Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fly, Hawaiian picture-wing.	*Drosophila mulli*	U.S.A. (HI)	NA	T	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila musaphilia*	U.S.A. (HI)	NA	E	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila neoclavisetae.*	U.S.A. (HI)	NA	E	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila obatai*	U.S.A. (HI)	NA	E	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila ochrobasis.*	U.S.A. (HI)	NA	E	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila substenoptera.*	U.S.A. (HI)	NA	E	756	NA	NA
Fly, Hawaiian picture-wing.	*Drosophila tarphytrichia.*	U.S.A. (HI)	NA	E	756	NA	NA
*	*	*	*	*	*	*	

Dated: May 2, 2006.

H. Dale Hall,

Director, Fish and Wildlife Service.

[FR Doc. 06–4299 Filed 5–8–06; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 223

[Docket No. 050304058–6116–03; I.D. No. 060204C]

RIN No. 0648–XB29

Endangered and Threatened Species: Final Listing Determinations for Elkhorn Coral and Staghorn Coral

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

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), are publishing this final rule to implement our determination to list elkhorn (*Acropora palmata*) and staghorn (*A. cervicornis*) corals as threatened species under the Endangered Species Act (ESA) of 1973, as amended. We have reviewed the status of the species and efforts being made to protect the species, and we have made our determinations based on the best scientific and commercial data available. We also solicit information that may be relevant to our analysis of protective regulations and to the designation of critical habitat for these two species.

DATES: The effective date of this rule is June 8, 2006. Responses to the request for information regarding a subsequent ESA section 4(d) Rule and critical habitat designation must be received by June 2, 2006.

ADDRESSES: NMFS, Southeast Regional Office, Protected Resources Division, 263 13th Ave. South, St. Petersburg, FL 33701.

FOR FURTHER INFORMATION CONTACT: Jennifer Moore or Stephania Bolden, NMFS, Southeast Region, at the address above or at (727) 824–5312, or Marta Nammack, NMFS, Office of Protected Resources, at (301) 713–1401. Reference materials regarding these determinations are available upon request or on the Internet at *http://sero.nmfs.noaa.gov*.

SUPPLEMENTARY INFORMATION:

Background

On June 11, 1991, we identified elkhorn and staghorn corals as ''candidates'' for listing under the ESA (56 FR 26797). Both species were subsequently removed from the candidate list on December 18, 1997, because we were not able to obtain sufficient information on their biological status and threats to meet the scientific documentation required for inclusion on the 1997 candidate species list (62 FR 37560).

Using data from a 1998 analysis and information obtained during a public comment period, we again added the two species to the ESA candidate species list on June 23, 1999 (64 FR 33466). These two species qualified as ESA candidate species at that time because there was some evidence they had undergone substantial declines in abundance or range from historic levels. On April 15, 2004, we established a ''species of concern'' list to differentiate those species for which we had concerns regarding their status from those species that were truly candidates for listing under the ESA (69 FR 19976). When we established this new list, we transferred both elkhorn and staghorn corals from the candidate species list to the species of concern list.

On March 4, 2004, the Center for Biological Diversity (CBD) petitioned us to list elkhorn, staghorn, and fused-staghorn corals as either threatened or endangered under the ESA and to designate critical habitat. On June 23, 2004, we made a positive 90–day finding (69 FR 34995) that CBD had presented substantial information indicating the petitioned actions may be warranted and announced the initiation of a formal status review as required by section 4(b)(3)(A) of the ESA. Concurrently, we solicited additional information from the public on these Acroporid corals regarding historic and current distribution and abundance, population status and trends, areas that may qualify as critical habitat, any current or planned activities that may adversely affect them, and known conservation efforts. Additional information was also requested during two public meetings held in December 2004 on: (1) distribution and abundance; (2) areas that may qualify as critical habitat; and (3) approaches or criteria that could be used to assess listing potential of the Acroporids (e.g., viability assessment, extinction risk, etc.).

In order to conduct a comprehensive status review, we convened an Atlantic Acropora Biological Review Team (BRT) to compile and analyze the best available scientific and commercial information on these species. The

members of the BRT were a diverse group of experts in their fields and included coral biologists and ecologists; specialists in coral disease, coral monitoring and restoration, climate, water quality, and coral taxonomy; regional experts in coral abundance/distribution throughout the Caribbean Sea; and state and Federal resource managers. The comprehensive, peer-reviewed status review report developed by the BRT incorporates and summarizes the best scientific and commercial data available as of March 2005. The report addresses the status of the species, the factors identified in section 4(a)(1) of the ESA, and current regulatory, conservation, and research efforts yielding protection to the corals. The BRT also reviewed and considered the petition and materials we received as a result of the **Federal Register** announcement of the 90–day finding (69 FR 34995) and the public meetings.

On March 3, 2005, we determined that elkhorn and staghorn corals were likely to become endangered within the foreseeable future throughout their entire ranges, and, therefore, a proposal to list the two species as threatened under the ESA was warranted (70 FR 13151; March 18, 2005). We also found that fused-staghorn coral was a hybrid and did not warrant listing. On May 9, 2005, we published a proposed rule (70 FR 24359) to place both elkhorn and staghorn corals on the list of threatened species under the ESA and commenced a 90–day public comment period, which included public meetings.

Statutory Framework for ESA Listing Determinations

The ESA defines an endangered species as one that is in danger of extinction throughout all or a significant portion of its range, and a threatened species as one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range (sections 3(6) and 3(19) of the ESA, respectively). Section 4(a)(1) of the ESA requires us to determine whether any species is endangered or threatened because of any one or a combination of the following factors: the present or threatened destruction, modification or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting its continued existence. We are required to make this determination based solely on the best scientific and commercial data available after conducting a review of the status of the species, and after taking into account those efforts being made by states or foreign nations to protect or conserve the species.

Finally, section 4(b)(1)(B) of the ESA requires us to give consideration to species which: (1) have been designated as requiring protection from unrestricted commerce by any foreign nation or pursuant to an international agreement; or (2) have been identified as in danger of extinction, or likely to become so within the foreseeable future, by any state agency or by any agency of a foreign nation.

Summary of Comments Received

Below we address the comments received pertaining to the proposed listing for the Acroporid corals. For additional background and a summary of Acropora spp. natural history and threats to the species, the reader is referred to the March 3, 2005, Atlantic Acropora Status Review report (available at http://sero.nmfs.noaa.gov/pr/protres.htm). In response to our request for public comments, we received 1,393 written and verbal responses to the proposed threatened listings.

Comment 1: Numerous commenters stated that the elkhorn and staghorn corals qualified for an endangered listing based on the declines in abundance and the significant threats faced by the species throughout their ranges.

Response: During the status review, we carefully analyzed threats facing the species and declines in abundance and considered this analysis when determining the status of the species. As depicted and described in the status review report, abundance of both species has declined over the past 30 years rangewide; however, recent surveys indicate an increase in abundance in some areas (e.g., Buck Island, U.S.V.I.), no change in some areas (e.g., Florida Keys), and fluctuating abundance in some areas (e.g., Belize). At present, the total numbers of colonies and presumably individuals remain very large, though the absolute number of colonies or percent coverage is unquantified. For example, one study of *A. palmata* in the Florida Keys in 2001 estimated colony density to be 0.8 colonies per square meter; expanding this same density to the overall available habitat within the wider Caribbean (on the order of thousands of square kilometers) would correspond to individual colony counts on the order of billions. Further, the species persist across a very large geographic range, and there is no current evidence of range contractions. Therefore, we believe the species are showing limited, localized recovery, and, rangewide, the rate of decline appears to have stabilized and is comparatively slow as evidenced by the persistence at reduced abundances for the past two decades.

In addition to population trends, we considered the significance of individual threats, and the cumulative and synergistic effects of the threats, acknowledging that the major threats (i.e., disease, hurricanes, and elevated sea surface temperature) to the elkhorn and staghorn corals are severe, unpredictable, and likely to increase in the foreseeable future. However, given the large number of colonies, the species' large geographic ranges that remain intact, and the fact that asexual reproduction (fragmentation) provides a source for new colonies (albeit clones) that can buffer natural demographic and environmental variability, it is likely both species retain significant potential for persistence, and are not currently at risk of extinction throughout all or a significant portion of their ranges.

Comment 2: One commenter asked us to provide a threshold that the corals must attain to qualify as endangered.

Response: In the proposed listing rule, we described the application of the ESA definitions of endangered and threatened to the status of and threats to the Acroporid corals (70 FR 24360). The threshold for a species to qualify for endangered status is that it is in danger of extinction throughout all or a significant portion of its range. We determined the two species are not currently in danger of extinction, as discussed in the response above.

Comment 3: Several commenters stated that we did not conduct a proper ''significant portion of the range'' analysis. One commenter stated that our conclusion that ''there is no evidence indicating that any elkhorn or staghorn population within the geographic range of the species is more or less important than the others'' is evidence of arbitrary and capricious reasoning. The commenter stated that, in our analysis of whether any portion of the range was significant, we should have at least considered areas where the corals have shown limited recovery as more important to the survival and recovery of the species than other areas.

One commenter discussed a number of court cases invalidating decisions not to list species where the U.S. Fish and Wildlife Service (FWS) or NMFS only analyzed a species' rangewide status and did not separately evaluate whether a species was endangered or threatened in a significant portion of its range (SPOIR). One commenter stated that we must apply this statutory term such that

it does not effectively conflate 'entire range' with 'SPOIR,' nor base a listing decision solely on whether a species is threatened or endangered within a fixed percentage of its range.

One commenter stated that if a species is threatened or endangered in a SPOIR, it must be listed as threatened or endangered throughout its range.

Response: Because we did not determine any portion of the species' ranges to be significant, and their ranges are intact, there was no basis for further evaluating the extinction risk of or threats to the species in any particular geographic areas, or for determining whether the coral species were endangered or threatened throughout a significant portion of their ranges. We proceeded instead to evaluate whether the species were endangered or threatened throughout their respective ranges. We did not conflate ''entire range'' and ''SPOIR,'' nor did we require any fixed percentage of the species' ranges to constitute a significant portion.

Consistent with prior court holdings, we performed a separate SPOIR analysis. We analyzed the relative biological importance of portions of the species' ranges and found that no area was more or less important (i.e., functionally, ecologically) than any other area. As discussed in further detail (see Species and Risk of Extinction section), we evaluated a recent study that examined genetic exchange and clonal population structure of *A. palmata*, and we found that it does not indicate source or sink areas, distinguishable or separable populations within each region, or any more or less significant areas or populations (i.e., in terms of differential biological value to the species). While there are a few locations (e.g., Buck Island Reef National Monument) where limited recovery appears to be progressing, the origin of recruits, presumably from a single sexual reproduction event, is unknown and their contribution to the corals' rangewide recovery remains undetermined. Therefore, there is insufficient evidence indicating that any particular geographic area or population is more significant to the species than others.

Comment 4: One commenter requested we specifically list the coral populations off Broward County, FL as endangered.

Response: As stated in the proposed listing rule, the ESA does not provide for listing distinct population segments of invertebrate species, and corals are invertebrates. Listing determinations for invertebrate species must be made at the species or subspecies level. Therefore, whether the populations of *A. cervicornis* on the Broward reefs are in danger of extinction, the ESA does not provide for listing a population of this species.

Comment 5: A few commenters were critical that the 30–year period, defined as the foreseeable future for purposes of our analysis for a threatened status, is not sufficiently protective, asserting that current threats could cause large amounts of coral to be lost in 30 years.

Response: The definition of foreseeable future applies only to the threshold for a 'threatened' determination (i.e., whether a species is likely to become endangered within the foreseeable future throughout all of a significant portion of its range). As discussed in our responses to Comments 1 and 2, we determined that neither elkhorn nor staghorn coral is currently in danger of extinction (the threshold for making an 'endangered' determination). In evaluating 'foreseeable future' for our threatened determinations for elkhorn and staghorn coral, our 30–year timeframe was selected as the most appropriate, given the species' biology and threats they face (see Species and Risk of Extinction section), as well as the purpose of the ESA, which is to provide for the conservation and recovery of the species and the ecosystems upon which they depend. The 30–year period identified for the two coral species is consistent with the logistic function indicated by the data portraying population decline (circa 1975–2005), the preceding 30–year period of relative stability in abundance, and the hypothesized cycle of hurricane frequency and intensity.

We concur with the commenters that, without an ESA listing, the species' abundance and distribution are likely to become further reduced in the next 30 years, with some local extirpations likely. Those considerations contributed to our determination to list the species as threatened. Given that we made a determination to list the species as threatened using the 30–year timeframe for foreseeable future, a shorter timeframe would have been no more protective. We believe our 30–year timeframe is both appropriate and protective.

Comment 6: Comments were received challenging our determination that *A. prolifera* is a hybrid and, therefore, not considered a species for listing. Commenters stated that the hybrid should be listed because of its ecological function and separate taxonomic diagnosis. Commenters stated that the hybrid may not be as well-studied as other Acroporids, and interbreeding is not a requirement to classify a species. Lastly, one commenter stated we did not use the best available science, referring us to recent court cases on taxonomic uncertainty in ESA listings.

Response: The ESA does not allow us to consider a taxon for listing based solely on its ecological function; it must as an initial matter meet the ESA definition of species. To determine *A. prolifera*'s status as a species, we followed our regulations at 50 CFR section 424.11(a), which direct us to rely on the standard taxonomic distinctions and the appropriate biological expertise within the agency and the scientific community in order to determine whether a particular taxon or population is a species for purposes of the ESA. We used published literature and unpublished scientific research to describe *A. prolifera*'s taxonomy based on morphology, genetics, and potential to reproduce. We concluded that A. prolifera is a hybrid because: (1) it exhibits a wide range of intermediate morphologies; (2) all individuals sampled are first generation hybrids of *A. palmata* and *A. cervicornis*; and (3) in laboratory attempts, it does not produce successful offspring via sexual reproduction. Other *Acropora* spp. reproduce by both sexual and asexual modes, while A. prolifera is not able to reproduce by both modes. All known individuals are hybrids, and cannot interbreed when mature, and, therefore, *A. prolifera* does not meet the biological definition of species. We also followed the court's ruling in *Center for Biological Diversity* v. *Lohn*, 296 F. Supp.2d 1223 (W.D. Wash. 2003), by basing our decision on the best available science instead of outdated taxonomic distinctions. Although *A. prolifera* has a separate taxonomic history, the best available science shows it is a first generation hybrid and not a species.

Comment 7: A commenter stated the BRT appeared to rely on a draft policy on listing hybrids (61 FR 4710; February 7, 1996) in considering the status of *A. prolifera*.

Response: While the status review report briefly describes the draft hybrid policy as ESA background, the report indicates that the policy is non-binding because it has never been finalized. The policy was never discussed or applied by the BRT in the remainder of the report. Similarly, we were aware of the draft policy, but did not rely on the draft policy when making our determination that A. prolifera should not be considered a species for ESA listing. Our determination was based on the scientific information summarized in the response above.

Comment 8: Many comments were received recommending potential listing

of A. prolifera under the ''similarity of appearance'' provision pursuant to section 4(e) of the ESA.

Response: Because we have not prohibited take of *A. palmata* and *A. cervicornis* in this final listing rule, prohibiting take of *A. prolifera* by listing it under 4(e) of the ESA is not appropriate as part of this final rule. We will consider whether a ''similarity of appearance'' regulation for A. prolifera is appropriate if we issue an ESA section 4(d) rule to conserve the listed species.

Comment 9: Numerous comments provided information on the threats we identified in the proposed rule. Several comments and journal articles addressing climate change and coral bleaching were received. Additionally, several commenters stated land-based sources of pollution (i.e., nutrients, sedimentation) are contributing to the decline of these species. We also received comments on the contribution of disease, hurricanes, poor boating, diving and fishing practices, and habitat loss to the status of elkhorn and staghorn corals. Many of the comments made suggestions regarding the relative importance of the threats and their contribution to the species' status.

Response: We evaluated all the information received on the threats affecting these species. No new threats were identified by any commenter. The suggested relative importance of the threats to the species' status was consistent with the status review report and the proposed rule. The information received was also consistent with the data used to make our threatened determination.

Comment 10: One commenter suggested we include a statement regarding the adequacy of the existing regulatory mechanisms pursuant to the Clean Water Act (CWA).

Response: We acknowledge the importance of the CWA as a tool to protect marine life. Although the CWA sets water quality standards for salt water and delegates authority to set and enforce water quality standards to the states, we concur with the BRT's conclusion that, despite existing regulations, degraded water quality resulting from nutrients and contaminants is contributing to the status of the two species.

Comment 11: We received several comments pertaining to future regulatory actions under the ESA. These included suggestions to develop regulations to manage specific threats (e.g., emissions, water quality). Additionally, other commenters questioned how the proposed listing would affect their actions (e.g., fishing, boating, diving). Commenters inquired about the timing of subsequent regulatory actions.

Response: Because we are listing elkhorn and staghorn corals as threatened, the prohibitions under section 9 of the ESA are not automatically applied to these species. Section 4(d) of the ESA allows us to develop regulations necessary and advisable for the conservation of listed threatened species, including regulations that extend the section 9 prohibitions to such species. We are beginning to work with interested parties to evaluate the necessity and advisability of a 4(d) rule for elkhorn and staghorn corals.

Similarly, because section 9 prohibitions are not automatically applied to these two species, this final rule will have no direct effects on the activities of private citizens. However, Federal agencies that fund, authorize, or carry out actions that are likely to adversely affect elkhorn or staghorn coral will be required to consult with us pursuant to section 7 of the ESA to ensure their actions are not likely to jeopardize the continued existence of either species.

Section 4(a)(3)(A) of the ESA requires that critical habitat be designated, to the maximum extent prudent and determinable, concurrently with a determination that a species is endangered or threatened. When such a designation is not determinable at the time of final listing of a species, section 4(b)(6)(C)(ii) of the ESA provides for an additional year to promulgate a critical habitat designation. We have concluded that critical habitat for elkhorn and staghorn corals is not determinable at this time. Through the status review and public comment process, we have begun to collect information on the biological and physical features essential to the conservation of the two species. More information is still required to identify those features. Throughout the next year, we intend to gather and review current and ongoing studies on the habitat use and requirements of elkhorn and staghorn corals; this information is crucial for the designation of critical habitat. We will also gather information on the benefits and impacts of the designation.

Comment 12: One commenter asked where take was occurring within the Caribbean Basin, because collection and sale of these corals is already prohibited.

Response: Collection is not the only activity that constitutes take under the ESA. The ESA defines take as ''to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect,'' which is a broader definition than the meaning suggested by the commenter. Although collection is prohibited in the United States and in many other Caribbean nations, there are many other activities currently occurring that may constitute take (see ''Consideration of Causal Factors Relevant to Listing'' section below).

Comment 13: Many commenters stated it is essential to protect coral habitat, given the importance of coral reefs to the economy. Additionally, the commenters stated many cities and communities depend on coral reefs and associated commerce.

Response: While the ESA and our listing regulations do not allow us to consider economics during listing, we are directed to consider the economic impacts, including relevant beneficial effects such as those raised by these commenters, when we designate critical habitat.

Comment 14: Numerous commenters supported the proposed listing.

Response: Comments noted. We look forward to partnering with these commenters and all stakeholders in the conservation of the two species.

In addition to the comments relating to the proposed listing, the following were also received: (1) peer-reviewed journal articles regarding climate change; effectiveness of the ESA; and coral resistance, resilience, and bleaching; (2) additional detail pertaining to existing regulatory mechanisms evaluated in the status review; (3) geographic information identifying land development, runoff, sewer outfalls, and land-use; (4) statements regarding the functional role of corals as keystone and indicator species; (5) references to oceanographic processes and circulation patterns; (6) reiteration of biological information included in the status review report; (7) summary of the 2005 NOAA Fisheries Public Employees for Environmental Responsibility survey; and (8) information on the umbrella effect, ecosystem management, limitations in funding opportunities, bryozoans, mari- and aquaculture, coral nurseries, species' status, effectiveness of potential listing, recruitment fitness and success, application of the ESA, obtaining permits, and an Illinois State bill. After careful consideration, we conclude the additional information received, as summarized above, was considered previously or did not pertain to the listing determination for the Acroporid corals.

Assessment of Species Status

In the proposed rule to add elkhorn and staghorn corals to the list of

threatened species under the ESA, we outlined our rationale for our determination, including our finding that the BRT's report constituted the best scientific and commercial data available. Below we have reiterated those portions of our evaluation pertinent to the public comments above and our final determination. Please refer to the proposed rule for additional information.

Species and Risk of Extinction

We first considered whether all three of the corals identified in the petition met the definition of ''species'' pursuant to section 3 of the ESA. The term ''species'' includes ''any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' Based on this language and the regulations at 50 CFR 424.11(a), ''species'' is given its ordinary, accepted biological meaning for these corals. Species diagnoses for both elkhorn and staghorn are not disputed; both species are recognized as separate taxa in the literature, have separate and discrete diagnoses and morphologies, produce offspring via asexual fragmentation, and produce viable gametes, larvae, and successful sexual offspring, which is typical of all species in the *Acropora* genus. In contrast, *A. prolifera* is a hybrid and does not meet the definition of species under the ESA (see Response to Comment 6).

We then carefully examined whether the coral species met the definitions of endangered or threatened species in section 3 of the ESA: (1) ''endangered species'' is defined as ''any species which is in danger of extinction throughout all or a significant portion of its range;'' and (2) ''threatened species'' is defined as ''any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.≥

Corals are invertebrates, and, therefore, only species or subspecies can be listed under the ESA. Distinct population segments of invertebrates cannot be listed. Further, we must also base a listing decision on whether a species is endangered or threatened throughout all or a significant portion of its range.

Acropora spp. are widely distributed throughout the wider Caribbean and are found in waters off Florida, and Puerto Rico, U.S. Virgin Islands, Navassa, and the wider Caribbean (Belize, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, Venezuela, and all the islands of the West Indies). Both elkhorn and staghorn corals were historically (pre–1980s) the most abundant and most important species on Caribbean coral reefs in terms of accretion of reef structure.

To assess if a geographic area could constitute a significant portion of the range of either elkhorn or staghorn coral, we examined the relative biological importance of populations throughout the species' ranges. We considered the single genetic study available at the time of this determination that might support identification of portions of the species' ranges that are distinguishable or separable (i.e., ''distinct or discrete'' as used in the May 9, 2005, proposed rule (70 FR 24359). The study examined genetic exchange and clonal population structure in *A. palmata* by sampling and genotyping colonies from 11 locations throughout its geographic range using microsatellite markers. Results indicate populations in the eastern Caribbean (St. Vincent and the Grenadines, U.S.V.I., Curacao, and Bonaire) have experienced little or no genetic exchange with populations in the western Caribbean (Bahamas, Florida, Mexico, Panama, Navassa, and Mona Island). Puerto Rico is an area of mixing where populations show genetic contribution from both regions, though it is more closely connected with the western Caribbean. Within these regions, some locations are entirely self-recruiting and some receive immigrants from other locations within the region; however, the overall, rangewide average of the relative contribution of sexually versus asexually derived populations is approximately equal. No similar information exists for *A. cervicornis*. These data indicate that, on small and large scales, there are areas of mixing and areas that do not appear to have exchange; this indicates that there are no source or sink areas. In addition, although there are a few locations (e.g., Buck Island Reef National Monument) where limited recovery appears to be progressing, the origin of recruits, presumably from a single sexual reproduction event, is unknown, and their contribution to the corals' rangewide recovery remains undetermined. Based on this, we cannot determine that there are any specific geographic areas or populations within the wider Caribbean that should be considered more or less significant (i.e., in terms of differential biological value to the species). Because we did not determine any portion of the species' ranges to be significant, and their ranges are intact, there was no basis for further evaluating the extinction risk of or threats to the species in any particular geographic areas, or for determining whether the coral species were endangered or threatened throughout a significant portion of their ranges. We proceeded instead to evaluate whether the species were endangered or threatened throughout their respective ranges.

We determined that neither elkhorn nor staghorn corals are currently in danger of extinction throughout their entire ranges and neither meets the definition of endangered under the ESA. While the number and percent coverage of elkhorn and staghorn corals rangewide has declined precipitously over the last 30 years, the total number of colonies and presumably individuals remains very large (e.g., 0.8 colonies/sq m; therefore, over the species' ranges, on the order of billions of individuals), though the absolute number of colonies or percent coverage is unquantified. Given the high number of colonies, the species' large geographic ranges that remain intact (no evidence of current range constriction), and the fact that asexual reproduction (fragmentation) provides a source for new colonies (albeit clones) that can buffer natural demographic and environmental variability, we believe both species retain significant potential for persistence and are not currently at risk of extinction throughout their ranges. Additionally, as evidenced by the geologic record, both elkhorn and staghorn corals have persisted through climate cooling and heating fluctuation periods over millions of years, whereas other corals have gone extinct.

We believe that, while elkhorn and staghorn corals are not currently in danger of extinction, as described above, they are likely to become so within the foreseeable future throughout their entire ranges. In making this determination, we established that the appropriate period of time corresponding to the foreseeable future is a function of the threats, life-history characteristics, and the specific habitat requirements for the species under consideration. We determined it is also consistent with the purpose of the ESA that the timeframe for the foreseeable future be adequate to provide for the conservation and recovery of threatened species and the ecosystems upon which they depend. The aspects of the species' life histories that are relevant are slow growth rate, late maturation, and both sexual (annual broadcast spawning) and asexual (fragmentation) modes of reproduction. Given this conceptual framework, the fact that some threats are short term (e.g., hurricanes, major disease outbreaks) and others long term (e.g., habitat degradation, changes in sea

surface temperature), aspects of the species' life histories, and the fact that the current decline as summarized by the BRT occurred during the last 20 to 30 years, we determined the foreseeable future for these species to be 30 years.

We then considered the following information on a 30–year timescale when evaluating the status of elkhorn and staghorn corals:

1. Recent drastic declines in abundance of both species have occurred throughout their ranges, and abundances, though still high, are at historic lows;

2. The species are vulnerable to range constrictions due to local extirpations resulting from a single stochastic event (e.g., hurricanes, new disease outbreak);

3. Sexual recruitment is limited in some areas and unknown in most; fertilization success from clones is virtually zero; and settlement of larvae is often unsuccessful, given limited amount of appropriate habitat; and

4. Fertilization success is declining as a result of greatly reduced densities of adult colonies (the Allee effect).

Based on these facts, we believe that abundance and distribution of both elkhorn and staghorn coral are likely to become further reduced. Furthermore, a number of local extirpations is likely to occur within the next 30 years. The major threats to the species' persistence (i.e., disease, elevated sea surface temperature, and hurricanes) are severe, unpredictable, likely to increase in the foreseeable future, and, at current levels of knowledge, unmanageable.

Consideration of Causal Factors Relevant to Listing

Section 4 of the ESA and regulations promulgated to implement the listing provisions of the ESA (50 CFR part 424) set forth the procedures for adding species to the Federal list. Section 4 requires that listing determinations be based solely on the best scientific and commercial data available, without consideration of possible economic or other impacts of such determinations. Section 4(a)(1) of the ESA provides that the Secretary of Commerce shall determine whether any species is endangered or threatened because of any of five specified factors; our analysis of these factors and their relevance to the status of elkhorn and staghorn corals is briefly discussed below.

The BRT categorized threats to *A. palmata* and *A. cervicornis* as sources, stressors, or responses. Sources were considered as natural or anthropogenic processes that create stressful conditions for organisms (e.g., climate variability and change, coastal development). A stressor is the specific condition that causes stress to the organisms (e.g., elevated sea surface temperature or sediment runoff). The response of the organisms to that stressor is often in the form of altered physiological processes (e.g., bleaching, reduced fecundity or growth) or mortality. The BRT tabulated and then classified each stressor into one, or more, of the ESA section 4(a)(1) factors. We determined that the major stressors affecting the status of the two species are disease, elevated sea surface temperature, and hurricanes. Other stressors identified as contributing to the status of the species, given their extremely reduced population sizes, are sedimentation, anthropogenic abrasion and breakage, competition, excessive nutrients, predation, contaminants, loss of genetic diversity, African dust, elevated carbon dioxide levels, and sponge boring. These stressors were categorized under several of the causal factors identified in section 4(a)(1) of the ESA:

1. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Seven stressors (natural abrasion and breakage, anthropogenic abrasion and breakage, sedimentation, persistent elevated sea surface temperature, competition, excessive nutrients and sea level rise) were identified as affecting both species through present or threatened destruction, modification, or curtailment of their habitats or ranges. These stressors consist of destruction or disruption of substrate to grow on, and modification or alteration of the aquatic environment in which the corals live. Although habitat loss has occurred, the range of these two species has not been reduced, to date. However, because of the species' extremely low abundance, local extirpations are possible in the foreseeable future, which would likely lead to a reduction in range.

Elkhorn and staghorn corals, like most corals, require hard, consolidated substrate (i.e., attached, dead coral skeleton) for their larvae to settle or fragments to reattach. When the substrate is physically disturbed and when the attached corals are broken and reduced to unstable rubble or sediment, settlement and re-attachment habitat is lost. The most common causes of natural abrasion and breakage are severe storm events, including hurricanes. Severe storms can lead to the complete destruction and mortality of entire reef zones dominated by these species as well as destruction of the habitat on which these species depend (i.e., by covering settlement, reattachment, and growing surfaces with unstable rubble and sediment). Major storms have physically disrupted reefs throughout the wider Caribbean and are among the primary causes of elkhorn and staghorn coral habitat loss in certain locations.

Human activity in coral reef areas is another source of abrasion and breakage likely to result in destruction of *A. palmata* and *A. cervicornis* habitat. These activities include marine transportation, boating, anchoring, fishing, recreational SCUBA diving and snorkeling, and an increasing variety of maritime construction and development activities. The shallow habitat requirements of these two species make them especially susceptible to impacts, such as abrasion and breakage, from these anthropogenic activities, which have been documented as causing effects similar to severe storms, though usually on a smaller scale.

Acropora spp. also appear to be particularly sensitive to shading effects resulting from increased sediments in the water column. Because these corals are almost entirely dependent upon sunlight for nourishment, they are much more susceptible to increases in water turbidity and sedimentation than other coral species. Increased sediments in the water column can result from, among other things, land development and run-off, dredging and disposal activities, and major storm events. Sedimentation has also been documented to impede larval settlement.

Optimal water temperatures for elkhorn and staghorn coral range from 25 to 29° C, with the species being able to tolerate higher temperatures for a brief period of time (i.e., days to weeks, depending on the magnitude of the temperature elevation). Documented increases in global air and sea surface temperatures make shallow reef habitats especially vulnerable. Water with temperatures above the optimal range does not provide suitable habitat for either of the two species.

Because of their fast growth rates (relative to other corals) and canopy-forming morphology, *A. palmata* and *A. cervicornis* are known to be competitive dominants within coral communities, in terms of their ability to overgrow other stony and soft corals. However, other types of reef benthic organisms (e.g., algae) have higher growth rates and, under certain conditions are expected to outcompete *Acropora* spp. Under current oceanographic conditions in shallow, coastal areas (i.e., elevated nutrients), algae are typically out-competing both *Acropora* spp. for space on the reef. The consequence of this

competition is that less habitat is available for the two species to colonize.

Nutrients are added to coral reefs from both point sources (readily identifiable inputs where pollutants are discharged to receiving surface waters from a pipe or drain) and non-point sources (inputs that occur over a wide area and are associated with particular land uses). Generally, coral reefs have been considered nutrient-limited systems, meaning levels of accessible nitrogen and phosphorus limit the rates of plant growth. When nutrients levels are raised in such a system, plant growth can be expected to increase; the widespread increase in algae abundance on Caribbean coral reefs has been attributed to nutrient enrichment. As a result of this increased algal growth, less habitat is available for elkhorn and staghorn coral larval settlement or fragment reattachment. Thus, destruction, modification, and curtailment of elkhorn and staghorn corals' habitat has been identified as contributing to these species' threatened status.

2. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Only one stressor under this ESA section 4(a)(1) factor was identified as having the potential to impact the status of elkhorn and staghorn corals: overharvest for curio/aquarium. Given current regulation and management, overutilization does not appear to be a significant threat to either of these two species or a factor contributing to the status of either species.

3. Disease or Predation

Diseases were identified as the single largest cause of both elkhorn and staghorn coral mortality and decline. These stressors present the greatest threat to the two species' persistence and recovery, given their widespread, episodic, and unpredictable occurrence and high resultant mortality. The threat from these stressors is exacerbated by the fact that coral diseases, though clearly severe, are poorly understood in terms of etiology and possible links to anthropogenic sources. Although the number or identity of specific disease conditions affecting Atlantic *Acropora* spp. and the causal factors involved are uncertain, several generalizations are evident. The total number, prevalence, and geographic range of impact of described Acroporid-specific diseases have increased over the past decade, and this trend is expected to continue. Additionally, diseases continue to have major impacts on population abundance and colony condition of both elkhorn and staghorn coral. Diseases constitute an ongoing, major threat about which specific mechanistic and predictive understanding is largely lacking, thereby currently preventing effective control or management strategies. Diseases affecting these species may prevent or delay their recovery in the wider Caribbean.

Acropora spp. are also subject to invertebrate (e.g., polychaete, mollusk, echinoderm) and vertebrate (fish) predation, but ''plagues'' of coral predators such as the Indo-Pacific crown-of-thorns starfish outbreaks (*Acanthaster planci*) have not been described in the Atlantic. Predation may directly cause mortality or injuries leading to invasion of other biota (e.g., algae, boring sponges). Thus, predation, while apparently much less than that of disease, is also contributing to the threatened status of these species.

4. Inadequacy of Existing Regulatory Mechanisms

We evaluated existing regulatory mechanisms directed at managing threats to elkhorn and staghorn corals. Most existing regulatory mechanisms are not specific to these two coral species but were promulgated to manage corals or coral reefs in general. While the impacts of many stressors were determined to be slightly reduced as a result of implementation of existing regulations, none were totally abated. For example, the Fishery Management Plan for Coral and Coral Reefs of the Gulf of Mexico and South Atlantic (under the Magnuson-Stevens Fishery Conservation and Management Act) protects all corals on the seabed in U.S. Federal waters from harvest, sale, and destruction from fishing related activities. However, in some cases, elkhorn and staghorn corals are incidentally destroyed during fishing practices, and, therefore, the regulation does not fully abate the threat from damaging fishing practices.

The major threats to these species' persistence (i.e., disease, elevated sea surface temperature, and hurricanes) are severe, unpredictable, have increased over the past 3 decades, and, at current levels of knowledge, the threats are unmanageable. There is no apparent indication these trends will change in the foreseeable future. No regulatory mechanisms are currently in place, or expected to be in place in the foreseeable future, to control or prevent these major threats. Therefore, the inadequacy of existing regulatory mechanisms is contributing to the threatened status of these species.

5. Other Natural or Manmade Factors Affecting Its Continued Existence

We identified 11 other stressors with the potential to impact the status of elkhorn and staghorn corals: Elevated sea surface temperature, competition, elevated nutrients, sedimentation, sea level rise, abrasion and breakage, contaminants, loss of genetic diversity, African dust, elevated carbon dioxide, and sponge boring. Many of these stressors are the same as those identified in the first factor (habitat destruction) because the same mechanisms can cause direct impacts to the organisms in addition to destroying or disrupting their habitat. Impacts from some of these stressors are complex, resulting in synergistic habitat impacts.

Elevation of the sea surface temperature in tropical and subtropical oceans stresses *Acropora* spp. Documented increases in global air and sea temperatures make shallow reef habitats especially vulnerable. When exposed to elevated sea surface temperatures, elkhorn and staghorn corals expel the symbiotic algae on which they depend for a photosynthetic contribution to their energy budget, enhancement of calcification, and color. This process is called bleaching. Temperature-induced bleaching affects growth, maintenance, reproduction, and survival of these two species. As summarized in the status review report, bleaching has been documented as the source of extensive elkhorn and staghorn mortality in numerous locations throughout their ranges. The extent and impact of bleaching is a function of the magnitude and duration of the increase in temperature. Mortality to *Acropora* spp. from a bleaching event can occur in a matter of days to weeks, though there is the potential for the coral to re-acquire the symbiotic algae and not suffer permanent damage. We conclude that temperature-induced bleaching is contributing to the status of elkhorn and staghorn corals.

Along with elevated sea surface temperature, atmospheric carbon dioxide levels have increased in the last century, and there is no apparent evidence the trend will not continue. As atmospheric carbon dioxide is dissolved in surface seawater, seawater becomes more acidic, shifting the balance of inorganic carbon away from carbon dioxide and carbonate toward bicarbonate. This shift decreases the ability of corals to calcify because corals are thought to use carbonate, not bicarbonate, to build their aragonite skeletons. Experiments have shown a reduction of coral calcification in response to elevated carbon dioxide

levels; therefore, increased carbon dioxide levels in seawater may be contributing to the status of the two species.

Rapid sea level rise was identified as a potential threat to these species; however, under current conditions, we conclude that this particular stressor is not affecting either of the two species' status.

Increased sediments in the water column can result from, among other things, land development and run-off; dredging and disposal activities; and major storm events. In addition to the habitat impacts, sedimentation has been shown to cause direct physiological stress to elkhorn and staghorn corals. Direct deposition of sediments on coral tissue and shading due to sediments in the water column have caused tissue death in these species; therefore, sedimentation is contributing to the status of the two species.

In addition to the habitat impacts described above, natural and anthropogenic sources of abrasion and breakage (e.g., severe storms, vessel groundings, fishing debris) cause direct mortality to elkhorn and staghorn corals. Their branching morphology makes them particularly susceptible to breakage. The creation of fragments through breakage is a natural means of asexual reproduction for these species. However, the fragments must encounter suitable habitat to be able to reattach and create a new colony. Under current conditions, suitable habitat is often not available, and entire elkhorn and staghorn reefs have been destroyed after these events; therefore, abrasion and breakage are contributing to the status of these two species.

Many of the stressors identified as contributing to the status of elkhorn and staghorn coral are minor in intensity, but have an impact because of the extremely reduced population sizes of these coral species. For example, direct competition with other species, skeleton bioerosion by clionid sponges, and effects from African dust all are minor stressors, but they are exacerbating the species' current status.

The severity of all of the stressors (natural or manmade) ranges from high (e.g., elevated sea surface temperature) to low (e.g., sponge boring). Some stressors (e.g., contaminants and loss of genetic diversity) are known to be adversely affecting these two species, but the magnitude of their effect on the status of elkhorn and staghorn corals is undetermined and understudied.

No one factor alone is responsible for the threatened status of elkhorn and staghorn corals; we conclude that four of the five ESA section 4(a)(1) factors (all but overutilization) to some degree are contributing to the threatened status of the species. Although the interaction of individual stressors is difficult to study in a rigorous, controlled experiment, it is clear *Acropora* spp. corals are facing myriad stressors that act simultaneously on the species. Some of these stressors, such as contaminants or novel pathogens, might be new and outside of the species' evolutionary experience. It is also clear that the corals are experiencing many of these stressors in new and severe combinations. It is logical to conclude that the synergistic effects of these combined stressors will continue.

Efforts Being Made to Protect Elkhorn and Staghorn Corals

In making listing determinations, section 4(b)(1) of the ESA requires us to take into account the efforts, if any, being made by states or foreign nations to protect the species and to give consideration to species which have been designated as requiring protection from unrestricted commerce by foreign nations or under international agreements or have been identified as in danger of extinction or likely to become so by any state or foreign nation. Acknowledging their reefs' extreme importance to the ecosystem, the State of Florida and Commonwealth of Puerto Rico protect all corals to varying extents; however, neither provide specific protection to elkhorn or staghorn corals. Additionally, all corals, including elkhorn and staghorn corals, are protected under the U.S.V.I. Indigenous and Endangered Species Act of 1990, and both species have been listed recently in the ''red book'' of threatened marine invertebrates of Colombia by a technical commission coordinated by the Ministry of the Environment. *Acropora cervicornis* was considered a critically endangered species in Colombia, and *A. palmata* was included as endangered. Although certain governments offer specific protection to these two species, the measures are not sufficient to offset the impacts currently affecting elkhorn and staghorn corals.

All corals are listed under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which regulates international trade of species to ensure survival. Thus, a determination to include the two *Acropora* species on the federal list of endangered and threatened species would be consistent with state and international actions regarding these species.

Final Conclusions Regarding ESA Listing Status

After reviewing the public comments received, we find that there is no substantive information that would cause us to reconsider the extinction risk assessments of the BRT or our assessment of the factors causing the threatened status of these two corals. We believe that abundance and distribution of both elkhorn and staghorn coral are likely to become further reduced. Furthermore, a number of local extirpations is likely to occur within the next 30 years. The major threats (e.g., disease, elevated sea surface temperature, and hurricanes) to these species' persistence are severe, unpredictable, likely to increase in the foreseeable future, and, at current levels of knowledge, unmanageable. We believe that elkhorn and staghorn coral are not currently in danger of extinction throughout their ranges. However, they are likely to become so within the foreseeable future because of a combination of four of the five factors listed in section 4(a)(1) of the ESA, and this status is not being ameliorated by efforts to protect the species by state or foreign governments. Accordingly, the two species warrant listing as threatened.

Prohibitions and Protective Regulations

ESA section 9(a) take prohibitions (16 U.S.C. 1538(a)(1)(B)) apply to all species listed as endangered. In the case of threatened species, section 4(d) of the ESA directs the Secretary to issue regulations he considers necessary and advisable for the conservation of the species. The 4(d) protective regulations may prohibit, with respect to threatened species, some or all of the acts which section 9(a) of the ESA prohibits with respect to endangered species. These section 9(a) prohibitions and section 4(d) regulations apply to all individuals, organizations, and agencies subject to U.S. jurisdiction. Subsequent to this rulemaking, we will evaluate the necessity and advisability of proposing protective regulations pursuant to section 4(d) of the ESA for these two coral species.

Identification of Those Activities that Would Constitute a Violation of Section 9 of the ESA

On July 1, 1994, we and the FWS published a policy requiring us 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 ESA (59 FR 34272). The intent of this policy is to increase public

awareness of the effect of listings on proposed and ongoing activities within the species' range. However, because elkhorn and staghorn corals are being listed as threatened, section 9 ''take'' prohibitions are not applicable.

Peer Review Policies

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 Bulletin, implemented under the Information Quality Act (Public Law 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.

Pursuant to our 1994 policy on peer review (59 FR 34270; July 1, 1994), we have solicited the expert opinions of at least three appropriate and independent specialists regarding pertinent scientific or commercial data and assumptions relating to the taxonomy, genetics, and supportive biological and ecological information for species under consideration for listing. We conclude that these expert reviews satisfy the requirements for ''adequate [prior] peer review'' contained in the Bulletin (sec. II.2.).

Critical Habitat

''Critical habitat'' is defined in section 3 of the ESA (16 U.S.C. 1532(3)) as: ''(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the [ESA], on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed ... upon a determination by the Secretary that such areas are essential for the conservation of the species.'' ''Conservation'' is defined as the use of all methods and procedures necessary to bring the species to the point at which the measures of the ESA are no longer necessary.

Section 4(a)(3)(A) of the ESA requires that, to the maximum extent prudent and determinable, critical habitat be designated concurrently with the listing of a species. Section 4(b)(6)(C)(ii) of the ESA provides for additional time to promulgate a critical habitat designation if such designation is not determinable at the time of final listing of a species. Designations of critical habitat must be based on the best scientific data available and must take into consideration the economic, national security, and other relevant impacts of specifying any particular area as critical habitat.

The designation of critical habitat is not determinable at this time due to the extremely complex biological and physical requirements of these two Acroporid species. Although we have gathered information through the status review and public comment processes, we currently do not have enough information to determine which of these features are essential to the conservation of elkhorn and staghorn corals and may require special management considerations or protection. We will continue to gather and review other ongoing studies on the habitat use and requirements of elkhorn and staghorn corals to attempt to identify these features. Additionally, we need more time to gather the information needed to perform the required analyses of the impacts of the designation. Once areas containing these features are identified and mapped, and economic, national security, and other relevant impacts are considered, we will publish, in a separate rule, to the maximum extent prudent, a proposed designation of critical habitat for elkhorn and staghorn corals.

Information Solicited

To ensure subsequent rulemaking resulting from this Final Rule will be as accurate and effective as possible, we are soliciting information from the public, other governmental agencies, the scientific community, industry, and any other interested parties. Specifically, we are interested in information that will inform the ESA section 4(d) rule making and the designation of critical habitat for elkhorn and staghorn corals, including: (1) current or planned activities within the range of these two species and their possible impact on these species; (2) necessary prohibitions on take to promote the conservation of these two species; (3) evaluations describing the quality and extent of their habitats (occupied currently or occupied in the past, but no longer occupied); (4) information on areas that may qualify as critical habitat including those physical and biological features essential for the conservation of these two species; (5) activities that could be affected by an ESA section 4(d) rule and/or critical habitat designation; and (6) the economic costs and benefits likely to result from protective regulations and designation of critical habitat (see **DATES** and **ADDRESSES**).

Classification

National Environmental Policy Act

The 1982 amendments to the ESA, in section 4(b)(1)(A), restrict the information considered when assessing species for listing. Based on this limitation of criteria for a listing decision and the opinion in *Pacific Legal Foundation* v. *Andrus*, 675 F. 2d 825 (6th Cir.1981), we have concluded that ESA listing actions are not subject to the environmental impact assessment requirements of the National Environmental Policy Act.

Executive Order (E.O.) 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 rule is exempt from review under E.O. 12866. This final determination does not contain a collection of information requirement for the purposes of the Paperwork Reduction Act.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, we make the following findings: (a) This final rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon state, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)-(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide

funding'' and the state, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.'' The listing of a species does not impose a legally binding duty on non-Federal government entities or private parties. Under the ESA, the only regulatory effect of this final rule is that Federal agencies must ensure that their actions do not jeopardize the continued existence of any endangered or threatened species under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the listing of the species, the legally binding duty to avoid jeopardizing the continued existence of the species rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would listing the species shift the costs of the large entitlement programs listed above to state governments.

(b) Due to current public knowledge of coral protection in general and the prohibition on collection of these species, we do not anticipate that this final rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

E.O. 13132 - Federalism

E.O. 13132 requires agencies to take into account any federalism impacts of regulations under development. It includes specific consultation directives for situations where a regulation will preempt state law, or impose substantial direct compliance costs on state and local governments (unless required by statute). Neither of those circumstances is applicable to this final listing determination. In keeping with the intent of the Administration and Congress to provide continuing and meaningful dialogue on issues of mutual state and Federal interest, the proposed rule was provided to the relevant agencies in each state in which the subject species occurs, and these agencies were invited to comment. Their comments were addressed with other comments in the Summary of Comments Received section.

References

Acropora Biological Review Team. 2005. Atlantic Acropora Status Review Document. Report to National Marine Fisheries Service, Southeast Regional Office. March 3, 2005. 152 p + App.

List of Subjects in 50 CFR Parts 223

Endangered and threatened species, Exports, Imports, Transportation.

Dated: May 4, 2006.

William T. Hogarth,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

■ For reasons set out in the preamble, 50 CFR part 223 is amended as follows:

PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

■ 1. The authority citation for part 223 is revised 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. Revise § 223.102 to read as follows:

§ 223.102 Enumeration of threatened marine and anadromous species.

The species determined by the Secretary of Commerce to be threatened pursuant to section 4(a) of the Act, as well as species listed under the Endangered Species Conservation Act of 1969 by the Secretary of the Interior and currently under the jurisdiction of the Secretary of Commerce, are listed in the table below. The table lists the common and scientific names of threatened species, the locations where they are listed, and the **Federal Register** citations for the listings and critical habitat designations.

BILLING CODE 3510–22–S

Species[1]		Where Listed	Citation(s) for Listing Determination(s)	Citation for Critical Habitat Designation
Common name	Scientific name			
Marine Mammals				
Guadalupe fur seal	Arctocephalus townsendi	Wherever found – U.S.A. (Farallon Islands of CA) south to Mexico (Islas Revillagigedo)	50 FR 51252; Dec 16, 1985	NA
Steller sea lion	Eumetopias jubatus	Eastern population, which consists of all Steller sea lions from breeding colonies located east of 144° W. longitude	55 FR 13488; Apr 10, 1990 55 FR 50006; Dec 4, 1990 62 FR 30772; Jun 5, 1997	58 FR 45278; Aug 27, 1993 64 FR 14067; Mar 23, 1999
Sea Turtles				
green turtle[2]	Chelonia mydas	Wherever found, except where listed as endangered under §224.101(c); circumglobal in tropical and temperate seas and oceans	43 FR 32808; Jul 28, 1978	63 FR 46701; Sep 2, 1998 64 FR 14067; Mar 23, 1999
loggerhead turtle[2]	Caretta caretta	Wherever found; circumglobal in tropical and temperate seas and oceans	43 FR 32808; Jul 28, 1978	NA
olive ridley turtle[2]	Lepidochelys olivacea	Wherever found, except where listed as endangered under §224.101(c); circumglobal in tropical and temperate seas.	43 FR 32808; Jul 28, 1978	NA
Fishes				
green sturgeon - southern DPS	Acipenser medirostris	U.S.A., CA. The southern DPS includes all spawning populations of green sturgeon south of the Eel River (exclusive), principally including the Sacramento River green sturgeon spawning population.		

Gulf sturgeon	Acipenser oxyrinchus desotoi	Wherever found.	56 FR 49653; Sep 30, 1991	68 FR 13370; Mar 19, 2003
Ozette Lake sockeye	Oncorhynchus nerka	U.S.A.- WA, including all naturally spawned populations of sockeye salmon in Ozette Lake and streams and tributaries flowing into Ozette Lake, Washington, as well as two artificial propagation programs: the Umbrella Creek and Big River sockeye hatchery programs.	64 FR 14528; Mar 25, 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005
Central Valley spring-run Chinook	Oncorhynchus tshawytscha	U.S.A.- CA, including all naturally spawned populations of spring-run Chinook salmon in the Sacramento River and its tributaries in California, including the Feather River, as well as the Feather River Hatchery spring-run Chinook program.	64 FR 50394; Sep 16, 1999 70 FR 37160; Jun 28, 2005	70 FR 52488; Sep 2, 2005
California Coastal Chinook	Oncorhynchus tshawytscha	U.S.A.- CA, including all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River to the Russian River, California, as well as seven artificial propagation programs: the Humboldt Fish Action Council (Freshwater Creek), Yager Creek, Redwood Creek, Hollow Tree, Van Arsdale Fish Station, Mattole Salmon Group, and Mad River Hatchery fall-run Chinook hatchery programs.	64 FR 50394; Sep 16, 1999 70 FR 37160; Jun 28, 2005	70 FR 52488; Sep 2, 2005

Upper Willamette River Chinook	Oncorhynchus tshawytscha	U.S.A.- OR, including all naturally spawned populations of spring-run Chinook salmon in the Clackamas River and in the Willamette River, and its tributaries, above Willamette Falls, Oregon, as well as seven artificial propagation programs: the McKenzie River Hatchery (Oregon Department of Fish and Wildlife (ODFW) stock #24), Marion Forks/North Fork Santiam River (ODFW stock #21), South Santiam Hatchery (ODFW stock #23) in the South Fork Santiam River, South Santiam Hatchery in the Calapooia River, South Santiam Hatchery in the Mollala River, Willamette Hatchery (ODFW stock #22), and Clackamas hatchery (ODFW stock #19) spring-run Chinook hatchery programs.	64 FR 14308; Mar. 24 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005
Lower Columbia River Chinook	Oncorhynchus tshawytscha	U.S.A.- OR, WA, including all naturally spawned populations of Chinook salmon from the Columbia River and its tributaries from its mouth at the Pacific Ocean upstream to a transitional point between Washington and Oregon east of the Hood River and the White Salmon River, and includes the Willamette River to Willamette Falls, Oregon, exclusive of spring-run Chinook salmon in the Clackamas River, as well as seventeen artificial	64 FR 14308; Mar. 24, 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005

		propagation programs: the Sea Resources Tule Chinook Program, Big Creek Tule Chinook Program, Astoria High School (STEP) Tule Chinook Program, Warrenton High School (STEP) Tule Chinook Program, Elochoman River Tule Chinook Program, Cowlitz Tule Chinook Program, North Fork Toutle Tule Chinook Program, Kalama Tule Chinook Program, Washougal River Tule Chinook Program, Spring Creek NFH Tule Chinook Program, Cowlitz spring Chinook Program in the Upper Cowlitz River and the Cispus River, Friends of the Cowlitz spring Chinook Program, Kalama River spring Chinook Program, Lewis River spring Chinook Program, Fish First spring Chinook Program, and the Sandy River Hatchery (ODFW stock #11) Chinook hatchery programs.	64 FR 14308; Mar. 24, 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005
Puget Sound Chinook	Oncorhynchus tshawytscha	U.S.A.- WA, including all naturally spawned populations of Chinook salmon from rivers and streams flowing into Puget Sound including the Straits of Juan De Fuca from the Elwha River, eastward, including rivers and streams flowing into Hood Canal, South Sound, North Sound and the Strait of Georgia in Washington, as well as twenty-six artificial propagation programs: the Kendal Creek Hatchery, Marblemount Hatchery		

		(fall, spring yearlings, spring subyearlings, and summer run), Harvey Creek Hatchery, Whitehorse Springs Pond, Wallace River Hatchery (yearlings and subyearlings), Tulalip Bay, Issaquah Hatchery, Soos Creek Hatchery, Icy Creek Hatchery, Keta Creek Hatchery, White River Hatchery, White Acclimation Pond, Hupp Springs Hatchery, Voights Creek Hatchery, Diru Creek, Clear Creek, Kalama Creek, George Adams Hatchery, Rick's Pond Hatchery, Hamma Hamma Hatchery, Dungeness/Hurd Creek Hatchery, Elwha Channel Hatchery Chinook hatchery programs.		
Snake River fall-run Chinook	Oncorhynchus tshawytscha	U.S.A.- OR, WA, ID, including all naturally spawned populations of fall-run Chinook salmon in the mainstem Snake River below Hells Canyon Dam, and in the Tucannon River, Grande Ronde River, Imnaha River, Salmon River, and Clearwater River, as well as four artificial propagation programs: the Lyons Ferry Hatchery, Fall Chinook Acclimation Ponds Program, Nez Perce Tribal Hatchery, and Oxbow Hatchery fall-run Chinook hatchery programs.	57 FR 14653; Apr 22, 1992 57 FR 23458; Jun 3, 1992 70 FR 37160; Jun 28, 2005	58 FR 68543; Dec 28, 1993
Snake River spring/summer-run	Oncorhynchus tshawytscha	U.S.A.- OR, WA, ID, including all naturally spawned populations of	57 FR 14653; Apr 22, 1992 57 FR 23458; Jun 3, 1992	58 FR 68543; Dec 28, 1993 64 FR 57399; Oct 25, 1999

Chinook		spring/summer-run Chinook salmon in the mainstem Snake River and the Tucannon River, Grande Ronde River, Imnaha River, and Salmon River subbasins, as well as fifteen artificial propagation programs: the Tucannon River conventional Hatchery, Tucannon River Captive Broodstock Program, Lostine River, Catherine Creek, Lookingglass Hatchery, Upper Grande Ronde, Imnaha River, Big Sheep Creek, McCall Hatchery, Johnson Creek Artificial Propagation Enhancement, Lemhi River Captive Rearing Experiment, Pahsimeroi Hatchery, East Fork Captive Rearing Experiment, West Fork Yankee Fork Captive Rearing Experiment, and the Sawtooth Hatchery spring/summer-run Chinook hatchery programs.	70 FR 37160; Jun 28, 2005	
Southern Oregon/Northern California Coast coho	Oncorhynchus kisutch	U.S.A.- CA, OR, including all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Punta Gorda, California, as well three artificial propagation programs: the Cole Rivers Hatchery (ODFW stock #52), Trinity River Hatchery, and Iron Gate Hatchery coho hatchery programs.	62 FR 24588; May 6, 1997 70 FR 37160; Jun 28, 2005	64 FR 24049; May 5, 1999
Lower Columbia	Oncorhynchus kisutch	U.S.A.- OR, WA, including all	70 FR 37160; Jun 28, 2005	NA

River coho	naturally spawned populations of coho salmon in the Columbia River and its tributaries in Washington and Oregon, from the mouth of the Columbia up to and including the Big White Salmon and Hood Rivers, and includes the Willamette River to Willamette Falls, Oregon, as well as twenty-five artificial propagation programs: the Grays River, Sea Resources Hatchery, Peterson Coho Project, Big Creek Hatchery, Astoria High School (STEP) Coho Program, Warrenton High School (STEP) Coho Program, Elochoman Type-S Coho Program, Elochoman Type-N Coho Program, Cathlamet High School FFA Type-N Coho Program, Cowlitz Type-N Coho Program in the Upper and Lower Cowlitz Rivers, Cowlitz Game and Anglers Coho Program, Friends of the Cowlitz Coho Program, North Fork Toutle River Hatchery, Kalama River Type-N Coho Program, Kalama River Type-S Coho Program, Lewis River Type-N Coho Program, Lewis River Type-S Coho Program, Fish First Wild Coho Program, Fish First Type-N Coho Program, Syverson Project Type-N Coho Program, Eagle Creek National Fish Hatchery, Sandy Hatchery, and the Bonneville/Cascade/Oxbow

		complex coho hatchery programs.		
Columbia River chum	Oncorhynchus keta	U.S.A.- OR, WA, including all naturally spawned populations of chum salmon in the Columbia River and its tributaries in Washington and Oregon, as well as three artificial propagation programs: the Chinook River (Sea Resources Hatchery), Grays River, and Washougal River/Duncan Creek chum hatchery programs.	64 FR 14508; Mar. 25, 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005
Hood Canal summer-run chum	Oncorhynchus keta	U.S.A.- WA, including all naturally spawned populations of summer-run chum salmon in Hood Canal and its tributaries as well as populations in Olympic Peninsula rivers between Hood Canal and Dungeness Bay, Washington, as well as eight artificial propagation programs: the Quilcene NFH, Hamma Hamma Fish Hatchery, Lilliwaup Creek Fish Hatchery, Union River/Tahuya, Big Beef Creek Fish Hatchery, Salmon Creek Fish Hatchery, Chimacum Creek Fish Hatchery, and the Jimmycomelately Creek Fish Hatchery summer-run chum hatchery programs.	64 FR 14508; Mar. 25, 1999 70 FR 37160; Jun 28, 2005	70 FR 52630; Sep 2, 2005
South-Central California Coast Steelhead	Oncorhynchus mykiss	U.S.A.- CA, including all naturally spawned populations of steelhead (and their progeny) in streams from the Pajaro River (inclusive), located in Santa Cruz	62 FR 43937; Aug 18, 1997 71 FR 834; January 5, 2006	70 FR 52488; Sep 2, 2005

		County, California, to (but not including) the Santa Maria River.		
Central California Coast Steelhead	Oncorhynchus mykiss	U.S.A.- CA, including all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, Californian (inclusive), and the drainages of San Francisco and San Pablo Bays eastward to the Napa River (inclusive), Napa County, California. Excludes the Sacramento-San Joaquin River Basin of the Central Valley of California.	62 FR 43937; Aug 18, 1997 71 FR 834; January 5, 2006	70 FR 52488; Sep 2, 2005
California Central Valley Steelhead	Oncorhynchus mykiss	U.S.A.- CA, including all naturally spawned populations of steelhead (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries.	63 FR 13347; Mar. 19, 1998 71 FR 834; January 5, 2006	70 FR 52488; Sep 2, 2005
Northern California Steelhead	Oncorhynchus mykiss	U.S.A.- CA, including all naturally spawned populations of steelhead (and their progeny) in California coastal river basins from Redwood Creek in Humboldt County, California, to the Gualala River, inclusive, in Mendocino County, California.	65 FR 36074; June 7, 2000 71 FR 834; January 5, 2006	70 FR 52488; Sep 2, 2005

Upper Willamette River Steelhead	Oncorhynchus mykiss	U.S.A.- OR, including all naturally spawned populations of winter-run steelhead in the Willamette River, Oregon, and its tributaries upstream from Willamette Falls to the Calapooia River, inclusive.	62 FR 43937; Aug 18, 1997 71 FR 834; January 5, 2006	70 FR 52630; Sep 2, 2005
Lower Columbia River Steelhead	Oncorhynchus mykiss	U.S.A.- OR, WA, including all naturally spawned populations of steelhead (and their progeny) in streams and tributaries to the Columbia River between the Cowlitz and Wind Rivers, Washington, inclusive, and the Willamette and Hood Rivers, Oregon, inclusive. Excluded are steelhead in the upper Willamette River Basin above Willamette Falls, Oregon, and from the Little and Big White Salmon Rivers, Washington.	63 FR 13347; Mar 19, 1998 71 FR 834; January 5, 2006	70 FR 52630; Sep 2, 2005
Middle Columbia River Steelhead	Oncorhynchus mykiss	U.S.A.- OR, WA, including all naturally spawned populations of steelhead in streams from above the Wind River, Washington, and the Hood River, Oregon (exclusive), upstream to, and including, the Yakima River, Washington. Excluded are steelhead from the Snake River Basin.	57 FR 14517; Mar 25, 1999. 71 FR 834; January 5, 2006	70 FR 52630; Sep 2, 2005
Snake River Basin Steelhead	Oncorhynchus mykiss	U.S.A.- OR, WA, ID, including all naturally spawned populations of steelhead (and their progeny) in streams in the Snake River Basin of southeast Washington,	62 FR 43937; Aug 18, 1997 71 FR 834; January 5, 2006	70 FR 52630; Sep 2, 2005

		northeast Oregon, and Idaho.		
Marine Invertebrates				
Elkhorn coral	Acropora palmata	Wherever found. Includes United States – Florida, Puerto Rico, U.S. Virgin Islands, Navassa; and wider Caribbean – Belize, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, Venezuela and all the islands of the West Indies.	[Insert FEDERAL REGISTER page and date citation]	NA
Staghorn coral	Acropora cervicornis	Wherever found. Includes United States – Florida, Puerto Rico, U.S. Virgin Islands, Navassa; and wider Caribbean – Belize, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, Venezuela and all the islands of the West Indies.	[Insert FEDERAL REGISTER page and date citation]	NA
Marine Plants				
Johnson's seagrass	Halophila johnsonii	Wherever found. U.S.A. - Southeastern FL between Sebastian Inlet and north Biscayne Bay.	63 FR 49035; Sep 14, 1998	65 FR 17786; Apr 5, 2000

[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).

[2] Jurisdiction for sea turtles by the Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, is limited to turtles while in the water.

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