■ 1. The authority citation for parts 213, 229, 232, and 252 continues to read as follows:

Authority: 41 U.S.C. 1303 and 48 CFR chapter 1.

PART 213—SIMPLIFIED ACQUISITION PROCEDURES

■ 2. Amend section 213.301 by redesignating paragraph (4) as paragraph (5) and adding a new paragraph (4) to read as follows:

213.301 Governmentwide commercial purchase card.

* * * * *

(4) The contracting officer shall not authorize the Governmentwide commercial purchase card as a method of payment during any contract period of performance if the contract includes the clause at FAR 52.229–12, Tax on Certain Foreign Procurements, unless the contract also includes the clause at 252.229–70XX, Full Exemption from Two-Percent Excise Tax on Certain Foreign Procurements, indicating that the contractor is fully exempt from the tax.

* * * * *

PART 229—TAXES

■ 3. Add subpart 229.2, consisting of section 229.204, to read as follows:

SUBPART 229.2—FEDERAL EXCISE TAXES

229.204 Federal excise tax on specific foreign contract payments.

The contracting officer shall not authorize the Governmentwide commercial purchase card as a method of payment during any contract period of performance if the contract includes the clause at FAR 52.229–12, Tax on Certain Foreign Procurements, unless the contract also includes the clause at 252.229–70XX, Full Exemption from Two-Percent Excise Tax on Certain Foreign Procurements, indicating that the contractor is fully exempt from the tax.

■ 4. Amend section 229.402–70 by adding paragraph (k) to read as follows:

229.402–70 Additional provisions and clauses.

* * * * *

(k) Use the clause at 252.229–70XX, Full Exemption from Two-Percent Excise Tax on Certain Foreign Procurements, in contracts that include the clause at FAR 52.229–12, Tax on Certain Foreign Procurements, when the contractor has—

(1) Represented that it is a foreign person in response to the provision at FAR 52.229–11, Tax on Certain Foreign Procurements—Notice and Representation; and

(2) Indicated that it is fully exempt from the tax for reasons cited on their IRS Form W–14, Certificate of Foreign Contracting Party Receiving Federal Procurement Payments.

PART 232—CONTRACT FINANCING

■ 5. Add sections 232.1108 and 232.1108–70 to subpart 232.11 to read as follows:

232.1108 Payment by Governmentwide commercial purchase card.

232.1108–70 Prohibition of Governmentwide commercial purchase card as a method of payment when the tax on certain foreign procurements applies.

The contracting officer shall not authorize the Governmentwide commercial purchase card as a method of payment during any contract period of performance if the contract includes the clause at FAR 52.229–12, Tax on Certain Foreign Procurements, unless the contract also includes the clause at 252.229–70XX, Full Exemption from Two-Percent Excise Tax on Certain Foreign Procurements, indicating that the contractor is fully exempt from the tax.

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 6. Add section 252.229–70XX to read as follows:

252.229–70XX Full Exemption from Two-Percent Excise Tax on Certain Foreign Procurements.

As prescribed in 229.402–70(k), use the following clause: FULL EXEMPTION FROM TWO–PERCENT EXCISE TAX ON CERTAIN FOREIGN PROCUREMENTS (DATE)

(a) As the Contractor represented in its offer, any item, including any item delivered under subcontract; any service; or any combination thereof delivered under this contract is fully exempt from the 2-percent excise tax withholding imposed by 26 U.S.C. 5000C and implemented by Federal Acquisition Regulation (FAR) 52.229–12, Tax on Certain Foreign Procurements.

(b) If the full exemption no longer applies due to a change in circumstances during the performance of the contract, causing the Contractor to become subject to the withholding for the 2-percent excise tax as imposed by 26 U.S.C. 5000C, then the Contractor shall immediately comply with the notification and billing requirements of FAR clause 52.229–12.

(End of clause)

[FR Doc. 2022–13370 Filed 6–22–22; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2021–0058; FF09E22000 FXES1113090FEDR 223]

RIN 1018–BE53

Endangered and Threatened Wildlife and Plants; Reclassification of Mitracarpus polycladus From Endangered to Threatened With a Section 4(d) Rule

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to reclassify *Mitracarpus polycladus* (a plant, no common name) from endangered to threatened (downlist) under the Endangered Species Act of 1973, as amended (Act). The proposed downlisting is based on our evaluation of the best available scientific and commercial information, which indicates that the species' status has improved such that it is not currently in danger of extinction throughout all or a significant portion of its range, but that it is still likely to become so in the foreseeable future. We also propose a rule under section 4(d) of the Act that provides for the conservation of *M. polycladus.*

DATES: We will accept comments received or postmarked on or before August 22, 2022. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES** below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for a public hearing, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT**, by August 8, 2022.

ADDRESSES: You may submit comments on this proposed rule by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: *https://www.regulations.gov.* In the Search box, enter FWS–R4–ES–2021–0058, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on ''Comment.''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R4–ES–2021–0058; U.S. Fish and Wildlife Service, MS: PRB/3W, 5275

Leesburg Pike, Falls Church, VA 22041–3803.

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

Availability of supporting materials: This proposed rule, list of literature cited, and supporting documents, including the 5-year reviews and the Recovery Plan, are available at *https://www.regulations.gov* under Docket No. FWS–R4–ES–2021–0058.

FOR FURTHER INFORMATION CONTACT: Edwin Muñiz, Field Supervisor, U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office, P.O. Box 491, Boquerón, PR 00622; telephone: (787) 851–7297. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species may warrant reclassification from endangered to threatened if it no longer meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range). *Mitracarpus polycladus* is listed as endangered, and we are proposing to reclassify (downlist) *M. polycladus* as threatened. We have determined *M. polycladus* does not meet the Act's definition of an endangered species, but it does meet the definition of a threatened species (likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range). Reclassifying a species as a threatened species can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process.

What this document does. This rule proposes to reclassify *Mitracarpus polycladus* as a threatened species on the Federal List of Endangered and Threatened Plants (List) and to establish provisions under section 4(d) of the Act that are necessary and advisable to provide for the conservation of this species.

The basis for our action. Under the Act, we may determine that a species is an endangered or threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We may reclassify a species if the best available commercial and scientific data indicate the species no longer meets the applicable definition in the Act. In our April 2011 and September 2018 5-year status reviews, we recommended reclassifying this plant from endangered to threatened based on our evaluation of these same five factors. Based on the status review, the current threats analysis, and evaluation of conservation measures discussed in this proposed rule, we conclude that the plant *M. polycladus* no longer meets the Act's definition of an endangered species and should be reclassified to a threatened species. The species is no longer in danger of extinction throughout all or a significant portion of its range, but is likely to become so within the foreseeable future. We determined that *M. polycladus* is affected by the following current and ongoing threats to the extent that the species meets the definition of a threatened species under the Act: habitat destruction and modification due to road and trail maintenance, trampling by humans; human-caused fires; nonnative, invasive species; urbanization and tourism development; and the effects of climate change.

The status of *Mitracarpus polycladus* has improved since the time of listing with an increased range, number of localities and individuals. At the time of listing, the known range of *M. polycladus* consisted of an undetermined number of individuals located in a single population in southern Puerto Rico and from one record on Saba Island. Currently, there are 3 populations of *M. polycladus* with more than 20,000 adult individuals in 11 localities in southern Puerto Rico and multiple localities on Saba Island and Anegada Island. In the largest population, 89 percent of individuals occur in areas managed for conservation. Despite ongoing threats from habitat destruction and modification, all three populations exhibit high or moderate resiliency and have demonstrated ability to maintain occurrences through changing environmental conditions. Furthermore, the current number of localities buffers the species from catastrophic events (drought and fire). For these reasons, we determined that the species is not in danger of extinction, and, thus, we conclude that *M. polycladus* no longer meets the Act's definition of an endangered species.

Although population numbers and abundance of *M. polycladus* have increased, our analysis indicates that magnitude of threats will remain into the foreseeable future. As the effects of habitat destruction and modification and climate change continue into the future, the abundance of each of the three populations may be reduced, thereby exacerbating the impacts from these stressors. Thus, we find that *M. polycladus* is likely to become in danger of extinction in the foreseeable future, and meets the Act's definition of a threatened species.

We are proposing to promulgate a section 4(d) rule. We propose to prohibit the activities under section 9(a)(2) of the Act for endangered plant species as a means to provide protections to *Mitracarpus polycladus.* We also propose specific exceptions from these prohibitions for our State or Territorial agency partners, so that they may continue with certain activities covered by an approved cooperative agreement to carry out conservation programs that will facilitate the conservation and recovery of the species.

Information Requested

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

We particularly seek comments concerning:

(1) Reasons we should or should not downlist *Mitracarpus polycladus* as a threatened species.

(2) Information on the historical and current status, range, distribution, and population size of *Mitracarpus polycladus.*

(3) Information on the known and potential threats to *Mitracarpus polycladus* including habitat modification, habitat loss, or climate change.

(4) Information regarding the life history, ecology, and habitat use of *Mitracarpus polycladus.*

(5) Current or planned activities within the geographic range of *Mitracarpus polycladus* that may have adverse or beneficial impacts on the species.

(6) Information on regulations that are necessary and advisable to provide for the conservation of *Mitracarpus polycladus* and that the Service can consider in developing a 4(d) rule for the species.

(7) Information concerning the extent to which we should include any of the Act's section 9 prohibitions in the 4(d) rule or whether we should consider any additional exceptions from the prohibitions in the 4(d) rule (to the extent permitted by Commonwealth law).

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

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act (16 U.S.C. 1531 *et seq.*) directs that determinations as to whether any species is an endangered or threatened species must be made ''solely on the basis of the best scientific and commercial data available.''

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via *https://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *https://www.regulations.gov.*

Comments and materials we receive, as well as supporting documentation used in preparing this proposed rule will be available for public inspection at Docket No. FWS–R4–ES–2021–0058 on *https://www.regulations.gov.*

Because we will consider all comments and information we receive during the comment period, our final determination may differ from this proposal. Based on the new information we receive (and any comments on that new information), we may conclude that the species should remain listed as endangered instead of being reclassified as threatened, or we may conclude that the species no longer warrants listing as either an endangered species or a threatened species. In addition, we may change the parameters of the proposed prohibitions or the proposed exceptions to those prohibitions if we conclude it is appropriate in light of comments and new information we receive. For example, we may expand the proposed prohibitions to include prohibiting additional activities if we conclude that those additional activities are not compatible with conservation of the species. Conversely, we may establish additional exceptions to the prohibitions in the final rule if we conclude that the activities would facilitate or are compatible with the conservation and recovery of the species.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the **Federal Register**. The use of these virtual public hearings is consistent with our regulation at 50 CFR 424.16(c)(3).

Peer Review

In accordance with our policy, ''Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities,'' which was published on July 1, 1994 (59 FR 34270) and our August 22, 2016, Director's Memorandum ''Peer Review Process,'' we will seek the expert opinion of at least three appropriate and independent specialists regarding scientific data and interpretations contained in this proposed rule. We will send copies of this proposed rule to the peer reviewers immediately following publication in the **Federal Register**. We will ensure that the opinions of peer reviewers are objective and unbiased by following the guidelines set forth in the Director's Memo, which updates and clarifies Service policy on peer review. The purpose of such review is to ensure that our decisions are based on scientifically sound data, assumptions, and analysis. Accordingly, our final decision may differ from this proposal.

Previous Federal Actions

On September 9, 1994, we published in the **Federal Register** (59 FR 46715) a final rule listing listing *Mitracarpus polycladus* as an endangered species. On October 6, 1998, we completed the recovery plan (Service 1998, entire). An amendment to the *M. polycladus* recovery plan was signed on September 24, 2019.

On September 27, 2006, and August 22, 2016, we initiated 5-year reviews for the species (71 FR 56545 and 81 FR 56692, respectively) and completed them on April 27, 2011 (Service 2011, entire), and September 25, 2018 (Service 2018a, entire). In those two reviews, we determined the species no longer met the definition of an endangered species and should be reclassified to threatened. The 5-year reviews are available at *https://www.regulations.gov* under Docket No. FWS–R4–ES–2021–0058.

For additional details on previous Federal actions, see Recovery, below. See *https://ecos.fws.gov/ecp/species/206* for the species profile for this plant.

I. Proposed Reclassification Determination

Background

Species Information

A thorough review of the taxonomy, life history, ecology, and overall viability of *Mitracarpus polycladus* is presented in the 5-year status reviews (Service 2011, entire; Service 2018a, entire). Below, we present a summary of the biological and distributional information described in the 5-year status reviews and new information published or obtained since.

Taxonomy and Species Description

Mitracarpus polycladus is a small shrub in the Rubiaceae family and the *Spermacoce* clade. This large family of flowering plants in the coffee family contains over 640 genera and 10,000 species with a mainly tropical distribution (Bremer 1996, p. 23). *Mitracarpus polycladus* was first collected in Puerto Rico in 1886 and described in 1903 as a new species (Urban 1903, p. 389; Lioger 1997, p. 124).

Mitracarpus polycladus is frequently confused with other genera of the *Spermacoce* clade, due to the similarity in morphological characters of herbarium specimens (Nuñez-Florentin *et al.* 2017, p. 96; Service 2018a, p. 22).

Mitracarpus polycladus may reach up to 45 centimeters (cm) (17.7 inches (in)) in height and its stems grow either erect

or along the ground (Proctor 1991, p. 127; Lioger 1997, p. 125). The leaves are smooth and narrow, approximately 2–4.5 cm (0.8–1.8 in) long and 0.3–0.5 cm (0.1–0.2 in) wide. The inflorescence is surrounded by three bract-like leaves on the ends of branches and is made up of smaller white flowers. The seed capsule is very small (1.5 millimeter (mm) (0.06 in) diameter) and contains black seeds (Proctor 1991, p. 127).

Biology

The reproductive biology of *Mitracarpus polycladus* had not been thoroughly studied at the time it was listed. Phenology of *M. polycladus* is closely related to the dry and rainy seasons. Flower production occurs just after the peak of rainfall, which may start as early as May and end as late as December, and seed availability occurs during the dry season, which is December to March (Service 2018a, p. 8). The species shows a large reproductive output after the rainy season (high number of seedlings) followed by a low number of mature adults counted during the next rainy season. Seed germination has been observed a few days after a rain event, producing numerous seedlings within 0.9 meter (m) (3 feet (ft)) surrounding mature plants, denoting a clumped spatial distribution (Service 2018b, p. 6). Seedlings and adults categories in our analysis are consistent with those used in recent survey reports (Service 2018b, p. 4).

The timing and spatial distribution of seedlings indicate the species produces viable seeds that stay in the soil seedbank until the next rain event (Service 2018b, p. 6). *Mitracarpus polycladus* colonizes on exposed limestone where aggregations of sediment and water provide necessary conditions for seed germination and seedling rooting (Medina *et al.* 2012, p. 203). Although a large number of seedlings (*e.g.,* 1,500 and 13,680 in 2011 and 2018, respectively) have been documented in Puerto Rico, seedling estimates are not included as part of the population abundance estimates because surveyors have been unable to determine seedling survival rates and effective recruitment (Service 2011, p. 24; Service 2018b, p. 8). Survival of seedlings to maturity is uncertain due to natural thinning of the seedlings and environmental variables (drought stress). High mortality of seedlings is observed during the driest period (Service 2018b, p. 8). Additionally, the clumping distribution of seedlings near the mature flowering plant is likely related to the lack of an animal dispersal agent (*e.g.,* bird, small mammal) to carry the seeds farther away. Experts conclude that seeds are dependent on water or wind as a dispersal mechanism, with seeds that are not dispersed by water or wind clumping near the mature plant (Buitrago-Soto 2002, p. 25; Service 2018a, p. 9).

We have little information about *Mitracarpus polycladus'*s pollinators. However, two insect groups (Hymenopterous and Lepidopterous) have been identified as visiting *M. polycladus* flowers and may act as effective pollinators of the species (Monsegur 2017, unpublished data). During 2017, bee species *Apis mellifera, Megachile lanata,* and *M. rufipennis,* and the hanno blue butterfly (*Hemiargurs hanno watsoni*) visited *M. polycladus* plants (Monsegur 2017, unpublished data). Similar insects (*e.g.,* the Great Southern butterfly (*Ascia monuste*), honeybees, and the hanno blue butterfly) have been documented visiting *M. maxwelliae* and are understood to pollinate the species (Buitrago-Soto 2002, p. 34). Although further research on the *M. polycladus'*s breeding system and reproductive biology is needed to confirm its pollinators, available information indicates the species is cross-pollinated by these insects. The observations of multiple insect groups visiting *M. polycladus* support our rationale for defining localities in the Guánica Commonwealth Forest (GCF) area as a single population as it is very likely that insect-facilitated cross-pollination is taking place.

Distribution and Abundance

Mitracarpus polycladus was known to occur only in Puerto Rico and on Saba Island in the Lesser Antilles at the time of listing (59 FR 46715; September 9, 1994). Although the species was discovered on Anegada Island in 1970, we were not aware of this occurrence at the time of listing (Service 2011, p. 9; Hamilton and Bárrios 2017, p. 1).

In Puerto Rico, *Mitracarpus polycladus* was first collected in 1886 on coastal rocks near Caña Gorda in the municipality of Guánica (Sintenis 1886, p. 1; Proctor 1991, p. 126). The species was first collected on Saba Island (approximate 289.6 kilometers (km) (180 miles (mi)) from the southeast coast of Puerto Rico) in 1906 (Bolding 1906, p. 1; Service 1998, p. 1). On Anegada Island, *M. polycladus* was first collected in 1970 on an area adjacent to Deep Bay (Woodbury 1970, p. 1). Anegada is approximately 144.8 km (90 mi) from the northeast coast of Puerto Rico (Hamilton 2016, p. 26).

When listed, *Mitracarpus polycladus* was known in Puerto Rico only from the Mesetas trail in the GCF (DNR 1976, pp. 56–58; 59 FR 46715, September 9, 1994). No abundance estimates were available for the species in Puerto Rico and no information was available on the status of the species on Saba Island. When the 1998 recovery plan was finalized, there was little information on *M. polycladus'*s historical and current abundance, distribution, ecology, and reproductive biology. At that time, we described *M. polycladus* occurrences in Puerto Rico and Saba Island as two populations (Proctor 1991, p. 2; Service 1998, p. 2).

At the time of listing and in the subsequent 5-year status reviews, occurrences of *Mitracarpus polycladus* in Puerto Rico were referred to as localities, and the occurrences on Anegada and Saba Islands were referred to as populations due to their distant geographic location. This approach did not consider the species-specific characteristics of clumped spatial distribution, distance among localities, natural geographic barriers, or the species' need for cross-pollination. Additional information about *M. polycladus'*s geographic and spatial distribution and biological and ecological aspects of the species' life history (*e.g.,* pollinators, seed dispersion, phenology) has since become available. We concluded that the following are natural physical barriers and preclude cross-pollination among populations and localities: coastal plains; dense, extensive forest patches; and bays. Connectivity among localities is important to maximize the likelihood of cross-pollination and gene flow, and to increase fruit production, viable seeds, and the chances of natural recruitment to support viable *M. polycladus* populations. Based on the factors described, we now identify three natural populations of *M. polycladus:* (1) Guánica forest in south Puerto Rico (composed of at least 10 localities within the GCF, which is managed for *M. polycladus* conservation, and adjacent lands that provide suitable habitat and connectivity); (2) Saba Island; and (3) Anegada Island. Additionally, a separate locality, Cerro Toro, resulted from a private translocation effort. This population is disjunct (no connectivity nor cross-pollination) from the GCF population; thus, we consider it a separate, introduced population.

Since the time of listing and the recovery plan development, new information on abundance and distribution has been gained through targeted surveys (Service 2007 and 2017, unpubl. data) and incidental observations. By 2011, seven *M.*

polycladus localities were documented within the GCF with an estimated abundance of 1,400 adult individuals in four localities with no occupied area estimated (Service 2011, pp. 8, 14). By 2018, 2 additional localities were documented within the GCF with an estimated 12,472 adult individuals in 9 localities in a 0.42-hectare (ha) (1.02 acres (ac)) area (Service 2018a, p. 22). The most recent abundance estimate is 17,637 adult individuals occupying 0.44 ha (1.1 ac) (Service 2018b, p. 9). These are underestimates of the population abundance and spatial extent as they did not include three natural localities due to time constraints. Because changes in the habitat have not been observed in the three localities, we expect the abundance (number) and spatial extent (ha) to be similar to the previous assessments. Therefore, the information from these three localities is unlikely to substantially change the estimates of abundance and extent of occupied area for the population; however, we recognize the potential for slight underestimation of the extent of areas with *M. polycladus* occurrences.

To date, 10 natural localities and 1 introduced locality comprise the Puerto Rico population; 8 of these are within the GCF and 3 are on private properties (Ballena beach, Cerro Toro, and Monte de la Ventana, which extends into the GCF). Based on the surrounding vegetation structure and the presence of exposed limestone observed in aerial images of the GCF, additional suitable habitat for the species has been identified and may contain unknown localities of *M. polycladus,* but it has not been quantified or surveyed. Therefore, we expect the species may extend beyond surveyed areas (Service 2018b, p. 8).

The increase in the number of localities recorded in Puerto Rico reflects additional survey efforts since the time of listing, while the increase in the number of individuals likely reflects the species' seasonal response to rain events (Service 2018b, p. 3). The species shows a large reproductive output after the rainy season (high number of seedlings) followed by a low number of mature adults counted during the next rainy season. Therefore, timing and seasonality of surveys affects abundance estimates.

On Saba Island, current information indicates the species occurs in several localities along the road between The Bottom and Windward Side towns in the southern section of the island (Rojer 1997, p. 19); however, no population estimate is available and the 1997 assessment does not include a population estimate. On Anegada Island, surveys for *M. polycladus* were conducted in 2015, 2016, and 2017 (Bárrios and Hamilton 2018, p. 3). Based on these data, the estimated population abundance is no more than 2,500 individuals in the north central region of the island between Windlass Point and Cooper Rock (Bárrios and Hamilton 2018, p. 4).

TABLE 1—CURRENT ABUNDANCE AND AREAL EXTENT OF *Mitracarpus Polycladus* PER LOCALITY IN PUERTO RICO

[Service 2018b, p. 9]

Locality	Abundance (# of adult plants)	Area occupied ** in hectares/acres	Ownership
Caña Gorda	Undetermined		Puerto Rico Department of Natural and Environmental Resources (Department).
Jaboncillo	Undetermined		Department.
Mesetas Trail	13,064	0.255/0.63	Department.
Ballena Trail	1,048	0.036/0.09	
La Cueva	310	0.016/0.04	
Hoya Onda	246	0.004/0.01	
State road PR 333	653	0.028/0.07	
Las Picuas	336	0.024/0.06	
Monte de la Ventana	1,967	0.077/0.19	Department and Private.
Ballena Beach	Undetermined		Private.
Cerro Toro *	13	0.004/0.01	Private.
Total	17,637	0.44/1.1	

* Introduced individuals.

** Area occupied reflects area surveyed by circular plots of 29.2 square meters (314 square feet) (Service 2018b, p. 3).

Habitat

Throughout its range in Puerto Rico, *Mitracarpus polycladus* occurs only on exposed limestone with sediment and water accumulation in holes and crevices. *M. polycladus* is restricted to geographical areas with unique substrate and climate features in dry forest habitat types that serve as corridors for pollinators and facilitate cross-pollination among *M. polycladus* localities within contiguous habitats. The species occurs among three major types of plant communities: coastal shrub forest, cactus scrub forest, and coastal scrub on sandy soil (DNR 1976, p. 53; Lugo *et al.* 1978, p. 282; Service 2018b, p. 11). Although these forest types cover about 582 ha (1,438 ac), or about 15 percent of the 3,882 ha (9,593 ac) GCF, (DNR 1976 p. 53; Lugo *et al.* 1978, p. 278), known occurrences of *M. polycladus* occupy only an area of 0.44 ha (1.1 ac), where the habitat and microhabitat features (*i.e.,* exposed limestone and aggregation of sediment and water) essential for the species are present (Service 2018b, p. 8). However, surveys have not been conducted throughout the suitable forest types; thus, the species may occur elsewhere within this area. All known *M. polycladus* localities in Puerto Rico fall in the subtropical dry forest life zone. This life zone occupies an area of 121,640 ha (300,576 ac) (Ewel and Whitmore 1973, p. 9) and is the driest life zone in Puerto Rico. It receives a mean annual rainfall of 60–100 cm (24–40 in), experiences high temperatures, and has high evapotranspiration when sufficient water is available (Murphy and Lugo 1986, p. 90; Cáceres-Charneco 2018, p. 27). The climate in this region is seasonal, with most precipitation occurring in September and October (Lugo *et al.* 1978, p. 278) and another small peak of rainfall in May and June (Sloan *et al.* 2006, p. 196; Cáceres-Charneco 2018, p. 28).

On Saba Island, the best available information indicates the species occurs on Gile's cherty sandy loam soil found between The Bottom and Windward Side towns. This arid section of the island is located in the south portion of

Saba Island (Rojer 1997, p. 19; Freitas *et al* 2016, p. 10). On Anegada Island, *Mitracarpus polycladus* currently grows on limestone plain and coastal sandy habitats located in the north-central area of this island where the species is restricted to two localities situated between Windlass Point and Cooper Rock (Bárrios and Hamilton 2018, p. 4). This area has similar environmental conditions and soil characteristics to *M. polycladus* localities in Puerto Rico.

Recovery Criteria

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Under section 4(f)(1)(B)(ii), recovery plans must, to the maximum extent practicable, include objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of section 4 of the Act, that the species be removed from the Lists of Endangered and Threatened Wildlife and Plants.

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species' likely future condition. However, they are not regulatory documents and do not substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of a species, or to delist a species, is ultimately based on an analysis of the best scientific and commercial data available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

There are many paths to accomplishing recovery of a species, and recovery may be achieved without all criteria in a recovery plan being fully met. For example, one or more criteria may be exceeded while other criteria may not yet be accomplished. In that instance, we may determine that the threats are minimized sufficiently and that the species is robust enough that it no longer meets the Act's definition of an endangered species or a threatened species. In other cases, we may discover new recovery opportunities after having finalized the recovery plan. Parties seeking to conserve the species may use these opportunities instead of methods identified in the recovery plan. Likewise, we may learn new information about the species after we finalize the recovery plan. The new information may change the extent to which existing criteria are appropriate for identifying recovery of the species. The recovery of a species is a dynamic process requiring adaptive management that may, or may not, follow all the guidance provided in a recovery plan.

The following discussion provides an analysis of the recovery criteria and goals as they relate to evaluating the status of the taxon. The recovery plan for *Mitracarpus polycladus* does not provide downlisting criteria (Service 1998, p. 8). In 2019, we published an amendment to the recovery plan that provides three revised criteria for delisting *M. polycladus* (Service 2019, p. 4). The three recovery criteria for delisting the species as outlined in the amendment are: (1) Threat reduction and management activities have been implemented to a degree that the species will remain viable into the foreseeable future; (2) existing natural populations of *M. polycladus* show a stable or increasing trend, as evidenced by natural recruitment and multiple age classes; and (3) within the historical range, at least three new populations of *M. polycladus* showing a stable or increasing trend have been established on lands protected by conservation measures, as evidenced by natural recruitment and multiple age classes (Service 2019, entire). Based on the information gathered and analyzed, two of these criteria have been partially met and the third has been initiated. The following discussion provides an assessment of the delisting criteria as they relate to evaluating the status of *M. polycladus.*

Criterion 1 for Delisting

Criterion 1 states that threat reduction and management activities have been implemented to a degree that the species will remain viable into the foreseeable future. This criterion has been partially met. Eighty-nine percent of the currently known *Mitracarpus polycladus* individuals in Puerto Rico occur within the GCF, which is managed for conservation by the Department as recommended by the Master Plan for the Commonwealth Forests of Puerto Rico (DNR 1976, p. 56). The management actions in the GCF protect *M. polycladus* from development activities and are compatible with the species' needs. In addition, *M. polycladus* is listed as critically endangered under Department regulations (DNRNA 2004, p. 52). Accordingly, the Department reviews all proposed actions in the GCF that may impact *M. polycladus* and its habitat within the forest. However the species is occasionally impacted by intense use of trails, human-caused fires, and nonnative invasive grasses encroaching on *M. polycladus* individuals and habitat. The species is also impacted by road maintenance activities (vegetation trimming) in 5 of the 11 localities where the species occurs (4 of these localities are within the GCF) (Service 2018b, p. 10). Each of the localities in the GCF has experienced some impact by one or more stressors including trail use, fires, nonnative invasive species, or road maintenance; these changes have resulted in loss of *M. polycladus* habitat available for the species. Although portions of the GCF localities have been impacted by these stressors, the threats do not have a substantive effect on the population and the protected and managed habitat in the GCF remains a stronghold for the species with the largest number of individuals and areal extent occurring along the Mesetas trail. Thus, although *M. polycladus* is legally protected in this forest, it is subject to actions that limit its abundance and distribution in impacted areas.

Two localities on private lands are subject to potential development pressure. The Ballena beach locality is subject to development pressure in the past with proposals for the development of a hotel in that area. Although this project has not been constructed to date, the threat remains. In Monte de la Ventana, development of a wind farm project is expected to affect the species. This project and the effects to *M. polycladus* are discussed under ''Urbanization and Development,'' below.

Evidence of fire has been recorded on or adjacent to *Mitracarpus polycladus* localities near State road PR 333 and GCF trails (Service 2018a, p. 27). Moreover, we have observed that *M. polycladus* does not colonize previously burned areas on the GCF (Service 2018b, p. 12). Therefore, fire can be a threat to species viability, as *M. polycladus* is endemic to dry limestone forest where vegetation did not evolve under a natural fire regime.

These threats of fire, development, nonnative and invasive species, and road and trail maintenance, coupled with competition with other plant species for specific habitat requirements such as holes and cracks for seed germination, and observed lack of dispersal mechanisms, reduce the species' ability to colonize other areas. Therefore, we determined that, while threat reduction and management activities at GCF have been implemented and have improved the species' viability, they have not been

implemented or improved viability to a degree that the species will maintain viability into the foreseeable future (criterion 1). Accordingly, this criterion has not been fully met.

Criterion 2 for Delisting

Criterion 2 states that existing natural populations of *Mitracarpus polycladus* show a stable or increasing trend, as evidenced by natural recruitment and multiple age classes. This criterion has been partially met. Since the time of listing, the number of individuals and localities reported for *M. polycladus* have increased. Now, approximately 17,624 adult *M. polycladus* individuals are distributed in 10 natural localities in Puerto Rico occupying 0.44 ha (1.1 ac), with documented recruitment as evidenced by numerous seedlings in close proximity to adult plants, particularly after rain events. However, existing data indicate that seedlings' survival is uncertain due to natural thinning and environmental stochasticity (drought stress). Despite this uncertainty, effective recruitment has occurred, and seedlings and saplings were noted in seven of eight localities in Puerto Rico during the 2018 assessment (Service 2018b, p. 9). Nonetheless, habitat modification caused by human-caused fires and subsequent encroachment of nonnative grasses has resulted in the loss of some clusters of individuals within a locality. Habitat modification and other threats, discussed below under Summary of Biological Status and Threats, may preclude the expansion of the species within known suitable habitats in Puerto Rico. The status and trend of *M. polycladus* populations on Anegada and Saba Islands, including recruitment, are currently unknown. Based on the uncertainty of population estimates and the lack of evidence of expansion into suitable habitat, we determined that a stable or increasing trend, as evidenced by natural recruitment and multiple age classes (criterion 2), has been met in Puerto Rico, but not on Saba or Anegada Islands. Accordingly, this criterion has been partially met.

Criterion 3 for Delisting

Criterion 3 states that at least three new populations of *Mitracarpus polycladus* showing a stable or increasing trend have been established within the historical range on lands protected by conservation, as evidenced by natural recruitment and multiple age classes. This criterion has been initiated. In Cerro Toro, an undetermined number of *M. polycladus* individuals were translocated from the Monte de la Ventana locality by the landowner to establish a new population of the species physically separated from the GCF population. As of 2018, 13 of the planted individuals were still alive (Service 2018b, p. 9; see table 1, above), but no recruitment (seedlings or saplings) was observed. However, this recovery effort has not been expanded. The Royal Botanic Gardens (Kew), in collaboration with the National Park Trust of the Virgin Islands, is propagating material from *M. polycladus* on Anegada Island, but no planting efforts have been implemented. No further efforts of translocations or propagation and reintroduction are currently known. Greater emphasis has been placed on the search for and protection of newly discovered localities in southern Puerto Rico. To increase *Mitracarpus polycladus'*s redundancy and long-term viability, additional populations should be established through translocation and/or propagation throughout the species' range.

Regulatory and Analytical Framework

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an endangered species or a threatened species. The Act defines an ''endangered species'' as a species that is in danger of extinction throughout all or a significant portion of its range, and a ''threatened species'' as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects. We consider these same five factors in downlisting a species from endangered to threatened (50 CFR 424.11(c) and (d)).

We use the term ''threat'' to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term ''threat'' includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term ''threat'' may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an ''endangered species'' or a ''threatened species.'' In determining whether a species meets either definition, we must evaluate all identified threats by considering the species' expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an ''endangered species'' or a ''threatened species'' only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term ''foreseeable future,'' which appears in the statutory definition of ''threatened species.'' Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term foreseeable future extends only so far into the future as we can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. ''Reliable'' does not mean ''certain''; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of

the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

Summary of Biological Status and Threats

In this discussion, we review the biological condition of the species and its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability. In addition, the 5-year review (Service 2018a, entire) documents our comprehensive biological status review for the species, including an assessment of the potential threats to the species. The following is a summary of this status review and the best available information gathered since that time that have informed this decision.

Habitat Alteration and Destruction

Habitat destruction and modification (Factor A) were identified as factors affecting the continued existence of *Mitracarpus polycladus* at the time of listing. Road and trail maintenance, human-caused fire, nonnative and invasive species, urbanization and tourism development, and grazing continue to contribute to alteration of *M. polycladus* habitat and are described in detail below. Although changes to habitat conditions may affect pollinator abundance and distribution, we currently have no evidence that a loss of pollinators is occurring in *M. polycladus* habitat and expect that sufficient pollinators are present to cross-pollinate individuals if they occur within the flight distance of that pollinator species.

Road and Trail Maintenance

Currently, *Mitracarpus polycladus* grows adjacent to or along paved and unpaved roads, parking areas, and trails that provide access to recreational areas in seven localities in the dry southern section of the GCF (Service 2018b, p. 5). These roads and trails are managed by the Department as scenic trails and natural areas. However, management and maintenance activities, primarily vegetation trimming, have affected *M. polycladus* individuals in these areas (Service 2018b, p. 10). Similarly, the Puerto Rico Department of Transportation and Public Works right-of-way maintenance causes impacts to individuals and habitat in the State road PR 333 locality (Service 2018b, p. 10). Right-of-way maintenance activities have resulted in mortality of reproductive *M. polycladus* individuals in three localities and may reduce production of seeds and potential seedlings in these localities if the plants do not recover sufficiently to reproduce when conditions are suitable (Service 2018b, p. 10).

The largest cluster of *Mitracarpus polycladus* occurs adjacent to the Mesetas trail in GCF with 13,064 individuals occupying an area of 0.25 ha (0.63 ac). This trail is heavily used for recreation and is the only access to that section of the GCF. Therefore, roughly a quarter of the individuals along the trail in this locality are exposed to damage caused by trail maintenance and human trampling. Physical impacts to *M. polycladus* and its habitat are caused by the frequent use of the scenic trails and adjacent habitat in the GCF by residents and tourists for recreational activities (*i.e.,* hiking, running, and mountain biking) throughout the year (Service 2018a, p. 12). Such habitat impacts also promote the intrusion of nonnative grasses along the trail corridor. Nonnative grass encroachment along trails follows a similar pattern to encroachment following fire and is described below. The Anegada and Saba Island populations do not occur adjacent to trails or roads and effects of road and trail maintenance on the *M. polycladus* population in Puerto Rico are limited. Although over half of localities and several thousand individuals are exposed to the threat of road and trail maintenance, the number of individuals impacted by this threat does not have a substantive effect on the population.

Human-Caused Fire

Fires are not a natural event in the subtropical dry forests in Puerto Rico, and the native vegetation in the Caribbean is not adapted to this type of disturbance (Brandeis and Woodall 2008, p. 557; Santiago-García *et al.* 2008, p. 604). However, human-caused fires were identified as a threat to the species when listed (59 FR 46715; September 9, 1994) and continue to occur throughout *Mitracarpus polycladus* habitat in Puerto Rico (Service 2018a, p. 27). Currently, 6 of 10 natural localities of *M. polycladus* occur in areas vulnerable to or at high risk of human-caused fires, particularly during the dry season (Service 2018b, p. 10). Although the Department implements a fire prevention and management program in the GCF during the dry season, fires still occur and impact *M. polycladus* and its habitat (Service 2011, p. 13; Service 2018b, p. 11). Surveyors documented several fires along State road PR 333 that affected *M. polycladus* habitat and, consequently, could have affected an undetermined number of individuals (Service 2018b, p. 11).

Fire affects *Mitracarpus polycladus* survival through impacts of heat and promotion of intrusion of invasive plant species. Nonnative plant species outcompete *M. polycladus* and serve as fuel for fires (García-Cancel 2013, pp. 19, 33; Service 2018a, p. 27). The interaction of fire and nonnative species is described under ''Nonnative, Invasive Species,'' below. Moreover, *M. polycladus* has not been observed growing in areas with evidence of past fires (Service 2018b, p. 11). We expect this is due to the effects of fire on the seedbank, thus precluding the sprouting of the species and recolonization of an area from the seedbank after a fire.

Human-caused fires lead to the destruction of native vegetation by direct impacts to individuals and to the seedbank (which is not fire-adapted). Therefore, it is very likely that fires reduce or eliminate *Mitracarpus polycladus* seeds in the seedbank and promote favorable conditions for the establishment of nonnative plant species. These species, such as guinea grass, are adapted to a natural fire regime and serve as fuel for fires, thus promoting conditions for a more frequent fire regime that precludes the establishment of native vegetation (Thaxton *et al.* 2012, p. 9). The presence of guinea grass and other nonnative grass species (*e.g.,* pajón and buffel grass) increases the amount of fuel for the fire and the resultant intensity of the fire. This occurs in some areas of *M. polycladus* habitat in the GCF, where nonnative grasses are present and *M. polycladus* is not (García-Cancel 2013, entire; Service 2018b, p. 12). Therefore, in habitats subject to fire, lack of seed availability is the primary factor limiting the recolonization of the forest with native species and compromises the long-term viability of native species, including *M. polycladus* (Wolfe 2009, p. 28). Other factors such as seed predation, seed intrinsic viability, and seedling survival also affect forest recovery after fire. In this and other habitat types, fires promote habitat fragmentation, return habitat to an earlier successional state, and slow forest recovery processes (Brandeis and Woodall 2008, p. 557; Meddens *et al.* 2008, p. 569).

Fire negatively impacts *Mitracarpus polycladus* and its habitat, and the

capacity of the species to survive and recover from this type of catastrophic event over time is unknown. Moreover, *M. polycladus* occurs in areas with high vulnerability to fires, exacerbating the potential effects of fire on individuals and populations. The effects of climate change and nonnative invasive species may alter conditions in *M. polycladus* habitat to promote increased susceptibility to fire (as described under ''Nonnative, Invasive Species,'' below). Therefore, even with the Department's current fire prevention and management program efforts during the dry season, human-caused fires occur every year within the species' range. Fires in *M. polycladus* localities affect the survival and recruitment of individuals, population resiliency, and, potentially, the species' viability (Service 2018b, p. 11). Information regarding the threat of fire to the Anegada and Saba Island populations is less extensive than the information for Puerto Rico; however, we expect the threat of human-caused fire is similar since the Anegada and Saba Island populations also occur along roadsides.

Nonnative, Invasive Species

Caribbean dry forests generally have seedbanks with low numbers and variety of species, and forest regeneration in areas disturbed through mechanical vegetation removal or through burning is largely dependent on propagules or seeds from nearby habitats (Wolfe 2009, p. 28). Nonnative species typically become established more quickly and may have less specific habitat or life-history requirements than native species. When nonnative species become established in a disturbed habitat, they outcompete native species for resources including space, nutrients, water, and sunlight. The impacts of nonnative invasive species are second only to habitat loss and degradation as a threat to global biodiversity and are among the greatest threats to the persistence of native rare species and their habitats in Puerto Rico (Thomson 2005, p. 615, García-Cancel 2013, entire). Nonnative species like guinea grass, buffel grass, pajón, and African grass (*Heteropogon contortus*) aggressively colonize and compete with native species for sunlight, nutrients, water and ground cover (space), suppressing native vegetation (García-Cancel 2013, entire; Rojas-Sandoval and Meléndez-Ackerman 2016, p. 156; Service 2018b, p. 12). Research on other listed plant species such as *Harrisia portoricensis* indicates that seedlings and juveniles are particularly susceptible to changes in microclimate conditions, and establishment is precluded by the presence of nonnative grasses (Rojas-Sandoval and Meléndez-Ackerman 2012, pp. 35, 37; Rojas-Sandoval and Meléndez-Ackerman 2013, p. 489). This finding is consistent with observations indicating that *Mitracarpus polycladus* did not occur in areas occupied (or dominated) by these grasses at localities in the GCF (García-Cancel 2013, entire; Service 2018b, p. 12). Moreover, nonnative trees (*e.g.,* lead tree (*Leucaena leucocephala*)) also colonize *M. polycladus* habitat, particularly after fire events, and suppress the growth of native vegetation (Wolfe and Van Bloem 2012, entire). Lead trees can remain as a dominant canopy species for at least 80 years (Wolfe 2009, p. 2), thus precluding recolonization of *M. polycladus* for long periods. The wind-aided broad seed dispersal and rapid growth of nonnative grasses can also negatively affect the establishment and persistence of *M. polycladus.* In areas where *M. polycladus* is established, nonnative species do not appear to reduce habitat directly by displacing existing individuals, but primarily impact *M. polycladus* populations by preventing or reducing colonization by the species when the area is disturbed. In summary, nonnative invasive species outcompete *M. polycladus* for required resources, promote increased frequency and intensity of fire, and prevent establishment of seedlings, thus impacting *M. polycladus* at the individual, population, and, potentially, species level.

Urbanization and Development

As previously mentioned, 89 percent of the currently known *Mitracarpus polycladus* individuals in Puerto Rico occur within the GCF, which is managed for conservation by the Department (DNR 1976, p. 56). However, one *Mitracarpus polycladus* locality occurs within an area currently proposed for the construction of a wind generation project (San Francisco Wind Farm) in Monte de la Ventana. This project occupies 79 ha (195 ac) of dry forest habitat with 1,967 *M. polycladus* individuals in the project area (Service 2018b, pp. 1, 11). Ninety-six percent of *M. polycladus* individuals on the site occur on and adjacent to now-abandoned roads opened in 2013 to access the proposed wind project site. The remaining 4 percent of individuals occur in areas that would not be impacted by the project.

Since 2010, we have been working with the landowner on the development and implementation of conservation measures to avoid or minimize adverse effects on the species and its habitat caused by the proposed development of the wind farm project. This wind farm project is covered by an incidental take permit (ITP) under a habitat conservation plan (HCP) that includes conservation measures to minimize adverse effects to listed species in the project area (Service 2013, p. 3). Although a substantial portion of this property is identified as a conservation area under the HCP, the conservation areas do not include habitat for *Mitracarpus polycladus* (Service 2013, p. 3). *Mitracarpus polycladus* is vulnerable to effects from the wind farm project operations because the species usually grows in open areas (*e.g.,* dirt roads and wind turbine pads in the project area), exposing it to impacts from maintenance activities, vehicle traffic, and habitat encroachment by nonnative invasive plants. To date, this wind farm project has not been constructed, but we have no indication that it is not being actively considered.

The Ballena beach locality has been subject to development pressure in the past with proposals for the development of a hotel in that area. Although this hotel development project has not been constructed, we do not have evidence it will not be pursued in the future.

Mitracarpus polycladus occurrences on Anegada and Saba Islands are also threatened by development. On Anegada Island, the potential for island-wide development exists, with local community support and road improvement works now underway (Hamilton 2016, p. 185). Anegada Island has been recognized by its government as an undeveloped island with high potential for tourism development due to the beauty of its natural resources (sandy beaches and coral reefs). In 2007, the Government of Anegada, under the authority of the Physical Planning Act No.15 of 2004 (enacted in March 2005), developed a Land Use Plan (Plan) designating areas for commercial and residential purposes, as well for hotel development, agriculture, community parks and recreational areas, a business district, protection and conservation, and government offices and related facilities (IRF 2013, p. 24). The Plan proposes to set aside some areas for conservation (IRF 2013, p. 25); however, the proposed areas do not contain *M. polycladus* or the habitat it requires. If the Plan is enacted fully, we expect *M. polycladus* and its habitat to be reduced or eliminated by the proposed development of the island. Although urbanization and development plans for Saba Island are unknown, the potential for urbanization and tourism development is present.

Grazing

On Anegada and Saba Islands, *Mitracarpus polycladus* habitat has been degraded by the grazing of feral livestock, such as goats and donkeys (Freitas *et al* 2016, p. 21; Bárrios and Hamilton 2018, p. 5; Hamilton 2020, pers. comm.). Livestock presence and grazing leads to an increase in soil erosion by disturbing soil with their hooves while foraging on the slopes, as has been observed on Saba Island (Freitas *et al.* 2016, p. 21). These animals also trample *M. polycladus* individuals, reduce its abundance, and affect the population structure. The best available information indicates feral livestock grazing may impact the species, although the extent of these impacts in the future is unclear.

In summary, impacts associated with habitat destruction and modification due to vegetation clearance for maintenance and improvement activities of roads and trails, urbanization and tourism development, human-caused fires, and encroachment of nonnative plant species have been documented as current threats to *Mitracarpus polycladus* throughout its range. In Puerto Rico, although about 89 percent of *M. polycladus* individuals occur within the GCF, the species and its habitat are still threatened by impacts from vegetation maintenance (trimming) along roads and trails, frequent human-caused fires, and encroachment of nonnative and invasive species after such disturbances. Human-caused fires have been documented in *M. polycladus* habitat even when fire management practices are implemented during the dry season. The remaining 11 percent of the individuals occur on private lands, not managed for conservation, where habitat destruction and modification resulting from road clearing and wind farm development and operation pose a threat to the species. All *M. polycladus* individuals on Saba Island and Anegada Island occur on private lands and are not purposefully managed for conservation. Occurrences on Saba island are subject to threats of grazing and human-induced fire, and potentially to the threat of urbanization and development. Anegada Island's *M. polycladus* are at risk due to grazing, urbanization and development, and human-induced fire.

Limited Distribution and Small Population Size

At the time of listing, we identified the species' limited distribution (*i.e.,* two isolated populations known at that time) coupled with an undetermined but presumably low number of individuals (*i.e.,* no abundance information was available, combined with ongoing drought conditions at the time) as the primary threats to the species. Since listing, our knowledge concerning *Mitracarpus polycladus'*s abundance and distribution has improved, and we are aware of increased numbers and occurrences throughout the southern section of the GCF (Service 2018a, p. 22). Currently, there are three known natural populations (Puerto Rico, Saba Island, Anegada Island) and one introduced population occurring on three Caribbean islands across the species' historical range. The species is restricted to small clusters on exposed limestone, occupying a total area of 0.44 ha (1.1 ac) in southern Puerto Rico (no areal extent is estimated for the populations on Anegada and Saba Islands). The limited distribution of the four populations makes *M. polycladus* vulnerable to catastrophic events (*e.g.,* widespread and severe drought and large-scale fires).

Small population size can exacerbate other threats acting on the species. Most species' populations fluctuate naturally, responding to various factors such as weather events, disease, and predation. These factors have a relatively minor impact on a species with large, stable local populations and a wide and continuous distribution. However, populations that are small, isolated by habitat loss or fragmentation, or impacted by other factors are more vulnerable to extirpation by natural, randomly occurring events (such as predation or stochastic weather events), and to genetic effects that plague small populations, collectively known as small population effects (Purvis *et al.* 2000, p. 1947). These effects can include genetic drift, founder effects (over time, an increasing percentage of the population inheriting a narrow range of traits), and genetic bottlenecks leading to increasingly lower genetic diversity, with consequent negative effects on adaptive capacity and reproductive success (Keller and Waller 2002, p. 235).

The Mesetas trail locality in GCF, the most abundant locality with 13,064 adults, is numerically strong; the remaining 9 natural localities on Puerto Rico are smaller localities with varying degrees of connectivity and cross-pollination between localities. The information regarding *M. polycladus* populations on Anegada and Saba Islands is more limited than that regarding the Puerto Rico population. Based on the best available information for Anegada and Saba Islands, these populations are currently small (2,500 on Anegada Island and unknown abundance on Saba Island) and in a few localities with limited distribution.

Effects of Climate Change and Sea Level Rise

The Intergovernmental Panel on Climate Change (IPCC) concluded that evidence of warming of the climate system is unequivocal (IPCC 2014, pp. 2, 40). Observed effects associated with climate change include widespread changes in precipitation amounts, increased extreme weather events including droughts, heavy precipitation, heat waves, more intense tropical cyclones, and an increase in sea level (IPCC 2014, pp. 40–44). Rather than assessing climate change as a single threat in and of itself, we examined the potential consequences to the species and its habitat that arise from changes in environmental conditions associated with various aspects of climate change (temperature, precipitation, and sea level rise). Climatic changes may affect the phenology, abundance, and distribution of many species (Walther *et al.* 2002, p. 394). Thus, vulnerability to climate change impacts can be defined as a function of sensitivity, exposure, and adaptive capacity of the species to those changes (IPCC 2007, pp. 6, 21; Glick and Stein 2010, p. 19).

The IPCC-modelled scenarios for the Caribbean islands predict precipitation declines, sea level rise, stronger and more frequent extreme weather events, and temperature increases by 2050 (Penn 2010, p. 45; Khalyani *et al.* 2016 p. 265; Gould *et al.* 2018, p. 813; Strauss and Kulp 2018, p. 3; USGCRP 2018, p.136). We examined a downscaled model for Puerto Rico and the British Virgin Islands based on global emissions scenarios from the Climate Model Intercomparison Project (CMIP3) dataset. The more current CMIP5 dataset was not available for the species' range at the time of analysis. The Special Report on Emissions (SRES) scenarios using the CMIP3 dataset are generally comparable to the more recent representative concentration pathways (RCP) scenarios from RCP4.5 (SRES B1) to RCP8.5 (SRES A2) (Lorde 2011, entire; IPCC 2014, p. 57; Khalyani *et al.* 2016, pp. 267, 279–280). Under both scenarios, emissions increase, precipitation declines, and temperature and total dry days increase, resulting in extreme drought conditions that convert subtropical dry forest into dry and very dry forest (Khalyani *et al.* 2016, p. 280).

Modeling shows dramatic changes to Puerto Rico through 2100; however, the divergence in these projections increases after mid-century (Khalyani *et al.* 2016, p. 275). By 2050, Puerto Rico is predicted to be subject to a decrease

in rainfall, along with increased drought intensity (Khalyani *et al.* 2016 p. 265; USGCRP 2018, p.136). As precipitation decreases, influenced by warming, it will tend to accelerate the hydrological cycles, resulting in wet and dry extremes (Cashman *et al.* 2010, pp. 1, 51, 53; Jennings *et al.* 2014, pp. 1, 5–6). A reduction in precipitation in the subtropical dry forests, where rain events are already limited, will affect *Mitracarpus polycladus* viability through reduced seed viability and result in increased seedling mortality. Droughts compromise seedling recruitment as evidenced following dry periods, when seedling and adult mortality is the highest and other individuals show partial die-off (Service 2018b, p. 8). In fact, under experimental conditions, the germination and survival of seedlings of the closely related *M. maxwelliae* were negatively affected by reduced soil moisture (Buitrago-Soto 2002, p. 25). There are indications that the southern region of Puerto Rico, where *M. polycladus* occurs, has experienced negative trends in annual rainfall. Between 2000 and 2016, Puerto Rico had seven drought episodes concentrated around the south, east, and southeastern regions of the island. The most severe drought occurred between 2014 and 2016 when Puerto Rico experienced 80 consecutive weeks of moderate drought, 48 weeks of severe drought, and 33 weeks of extreme drought conditions (Alvarez-Berríos *et al.* 2018, p. 1). Prolonged dry seasons may represent a bottleneck for seedlings and promote changes in the composition of recruits of plant species (Allen *et al.* 2017, p. 6). Additionally, prolonged droughts and associated changes in soil conditions (*i.e.,* temperature and soil humidity) would result in conditions promoting fire throughout *M. polycladus*'s range, impacting individuals and reducing seed viability, and therefore species' recruitment. Moreover, the absence of forest canopy on the exposed limestone substrate where *M. polycladus* occurs reduces suitable habitat conditions (*i.e.,* hydrology and moisture retention) that buffer the severity of stress resulting from environmental perturbations, such as droughts.

The IPCC global models and scenarios analyzed for the downscaled models apply to the Caribbean islands. Downscaled general circulation models predict dramatic shifts in the life zones of Puerto Rico with potential loss of subtropical rain, moist, and wet forest, and the appearance of tropical dry and very dry forests anticipated (Khalyani *et al.* 2016, p. 275). Some species may move to higher elevations in response to this shift in life zones; however, the extent of a species' ability to redistribute will depend on its dispersal capability and forest connectivity (Khalyani *et al.* 2019, p. 11). Due to the low dispersal capability of *Mitracarpus polycladus,* clumped spatial distribution, habitat requirements (exposed limestone), and the limited availability of the required habitat, a shift from dry to very dry forest is expected to affect species' viability because of a lack of suitable habitat and the species' inability to move to suitable habitat. Based on the similarity of habitat and geographic proximity, the effects of climate change on Anegada and Saba Islands are expected to be similar to Puerto Rico as emissions increase, precipitation declines, and temperature and total dry days increase, resulting in extreme drought conditions that convert subtropical dry forest into dry and very dry forest (Khalyani *et al.* 2016, entire). In the subtropical dry forest habitat where *M. polycladus* occurs, climate change may impact the species through declines in natural recruitment and population expansion.

Sea level rise is another expected effect of climate change that may affect coastal communities and habitat in the Caribbean islands (Penn 2010, entire; Lorde 2011, entire; Strauss and Kulp 2018, p. 1). Integrated sea level rise projection and flood risk analysis predict floods reaching 0.5 m (1.64 ft) above current high tide levels will become common events throughout most of the Caribbean by 2050 (Strauss and Kulp 2018, p. 2). Other scenarios using RCP4.5 and 8.5 forecast that by mid-century, sea level is expected to increase by 0.24 m (0.8 ft) to 0.85 m (2.8 ft) (Church *et al.* 2013, p. 1182; Sweet *et al.* 2017, p. 75; Strauss and Kulp 2018, p. 14). Based on these sea level rise projections, coastal floods will negatively affect *Mitracarpus polycladus* habitat at or below the 1.0 m (3.3 ft) sea level near the coast or in areas with high coastal erosion through the effects of saltwater inundation. In Puerto Rico, *M. polycladus* occurs at elevations ranging from 1.5 m (5 ft) to 52 m (172 ft) from current sea level (Service 2018b, p. 5). On Saba Island, *M. polycladus* occurs at an elevation ranging from 12 m (40 ft) to 335 m (1,100 ft) (Rojer 1997, p. 19; Freitas *et al* 2016, p. 10). On Anegada Island, *M. polycladus* occurs at elevations ranging from 1 m (3.2 ft) to 8 m (26 ft) from current sea level (Barrios 2021, pers. comm.; Hamilton 2021, pers. comm.). Across the range, the only known locality in an area with potential to be affected by flooding and sea level rise is the Windlass site on Anegada Island (approximately 200 *M. polycladus* individuals). The Windlass site is located in the sandy and rocky areas on the northern coast of the island where the habitat is subjected to high energy wave and coastal erosion (Bárrios and Hamilton 2018, p. 5). *Mitracarpus polycladus* individuals occur in elevations higher than those we expect to be impacted by sea level rise on Puerto Rico, Saba Island, and other localities on Anegada Island. Based on predicted sea level rise and the elevation where most individuals occur, we determined sea level rise does not pose a threat to the species in the foreseeable future. Nevertheless, sea level rise may indirectly impact the species, particularly on Anegada Island, through development associated with displacement of the human population from coastal areas to inland and urban areas where individuals of *M. polycladus* occur (Penn 2010, pp. 21, 249; Hamilton 2016, p. 101).

In summary, other natural and human-caused factors, such as the limited distribution of the three known natural populations and the effects of climate change (*i.e.,* decreased rainfall, severe droughts, and shift in life zones), are current threats to *Mitracarpus polycladus.* The threats to the species will be exacerbated by the expected changes in climatic conditions by 2050. We expect the projected changes in habitat and microhabitat conditions of temperature and rainfall will have negative effects on *M. polycladus.* The ecology of *M. polycladus* appears closely linked to specific current climatic conditions of rain seasonality and drought periods. By 2050, sea level rise is expected to affect the Caribbean islands, including Puerto Rico, Anegada Island, and Saba Island. We do not expect significant effects to *M. polycladus* from sea level rise, although one coastal locality on Anegada Island has the potential to be affected. Overall, the effects of a changing climate on *M. polycladus* will be exacerbated by the relatively low number of populations and habitat degradation and fragmentation, which can affect the future viability of the species.

Conservation Efforts and Regulatory Mechanisms

In the final listing rule (59 FR 46715; September 9, 1994), we identified the inadequacy of existing regulatory mechanisms as one of the factors affecting the continued existence of *Mitracarpus polycladus.* At that time, the species had no legal protection, because it had not been included in Puerto Rico's list of protected species.

After *M. polycladus* was listed under the Act, the Commonwealth designated the species as endangered in 2004 (DRNA 2004, p. 56).

Presently, *Mitracarpus polycladus* is legally protected under Commonwealth Law No. 241–1999 (title 12 of the Laws of Puerto Rico at sections 107–107u), known as *Nueva Ley de Vida Silvestre de Puerto Rico* (New Wildlife Law of Puerto Rico). The purpose of this law is multifaceted: to protect, conserve, and enhance both native and migratory wildlife species; to declare as property of Puerto Rico all wildlife species within its jurisdiction; to regulate permits and hunting activities; and to regulate exotic species, among other activities. This law also has provisions to protect habitat for all wildlife and plant species. In 2004, the Department approved Regulation 6766 or *Reglamento para Regir el Manejo de las Especies Vulnerables y en Peligro de Extinción en el Estado Libre Asociado de Puerto Rico* (Regulation 6766: To govern the management of threatened and endangered species in the Commonwealth of Puerto Rico). Article 2.06 of Regulation 6766 prohibits collecting, cutting, and removing, among other activities, listed plant individuals within the jurisdiction of Puerto Rico (DRNA 2004, p. 11). The provisions of Commonwealth Law No. 241–1999 and Regulation 6766 extend to private lands.

Mitracarpus polycladus that occur in the GCF are further protected under Commonwealth Law No. 133–1975 (title 12 of the Laws of Puerto Rico at sections 191–204), known as *Ley de Bosques de Puerto Rico* (Forest Act of Puerto Rico), as amended in 2000. Section 8(a) of this law prohibits cutting down, killing, causing the deterioration of, bud pruning, uprooting, or otherwise injuring or deteriorating any tree or vegetation within a Commonwealth forest without authorization of the Department Secretary (title 12 of the Laws of Puerto Rico at section 198). The Department also identified the GCF as a Critical Wildlife Area. The designation is intended to provide information to Commonwealth and Federal agencies about the conservation needs of these areas, and assist permitting agencies in precluding adverse impacts as a result of project endorsements or permit approvals (DNR 2005, pp. 211–216).

Although there are legal mechanisms in place (*e.g.,* laws or regulations) for the protection of *Mitracarpus polycladus,* the enforcement of such mechanisms on private and public land is sometimes challenging. For example, accidental damage by cutting, pruning, mowing, or trampling, or even loss of *M. polycladus* individuals, may occur when land managers or private landowners are not aware it is a protected species. Land managers, landowners, and law enforcement officers are not always aware of the localities occupied by the species throughout its range or may have difficulty correctly identifying the plant (Service 2018b, p. 10). Therefore, limited public awareness of the species and its status exacerbates the challenge of implementation of existing laws and regulations and affects conservation of *M. polycladus* and its habitat.

On Anegada Island, various conservation and education efforts are taking place for the protection of rare plant and animal species (Gardner *et al.* 2008, entire; IRF 2013, p. 29). However, we are unaware of any formal regulatory mechanism that protects *Mitracarpus polycladus* on Anegada Island. Similarly, no terrestrial areas on Saba Island are legally protected (Geelhoed *et al.* 2013, p. 12). A draft Island Nature Protection Ordinance must be approved by each island's government in the former Netherlands Antilles to facilitate the creation of island-specific conservation legislation (Collier and Brown 2008, p. 259). This process is ongoing within the Saba Island government, but to our knowledge, no current legislation is in place for the designation of terrestrial protected areas or conservation of species.

Outside of the protections provided by the Act, as previously indicated, the Commonwealth of Puerto Rico legally protects *Mitracarpus polycladus* as an endangered species, including protections to its habitat, through Commonwealth Law No. 241–1999 and Regulation 6766, which prohibit collecting, cutting, and removal, among other actions, of listed plants. If this species is reclassified as a threatened species under the Act, we do not expect this species to be removed from legal protection by the Commonwealth. Although these protections extend to both public and private lands, as discussed above, protection of this species is challenging. *Mitracarpus polycladus* habitat on private land is subject to pressures from urbanization and tourism development. Additionally, accidental damage or loss of individuals has occurred because public land managers, private landowners, or other parties may not be aware that it is a protected species. Nevertheless, this plant is now more abundant, is widely distributed, and largely occurs within conserved lands. Despite the existing regulatory mechanisms and conservation efforts, the threats discussed above are still affecting the species to the extent that it does not meet the criteria for delisting. However, additional opportunities exist to engage the public and provide information about *M. polycladus* and support the enforcement of existing protective mechanisms.

Summary

We have carefully assessed the best scientific and commercial information available regarding the threats faced by *Mitracarpus polycladus* in developing this proposed rule. Limited distribution and a low number of individuals were considered a threat to *M. polycladus* when we listed the species in 1994, but recent information indicates the species is more abundant and widely distributed than was known at the time of listing and most individuals occur in protected lands where threats, although they still occur, are reduced. We determined that habitat destruction and modification (*e.g.,* vegetation clearance with trail and road maintenance activities, human-caused fires, encroachment by nonnative and invasive species, urbanization and tourism development), as well as other natural or manmade factors such as limited distribution and the effects of climate change, will continue to pose threats to *M. polycladus* populations over the foreseeable future.

Species viability, or the species' ability to sustain populations over time, is related to the species' ability to withstand catastrophic events (redundancy), to adapt to changing environmental conditions (representation), and to withstand stochastic disturbance of varying magnitude and duration (resiliency). The viability of a species is also dependent on the likelihood of new stressors or continued threats, now and in the future, that act to reduce a species' redundancy, representation, and resiliency.

We evaluated the biological status of this species, both currently and into the future, considering the species' viability as characterized by its resiliency, redundancy, and representation. *Mitracarpus polycladus* has demonstrated some level of resiliency to natural and anthropogenic disturbances in the past. Adult individuals have overcome disturbances such as droughts and habitat modification, road and trail maintenance, and fires. However, seedlings are susceptible to the effects of drought and to the invasion of nonnative plant species after fire events. The lack of or reduced seedling recruitment can affect population demographics and long-term viability of the species.

For *Mitracarpus polycladus* to maintain viability, populations, or some portion thereof, must be sufficiently resilient. Resiliency describes the ability of population to withstand stochastic events (arising random factors). We can measure resiliency based on metrics of population health: for example, birth versus death rates and population size. For this proposed rule, our classification of resiliency relies heavily on the biology of the species and habitat characteristics in the absence of highly certain population size or trend estimates.

We broadly define categories of resiliency for *M. polycladus* populations by assessing demographic and habitat parameters and anchor these categories in the species' needs and life-history characteristics. Important species' characteristics center on the species' seasonality, seedling mortality after drought, dispersal capability, and competition with nonnative grasses for space and resources. The demographic metrics we evaluated include abundance at localities and evidence of reproduction or recruitment. We assessed habitat characteristics, including the degree of habitat protection (or, conversely, development risk), extent of suitable habitat, connectivity to other localities, and vulnerability to threats. A population may not exhibit each characteristic of the category as defined, but most parameters known for the population fall into the resilience category. For example, a population that is described as highly resilient may have high abundance, high number of localities, good distribution of localities, and recruitment at most localities, but suitable habitat and connectivity may be limited.

TABLE 2—DEFINITIONS FOR MITRACARPUS POLYCLADUS POPULATION RESILIENCY CATEGORIES

High	Moderate	Low
• Abundance is high; • Number of localities is high, and they occupy a greater spatial extent within suitable habitat; • Reproduction and recruitment are such that the population remains stable or increases; • Abundant suitable habitat occurs outside known localities; and • Connectivity occurs among most localities.	• Abundance is moderate; • Number of localities is moderate, and they occupy a limited spatial extent within suitable habitat; • Reproduction and/or recruitment is occurring at some localities; • Recruitment and mortality are equal such that the population does not grow or the population trend is unknown; • Some suitable habitat occurs outside known localities; and • Connectivity occurs between at least two localities.	• Abundance is low; • Number of localities is limited to one, and it occupies a very restricted spatial extent; • No reproduction or recruitment is occurring; • Mortality exceeds recruitment such that the population is declining; • Limited or no suitable habitat occurs outside known locality; and • There is no connectivity between localities (single locality population).

Currently, three *Mitracarpus polycladus* natural populations are known from three islands in the Caribbean (*i.e.,* Puerto Rico, Anegada Island, and Saba Island). In Puerto Rico, many *M. polycladus* adult individuals occur in small clusters, and seedlings have been documented, particularly after rain events. Information from Anegada Island and Saba Island is very limited, making it difficult to determine the level of population resiliency. However, both of those populations of *M. polycladus* demonstrate some level of resiliency as they are still present on both islands and have presumably overcome historical disturbances of varying magnitude and duration, including habitat modification.

The short time it takes *M. polycladus* to reach reproductive size and the extent of seed production facilitates population-level resiliency. However, resiliency is limited by the small size of clusters of individuals, species' seasonality, low dispersal capacity, and high seedling mortality. We have no evidence that known *M. polycladus* clusters are expanding or colonizing suitable habitat away from roads and trails. The lack of expansion and colonization results in isolated clusters with an increased chance of reduced genetic variation due to genetic drift, potentially resulting in inbreeding depression and lower resiliency. In addition, *M. polycladus* has been displaced by nonnative, invasive species after habitat disturbance by fire, which further precludes the effective recruitment of the species. The *M. polycladus* population in Puerto Rico occurs on 0.44 ha (1.1 ac) of habitat in 10 naturally occurring and 1 introduced locality. Suitable habitat connects some, but not all, localities. Habitat protection and enhancement to increase connectivity between scattered localities in Puerto Rico is important to maximize the resiliency of the *M. polycladus* population. The Saba and Anegada Islands populations occur in limited areas as well and although the species has persisted in these locations, the population trend and extent are not known. Overall, the limited areal extent of *M. polycladus* contributes to its susceptibility to stochastic and catastrophic events. Based on these factors, we determined the Puerto Rico population currently exhibits moderate resiliency and the Anegada and Saba Islands populations exhibit unknown or likely low resiliency.

The species' viability is also affected by its ability to adapt to changing environmental conditions. We have no information on the genetic variability of *Mitracarpus polycladus* nor information on variation in adaptive life-history traits, and, therefore, we evaluated the species' ability to adapt based on its likelihood of maintaining the breadth of genetic diversity and gene flow. This species occurs in small patches of suitable habitat within subtropical dry forest in three islands of the Caribbean with little variation in habitat conditions between populations. Historically, genetic diversity may have contributed to the species' ability to adapt to changing conditions (to adapt or shift in place). We expect that the species has maintained some underlying genetic diversity, but as threats affect the species' viability in the future, this genetic diversity may be reduced, and the species will be less able to adapt. Currently, *M. polycladus* representation relies on the genetic contribution of only three disconnected and distinctive populations: Puerto Rico, Saba Island, and Anegada Island. In Puerto Rico, the natural population occurs in scattered clusters along approximately 5 miles of southwestern Puerto Rico coastline. Although on protected land, some localities are subject to human-caused fires and habitat encroachment by invasive grasses, which increase the distance between clusters and further affect cross-pollination. On Anegada

and Saba Islands, *M. polycladus* individuals are also clustered in a small area vulnerable to the effects of urbanization and development, as well as human-caused fires and encroachment by invasive grasses. Rangewide, all populations are vulnerable to the effects of climate change (*i.e.,* decreased rainfall, severe droughts, and shift in life zones), which could result in the extirpation of clusters of individuals and the loss of genetic representation.

The ability of the species to adapt is also a function of the level of gene flow between populations. The three populations are disconnected; thus, gene flow is limited to individuals within populations. Small, isolated populations are susceptible to the loss of genetic diversity, genetic drift, and inbreeding, which will affect the ability of the species to adapt to changing environmental conditions over time. At this time, the most updated information shows that the species' occurrences remain stable; thus, the species does not appear to be affected by genetic drift at present. However, gene flow is limited to individuals within populations due to the lack of connectivity that would allow cross-pollination among populations. As fragmentation increases, gene flow will be reduced further, and the populations will become more vulnerable to genetic drift and inbreeding, thereby reducing the species' ability to adapt to changing conditions. We determined *M. polycladus* representation is likely somewhat reduced from historical representation due to reduced or fragmented habitat conditions, but maintains moderate adaptive capacity for the species.

Lastly, the species' viability depends on its ability to withstand catastrophic events, which is a function of the number and distribution of *M. polycladus* populations. The more sufficiently resilient populations, and the wider the distribution of those populations, the more redundancy the species will exhibit. The number and distribution of localities in each population continue to occur in the same geographic area and are exposed to naturally occurring levels of catastrophic events. The primary catastrophic risks include drought and fire. These factors are expected to increase with the subtropical dry forest shifting to very dry forest habitat within the foreseeable future. Hence, we expect the risk of catastrophic events to increase in the foreseeable future. The species' largest population (Puerto Rico) is moderately resilient and the species now occurs in a wider rangewide distribution than was known historically; therefore, we have determined *M. polycladus* has maintained moderate species redundancy.

In summary, the current abundance of *Mitracarpus polycladus* has increased and some of the identified threats have decreased since listing in 1994. However, our analysis indicates that threats and stressors continue to affect the species. We based our analyses on biological factors, expert judgments regarding the consequences of interacting stressors to the species' viability, and our assessment of likely future habitat conditions.

Determination of *Mitracarpus polycladus*'s Status

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of an endangered species or a threatened species. The Act defines an ''endangered species'' as a species in danger of extinction throughout all or a significant portion of its range, and a ''threatened species'' as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. For a more detailed discussion on the factors considered when determining whether a species meets the definition of an endangered species or a threatened species and our analysis on how we determine the foreseeable future in making these decisions, please see Regulatory and Analytical Framework.

Status Throughout All of Its Range

After evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we have determined that *Mitracarpus polycladus'* current viability is higher than was known at the time of listing (current abundance estimate of more than 20,000 adult individuals in three populations) and most individuals occur on protected lands where threats are reduced. Accordingly, we find that the species is not in danger of extinction and no longer meets the Act's definition of an endangered species.

At the time of listing, the known range of *Mitracarpus polycladus* consisted of an undetermined number of individuals located in a single population in southern Puerto Rico and from one record on Saba Island. The primary threats were habitat destruction and modification, inadequacy of existing regulatory mechanisms, and limited distribution (59 FR 46715, September 9, 1994, pp. 46716–46717). Currently, *M. polycladus* is known to occur in 11 localities within an areal extent of 0.44 ha (1.1 ac) in southern Puerto Rico and several localities on Saba Island and Anegada Island. In Puerto Rico, about 89 percent of the known *M. polycladus* individuals occur within the GCF, a forest managed for conservation by the Department in a manner compatible with *M. polycladus'*s needs and protected by Commonwealth regulations.

However, although now known to be more widespread and abundant than previously thought, the remaining 11 percent of individuals on Puerto Rico and individuals on Saba and Anegada Islands occur on private lands and are at risk due to habitat destruction and modification from wind farm projects, urbanization, and tourism development. Accidental damage to *M. polycladus* also occurs because private landowners and road and trail maintenance crews may not be aware it is a protected species or may not be able to identify it. Information from Puerto Rico also indicates that threats from human-caused fires, human trampling, and nonnative and invasive species are acting on *M. polycladus* on both public and private lands. Some of these threats could be more severe for the populations on private lands, since there are no fire management prevention practices implemented, making the species more vulnerable to impacts. On both Saba and Anegada Islands, the species also faces threats due to residential and commercial development and degradation due to uncontrolled grazing of feral livestock. Information from Anegada Island and Saba Island is very limited, making it difficult to determine the level of population resiliency; however, both populations demonstrate some level of resiliency as they are still present on both islands and have presumably overcome historical disturbances of varying magnitude and duration, including habitat modification. Thus, we determined the Puerto Rico population currently exhibits moderate resiliency and the resiliency of the Anegada and Saba Islands populations is unknown or likely low.

Furthermore, the species' distribution is wider than known at the time of listing, and the species' listing by the Commonwealth of Puerto Rico provides some level of protection to *Mitracarpus polycladus.* However, there continues to be concern about present or threatened destruction, modification, or curtailment of its habitat or range (specifically, maintenance of existing roads and trails, human trampling, human-caused fires, encroachment of

nonnative and invasive species after fires and other habitat modification activities, and urbanization and tourism development) (Factor A); and other natural or manmade factors affecting the continued existence of *Mitracarpus polycladus* throughout its range (specifically, limited distribution and the effects of climate change) (Factor E). The species is not affected by stressors related to overutilization. The best available information does not indicate that diseases are affecting the species or feral livestock are specifically targeting this species and consuming it. Despite the identification of these threats that currently continue to act upon the species, the species overall—and the Puerto Rico population in particular—appears sufficiently resilient to the current magnitude and scope of threats acting upon it.

In summary, *Mitracarpus polycladus* is distributed across a narrow range, but the number of localities within populations and environmental conditions have improved since the time of listing. Given the species' current resiliency and ability to withstand catastrophic events and adapt to changing conditions, the species is not currently in danger of extinction throughout its range. Therefore, we proceed with determining whether *M. polycladus* is threatened (*i.e.,* is likely to become endangered within the foreseeable future) throughout all of its range.

Based on biological factors and stressors to the species' viability, we determined 25 years to be the foreseeable future within which we can reasonably project threats and the species' response to those threats. The foreseeable future for the individual factors and threats varies. We reviewed available information including forest management plans, proposed development projects, and fire history within the range of the species, to inform our assessment of likely future levels for each threat. Projections out to the year 2050 predict increases in temperature and decreases in precipitation (Khalyani *et al.* 2016, pp. 274–275). However, divergence in temperature and precipitation projections increases dramatically after mid-century among climate change scenarios (Khalyani *et al.* 2016, p. 275), making late-century projections more uncertain. Therefore, our ability to reliably predict stressors associated with climate change is reduced beyond mid-century. In addition, observation of threats and the effects of those threats on the species since listing more than 25 years ago has given us a baseline to understand how threats described above may impact the species. For example, we have observed the effects of habitat destruction and modification (such as vegetation clearance for maintaining or improving trails and access roads, human trampling, human-caused fires, invasive species, and urban and tourist development), and climate change (predicted changes in temperature, increased droughts, and life zones shifting) on the species since its listing and can reliably predict the species' response to these threats.

The 25-year period includes multiple generations of the species and allows adequate time for impacts from conservation efforts or changes in threats to be observed through population responses. For example, this timeframe accounts for the species' reproductive biology, and thus the time required by multiple generations of *Mitracarpus polycladus* to reach a reproductive size and effectively contribute to the viability of the species. It accounts for reaching maturity, flowering, setting viable fruits and seeds, seed germination, and seedling survival and establishment, and allows environmental stochastic events such as severe drought periods to affect the species. Furthermore, the established timeframe provides an opportunity to analyze the implications of the Department's forest management actions, and existing laws and regulations to protect currently known populations.

Although population numbers and abundance of *M. polycladus* have increased and the species' occurrences appear stable, threats remain in magnitude, scope, and impact over time. Habitat destruction and modification, such as vegetation clearance for maintaining or improving trails and access roads, human trampling, human-caused fires, invasive species, and urban and tourist development (Factor A), and other natural or manmade factors such as the effects of climate change (Factor E) may limit the species' abundance and distribution of occurrences. Gene flow will continue to be limited to individuals within populations due to the lack of connectivity that would allow cross-pollination among populations; populations may become more vulnerable to genetic drift and inbreeding thereby reducing the species' ability to adapt to changing conditions. Although much of the Puerto Rico population occurs in the GCF, which is managed for conservation, actions that benefit the species will not eliminate the threats of trail maintenance, trampling, nonnative and invasive species, and human-caused fires and these threats are expected to continue to affect the species in the foreseeable future. Proposed urbanization and tourism development projects may be completed in the foreseeable future. Furthermore, under climate change projections, the risk of catastrophic drought and fire is expected to increase with the subtropical dry forest shifting to very dry forest habitat within the foreseeable future. The magnitude of effects associated with habitat destruction and modification and with climate change are expected to continue and potentially increase in the foreseeable future. Despite the existing regulatory mechanisms and conservation efforts, the threats discussed above are still affecting the species to the extent that it does not meet the criteria for delisting. Thus, after assessing the best available information, we conclude that *M. polycladus* is not currently in danger of extinction, but is likely to become in danger of extinction within the foreseeable future throughout all of its range.

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. The court in *Center for Biological Diversity* v. *Everson,* 2020 WL 437289 (D.D.C. Jan. 28, 2020) (*Center for Biological Diversity*), vacated the aspect of the Final Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species'' (79 FR 37578; July 1, 2014) that provided that the Service does not undertake an analysis of significant portions of a species' range if the species warrants listing as threatened throughout all of its range. Therefore, we proceed to evaluating whether the species is endangered in a significant portion of its range—that is, whether there is any portion of the species' range for which both (1) the portion is significant; and (2) the species is in danger of extinction in that portion. Depending on the case, it might be more efficient for us to address the ''significance'' question or the ''status'' question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species' range.

Following the court's holding in *Center for Biological Diversity,* we now

consider whether there are any significant portions of the species' range where the species is in danger of extinction now (*i.e.,* endangered). In undertaking this analysis for *Mitracarpus polycladus,* we choose to address the status question first—we consider information pertaining to the geographic distribution of both the species and the threats that the species faces to identify any portions of the range where the species is endangered. Types of threats and levels of threats are more likely to vary across a species' range if the species has a large range rather than a very small natural range, such as *M. polycladus.* Species with limited ranges are more likely to experience the same types and generally the same levels of threats in all parts of their range.

For *Mitracarpus polycladus,* we considered whether the threats are geographically concentrated in any portion of the species' range at a biologically meaningful scale in the context of its small natural range. We examined the following threats: habitat loss and modification due to vegetation maintenance or trimming along roads and trails, human trampling, and urbanization and tourism development; human-caused fires; nonnative invasive plant species; the effects of climate change (prolonged droughts, expected shifts of life zones, and sea level rise); and synergistic and cumulative effects. We also considered whether these threats may be exacerbated by small population size and limited connectivity between populations. For detailed description of each threat, see Summary of Biological Status and Threats, above.

Habitat modification poses a threat to most of the 11 *Mitracarpus polycladus* localities in Puerto Rico, as well as the populations on Saba and Anegada Islands. The *M. polycladus* populations on Puerto Rico, Anegada Island, and Saba Island experience threats of habitat degradation and modification due to vegetation clearance for maintenance and improvement of roads and trails, urbanization and tourism development, human-caused fires, and the subsequent encroachment of nonnative and invasive species. In addition, approximately 11 percent of *M. polycladus* individuals in Puerto Rico occur on private lands that are exposed to the threat of development more so than plants on protected lands. Moreover, the species' localities in Puerto Rico are distributed across a limited geographic area. Although climate change is expected to affect *M. polycladus* populations in the foreseeable future, we determined that climate change does not represent a current threat to the species; therefore, our assessment of the threat of climate change as a future threat is consistent with our ''threatened'' determination.

Small population size can exacerbate other threats acting on the species. The information regarding *Mitracarpus polycladus* populations on Anegada and Saba Islands is more limited than that regarding the Puerto Rico population. Based on the best available information for Anegada and Saba Islands, these populations are currently small or assumed to be small (2,500 on Anegada Island and unknown abundance on Saba Island) and in a few localities with limited distribution. Ten of the 11 localities on Puerto Rico also occur in clusters with low numbers of individuals that are isolated from other clusters, but the species is represented by a wider distribution on Puerto Rico than on Anegada and Saba Islands. Despite the rarity of *M. polycladus* on Anegada and Saba Islands, the species has demonstrated continued presence for decades in some localities. Although species' persistence does not equate with high resiliency or viability of a population or species, we expect *M. polycladus* populations to maintain resiliency in the future, despite ongoing threats. Therefore, small population size and low abundance in these localities, even when considered in the context of other threats, do not represent a concentration of threats at a biologically meaningful scale such that the species may be in danger of extinction in this portion. Based on our review of information and the synergistic effects of threats on Anegada and Saba Islands, this portion of the species' range does not provide a basis for determining that the species is in danger of extinction in a significant portion of its range.

Overall, we found that threats are likely acting on individuals or populations similarly across the species' range. These threats are certain to occur, and populations are facing the same extent of threats, even though certain populations may have fewer occurrences. We found no concentration of threats in any portion of *Mitracarpus polycladus'*s range at a biologically meaningful scale. Thus, there are no portions of the species' range where the species has a different status from its rangewide status. Therefore, no portion of the species' range provides a basis for determining that the species is in danger of extinction in a significant portion of its range, and we determine that the species is likely to become in danger of extinction within the foreseeable future throughout all of its range. This does not conflict with the courts' holdings in *Desert Survivors* v. *U.S. Department of the Interior,* 321 F. Supp. 3d 1011, 1070–74 (N.D. Cal. 2018) and *Center for Biological Diversity* v. *Jewell,* 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) because, in reaching this conclusion, we did not need to consider whether any portions are significant and, therefore, did not apply the aspects of the Final Policy's definition of ''significant'' that those court decisions held were invalid.

Determination of Status

Our review of the best available scientific and commercial information indicates that *Mitracarpus polycladus* meets the Act's definition of a threatened species. Therefore, we propose to reclassify *M. polycladus* as a threatened species in accordance with sections 3(20) and 4(a)(1) of the Act.

II. Proposed Rule Under Section 4(d) of the Act

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of the species proposed for listing. Because we are proposing to reclassify this species as a threatened species, the prohibitions in section 9 would not apply directly. We are, therefore, proposing below a set of regulations to provide for the conservation of the species in accordance with section 4(d) of the Act, which also authorizes us to apply any of the prohibitions in section 9 of the Act to a threatened species. The proposal, which includes a description of the kinds of activities that would or would not constitute a violation, complies with this policy.

Background

Section 4(d) of the Act contains two sentences. The first sentence states that the Secretary shall issue such regulations as she deems necessary and advisable to provide for the conservation of species listed as threatened. The U.S. Supreme Court has noted that statutory language like ''necessary and advisable'' demonstrates a large degree of deference to the agency (see *Webster* v. *Doe,* 486 U.S. 592 (1988)). Conservation is defined in the Act to mean the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Additionally,

the second sentence of section 4(d) of the Act states that the Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants. Thus, the combination of the two sentences of section 4(d) provides the Secretary with wide latitude of discretion to select and promulgate appropriate regulations tailored to the specific conservation needs of the threatened species. The second sentence grants particularly broad discretion to us when adopting the prohibitions under section 9.

The courts have recognized the extent of the Secretary's discretion under this standard to develop rules that are appropriate for the conservation of a species. For example, courts have upheld rules developed under section 4(d) as a valid exercise of agency authority where they prohibited take of threatened wildlife or include a limited taking prohibition (see *Alsea Valley Alliance* v. *Lautenbacher,* 2007 U.S. Dist. Lexis 60203 (D. Or. 2007); *Washington Environmental Council* v. *National Marine Fisheries Service,* 2002 U.S. Dist. Lexis 5432 (W.D. Wash. 2002)). Courts have also upheld 4(d) rules that do not address all of the threats a species faces (see *State of Louisiana* v. *Verity,* 853 F.2d 322 (5th Cir. 1988)). As noted in the legislative history when the Act was initially enacted, ''once an animal is on the threatened list, the Secretary has an almost infinite number of options available to [her] with regard to the permitted activities for those species. [She] may, for example, permit taking, but not importation of such species, or [she] may choose to forbid both taking and importation but allow the transportation of such species'' (H.R. Rep. No. 412, 93rd Cong., 1st Sess. 1973).

The provisions of this proposed 4(d) rule would promote the conservation of *M. polycladus* by encouraging management of the landscape in ways that meet both land management considerations and the conservation needs of *M. polycladus.* The provisions of this proposed rule are one of many tools that we would use to promote the conservation of *M. polycladus.* This proposed 4(d) rule would apply only if and when we make final the reclassification of *M. polycladus* as a threatened species.

Provisions of the Proposed 4(d) Rule

Exercising this authority under section 4(d) of the Act, we have developed a proposed rule that is designed to address *Mitracarpus polycladus'* specific threats and conservation needs. As discussed above under Summary of Biological Status and Threats, we have concluded that *Mitracarpus polycladus* is likely to become in danger of extinction within the foreseeable future primarily due to the present or threatened destruction, modification, or curtailment of its habitat or range (specifically, human-caused fires, nonnative and invasive species, and urbanization and tourism development); and other natural or manmade factors (specifically, the effects of climate change). Section 4(d) requires the Secretary to issue such regulations as she deems necessary and advisable to provide for the conservation of each threatened species and authorizes the Secretary to include among those protective regulations any of the prohibitions that section 9(a)(2) of the Act prescribes for endangered species. We find that, if finalized, the protections, prohibitions, and exceptions in this proposed rule as a whole satisfy the requirement in section 4(d) of the Act to issue regulations deemed necessary and advisable to provide for the conservation of *M. polycladus.*

The protective regulations we are proposing for *Mitracarpus polycladus* incorporate prohibitions from section 9(a)(2) to address the threats to the species. Section 9(a)(2) prohibits the following activities for endangered plants: importing or exporting; certain acts related to removing, damaging, and destroying; delivering, receiving, carrying, transporting, or shipping in interstate or foreign commerce in the course of commercial activity; or selling or offering for sale in interstate or foreign commerce. These proposed protective regulations include all of these prohibitions for *M. polycladus* because the species is at risk of extinction in the foreseeable future and putting these prohibitions in place will help to protect the species' remaining populations, slow its rate of decline, and decrease synergistic, negative effects from other threats. For example, modifying the habitat of the species on Federal lands without authorization (*e.g.,* unauthorized opening of trails, etc.) would be considered a violation of this rule. Also, removing, cutting, digging up, or damaging or destroying of the species on any non-Federal lands in knowing violation of any law or regulation of the Territory or in the course of any violation of the Territory's criminal trespass law would be considered a violation. As a whole, the proposed 4(d) rule for this species would help in the efforts to recover *M. polycladus.*

In particular, this proposed 4(d) rule would provide for the conservation of *Mitracarpus polycladus* by prohibiting the following activities, unless they fall within specific exceptions or are otherwise authorized or permitted: importing or exporting; certain acts related to removing, damaging, and destroying; delivering, receiving, transporting, or shipping in interstate or foreign commerce in the course of commercial activity; or selling or offering for sale in interstate or foreign commerce. The exceptions to the prohibitions would include all of the general exceptions to the prohibition against removing and reducing to possession endangered plants, as set forth in 50 CFR 17.61.

Despite these prohibitions regarding threatened species, we may under certain circumstances issue permits to carry out one or more otherwise-prohibited activities, including those described above. The regulations that govern permits for threatened plants state that the Director may issue a permit authorizing any activity otherwise prohibited with regard to threatened species (50 CFR 17.72). Those regulations also state that the permit shall be governed by the provisions of § 17.72 unless a special rule applicable to the plant is provided in §§ 17.73 to 17.78. Therefore, permits for threatened species are governed by the provisions of § 17.72 unless a species-specific 4(d) rule provides otherwise. However, under our recent revisions to § 17.71, the prohibitions in § 17.71(a) will not apply to any plant listed as a threatened species after September 26, 2019. As a result, for threatened plant species listed after that date, any protections must be contained in a species-specific 4(d) rule. We did not intend for those revisions to limit or alter the applicability of the permitting provisions in § 17.72, or to require that every species-specific 4(d) rule spell out any permitting provisions that apply to that species and species-specific 4(d) rule. To the contrary, we anticipate that permitting provisions would generally be similar or identical for most species, so applying the provisions of § 17.72 unless a species-specific 4(d) rule provides otherwise would likely avoid substantial duplication. Moreover, this interpretation brings § 17.72 in line with the comparable provision for wildlife at 50 CFR 17.32, in which the second sentence states that the permit shall be governed by the provisions of § 17.32 unless a special rule applicable to the wildlife, appearing in 50 CFR 17.40 to 17.48, provides otherwise. Under 50

CFR 17.72 with regard to threatened plants, a permit may be issued for the following purposes: For scientific purposes, to enhance propagation or survival, for economic hardship, for botanical or horticultural exhibition, for educational purposes, or for other activities consistent with the purposes and policy of the Act. Additional statutory exemptions from the prohibitions are found in sections 9 and 10 of the Act.

We recognize the beneficial and educational aspects of activities with seeds of cultivated plants, which generally enhance the propagation of the species and, therefore, would satisfy permit requirements under the Act. We intend to monitor the interstate and foreign commerce and import and export of these specimens in a manner that will not inhibit such activities, providing the activities do not represent a threat to the species' survival in the wild. In this regard, seeds of cultivated specimens would not be subject to the prohibitions above, provided that a statement that the seeds are of ''cultivated origin'' accompanies the seeds or their container (50 CFR 17.71(a)).

We recognize the special and unique relationship with our State and Territorial natural resource agency partners in contributing to conservation of listed species. State and Territorial agencies often possess scientific data and valuable expertise on the status and distribution of endangered, threatened, and candidate species of wildlife and plants. State and Territorial agencies, because of their authorities and their close working relationships with local governments and landowners, are in a unique position to assist us in implementing all aspects of the Act. In this regard, section 6 of the Act provides that the Service shall cooperate to the maximum extent practicable with the States and Territories in carrying out programs authorized by the Act. Therefore, any qualified employee or agent of a Territorial conservation agency that is a party to a cooperative agreement with us in accordance with section 6(c) of the Act, who is designated by his or her agency for such purposes, would be able to conduct activities designed to conserve *Mitracarpus polycladus* that may result in otherwise prohibited activities without additional authorization.

Nothing in this proposed 4(d) rule would change in any way the recovery planning provisions of section 4(f) of the Act, the consultation requirements under section 7 of the Act, or our ability to enter into partnerships for the management and protection of *Mitracarpus polycladus.* However, interagency cooperation may be further streamlined through planned programmatic consultations for the species between us and other Federal agencies, where appropriate. We ask the public, particularly State and Territorial agencies and other interested stakeholders that may be affected by the proposed 4(d) rule, to provide comments and suggestions regarding additional guidance and methods that the Service could provide or use, respectively, to streamline the implementation of this proposed 4(d) rule (see Information Requested, above).

Required Determinations

Clarity of This Proposed Rule

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

(1) Be logically organized;

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

(3) Use clear language rather than jargon;

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

(5) Use lists and tables wherever possible.

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

National Environmental Policy Act

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with determining a species' listing status under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). We also determine that 4(d) rules that accompany regulations adopted pursuant to section 4(a) of the Act are not subject to the National Environmental Policy Act.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribes will be affected by this proposed reclassification.

References Cited

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

Authors

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

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

■ 2. In § 17.12 in paragraph (h) amend the table by revising the entry for ''*Mitracarpus polycladus*'' under FLOWERING PLANTS in the List of Endangered and Threatened Plants to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Scientific name	Common name	Where listed	Status	Listing citations and applicable rules
Flowering Plants				
*	*	*	*	* * *
Mitracarpus polycladus	No common name	Wherever found	T	59 FR 46715, 9/9/1994; [**Federal Register** citation of final rule]; 50 CFR 17.73(l).[4d]
*	*	*	*	* * *

■ 3. As proposed to be amended at 85 FR 58224 (September 17, 2020), 85 FR 61684 (September 30, 2020), 86 FR 18014 (April 7, 2021), 85 FR 66906 (October 21, 2020), 86 FR 3976 (January 15, 2021), 86 FR 33159 (June 24, 2021), and 86 FR 37091 (July 14, 2021), § 17.73 is further amended by adding paragraph (l) to read as follows:

§ 17.73 Special rules—flowering plants.

* * * * *

(l) *Mitracarpus polycladus* (no common name)

(1) *Prohibitions.* The following prohibitions that apply to endangered plants also apply to *Mitracarpus polycladus.* Except as provided under paragraph (l)(2) of this section, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or cause to be committed, any of the following acts in regard to this species:

(i) Import or export, as set forth at § 17.61(b) for endangered plants.

(ii) Remove and reduce to possession the species from areas under Federal jurisdiction; maliciously damage or destroy the species on any such area; or remove, cut, dig up, or damage or destroy the species on any other area in knowing violation of any law or regulation of the Territory or in the course of any violation of a Territorial criminal trespass law.

(iii) Interstate or foreign commerce in the course of commercial activity, as set forth at § 17.61(d) for endangered plants.

(iv) Sale or offer for sale, as set forth at § 17.61(e) for endangered plants.

(2) *Exceptions from prohibitions.* In regard to this species, you may:

(i) Conduct activities as authorized by permit under § 17.72.

(ii) Remove, cut, dig up, damage, or destroy on areas not under Federal jurisdiction if you are a qualified employee or agent of the Service or Territorial conservation agency which is a party to a cooperative agreement with the Service in accordance with section 6(c) of the Act, and you have been designated by that agency for such purposes, when acting in the course of official duties.

(iii) Engage in any act prohibited under paragraph (l)(1) of this section with seeds of cultivated specimens, provided that a statement that the seeds are of ''cultivated origin'' accompanies the seeds or their container.

Martha Williams,

Director, U.S. Fish and Wildlife Service.

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