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March 2, 2010

VIA ELECTRONIC MAIL

Mr. Eric Schwaab
Assistant Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Re: Pending Decision to Identify Distinct Population Segments and Change Status of Loggerhead Sea Turtles from Threatened to Endangered

Dear Mr. Schwaab:

We are writing on behalf of the Fisheries Survival Fund, an organization whose participants number approximately three hundred full-time, limited access scallop vessels from Massachusetts to Virginia. We understand that the National Marine Fisheries Service ("NMFS") has committed to making a final decision responding to Oceana, Inc.'s and the Center for Biological Diversity's petition under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, to designate "distinct population segments" ("DPS") and to uplist loggerhead turtles from threatened to endangered by March 8, 2010.[1] While we take no position on the DPS issue, we strongly urge NMFS to find the status change to be not warranted based on the 2009 Status Review.[2]

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[1] The petitions also asks NMFS to designate critical habitat for loggerhead turtles. As this process requires the agency to consider economic impacts, *see* 16 U.S.C. § 1533(b)(2), and given the wide geographic, indeed, world-wide, distribution of this species, we would hope that if the agency initiates a critical habitat designation process, that such process be open and public with ample opportunities for input by affected constituencies.

[2] Loggerhead Biological Review Team, *Loggerhead Sea Turtle* (Caretta caretta) *2009 Status Review Under the U.S. Endangered Species Act* (Aug. 2009) ("2009 Status Review").

As an initial matter, it is important to note that the scallop industry, through the FSF in partnership with Coonemessett Farm Foundation, the Virginia Institute of Marine Science, and NMFS itself, has been undertaking cutting edge research on sea turtles. In addition to the proactive work on gear modifications, including a new chain mat designed to protect turtles from harm and a new dredge designed to minimize impacts of sea floor encounters, FSF's partners have been studying turtle behavior and populations. This work includes videotaping turtles with remotely operated vehicles (while also collecting environmental information), oceanographic and aerial surveys, and tagging two juvenile turtles with sophisticated satellite transponders, adding greatly to our understanding of this species.

This research, coupled with observations of fulltime fishermen, suggest the in-water loggerhead population is large and likely expanding. If borne out through in-water surveys, this result should not be surprising given the confluence of dramatic decreases in overall fishing effort and increasing protective measures implemented since 1978 when loggerheads were first listed. As to the former, declines in the number of fishing vessels and overall effort increased significantly with the passage of the Sustainable Fisheries Act of 1996, P.L. 04-297, 110 Stat. 3617 (Oct. 11, 1996), and, more recently, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, P.L. 109-479, 120 Stat. 3575 (Jan. 12, 2007).

Meanwhile, turtle conservation efforts over this period have mushroomed. Not only were turtle excluder devices ("TEDs") mandated for shrimpers, and their use expanded to other fisheries, their designs have improved and large time/area closures for the shrinking pelagic longline fleet (the most recent of which in the Gulf of Mexico) have been implemented. Additional efforts include new measures like those described above for scallopers and improved protection for nesting females, their nests, and hatchlings implemented by states and the federal government.

Nesting beach surveys cannot provide convincing evidence of impending danger of extinction necessary to support an uplisting. These do not capture recent conservation measures, and assess only a fraction of the overall population (mature females). Nor does 2009 Status Review's threat assessment adequately characterize current threats, particularly as it does not appropriately capture or characterize ever-improving and expanding conservation efforts. Most importantly, neither approach provides a temporal dimension—*i.e.*, how long to extinction—that, as explained below, is critical to determining the extent of "danger of extinction."

Rather than a change in legal status, what is desperately needed is an annual, in-water loggerhead turtle abundance survey of substantial duration; an updated and quantitative threat assessment accounting for changes in fisheries impacting the species; and research on the effectiveness existing conservation measures and improvements to existing, and development of new, technologies. Until these are accomplished, the best available scientific and commercial data do not support a change in status of loggerhead turtles under the ESA to endangered.

FSF will expand on these points, incorporating the relevant legal standards governing NMFS' current review.

I. Brief Discussion of Legal Considerations

The standard for determining whether a petition to change the status of listed species is warranted is whether "the status review provides *convincing information* to conclude that a proposal is warranted."[3] "Endangered species" is defined as "any species which is danger of extinction throughout all or a significant portion of its range, while a "threatened species" is one "likely to become an endangered species within the foreseeable future." 16 U.S.C. § 1532(6), (20).

In making this determination, not only must NMFS utilize the best scientific and commercial data, it must also "tak[e] into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction; or on the high seas." *Id.* § 1533(b)(1)(A). This inquiry includes myriad conservation efforts undertaken not only by NMFS itself, but those of other nations, various states, and other federal agencies.

The key questions are whether convincing evidence exists showing loggerheads "in danger of extinction" and whether such extinction is likely to be either worldwide or only over some range determined by NMFS to be significant. As to the first, there is not much case law defining the meaning of "danger of extinction." It would appear, however, that a negative population trend, standing alone, would not suffice. Any negative trend would result in extinction (or quasi-extinction) over some period if no other factors were taken into account. Indeed, there are nations with negative population growth, but no one would assume from that that humans are in danger of extinction in a significant portion of their range. Rather, the critical question relating to danger is the imminence of the threat and the existence of factors to mitigate such threat.

That is why Congress requires NMFS to examine efforts underway to avoid extinction, and why courts look at timeframes sufficient to reasonably gauge the threat. Thus, in *Oregon Natural Resources Council v. Daley*, 6 F. Supp. 2d 1139 (D. Ore 1998), the court found NMFS to have acted arbitrarily when it found that a unit of coho salmon was not likely to become eligible for ESA listing over only a two year period, by which time the state was expected to enact protective measures. *Id.* at 1150-51. While that court was reviewing NMFS' decision not to list the species as "threatened" and was interpreting the meaning of "foreseeable future," its holding applies equally to determining the timeframe for considering the danger of extinction within the meaning of the ESA's "endangered" definition.

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[3] U.S. Fish and Wildlife Service & NMFS, "Endangered Species Petition Management Guidance" at 13, § III(C)(1)(b)(2) (July 1996) (emphasis added).

The court in *Oregon Resources Council* stated:

> This court need not decide whether the "foreseeable future" for coho salmon is 30 or 100 years because it is clear that the NMFS only determined that the Oregon Coast ESU would not become endangered within the next two years, falling far short of any reasonable definition of the "foreseeable future."

Id. at 1151. Likewise, it is unreasonable to determine that a population is in danger of extinction if such extirpation lies fifty or a hundred years in the future. Such a time frame allows ample time for intervention to avoid the "danger." In other words, if functional extinction is well off in the foreseeable future, then a stock may only be considered threatened under the ESA because the danger of extinction is minimal and the stock, at most, is only likely to become endangered.

Consistently, when the impact of the scallop fishery on loggerhead turtles was last assessed, NMFS undertook analysis that looked at probability of extinction in terms of the time to quasi-extinction.[4] This report was conducted in the context of an ESA Section 7 consultation to determine whether the fishery could lead to "jeopardy." The basic findings, utilizing the same nesting trends as relied upon by the 2009 Status Review and very conservative estimates of takes by the scallop fishery, were that the likelihood of quasi-extinction over 75 year period was zero, and the likelihood at 100 years was only 0.01. *Id.* at 8.

Neither of the methodologies utilized in the 2009 Status Review provide any indication of the timeframe over which the speculative risk of extinction could occur. As such, this report cannot support a finding that loggerhead turtles qualify as an endangered species. This analysis is also lacking in any meaningful discussion of the other legally relevant factors, such as existence of protective regimes or the significance of any of the particular ranges to the species as a whole. In short, this report does not provide "convincing evidence" that an uplisting is warranted.

II. Brief Discussion of the Shortcomings of the 2009 Status Review

The fundamental flaw with the 2009 Status Review is that it relies on two new, assumption-dependent, and, as far as we are able to discern, non-peer reviewed approaches.[5] The first, an estimate of quasi-extinction risk, is based entirely on nesting beach surveys. As such, it measures only a fraction of the overall population and is necessarily backward-looking, given

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[4] *See* Merrick & Hass, *Analysis of Atlantic Sea Scallop* (Placopecten magellanicus) *Fishery Impacts on the North Atlantic Population of Loggerhead Sea Turtles* (Caretta caretta), NOAA Technical Mem. NMFS-NE-207 (Feb. 2008).

[5] We base this assumption on the fact that peer reviews of scientific and commercial data used to make listing determinations such as this are to be "made available for public review" and comment, *see* 59 Fed Reg. 34270 (July 1, 1994), yet no announcement of such reports or opportunities for comment appear to have been provided.

that the median age of first reproduction is 30 years. Virtually all nesting females captured by beach surveys were born before the species had the benefit of the protection of the ESA.

The second, the threat matrix analysis, incorporates out-dated, qualitative estimates of risk factors that, at least as to the scallop fishery, are mischaracterized and inaccurate.[6] The 2009 Status Review makes no attempt to quantify the NWA loggerhead population and ignores in-water surveys that largely show either increasing or no population trend.[7] Rather, the Review focuses on only a small fraction of the population, mature, nesting females. Most importantly, the unqualified statement that "the Northwest Atlantic Ocean DPS is currently at risk of extinction," *id.* at 164, provides no timeframe over which this risk may occur.[8] Notably, as well, this finding runs counter to other recent analyses loggerhead populations, like the recent scallop review and the 2009 Recovery Plan, each of which found no imminent danger of extinction.

In particular, as regards the so-called NWA DPS, no nesting survey extends more than 27 years,[9] while loggerheads do not mature until a median age of 30 years, and a maximum age of 41. *Id.* at 54. That means that these surveys are measuring a population of mature females that hatched, at the latest, during the early 1980s and mostly during the 1970s. Since that time, particularly during the 1990s, fishing fleets and effort have declined dramatically[10] and gear modifications, including turtle excluder devices, circle hooks, and scallop dredge chain mats, coupled with time

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[6] For instance, the report ignores the development and use of chain mats, which are proven to reduce harmful and lethal takes. *See* 2009 Status Review at 135 ("Turtles can be . . . captured in the bag where they may drown or be further injured or killed when the catch and heavy gear are dumped on the vessel deck"); *see also* Threat Tables, notes (the impact of chain mats was not considered), *available at* http://www.nmfs.noaa.gov/pr/recovery/threats_tables-final.xls.

[7] NMFS, *Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle* (Caretta caretta), Second Revision, at I-13 (Table 2) (Dec. 2008) ("2009 Recovery Plan").

[8] However, this finding can be contrasted with that for the Mediterranean Sea loggerhead DPS, which was found to be "at *immediate* risk of extinction." *Id.* at 165 (emphasis added).

[9] That survey covers the Northern Recovery Unit; no other survey includes data prior to 1989. *See* 2009 Status Review at 44 (Figure 4).

[10] Taking the scallop fishery as an example, annual area swept by the fishery declined 70 percent between 1990 and 2008, from 16,266 square nautical miles to 4,880. Framework 19 to the Atlantic Sea Scallop Fishery Management Plan Final Submission at 103 (Tables 38 & 39) (Dec. 19, 2007). Two fisheries with major loggerhead turtle interactions, the shrimp and highly migratory pelagic longline fisheries, are merely a fraction of their former size. *See, e.g.*, "Market Report – Shrimp Gulf shrimp fishery faces stagnant prices, declining fleet" (May 19, 2009) ("There are currently about 5,000 active Louisiana shrimpers, a 75 percent decline since the fishery's heyday in the mid-1980s. Texas has embarked on government-led programs to reduce its number of shrimp boats by purchasing the licenses of more than half the fleet, or 1,800 inshore shrimpers."), *available at* http://www.seafoodsource.com/MarketReport.aspx?id=4830.

area closures, have all contributed significantly towards reducing in-water turtle mortalities.[11] Hatchlings born in the past twenty years simply have a much improved chance of survival compared to the current nesting cohort.

This is a key issue. For instance, in discussing analytical difficulties late maturation presents for assessing future population trends, the NMFS Southeast Fisheries Science Center noted:

> A population of long-lived organisms, like loggerhead sea turtles, far from its stable stage distribution, may exhibit transient dynamics that make predicting near-term (within the next 100 years) population size difficult, and could mask the effects of any management actions [to benefit turtles] for a very long time.[12]

Even the 2009 Status Review notes, "A fundamental problem with restricting population trend analyses to nesting beach surveys is that they are unlikely to reflect changes in the entire population. This is because of the long time lag to maturity and the relatively small proportion of females that are reproducing for the first time on a nesting beach, at least in populations with high adult survival rates." 2009 Status Review at 84. In recognition of the these factors, which erode the utility of relatively short timeframes for detecting population trends from nesting surveys, the established recovery criteria for each of the recovery units call for sustained increases in nests over an entire generation time, or fifty years.[13]

Despite the recognition of such uncertainty, the 2009 Status Review declares "that the Northwest Atlantic Ocean DPS is currently at risk of extinction." *Id.* at 164. As mentioned, this determination is legally irrelevant because it provides no timeframe or other contextualizing information contained in other recent analysis which have not found loggerheads to be in danger of extinction. Furthermore, the list of factors allegedly supporting this conclusion are unsupported, contrary to the best scientific and commercial data, and entirely subjective.

This is clearly seen in the reasons allegedly supporting the endangerment finding in the Report's "synthesis" section: "Although national and international governmental and non-governmental entities on both sides of the North Atlantic are currently working toward reducing loggerhead bycatch, and some positive actions have been implemented, it is unlikely that this source of mortality can be sufficiently reduced across the range of the DPS in the near future because":

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11 As only one example, see Office of Protected Resources, NMFS, "Report of the U.S. Longline Bycatch Reduction Assessment and Planning Workshop" Seattle, Washington (Sept. 18 - 20, 2007), *available at* http://www.nmfs.noaa.gov/pr/pdfs/interactions/longline_workshop.pdf. Depending on hook size and bait, this modification has been shown to reduce loggerhead turtle takes by 40 to 90 percent. *Id.* at 8. For a listing of other recent actions not accounted for in any analysis, see NMFS Southeast Fisheries Science Center, *An Assessment of Loggerhead Sea Turtles to Estimate Impacts of Mortality Reductions on Population Dynamics*, at 1 (July 2009)

12 NMFS Southeast Fisheries Science Center, *supra* n.11, at 39.

13 2009 Recovery Plan, *supra* n.7, at ix.

1. "[T]he diversity and magnitude of the fisheries operating in the North Atlantic"[14] – As mentioned, fisheries of the North Atlantic, and U.S. fisheries in particular, are both less diverse and of smaller magnitude than they during nearly the entire period when current nesting females were hatched.. Limited entry, conservation requirements that started in earnest with the 1996 Sustainable Fisheries Act and accelerated under the MSA Reauthorization Act of 2008, and coastal gentrification have all conspired to reduce commercial fishing fleets.

2. "[T]he lack of comprehensive information on fishing distribution and effort" – The U.S. has perhaps the world's most comprehensive system of information collection and tracking of commercial fishing effort. Today, nearly every federally permitted vessel must carry and utilize vessel monitoring systems. States are increasingly coordinating management of their fisheries through entities like the Atlantic and Gulf States Marine Fisheries Commissions. These systems are magnitudes greater than when loggerheads were first declared threatened under the ESA.

3. "[L]imitations on implementing demonstrated effective conservation measures" – Conservation efforts are constantly upgraded and being more broadly applied. Cooperative research, such as the longliners' circle hook program discussed above and ever improving shrimp and trawl TEDs, is leading to ever increasing protection for sea turtles at all life stages. The scallop chain mats and the new turtle dredge design currently in testing are other examples. Efforts are also underway to better protect nesting beaches, nests themselves, and reducing threats to hatchlings, such as light pollution and other natural and man-made threats.[15]

4. "[G]eopolitical complexities" – What these geopolitical complexities exist are left unexplained. Given that all the populations studied are within the United States, the import of such "complexities" is completely opaque. While some nesting populations in the NWA DPS occur in foreign nations, such as Mexico and Caribbean states, the U.S. has excellent relations with these countries (save for Cuba), as well as with European nations.

5. "[L]imitations on enforcement capacity" – Enforcement of sea turtle protective measures always presents challenges, but the current system is comprehensive and effective. TED compliance is enforced through random at-sea boardings. Penalties for failure to comply are stiff. There is no reason to believe that enforcement presents any barrier to creation and implementation of an overarching turtle protection scheme.

6. "[A]vailability of comprehensive bycatch reduction technologies" – The meaning of this statement is entirely unclear. Of course, no single technology is appropriate for all fisheries. For

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14 All quoted language is from page 164 of the 2009 Status Review.

15 For only one example see National Park Service, "Cape Hatteras National Seashore Sea Turtle 2009 Annual Report," at 4-6 (undated) (describing the extraordinary efforts undertaken to protect nests from anthropogenic and natural threats), *available at* http://www.nps.gov/caha/naturescience/upload/2009%20Sea%20Turtle%20Report.pdf.

some, TEDs are both economic and effective; for others, like gillnets, time/area management, mandatory tending of nets, or reduced soak times work well; for longliners, bait substitution, circle hooks, and use of technologies to avoid temperature bands preferred by turtles are all effective. We have an effective system for identifying problem fisheries and addressing those problems in an iterative and comprehensive manner.[16]

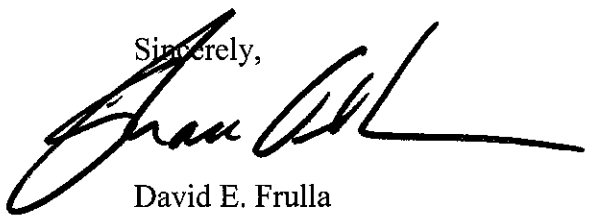
In summary, the Biological Review Team's conclusion that extinction, whenever such may occur, lacks a foundation based on a realistic assessment of the relevant factors and legally relevant criteria.

Conclusion

NMFS appears to recognize the shortcomings of the current threat assessment system. Indeed, one of the principle elements of the loggerhead recovery plan is "to develop long-term in-water studies . . . to monitor population status and effectively track population changes, especially as recovery efforts are implemented and assessed." 2009 Recovery Plan at I-12. FSF has begun analyzing techniques and submitted additional proposals to help move this effort forward. However, we are dismayed by the lack of transparency that has marked the current re-assessment process, which appears to be heading towards a pre-determined result that loggerheads should be uplisted. Such a process ill-serves cooperative management efforts and could lead to a legally questionable outcome.

We hope NMFS will consider these comments in making its final determination with respect to the current petition and we look forward to continuing our productive relationship with NMFS in the protection and recovery of sea turtles over the long run.

Sincerely,



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[16] *See, e.g.*, 74 Fed. Reg. 21627 (May 8, 2009) (notice of intent to expand TED use to all Atlantic trawl fisheries on a prioritized basis).