

- Conditional rating
- Satisfactory rating

2. Should FMCSA include additional HM regulatory requirements in appendix B to part 385 (Explanation of Safety Rating Process) in the SFD calculation?

3. Currently, the table of regulatory factors in appendix B to part 385 (at II(C)(b)) excludes parts 172 and 173. However, there are violations in these parts included in the list of critical and acute violations in appendix B. Should they be included in the SFD calculations?

4. Should motor carriers of passengers be subject to higher standards than other motor carriers in terms of safety fitness rating methodology? If yes, what should these higher safety standards or thresholds be, and why are they appropriate? If no, why not?

5. Is there a specific aspect of safety management, such as driver training, driver fatigue management and mitigation, vehicular maintenance and repair, etc., that is so fundamentally different in passenger transportation, relative to CMVs transporting property, that FMCSA's safety fitness rating methodology should take this aspect into special consideration? If yes, what is this specific aspect of safety management, and how do you recommend FMCSA handle the matter within its safety fitness rating methodology? If no, why are the safety management aspects the same?

6. How will States be affected if the Agency changes the SFD? What resources might be needed to accommodate any changes, and how long would it take to incorporate any proposed changes?

7. The current SFD does not use all available safety data, such as all inspection-based data. Should the SMS methodology be used to issue SFDs, in a manner similar to what was proposed in the 2016 NPRM? If so, what adjustments, if any, should be made to that proposal? If not, should the Agency include more safety data in the SFD process in other ways and, if so, how? The Agency is interested in comments specifically on whether the integration of on-road safety data into the SFD process would improve the assessment of motor carriers' safety posture and the identification of unfit motor carriers.

8. Given the importance of driver behavior in preventing crashes, how would you recommend the Agency incorporate driver behavior data into the SFD? What data should the agency use? How should this methodology distinguish between data resulting in a conviction and data without a conviction?

9. What changes, additions, or deletions, from the current list of critical and acute violations should be included in the NPRM, and why? Should the list be retained? Why or why not?

10. Should SFD consider motor carriers' adoption and use of safety technologies in a carrier's rating? How should this fit into the SFD methodology?

11. Should the Agency revise the current administrative review procedures in §§ 385.15 and 385.17(j) related to administrative review and corrective action? Which of those procedures should be changed or discarded? Please give the reasons for your views.

12. Given that unsafe driving behaviors, such as speeding and texting while driving, are highly correlated with crash risk, should the safety fitness rating methodology give more weight to unsafe driving violations of § 392.2? For example, each pattern of noncompliance with a critical regulation relative to part 395, Hours of Service of Drivers, is assessed double the points in the safety fitness rating methodology. Should violations of § 392.2, or a subset of those violations, be treated in a similar manner?

Robin Hutcheson,
Administrator.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 224

[Docket No. 230810-0189; RTID 0648-XR126]

Endangered and Threatened Wildlife and Plants: Proposed Reclassification of Pillar Coral (*Dendrogyra cylindrus*) From Threatened to Endangered

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: We, NMFS, are issuing a proposed rule to change the status of pillar coral (*Dendrogyra cylindrus*) on the Federal List of Threatened and Endangered Species from threatened to endangered as recommended in the recent 5-year review of the species under the Endangered Species Act (ESA) of 1973. We propose this action

based on population declines and susceptibility to a recently emerged coral disease.

DATES: Written comments must be received on or before October 30, 2023.

Public hearings: A public hearing on the proposed rule will be held online on September 26, 2023, from 1 to 3 p.m. Eastern Daylight Time. Members of the public can join by internet or phone, regardless of location. Instructions for joining the hearing are provided under **ADDRESSES**. Requests for additional public hearings must be received by October 13, 2023.

ADDRESSES: The public hearing will be conducted as a virtual meeting. You may join the virtual public hearing using a web browser, a mobile app on a phone (app installation required), or by phone (for audio only) as specified on this website: <https://www.fisheries.noaa.gov/species/pillar-coral#conservation-management>.

You may submit comments on the proposed rule verbally at the public hearing or in writing, by any of the following methods:

- **Electronic Submission:** Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov and enter NOAA-NMFS-2023-0002 in the Search box. Click on the "Comment" icon, complete the required fields, and enter or attach your comments; or
- **Email:** Submit written comments to alison.moulding@noaa.gov.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Alison Moulding, 727-551-5607, alison.moulding@noaa.gov.

SUPPLEMENTARY INFORMATION:

Background

On September 10, 2014, we published a final rule listing pillar coral (*Dendrogyra cylindrus*), along with 4 other Caribbean coral species and 15 Indo-Pacific coral species, as threatened under the ESA (79 FR 53851). In early 2021, we announced a 5-year review of

7 threatened Caribbean coral species, including *D. cylindrus* (86 FR 1091, January 7, 2021). A 5-year review is intended to ensure that the listing classification of a species is accurate, and this review must be based on the best scientific and commercial data available.

Section 3 of the ESA defines an endangered species as any species which is in danger of extinction throughout all or a significant portion of its range and a threatened species as one which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The statute requires us to determine whether a species is threatened or endangered as a result of any of the factors listed in section 4(a)(1) of the ESA: (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. Changes to a listed species' status must be determined on the basis of these factors using solely the best scientific and commercial data available (16 U.S.C. 1533(c)(2)(B)). Implementing regulations in 50 CFR 424.11(b) reiterate the requirement that changes in a species' classifications must be based solely on the best available scientific and commercial information regarding a species' status. Recently proposed revisions to the regulations in 50 CFR 424.11(b) would restore the phrase "without reference to possible economic or other impacts of such determination" to the end of the provision, which was removed in 2019 (see 88 FR 40764, June 22, 2023). This clarification, if finalized, would not affect the existing requirements for making classification determinations, nor would it affect the proposed reclassification for the pillar coral.

Biology and Life History

Dendrogyra cylindrus is a colonial coral that can form large pillars (up to 3 meters (m)) upon an encrusting base. The final listing rule (79 FR 53851, September 10, 2014) described *D. cylindrus* as a gonochoric (separate sexes), broadcast spawning coral species that can also reproduce asexually through fragmentation and reattachment to the substrate. It has a relatively low annual egg production and low sexual recruitment (no reports of observed sexual recruitment in the wild).

Since the listing, new evidence of hermaphroditism (presence of both male and female gametes) and plasticity in reproductive mode has been observed in histological samples (Kabay, 2016) and in spawning colonies observed over several seasons in Florida (Neely *et al.*, 2018; Neely *et al.*, 2020a; O'Neil *et al.*, 2021). Histological samples from Florida revealed some hermaphroditic colonies that produced eggs and sperm within the same polyp and within the same mesentery while most colonies only produced eggs or sperm (Kabay, 2016). *Dendrogyra cylindrus* colonies have been observed to spawn as different genders on different nights of the same year, as different genders in different years, and as hermaphrodites spawning eggs and sperm simultaneously (Neely *et al.*, 2018; Neely *et al.*, 2020a; O'Neil *et al.*, 2021). Also, separate colonies of the same genotype (genetically identical colonies) have been observed to spawn either male or female gametes, and some colonies produced both eggs and sperm within separate regions of the same colony (Neely *et al.*, 2018). Spawning observations have also suggested that eggs may be fertilized within female colonies prior to release (Marhaver *et al.*, 2015). This flexibility in reproductive mode may be a strategy to improve the chances of successful reproduction for a species that is naturally rare and whose potential mates are scarce (Neely *et al.*, 2018).

Abundance, Trends, and Distribution

Dendrogyra cylindrus is present in the western Atlantic and throughout the greater Caribbean. It is absent in the Flower Garden Banks in the Gulf of Mexico and from the southwest Gulf of Mexico. It inhabits most reef environments in water depths ranging from 1 to 25 m and is most common in reef environments in water depths between 5 and 15 m. It has a naturally uncommon to rare occurrence, appearing as scattered, isolated colonies; it is sometimes found in highly clonal aggregations, likely resulting from fragmentation events (Chan *et al.*, 2019).

At the time of listing (79 FR 53851, September 10, 2014), available information indicated that colony density and cover were low (generally less than 1 colony per 10 square meters (m²) and less than 1 percent cover). Estimates of frequency of occurrence of *D. cylindrus* ranged from 1 percent of sites in Florida to a high of 30 percent in the U.S. Virgin Islands. Based on extrapolations of abundance from stratified random samples, abundance in Florida was estimated at tens of thousands of colonies. There was no

available population trend information at the time of listing.

Since the listing, there has been a new survey of *D. cylindrus* abundance in Los Roques National Park, Venezuela (Cavada-Blanco *et al.*, 2020). Surveys were conducted between 2014 and 2015 at 106 sites where the species had been reported by the local community. A total of 1,490 *D. cylindrus* colonies were located within 49 percent of the sites surveyed, and colony abundance ranged between 1 and 68 colonies per site. Average height of colonies was 72 centimeters (cm) (range 5–290 cm), though most of the colonies were below 60 cm in height. Disease presence was low overall (0.2 and 0.3 percent of colonies with white plague and black band disease, respectively) and 29 percent of the 1,490 colonies exhibited partial mortality (Cavada-Blanco *et al.*, 2020).

New studies published since the listing provide some population trend information. Surveys of *D. cylindrus* were conducted in 2012 in Old Providence and St. Catalina Islands, which host more than 90 percent of the *D. cylindrus* population in Colombia (Bernal-Sotelo *et al.*, 2019). Results were compared to surveys of the same area conducted in 2002 to discern population trends. The surveys revealed that *D. cylindrus* was present in 2012 in 3 of the 4 reef areas where it was present in 2002, but its spatial extent was reduced (*i.e.*, *D. cylindrus* occupied a smaller amount of the reef areas in 2012 relative to 2002). Half of the radial plots (60 m diameter) that contained more than 4 colonies of *D. cylindrus* in 2002 contained no living colonies of *D. cylindrus* 10 years later. The number of colonies and fragments (*i.e.*, tissue remnants on standing colonies) observed in 2002 were 213 and 70, respectively, versus 261 colonies and 585 fragments in 2012. Almost 97 percent of the fragments observed in 2012 were produced as a result of partial colony mortality. Average colony and fragment size was also smaller in 2012, and the number of colonies with partial mortality and the amount of partial mortality were higher. Larger colonies (≥ 115 cm) had higher partial and total mortality. In summary, compared to 2002, in 2012 there were more *D. cylindrus* colonies and fragments that likely resulted from partial mortality. Colonies and fragments in 2012 were smaller in size, had a higher prevalence of partial mortality, and had higher amounts of partial mortality within individual colonies. The authors concluded that the reduced amount of living tissue, dominance of asexually produced

fragments, and smaller fragment size limit the potential for population growth, making this population vulnerable and at risk of local extinction (Bernal-Sotelo *et al.*, 2019).

Beginning in 2013, all known colonies of *D. cylindrus* in Florida (n = 819 colonies) were tracked in an effort to monitor colony health and status (Neely *et al.*, 2021a). There were consecutive thermal bleaching events in 2014 and 2015, as well as ongoing and emerging disease events, which affected the monitored *D. cylindrus* colonies. Recovery from bleaching was calculated to take 11 years (in the absence of additional severe stressors) based on colony growth rates (~4 percent annual increase in live tissue) observed after bleaching but before disease affected the colonies (Neely *et al.*, 2021a). In a separate study using the same tracked colonies, demographic modeling of *D. cylindrus* was conducted to examine the effects of thermal stress events on population persistence. The model used different survival scenarios of 80, 50, and 20 percent of the population after the 2014 and 2015 thermally-induced bleaching and disease outbreak and assumed no sexual reproduction, no establishment of asexual recruits, and no successful restoration (Chan *et al.*, 2019). The model predicted that the number of thermal stress events before local extinction occurred was 31 for the 80 percent survival scenario, 11 for the 50 percent survival scenario, and 6 for the 20 percent survival scenario (Chan *et al.*, 2019). Assuming 2 stress events per decade until 2042 when thermal stress events are predicted to become annual, local extinction of *D. cylindrus* in Florida was predicted to occur in 2066 for the 80 percent survival scenario, in 2046 for the 50 percent survival scenario, and in 2039 for the 20 percent survival scenario (Chan *et al.*, 2019). These modeling predictions did not account for disease, which, as described below, caused near extirpation from Florida much sooner than the model's predicted dates for local extinction (Neely *et al.*, 2021a).

The Florida *D. cylindrus* colonies that were monitored between 2013 and 2020 included 819 colonies of an assumed 190 genotypes based on genetic testing or colony distances from each other (Neely *et al.*, 2021a). Distances between genotypes on average was about 1 kilometer (km), ranging from 2.5 m to 6.6 km. Half of the colonies represented clones of only five genotypes, and 62 percent of the genotypes were represented by a single colony. Asexual reproduction accounted for 77 percent of the colonies. During baseline surveys in 2013–2014 (542 colonies, 533 alive),

average tissue mortality was 30 percent (n = 542), and 22 percent of the colonies exhibited low (2.2 percent) recent mortality. During the monitoring period, there were chronic stressors that occurred on about 1 percent of colonies and caused minor damage (on average less than 1 percent tissue loss), including damselfish gardens/nests, predation by the corallivorous snail (*Coralliophila abbreviata*), competition with other benthic organisms, and abrasion and burial. However, acute stressors, including the 2014 and 2015 bleaching events, ongoing outbreaks of white plague and black band disease, and the outbreak of a novel, particularly devastating disease, termed stony coral tissue loss disease (SCTLD), resulted in extremely high mortality (Lewis, 2018; Lewis *et al.*, 2017; Neely *et al.*, 2021a). By the end of the monitoring period in 2020, there had been a 94 percent loss of coral tissue, 93 percent loss of colonies, and 86 percent loss of genotypes due primarily to disease. At the end of 2020, there were 25 known genotypes remaining (out of the 190 genotypes assumed at the beginning of the study), half of which had declined to less than 2 percent live tissue, and the other half were actively experiencing rapid tissue loss due to SCTLD. Only two genotypes remained unaffected and were located in the Dry Tortugas where SCTLD had not yet reached at the time of the study (but has now). Based on the extreme loss of colonies and live tissue, *D. cylindrus* is now considered functionally extinct along the Florida reef tract (Neely *et al.*, 2021a).

Although quantitative population trend data are only available from Florida and Colombia, we assume the species is in decline throughout most of its range based on the evidence from these regions (northern and southwestern portions of its range) and the more widespread evidence of severe disease impacts described in the “Threats” section below.

Threats

The ESA requires us to determine whether a species is endangered or threatened as a result 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. The final listing rule (79 FR 53851, September 10, 2014) identified and described the susceptibility of *D.*

cylindrus to multiple threats including ocean warming (Factor E), ocean acidification (Factor E), disease (Factor C), nutrient enrichment (Factors A and E), sedimentation (Factors A and E), and trophic effects of fishing (Factor A). In addition, *D. cylindrus* was determined to be at heightened extinction risk due to inadequate regulatory mechanisms to address global threats (*i.e.*, climate change that results in ocean warming and acidification and has been linked to increasing coral disease; Factor D).

Since the listing of *D. cylindrus* as threatened (79 FR 53851, September 10, 2014), SCTLD has emerged as a new and deadly disease, impacting at least 24 Caribbean coral species, including *D. cylindrus* (Florida Coral Disease Response Research & Epidemiology Team, 2018). SCTLD was first observed in Miami, Florida, in 2014 and then spread throughout the Florida reef tract over the next several years (Neely, 2018; Precht *et al.*, 2016). SCTLD has continued to spread throughout much of the Caribbean and has been observed along the Mesoamerican Reef, Bahamas, Greater Antilles, and in the Lesser Antilles as far south as Grenada (see <https://www.agrra.org/coral-disease-outbreak/> for a map of confirmed sightings of SCTLD in the greater Caribbean). The disease is unprecedented in temporal and geographic scope as well as the number of susceptible species, prevalence, and rates of mortality (Neely, 2018; Precht *et al.*, 2016). In almost all affected species, tissue loss occurs rapidly and leads to full colony mortality. The disease appears to be both waterborne and transmissible through direct contact (Aeby *et al.*, 2019). In addition, sediment can act as a SCTLD vector by transmitting SCTLD in the absence of direct contact between diseased and healthy corals Studivan *et al.*, 2022). SCTLD does not appear to be seasonal like many other coral diseases that will ramp up during higher temperatures but then decrease as water temperatures cool.

Dendrogyra cylindrus is highly susceptible to SCTLD and is often one of the first species to become infected (Florida Coral Disease Response Research & Epidemiology Team, 2018). Surveys of the progression and impact of SCTLD have shown that *D. cylindrus* exhibits high disease prevalence and colony mortality. As previously described, between 2014 and 2020 the Florida population of *D. cylindrus* was heavily impacted by SCTLD; there was a loss of 93 percent of colonies and 94 percent of live tissue (Neely *et al.*, 2021a). In surveys of the Bahamas, 67 percent of *D. cylindrus* colonies (n = 15,

March 2020) were infected with SCTLD in Grand Bahama, and 13 percent of *D. cylindrus* colonies (n = 8, June 2020) were infected in New Providence (Dahlgren *et al.*, 2021). In surveys across Mexico, 71 percent of *D. cylindrus* colonies (n = 7) surveyed in 2018 to 2019 were infected with SCTLD, and *D. cylindrus* was extirpated from several mainland coastal sites (Alvarez-Filip *et al.*, 2019). In separate surveys conducted in Cozumel, Mexico, between 2018 and 2020, surveyors observed that *D. cylindrus* colonies were heavily affected by SCTLD, though no quantitative prevalence data are available because no *D. cylindrus* colonies occurred in the survey transects (Estrada-Saldivar *et al.*, 2021). In 54 sites surveyed in 2020 around St. Thomas, U.S. Virgin Islands, 67 percent of the *D. cylindrus* colonies (n = 3) were infected with SCTLD, and *D. cylindrus* was the species with the highest prevalence of SCTLD within the epidemic zone (Costa *et al.*, 2021). In long-term monitoring transects in the U.S. Virgin Islands, 50 percent of *D. cylindrus* colonies (n = 2) surveyed in February 2019 were infected, and by July 2020, no *D. cylindrus* colonies remained alive in the transects (Brandt *et al.*, 2021). Prior to the documentation of SCTLD in the U.S. Virgin Islands, there were 11 colonies of *D. cylindrus* present in the monitoring transects between 2005 and 2018, suggesting loss of nine colonies from unknown causes (Brandt *et al.*, 2021). The study also noted that numerous recently dead colonies of *D. cylindrus*, presumably from SCTLD, were observed and that it was increasingly rare to find live colonies, even in locations where the species previously had been relatively abundant (Brandt *et al.*, 2021).

SCTLD has spread from Florida, where it was initially documented, to the eastern and western Caribbean. Although it has not yet been confirmed in all areas of the Caribbean (*i.e.*, the most southern part), we assume SCTLD will eventually reach all areas of the range of *D. cylindrus* based on its previous spread and the fact that it is waterborne.

Conservation Measures

Coral colonies infected with SCTLD have been effectively treated to stop the progression of the disease. Initial *ex situ* (in aquaria) treatment of *D. cylindrus* consisted of amputation of diseased tissue and dipping the corals (13 fragments from 6 colonies) in a Lugol's iodide solution, which is commonly used in the aquarium industry as a treatment for bacterial infections. After repeated treatments, this method was

effective in arresting disease progression about 53 percent of the time (O'Neil *et al.*, 2018). Additional *ex situ* treatment with the antibiotic amoxicillin applied directly to the diseased tissue margin in a custom-made paste formulation (modified from a dental paste) increased survival of infected *D. cylindrus* to about 97 percent (Miller *et al.*, 2020). However, this antibiotic dental paste has to be applied to corals out of water (corals were placed back in the water after antibiotic paste application). To treat corals *in situ* (in the ocean), slow-release antibiotic pastes were developed that could be applied underwater (O'Neil *et al.*, 2018). Antibiotic pastes have been successfully applied *in situ* to coral species infected with SCTLD in Florida (67 to 95 percent effectiveness, Neely *et al.*, 2020b; Neely *et al.*, 2021c; Shilling *et al.*, 2021; Walker *et al.*, 2021), though no reports of effectiveness on *in situ* *D. cylindrus* colonies have been published, likely because most of these studies have been performed in Florida after the near-extirpation of the species. The treatment only has the ability to stop progression of the disease lesion, but it does not prevent new lesions from forming (Neely *et al.*, 2020b; Shilling *et al.*, 2021; Walker *et al.*, 2021).

During the widespread and severe decline of *D. cylindrus* in Florida, a rescue effort was undertaken to collect fragments of live colonies and bring them under human care to preserve the remaining genetic diversity. From November 2015 to November 2019, fragments were collected from most remaining *D. cylindrus* genotypes (Kabay, 2016; Neely *et al.*, 2021b; O'Neil *et al.*, 2021). A total of 574 fragments representing 128 genotypes were collected between 2015 and 2019 (Neely *et al.*, 2021b), and an additional 4 fragments were collected in August 2021 from newly found colonies in the Dry Tortugas (K.L. Neely, Nova Southeastern University, personal communication). Fragments were brought under human care in both land-based and ocean-based nurseries for preservation and to aid in propagation and future restoration (Kabay, 2016; Neely *et al.*, 2021b; O'Neil *et al.*, 2021). As of the end of 2020, 543 fragments of 123 Florida genotypes of *D. cylindrus* were being held in nurseries (Neely *et al.*, 2021a).

Increased understanding of the reproductive biology and early life history of *D. cylindrus* has contributed to attempts to sexually propagate *D. cylindrus* for use in conservation efforts (Marhaver *et al.*, 2015; Neely *et al.*, 2020a; O'Neil *et al.*, 2021; Villalpando *et al.*, 2021). The first report of successful settlement from larval

propagation resulted from collection and fertilization of gametes in Curaçao (Marhaver *et al.*, 2015). The resulting *D. cylindrus* larvae were settled and maintained in the lab and reached the primary polyp stage (Marhaver *et al.*, 2015). However, settlers did not survive longer than 7 months and showed no formation of new polyps through budding (Marhaver *et al.*, 2015). Subsequent larval propagation efforts in Florida produced a small number of longer-surviving settlers. Gamete collections from wild colonies in 2016 produced 3 settlers that survived to at least 3 years of age. In 2018, gamete collections from colonies maintained *ex situ* produced 10 settlers that survived to at least 1 year old (Neely, 2019). In another attempt at sexual propagation, larvae of *D. cylindrus* were produced from gamete collections from wild colonies, settled in the lab, and transferred to an offshore coral nursery in the Dominican Republic 1 month after settlement (Villalpando *et al.*, 2021). An estimated 380 corals were transferred to the nursery, and 1 year after they were transferred, 1 surviving coral was observed (Villalpando *et al.*, 2021). The following year (2020), gametes were again collected from wild colonies, settled in the lab, and transferred to an *in situ* nursery after settlement; 28 settlers have survived from this cohort for more than two years (M. F. Villalpando, FUNDEMAR, personal communication).

Dendrogyra cylindrus has also successfully reproduced in captivity in Florida in an induced spawning system designed to mimic natural environmental light and temperature regimes (O'Neil *et al.*, 2021). In 2020, the induced spawning tanks held 21 *D. cylindrus* genotypes, and over 50,000 viable *D. cylindrus* larvae were produced from only a fraction of the spawn that was collected (O'Neil *et al.*, 2021). A total of 4,330 larvae settled, and as of February 2022, 38 small colonies (1–3 cm in diameter) were alive and remained in captivity (K.L. O'Neil, The Florida Aquarium, personal communication). In 2021, colonies in the induced spawning tanks produced 150 surviving *D. cylindrus* recruits (<1 cm in diameter) that are also being held in captivity (K.L. O'Neil, the Florida Aquarium, personal communication). These advances in propagation methods have the potential to benefit the species.

Risk of Extinction

As noted above, *D. cylindrus* was listed as threatened because of its susceptibility to multiple threats, including ocean warming, ocean acidification, disease, nutrient

enrichment, sedimentation, trophic effects of fishing, and inadequate regulatory mechanisms to address global threats. Future projections of these threats indicate the species is likely to be in danger of extinction within the foreseeable future throughout its range. Circumstances and demographic risks that contributed to our assessment of the species' risk of extinction in 2014 were: (1) geographic location in the Caribbean where localized human impacts were high and threats were predicted to increase, exposing a high proportion of the population to threats over the foreseeable future; (2) uncommon to rare occurrence of the species, which heightened the potential effect of mortality events and made the species vulnerable to becoming of such low abundance within the foreseeable future that it could be at risk from compensatory processes, environmental stochasticity, or catastrophic events, and (3) low sexual recruitment which limited the species' capacity for recovery from threat-induced mortality events throughout its range over the foreseeable future.

The final listing rule (79 FR 53851, September 10, 2014) also explained that *D. cylindrus* was not in danger of extinction at the time and did not warrant listing as an endangered species because: (1) there was little evidence of population declines, (2) *D. cylindrus* showed evidence of resistance to bleaching from warmer temperatures in some portions of its range under some circumstances (e.g., Roatan, Honduras), and (3) while its distribution within the Caribbean increased its risk of exposure to threats, its occurrence in numerous reef environments that would experience highly variable thermal regimes and ocean chemistry on local and regional scales at any given point in time moderated its vulnerability to extinction.

We are now proposing to change the status of *D. cylindrus* from threatened to endangered. We make this determination based on the best scientific and commercial information available since the original listing of *D. cylindrus* that indicates that there have been declines in the abundance and distribution of *D. cylindrus* in multiple locations with the most severe in the northern portions of its range and that *D. cylindrus* is highly susceptible to SCTLD, which has emerged as a devastating and deadly new disease. Though SCTLD is not yet present in all areas of the Caribbean, the disease spread between 2014 and 2021 from Florida throughout the northern, western, and eastern Caribbean including the Mesoamerican Reef

System, the Bahamas, the Greater Antilles, and as far south as Grenada in the Lesser Antilles. We expect SCTLD to continue to spread throughout the species' range based on the previous spread and the fact that it is waterborne. In locations where SCTLD has been observed, *D. cylindrus* has experienced high disease prevalence, fast disease progression within infected colonies, and high mortality rates from the disease. The distribution of *D. cylindrus* has diminished with the loss of almost all wild colonies in Florida, and though the occurrence of *D. cylindrus* has historically been uncommon to rare, the species has become even more rare as a result of SCTLD, disappearing from individual sites in Florida, Mexico, and the U.S. Virgin Islands. Furthermore, no observed sexual recruitment has been reported in the wild, and reductions in population size and local extinctions will further inhibit the species' ability to persist and replenish diminished populations through asexual and sexual reproduction.

In conclusion, *D. cylindrus* continues to be susceptible to multiple threats such as ocean warming (ESA Factor E), disease (C), acidification (E), nutrient enrichment (A and E), sedimentation (A and E), trophic effects of fishing (A), and inadequate existing regulatory mechanisms to address global threats (D). In addition, the following characteristics contribute to its risk of extinction:

(1) It is geographically located in the highly disturbed Caribbean where localized human impacts are high and threats are predicted to increase. A range constrained to this particular geographic area that is likely to experience severe and increasing threats indicates that a high proportion of the population of this species is likely to be exposed to those threats;

(2) It has an uncommon to rare occurrence throughout its range, which heightens the potential effect of localized mortality events and leaves the species vulnerable to becoming of such low abundance that it may be at risk from compensatory processes, environmental stochasticity, or catastrophic events;

(3) Its low sexual recruitment limits its capacity for recovery from threat-induced mortality events throughout its range; and

(4) It has experienced population declines, primarily due to SCTLD, in multiple locations throughout its range, including severe declines in the northern portion of its range, which has resulted in diminished distribution and local extirpation.

The combination of these characteristics indicates that *D. cylindrus* is in danger of extinction throughout its range and warrants listing as an endangered species due to factors A, C, D, and E.

Conservation actions include treatment of individual colonies for SCTLD, ex situ banking, and propagation of *D. cylindrus* for future restoration. The conservation actions will no doubt have benefits to the species, but we do not find that the current conservation efforts will affect the status of *D. cylindrus* to the point at which listing as endangered is not warranted. Further, because current conservation actions do not directly address the root causes of threats such as disease, they are insufficient to protect the species from the risk of extinction.

Effects of Listing

Conservation measures provided for species listed as endangered or threatened under the ESA include recovery plans (16 U.S.C. 1553(f)), critical habitat designations, Federal agency consultation requirements (16 U.S.C. 1536), and prohibitions of certain acts under the ESA (16 U.S.C. 1538). Because *D. cylindrus* is currently listed as threatened, Federal agency consultation requirements are already in effect, and a recovery outline has been developed to guide recovery until a full recovery plan has been finalized. Critical Habitat has been proposed for *D. cylindrus* (85 FR 76302), and the bases for any final designation of critical habitat would not be affected should the status of *D. cylindrus* be changed from threatened to endangered. The ESA section 9 prohibitions do not currently apply to *D. cylindrus* because those protections are automatically applied only to endangered species and NMFS has not promulgated protective regulations for *D. cylindrus* pursuant to ESA section 4(d).

All of the prohibitions in section 9(a)(1) of the ESA will apply to *D. cylindrus* if it becomes listed as an endangered species. Section 9(a)(1) includes prohibitions on importing, exporting, engaging in foreign or interstate commerce, or "taking" of the species. "Take" is defined under the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or an attempt to engage in any such conduct." These prohibitions apply to all persons subject to the jurisdiction of the United States, including in the United States, its territorial sea, or on the high seas. Upon up-listing pillar coral to endangered

status, section 9 of the ESA would expressly prohibit:

(1) Taking of pillar coral within the U.S. or its territorial sea, or upon the high seas;

(2) Possessing, selling, delivering, carrying, transporting, or shipping any pillar coral that was illegally taken;

(3) Delivering, receiving, carrying, transporting, or shipping in interstate or foreign commerce any pillar coral in the course of a commercial activity;

(4) Selling or offering pillar coral for sale in interstate or foreign commerce; or

(5) Importing pillar coral into, or exporting pillar coral from, the United States.

On July 1, 1994, NMFS and FWS published a policy (59 FR 34272) that requires us to identify, to the extent known at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the ESA. The intent of this policy is to increase public awareness of the effect of a listing on proposed and ongoing activities within a species' range. Based on available information, we believe the following categories of activities are likely to meet the ESA's definition of "take" and therefore result in a violation of the ESA section 9 prohibitions. We emphasize that whether a violation results from a particular activity is entirely dependent upon the facts and circumstances of each incident. The mere fact that an activity may fall within 1 of these categories does not mean that the specific activity will cause a violation. Further, an activity not listed may in fact result in a violation. Activities that are likely to result in a violation of section 9 prohibitions include, but are not limited to, the following:

(1) Collection of pillar coral, including colonies, fragments, tissue samples, and gametes, from the wild;

(2) Harming captive pillar coral by, among other means, injuring or killing captive pillar coral, through potentially injurious research outside the bounds of normal animal husbandry practices;

(3) Removing, relocating, reattaching, damaging, poisoning, or contaminating pillar coral;

(4) Scientific research activities on wild pillar coral, involving the manipulation of the coral or its environment;

(5) Release of captive pillar coral into the wild. Release of a captive coral could have the potential to injure or kill the coral or to affect wild populations of pillar coral through introduction of disease;

(6) Harm to pillar coral habitat resulting in injury or death of the

species, such as removing or altering substrate or altering water quality;

(7) Discharging pollutants, such as oil, toxic chemicals, radioactive matter, carcinogens, mutagens, teratogens, or organic nutrient-laden water, including sewage water, into pillar corals' habitat to an extent that harms or kills pillar coral;

(8) Shoreline and riparian disturbances (whether in the riverine, estuarine, marine, or floodplain environment) that may harm or kill pillar coral, for instance by disrupting or preventing the reproduction, settlement, reattachment, development, or normal physiology of pillar coral. Such disturbances could include land development, run-off, dredging, and disposal activities that result in direct deposition of sediment on pillar coral, shading, or covering of substrate for fragment reattachment or larval settlement; and

(9) Activities that modify water chemistry in pillar coral habitat to an extent that disrupts or prevents the reproduction, development, or normal physiology of pillar coral.

Some categories of activities are unlikely to constitute a violation of the section 9 prohibitions should the proposed listing become finalized. We consider the following activities to be ones that are unlikely to violate the ESA section 9 prohibitions:

(1) Taking of wild pillar coral, including collection of colonies, fragments, tissue samples, and gametes, authorized by a 10(a)(1)(A) permit issued by NMFS for the purposes of scientific research or the enhancement of propagation or survival of the species and carried out in accordance with the terms and conditions of the permit;

(2) Incidental taking of pillar coral resulting from federally authorized, funded, or conducted projects for which consultation under section 7 of the ESA has been completed and when the project is conducted in accordance with any terms and conditions set forth by NMFS in an incidental take statement in a biological opinion pursuant to section 7 of the ESA;

(3) Import or export of pillar coral authorized by a Convention on International Trade in Endangered Species (CITES) permit and an ESA section 10(a)(1)(A) permit issued by NMFS;

(4) Continued possession of pillar coral parts or live pillar coral that were in captivity at the time of up-listing to an endangered species, including any progeny produced from captive corals after the rule is finalized, so long as the prohibitions of ESA section 9(a)(1) are not violated. Corals are considered to be

in captivity if they are maintained in a controlled environment or under human care in ocean-based coral nurseries.

Individuals or organizations should be able to provide evidence that pillar coral or pillar coral parts were in captivity prior to its listing as an endangered species. We suggest such individuals or organizations submit information to us on the pillar coral in their possession (e.g., type, number, size, source, date of acquisition), to establish their claim of possession (see **FOR FURTHER INFORMATION CONTACT**);

(5) Providing normal care for captive pillar coral. Captive corals are still protected under the ESA and may not be killed or injured, or otherwise harmed and must receive proper care. Normal husbandry care of captive corals includes handling, cleaning, maintaining water quality within an acceptable range, extracting tissue samples for the purposes of diagnosis of condition or genetics, treating of maladies such as disease or parasites using established methods proven to be effective, propagating corals by sexual or asexual means (i.e., fragmenting larger coral colonies into smaller colonies to increase the number of corals, maintain corals of manageable size, or accelerate their growth rate) within the bounds of normal husbandry practices, attaching to artificial surfaces, and removing dead skeleton;

(6) Interstate and intrastate transportation of legally-obtained captive pillar coral and pillar coral parts provided it is not in the course of a commercial activity. If captive corals or pillar coral parts are to be moved to a different holding location, records documenting transfer of corals must be maintained;

(7) Stabilization of loose pillar coral, including fragments, in the wild by experienced individuals and as authorized by a 10(a)(1)(A) permit issued by NMFS;

(8) Relocation of wild pillar coral from one site to another under the authorization of an ESA section 10(a)(1)(A) permit issued by NMFS;

(9) Use of captive pillar coral for scientific studies under the authorization of an ESA Section 10(a)(1)(A) permit issued by NMFS. Scientific studies that have the potential to injure or harm captive pillar coral (e.g., altered temperature outside of ideal range, exposure to contaminants, potentially harmful chemicals, or disease, introduction of coral predators) require an ESA section 10(a)(1)(A) permit. Scientific studies that are intended to improve the husbandry practices of caring for captive pillar coral, where there is a reasonable

expectation that they would not cause harm to pillar coral (e.g., trialing new food supplements, comparing different lighting systems, testing different attachment substrates), would not require an ESA permit;

(10) Research activities on pillar coral in the wild under the authorization of an ESA section 10(a)(1)(A) permit. Research activities, such as observational studies, on pillar coral in the wild that do not involve collections of pillar corals or manipulation of pillar corals or of their environment do not require an ESA section 10(a)(1)(A) permit;

(11) Release of captive pillar coral into the wild, as authorized by an ESA section 10(a)(1)(A) permit issued by NMFS; and

(12) Treatment of wild pillar coral for disease by experienced individuals using non-experimental methods proven to be effective and as authorized by state and territorial permits.

Information Quality Act and Peer Review

In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review establishing minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation. The OMB Peer Review Bulletin (the Bulletin), implemented under the Information Quality Act (Pub. L. 106–554), is intended to enhance the quality and credibility of the Federal Government’s scientific information, and applies to influential or highly influential scientific information disseminated on or after June 16, 2005. To satisfy our requirements under the Bulletin, this proposed rule was subject to peer review. A peer review plan was posted on the NOAA peer review agenda and can be found at the following website: <https://www.noaa.gov/information-technology/endangered-species-act-proposed-rule-for-pillar-coral-dendrogyra-cylindrus-id432>. Our synthesis and assessment of scientific information supporting this proposed action was peer reviewed via individual letters soliciting the expert opinions of three qualified specialists selected from the academic and scientific community. The charge to the peer reviewers and the peer review report have been placed in the administrative record and posted on the agency’s peer review agenda. In meeting the OMB Peer Review Bulletin requirements, we have also satisfied the requirements of the 1994 joint U.S. Fish and Wildlife Service/NMFS peer review policy (59 FR 34270; July 1, 1994).

Public Comments Solicited

To ensure that any final action resulting from this proposal will be as accurate and effective as possible, we are soliciting comments from the public, other concerned governmental agencies, the scientific community, industry, and any other interested parties. We must base our final determination on the best available scientific and commercial data when making listing determinations. We cannot, for example, consider the economic effects of a listing determination. Final promulgation of any regulation on this species or withdrawal of this listing proposal will take into consideration the comments and any additional information we receive, and such communications may lead to a final regulation that differs from this proposal or result in a withdrawal of this reclassification proposal.

Public Hearing

A public hearing will be conducted online as a virtual meeting, as specified under **ADDRESSES**. More detailed instructions for joining the virtual meeting are provided on our web page: <https://www.fisheries.noaa.gov/species/pillar-coral#conservation-management>. The hearing will begin with a brief presentation by NMFS that will give an overview of the proposed rule under the ESA. After the presentation, but before public comments, there will be a question-and-answer session during which members of the public may ask NMFS staff clarifying questions about the proposed rule. Following the question-and-answer session, members of the public will have the opportunity to provide oral comments on the record regarding the proposed rule. In the event there is a large attendance, the time allotted per individual for oral comments may be limited. Therefore, anyone wishing to make an oral comment at the public hearing for the record is also encouraged to submit a written comment during the relevant public comment period as described under **ADDRESSES** and **DATES**. All oral comments will be recorded, transcribed, and added to the public comment record for this proposed rule.

References

A complete list of the references used in this proposed rule is available online (see www.fisheries.noaa.gov/species/pillar-coral#conservation-management) and upon request (see **FOR FURTHER INFORMATION CONTACT**).

Classification

National Environmental Policy Act

The 1982 amendments to the ESA, in section 4(b)(1)(A), restrict the information that may be considered when assessing species for listing. Based on this limitation of criteria for a listing decision and NOAA Administrative Order 216–6 (Environmental Review Procedures for Implementing the National Environmental Policy Act), we have concluded that ESA listing actions are not subject to requirements of the National Environmental Policy Act.

Executive Order 12866, Regulatory Flexibility Act, and Paperwork Reduction Act

As noted in the Conference Report on the 1982 amendments to the ESA, economic impacts cannot be considered when assessing the status of a species. Therefore, the economic analysis requirements of the Regulatory Flexibility Act are not applicable to the listing process. In addition, this proposed rule is exempt from review under Executive Order 12866. This proposed rule does not contain a collection-of-information requirement for the purposes of the Paperwork Reduction Act.

Executive Order 13132, Federalism

In accordance with E.O. 13132, we have made a preliminary determination that this proposed rule does not have significant federalism effects and that a federalism assessment is not required. In keeping with the intent of the Administration and Congress to provide continuing and meaningful dialogue on issues of mutual state and Federal interest, this proposed rule will be given to the relevant state agencies in each state in which the species is believed to occur, and those states will be invited to comment on this proposal. As we proceed, we intend to continue engaging in informal and formal contacts with the state, and other affected local or regional entities, giving careful consideration to all written and oral comments received.

Executive Order 12898, Environmental Justice

Executive Order 12898 requires that Federal actions address environmental justice in the decision-making process. In particular, the environmental effects of the actions should not have a disproportionate effect on minority and low-income communities. This proposed rule is not expected to have a disproportionately high effect on minority populations or low-income populations.

List of Subjects

50 CFR Part 223

Endangered and threatened species, Exports, Imports, Transportation.

50 CFR Part 224

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Dated: August 14, 2023.

Samuel D. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reason set out in the preamble, NMFS proposes to amend 50 CFR parts 223 and 224 as follows:

PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

■ 1. The authority citation for part 223 continues to read as follows:

Authority: 16 U.S.C. 1531–1543; subpart B, § 223.201–202 also issued under 16 U.S.C. 1361 *et seq.*; 16 U.S.C. 5503(d) for § 223.206(d)(9).

■ 2. In § 223.102, amend the table in paragraph (e), under the subheading “Corals”, by removing the entry for “Coral, pillar (*Dendrogyra cylindrus*)”.

PART 224—ENDANGERED MARINE AND ANADROMOUS SPECIES

■ 3. The authority citation of part 224 continues to read as follows:

Authority: 16 U.S.C. 1531–1543 and 16 U.S.C. 1361 *et seq.*

■ 4. In § 224.101, amend the table in paragraph (h), under the subheading “Corals”, by adding the following entry to read as follows:

§ 224.101 Enumeration of endangered marine and anadromous species.

* * * * *

(h) The endangered species under the jurisdiction of the Secretary of Commerce are:

Species ¹		Description of listed entity	Citation(s) for listing determination(s)	Critical habitat	ESA rules
Common name	Scientific name				
*	*	*	*	*	*
CORALS					
Coral, pillar	<i>Dendrogyra cylindrus</i>	Entire species	[Insert FR Citation & Date When Published As A Final Rule].	NA	NA
*	*	*	*	*	*

¹ Species includes taxonomic species, subspecies, distinct population segments (DPSs) (for a policy statement, see 61 FR 4722, February 7, 1996), and evolutionarily significant units (ESUs) (for a policy statement, see 56 FR 58612, November 20, 1991).