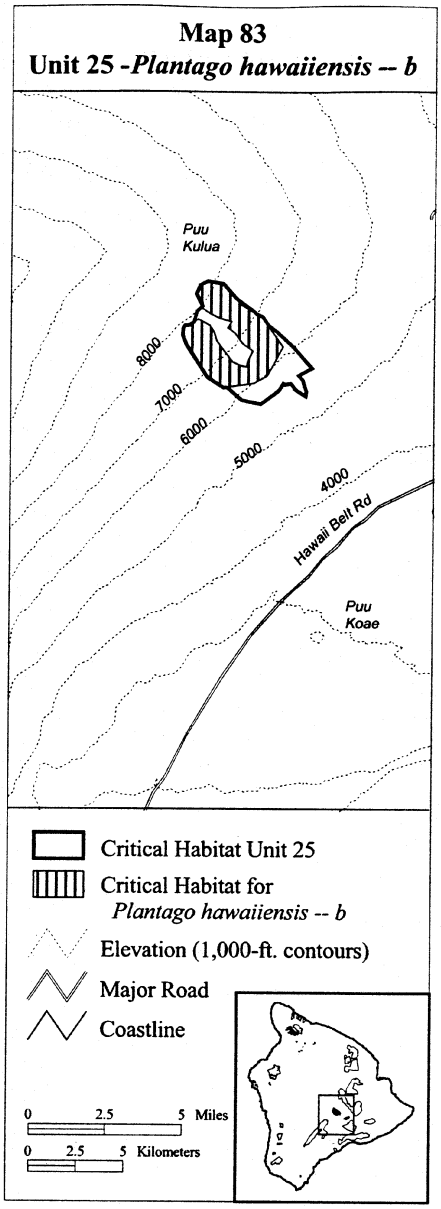
(ii) NOTE: Map 82 follows:



(83) Hawaii 25—*Plantago hawaiensis*—b (1,522 ha, 3,762 ac)

(i) Unit consists of the following 35 boundary points: Start at 250884, 2156394; 250042, 2154844; 249371, 2154454; 247769, 2154222; 246915, 2154794; 245791, 2156465; 245586, 2156984; 245636, 2157360; 245710, 2157517; 245929, 2157517; 246442, 2157846; 247040, 2157529; 247235, 2157212; 247369, 2156711; 247784, 2156175; 248224, 2155589; 248639, 2155406; 248980, 2155320; 249005, 2155564; 249285, 2156187; 248773, 2156528; 248358, 2157090; 247967, 2157383; 248175, 2157737; 247528, 2157895; 246991, 2158164; 246649, 2158418; 246674, 2158444; 246320, 2159164; 246527, 2159640; 246918, 2159860; 247369, 2159775; 247723, 2159701; 248761, 2158530; 249786, 2157944; return to starting point.

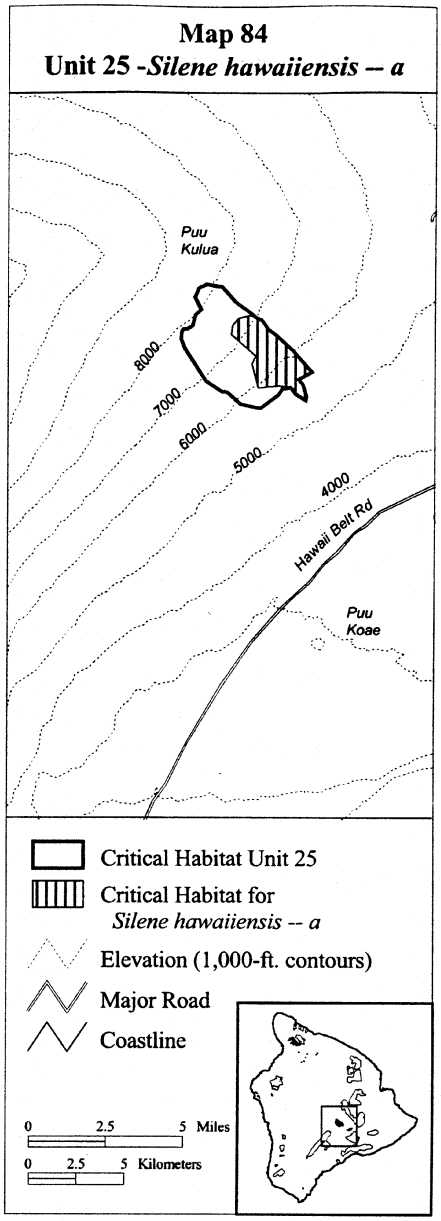
(ii) NOTE: Map 83 follows:



(84) Hawaii 25—*Silene hawaiiensis*—a (854 ha, 2,110 ac)

(i) Unit consists of the following 20 boundary points: Start at 249605, 2154443; 249282, 2155670; 249489, 2156083; 248205, 2157211; 248257, 2157694; 248587, 2158073; 249179, 2158214; 249790, 2157993; 250127, 2157482; 250559, 2157202; 251403, 2156390; 252371, 2155266; 251701, 2154870; 251902, 2154637; 252099, 2154017; 252071, 2153773; 251517, 2154149; 251301, 2154449; 250993, 2154406; 250728, 2154562; return to starting point.

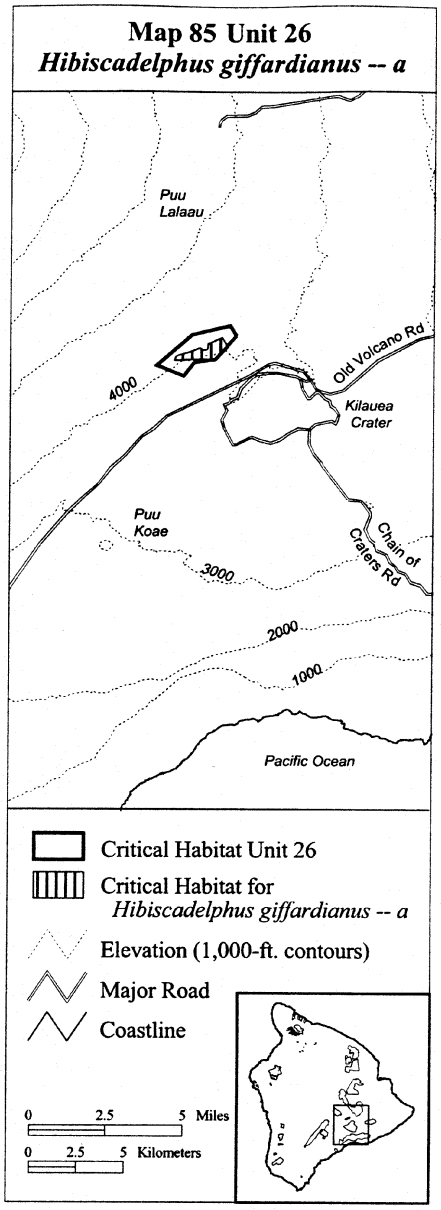
(ii) NOTE: Map 84 follows:



(85) Hawaii 26—*Hibiscadelphus giffardianus*—a (149 ha, 367 ac)

(i) Unit consists of the following 18 boundary points: Start at 256349, 2151035; 256516, 2151138; 256717, 2151196; 257064, 2151279; 257624, 2151506; 257795, 2151400; 258009, 2151416; 258048, 2151718; 258777, 2152045; 258966, 2151770; 259051, 2151582; 258433, 2150898; 258430, 2150898; 257945, 2150909; 257790, 2150915; 257034, 2150898; 256769, 2150857; 256333, 2150857; return to starting point.

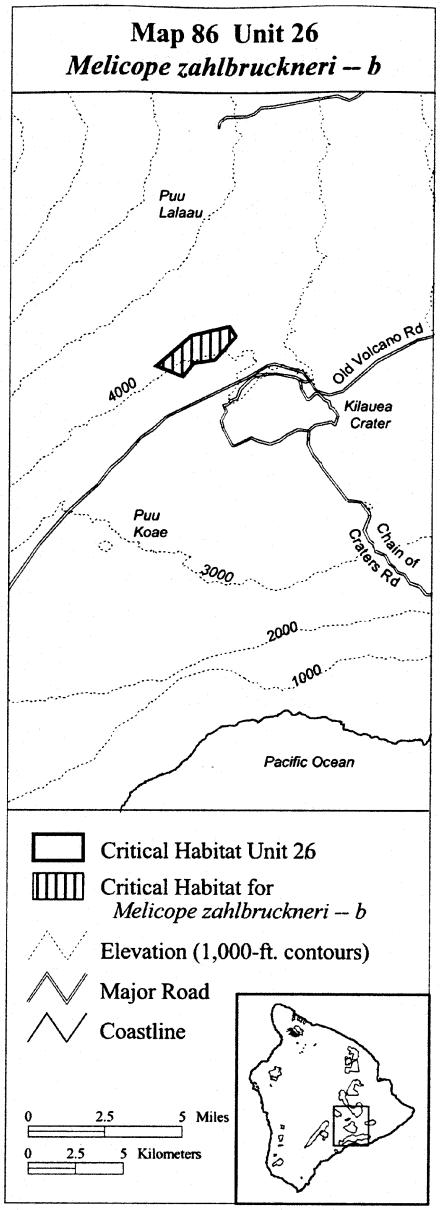
(ii) NOTE: Map 85 follows:



(86) Hawaii 26—*Melicope zahlbruckneri*—b (495 ha, 1,224 ac)

(i) Unit consists of the following seven boundary points: Start at 259520, 2152124; 258420, 2150913; 257324, 2150755; 256781, 2150023; 255379, 2150583; 257220, 2152206; 259198, 2152680; return to starting point.

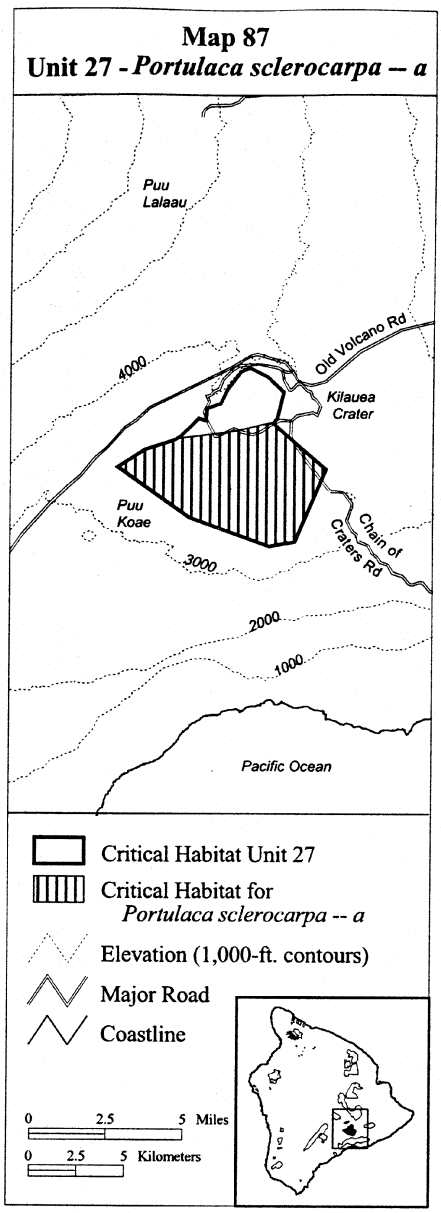
(ii) NOTE: Map 86 follows:



(87) Hawaii 27—*Portulaca sclerocarpa*—a (4,390 ha, 10,848 ac)

(i) Unit consists of the following nine boundary points: Start at 263596, 2140748; 262234, 2140517; 258055, 2142041; 254269, 2144742; 255668, 2145679; 257593, 2146289; 260387, 2146659; 262395, 2147120; 265212, 2144650; return to starting point.

(ii) NOTE: Map 87 follows:

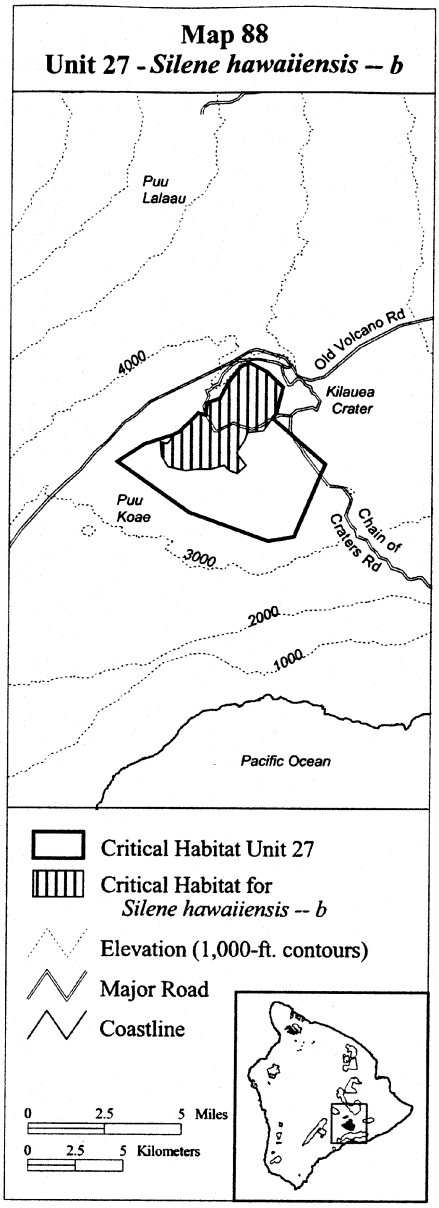


(88) Hawaii 27—*Silene hawaiiensis*—b (1,942 ha, 4,798 ac)

(i) Unit consists of the following 28 boundary points: Start at 261207, 2150002; 262152, 2149529; 262966, 2148732; 262640, 2147357; 261953, 2146398; 261102,

2146308; 260976, 2145910; 260541, 2145204; 261048, 2144534; 260596, 2144100; 260125, 2144299; 259890, 2144552; 259220, 2144335; 258515, 2144335; 257845, 2144263; 256922, 2144462; 256560, 2145059; 256506, 2145801; 256886, 2145710; 257239, 2146201; 257501, 2146344; 258279, 2147086; 258496, 2147337; 258877, 2147212; 258949, 2147864; 259637, 2148117; 260035, 2148895; 260704, 2149800; return to starting point.

(ii) NOTE: Map 88 follows:

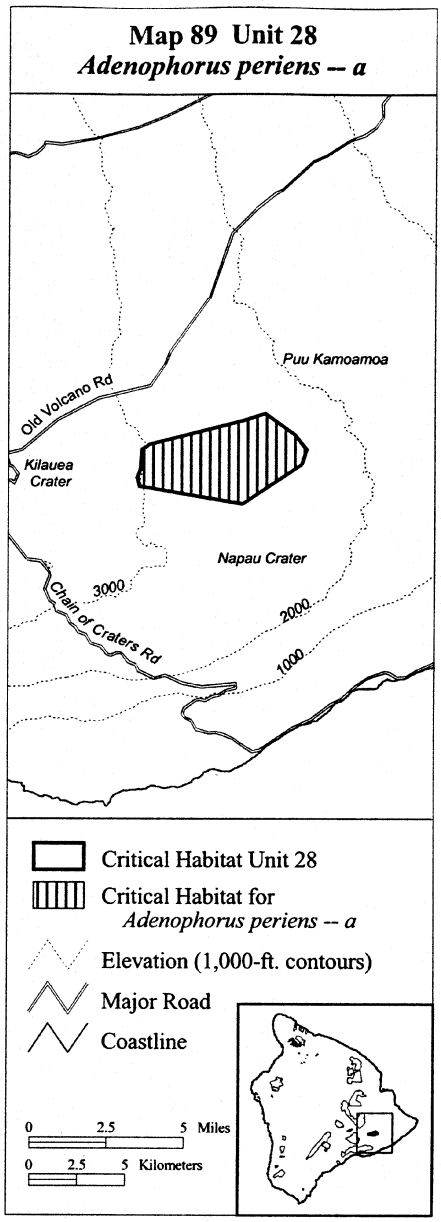


(89) Hawaii 28—*Adenophorus periens*—a (2,733 ha, 6,754 ac)

(i) Unit consists of the following 11 boundary points: Start at 279712, 2148510; 276648, 2146439; 271250, 2147346; 271140, 2147797; 271319, 2148257; 271361,

2149267; 271770, 2149568; 276751, 2150845; 277839, 2151215; 279362, 2150061; 279952, 2149315; return to starting point.

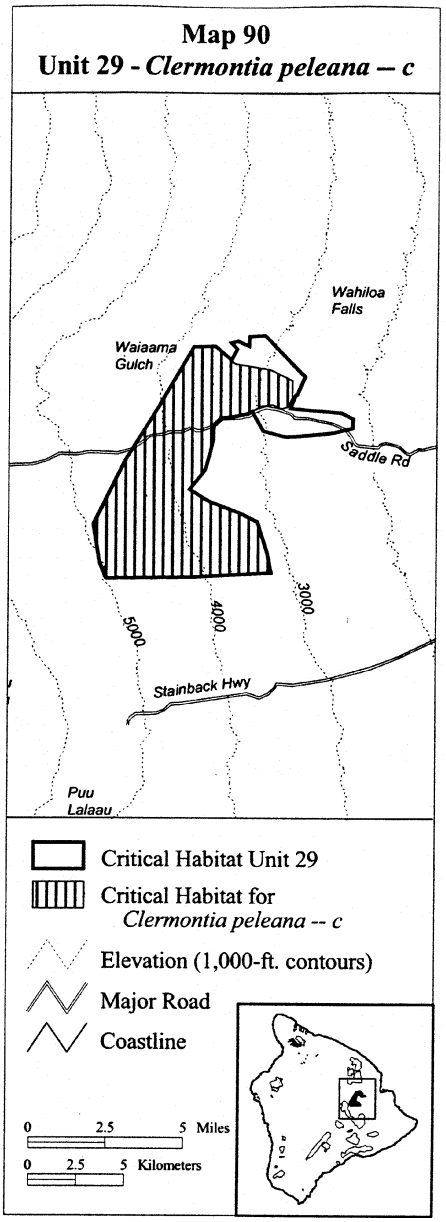
(ii) NOTE: Map 89 follows:



(90) Hawaii 29—*Clermontia peleana*—c (6,845 ha, 16,914 ac)

(i) Unit consists of the following 29 boundary points: Start at 256704, 2173629; 258341, 2177012; 260142, 2179904; 261881, 2182923; 262993, 2182963; 264053, 2182050; 265872, 2181759; 266999, 2181195; 267018, 2180286; 266781, 2179777; 266454, 2179686; 265993, 2179903; 265443, 2179855; 264701, 2179425; 264030, 2179281; 263288, 2179209; 262953, 2178826; 262905, 2178084; 262761, 2177461; 262498, 2176480; 261708, 2175450; 262666, 2174828; 264380, 2174192; 265235, 2173756; 265744, 2172137; 265944, 2171082; 261670, 2170827; 257377, 2170773; 257013, 2171646; return to starting point.

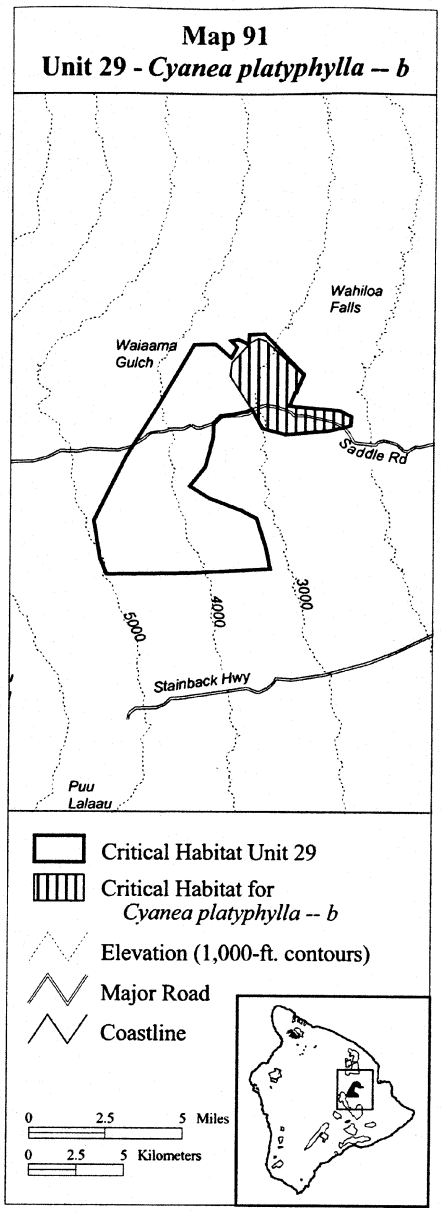
(ii) NOTE: Map 90 follows:



(91) Hawaii 29—*Cyanea platyphylla*—b (1,524 ha, 3,767 ac)

(i) Unit consists of the following 15 boundary points: Start at 270137, 2179182; 270117, 2178705; 269049, 2178426; 266707, 2178218; 265505, 2178550; 264852, 2179669; 264237, 2180565; 263774, 2181296; 263878, 2181980; 264821, 2183016; 265256, 2183296; 265629, 2183151; 267567, 2181379; 266904, 2179742; 269567, 2179503; return to starting point.

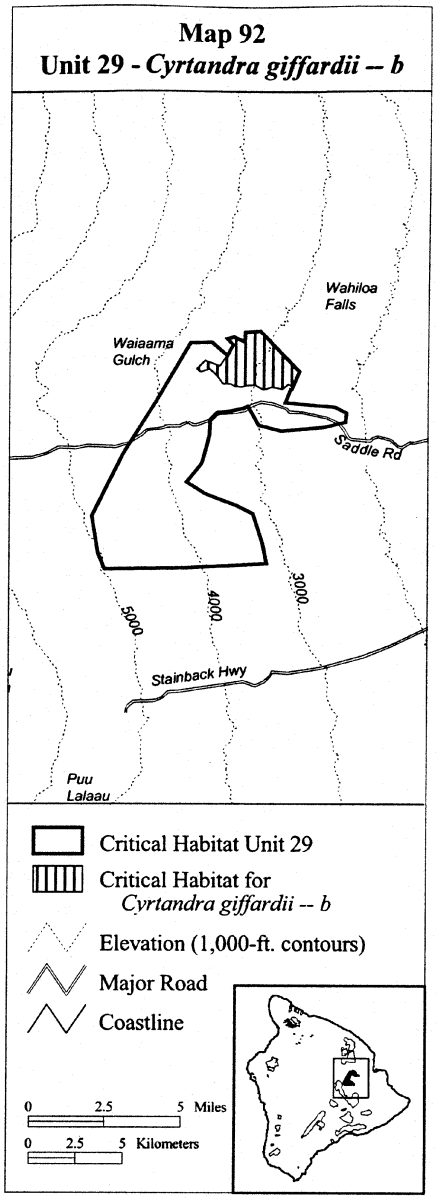
(ii) NOTE: Map 91 follows:



(92) Hawaii 29—*Cyrtandra giffardii*—b (938 ha, 2,319 ac)

(i) Unit consists of the following 28 boundary points: Start at 262416, 2181378; 262234, 2181545; 262682, 2181990; 263440, 2181695; 263960, 2182446; 264133, 2182822; 263843, 2183142; 264177, 2183241; 264755, 2182952; 264784, 2183472; 265594, 2183524; 267656, 2181395; 267302, 2180559; 267067, 2180712; 266763, 2180438; 266546, 2180496; 266214, 2180553; 265752, 2180423; 265275, 2180683; 264856, 2180640; 264596, 2180553; 264191, 2180611; 264018, 2180727; 263642, 2180727; 263367, 2181102; 263122, 2181334; 262891, 2181536; 262486, 2181377; return to starting point.

(ii) NOTE: Map 92 follows:

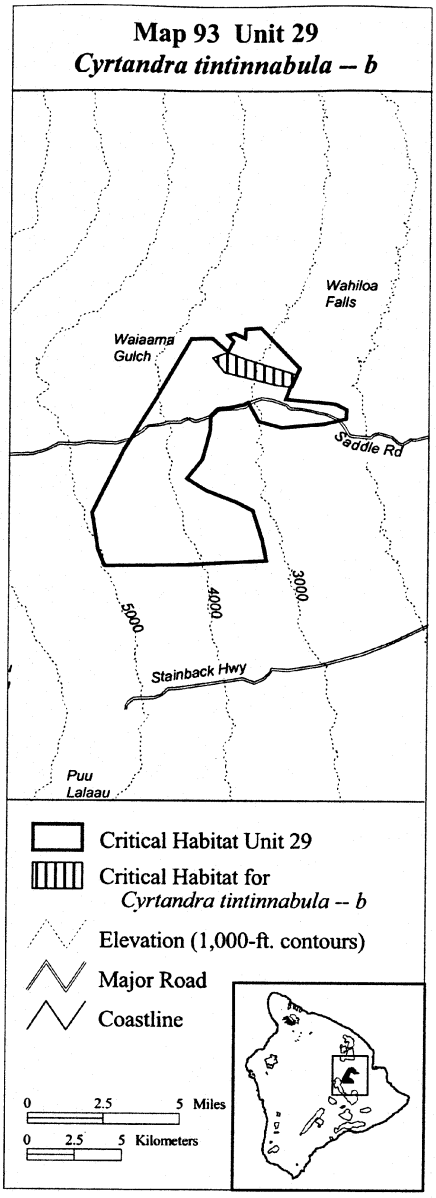


(93) Hawaii 29—*Cyrtandra tintinnabula*—b (378 ha, 934 ac)

(i) Unit consists of the following eight boundary points: Start at 267234, 2180396; 266451, 2180468; 263662, 2181160; 263032, 2181914; 263831, 2182224; 264610,

2181934; 265290, 2181716; 267462, 2181056; return to starting point.

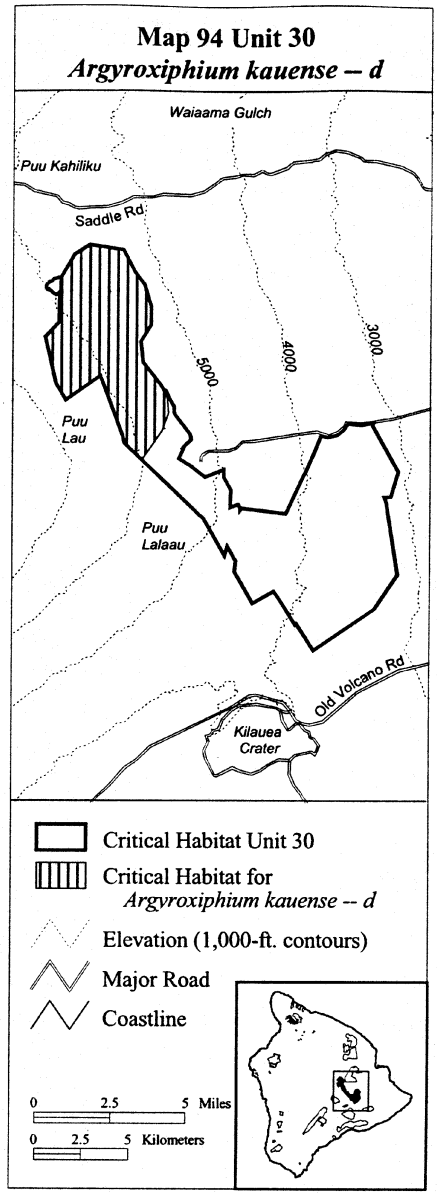
(ii) NOTE: Map 93 follows:



(94) Hawaii 30—*Argyroxiphium kauense*—d (4,281 ha, 10,578 ac)

(i) Unit consists of the following 35 boundary points: Start at 251376, 2166456; 250829, 2167375; 250254, 2169847; 250992, 2170628; 251020, 2172877; 251769, 2174236; 252605, 2174758; 254398, 2174497; 255008, 2173313; 255513, 2172668; 255879, 2171502; 255879, 2170492; 255339, 2169604; 255451, 2168509; 256441, 2167275; 256753, 2166610; 256810, 2165770; 256453, 2164780; 255495, 2163352; 255306, 2163361; 254541, 2164098; 254498, 2164137; 254481, 2164182; 254455, 2164255; 254449, 2164271; 254374, 2164589; 254004, 2165599; 253287, 2167525; 253238, 2167661; 253194, 2167785; 253194, 2167786; 253193, 2167786; 253192, 2167786; 253191, 2167786; 253146, 2167752; return to starting point.

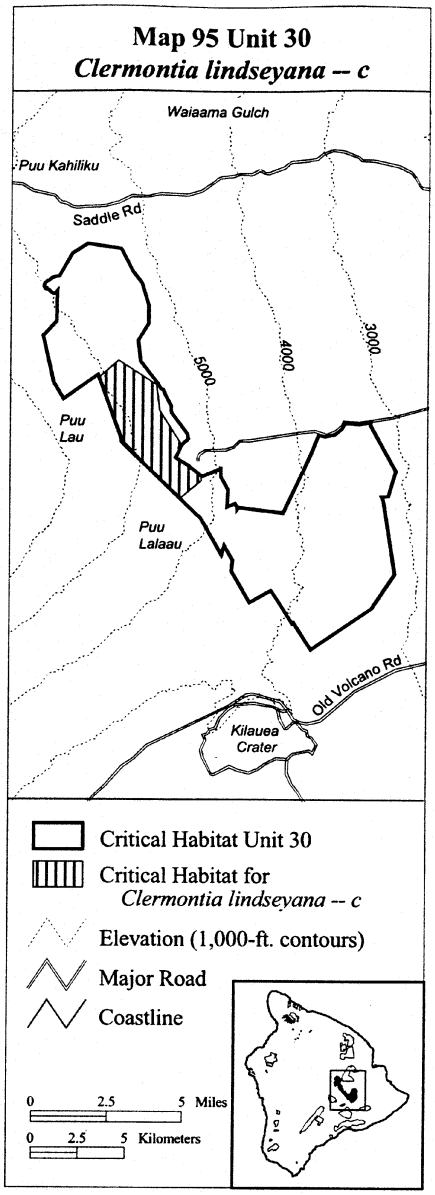
(ii) NOTE: Map 94 follows:



(95) Hawaii 30—*Clermontia lindseyana*—c (1,634 ha, 4,037 ac)

(i) Unit consists of the following 13 boundary points: Start at 254584, 2164181; 253305, 2167650; 254302, 2168554; 256320, 2167251; 256487, 2165898; 257687, 2164037; 257302, 2163331; 258133, 2162854; 258725, 2162386; 258756, 2162085; 257655, 2161172; 256263, 2162480; 255102, 2163686; return to starting point.

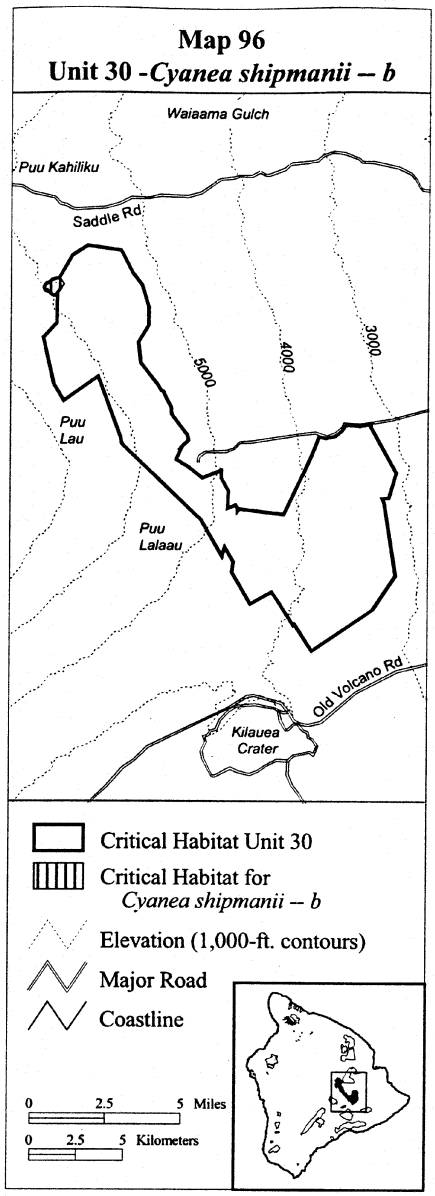
(ii) NOTE: Map 95 follows:



(96) Hawaii 30—*Cyanea shipmanii*—b (62 ha, 152 ac)

(i) Unit consists of the following 17 boundary points: Start at 250385, 2172716; 250588, 2172812; 250726, 2172919; 250993, 2173015; 251162, 2173040; 251356, 2172692; 251292, 2172620; 251217, 2172460; 251121, 2172321; 251014, 2172236; 250918, 2172140; 250790, 2172086; 250673, 2172161; 250545, 2172300; 250385, 2172332; 250300, 2172449; 250310, 2172535; return to starting point.

(ii) NOTE: Map 96 follows:

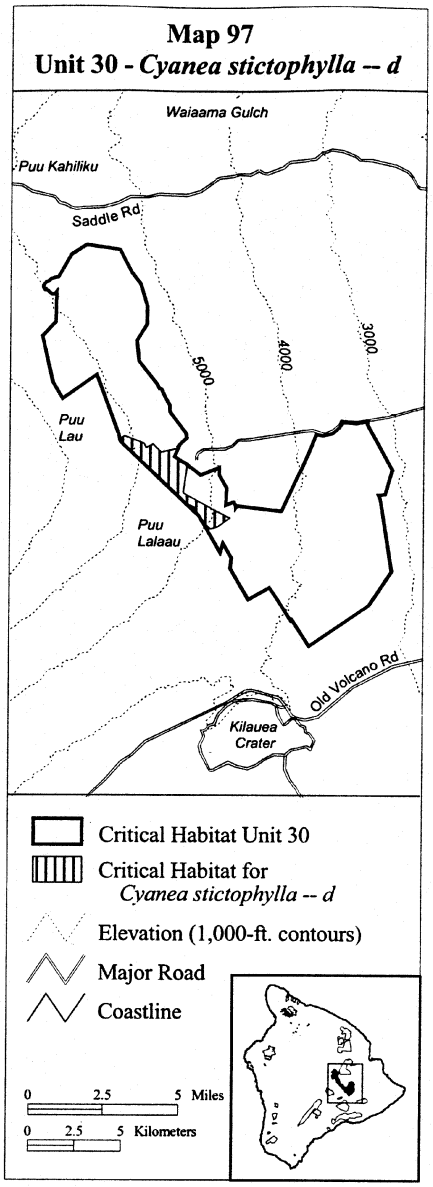


(97) Hawaii 30—*Cyanea shipmanii*—c (825 ha, 2,038 ac)

(i) Unit consists of the following 17 boundary points: Start at 254374, 2164589; 254004, 2165599; 253236, 2167756; 253128, 2168010; 254193, 2168432; 254246,

2168296; 254470, 2167400; 254649, 2167176; 255481, 2167289; 256666, 2167013; 256799, 2166728; 257113, 2166101; 257113, 2164936; 256396, 2164757; 255321, 2165116; 254559, 2165295; 254649, 2164623; return to starting point.

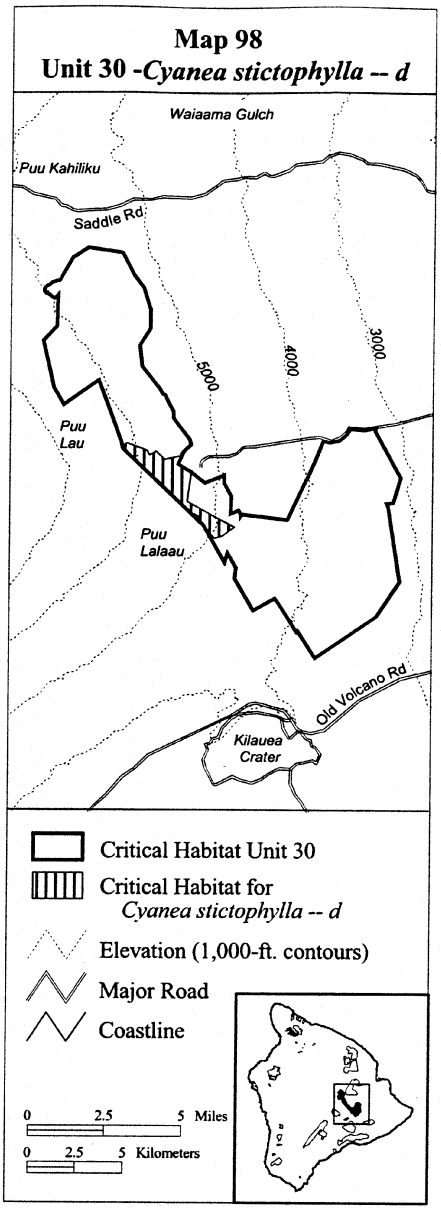
(ii) NOTE: Map 97 follows:



(98) Hawaii 30—*Cyanea stictophylla*—d (623 ha, 1,539 ac)

(i) Unit consists of the following 27 boundary points: Start at 254498, 2164341; 254727, 2164444; 255743, 2164078; 255868, 2163816; 256222, 2164021; 256656, 2163576; 257560, 2163785; 257352, 2163331; 258066, 2162902; 257844, 2161395; 257900, 2161317; 259249, 2160573; 260356, 2159979; 259695, 2159517; 259319, 2159380; 258898, 2159773; 258849, 2159861; 258810, 2159929; 258784, 2159981; 258755, 2160036; 258715, 2160077; 258688, 2160104; 258437, 2160584; 258243, 2160676; 258167, 2160673; 256128, 2162630; 254574, 2164116; return to starting point.

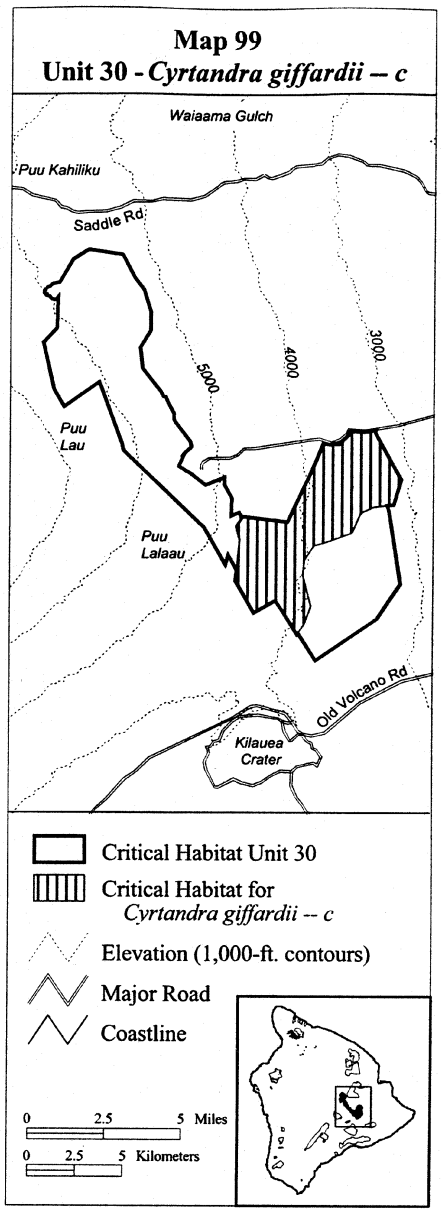
(ii) NOTE: Map 98 follows:



(99) Hawaii 30—*Cyrtandra giffardii*—c (3,872 ha, 9,567 ac)

(i) Unit consists of the following 28 boundary points: Start at 266492, 2165136; 267184, 2165097; 267638, 2165195; 269069, 2162612; 268669, 2161281; 267615, 2161161; 266924, 2160825; 266490, 2159798; 265048, 2159265; 264495, 2159127; 264001, 2158357; 263902, 2157567; 264357, 2155927; 263981, 2154960; 263634, 2154426; 262793, 2155728; 262477, 2156217; 261337, 2155564; 260360, 2157263; 260584, 2159423; 260367, 2160114; 260734, 2160659; 263088, 2160361; 264090, 2162500; 264176, 2162638; 264221, 2162790; 264951, 2164464; 265860, 2164445; return to starting point.

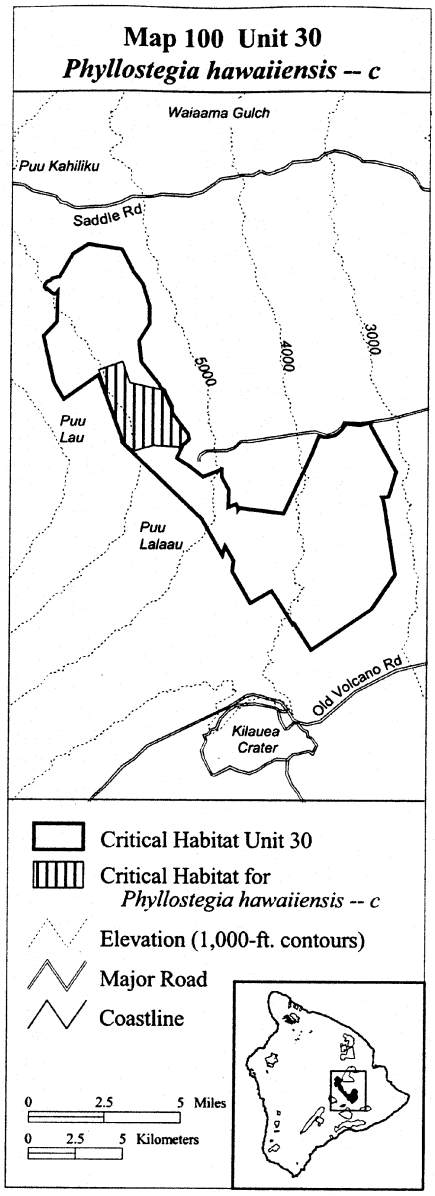
(ii) NOTE: Map 99 follows:



(100) Hawaii 30—*Phyllostegia racemosa*—c (267 ha, 659 ac)

(i) Unit consists of the following 10 boundary points: Start at 255001, 2163655; 256020, 2163968; 257634, 2163912; 257384, 2163319; 257871, 2163010; 257756, 2162804; 256542, 2162680; 256379, 2162447; 256238, 2162463; 256081, 2162615; return to starting point.

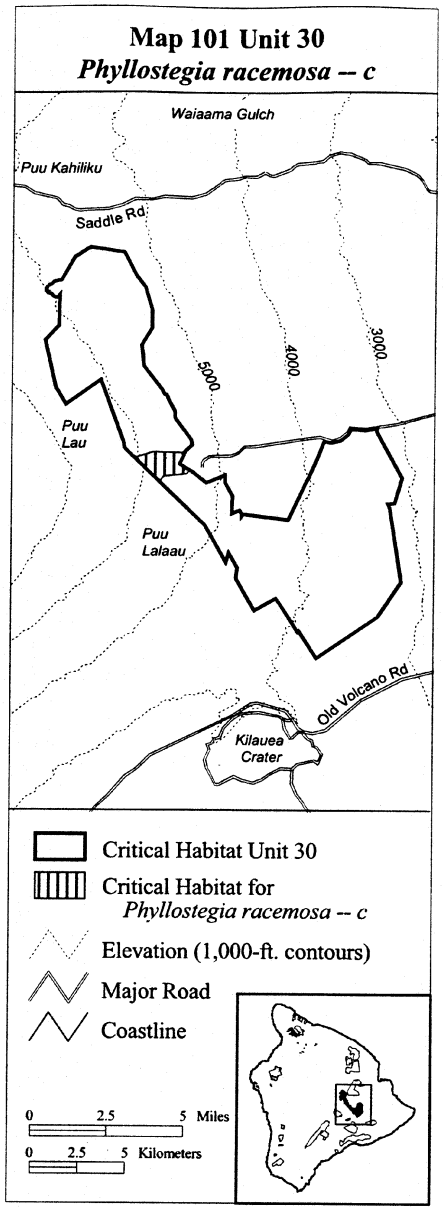
(ii) NOTE: Map 100 follows:



(101) Hawaii 30—*Phyllostegia velutina*—b (1,180 ha, 2,916 ac)

(i) Unit consists of the following 25 boundary points: Start at 255001, 2163655; 256020, 2163968; 257556, 2163812; 257342, 2163356; 258145, 2162834; 258761, 2162325; 259766, 2162727; 259792, 2162339; 260155, 2161636; 260142, 2160687; 260553, 2160880; 260676, 2160624; 260669, 2159628; 260010, 2158695; 259835, 2158111; 258895, 2159775; 258845, 2159864; 258808, 2159929; 258780, 2159981; 258748, 2160040; 258707, 2160080; 258644, 2160142; 258562, 2160221; 258544, 2160239; 256081, 2162615; return to starting point.

(ii) NOTE: Map 101 follows:

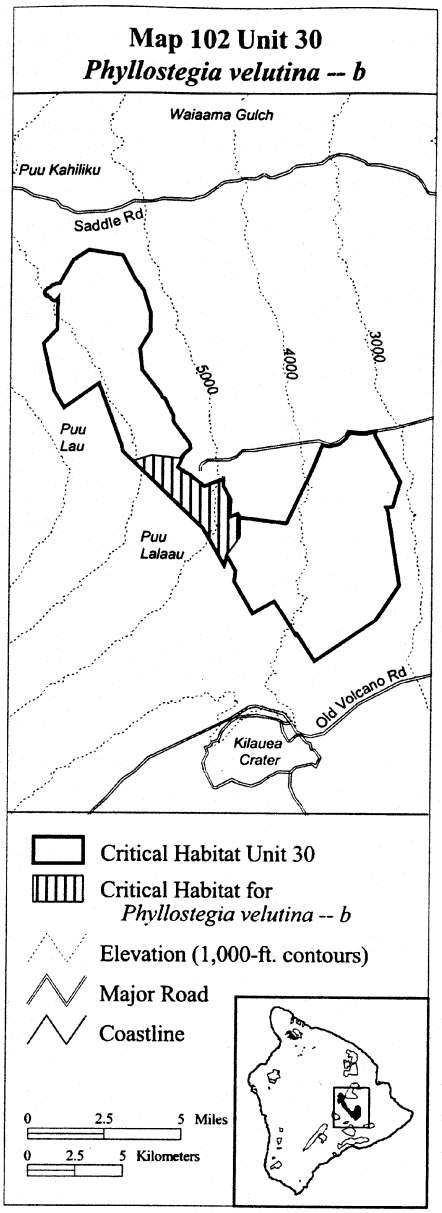


(102) Hawaii 30—*Plantago hawaiensis*—c (1,219 ha, 3,012 ac)

(i) Unit consists of the following 13 boundary points: Start at 254476, 2168522; 254473, 2168510; 254874, 2167383; 256572, 2166997; 257174, 2165685; 257971,

2164620; 258044, 2164337; 257576, 2163925; 256125, 2164018; 255434, 2163788; 255099, 2163685; 254488, 2164250; 253207, 2168032; return to starting point.

(ii) NOTE: Map 102 follows:

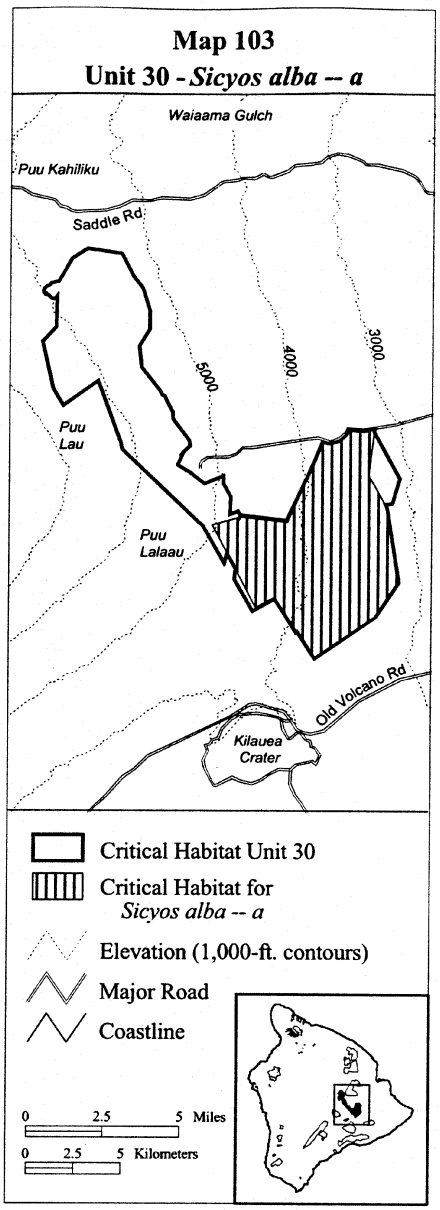


(103) Hawaii 30—*Sicyos alba*—a (6,266 ha, 15,483 ac)

(i) Unit consists of the following 18 boundary points: Start at 266388, 2165221; 267132, 2165147; 267709, 2165277; 267412, 2162783; 268417, 2161049; 269013, 2157105; 267821, 2155262; 264606, 2153076; 262507, 2156298; 261492, 2155783; 259208, 2160114; 260710, 2160549; 263148, 2160288; 264210, 2162671; 264954, 2164570; 265289, 2164477; 265811, 2164588; 266183, 2164886; return to starting point.

(ii) NOTE: Map 103 follows:

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



Unit name	Species occupied	Species unoccupied
Hawaii 9—*Achyranthes mutica*—a		*Achyranthes mutica.*
Hawaii 9—*Achyranthes mutica*—b	*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.*

Unit name	Species occupied	Species unoccupied
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 28—*Adenophorus periens*—a	*Adenophorus periens.*	
Hawaii 10—*Argyroxiphium kauense*—a	.....	*Argyroxiphium kauense.*
Hawaii 24—*Argyroxiphium kauense*—b	*Argyroxiphium kauense.*	
Hawaii 25—*Argyroxiphium kauense*—c	*Argyroxiphium kauense.*	
Hawaii 30—*Argyroxiphium kauense*—d	*Argyroxiphium kauense.*	
Hawaii 24—*Asplenium fragile* var. *insulare*—a.	*Asplenium fragile* var. *insulare.*	
Hawaii 10—*Bonamia menziesii*—a	.....	*Bonamia menziesii.*
Hawaii 8—*Clermontia drepanomorpha*—a	*Clermontia drepanomorpha.*	
Hawaii 1—*Clermontia lindseyana*—a	*Clermontia lindseyana.*	
Hawaii 2—*Clermontia lindseyana*—b	*Clermontia lindseyana.*	
Hawaii 30—*Clermontia lindseyana*—c	*Clermontia lindseyana.*	
Hawaii 1—*Clermontia peleana*—a	*Clermontia peleana.*	
Hawaii 3—*Clermontia peleana*—b	*Clermontia peleana.*	
Hawaii 29—*Clermontia peleana*—c	*Clermontia peleana.*	
Hawaii 1—*Clermontia pyrularia*—a	.....	*Clermontia pyrularia.*
Hawaii 2—*Clermontia pyrularia*—b	*Clermontia pyrularia.*	
Hawaii 10—*Colubrina oppositifolia*—a	*Colubrina oppositifolia.*	
Hawaii 18—*Colubrina oppositifolia*—b	*Colubrina oppositifolia.*	
Hawaii 11—*Cyanea hamatiflora* ssp. *carlsonii*—a.	*Cyanea hamatiflora* ssp. *carlsonii.*	
Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*—b.	.....	*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*—c.	.....	*Cyanea hamatiflora* ssp. *carlsonii.*
Hawaii 16—*Cyanea hamatiflora* ssp. *carlsonii*—d.	*Cyanea hamatiflora* ssp. *carlsonii.*	
Hawaii 3—*Cyanea platyphylla*—a	*Cyanea platyphylla.*	
Hawaii 29—*Cyanea platyphylla*—b	*Cyanea platyphylla.*	
Hawaii 1—*Cyanea shipmanii*—a	*Cyanea shipmanii.*	
Hawaii 30—*Cyanea shipmanii*—b	*Cyanea shipmanii.*	
Hawaii 30—*Cyanea shipmanii*—c	.....	*Cyanea shipmanii.*
Hawaii 15—*Cyanea stictophylla*—a	*Cyanea stictophylla.*	
Hawaii 16—*Cyanea stictophylla*—b	*Cyanea stictophylla.*	
Hawaii 24—*Cyanea stictophylla*—c	.....	*Cyanea stictophylla.*
Hawaii 30—*Cyanea stictophylla*—d	.....	*Cyanea stictophylla.*
Hawaii 3—*Cyrtandra giffardii*—a	*Cyrtandra giffardii.*	
Hawaii 29—*Cyrtandra giffardii*—b	.....	*Cyrtandra giffardii.*
Hawaii 30—*Cyrtandra giffardii*—c	*Cyrtandra giffardii.*	
Hawaii 3—*Cyrtandra tintinnabula*—a	*Cyrtandra tintinnabula.*	
Hawaii 29—*Cyrtandra tintinnabula*—b	.....	*Cyrtandra tintinnabula.*
Hawaii 10—*Delissea undulata*—a	.....	*Delissea undulata.*
Hawaii 10—*Delissea undulata*—b	*Delissea undulata.*	
Hawaii 17—*Diellia erecta*—a	*Diellia erecta.*	
Hawaii 18—*Diellia erecta*—b	*Diellia erecta.*	
Hawaii 17—*Flueggea neowawraea*—a	*Flueggea neowawraea.*	
Hawaii 18—*Flueggea neowawraea*—b	*Flueggea neowawraea.*	
Hawaii 18—*Gouania vitifolia*—a	*Gouania vitifolia.*	
Hawaii 26—*Hibiscadelphus giffardianus*—a.	*Hibiscadelphus giffardianus.*	
Hawaii 10—*Hibiscadelphus hualalaiensis*—a.	*Hibiscadelphus hualalaiensis.*	
Hawaii 10—*Hibiscus brackenridgei*—a	*Hibiscus brackenridgei.*	
Hawaii 21—*Ischaemum byrone*—a	.....	*Ischaemum byrone.*
Hawaii 22—*Ischaemum byrone*—b	*Ischaemum byrone.*	
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.*	
Hawaii 19—*Mariscus fauriei*—a	*Mariscus fauriei.*	
Hawaii 24—*Melicope zahlbruckneri*—a	.....	*Melicope zahlbruckneri.*
Hawaii 26—*Melicope zahlbruckneri*—b	*Melicope zahlbruckneri.*	
Hawaii 10—*Neraudia ovata*—a	.....	*Neraudia ovata.*
Hawaii 18—*Neraudia ovata*—d	*Neraudia ovata.*	
Hawaii 5—*Nothocestrum breviflorum*—a	.....	*Nothocestrum breviflorum.*
Hawaii 6—*Nothocestrum breviflorum*—b	*Nothocestrum breviflorum.*	
Hawaii 10—*Nothocestrum breviflorum*—c	*Nothocestrum breviflorum.*	
Hawaii 1—*Phyllostegia racemosa*—a	*Phyllostegia racemosa.*	

Unit name	Species occupied	Species unoccupied
Hawaii 2—*Phyllostegia racemosa*—b	*Phyllostegia racemosa.*	
Hawaii 30—*Phyllostegia racemosa*—c	.....	*Phyllostegia racemosa.*
Hawaii 24—*Phyllostegia velutina*—a	*Phyllostegia velutina.*	
Hawaii 30—*Phyllostegia velutina*—b	*Phyllostegia velutina.*	
Hawaii 3—*Phyllostegia warshaueri*—a	*Phyllostegia warshaueri.*	
Hawaii 8—*Phyllostegia warshaueri*—b	*Phyllostegia warshaueri.*	
Hawaii 24—*Plantago hawaiensis*—a	*Plantago hawaiensis.*	
Hawaii 25—*Plantago hawaiensis*—b	*Plantago hawaiensis.*	
Hawaii 30—*Plantago hawaiensis*—c	*Plantago hawaiensis.*	
Hawaii 7—*Pleomele hawaiiensis*—a	*Pleomele hawaiiensis.*	
Hawaii 10—*Pleomele hawaiiensis*—b	*Pleomele hawaiiensis.*	
Hawaii 18—*Pleomele hawaiiensis*—c	*Pleomele hawaiiensis.*	
Hawaii 23—*Pleomele hawaiiensis*—d	*Pleomele hawaiiensis.*	
Hawaii 27—*Portulaca sclerocarpa*—a	*Portulaca sclerocarpa.*	
Hawaii 20—*Sesbania tomentosa*—a	*Sesbania tomentosa.*	
Hawaii 23—*Sesbania tomentosa*—b	*Sesbania tomentosa.*	
Hawaii 30—*Sicyos alba*—a	*Sicyos alba.*	
Hawaii 25—*Silene hawaiiensis*—a	*Silene hawaiiensis.*	
Hawaii 27—*Silene hawaiiensis*—b	*Silene hawaiiensis.*	
Hawaii 10—*Solanum incompletum*—a	.....	*Solanum incompletum.*
Hawaii 11—*Solanum incompletum*—b	.....	*Solanum incompletum.*
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 10—*Zanthoxylum dipetalum* ssp. *tomentosum*—a.	*Zanthoxylum dipetalum* ssp. *tomentosum.*	

(105) Critical habitat unit descriptions and maps, and a description of primary constituent elements, for Family Malvaceae: *Kokia drynariodes* on the island of Hawaii is provided in 50 CFR 17.96(a).

(l) *Plants on the island of Hawaii; Constituent elements.*

(1) *Flowering plants.*

FAMILY AMARANTHACEAE: ***Achyranthes mutica*** (NCN)

Hawaii 9—*Achyranthes mutica*—a, Hawaii 9—*Achyranthes mutica*—b, Hawaii 9—*Achyranthes mutica*—c, Hawaii 9—*Achyranthes mutica*—d, Hawaii 9—*Achyranthes mutica*—e, Hawaii 9—*Achyranthes mutica*—f, Hawaii 9—*Achyranthes mutica*—g, Hawaii 9—*Achyranthes mutica*—h, Hawaii 9—*Achyranthes mutica*—i, Hawaii 9—*Achyranthes mutica*—j, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for Achyranthes mutica on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koaia* lowland dry forest, primarily in gulches but also in remnant stands of forest, and containing one or more of the following associated native plant species: *Dodonaea viscosa, Erythrina sandwicensis, Metrosideros polymorpha, Myoporum sandwicense, Osteomeles anthyllidifolia, Nestegis sandwicensis, Santalum ellipticum,* or *Sophora chrysophylla;* and

(ii) Elevations between 646 and 1,509 m (2,120 and 4,949 ft).

FAMILY ASTERACEAE: ***Argyroxiphium kauense*** (MAUNA LOA SILVERSWORD)

Hawaii 10—*Argyroxiphium kauense*—a, Hawaii 24—*Argyroxiphium kauense*—b, Hawaii 25—*Argyroxiphium kauense*—c, and Hawaii 30—*Argyroxiphium kauense*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Argyroxiphium kauense* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Moist, open forest; subalpine mesic shrubland; bogs; and weathered, old pahoehoe (smooth) or aa (rough) lava with well-developed pockets of soil, and containing one or more of the following associated native plant species: *Asplenium peruvianum* var. *insulare, Carex alligata, Carex* sp., *Coprosma ernodeoides, Coprosma montana, Deschampsia nubigena, Dodonaea*

viscosa, Dubautia ciliolata, Gahnia gahniiformis, Geranium cuneatum, Leptecophylla tameiameiae, Metrosideros polymorpha, Plantago hawaiensis, Rhynchospora chinensis, Silene hawaiiensis, or *Vaccinium reticulatum;* and

(ii) Elevations between 1,583 and 2,246 m (5,193 and 8,024 ft).

FAMILY CAMPANULACEAE: ***Clermontia drepanomorpha*** (OHA WAI)

Hawaii 8—*Clermontia drepanomorpha*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Clermontia drepanomorpha* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha, Cheirodendron trigynum,* and *Cibotium glaucum* dominated montane wet forests, containing one or more of the following native plant species: *Astelia menziesiana, Carex alligata, Coprosma* sp., *Cyanea pilosa, Leptecophylla tameiameiae, Melicope clusiifolia,* and *Rubus hawaiiensis,* or *sphagnum moss;* and

(ii) Elevations between 1,106 and 1,676 m (3,627 and 5,459 ft).

FAMILY CAMPANULACEAE: ***Clermontia lindseyana*** (OHA WAI)

Hawaii 1—*Clermontia lindseyana*—a, Hawaii 2—*Clermontia lindseyana*—b, and Hawaii 30—*Clermontia lindseyana*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia lindseyana* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Slightly open forest cover in wet and mesic *Metrosideros polymorpha-Acacia koa* forest, *M. polymorpha* forest, and mixed montane mesic *M. polymorpha-Acacia koa* forest and containing one or more of the following associated native plant species: *Athyrium* sp., *Cheirodendron trigynum, Coprosma* sp., *Leptecophylla tameiameiae, Peperomia* sp., or *Rubus hawaiiensis;* and

(ii) Elevations between 1,495 and 1,953 m (4,906 and 6,407 ft).

FAMILY CAMPANULACEAE: ***Clermontia peleana*** (OHA WAI)

Hawaii 1—*Clermontia peleana*—a, Hawaii 3—*Clermontia peleana*—b, and Hawaii 29—*Clermontia peleana*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia peleana* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane, wet *Metrosideros-Cibotium* forest containing one or more of the following associated native plant species: *Cheirodendron trigynum, Cibotium chamissoi, Cibotium menziesii, Clermontia hawaiiensis, Coprosma pubens, Cyrtandra platyphylla, Ilex anomala,* or *Sadleria* spp.; and

(ii) Elevations between 663 and 1,622 m (2,175 and 5,321 ft).

FAMILY CAMPANULACEAE: ***Clermontia pyrularia*** (OHA WAI)

Hawaii 1—*Clermontia pyrularia*—a and Hawaii 2—*Clermontia pyrularia*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Clermontia pyrularia* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Wet and mesic montane forest dominated by *Acacia koa* or *Metrosideros polymorpha,* and subalpine dry forest dominated by *M. polymorpha,* and containing one or more of the following associated native plant species: *Coprosma* sp., *Dryopteris wallichiana, Hedyotis* sp., or *Rubus hawaiensis;* and

(ii) Elevations between 1,652 and 2,026 m (5,416 to 6,646 ft).

FAMILY CAMPANULACEAE: ***Cyanea hamatiflora*** SSP. ***carlsonii*** (HAHA)

Hawaii 11—*Cyanea hamatiflora* ssp. *carlsonii*—a, Hawaii 14—*Cyanea hamatiflora* ssp. *carlsonii*—b, Hawaii 15—*Cyanea hamatiflora* ssp. *carlsonii*—c, and Hawaii 16—*Cyanea hamatiflora* ssp.

carlsonii—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea hamatiflora* ssp. *carlsonii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Mesic montane forest dominated by *Acacia koa* or *Metrosideros polymorpha*, and containing one or more of the following associated native plant species: *Athyrium* sp., *Cibotium* spp., *Clermontia clermontioides*, *Coprosma* sp., *Dryopteris* sp., *Hedyotis* sp., *Ilex anomala*, *Myoporum sandwicense*, or *Sophora chrysophylla;* and

(ii) Elevations between 1,366 and 1,755 m (4,482 and 5,759 ft).

FAMILY CAMPANULACEAE: ***Cyanea platyphylla*** (HAHA)

Hawaii 3—*Cyanea platyphylla*—a and Hawaii 29—*Cyanea platyphylla*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea platyphylla* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha-Acacia koa* lowland and montane wet forests, containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *Cibotium* sp., *Clermontia* spp., *Coprosma* sp., *Cyrtandra* spp., *Hedyotis* sp., *Perrottetia sandwicensis*, *Psychotria hawaiiensis*, or *Scaevola* spp.; and

(ii) Elevations between 615 and 1,082 m (2,017 and 3,551 ft).

FAMILY CAMPANULACEAE: ***Cyanea shipmanii*** (HAHA)

Hawaii 1—*Cyanea shipmanii*—a, Hawaii 30—*Cyanea shipmanii*—b, and Hawaii 30—*Cyanea shipmanii*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea shipmanii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane mesic forest dominated by *Acacia koa-Metrosideros polymorpha* and containing one or more of the following associated native plant species: *Cheirodendron trigynum*, *Ilex anomala*, or *Myrsine lessertiana;* and

(ii) Elevations between 1,629 and 2,025 m (5,345 and 6,645 ft).

FAMILY CAMPANULACEAE: ***Cyanea stictophylla*** (HAHA)

Hawaii 15—*Cyanea stictophylla*—a, Hawaii 16—*Cyanea stictophylla*—b, Hawaii 24—*Cyanea stictophylla*—c, and Hawaii 30—*Cyanea stictophylla*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyanea stictophylla* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koa* or wet *Metrosideros polymorpha* forests, containing one or more of the following associated native plant species: *Cibotium* sp., *Melicope* spp., or *Urera glabra;* and

(ii) Between elevations of 1,056 and 1,917 m (3,466 and 6,288 ft).

FAMILY CAMPANULACEAE: ***Delissea undulata*** (NCN)

Hawaii 10—*Delissea undulata*—a and Hawaii 10—*Delissea undulata*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Delissea undulata* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry cinder cones and open *Metrosideros polymorpha* and *Sophora chrysophylla* forest, and containing one or more of the following associated native plant species: *Acacia koa*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Nothocestrum breviflorum*, *Psychotria* spp., *Santalum paniculatum*, or *Sophora chrysophylla;* and

(ii) Elevations between 893 to 1,734 m (2,928 to 5,690 ft).

FAMILY CARYOPHYLLACEAE: ***Silene hawaiiensis*** (NCN)

Hawaii 25—*Silene hawaiiensis*—a and Hawaii 27—*Silene hawaiiensis*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Silene hawaiiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Weathered lava or variously aged lava flows and cinder substrates in montane and subalpine dry shrubland containing one or more of the following associated native plant species: *Dodonaea viscosa, Leptecophylla tameiameiae, Metrosideros polymorpha, Rumex giganteus, Sophora chrysophylla,* or *Vaccinium reticulatum;* and

(ii) Elevations between 1,022 and 2,413 m (3,352 and 7,915 ft).

FAMILY CONVOLVULACEAE: ***Bonamia menziesii*** (NCN)

Hawaii 10—*Bonamia menziesii*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Bonamia menziesii* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry forest, containing one or more of the following associated native plant species: *Argemone glauca, Canavalia hawaiiensis, Chenopodium oahuense, Diospyros sandwicensis, Dodonaea viscosa, Erythrina sandwicensis, Metrosideros polymorpha, Myrsine lanaiensis, Nototrichium sandwicense, Osteomeles anthyllidifolia, Peperomia blanda* var. *floribunda, Pouteria sandwicensis, Psilotum nudum, Santalum paniculatum, Sapindus saponaria, Senna gaudichaudii, Sida fallax, Sophora chrysophylla,* or *Xylosma hawaiiense;* and

(ii) Elevations between 492 and 697 m (1,614 and 2,285 ft).

FAMILY CUCURBITACEAE: ***Sicyos alba*** (ANUNU)

Hawaii 30—*Sicyos alba*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Sicyos alba* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha-Cibotium glaucum* dominated montane wet forests, containing one or more of the following associated native plant species: *Astelia menziesiana, Athyrium microphyllum* and other ferns, *Broussaisia arguta, Cheirodendron trigynum, Coprosma* sp., *Cyanea tritomantha, Cyrtandra lysiosepala, Perrottetia sandwicensis, Platydesma spathulata, Pritchardia beccariana, Psychotria* sp., or *Stenogyne* sp.; and

(ii) Elevations between 966 and 1,546 m (3,170 and 5,072 ft).

FAMILY CYPERACEAE: ***Mariscus fauriei*** (NCN)

Hawaii 19—*Mariscus fauriei*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Mariscus fauriei* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Diospyros sandwicensis-Metrosideros polymorpha-Sapindus saponaria* dominated lowland dry forests, often on a lava substrate, and containing one or more of the following associated native plant species: *Myoporum sandwicense, Osteomeles anthyllidifolia, Peperomia blanda* var. *floribunda, Psydrax odorata, Rauvolfia sandwicensis,* or *Sophora chrysophylla;* and

(ii) Elevations between 278 and 342 m (913 and 1,123 ft).

FAMILY EUPHORBIACEAE: ***Flueggea neowawraea*** (MEHAMEHAME)

Hawaii 17—*Flueggea neowawraea*—a and Hawaii 18—*Flueggea neowawraea*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Flueggea neowawraea* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Mesic *Metrosideros polymorpha* forest, containing one or more of the following associated native plant species:

Antidesma platyphyllum, Antidesma pulvinatum, Diospyros sandwicensis, Nephrolepis spp., *Nestegis sandwicensis, Pipturus albidus, Pisonia* spp., *Pittosporum hosmeri, Psychotria hawaiiensis,* or *Psydrax odorata;* and

(ii) Elevations between 499 and 818 m (1,637 and 2,684 ft).

FAMILY FABACEAE: ***Sesbania tomentosa*** (OHAI)

Hawaii 20—*Sesbania tomentosa*—a and Hawaii 23—*Sesbania tomentosa*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Sesbania tomentosa* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Open, dry *Metrosideros polymorpha* forest with mixed native grasses, *Scaevola taccada* coastal dry shrubland on windswept slopes, and weathered basaltic slopes, and containing one or more of the following associated native plant species: *Dodonaea viscosa, Fimbristylis hawaiiensis, Ipomoea pescaprae, Jacquemontia ovalifolia* ssp. *sandwicensis, Leptecophylla tameiameiae, Melanthera integrifolia, Myoporum sandwicense, Sida fallax, Sporobolus virginicus,* or *Waltheria indica;* and

(ii) Elevations between sea level and 922 m (0 and 3,025 ft).

FAMILY FABACEAE: ***Vigna o-wahuensis*** (NCN)

Hawaii 4—*Vigna o-wahuensis*—a, Hawaii 4—*Vigna o-wahuensis*—b, and Hawaii 4—*Vigna o-wahuensis*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Vigna o-wahuensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Dodonaea viscosa* lowland dry shrubland, containing one or more of the following associated native plant species: *Chenopodium oahuense, Dodonaea viscosa, Osteomeles anthyllidifolia, Sida fallax,* or *Wikstroemia* sp.; and

(ii) Elevations between 717 and 993 m (2,352 and 3,259 ft).

FAMILY GESNERIACEAE: ***Cyrtandra giffardii*** (HAIWALE)

Hawaii 3—*Cyrtandra giffardii*—a, Hawaii 29—*Cyrtandra giffardii*—b, and Hawaii 30—*Cyrtandra giffardii*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra giffardii* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Wet montane forest dominated by *Cibotium* sp. or *Metrosideros polymorpha,* and *Metrosideros polymorpha-Acacia koa* lowland wet forests, and containing one or more of the following associated native plant species: *Astelia menziesiana, Diplazium sandwichianum, Hedyotis terminalis, Perrottetia sandwicensis,* or other species of *Cyrtandra;* and

(ii) Between elevations of 654 and 1,440 m (2,146 and 4,723 ft).

FAMILY GESNERIACEAE: ***Cyrtandra tintinnabula*** (HAIWALE)

Hawaii 3—*Cyrtandra tintinnabula*—a and Hawaii 29—*Cyrtandra tintinnabula*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Cyrtandra tintinnabula* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland wet forest dominated by dense *Acacia koa, Metrosideros polymorpha,* and *Cibotium* spp. and containing one or more of the following associated native plant species: *Cyrtandra* spp. or *Hedyotis* spp.; and

(ii) Between elevations 641 and 1,391 m (2,102 and 4,565 ft).

FAMILY LAMIACEAE: ***Phyllostegia racemosa*** (KIPONAPONA)

Hawaii 1—*Phyllostegia racemosa*—a, Hawaii 2—*Phyllostegia racemosa*—b, and Hawaii 30—*Phyllostegia racemosa*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia racemosa* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat

include, but are not limited to, the habitat components provided by:

(i) Tree trunks in *Acacia koa*, *Metrosideros polymorpha*, and *Cibotium* sp. dominated montane mesic or wet forests and containing one or more of the following associated native plant species: *Dryopteris wallichiana*, *Rubus hawaiiensis*, or *Vaccinium calycinum;* and

(ii) Elevations between 1,371 and 1,935 m (4,498 and 6,349 ft).

FAMILY LAMIACEAE: ***Phyllostegia velutina*** (NCN)

Hawaii 24—*Phyllostegia velutina*—a and Hawaii 30—*Phyllostegia velutina*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia velutina* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha-Acacia koa* dominated montane mesic and wet forests containing one or more of the following native plant species: *Athyrium microphyllum* and other native wet forest terrestrial ferns, *Cheirodendron trigynum*, *Cibotium* spp., *Coprosma* sp., *Dryopteris wallichiana*, *Ilex anomala*, *Myrsine lessertiana*, *Pipturus albidus*, *Rubus hawaiiensis*, or *Vaccinium calycinum;* and

(ii) Elevations between 966 and 1,881 m (3,168 and 6,170 ft).

FAMILY LAMIACEAE: ***Phyllostegia warshaueri*** (NCN)

Hawaii 3—*Phyllostegia warshaueri*—a and Hawaii 8—*Phyllostegia warshaueri*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Phyllostegia warshaueri* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha* and *Cibotium* montane and lowland wet forest, in which *Acacia koa* or *Cheirodendron trigynum* may co-dominate, and containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *Athyrium sandwicensis*, *Broussaisia arguta*, *Clermontia parviflora*, *Coprosma* sp., *Cyanea pilosa*, *Cyanea* spp., *Hedyotis* sp., *Machaerina angustifolia*, *Pipturus albidus*, *Psychotria hawaiiensis*, or *Sadleria pallida;* and

(ii) Elevations between 681 and 1,411 m (2,234 and 4,629 ft).

FAMILY LILIACEAE: ***Pleomele hawaiiensis*** (HALA PEPE)

Hawaii 7—*Pleomele hawaiiensis*—a, Hawaii 10—*Pleomele hawaiiensis*—b, Hawaii 18—*Pleomele hawaiiensis*—c, and Hawaii 23—*Pleomele hawaiiensis*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Pleomele hawaiiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Open aa lava in diverse lowland dry forests and *Metrosideros-Diospyros* lowland dry forest, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Bobea timonioides*, *Caesalpinia kavaiensis*, *Cocculus trilobus*, *Colubrina oppositifolia*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Erythrina sandwicensis*, *Kokia drynarioides*, *Metrosideros polymorpha*, *Myoporum sandwicense*, *Neraudia ovata*, *Nestegis sandwicensis*, *Nothocestrum breviflorum*, *Nototrichium sandwicense*, *Osteomeles anthyllidifolia*, *Psydrax odorata*, *Reynoldsia sandwicensis*, *Santalum paniculatum*, *Sida fallax*, or *Sophora chrysophylla;* and

(ii) Elevations between 86 and 892 m (281 and 2,925 ft).

FAMILY MALVACEAE: ***Hibiscadelphus giffardianus*** (HAU KUAHIWI)

Hawaii 26—*Hibiscadelphus giffardianus*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscadelphus giffardianus* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Mixed montane mesic forest containing one or more of the following native plant species: *Acacia koa*, *Coprosma rhynchocarpa*, *Dodonaea*

viscosa, *Melicope* spp., *Metrosideros polymorpha*, *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Psychotria* sp., or *Sapindus saponaria*; and

(ii) Elevations between 1,193 and 1,274 m (3,914 and 4,181 ft).

FAMILY MALVACEAE: ***Hibiscadelphus hualalaiensis*** (HAU KUAHIWI)

Hawaii 10—*Hibiscadelphus hualalaiensis*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscadelphus hualalaiensis* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry-mesic to dry *Metrosideros* forest on rocky substrate in deep soils and containing one or more of the following native plant species: *Acacia koa*, *Coprosma rhynchocarpa*, *Dodonaea viscosa*, *Melicope* spp., *Metrosideros polymorpha*, *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Psychotria* sp., or *Sapindus saponaria*; and

(ii) Between elevations 512 and 1,223 m (1,679 and 4,012 ft).

FAMILY MALVACEAE: ***Hibiscus brackenridgei*** (MAO HAU HELE)

Hawaii 10—*Hibiscus brackenridgei*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Hibiscus brackenridgei* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koa* lowland mesic forest containing one or more of the following native plants species: *Reynoldsia sandwicensis* or *Sida fallax;* and

(ii) Elevations between 649 and 847 (2,130 and 2,779 ft).

FAMILY PLANTAGINACEAE: ***Plantago hawaiensis*** (LAUKAHI KUAHIWI)

Hawaii 24—*Plantago hawaiensis*—a, Hawaii 25—*Plantago hawaiensis*—b, and Hawaii 30—*Plantago hawaiensis*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Plantago hawaiensis* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Montane wet sedge land (often in damp cracks of pahoehoe lava) with mixed sedges and grasses, montane mesic forest, dry subalpine woodland, or *Metrosideros polymorpha* and native shrub, and containing one or more of the following associated native plant species: *Acacia koa*, *Coprosma ernodeoides*, *Coprosma montana*, *Dodonaea viscosa*, *Leptecophylla tameiameiae*, *Metrosideros polymorpha*, or *Vaccinium reticulatum*; and

(ii) Elevations between 1,584 and 2,513 m (5,198 and 8,243 ft).

FAMILY POACEAE: ***Ischaemum byrone*** (HILO ISCHAEMUM)

Hawaii 21—*Ischaemum byrone*—a and Hawaii 22—*Ischaemum byrone*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Ischaemum byrone* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Coastal wet to dry shrubland, near the ocean, rocks or pahoehoe lava in cracks and holes, and containing one or more of the following associated native plant species: *Fimbristylis cymosa*, or *Scaevola taccada*; and

(ii) Elevations between sea level and 28 m (0 and 91 ft).

FAMILY PORTULACACEAE: ***Portulaca sclerocarpa*** (POE)

Hawaii 27—*Portulaca sclerocarpa*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Portulaca sclerocarpa* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Weathered Mauna Kea soils, cinder cones, or geologically young lavas, in montane dry shrubland, often on bare cinder, near steam vents, or in open *Metrosideros polymorpha* dominated woodlands, and containing one or

more of the following associated native plant species: *Dodonaea viscosa*, *Melanthera venosa*, or *Sophora chrysophylla*; and

(ii) Elevations between 941 and 1,634 m (3,087 to 5,360 ft).

FAMILY RHAMNACEAE: ***Colubrina oppositifolia*** (KAUILA)

Hawaii 10—*Colubrina oppositifolia*—a and Hawaii 18—*Colubrina oppositifolia*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Colubrina oppositifolia* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry and mesic forests dominated by *Diospyros sandwicensis* or *Metrosideros polymorpha* and containing one or more of the following associated native plant species: *Bobea timonioides*, *Erythrina sandwicensis*, *Leptecophylla tameiameiae*, *Nestegis sandwicensis*, *Nothocestrum breviflorum*, *Nototrichium sandwicense*, *Peperomia* sp., *Pleomele hawaiiensis*, *Psydrax odorata*, *Rauvolfia sandwicensis*, *Reynoldsia sandwicensis*, or *Sophora chrysophylla*; and

(ii) Elevations between 177 and 927 m (580 and 3,042 ft).

FAMILY RHAMNACEAE: ***Gouania vitifolia*** (NCN)

Hawaii 18—*Gouania vitifolia*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Gouania vitifolia* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry, rocky ridges and slopes in dry shrubland or dry to mesic *Nestegis-Metrosideros* forests on old substrate kipuka and containing one or more of the following associated native plant species: *Nephrolepis* spp., *Nestegis sandwicensis*, *Pipturus albidus*, *Wikstroemia phillyreifolia*, or *W. sandwicensis*; and

(ii) Elevations between 536 and 1,020 m (1,757 and 3,346 ft).

FAMILY RUBIACEAE: ***Melicope zahlbruckneri*** (ALANI)

Hawaii 24—*Melicope zahlbruckneri*—a and Hawaii 26—*Melicope zahlbruckneri*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Melicope zahlbruckneri* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Acacia koa-Metrosideros polymorpha* dominated montane mesic forest containing one or more of the following associated native plant species: *Coprosma rhynchocarpa*, *Melicope* spp., *Myoporum sandwicense*, *Nestegis sandwicensis*, *Pipturus albidus*, *Pisonia brunoniana*, *Psychotria hawaiiensis*, *Sapindus saponaria*, or *Zanthoxylum dipetalum;* and

(ii) Elevations between 1,060 and 1,336 m (3,476 and 4,383 ft).

FAMILY RUTACEAE: ***Zanthoxylum dipetalum*** VAR. ***tomentosum*** (AE)

Hawaii 10—*Zanthoxylum dipetalum* ssp. *tomentosum*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Zanthoxylum dipetalum* var. *tomentosum* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha* dominated montane mesic forest, often on aa lava, and containing one or more of the following associated native plant species: *Diospyros sandwicensis*, *Myrsine* sp., *Pouteria sandwicensis*, *Psychotria* sp., *Reynoldsia sandwicensis*, *Santalum paniculatum*, or *Sophora chrysophylla;* and

(ii) Elevations between 874 and 1,208 m (2,867 and 3,964 ft).

FAMILY SOLANACEAE: ***Nothocestrum breviflorum*** (AIEA)

Hawaii 5—*Nothocestrum breviflorum*—a, Hawaii 6—*Nothocestrum breviflorum*—b, and Hawaii 10—*Nothocestrum breviflorum*—c, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Nothocestrum breviflorum* on Hawaii.

Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry forest, montane dry forest, or montane mesic forest dominated by *Acacia koa*, *Diospyros sandwicensis*, or *Metrosideros polymorpha* on aa lava substrates, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Caesalpinia kavaiensis*, *Colubrina oppositifolia*, *Delissea undulata*, *Dodonaea viscosa*, *Erythrina sandwicensis*, *Hibiscadelphus hualalaiensis*, *Kokia drynarioides*, *Myoporum sandwicense*, *Osteomeles anthyllidifolia*, *Psydrax odorata*, *Reynoldsia sandwicensis*, *Santalum ellipticum*, *Santalum paniculatum*, or *Sophora chrysophylla;* and

(ii) Elevations between 45 and 1,236 m (146 and 4,055 ft).

FAMILY SOLANACEAE: ***Solanum incompletum*** (POPOLO KU MAI)

Hawaii 10—*Solanum incompletum*—a and Hawaii 11—*Solanum incompletum*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Solanum incompletum* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Dry to mesic forest, diverse mesic forest, or subalpine forest, and containing one or more of the following associated native plant species: *Myoporum sandwicense*, *Myrsine lanaiensis*, or *Sophora chrysophylla;* and

(ii) Elevations between 1,185 and 2,169 m (3,887 and 7,115 ft).

FAMILY URTICACEAE: ***Neraudia ovata*** (NCN)

Hawaii 10—*Neraudia ovata*—a and Hawaii 18—*Neraudia ovata*—d, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Neraudia ovata* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Open *Metrosideros polymorpha-Sophora chrysophylla* dominated lowlands, montane dry forests, or *Metrosideros*-shrub woodland, and containing one or more of the following associated native plant species: *Bidens micrantha* ssp. *ctenophylla*, *Capparis sandwichiana*, *Cocculus orbiculatus*, *Fimbristylis hawaiiensis*, *Myoporum sandwicense*, *Myrsine lanaiensis*, *Myrsine lessertiana*, *Nothocestrum breviflorum*, *Pleomele hawaiiensis*, *or Reynoldsia sandwicensis;* and

(ii) Elevations between 28 and 1,526 m (93 to 5,005 ft).

FAMILY VIOLACEAE: ***Isodendrion hosakae*** (AUPAKA)

Hawaii 4—*Isodendrion hosakae*—a, Hawaii 4—*Isodendrion hosakae*—b, Hawaii 4—*Isodendrion hosakae*—c, Hawaii 4—*Isodendrion hosakae*—d, Hawaii 4—*Isodendrion hosakae*—e, and Hawaii 4—*Isodendrion hosakae*—f, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Isodendrion hosakae* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Cinder cones with montane dry shrubland and containing one or more of the following associated native plant species: *Bidens menziesii*, *Dodonaea viscosa*, *Dubautia linearis*, *Leptecophylla tameiameiae*, *Melanthera venosa*, *Osteomeles anthyllidifolia*, *Santalum ellipticum*, *Sophora chrysophylla*, or *Wikstroemia pulcherrima;* and

(ii) Elevations between 717 and 1,242 m (2,352 and 4,074 ft).

FAMILY VIOLACEAE: ***Isodendrion pyrifolium*** (WAHINE NOHO KULA)

Hawaii 12—*Isodendrion pyrifolium*—a and Hawaii 13—*Isodendrion pyrifolium*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Isodendrion pyrifolium* on Hawaii. Within these unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) Lowland dry forests containing one or more of the following native plant species: *Myoporum sandwicense*,

Psydrax odorata, *Sida fallax*, *Sophora chrysophylla*, or *Waltheria indica;* and

(ii) Elevations between 29 and 128 m (94 and 420 ft).

(2) *Ferns and allies*.

FAMILY ASPLENIACEAE: ***Asplenium fragile*** VAR. ***insulare*** (NCN)

Hawaii 24—*Asplenium fragile* var. *insulare*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Asplenium fragile* var. *insulare* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha* dry montane forest; *Dodonaea viscosa* dry montane shrubland; *Myoporum sandwicense-Sophora chrysophylla* dry montane forest; *Metrosideros polymorpha-Acacia koa* forest; or subalpine dry forest and shrubland with large, moist lava tubes (3.05 to 4.6 m (10 to 15 ft) in diameter), pits, deep cracks, and lava tree molds that have at least a moderate soil or ash accumulation or that are at the interface between younger aa lava flows and much older pahoehoe lava or ash deposits with a fairly consistent microhabitat (areas that are moist and dark); and containing one or more of the following associated native plant species: *Leptecophylla tameiameiae*, *Phyllostegia ambigua*, *Vaccinium reticulatum*, mosses, or liverworts; and

(ii) Elevations between 1,313 and 2,194 m (4,306 and 7,198 ft).

FAMILY ASPLENIACEAE: ***Diellia erecta*** (ASPLENIUM-LEAVED DIELLIA)

Hawaii 17—*Diellia erecta*—a and Hawaii 18—*Diellia erecta*—b, identified in the legal descriptions in paragraph (k) of this section, constitute critical habitat for *Diellia erecta* on Hawaii. Within these units, the currently known primary constituent elements of critical habitat include, but are not limited to, the habitat components provided by:

(i) *Metrosideros polymorpha-Nestegis sandwicensis* lowland mesic forest containing one or more of the following associated native plant species: *Antidesma platyphyllum*, *A. pulvinatum*, *Diospyros sandwicensis*, *Microlepia* sp., *Nephrolepis* spp. *Nestegis sandwicensis*, *Psydrax odorata*, *Wikstroemia phillyreifolia*, or *Wikstroemia sandwicensis;* and

(ii) Elevations between 510 and 981 m (1,672 and 3,217 ft).

FAMILY GRAMMITIDACEAE: ***Adenophorus periens*** (PENDENT KIHI FERN)

Hawaii 28—*Adenophorus periens*—a, identified in the legal description in paragraph (k) of this section, constitutes critical habitat for *Adenophorus periens* on Hawaii. Within this unit, the currently known primary constituent elements of critical habitat include but are not limited to, the habitat components provided by:

(i) Epiphytic on *Metrosideros polymorpha* or *Ilex anomala*, or possibly other native tree trunks, in *Metrosideros polymorpha-Cibotium glaucum* lowland wet forest containing one or more of the following associated native plant species: *Broussasia arguta*, *Cheirodendron trigynum*, *Cyanea* sp., *Cyrtandra* sp., *Dicranopteris linearis*, *Freycinetia arborea*, *Hedyotis terminalis*, *Labordia hirtella*, *Machaerina angustifolia*, *Psychotria hawaiiensis*, or *Psychotria* sp.; and

(ii) Elevations between 675 and 921 m (2,215 and 3,021 ft).

[68 FR 9241, Feb. 27, 2003, as amended at 68 FR 13055, Mar. 18, 2003; 68 FR 26038, May 14, 2003; 68 FR 28072, May 22, 2003; 68 FR 36080, June 17, 2003; 68 FR 39704, July 2, 2003; 77 FR 57767, Sept. 18, 2012]

Subpart J—Manatee Protection Areas

SOURCE: 44 FR 60964, Oct. 22, 1979, unless otherwise noted.

§ 17.100 Purpose.

This subpart provides a means for establishing manatee protection areas without waters under the jurisdiction of the United States, including coastal waters adjacent to and inland waters within the several States, within which certain waterborne activities will be restricted or prohibited for the purpose of preventing the taking of manatees.

§ 17.101 Scope.

This subpart applies to the West Indian manatee (*Trichechus manatus*), also known as the Florida manatee and as the sea cow. The provisions of this subpart are in addition to, and not in lieu of, other regulations contained in this chapter I which may require a permit or prescribe additional restrictions on the importation, exportation, transportation, or taking of wildlife, and the regulations contained in title 33, CFR, which regulate the use of navigable waters.

§ 17.102 Definitions.

In addition to definitions contained in the Acts, part 10 of this subchapter, and § 17.3 of this part, and unless the context otherwise requires, in this subpart:

Acts means the Endangered Species Act of 1973, as amended (87 Stat. 884, 16 U.S.C. 1531–1543) and the Marine Mammal Protection Act of 1972, as amended (86 Stat. 1027, 16 U.S.C. 1361–1407);

Authorized officer means any commissioned, warrant, or petty officer of the U.S. Coast Guard, or any officer or agent designated by the Director of the U.S. Fish and Wildlife Service, the Secretary of the Interior, the Secretary of Commerce, or the Secretary of the Treasury, or any officer designated by the head of a Federal or State agency which has entered into an agreement with the Secretary of the Interior, Secretary of Commerce, Secretary of the Treasury, or Secretary of Transportation to enforce the Acts, or any Coast Guard personnel accompanying and acting under the direction of a person included above in this definition;

Idle speed is defined as the minimum speed needed to maintain steerage (direction) of the vessel;

Manatee protection area means a manatee refuge or a manatee sanctuary;

Manatee refuge means an area in which the Director has determined that certain waterborne activity would result in the taking of one or more manatees, or that certain waterborne activity must be restricted to prevent the taking of one or more manatees, including but not limited to a taking by harassment;

Manatee sanctuary means an area in which the Director has determined that any waterborne activity would result in a taking of one or more manatees, including but not limited to a taking by harassment;

Planing means riding on or near the water's surface as a result of the hydrodynamic forces on a water vehicle's hull, sponsons, foils, or other surfaces. A water vehicle is considered on plane when it is being operated at or above the speed necessary to keep the vessel planing;

Slow speed is defined as the speed at which a water vehicle proceeds when it is fully off plane and completely settled in the water. Due to the different speeds at which water vehicles of different sizes and configurations may travel while in compliance with this definition, no specific speed is assigned to slow speed. A water vehicle is *not* proceeding at slow speed if it is: on a plane; in the process of coming up on or coming off of plane; or creating an excessive wake. A water vehicle *is* proceeding at slow speed if it is fully off plane and completely settled in the water, not creating an excessive wake;

Slow speed (channel exempt) means that the slow-speed designation does not apply to those waters within the maintained, marked channel;

Slow speed (channel included) means that the slow-speed designation applies both within and outside the designated channel;

Wake means all changes in the vertical height of the water's surface caused by the passage of a water vehicle, including a vessel's bow wave, stern wave, and propeller wash, or a combination thereof;

Waterborne activity includes, but is not limited to, swimming, diving (including skin and scuba diving), snorkeling, water skiing, surfing, fishing, the use of water vehicles, and dredging and filling operations;

Water vehicle, *watercraft*, and *vessel* include, but are not limited to, boats (whether powered by engine, wind, or other means), ships (whether powered by engine, wind, or other means), barges, surfboards, personal watercraft, water skis, or any other device or mechanism the primary or an incidental purpose of which is locomotion

on, or across, or underneath the surface of the water.

[44 FR 60964, Oct. 22, 1979, as amended at 67 FR 693, Jan. 7, 2002]

§ 17.103 Establishment of protection areas.

The Director may, by regulation issued in accordance with 5 U.S.C. 553 and 43 CFR part 14, establish manatee protection areas whenever there is substantial evidence showing such establishment is necessary to prevent the taking of one or more manatees. Any regulation establishing a manatee protection area shall state the following information:

(a) Whether the area is to be a manatee sanctuary or refuge.

(1) If the area is to be a manatee sanctuary, the regulation shall state that all waterborne activities are prohibited.

(2) If the area is to be a manatee refuge, the regulation shall state which, if any, waterborne activities are prohibited, and it shall state the applicable restrictions, if any, on permitted waterborne activities.

(b) A description of the area sufficient enough so that its location and dimensions can be readily ascertained without resort to means other than published maps, natural or man-made physical reference points, and posted signs.

(c) Whether the designation is to remain in effect year-round, and if not, the time of year it is to remain in effect.

§ 17.104 Prohibitions.

Except as provided in § 17.105,

(a) *Manatee sanctuary*. It is unlawful for any person to engage in any waterborne activity within a manatee sanctuary.

(b) *Manatee refuge*. It is unlawful for any person within a particular manatee refuge to engage in any waterborne activity which has been specifically prohibited within that refuge, or to engage in any waterborne activity in a manner contrary to that permitted by regulation within that area. Any take of manatees under the Acts (see § 18.3 of this chapter for a definition of ''take'' in regard to marine mammals), including take by harassment, is prohibited wherever it may occur.

(c) *State law*. It is unlawful for any person to engage in any waterborne activity prohibited by, or to engage in any waterborne activity in a manner contrary to that permitted by, any State law or regulation the primary purpose of which is the protection of manatees: *Provided:* that such State law or regulation has been issued as part of a program which is determined to be in accordance with the Endangered Species Act of 1973, pursuant to section 6(c) of that Act (16 U.S.C. 1535(c)) or has been approved as consistent with the Marine Mammal Protection Act of 1972 in accordance with section 109 of that Act (16 U.S.C. 1379) and 50 CFR 18.53.[1]

[44 FR 60964, Oct. 22, 1979, as amended at 77 FR 15631, Mar. 16, 2012]

§ 17.105 Permits and exceptions.

(a) The Director may issue permits allowing the permittee to engage in any activity otherwise prohibited by this subpart. Such permits shall be issued in accordance with the provisions of § 17.22 of this part. Such permits shall be issued only for scientific purposes or for the enhancement of propagation or survival. All of the provisions of § 17.22 shall apply to the issuance of such permits, including those provisions which incorporate other sections by reference. Compliance with this paragraph does not by itself constitute compliance with any applicable requirements of part 18.

(b) Any authorized officer may engage in any activity otherwise prohibited by this subpart if:

(1) The officer is acting in the performance of his or her official duties; and

(2) The activity is being conducted to directly protect any manatees, to enhance the propagation or survival of manatees, or is reasonably required to enforce the other provisions of this subpart.

[1] EDITORIAL NOTE: Section 18.53 was removed at 48 FR 22456, May 18, 1983. See the note at part 18, subpart F.

(c) Any person may engage in any activity otherwise prohibited by this subpart if such activity is reasonably necessary to prevent the loss of life or property due to weather conditions or other reasonably unforeseen circumstances, or to render necessary assistance to persons or property.

(d) Any waterborne activity which would otherwise be prohibited by this subpart may be engaged in if it is conducted by or under a contract with a Federal agency and if the Secretary of Defense, in accordance with section 7(j) of the Endangered Species Act of 1973 (16 U.S.C. 1536(j)) makes a finding that such activity is necessary for reasons of national security. Such a finding must be made prior to the beginning of the activity or the designation of the protection area, whichever occurs later; except that in the case of an emergency establishment of a protection area under §17.106, the finding must be made within 10 days after the beginning of the activity or the designation of the protection area, whichever occurs later.

§17.106 Emergency establishment of protection areas.

(a) The Director may establish a manatee protection area under the provisions of paragraphs (b) and (c) of this section at any time he determines there is substantial evidence that there is imminent danger of a taking of one or more manatees, and that such establishment is necessary to prevent such a taking.

(b) The establishment of a manatee protection area under this section shall become effective immediately upon completion of the following requirements:

(1) Publication of a notice containing the information required by §17.103 of this section in a newspaper of general circulation in each county, if any, in which the protection area lies; and

(2) Posting of the protection area with signs clearly marking its boundaries.

(c) Simultaneously with the publication required by paragraph (b) of this section, the Director shall publish the same notice in the FEDERAL REGISTER. If simultaneous publication is impractical, because of the time involved or the nature of a particular emergency situation, failure to publish notice in the FEDERAL REGISTER simultaneously shall not delay the effective date of the emergency establishment. In such a case, notice shall be published in the FEDERAL REGISTER as soon as possible.

(d) No emergency establishment of a protection area shall be effective for more than 120 days. Termination of an emergency establishment of a protection area shall be accomplished by publishing notice of the termination in the FEDERAL REGISTER and in a newspaper of general circulation in each county, if any, in which the protection area lies.

(e) Within 10 days after establishing a protection area in accordance with this section, the Director shall commence proceedings to establish the area in accordance with §17.103.

§17.107 Facilitating enforcement.

Water vehicles operating in manatee sanctuary or refuge waters are subject to boarding and inspection for the purpose of enforcing the Acts and these regulations.

(a) The operator of a water vehicle shall immediately comply with instructions issued by authorized officers to facilitate boarding and inspection of the water vehicle.

(b) Upon being approached by an authorized officer, the operator of a water vehicle shall be alert for signals conveying enforcement instructions.

(c) A water vehicle signaled for boarding shall:

(1) Guard channel 16, VHF-FM, if equipped with a VHF-FM radio;

(2) Stop immediately and lay to or maneuver in such a manner as to facilitate boarding by the authorized officer and his or her party;

(3) When necessary to facilitate the boarding, provide a safe ladder, manrope, safety line and illumination of the ladder; and

(4) Take such other actions as may be necessary to ensure the safety of the authorized officer and his or her party and to facilitate the boarding and inspection.

(d) It is unlawful for any person to assault, resist, oppose, impede, intimidate, or interfere with any authorized officer or member of his or her party.

§ 17.108 List of designated manatee protection areas.

(a) *Manatee sanctuaries*. The following areas are designated as manatee sanctuaries. All waterborne activities are prohibited in these areas during the period November 15–March 31 of each year. The areas which will be posted are described as follows:

(1) That part of Kings Bay, Crystal River, Citrus County, within T. 18 S., R. 17 E., Tallahassee Meridian; located in SW¼ fractional section 28, more particularly described as follows:

Beginning at Corner 1 (N–1,653,459/E–308,915) Florida Coordinate System, West Zone, a point on the shoreline of Kings Bay near the southwest corner of Lot 9 as accepted on a plat by the Department of the Interior, General Land Office, dated January 10, 1928; thence easterly, along said shoreline, approximately 1240 feet to Corner 2 (N–1,653,762/E/309,641) a point; thence S. 56°58′11″ W., across open water, 776.49 feet to Corner 3 (N–1,653,339/E–308,990) a point; thence N. 32°03′07″ W., across open water, 142.26 feet to the point of beginning, containing 3.41 acres, more or less, to be known as the Banana Island Sanctuary.

(2) That part of Kings Bay, Crystal River, Citrus County, Florida, within T. 18 S., R. 17 E., Tallahassee Meridian; located in SW¼ fractional section 28, more particularly described as follows:

Beginning at Corner 1 (N–1,652,684/E–309,396) Florida Coordinate System, West Zone, a point on the shoreline of Kings Bay, said point being the northwest corner of Lot 31 Sunset Shores Addition to Woodward Park (Plat Book 2, page 140 Citrus County Property Appraiser's Office); thence N. 35°05′33″ W., across open water, 439.10 feet to Corner 2 (N–1,653,043/E–309,144) a point; thence N. 67°23′28″ E., across open water, 873.45 feet to Corner 3, a point on the shoreline of Kings Bay said point also being a corner in the northerly boundary line of Lot 21 in said subdivision; thence southwesterly along said shoreline and the northerly boundary of Lots 21–31, including a canal, approximately 920 feet to the point of beginning, containing 5.62 acres, more or less, to be known as the Sunset Shores Sanctuary.

(3) A tract of submerged land, lying in Sections 21 and 28, Township 18 South, Range 17 East in Citrus County, Florida, more particularly described as follows: All of the submerged land lying within the mean high water line of a canal bordering the western, northern, and eastern sides of Paradise Isle Subdivision, as recorded in Plat Book 3, Page 88 of the Public Records of Citrus County, Florida; bounded at the western exit by a line drawn between the southwestern corner of Lot 7 of said Paradise Isle Subdivision and the southeastern corner of Lot 22 of Springs O'Paradise Subdivision, Unit No. 3, as recorded in Plat Book 3, Page 70 of said Public Records; and bounded at the eastern exit by an easterly extension of the south boundary of said Paradise Isle Subdivision; Containing 3.4 acres, more or less, to be known as the Magnolia Springs Manatee Sanctuary.

(4) A tract of submerged land, lying in Sections 28 and 29, Township 18 South, Range 17 East in Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 28; Then go N 06°01′23″ W for 4466.90 feet to a 10-inch diameter concrete monument marking the Point of Beginning; Then go N 10°05′38″ W for 477.32 feet to a 10-inch diameter concrete monument with an attached buoy; Then go N 37°34′41″ E for 651.07 feet to a 10-inch diameter concrete monument with an attached buoy; Then go S 73°26′46″ E for 634.10 feet to a 10-inch diameter concrete monument with an attached buoy; Then go S 17°50′16″ E for 1691.53 feet to a 10-inch diameter concrete monument with an attached buoy; Then go S 71°48′58″ W for 117.87 feet to a 10-inch diameter concrete monument with an attached buoy; Then continue S 71°48′58″ W for 5 feet more or less to the mean high water line of Buzzard Island; Then follow said mean high water line northerly and westerly to a point lying S 10°05′38″ E of the point of beginning; Then go N 10°05′38″ W for 5 feet more or less to the point of beginning; Containing 18.0 acres, more or less, to be known as the Buzzard Island Manatee Sanctuary.

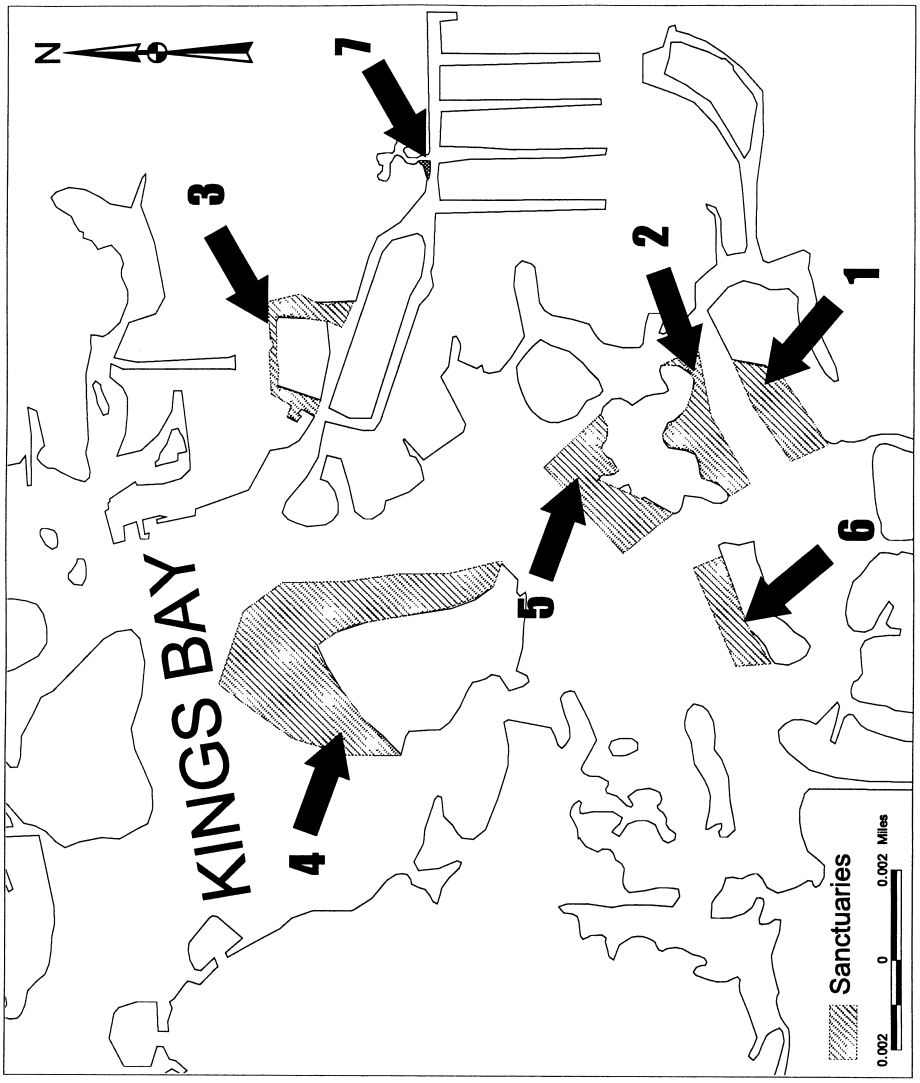
(5) A tract of submerged land, lying in Section 28, Township 18 South, Range 17 East in Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 28; Then go N 28°55′06″ E for 2546.59 feet to a 4-inch diameter iron pipe marking the Point of Beginning; Then go N 44°23′41″ W for 282.45 feet to a 10-inch diameter concrete monument with an attached buoy; Then go N 33°53′16″ E for 764.07 feet to a 10-inch diameter concrete monument with an attached buoy; Then go S 31°51′55″ E for 333.22 feet to a 4-inch diameter iron pipe; Then continue S 31°51′55″ E for 5 feet more or less to the mean high water line of Banana Island; Then go westerly along said main high water line to a point lying S 44°23′41″ E from the point of beginning; Then go N 44°23′41″ W for 5 feet more or less to the point of beginning; Containing 4.6 acres, more or less, to be known as the Tarpon Springs Manatee Sanctuary.

(6) A tract of submerged land, lying in Section 28, Township 18 South, Range 17 East in Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 28; Then go N 06°43′00″ E for 1477.54 feet to a 10-inch diameter concrete monument marking the Point of Beginning; Then

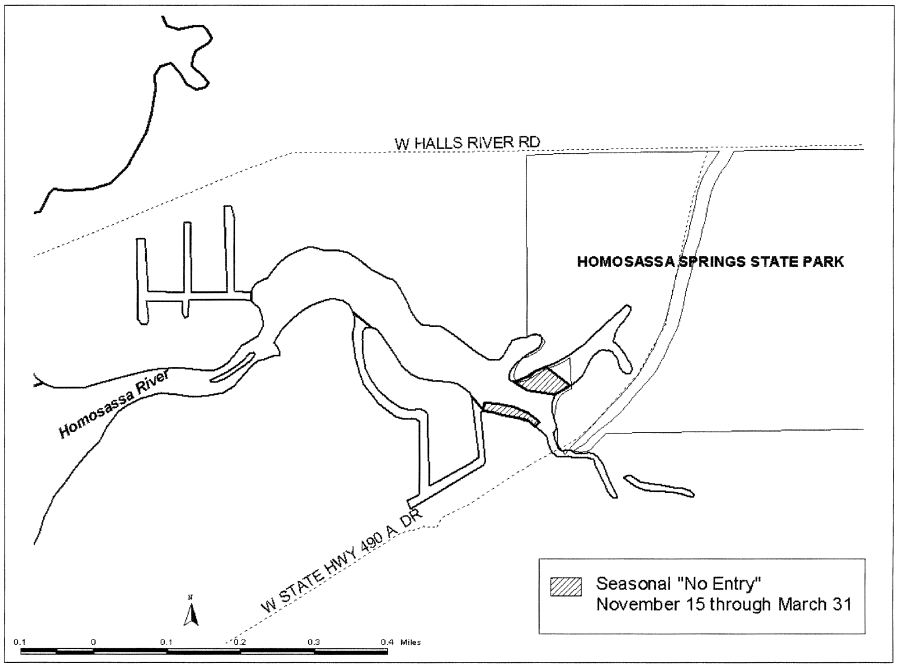
go N 06°24′59″ W for 251.66 feet to a 10-inch diameter concrete monument with an attached buoy; Then go N 65°41′12″ E for 637.83 feet to a 10-inch diameter concrete monument with an attached buoy; Then go S 55°40′52″ E for 272.86 feet to a 10-inch diameter concrete monument; Then continue S 65°15′06″ W for 857.22 feet to the point of beginning; Containing 4.0 acres, more or less, to be known as the Warden Key Manatee Sanctuary.

(7) A tract of submerged land, lying in Section 28, Township 18 South, Range 17 East, Tallahassee Meridian, Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 28 (N–1651797.56 E–463846.96) Florida Coordinate System, West Zone, NAD 1983, N.G.S. adjustment of 1990 (expressed in U.S. survey feet); thence N. 40°08′47″ E., 5551.65 feet (5551.57 feet grid distance) to an aluminum monument stamped ''PSM 3341 1998'' (N1656009.01 E-467449.35) marking the Point of Beginning; thence N. 77°06′49″ E., 71.84 feet to an aluminum monument stamped ''PSM3341 1998'' (N–1656025.04, N–467519.38); thence S. 04°37′09″ W., 29.88 feet to an aluminum monument stamped ''PSM 3341 1998'' (N–1655995.26 E–467516.98); thence N. 78°29′57″ W., 69.01 feet to the point of beginning; to be known as the Three Sisters Spring Sanctuary.

NOTE: Map for paragraphs (a)(1) through (a)(7) follows:

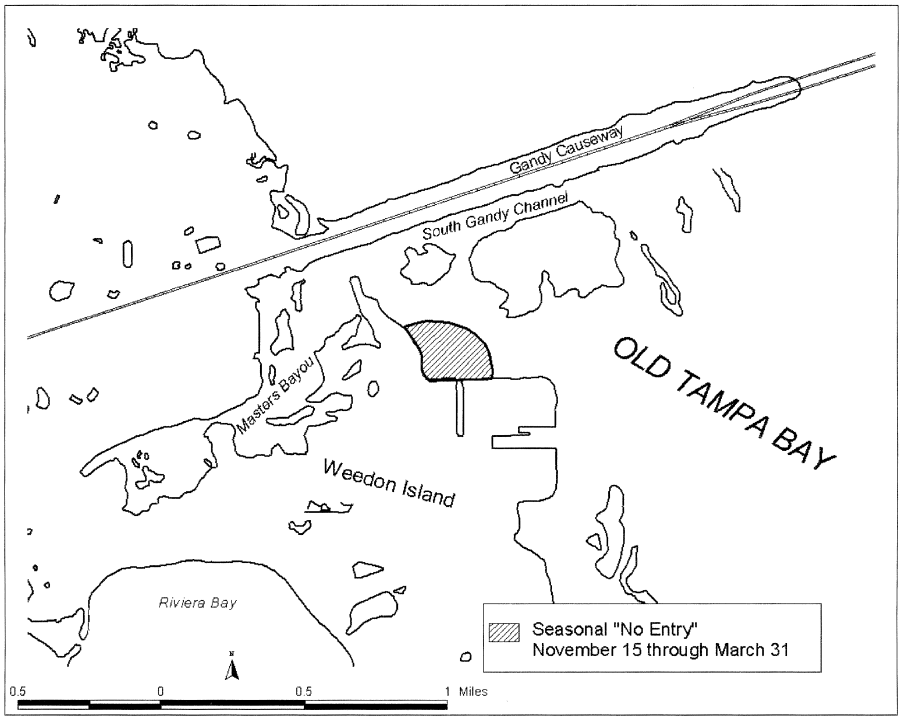


(8) That part of the Homosassa River, Homosassa, Citrus County, Florida, within Section 28, Township 19 South, Range 17 East, described as the headwaters of the Homosassa River (adjacent to the Homosassa Springs State Wildlife Park), including the spring run at the point where the run enters the northeast fork of the river along the southeastern shore and an area opposite this site along the southern shoreline; containing approximately 0.67 ha (1.66 acres). Map follows (see Blue Waters Manatee Sanctuary):



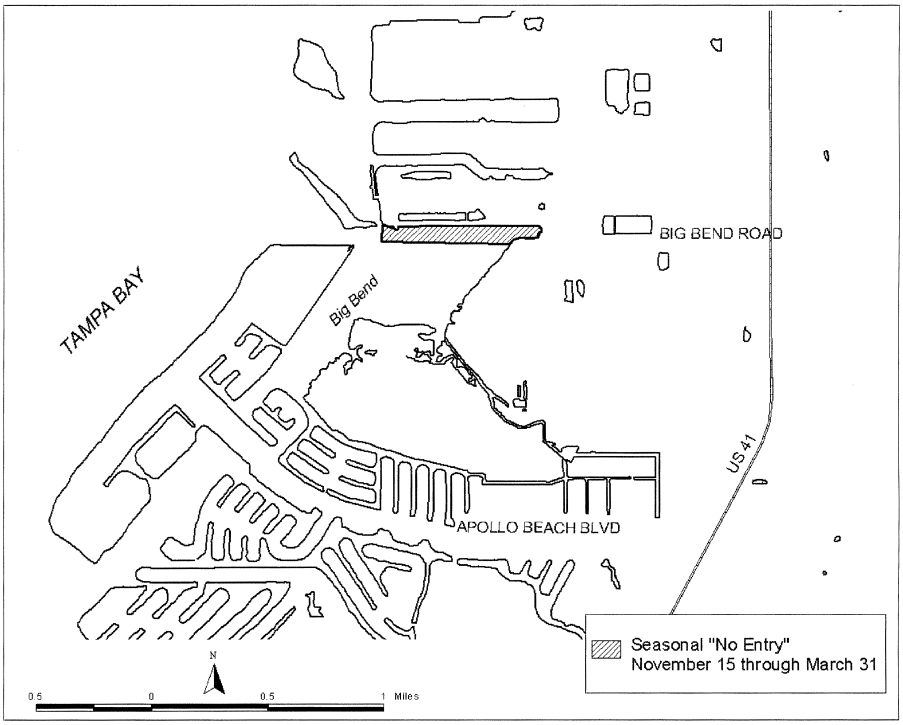
Blue Waters Manatee Sanctuary

(9) That part of Tampa Bay, St. Petersburg, Pinellas County, Florida, within Sections 16 and 21, Township 30 South, Range 17 East, described as the warm-water outflow of the Bartow Electric Generating Plant located on the northern shore of Weedon Island, encircling that point where the discharge enters receiving waters along the western shore of Old Tampa Bay; to be known as the Bartow Electric Generating Plant Manatee Sanctuary, containing approximately 12.07 ha (29.82 acres). Map follows (see Bartow Electric Generating Plant Manatee Sanctuary):



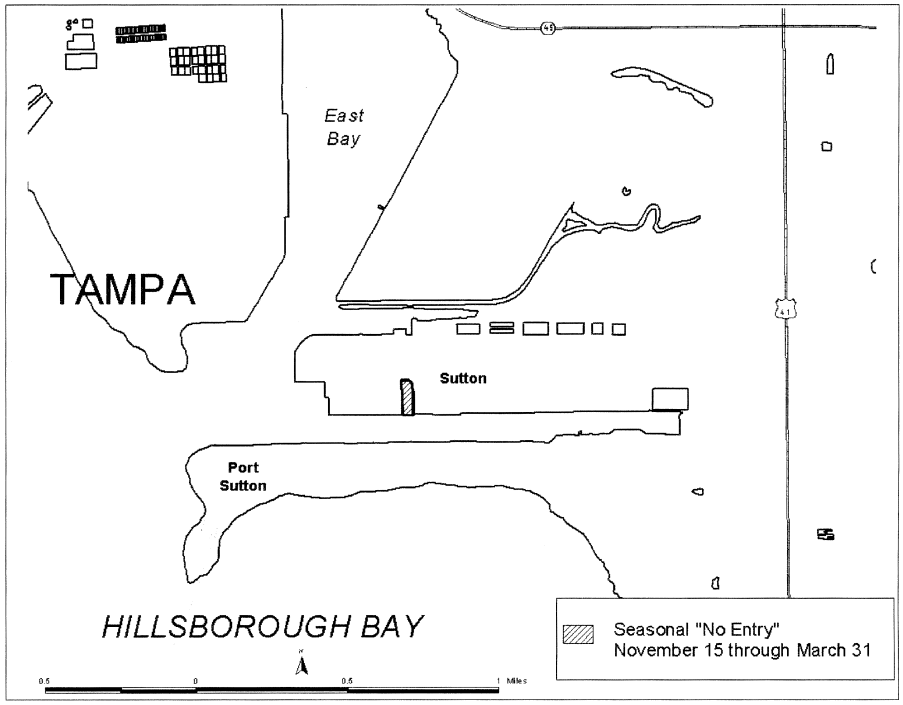
Bartow Electric Generating Plant Manatee Sanctuary

(10) That part of Tampa Bay, Tampa, Hillsborough County, Florida, within Sections 10 and 15, Township 31 South, Range 19 East, described as the waters in and around the warm-water outflow of the Tampa Electric Company Big Bend Electric Generating Station located west of Jackson Branch and including the Big Bend area of eastern Tampa Bay, to be known as the Tampa Electric Company Big Bend Manatee Sanctuary, containing approximately 12.08 ha (29.85 acres). Map follows (See TECO Big Bend Manatee Sanctuary):



TECO Big Bend Manatee Sanctuary

(11) That part of Tampa Bay, Tampa, Hillsborough County, Florida, lying within Section 4, Township 30 South, Range 19 East, described as the warm-water outflow of the Tampa Electric Company Gannon Electric Generating Station, to be known as the Port Sutton Manatee Sanctuary, containing approximately 1.1 ha (2.7 acres). Map follows (see Port Sutton Manatee Sanctuary):



Port Sutton Manatee Sanctuary

(b) *Exceptions.* (1) Adjoining property owners, their guests, employees, and their designees (including but not limited to contractors and lessees) may engage in watercraft access and property maintenance activities through manatee sanctuaries (set forth in paragraphs (a)(1) through (a)(11) of this section) and designated ''no-entry areas'' in the Kings Bay Manatee Refuge (set forth in paragraph (c)(14) of this section). Use of sanctuary and no-entry area waters is restricted to authorized individuals accessing adjoining properties, storing watercraft, and maintaining property and waterways. Maintenance activities include those actions necessary to maintain property and waterways, subject to any Federal, State, and local government permitting requirements.

(2) Authorized individuals must obtain a sticker or letter of authorization from the U.S. Fish and Wildlife Service identifying them as individuals authorized to enter no-entry areas that adjoin their property. Stickers must be placed in a conspicuous location to readily identify authorized watercraft. Individuals with a letter of authorization must have a valid letter in their possession when accessing no-entry areas.

(3) Authorized individuals must conduct any authorized boating activity within these areas at idle or no-wake speeds.

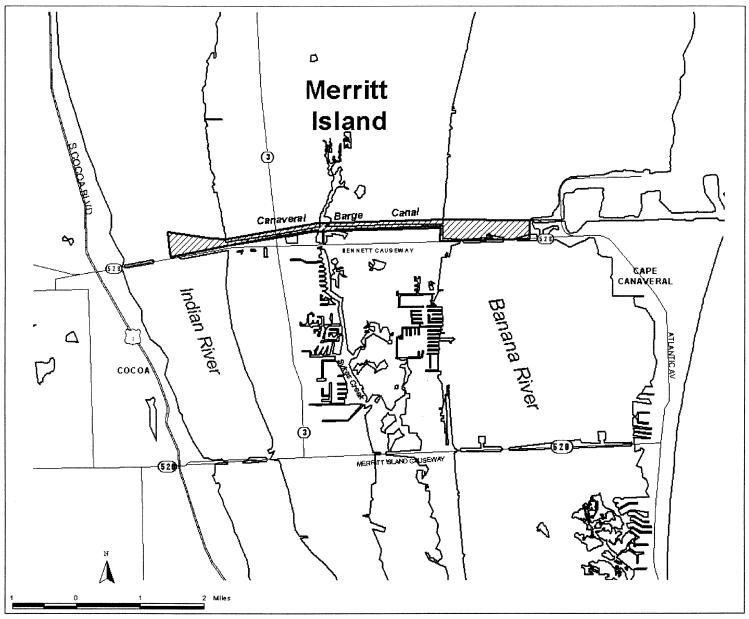
(c) *Manatee refuges.* The following areas are designated as manatee refuges. For each manatee refuge, we will state on appropriate signs which, if any, waterborne activities are prohibited, and state the applicable restrictions, if any, on permitted waterborne activities. The areas that will be posted are described as follows:

(1) *The Barge Canal Manatee Refuge.* (i) The Barge Canal Manatee Refuge is described as all waters lying within the

banks of the Barge Canal, Brevard County, Florida, including all waters lying within the marked channel in the Banana River that lie between the east entrance of the Barge Canal and the Canaveral Locks; containing approximately 276.3 ha (682.7 acres).

(ii) Watercraft are required to proceed at slow speed (channel included) all year. The use of watercraft at speeds greater than slow speed is prohibited throughout the Barge Canal Manatee Refuge.

(iii) Map of the Barge Canal Manatee Refuge follows:

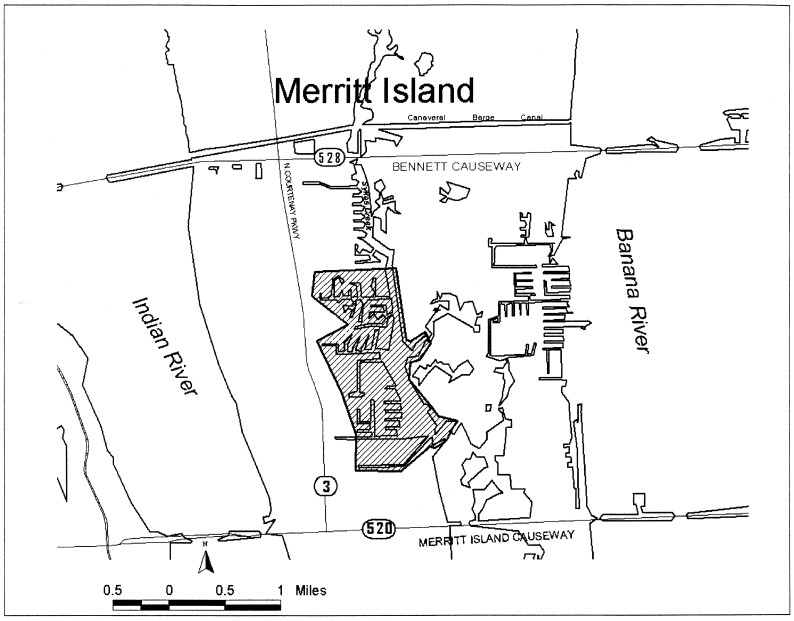


Barge Canal Manatee Refuge

(2) *The Sykes Creek Manatee Refuge.* (i) The Sykes Creek Manatee Refuge is described as all waters, including the marked channel in Sykes Creek, Brevard County, Florida. In particular, the portion of Sykes Creek southerly of the southern boundary of that portion of the creek commonly known as the ''S'' curve (said boundary being a line bearing east from a point on the western shoreline of Sykes Creek at approximate latitude 28 degrees 23′24″ N, approximate longitude 80 degrees 41′27″ W) and northerly of the Sykes Creek Parkway; containing approximately 342.3 ha (845.8 acres).

(ii) Watercraft are required to proceed at slow speed (channel included) all year. The use of watercraft at speeds greater than slow speed is prohibited throughout the Sykes Creek Manatee Refuge.

(iii) Map of the Sykes Creek Manatee Refuge follows:

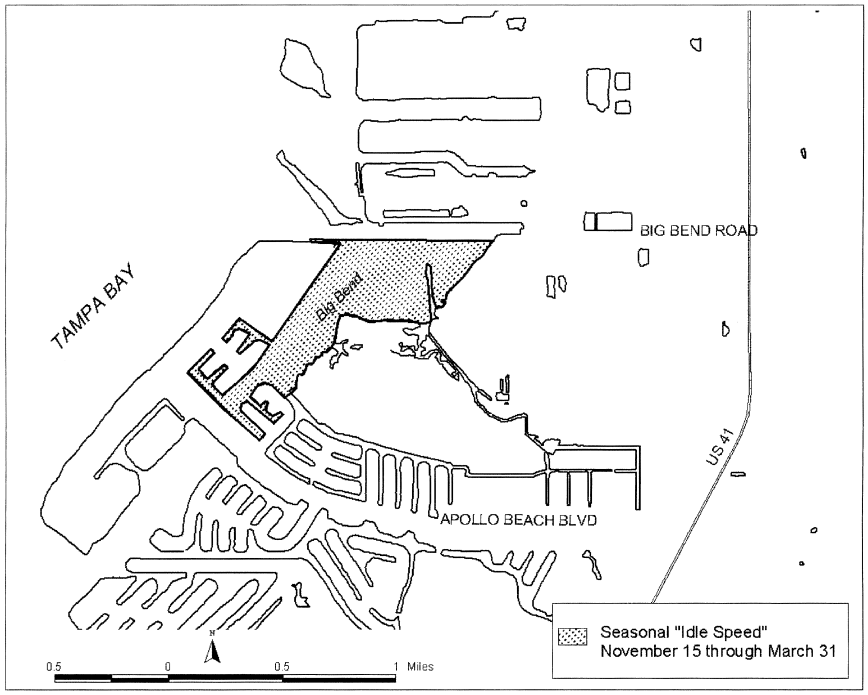


Sykes Creek Manatee Refuge

(3) *The Tampa Electric Company's Big Bend Manatee Refuge.* (i) The Tampa Electric Company's Big Bend Manatee Refuge is described as the entrance channel and those waters south of the manatee sanctuary at the Tampa Electric Company's Big Bend Electric Generating Station within Hillsborough County, Florida; containing approximately 89.35 ha (220.79 acres).

(ii) Watercraft are required to operate at idle speed from November 15 through March 31. Watercraft are prohibited from operating at speeds greater than idle speed from November 15 through March 31, inclusive.

(iii) Map of the Tampa Electric Company's Big Bend Manatee Refuge follows (see TECO Big Bend Manatee Refuge):

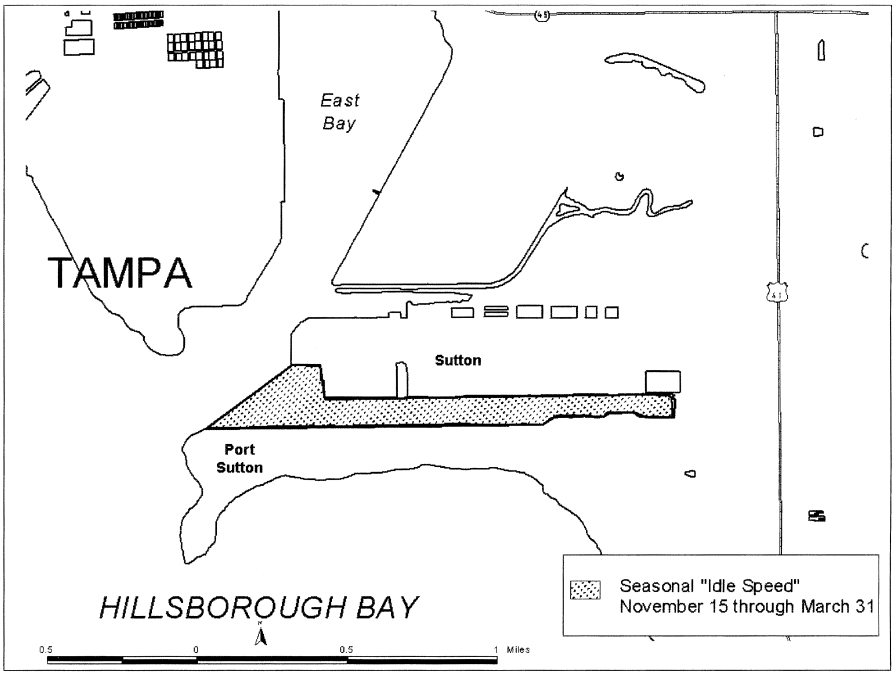


TECO Big Bend Manatee Refuge

(4) *The Port Sutton Manatee Refuge.* (i) The Port Sutton Manatee Refuge is described as those waters surrounding the Port Sutton Manatee Sanctuary, including all waters within Port Sutton, Hillsborough County, Florida; containing approximately 39.2 ha (96.9 acres).

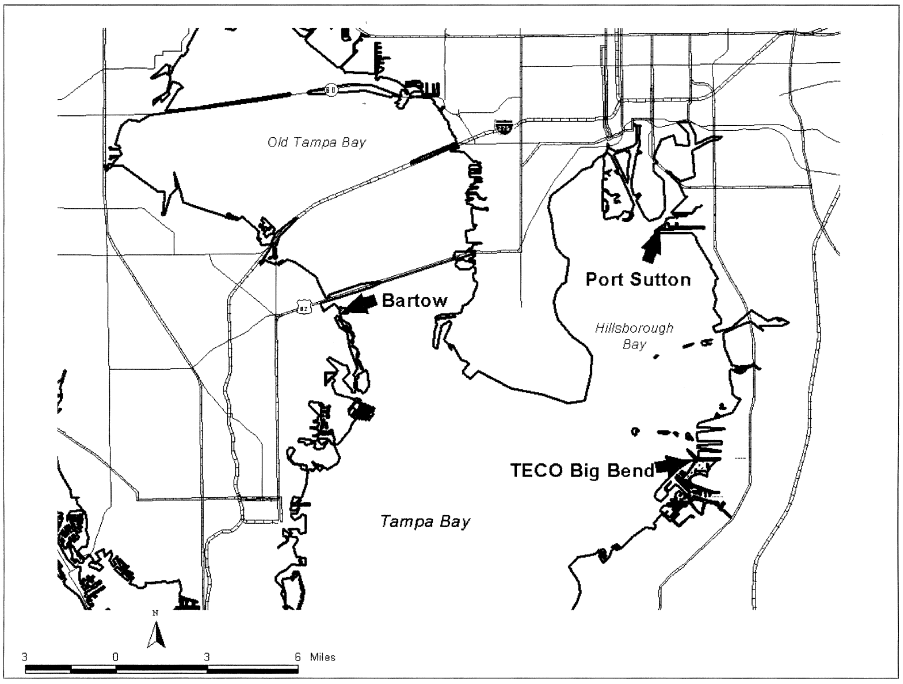
(ii) Watercraft are required to operate at idle speed from November 15 through March 31, inclusive. Watercraft are prohibited from operating at speeds greater than idle speed from November 15 through March 31, inclusive.

(iii) Map of Port Sutton Manatee Refuge follows (see Port Sutton Manatee Refuge):



Port Sutton Manatee Refuge

(iv) Map showing the relative locations of the Bartow, TECO Big Bend, and Port Sutton areas of Tampa Bay follows (see Tampa Bay Manatee Sanctuaries and Refuges):

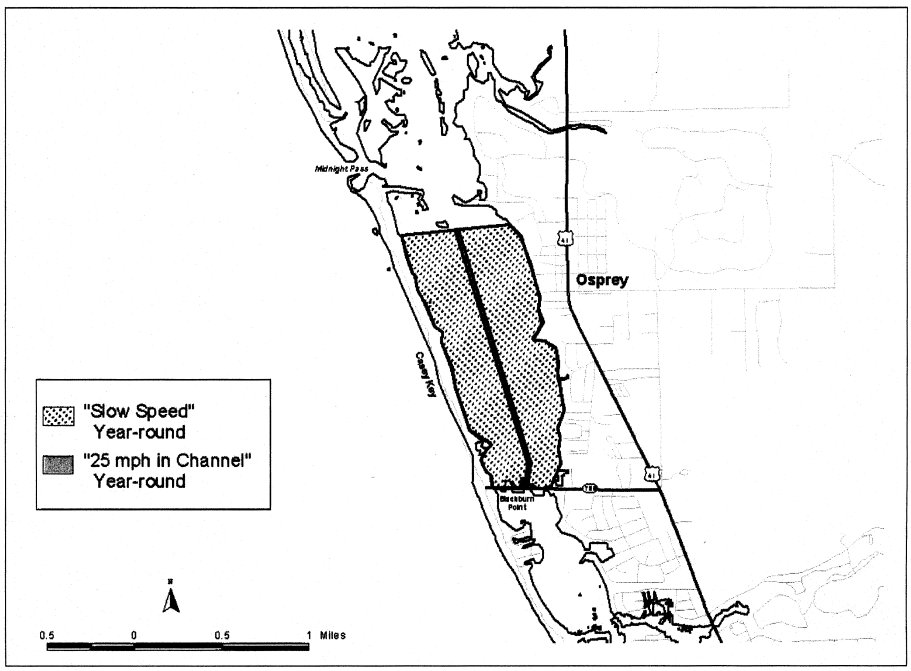


Tampa Bay Manatee Sanctuaries and Refuges

(5) *The Little Sarasota Bay Manatee Refuge.* (i) The Little Sarasota Bay Manatee Refuge is described as those waters lying southerly of a line that bears north 90 degrees 00′00″ E (true) and runs through the southerly tip of the first unnamed island south of Red Intracoastal Waterway Channel Marker ''40'' (latitude 27 degrees 10′07″ N, longitude 82 degrees 30′05″ W) and those waters lying northerly of the Blackburn Point Bridge, Sarasota County, Florida; containing approximately 214.2 ha (529.40 acres).

(ii) Watercraft are required to proceed at slow speed, 40 kilometers per hour (25 miles per hour) within the channel, year-round. Watercraft are prohibited from operating in excess of slow speed outside of the channel and operating at speeds in excess of 40 kilometers per hour (25 miles per hour) within the channel, year-round.

(iii) Map of the Little Sarasota Bay Manatee Refuge follows (see Little Sarasota Bay Manatee Refuge):

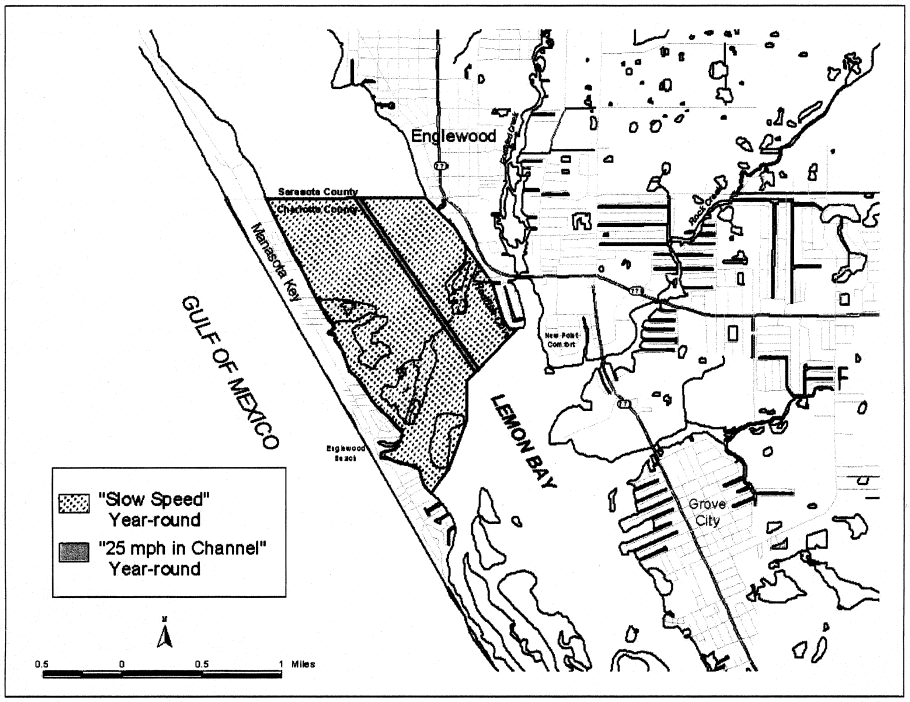


Little Sarasota Bay Manatee Refuge

(6) *The Lemon Bay Manatee Refuge.* (i) The Lemon Bay Manatee Refuge is described as those waters of Lemon Bay lying south of the Sarasota/Charlotte County, Florida, boundary and north of a line north 60 degrees 14′00″ E (true) parallel with a series of small islands approximately 1.6 kilometer (1 mile) south of the Bay Road Bridge; containing approximately 383.61 ha (948.06 acres).

(ii) Watercraft are required to proceed at slow speed, 40 kilometers per hour (25 miles per hour) within the channel, year-round. Watercraft are prohibited from operating in excess of slow speed outside of the channel and operating at speeds in excess of 40 kilometers per hour (25 miles per hour) within the channel, year-round.

(iii) Map of the Lemon Bay Manatee Refuge follows (see Lemon Bay Manatee Refuge):



Lemon Bay Manatee Refuge

(7) *The Peace River Manatee Refuge.* (i) The Peace River Manatee Refuge is described as all waters of the Peace River and certain associated water bodies north and east of the U.S. Highway 41, Charlotte and De Soto Counties, Florida; containing approximately 1.698.11 ha (4,196.11 acres).

(ii) In the Peace River in Charlotte County, watercraft are required to travel at slow speed within a posted shoreline buffer between the US Highway 41 and I–75 bridges. The buffer is approximately 300 meters (1,000 feet) from shore except in a slightly larger area north and west of I–75 to be consistent with recently adopted Florida Fish and Wildlife Conservation Commission's regulations. Watercraft are allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) year-round outside the buffer. Watercraft are prohibited from traveling in excess of slow speed within the posted shoreline buffer between the U.S. Highway 41 and I–75 bridges and are further prohibited from operating in excess of 40 kilometers per hour (25 miles per hour) outside the buffer throughout the year.

(iii) In the Peace River within Charlotte County and upstream of I–75 to red channel marker ''14,'' watercraft are required to travel at slow speed outside of the marked navigation channel. Watercraft are allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) year-round inside the marked navigation channel. Watercraft are prohibited from traveling in excess of slow speed in areas outside of the navigation channel and are further prohibited from traveling in excess of 40 kilometers per hour (25 miles per hour) inside the marked navigation channel, year-round.

(iv) In the waters of the Peace River in Charlotte and De Soto Counties upstream of red channel marker ''14,'' watercraft are allowed to travel at a

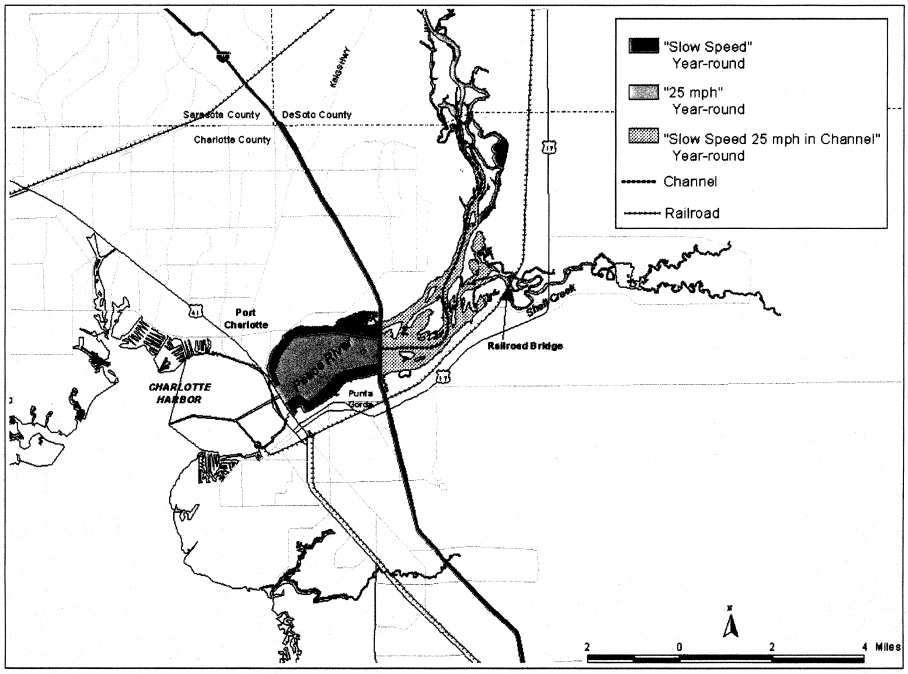
maximum speed of 40 kilometers per hour (25 miles per hour) year-round. Watercraft are prohibited from traveling in excess of 40 kilometers per hour (25 miles per hour), year-round, in this area.

(v) Within the waters of Jim Long Lake and Hunter Creek in Charlotte and De Soto Counties, watercraft are required to travel at slow speed year-round. Watercraft are prohibited from traveling in excess of slow speed in this area, year-round.

(vi) Within the waters of Deep Creek in Charlotte and De Soto Counties, watercraft are required to travel at slow speed year-round. Watercraft are prohibited from traveling in excess of slow speed in this area, year-round.

(vii) Within the waters of Shell Creek in Charlotte County, watercraft are required to travel at slow speed year-round with the following exception. Should a U.S. Coast Guard or State of Florida approved marked navigation channel be established in that portion of Shell Creek approximately 1.6 kilometers (1 mile) downstream of the Seaboard Railroad trestles, watercraft will be allowed to travel at a maximum speed of 40 kilometers per hour (25 miles per hour) in this section of Shell Creek upon posting by the Fish and Wildlife Service or the Florida Fish and Wildlife Conservation Commission. Watercraft are prohibited from traveling in excess of slow speed in this area, year-round.

(viii) Map of the Peace River Manatee Refuge follows (see Peace River Manatee Refuge):



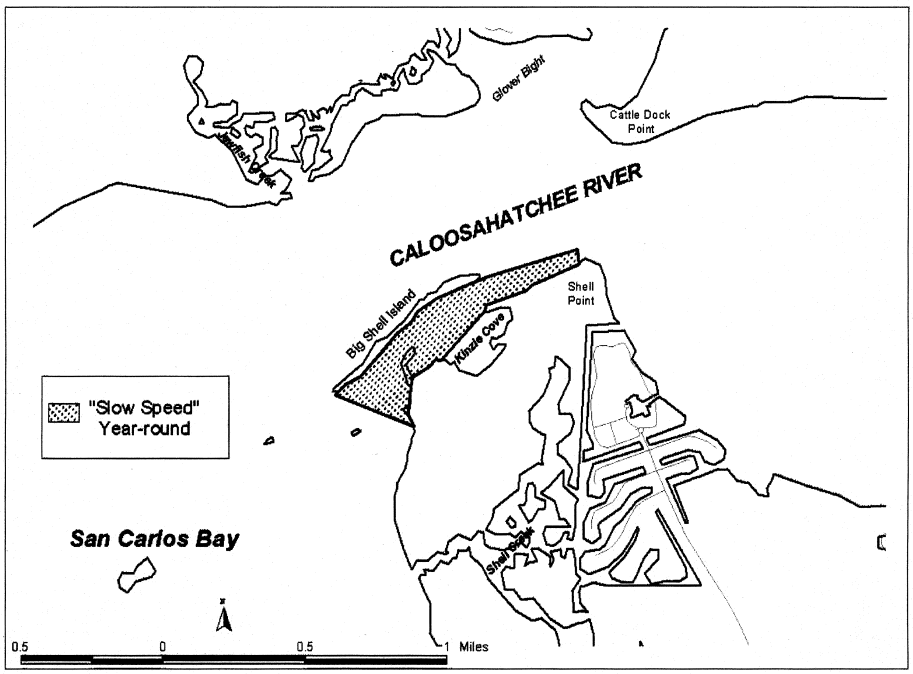
Peace River Manatee Refuge

(8) *The Shell Island Manatee Refuge.* (i) The Shell Island Manatee Refuge is described as all waters within the marked Intracoastal Waterway channel between Green Marker ''99'' (approximate

latitude 26 degrees 31′00″ N, approximate longitude 82 degrees 00′52″ W) and Green Marker ''93'' (approximate latitude 26 degrees 31′37″ N, approximate longitude 81 degrees 59′46″ W), Lee County, Florida; containing approximately 32.6 ha (80.5 acres).

(ii) Watercraft are required to proceed at slow speed (channel included) year-round. Watercraft are prohibited from traveling in excess of slow speed in this area, year-round.

(iii) Map of the Shell Island Manatee Refuge follows (see Shell Island Manatee Refuge):

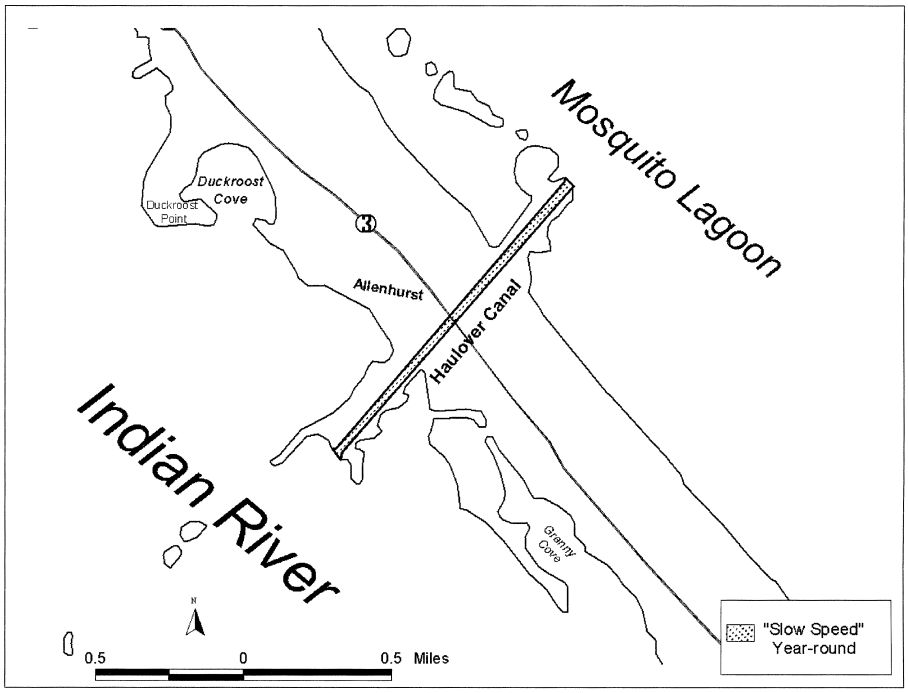


Shell Island Manatee Refuge

(9) *The Haulover Canal Manatee Refuge.* (i) The Haulover Canal Manatee Refuge is described as all waters lying within Haulover Canal in Brevard County, Florida; containing approximately 8.95 ha (22.11 acres).

(ii) Watercraft are required to proceed at slow speed (channel included) year-round. Watercraft are prohibited from traveling in excess of slow speed in this area, year-round.

(iii) Map of the Haulover Canal Manatee Refuge follows (see Haulover Canal Manatee Refuge):



Haulover Canal Manatee Refuge

(10) *The Caloosahatchee River—San Carlos Bay Manatee Refuge.*

(i) The Caloosahatchee River—San Carlos Bay Manatee Refuge is described as all waters of the Caloosahatchee River and San Carlos Bay downstream of the Seaboard Coastline trestle at Beautiful Island to Channel Marker ''93'' and from Channel Marker ''99'' to the Sanibel Causeway, in Lee County. A map showing the refuge and four maps showing specific areas in the refuge are at paragraph (10)(x) of this section.

(ii) From the Seaboard Coastline Railroad trestle at Beautiful Island, downstream to Channel Marker ''25'', a distance of approximately 1.6 kilometers (1 mile), watercraft are required to proceed at slow speed in the marked navigation channel from November 15 to March 31 and at not more than 40 kilometers per hour (km/h) (25 miles per hour) in the channel from April 1 to November 14. See map of ''Edison Bridge Area'' in paragraph (10)(x) of this section.

(iii) From a point 152 meters (500 feet) east of the Edison Bridge downstream to a point 152 meters (500 feet) west of the Caloosahatchee Bridge, approximately 1.1 kilometers (0.7 mile) in length, shoreline-to-shoreline (including the marked navigation channel), watercraft are required to proceed at slow speed (channel included), year-round. See map of ''Edison Bridge Area'' in paragraph (10)(x) of this section.

(iv) From a point 152 meters (500 feet) west of the Caloosahatchee Bridge downstream to a point 152 meters (500 feet) northeast of the Cape Coral Bridge, a distance of approximately 10.9 kilometers (6.8 miles), watercraft are required to proceed year-round at slow speed, while traveling within shoreline buffers extending out from the shore to a minimum distance of approximately 402 meters (1,320 feet), as

marked. Watercraft, with the exception of seaplanes, are required to proceed at not more than 40 km/h (25 miles per hour) throughout the year between these buffers (including the marked navigation channel where not more restrictively designated). See map of ''Cape Coral Bridge Area'' in paragraph (10)(x) of this section.

(v) From a point 152 meters (500 feet) northeast of the Cape Coral Bridge downstream to a point 152 meters (500 feet) southwest of the Cape Coral Bridge, a distance of approximately 0.4 kilometer (0.25 mile), shoreline-to-shoreline (excluding the marked navigation channel), watercraft are required to proceed at slow speed, year-round. In the marked navigation channel, watercraft are required to proceed at not more than 40 km/h (25 miles per hour) throughout the year. See map of ''Cape Coral Bridge Area'' in paragraph (10)(x) of this section.

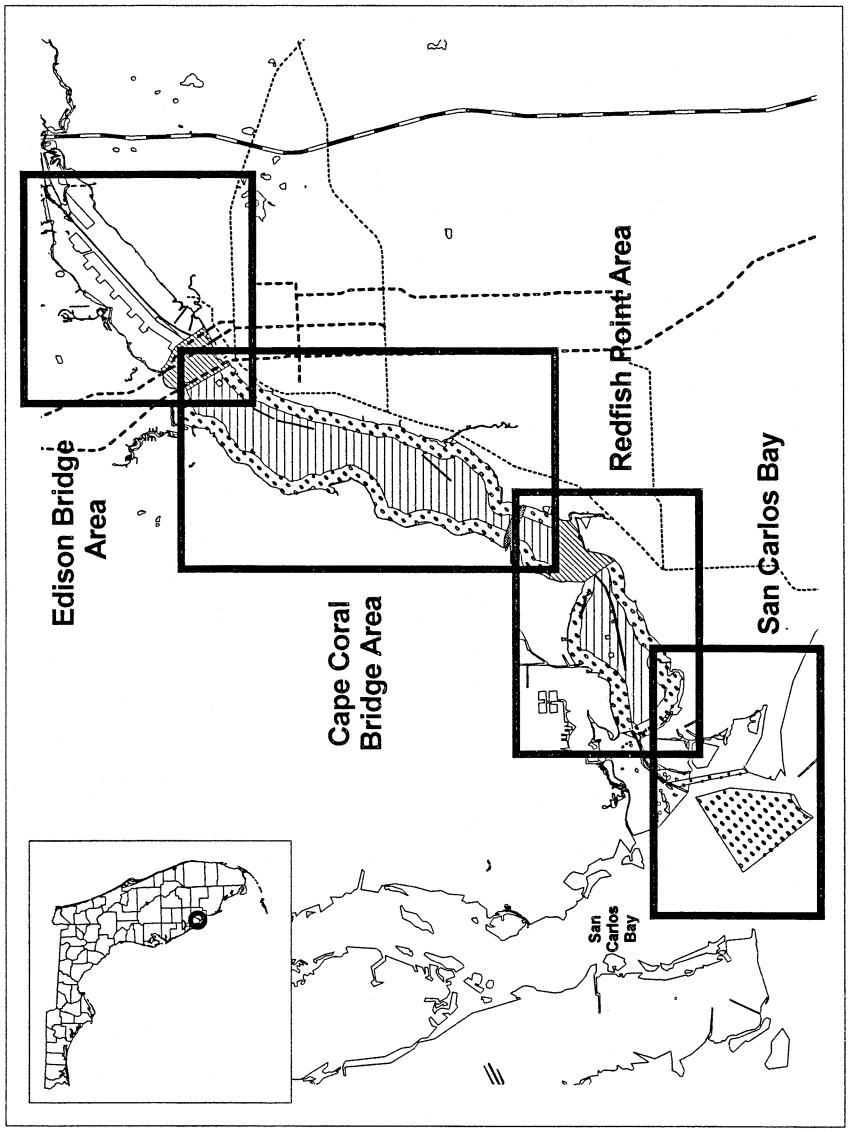
(vi) From a point 152 meters (500 feet) southwest of the Cape Coral Bridge to Channel Marker ''72,'' a distance of approximately 1.9 kilometers (1.2 miles), watercraft are required to proceed year-round at slow speed, while traveling within shoreline buffers extending out from the shore to a minimum distance of approximately 402 meters (1,320 feet), as marked. Watercraft are required to proceed at not more than 40 km/h (25 miles per hour) throughout the year between these buffers (including the marked navigation channel where not more restrictively designated). See map of ''Redfish Point Area'' in paragraph (10)(x) of this section.

(vii) From Channel Marker ''72'' to Channel Marker ''76'' (in the vicinity of Redfish Point), for a distance of approximately 1.8 kilometers (1.1 miles) in length, shoreline-to-shoreline (including the marked navigation channel), watercraft are required to proceed at slow speed, year-round. See map of ''Redfish Point Area'' in paragraph (10)(x) of this section.

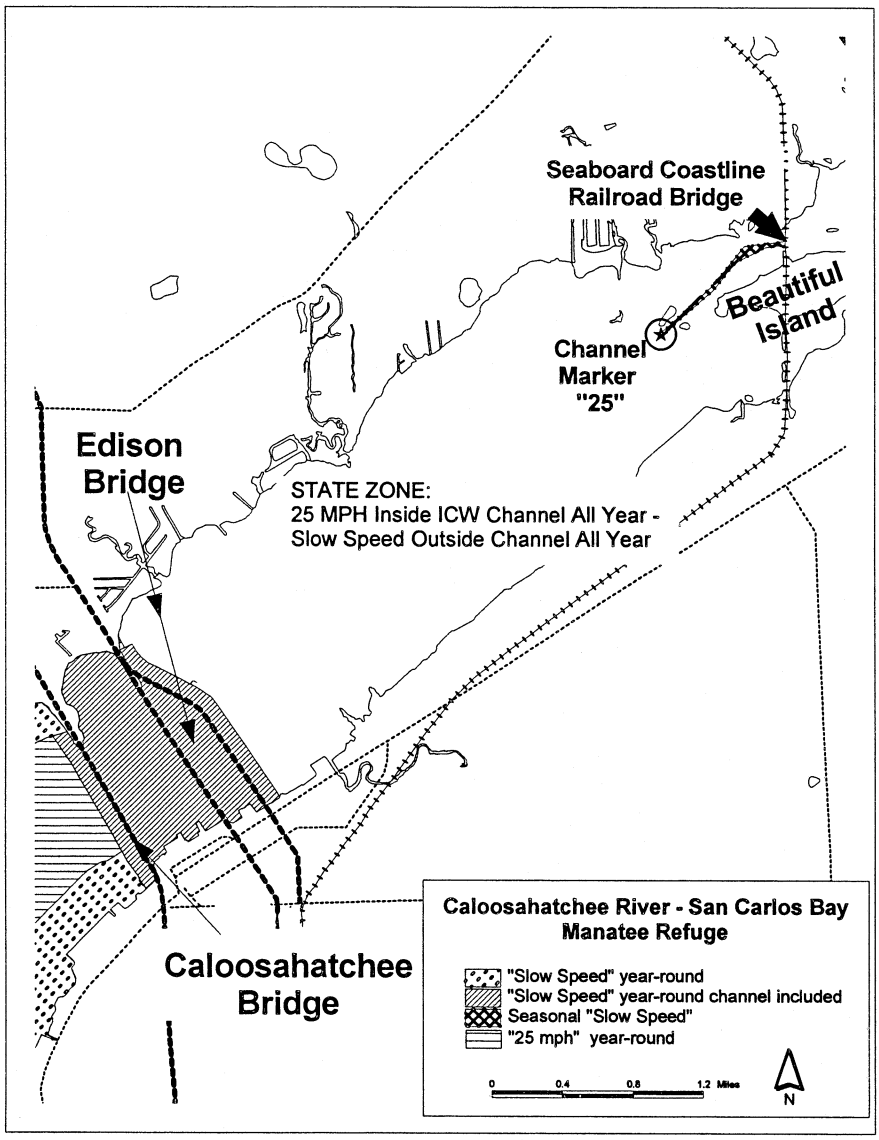
(viii) From Channel Marker ''76'' to Channel Marker ''93,'' a distance of approximately 5.2 kilometers (3.2 miles) in length, watercraft are required to proceed year-round at slow speed, while traveling within shoreline buffers extending out from the shore to a minimum distance of approximately 402 meters (1,320 feet), as marked. Watercraft are required to proceed at not more than 40 km/h (25 miles per hour) throughout the year between these buffers (including the marked navigation channel where not more restrictively designated). See map of ''Redfish Point Area'' in paragraph (10)(x) of this section.

(ix) Except as described below and as marked, from Channel Marker ''99'' to the Sanibel Causeway, watercraft are required to proceed at slow speed year-round in San Carlos Bay within the following limits: A northern boundary described by the southern edge of the marked navigation channel, a line approximately 2.9 kilometers (1.8 miles) in length; a southern boundary described by the Sanibel Causeway (approximately 1.9 kilometers (1.2 miles) in length); a western boundary described by a line that connects the western end of the easternmost Sanibel Causeway island and extending northwest to Channel Marker ''7'' (approximately 2.9 kilometers (1.8 miles) in length); and the eastern boundary includes the western limit of the State-designated manatee protection area (68C–22.005) near Punta Rassa (approximately 2.9 kilometers (1.8 miles) in length). However this area excludes the marked navigation channel from Channel Marker ''99'' to the Sanibel Causeway and adjacent waters, as marked. See map of ''San Carlos Bay'' in paragraph (10)(x) of this section.

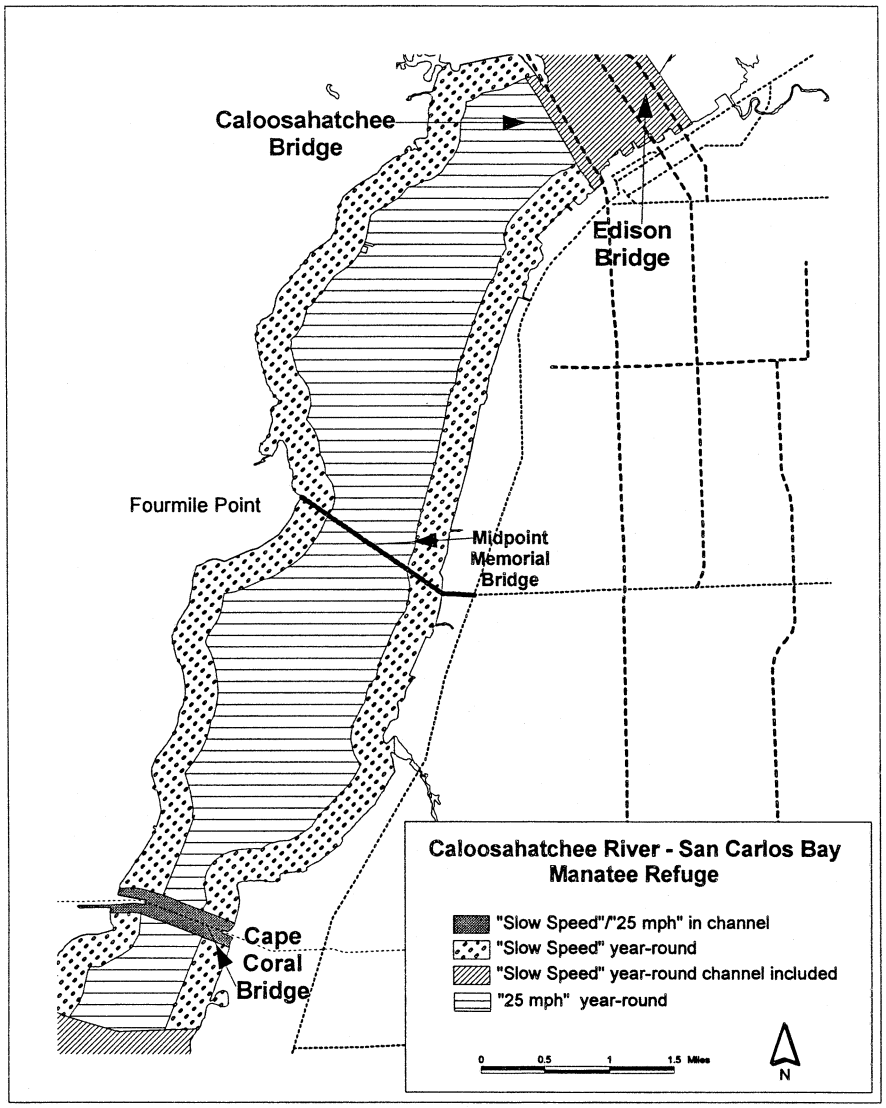
(x) Five maps of the Caloosahatchee River—San Carlos Bay Manatee Refuge follow:



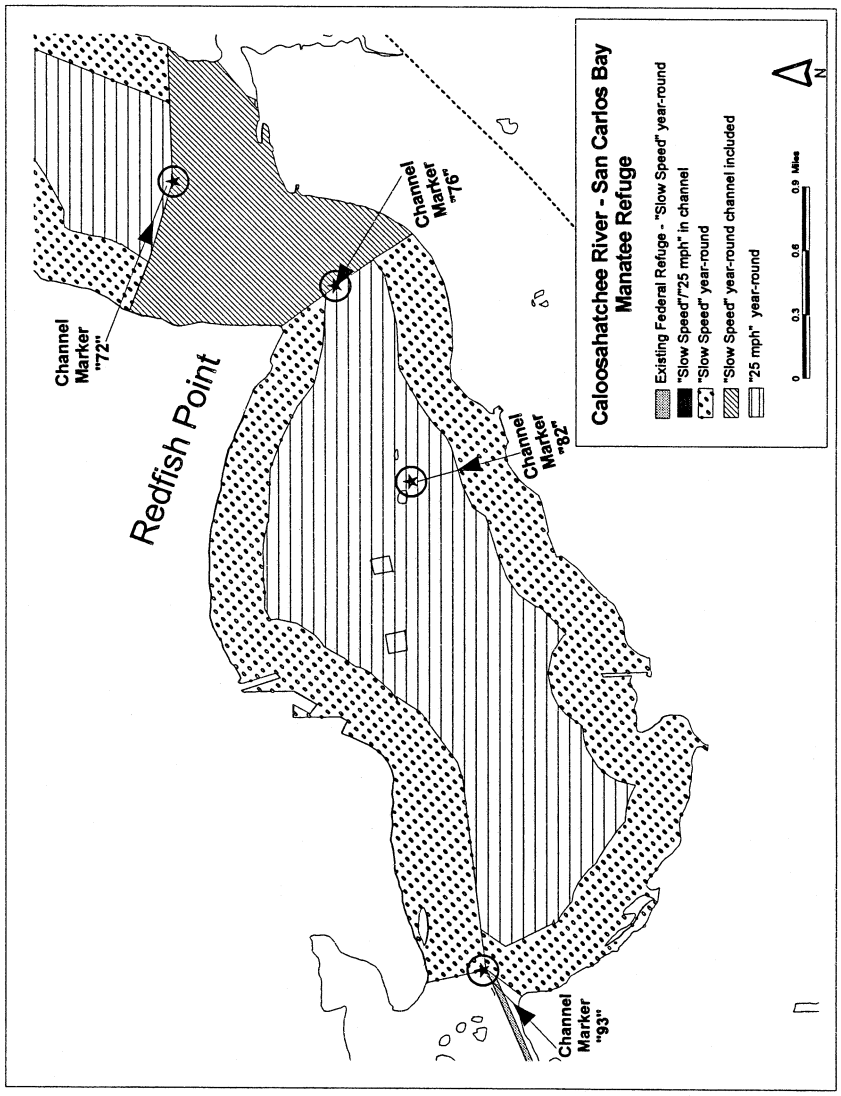
Caloosahatchee River - San Carlos Bay Manatee Refuge



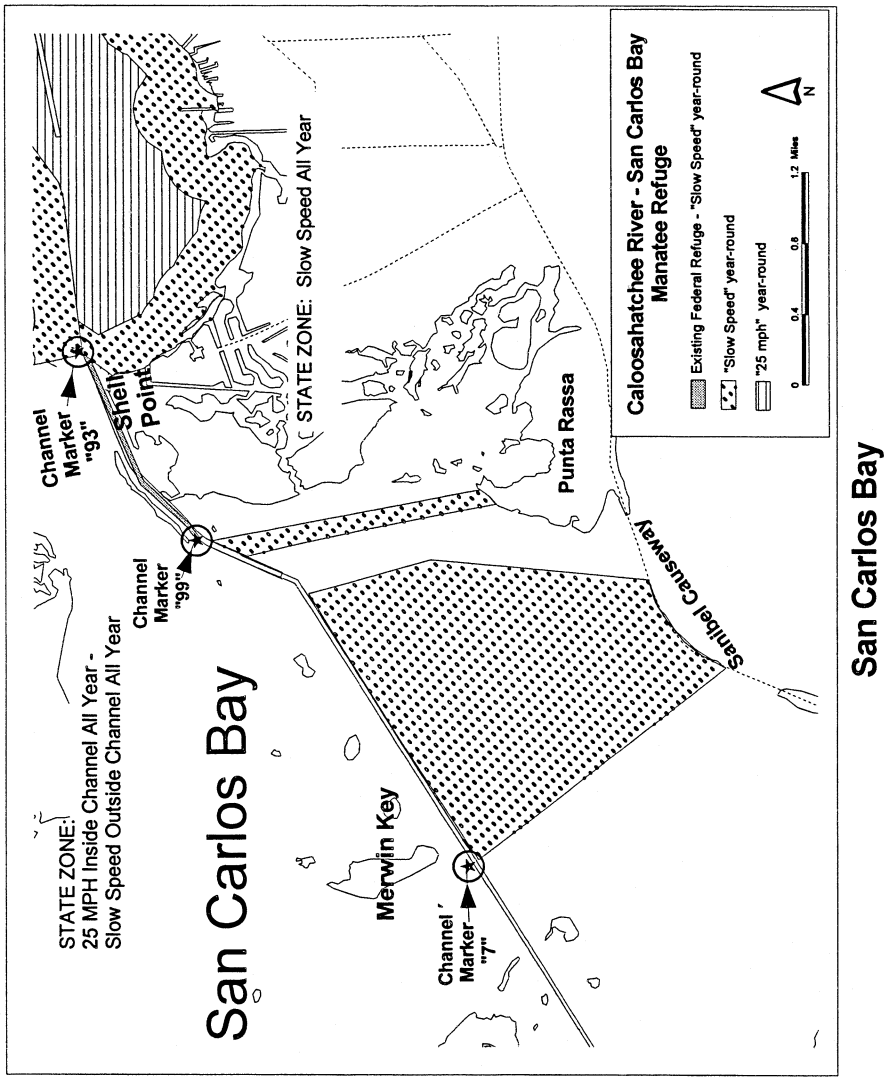
Edison Bridge Area



Cape Coral Bridge Area



Redfish Point Area



(11) *The Lower St. Johns River Manatee Refuge.*

(i) The Lower St. Johns River Manatee Refuge is described as portions of the St. Johns River and adjacent waters in Duval, Clay, and St. Johns Counties from Sandfly Point (the intersection of the right descending bank of the Trout River and the left descending bank of the St. Johns River) and Reddie Point, as marked, upstream to the mouth of Peter's Branch, including Doctors Lake, in Clay County on the western shore, and to the southern shore of the mouth of Julington Creek in St. Johns County on the eastern shore. A map showing the refuge and two maps showing specific areas of the refuge are at paragraph (11)(vi) of this section.

(ii) In the St. Johns River from Sandfly Point on the left descending

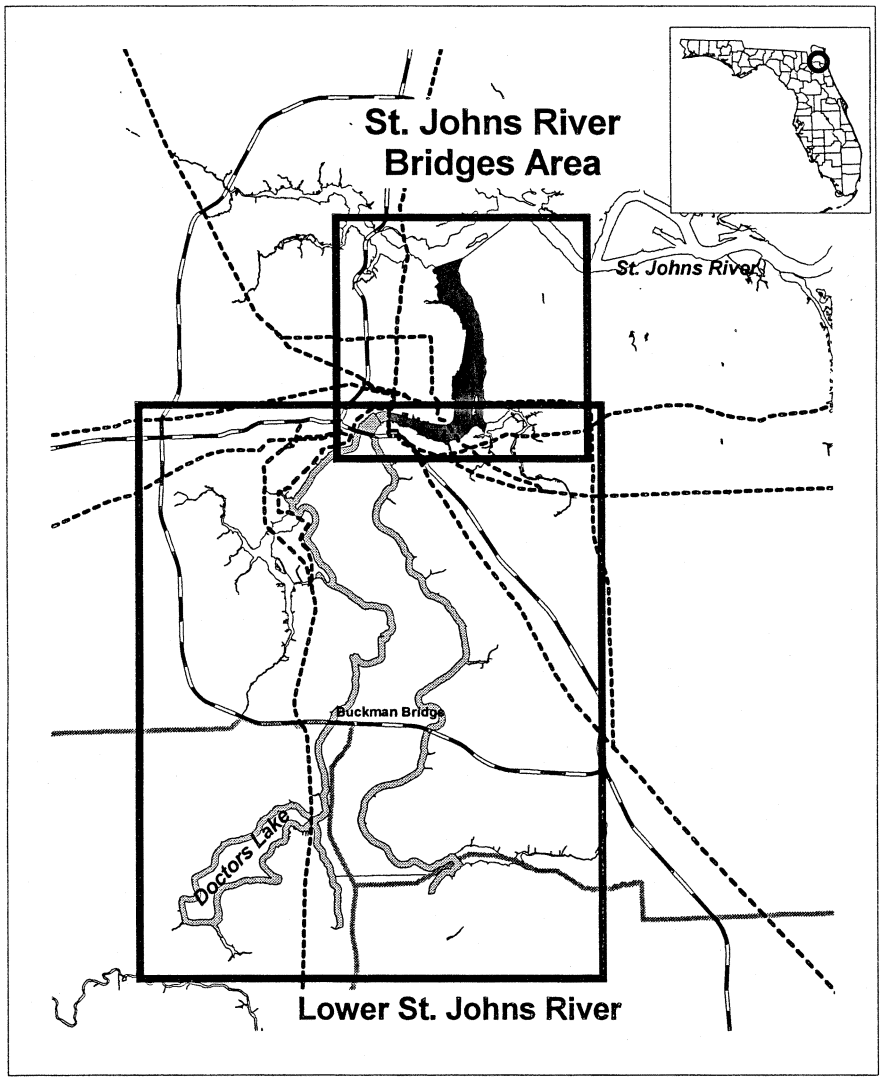
bank of the St. Johns River and Reddie Point on the right descending bank of the St. Johns River, upstream to the Hart Bridge, a distance of approximately 5.5 miles (8.8 km), watercraft are required to proceed at slow speed, year-round, within 300 feet (91 m) of the shoreline on the left descending bank of the St. Johns River and within a buffer as marked, typically about 1,000 feet (305 m) from the shoreline along the right descending bank of the river. The slow speed designation also includes that portion of the river between Exchange Island and the right descending bank, a marked buffer approximately 300 feet (91 m) along the west (channel-ward) shoreline of Exchange Island, and a portion of the Arlington River as marked. Watercraft are also required to proceed at not more than 25 miles per hour (40 km/h), year round, in the area posted as such between these slow speed shoreline buffers. See map of ''St. Johns River Bridges Area'' in paragraph (11)(vi) of this section.

(iii) From the Hart Bridge to the Main Street Bridge, a distance of approximately 2 miles (3.2 km), watercraft are required to proceed at slow speed, year-round, outside the marked navigation channel and at speeds of not more than 25 miles per hour (40 km/h) in the marked channel (from Channel Marker ''81'' to the Main Street Bridge, the channel is defined as the line of sight extending west from Channel Markers ''81'' and ''82'' to the fenders of the Main Street Bridge). See map of ''St. Johns River Bridges Area'' in paragraph (11)(vi) of this section.

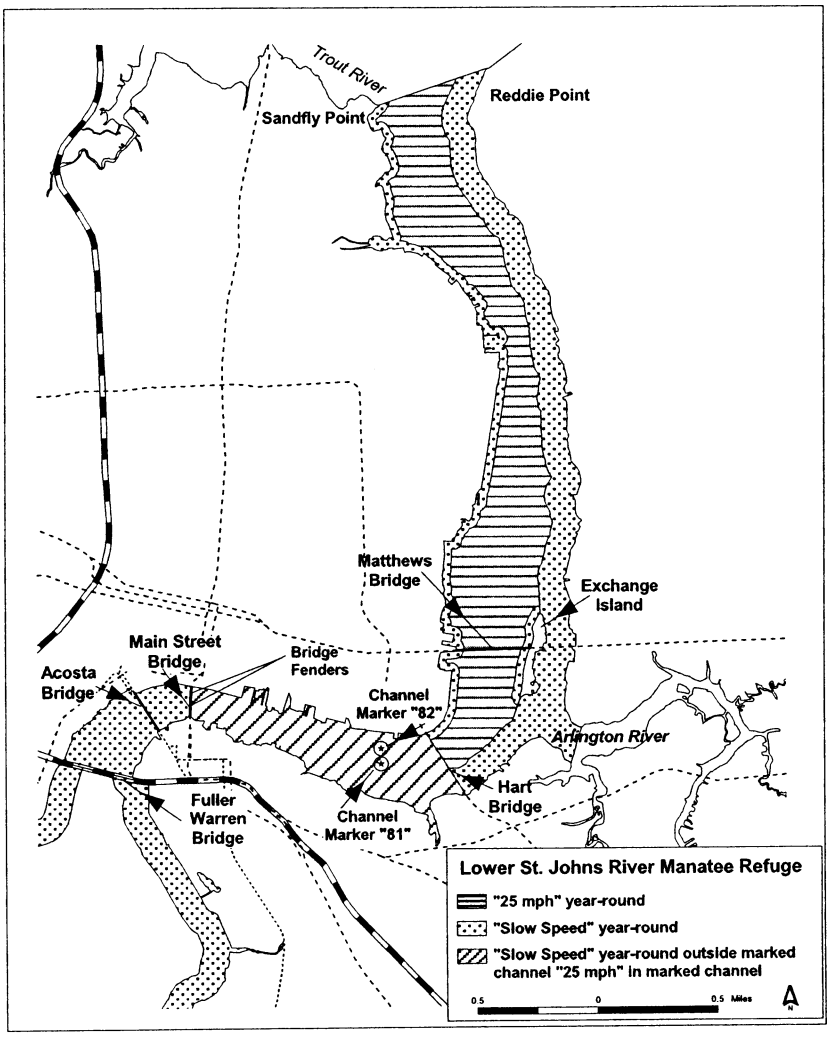
(iv) From the Main Street Bridge to the Fuller Warren Bridge, a distance of approximately 1 mile (1.6 km), shoreline to shoreline, watercraft are required to proceed at slow speed (channel included), year-round. See map of ''St. Johns River Bridges Area'' in paragraph (11)(vi) of this section.

(v) Upstream of the Fuller Warren Bridge: for a distance of approximately 19.3 miles (31.1 km) along the left descending bank of the St. Johns River, watercraft are required to proceed at slow speed, year-round, in a 700-foot (213 m) to 1,000-foot (305 m) as-marked, shoreline buffer from the Fuller Warren Bridge to the south bank of the mouth of Peter's Branch in Clay County; for a distance of approximately 20.2 miles (32.5 km) along the right descending bank of the St. Johns River, watercraft are required to proceed at slow speed, year round, in a 700-foot (213 m) to 1,000-foot (305 m) as marked, shoreline buffer from the Fuller Warren Bridge to the south bank of the mouth of Julington Creek in St. Johns County (defined as a line north of a western extension of the Nature's Hammock Road North); and in Doctors Lake in Clay County watercraft are required to proceed at slow speed, year-round, in a 700-foot (213 m) to 900-foot (274 m) as-marked, shoreline buffer (approximately 12.9 miles (20.8 km)). See map of ''Lower St. Johns River'' in paragraph (11)(vi) of this section.

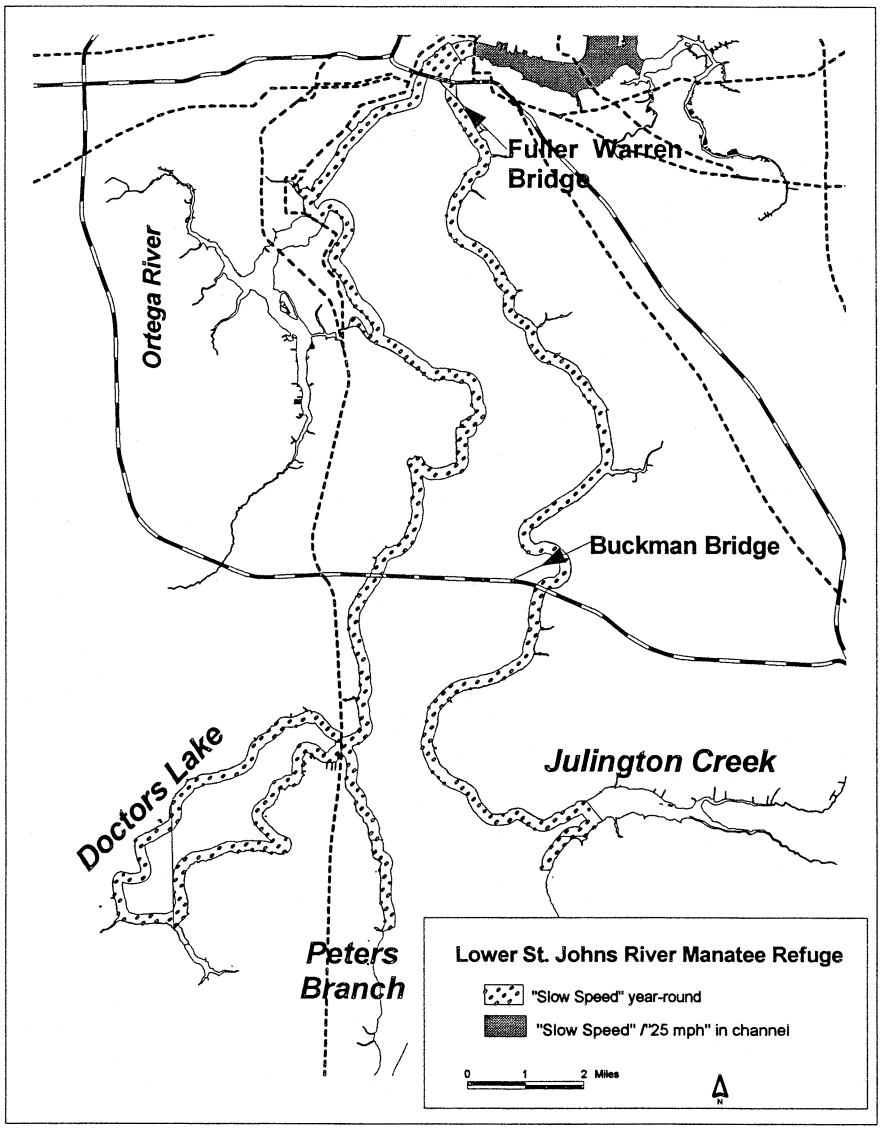
(vi) Three maps of the Lower St. Johns River Manatee Refuge follow:



Lower St. Johns River Manatee Refuge



St. Johns River Bridges Area



Lower St. Johns River

(12) *The Halifax and Tomoka Rivers Manatee Refuge.*

(i) The Halifax and Tomoka Rivers Manatee Refuge is described as the Halifax River and associated waterbodies in Volusia County, from the Volusia County—Flagler County line to New Smyrna Beach. A map showing the refuge and eight maps showing specific areas in the refuge are at paragraph (12)(xii) of this section.

(ii) From the Volusia County—Flagler County line at Halifax Creek

south to Channel Marker ''9,'' a distance of approximately 11.3 kilometers (7.0 miles) in length, watercraft are required to proceed at not more than 40 km/h (km/h)(25 miles per hour) in the channel. See maps of ''Halifax Creek'' and ''Tomoka River Basin'' in paragraph (12)(xii) of this section.

(iii) From Channel Marker ''9'' to a point 152 meters (500 feet) north of the Granada Bridge (State Road 40) (including the Tomoka Basin), a distance of approximately 5.0 km (3.1 miles) in length, watercraft are required to proceed at not more than 40 km/h (25 mph) in areas between the existing 91-meter (300-foot) buffers (and including the marked navigation channel). See maps of ''Tomoka River Basin'' and ''Tomoka River'' in paragraph (12)(xii) of this section.

(iv) In the Tomoka River, from the I–95 Bridge to Alligator Island, as marked, a distance of approximately 1.6 kilometers (1 mile), watercraft are required to proceed at slow speed, shoreline to shoreline, from April 1 to August 31. See map of ''Tomoka River'' in paragraph (12)(xii) of this section.

(v) From 152 meters (500 feet) north to 305 meters (1,000 feet) south of the Granada Bridge (State Road 40), a distance of approximately 0.5 kilometers (0.3 miles) in length, watercraft are required to proceed at slow speed, year-round, shoreline to shoreline. See map of ''Halifax River A'' in paragraph (12)(xii) of this section.

(vi) From a point 305 meters (1,000 feet) south of the Granada Bridge (State Road 40) to a point 152 meters (500 feet) north of the Seabreeze Bridge, a distance of approximately 6.4 km (4.0 miles) in length, watercraft are required to proceed at not more than 40 km/h (25 mph) in areas between the existing 91-meter (300-foot) buffers (and including the marked navigation channel). See map of ''Halifax River A'' in paragraph (12)(xii) of this section.

(vii) As marked, from 152 meters (500 feet) north of the Seabreeze Bridge, to 152 meters (500 feet) north of the Main Street bridge, a distance of approximately 1 kilometer (1 mile) in length, watercraft are required to proceed at slow speed (channel included), year-round. See map of ''Halifax River B'' in paragraph (12)(xii) of this section.

(viii) From Channel Marker ''40'' to a point a minimum of 152 meters (500 feet) north, as marked, of the Dunlawton Bridge, a distance of approximately 14.5 kilometers (9 miles) in length, watercraft are required to proceed at not more than 40 km/h (25 mph) in areas between the existing 91-meter (300-foot) buffers (and including the marked navigation channel). See map of ''Halifax River B'' in paragraph (12)(xii) of this section.

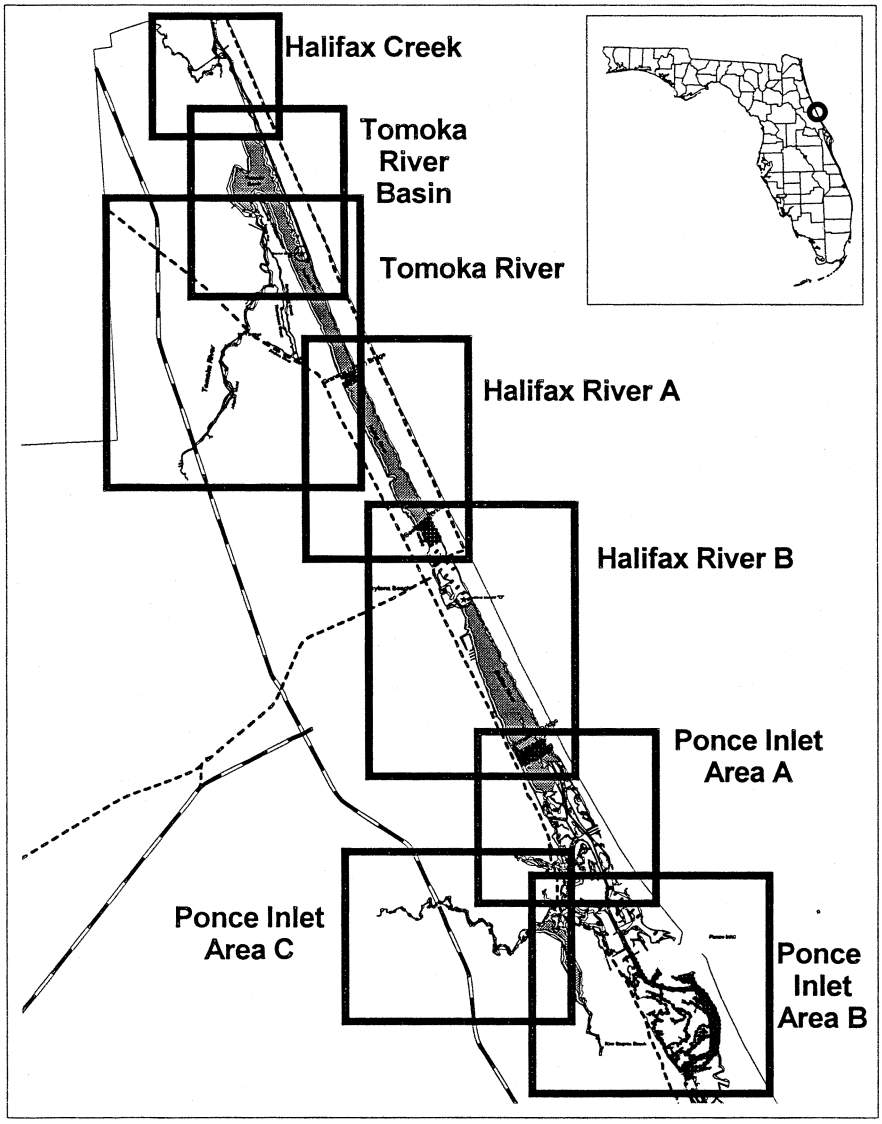
(ix) As marked, a minimum of 152 meters (500 feet) north to 152 meters (500 feet) south of the Dunlawton Bridge, a distance of approximately 0.3 kilometers (0.2 miles) in length, watercraft are required to proceed at slow speed (channel included), year-round, shoreline to shoreline; and adjacent to the western shoreline of the Halifax River north of the Dunlawton Bridge for a distance of approximately 640 meters (2,100 feet), and a minimum of 91 meters (300 feet) from shore, as marked, watercraft are required to proceed at slow speed, year-round. See map of ''Halifax River B'' in paragraph (12)(xii) of this section.

(x) As marked, from a minimum of 152 meters (500 feet) south of the Dunlawton Bridge to Redland Canal, a distance of approximately 10.5 kilometers (6.5 miles) in length, watercraft are required to proceed at not more than 40 km/h (25 mph) in waters not more restrictively designated; along the western shore of the Halifax River, a distance of approximately 3.1 km (1.95 miles), watercraft are required to proceed at not more than 40 km/h (25 mph) in the waters not more restrictively designated; in Rose Bay, a distance of approximately 2.7 km (1.7 miles), watercraft are required to proceed at not more than 40 km/h (25 mph) in waters not more restrictively designated; in Turnbull Bay, a distance of approximately 3.9 km (2.4 miles), watercraft are required to proceed at not more than 40 km/h (25 mph) in waters not more restrictively designated. See maps of ''Ponce Inlet Area A,'' ''Ponce Inlet Area B,'' and ''Ponce Inlet Area C'' in paragraph (12)(xii) of this section.

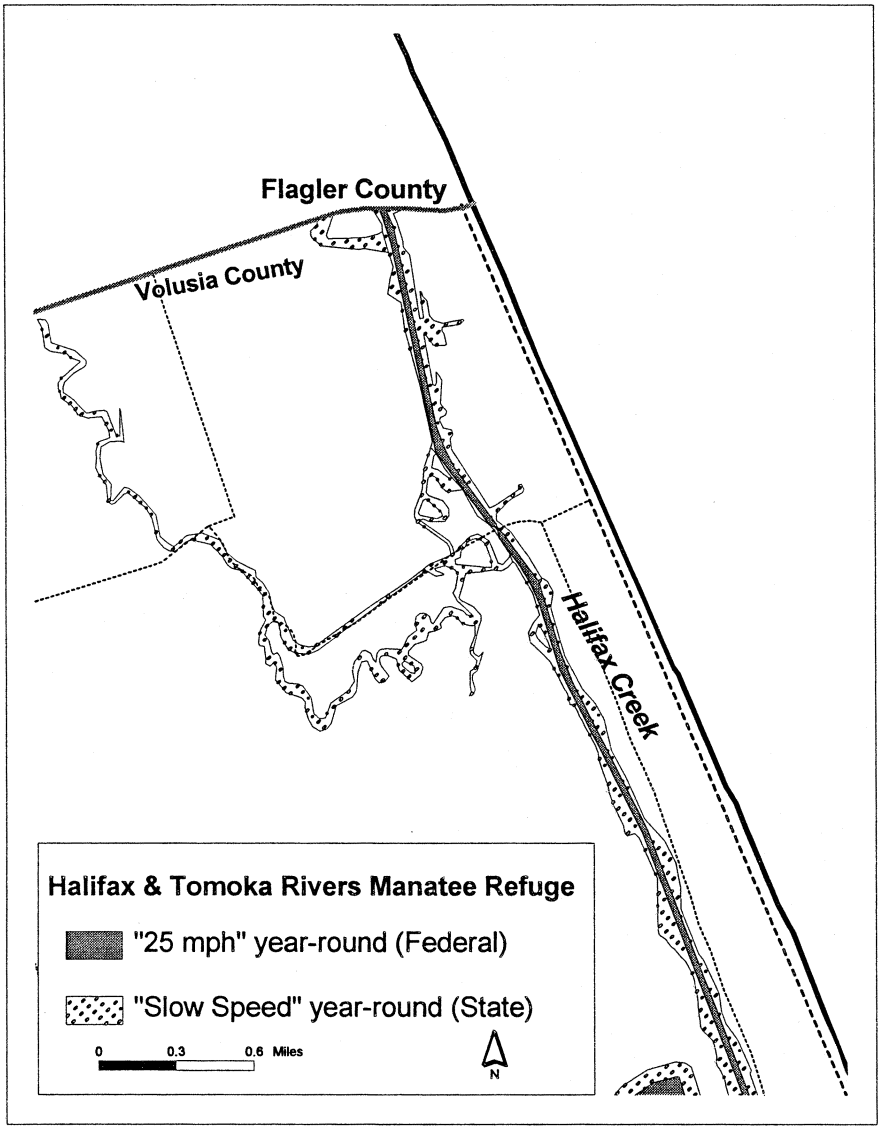
(xi) As marked, in the Intracoastal Waterway and adjacent waters from Redland Canal to the A1A Bridge (New

Smyrna Beach, for a distance of approximately 5.3 kilometers (3.3 miles) in length, watercraft are required to proceed at slow speed (channel included), year-round. See map of ''Ponce Inlet Area B'' in paragraph (12)(xii) of this section.

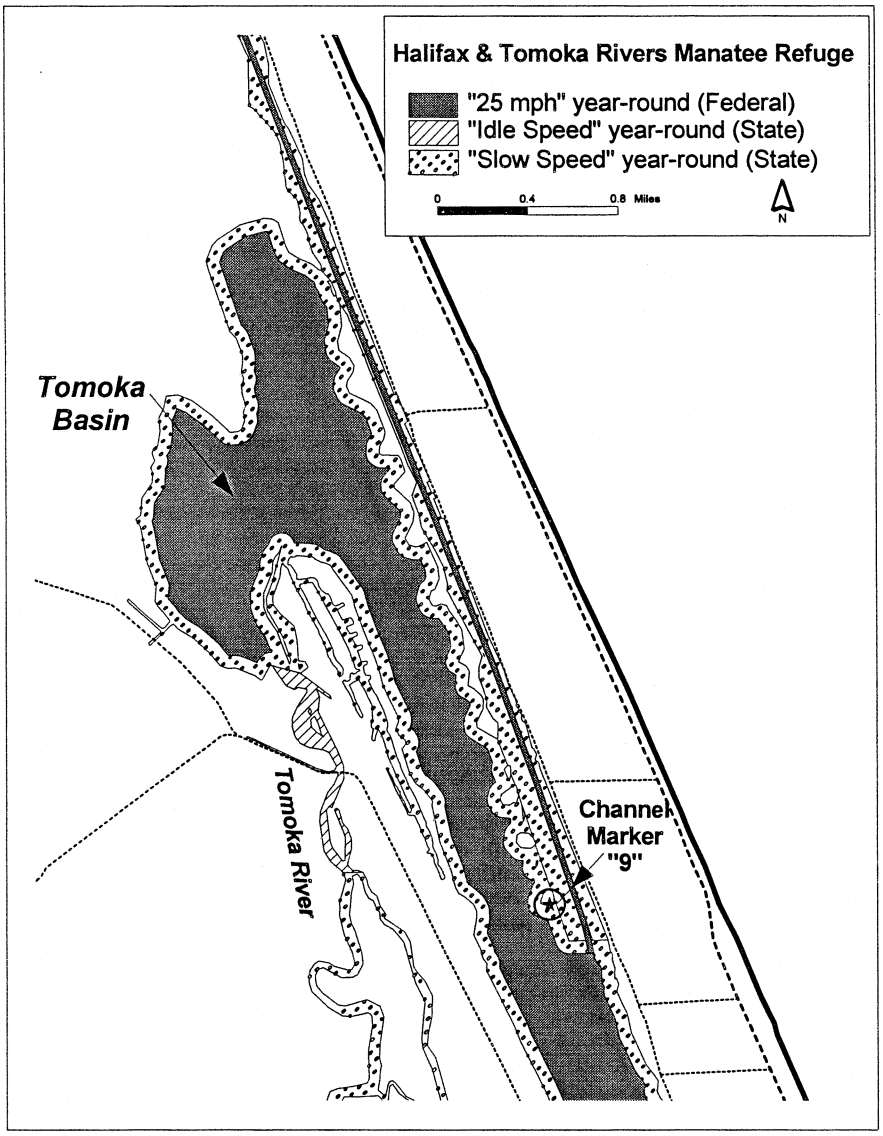
(xii) Nine maps of the Halifax and Tomoka Rivers Manatee Refuge follow:



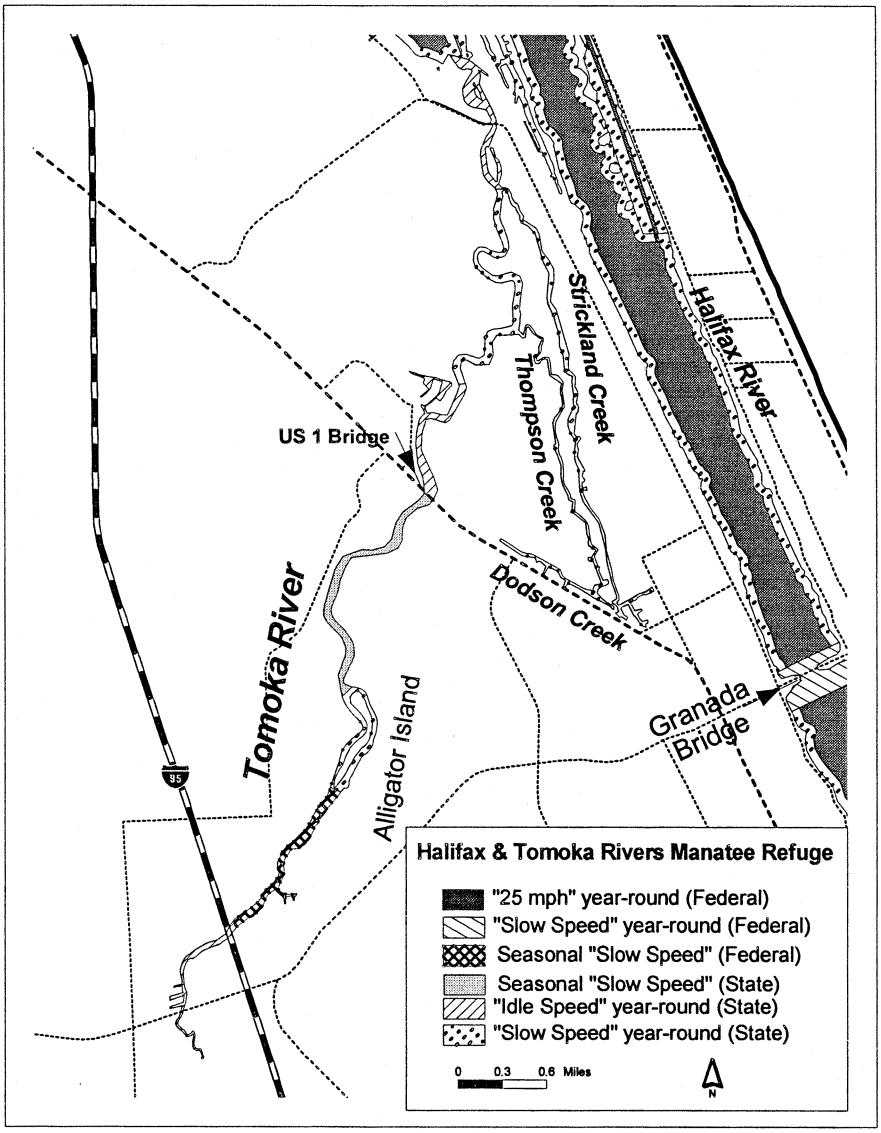
Halifax & Tomoka Rivers Manatee Refuge



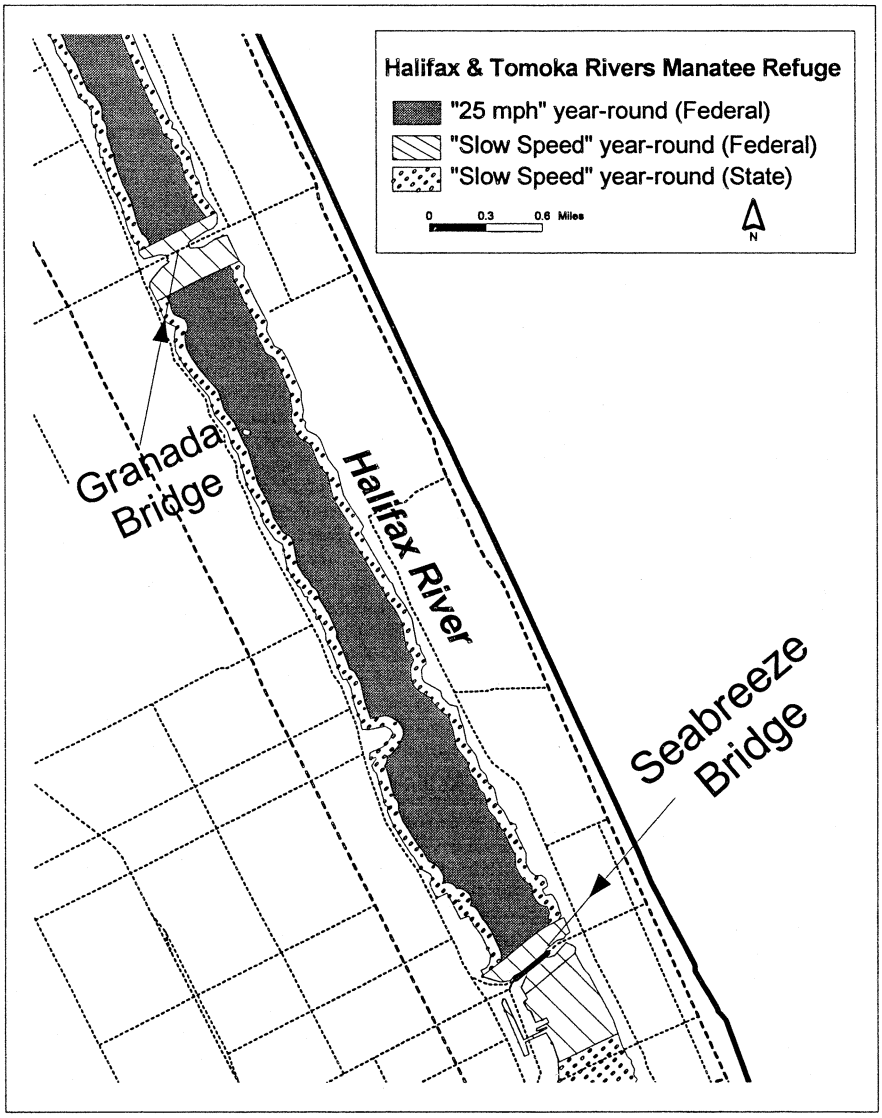
Halifax Creek



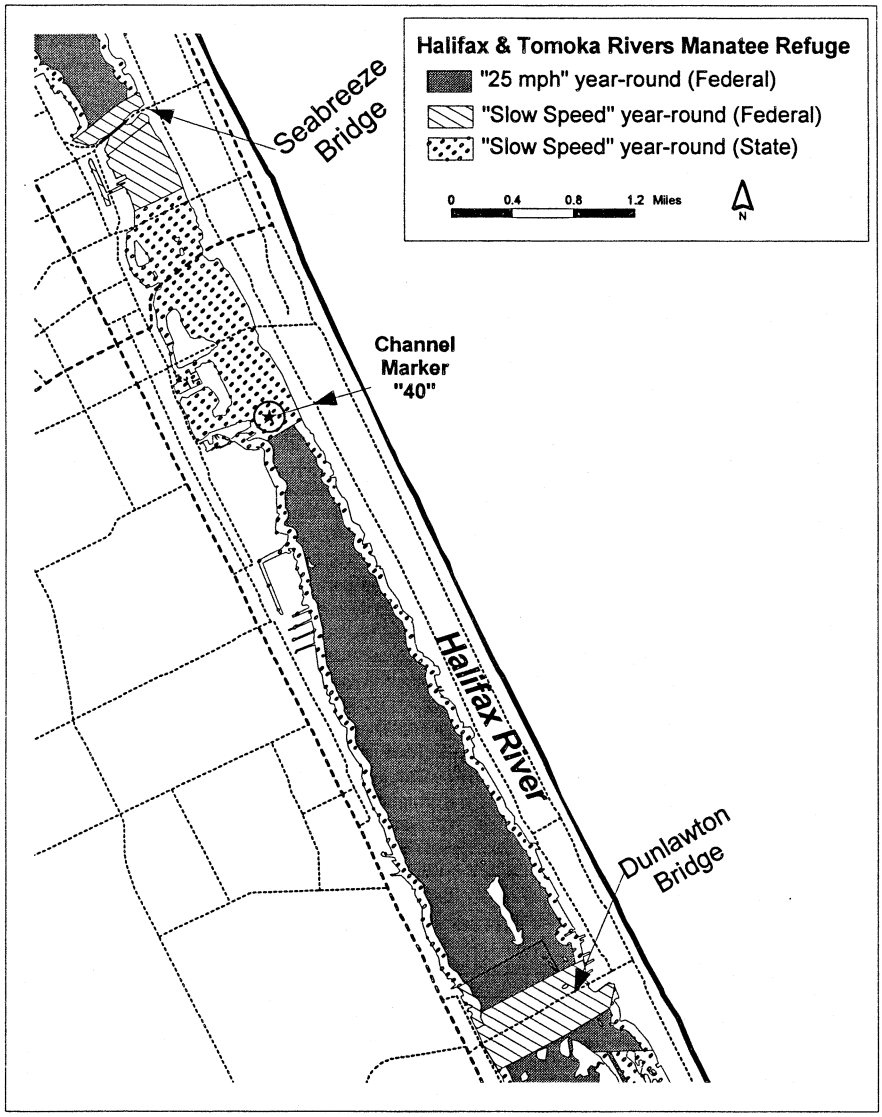
Tomoka River Basin



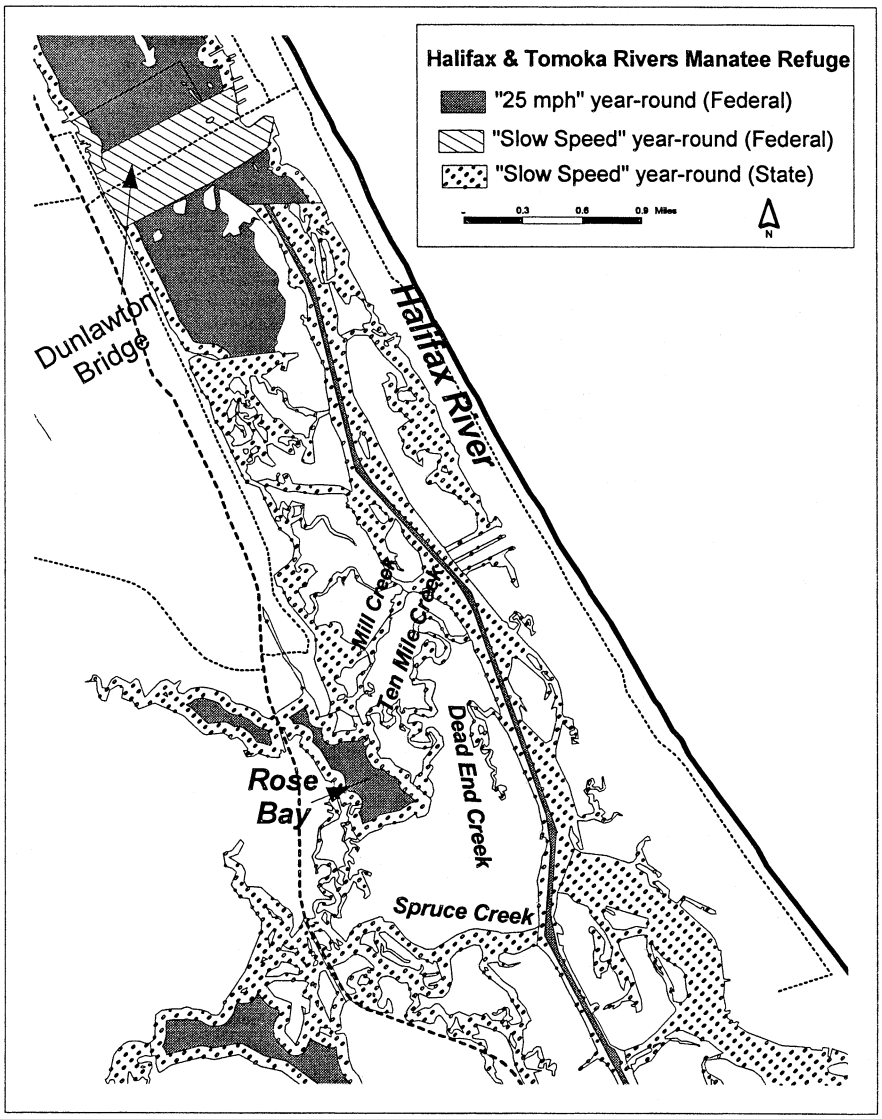
Tomoka River



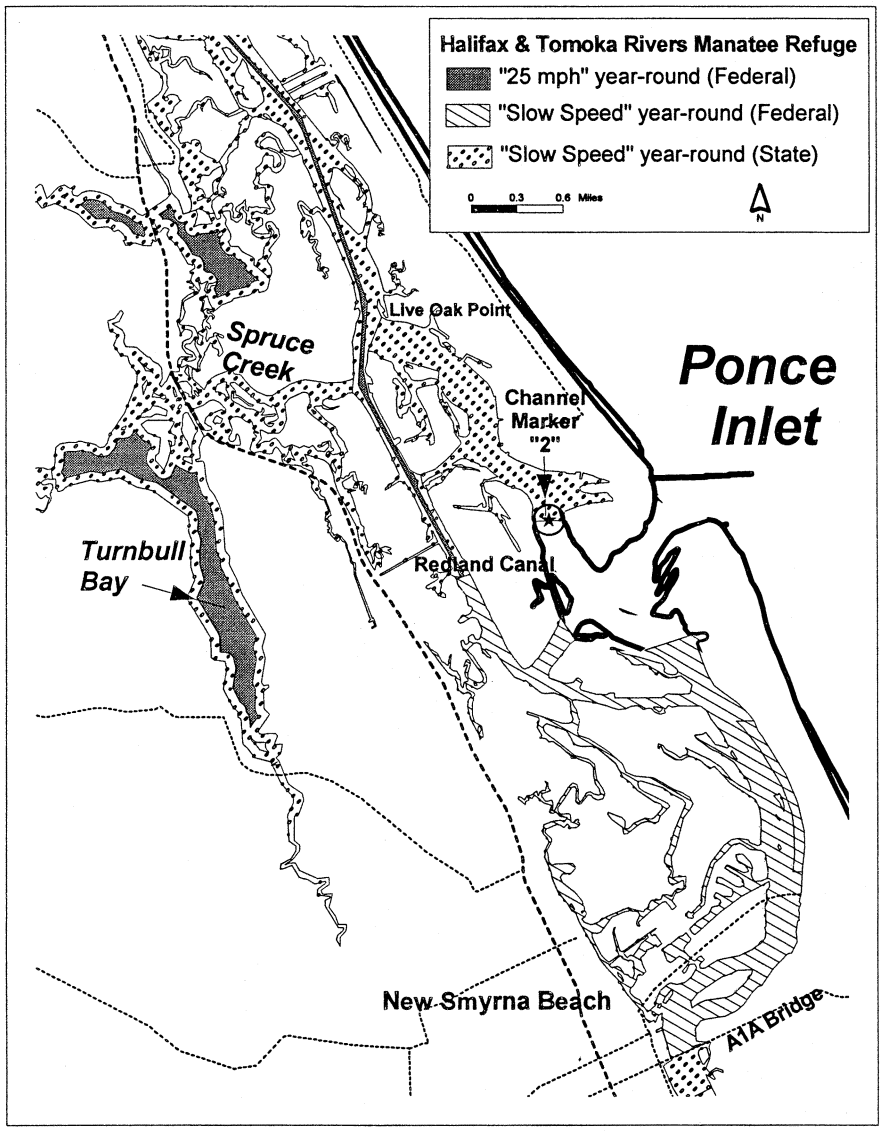
Halifax River A



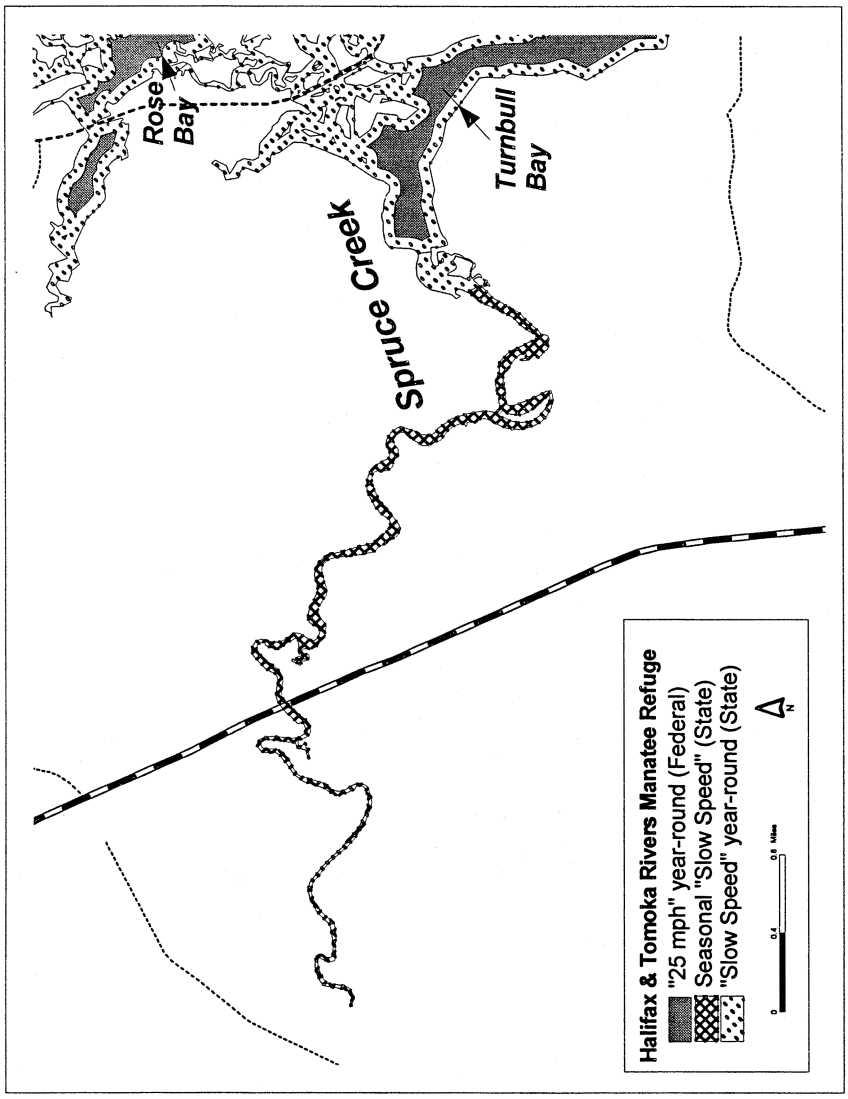
Halifax River B



Ponce Inlet Area A



Ponce Inlet Area B



Ponce Inlet Area C

(13) *The Pine Island-Estero Bay Manatee Refuge.* (i) Watercraft are required to proceed at slow speed all year in all waters of Matlacha Pass, south of a line that bears 90° and 270° from Matlacha Pass Green Channel Marker 77 (approximate latitude 26°40′00″ North, approximate longitude 82°06′00″ West), and north of Pine Island Road (State Road 78), excluding:

(A) The portion of the marked channel otherwise designated in paragraph (c)(13)(iii) of this section;

(B) All waters of Buzzard Bay east and northeast of a line beginning at a point (approximate latitude 26°40′00″ North, approximate longitude 82°05′20″ West) on the southwest shoreline of an unnamed mangrove island east of Matlacha Pass Green Channel Marker

77 and bearing 219° to the northeasternmost point (approximate latitude 26°39′58″ North, approximate longitude 82°05′23″ West) of another unnamed mangrove island, then running along the eastern shoreline of said island to its southeasternmost point (approximate latitude 26°39′36″ North, approximate longitude 82°05′09″ West), then bearing 115° to the westernmost point (approximate latitude 26°39′34″ North, approximate longitude 82°05′05″ West) of the unnamed mangrove island to the southeast, then running along the western shoreline of said island to its southwesternmost point (approximate latitude 26°39′22″ North, approximate longitude 82°04′53″ West), then bearing 123° to the northwesternmost point (approximate latitude 26°39′21″ North, approximate longitude 82°04′52″ West) of an unnamed mangrove island, then running along the western shoreline of said island to its southeasternmost point (approximate latitude 26°39′09″ North, approximate longitude 82°04′44″ West), then bearing 103° to the northwesternmost point (approximate latitude 26°39′08″ North, approximate longitude 82°04′41″ West) of a peninsula on the unnamed mangrove island to the southeast, then running along the southwestern shoreline of said island to its southeasternmost point (approximate latitude 26°38′51″ North, approximate longitude 82°04′18″ West), then bearing 99° to the southernmost point (approximate latitude 26°38′50″ North, approximate longitude 82°04′03″ West) of the unnamed mangrove island to the east, then bearing 90° to the line's terminus at a point (approximate latitude 26°38′50″ North, approximate longitude 82°03′55″ West) on the eastern shoreline of Matlacha Pass; and

(C) All waters of Pine Island Creek and Matlacha Pass north of Pine Island Road (State Road 78) and west and southwest of a line beginning at a point (approximate latitude 26°39′29″ North, approximate longitude 82°06′29″ West) on the western shoreline of Matlacha Pass and bearing 160° to the westernmost point (approximate latitude 26°39′25″ North, approximate longitude 82°06′28″ West) of an unnamed island, then running along the western shoreline of said island to its southernmost point (approximate latitude 26°39′18″ North, approximate longitude 82°06′24″ West), then bearing 128° to the northernmost point (approximate latitude 26°39′12″ North, approximate longitude 82°06′17″ West) of an unnamed mangrove island to the south, then running along the eastern shoreline of said island to its southeasternmost point (approximate latitude 26°39′00″ North, approximate longitude 82°06′09″ West), then bearing 138° to a point (approximate latitude 26°38′45″ North, approximate longitude 82°05′53″ West) on the northern shoreline of Bear Key, then running along the northern shoreline of Bear Key to its easternmost point (approximate latitude 26°38′44″ North, approximate longitude 82°05′46″ West), then bearing 85° to the westernmost point (approximate latitude 26°38′45″ North, approximate longitude 82°05′32″ West) of Deer Key, then running along the northern shoreline of Deer Key to its easternmost point (approximate latitude 26°38′46″ North, approximate longitude 82°05′22″ West), then bearing 103° to the northwesternmost point (approximate latitude 26°38′45″ North, approximate longitude 82°05′17″ West) of the unnamed mangrove island to the east, then running along the western shoreline of said island to its southernmost point (approximate latitude 26°38′30″ North, approximate longitude 82°05′04″ West), then bearing 106° to the westernmost point (approximate latitude 26°38′30″ North, approximate longitude 82°04′57″ West) of the unnamed island to the southeast, then running along the northern and eastern shorelines of said island to a point (approximate latitude 26°38′23″ North, approximate longitude 82°04′51″ West) on its eastern shoreline, then bearing 113° to the northernmost point of West Island (approximate latitude 26°38′21″ North, approximate longitude 82°04′37″ West), then running along the western shoreline of West Island to the point where the line intersects Pine Island Road (State Road 78).

(ii) Watercraft are required to proceed at slow speed all year in all waters of Matlacha Pass, St. James Creek, and San Carlos Bay, south of Pine Island Road (State Road 78), north of a line 500 feet northwest of and parallel to the main marked channel of the Intracoastal Waterway, west of a line that

bears 302° from Intracoastal Waterway Green Channel Marker 99 (approximate latitude 26°31′00″ North, approximate longitude 82°00′52″ West), and east of a line that bears 360° from Intracoastal Waterway Red Channel Marker 10 (approximate latitude 26°29′16″ North, approximate longitude 82°03′35″ West), excluding:

(A) The portions of the marked channels otherwise designated in paragraphs (c)(15)(iv) and (v) of this section;

(B) All waters of Matlacha Pass south of Pine Island Road (State Road 78) and west of the western shoreline of West Island and a line beginning at the southernmost point (approximate latitude 26°37′25″ North, approximate longitude 82°04′17″ West) of West Island and bearing 149° to the northernmost point (approximate latitude 26°37′18″ North, approximate longitude 82°04′12″ West) of the unnamed mangrove island to the south, then running along the eastern shoreline of said island to its southernmost point (approximate latitude 26°36′55″ North, approximate longitude 82°04′02″ West), then bearing 163° to the line's terminus at a point (approximate latitude 26°36′44″ North, approximate longitude 82°03′58″ West) on the eastern shoreline of Little Pine Island;

(C) All waters of Matlacha Pass, Pontoon Bay, and associated embayments south of Pine Island Road (State Road 78) and east of a line beginning at a point (approximate latitude 26°38′12″ North, approximate longitude 82°03′46″ West) on the northwestern shoreline of the embayment on the east side of Matlacha Pass, immediately south of Pine Island Road and then running along the eastern shoreline of the unnamed island to the south to its southeasternmost point (approximate latitude 26°37′30″ North, approximate longitude 82°03′22″ West), then bearing 163° to the northwesternmost point of the unnamed island to the south, then running along the western shoreline of said island to its southernmost point (approximate latitude 26°37′15″ North, approximate longitude 82°03′15″ West), then bearing 186° to the line's terminus at a point (approximate latitude 26°37′10″ North, approximate longitude 82°03′16″ West) on the eastern shoreline of Matlacha Pass;

(D) All waters of Pine Island Creek south of Pine Island Road (State Road 78); and all waters of Matlacha Pass, Rock Creek, and the Mud Hole, west of a line beginning at a point (approximate latitude 26°33′52″ North, approximate longitude 82°04′53″ West) on the western shoreline of Matlacha Pass and bearing 22° to a point (approximate latitude 26°34′09″ North, approximate longitude 82°04′45″ West) on the southern shoreline of the unnamed island to the northeast, then running along the southern and eastern shorelines of said island to a point (approximate latitude 26°34′15″ North, approximate longitude 82°04′39″ West) on its northeastern shoreline, then bearing 24° to a point (approximate latitude 26°34′21″ North, approximate longitude 82°04′36″ West) on the southern shoreline of the large unnamed island to the north, then running along the southern and eastern shorelines of said island to a point (approximate latitude 26°34′31″ North, approximate longitude 82°04′29″ West) on its eastern shoreline, then bearing 41° to the southernmost point (approximate latitude 26°34′39″ North, approximate longitude 82°04′22″ West) of another unnamed island to the northeast, then running along the eastern shoreline of said island to its northwesternmost point (approximate latitude 26°35′22″ North, approximate longitude 82°04′07″ West), then bearing 2° to the southernmost point (approximate latitude 26°35′32″ North, approximate longitude 82°04′07″ West) of the unnamed island to the north, then running along the eastern shoreline of said island to its northernmost point (approximate latitude 26°35′51″ North, approximate longitude 82°03′59″ West), then bearing 353° to the line's terminus at a point (approximate latitude 26°36′08″ North, approximate longitude 82°04′01″ West) on the eastern shoreline of Little Pine Island; and

(E) All waters of Punta Blanca Bay and Punta Blanca Creek, east of the eastern shoreline of Matlacha Pass and east and north of the eastern and northern shorelines of San Carlos Bay.

(iii) Watercraft may not exceed 25 miles per hour, all year, in all waters within the main marked channel in Matlacha Pass south of Green Channel Marker 77 (approximate latitude

26°40′00″ North, approximate longitude 82°06′00″ West) and north of a line perpendicular to the channel at a point in the channel ¼ mile northwest of the Pine Island Road Bridge (State Road 78).

(iv) Watercraft may not exceed 25 miles per hour, all year, in all waters within the main marked channel in Matlacha Pass south of a line perpendicular to the channel at a point in the channel ¼ mile southeast of the Pine Island Road Bridge (State Road 78), and north of a line 500 feet northwest of and parallel to the main marked channel of the Intracoastal Waterway (just north of Green Channel Marker 1).

(v) Watercraft may not exceed 25 miles per hour, all year, in all waters within the marked channel in Matlacha Pass that intersects the main Matlacha Pass channel near Green Channel Marker 15 (approximate latitude 26°31′57″ North, approximate longitude 82°03′38″ West) and intersects the main marked channel of the Intracoastal Waterway near Green Channel Marker 101 (approximate latitude 26°30′39″ North, approximate longitude 82°01′00″ West).

(vi) Watercraft are required to proceed at slow speed from April 1 through November 15 in all canals and boat basins of St. James City and the waters known as Long Cut and Short Cut; and all waters of Pine Island Sound and San Carlos Bay south of a line beginning at the southernmost tip (approximate latitude 26°31′28″ North, approximate longitude 82°06′19″ West) of a mangrove peninsula on the western shore of Pine Island approximately 2200 feet north of Galt Island and bearing 309° to the southeasternmost point (approximate latitude 26°31′32″ North, approximate longitude 82°06′25″ West) of another mangrove peninsula, then running along the southern shoreline of said peninsula to its southwesternmost point (approximate latitude 26°31′40″ North, approximate longitude 82°06′38″ West), then bearing 248° to a point (approximate latitude 26°31′40″ North, approximate longitude 82°06′39″ West) on the eastern shoreline of an unnamed mangrove island, then running along the southern shoreline of said island to its southwesternmost point (approximate latitude 26°31′39″ North, approximate longitude 82°06′44″ West), then bearing 206° to the line's terminus at the northernmost point of the Mac Keever Keys (approximate latitude 26°31′09″ North, approximate longitude 82°07′09″ West), east of a line beginning at said northernmost point of the Mac Keever Keys and running along and between the general contour of the western shorelines of said keys to a point (approximate latitude 26°30′27″ North, approximate longitude 82°07′08″ West) on the southernmost of the Mac Keever Keys, then bearing 201° to a point (approximate latitude 26°30′01″ North, approximate longitude 82°07′19″ West) approximately 150 feet due east of the southeasternmost point of Chino Island, then bearing approximately 162° to Red Intracoastal Waterway Channel Marker 22 (approximate latitude 26°28′57″ North, approximate longitude 82°06′55″ West), then bearing approximately 117° to the line's terminus at Red Intracoastal Waterway Channel Marker 20 (approximate latitude 26°28′45″ North, approximate longitude 82°06′38″ West), north of a line beginning at said Red Intracoastal Waterway Channel Marker 20 and bearing 86° to a point (approximate latitude 26°28′50″ North, approximate longitude 82°05′48″ West) ¼ mile south of York Island, then running parallel to and ¼ mile south of the general contour of the southern shorelines of York Island and Pine Island to the line's terminus at a point on a line bearing 360° from Red Intracoastal Waterway Channel Marker 10 (approximate latitude 26°29′16″ North, approximate longitude 82°03′35″ West), and west and southwest of the general contour of the western and southern shorelines of Pine Island and a line that bears 360° from said Red Intracoastal Waterway Channel Marker 10, excluding the portion of the marked channel otherwise designated in paragraph (c)(13)(vii) of this section.

(vii) Watercraft may not exceed 25 miles per hour from April 1 through November 15 in all waters of the marked channel that runs north of the power lines from the Cherry Estates area of St. James City into Pine Island Sound, east of the western boundary of the zone designated in 17.108(c)(13)(vi), and west of a line perpendicular to the

power lines that begins at the easternmost point (approximate latitude 26°30′25″ North, approximate longitude 82°06′15″ West) of the mangrove island on the north side of the power lines approximately 1,800 feet southwest of the Galt Island Causeway.

(viii) Watercraft are required to proceed at slow speed all year in all waters of San Carlos Bay and Punta Rassa Cove east of a line that bears 352° from the northernmost tip of the northern peninsula on Punta Rassa (approximate latitude 26°29′44″ North, approximate longitude 82°00′33″ West), and south of a line that bears 122° from Intracoastal Waterway Green Channel Marker 99 (approximate latitude 26°31′00″ North, approximate longitude 82°00′52″ West), including all waters of Shell Creek and associated waterways.

(ix) Watercraft are required to proceed at slow speed all year in all waters of San Carlos Bay and the Caloosahatchee River, including the residential canals of Cape Coral, northeast of a line that bears 302° and 122° from Intracoastal Waterway Green Channel Marker 99 (approximate latitude 26°31′00″ North, approximate longitude 82°00′52″ West), west of a line that bears 346° from Intracoastal Waterway Green Channel Marker 93 (approximate latitude 26°31′37″ North, approximate longitude 81°59′46″ West), and north and northwest of the general contour of the northwestern shoreline of Shell Point and a line that bears approximately 74° from the northernmost tip (approximate latitude 26°31′31″ North, approximate longitude 81°59′57″ West) of Shell Point to said Intracoastal Waterway Green Channel Marker 93, excluding the Intracoastal Waterway between markers 93 and 99 (which is already designated as a Federal manatee protection area, requiring watercraft to proceed at slow speed, and is not impacted by this rule).

(x) Watercraft are required to proceed at slow speed from April 1 through November 15 and at not more than 25 miles per hour the remainder of the year in all waters of Hell Peckney Bay southeast of Hurricane Bay, northeast of the northern shorelines of Julies Island and the unnamed island immediately northwest of Julies Island and a line that bears 312° from the northwesternmost point of Julies Island (approximate latitude 26°26′37″ North, approximate longitude 81°54′57″ West), northwest of Estero Bay, and southwest of a line beginning at the southernmost point (approximate latitude 26°27′23″ North, approximate longitude 81°55′11″ West) of an unnamed mangrove peninsula in northwest Hell Peckney Bay and bearing 191° to the northernmost point (approximate latitude 26°27′19″ North, approximate longitude 81°55′11″ West) of an unnamed mangrove island, then running along the northern shoreline of said island to its southeasternmost point (approximate latitude 26°27′11″ North, approximate longitude 81°55′05″ West), then bearing 115° to a point (approximate latitude 26°27′03″ North, approximate longitude 81°54′47″ West) on the northwest shoreline of an unnamed mangrove island, then running along the northern shoreline of said island to its northeasternmost point (approximate latitude 26°27′02″ North, approximate longitude 81°54′33″ West), and then bearing 37° to the line's terminus at the westernmost point of an unnamed mangrove peninsula in eastern Hell Peckney Bay.

(xi) Watercraft are required to proceed at slow speed from April 1 through November 15 and at not more than 25 miles per hour the remainder of the year in all waters of Hendry Creek south of a line that bears 270° from a point (approximate latitude 26°28′40″ North, approximate longitude 81°52′56″ West) on the eastern shoreline of Hendry Creek; and all waters of Estero Bay southeast and east of Hell Peckney Bay, a line that bears 340° from a point (approximate latitude 26°25′56″ North, approximate longitude 81°54′25″ West) on the northern tip of an unnamed mangrove peninsula on the northeastern shoreline of Estero Island, and the northern shoreline of Estero Island, south of Hendry Creek and a line that bears 135° and 315° from Red Channel Marker 18 (approximate latitude 26°27′46″ North, approximate longitude 81°52′00″ West) in Mullock Creek, and north of a line that bears 72° from the northernmost point (approximate latitude 26°24′22″ North, approximate longitude 81°52′34″ West) of Black Island,

including the waters of Buccaneer Lagoon at the southern end of Estero Island, but excluding:

(A) The portions of the marked channels otherwise designated in paragraph (c)(13)(xiii) of this section;

(B) The Estero River; and

(C) To waters of Big Carlos Pass east of a line beginning at a point (approximate latitude 26°24′34″ North, approximate longitude 81°53′05″ West) on the eastern shoreline of Estero Island and bearing 36° to a point (approximate latitude 26°24′40″ North, approximate longitude 81°53′00″ West) on the southern shoreline of Coon Key, south of a line beginning at a point (approximate latitude 26°24′36″ North, approximate longitude 81°52′30″ West) on the eastern shoreline of Coon Key and bearing 106° to a point (approximate latitude 26°24′39″ North, approximate longitude 81°52′34″ West) on the southwestern shoreline of the unnamed mangrove island north of Black Island, and west of a line beginning at a point (approximate latitude 26°24′36″ North, approximate longitude 81°52′30″ West) on the southern shoreline of said unnamed mangrove island north of Black Island and bearing 192° to the northernmost point (approximate latitude 26°24′22″ North, approximate longitude 81°52′34″ West) of Black Island.

(xii) Watercraft are required to proceed at slow speed from April 1 through November 15 and at not more than 25 miles per hour the remainder of the year in all waters of Estero Bay and Big Hickory Bay south of a line that bears 72° from the northernmost point (approximate latitude 26°24′22″ North, approximate longitude 81°52′34″ West) of Black Island, east of the centerline of State Road 865 (but including the waters of the embayment on the eastern side of Black Island and the waters inshore of the mouth of Big Hickory Pass that are west of State Road 865), and north of a line that bears 90° from a point (approximate latitude 26°20′51″ North, approximate longitude 81°50′33″ West) on the eastern shoreline of Little Hickory Island, excluding Spring Creek and the portions of the marked channels otherwise designated under 17.108(c)(13)(xiii) and the portion of Hickory Bay designated in paragraph (c)(13)(xiii) of this section.

(xiii) Watercraft may not exceed 25 miles per hour all year in:

(A) All waters of Big Hickory Bay north of a line that bears 90° from a point (approximate latitude 26°20′51'' North, approximate longitude 81°50′33″ West) on the eastern shoreline of Little Hickory Island, west of a line beginning at a point (approximate latitude 26°20′48″ North, approximate longitude 81°50′24″ West) on the southern shoreline of Big Hickory Bay and bearing 338° to a point (approximate latitude 26°21′39″ North, approximate longitude 81°50′48″ West) on the water in the northwestern end of Big Hickory Bay near the eastern end of Broadway Channel, south of a line beginning at said point on the water in the northwestern end of Big Hickory Bay and bearing 242° to the northernmost point (approximate latitude 26°21′39″ North, approximate longitude 81°50′50″ West) of the unnamed mangrove island south of Broadway Channel, and east of the eastern shoreline of said mangrove island and a line beginning at the southernmost point of said island (approximate latitude 26°21′07″ North, approximate longitude 81°50′58″ West) and bearing 167° to a point on Little Hickory Island (approximate latitude 26°21′03″ North, approximate longitude 81°50′57″ West);

(B) All waters of the main marked North–South channel in northern Estero Bay from Green Channel Marker 37 (approximate latitude 26°26′02 North, approximate longitude 81°54′29″ West) to Green Channel Marker 57 (approximate latitude 26°25′08″ North, approximate longitude 81°53′29″ West);

(C) All waters of the main marked North-South channel in southern Estero Bay south of a line beginning at a point (approximate latitude 26°24′36″ North, approximate longitude 81°52′30″ West) on the southern shoreline of the unnamed mangrove island north of Black Island and bearing 192° to the northernmost point (approximate latitude 26°24′22″ North, approximate longitude 81°52′34″ West) of Black Island, and north and east of Red Channel Marker 62 (approximate latitude 26°21′31″ North, approximate longitude 81°51′20″ West) in Broadway Channel;

(D) All waters within the portion of the marked channel leading to the Gulf

of Mexico through New Pass, west of the North-South channel and east of State Road 865; all waters of the marked channel leading to Mullock Creek north of a line beginning at a point (approximate latitude 26°24′36″ North, approximate longitude 81°52′30″ West) on the eastern shoreline of Coon Key and bearing 106° to a point (approximate latitude 26°24′39″ North, approximate longitude 81°52′34″ West) on the southwestern shoreline of the unnamed mangrove island north of Black Island, and south of Red Channel Marker 18 (approximate latitude 26°27′46″ North, approximate longitude 81°52′00″ West);

(E) All waters of the marked channel leading from the Mullock Creek Channel to the Estero River, west of the mouth of the Estero River. (This designation only applies if a channel is marked in accordance with permits issued by all applicable State and federal authorities. In the absence of a properly permitted channel, this area is as designated under paragraph (c)(13)(xi) of this section);

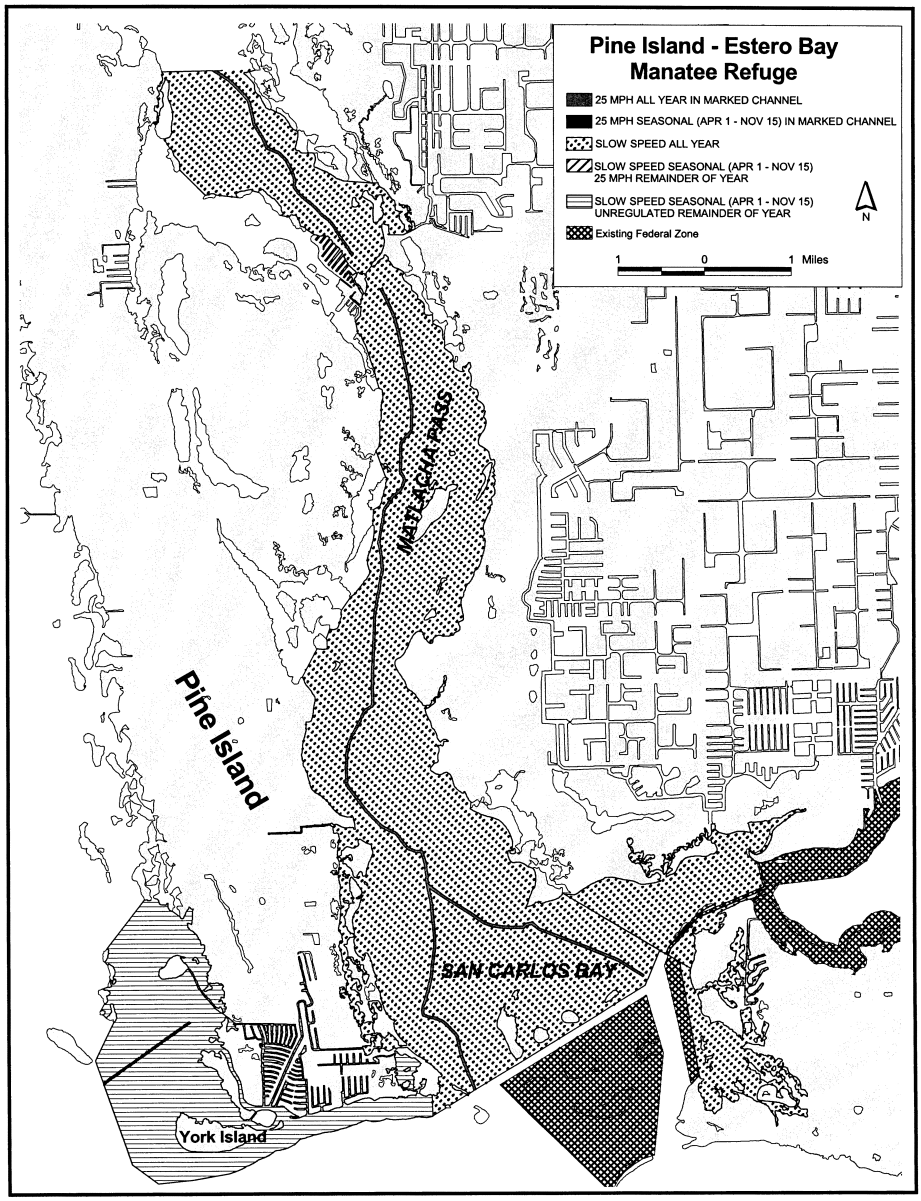
(F) All waters of the marked channel commonly known as Alternate Route Channel, with said channel generally running between Channel Marker 1 (approximate latitude 26°24′29″ North, approximate longitude 81°51′53″ West) and Channel Marker 10 (approximate latitude 26°24′00″ North, approximate longitude 81°51′09″ West);

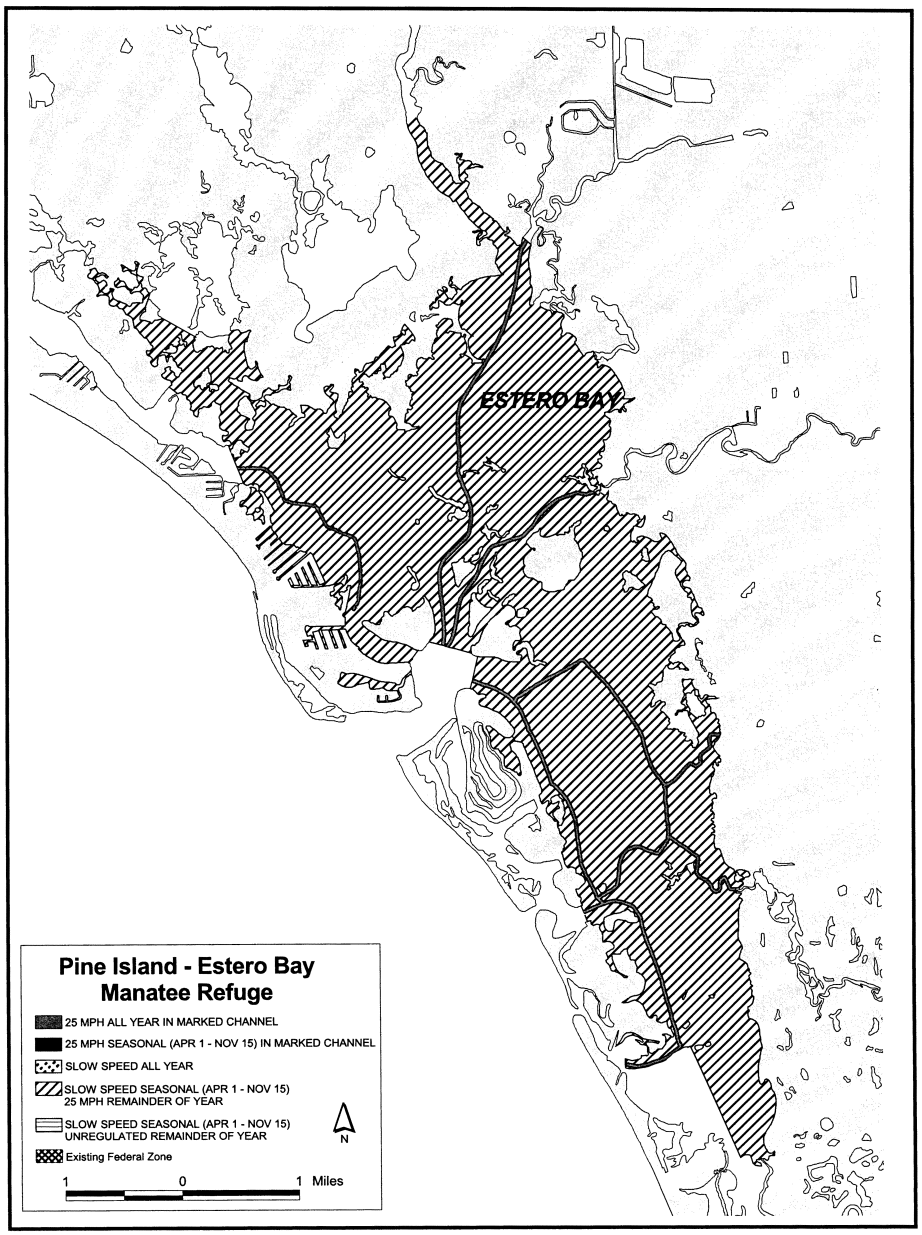
(G) All waters of the marked channel commonly known as Coconut Channel, with said channel generally running between Channel Marker 1 (approximate latitude 26°23′44″ North, approximate longitude 81°50′55″ West) and Channel Marker 23 (approximate latitude 26°24′00″ North, approximate longitude 81°50′30″ West);

(H) All waters of the marked channel commonly known as Southern Passage Channel, with said channel generally running between Channel Marker 1 (approximate latitude 26°22′58″ North, approximate longitude 81°51′57″ West) and Channel Marker 22 (approximate latitude 26°23′27″ North, approximate longitude 81°50′46″ West); and

(I) All waters of the marked channel leading from the Southern Passage Channel to Spring Creek, west of the mouth of Spring Creek.

(xiv) Maps of the Pine Island-Estero Bay Manatee Refuge follow:


Pine Island - Estero Bay
Manatee Refuge
25 MPH ALL YEAR IN MARKED CHANNEL
25 MPH SEASONAL (APR 1 - NOV 15) IN MARKED CHANNEL
SLOW SPEED ALL YEAR
SLOW SPEED SEASONAL (APR 1 - NOV 15)
25 MPH REMAINDER OF YEAR
SLOW SPEED SEASONAL (APR 1 - NOV 15)
UNREGULATED REMAINDER OF YEAR
Existing Federal Zone
N
1 0 1 Miles
MATLACHA PASS
Pine Island
SAN CARLOS BAY
York Island

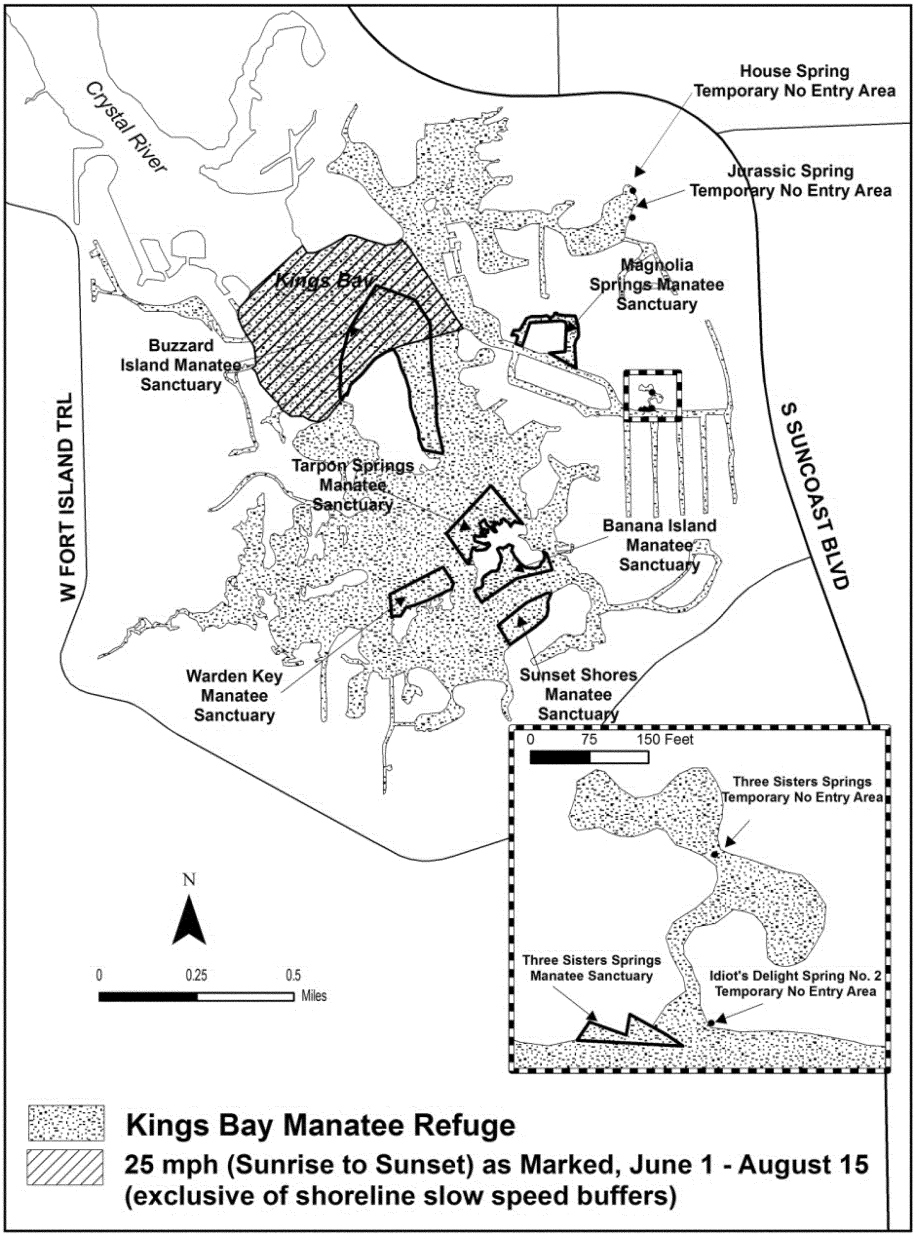


(14) *The Kings Bay Manatee Refuge.* A tract of submerged land that includes all waters of Kings Bay, including all tributaries and adjoining waterbodies, upstream of the confluence of Kings Bay and Crystal River, described by a line that bears North 53°00′00″ East (True) from the northeasternmost point of an island on the southwesterly shore of Crystal River (approximate

latitude 28°53′32″ North, approximate longitude 82°36′23″ West) to the southwesternmost point of a peninsula of Magnolia Shores (approximate latitude 28°53′38″ North, approximate longitude 82°36′16″ West).

(i) *Area covered*. The Kings Bay Manatee Refuge encompasses existing manatee protection areas as described in paragraphs (a)(1) through (a)(7) of this section, and areas outside these sections as depicted on the map in paragraph (c)(14)(ii) of this section.

(ii) *Particular areas*. The following springs fall within the boundaries of the Kings Bay Manatee Refuge. A map showing the entire refuge, including these springs, follows:



(A) *Three Sisters Springs.* A tract of submerged land, lying in Section 28, Township 18 South, Range 17 East, Tallahassee Meridian, Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the northwest corner of said

Section 28 in an east southeast direction to the canal that begins on the west side of Southeast Cutler Spur Boulevard and runs west-northwest to Kings Bay. The spring is north and east of the northern terminus of Southeast Paradise Avenue along the northern shore of said canal. Three Sisters Springs includes three main and numerous smaller spring vents and a spring run that connects the vents to said canal in Crystal River, Citrus County, Florida. This area is not the same as set forth in paragraph (a)(7) of this section. This area is behind the sanctuary (north from the mouth of the channel) as set forth in paragraph (a)(7) of this section.

(*1*) All waterborne activities in this specific area are prohibited from sunset to sunrise from November 15 through March 31 exclusive of the provisions of paragraph (c)(14)(v) of this section.

(*2*) Scuba diving and fishing (including but not limited to fishing by hook and line, by cast net, and by spear) are also prohibited in this specific area from November 15 through March 31 exclusive of the provisions of paragraph (c)(14)(v) of this section.

(*3*) If the provisions of paragraph (c)(14)(vi) of this section are put in effect, all waterborne activities are prohibited in this specific area for the duration established under paragraph (c)(14)(vi) of this section.

(B) *House Spring*. A tract of submerged land, lying in Section 21, Township 18 South, Range 17 East, Tallahassee Meridian, Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 21 in an east-northeast direction to the northeasternmost corner of Hunter Spring Run. The spring is immediately west of and adjacent to Northeast 2nd Court in Crystal River, Citrus County, Florida.

(C) *Jurassic Spring*. A tract of submerged land, lying in Section 21, Township 18 South, Range 17 East, Tallahassee Meridian, Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the southwest corner of said Section 21 in an east northeast direction to the eastern shore of Hunter Spring Run. The spring is immediately west of the western terminus of Bayshore Drive in Crystal River, Citrus County, Florida.

(D) *Idiot's Delight Number 2 Spring*. A tract of submerged land, lying in Section 28, Township 18 South, Range 17 East, Tallahassee Meridian, Citrus County, Florida, more particularly described as follows: For a point of reference, commence at the northwest corner of said Section 28 in an east southeast direction to the canal that begins on the west side of Southeast Cutler Spur Boulevard and runs west-northwest to Kings Bay. The spring is north and east of the northern terminus of Southeast Paradise Avenue along the northern shore of said canal just east of the southern terminus of the Three Sisters Springs run in Crystal River, Citrus County, Florida.

(iii) *Speed and anchoring restrictions*. (A) Throughout the entire year, watercraft speeds are restricted to slow speed throughout the manatee refuge with the following exceptions:

(*1*) A posted area generally north of Buzzard Island, exclusive of shoreline slow-speed buffer zones, where watercraft may travel at speeds up to 25 miles per hour during daylight hours (sunrise to sunset) from June 1 through August 15;

(*2*) Those areas where access is precluded (manatee sanctuaries, no-entry areas); or

(*3*) Areas where more restrictive speed restrictions are in effect.

(B) From June 1 through August 15, anchorage (other than emergency anchorage) of watercraft is prohibited in the posted high speed (25 miles per hour) area around Buzzard Island referenced in paragraph (c)(14)(iii)(A) of this section.

(iv) *Time and area prohibitions*. When the provisions of paragraphs (c)(14)(v) or (vi) of this section are in effect (November 15 through March 31 and April 1 through November 14, respectively), all waterborne activities, including swimming, diving (including skin and scuba diving), snorkeling, water skiing, surfing, fishing (including with hook and line, by cast net, or spear), and the use of water vehicles (including but not limited to boats powered by engine, wind, or other means; ships powered by engine, wind, or other means; barges,

surfboards, personal watercraft, water skis, and any other devices or mechanisms capable of locomotion on, across, or underneath the surface of the water) are prohibited in areas that are adjacent to and within specified distances from the existing manatee sanctuaries located in Kings Bay (defined in paragraphs (a)(1) through (a)(7) of this section) and the springs defined in paragraph (c)(14)(ii) of this section: Three Sisters Springs, House Spring, Jurassic Spring, and Idiot's Delight Number 2 Spring.

(v) *Expanded temporary no-entry area (November 15 through March 31).* When manatees exceed the capacity of an existing manatee sanctuary or shift usage around an existing manatee sanctuary or shift usage to Three Sisters Springs, House Spring, Jurassic Spring, and Idiot's Delight Number 2 Spring, due to water or weather or other conditions, we will designate ''no-entry'' areas from November 15 through March 31 as appropriate and necessary around any of these sites. The determination to designate and subsequently remove no-entry areas around existing manatee sanctuaries and Three Sisters Springs, House Spring, Jurassic Spring, and Idiot's Delight Number 2 Spring within the Kings Bay Manatee Refuge will be based on aerial survey observations of manatees using the existing sanctuary sites, current weather information, and other sources of credible, relevant information. We will designate no-entry areas within Kings Bay Manatee Refuge and outside of existing sanctuaries as follows:

(A) For the sanctuaries set forth in paragraphs (a)(1) through (a)(6) of this section, to a distance not to exceed 100 feet from the existing sanctuary boundary.

(B) For the Three Sisters Springs Sanctuary, to a distance not to exceed 400 feet from the existing boundary. We do not intend to completely mark off the manmade channel. Expansions could occur directly around the existing sanctuary and north into the area locally known as Three Sisters Springs.

(C) For House Spring and Jurassic Spring, an area that does not exceed 100 feet from the associated spring vents.

(D) For Idiot's Delight Number 2 Spring, an area that does not exceed 25 feet from the associated spring vent. Any temporary designation will be configured to avoid the manmade channel in the canal and will not block access into Three Sisters Springs.

(vi) *Temporary no-entry areas (April 1 through November 14).* Temporary no-entry area designations may be made in the existing manatee sanctuaries located in Kings Bay defined in paragraphs (a)(1) through (a)(7) and paragraphs (c)(14)(v)(A) through (D) of this section prior to November 15 and after March 31 during cold fronts when manatees are present. Designations will remain in effect for the duration of a cold front and only when there is regular manatee use; temporary no-entry area designations will remain in effect for no longer than 14 consecutive days.

(vii) *Posting of temporary no-entry areas designated in accordance with paragraph (c)(14)(v) or (vi) of this section.* Additional temporary protection areas will be posted to distances as described in paragraph (c)(14)(v) of this section and identified by the following devices: buoys, float lines, signs, advisories from onsite Service employees and their designees, or other methods.

(viii) *Notifications of temporary no-entry areas designated in accordance with paragraph (c)(14)(v) or (vi) of this section.* When we determine that the provisions of paragraph (c)(14)(v) or (vi) of this section are appropriate, the temporary protection areas will be designated and posted to distances as described in paragraph (c)(14)(v) of this section. No-entry area designations will occur immediately. We will advise the public of designations through public notice(s) announcing and describing the measures in a local newspaper and other media, including but not limited to, local television and radio broadcasts, Web sites and other news outlets, as soon as time permits. Onsite Service employees and their designees, when present, may also inform waterway users of designations.

(ix) *Prohibited activities (year-round).* We specifically identify and prohibit the activities set forth in this paragraph to prevent the take of one or

more manatees by individuals engaged in waterborne activities while in the water, in boats, or on-shore within the Kings Bay Manatee Refuge. In regard to these prohibited activities, we consider a resting manatee to be a mostly motionless manatee that rises to breathe from the water bottom, in the water column, or on the water's surface. While resting, a manatee may make minor changes in its posture and may slightly shift its position. Minor changes in posture occur when resting manatees breathe or roll. Resting manatees may also make slight movements with their flippers or tail to compensate for drift, etc. Prohibited activities include:

(A) Chasing or pursuing manatee(s).

(B) Disturbing or touching a resting or feeding manatee(s).

(C) Diving from the surface on to a resting or feeding manatee(s).

(D) Cornering or surrounding or attempting to corner or surround a manatee(s).

(E) Riding, holding, grabbing, or pinching or attempting to ride, hold, grab, or pinch a manatee(s).

(F) Poking, prodding, or stabbing or attempting to poke, prod, or stab a manatee(s) with anything, including your hands and feet.

(G) Standing on or attempting to stand on manatee(s).

(H) Separating a mother and calf or attempting to separate a mother and calf.

(I) Separating manatee(s) from a group or attempting to separate manatee(s) from a group.

(J) Giving manatee(s) anything to eat or drink or attempting to give manatee(s) anything to eat or drink.

(K) Actively initiating contact with belted or tagged manatee(s) and associated gear, including any belts, harnesses, tracking devices, or antennae.

(L) Interfering with rescue and research activities.

[45 FR 74881, Nov. 12, 1980, as amended at 57 FR 5990, Feb. 19, 1992; 59 FR 24658, May 12, 1994; 63 FR 55556, Oct. 16, 1998; 67 FR 693, Jan. 7, 2002; 67 FR 66473, Nov. 8, 2002; 68 FR 46898, Aug. 6, 2003; 69 FR 40805, July 7, 2004; 70 FR 17874, Apr. 7, 2005; 70 FR 21969, Apr. 28, 2005; 70 FR 29458, May 23, 2005; 77 FR 15631, Mar. 16, 2012]