Defenders of Wildlife
Oceans Public Trust Initiative
Friends of the Sea Otter
World Wildlife Fund

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Doug Krofta
Public Comments Processing
Attn: FWS–R7–ES–2008–0105
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive,
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Arlington, VA 22203.

RE: Designation of Critical Habitat for the Southwest Alaska Distinct Population Segment of the Northern Sea Otter (*Enhydra lutris kenyoni*), 73 Fed. Reg. 76455 (Dec. 16, 2008)

Dear Mr. Krofta:

The Defenders of Wildlife, Friends of the Sea Otter, Oceans Public Trust Initiative, a project of Earth Island Institute's International Marine Mammal Project, and World Wildlife Fund appreciate the opportunity to provide comments on the U.S. Fish and Wildlife Service's (FWS) proposed Designation of Critical Habitat for the Southwest Alaska Distinct Population Segment of the Northern Sea Otter (*Enhydra lutris kenyoni*), 73 Fed. Reg. 76455 (Dec. 16, 2008). As the FWS is well aware, the Southwest Alaska Distinct Population Segment (SADPS) of northern sea otters has undergone an overall population decline of at least 55-67 percent since the mid-1980s. In some areas within southwest Alaska, the population has declined by over 90 percent during this time period. 70 Fed. Reg. 46366, 46366 (Aug. 9, 2005) (final rule listing the SADPS as threatened). We support the designation of critical habitat for the SADPS in order to provide for both the survival and recovery of the species. To meet these legal and biological requirements, we urge the FWS to expand its analysis and finalize expeditiously the designation of critical habitat.

Pursuant to the Endangered Species Act (ESA), critical habitat is to include "the specific areas within the geographical area occupied by the species… 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." 16 U.S.C. § 1532(5)(A). It also must include areas outside the area occupied by the species at the time of listing if such areas are "essential for the conservation of the species." *Id*. "Conservation" is in turn defined as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." *Id*. § 1532(3). This definition of conservation, and thus the requirements for critical habitat, has been

construed by the courts to be broader than simply avoiding jeopardy to the species, instead requiring steps to promote the recovery of the species. *See, e.g., Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004).

In these comments, we generally support the proposed designation and recommend that it be implemented without further delay. Nevertheless, we believe that FWS is required to expand the proposed critical habitat areas in Bristol Bay and other places where important habitat elements exist, and that there is no basis for excluding man-made structures. In addition, FWS makes several statements and offers several conclusions regarding the status of the species and the threats it confronts that are either not accurate or supported by the best available science. These issues include the potential impacts of oil and gas exploration, commercial fishing, and fish processing in and adjacent to the proposed critical habitat.

Finally, we note several areas where conservation actions related and in addition to critical habitat designation are necessary. Our comments address these issues, and provide recommendations to further promote the conservation of the SADPS. FWS has a legal obligation to undertake these actions under the ESA and Marine Mammal Protection Act (MMPA) in order to bring the species to a point where the protections of these statutes are not longer required. In particular, we recommend that FWS work closely with NOAA Fisheries, other federal agencies that undertake actions in the Alaska coastal and offshore region, Alaska Native organizations, and the State of Alaska, to develop and carry out an ecosystem-based approach to conserving the many species throughout this region that are at risk from climate change and other factors that are impacting the environment in this region.

FWS Should Not Delay Designation of Critical Habitat

At the time of listing, FWS is required to designate critical habitat "to the maximum extent prudent and determinable." 16 U.S.C. § 1533(a)(3)(A). Despite listing the SADPS in 2005, the agency has deferred several years the designation of critical habitat. Refusal to designate critical habitat is authorized under ESA regulations only if designation would not be beneficial to the species, or indeed might increase the threat of taking or other human activity, or if the biological needs of the species are not well enough known to permit designation. 50 C.F.R. § 424.12. While the agency originally deferred critical habitat designation at the time of listing on the basis that it was not determinable, 70 Fed. Reg. at 76384, this is no longer the case.

It also is not the case that designation would not be beneficial to the species. We note, however, that human use goes almost entirely unaddressed in the proposal for critical habitat. Native Alaskan subsistence use of sea otters is authorized in specific circumstances by both the ESA and MMPA, under strict limitations, but nevertheless must be assessed for its impacts on this declining population and limited in an appropriate manner where the science dictates. The FWS critical habitat proposal notes that most of the land adjacent to proposed critical habitat is under the control of Alaskan Natives. The 2008 Stock Assessment for the SADPS of sea otters acknowledges that data through

2006 indicate an average of 91 sea otters are killed annually by Alaskan Natives (FWS 2008). As climate change affects patterns of ice cover, sea otters may be even more vulnerable to human interaction and land-based predators. *See* "Frozen bay turns otters into easy prey," *Anchorage Daily News*, April 8, 2007.

Furthermore, since 2002 a dramatic increase in sea otter strandings has resulted in the declaration of an Unusual Mortality Event (UME) in accordance with Section 404 of the MMPA. Initial data indicates that the UME is caused by a *Streptococcus infantarius* infection and has been observed over a broad geographic range in Alaska, including a few cases from southwest Alaska. (FWS 2008) While the majority of cases have come from Kachemak Bay in the southcentral Alaska stock, it is not clear if the observed stranding pattern is representative of overall sea otter mortality, or an artifact of having a well-developed stranding network in the Kachemak Bay area. The FWS must continue to investigate the causes of this UME as well as the overall health of the SADPS and take action to develop the infrastructure for a statewide marine mammal stranding network in Alaska. In areas where subsistence harvest is coincident with high sea otter strandings and poor health, the FWS should consider reductions to subsistence harvests to prevent further declines and to relieve the pressure on that portion of the population. Concurrent with its final designation of critical habitat, FWS also should initiate the procedures necessary to impose limitations on subsistence use in those locations where such take is having an adverse effect on the population.

FWS Should Reconsider its Proposed PCEs to Ensure That They Provide for Both the Survival and Recovery of the Species

Section 3(5)(A)(i) of the ESA and its implementing regulations at 50 C.F.R. § 424.12, require FWS, when determining areas to propose as critical habitat, to consider areas containing the physical and biological features that are essential to the conservation of the species and may require special management considerations or protection. 73 Fed. Reg. at 76457. These features are the specific primary constituent elements (PCEs)—laid out in the appropriate quantity and spatial arrangement for the conservation of the species—and they include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;
(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
(3) Cover or shelter;
(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
(5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

As a general matter, we believe that the FWS has done a good job of designating sea otter specific PCEs for some of the categories described above. In particular, FWS has focused on factors 3 and 5 listed above in its concentration on the designation of nearshore habitat and protection from marine predators. This limitation leaves significant gaps in protecting the habitat elements essential to the conservation and recovery of the

SADPS, however, and still does not even fully address the marine predator threat that scientists believe to be one of the leading causes for the decline of the species. Per our specific comments below, we urge the FWS to fill these gaps in its designation of PCEs and critical habitat in order to ensure that the critical habitat designation will fully provide for the species' survival and recovery. In addition, FWS should cooperate with other agencies to gather information and impose regulatory controls to ensure that human activities do not disrupt the health and stability of the marine ecosystem of the North Pacific Ocean and Bering Sea region.

Space for Growth and Normal Behavior

It is well established that while sea otters have been known to make long distance movements up to 350 km (217 mi) over a relatively short period of time when translocated to new or vacant habitat (Ralls et al. 1992), the home ranges of sea otters in established populations are relatively small. Once a population has become established within the habitat, individual sea otters movements are largely dictated by environmental and social factors and human disturbance. In the Aleutian Islands, breeding males generally remain within the bounds of their breeding territory, (length of coastline anywhere from 100 m (328 ft) to approximately 1 km (0.62 mi)) and sexually mature females have home ranges of approximately 8-16 km (5-10 mi).

Despite this information, FWS admits that circumstances may be different for sea otters like those in the SADPS "where dramatic reduction in numbers have occurred." 73 Fed. Reg. at 76457. Recognizing that the SADPS is not migratory and generally does not disperse over long distances, scientists have routinely documented movements of tens of kilometers (Garshelis and Garshelis 1984) with some individual otters traveling distances of over 100 km (Garshelis *et al.* 1984). Male sea otters that do not hold territories may move greater distances between resting and foraging areas than territorial males (Lensink 1962, Kenyon 1969, Riedman and Estes 1990, Estes et. al 1996). Juvenile males and females also can travel much longer distances (75 and 24 miles respectively) than adult animals; however, movements are likely limited by geographic barriers, high energy requirements of animals, and social behavior. 73 Fed. Reg. at 76457. These factors may affect space for individual and population growth, competition for prey resources and normal behavior and FWS therefore must assess whether the current PCE designation will provide for range expansion and the conservation of the species.

Nutritional and Physiological Requirements

Turning to nutritional and physiological requirements, sea otters in southeast Alaska spend 84 percent of their time foraging at depths between 2–30 m (6.6–98.4 ft), and 16 percent of their time foraging between 30–100 m (98.4–328.1 ft) (Bodkin *et al.* 2004, p. 305). Maximum foraging depths averaged 61 m (200.1 ft) and ranged from 35–100 m (114.8–328.1 ft). Less than 2 percent of all foraging dives were greater than 55 m (180.4 ft). Females dove to depths less than 20 m (65.6 ft) on 85 percent of their foraging dives while males dove to depths greater than 45 m (147.6 ft) on 50 percent of their foraging dives. 73 Fed. Reg. at 76455. Given this information, the FWS proposal to extend critical habitat out to the 100 m contour, will provide sufficient protection of the feeding areas most often used by the SADPS of northern sea otters. And, in addition the 100m contour

does a good job of encompassing other "areas containing the physical and biological features that are essential to the conservation of the species". (personal communication, J. Bodkin, 2009).

However, Bristol Bay, with its extensive shallow shelf with predominantly sandy substrate, is another important area for sea otters and should be included in the critical habitat designation. Because of the shallow, sandy geography, sea otters have been known to utilize habitat at distances from shore that are further out than is typically seen in other parts of Alaska. Sea otters can be found many miles offshore, and in the 1970s and 1980s, it was not uncommon to observe large rafts of sea otters more than 25 km from shore (Schnieder 1976, Brueggeman et al. 1988). Under the proposed SADPS PCEs, this area will not be designated critical habitat, yet we believe it should be due to its likely importance in fulfilling PCE categories 1 and 2.

Cover or Shelter and Protection from Disturbance

For cover and shelter, we believe the agency has done a fairly good job of designating PCEs and associated critical habitat, yet we are concerned about the specific omission of docks and other manmade structures from the designation. As described in the Federal Register notice, all manmade structures will be excluded from critical habitat because they do not contain the specifically designated PCEs for the SADPS. It is clear that sea otters are frequently found resting or foraging around these structures, actions which are included in the general list of PCEs included in the FWS critical habitat regulations. The FWS should broaden its designation of sheltering sites for the SADPS to include these manmade structures as part of critical habitat.

Reproduction and Rearing of Offspring

A discussion of breeding and rearing of offspring is extremely short and notes only that there does not appear to be any problem with reproduction at this time. By not identifying the habitat features necessary for this essential life function, the designation seems to leave a potentially large gap in the protection of the SADPS and its habitat. Again, we remind the FWS of the definition of conservation and its focus on not only survival, but also recovery. The FWS cannot simply refuse to identify a certain category of PCEs because they are thought not to have been a significant contributor to a species' decline. Accordingly, we urge the FWS to examine PCEs related to reproduction and rearing of offspring that are necessary for the species' recovery.

Other Factors to Consider in Critical Habitat Designation and Other Management Activities

Perhaps the biggest gap in the discussion of PCEs and the accompanying proposal for critical habitat is in the agency's failure even to mention climate change and related issues such as ocean acidification—a direct result of CO_2 inputs into the ocean. Over the past 50 years, Alaska has warmed at more than twice the rate of the rest of the United States. (NOAA 2009) As a result, climate change impacts in Alaska are much more pronounced than in other regions, manifesting in earlier spring snowmelt, reduced sea ice, wide-spread glacier retreat, permafrost warming and increased intensity of coastal erosion. (NOAA 2009) Climate change causes significant alterations in marine

ecosystems with important implications for fisheries and protected species conservation and management. For example, as sea ice retreats, species composition of plankton blooms changes, reducing the amount of food reaching benthic organisms—prey vital to sea otters and other marine wildlife (NOAA 2009). As climate change progresses, sea otters are likely to be further affected by changing ice patterns, sea level rise, reduced prey availability, and larger shifts in ocean ecosystems.

Ocean acidification (OA) and the biological consequences of altered seawater chemistry caused by climate change have also emerged as a significant environmental threat to healthy marine ecosystems. Because a more acidic ocean interferes with fixation of calcium carbonate to form shells or calcified skeletons, future ocean chemistry may significantly alter the physiology of calcifying marine organisms. These alterations may manifest themselves directly in the calcification process, or have synergistic effects with other environmental factors such as elevated temperatures. For example, ocean acidification can degrade the viability of sea urchin larvae, which will directly affect sea otters' ability to meet their nutritounal and energetic requirements.

For these reasons, FWS must think broadly about protection of the PCEs identified in the proposed critical habitat designation and how to maintain these essential life functions in the face of changing habitat. FWS should work with NOAA and the National Science Foundation (NSF) to monitor CO_2 levels and undertake the research to better understand the effects of ocean acidification in this environment. FWS should also consider climate modeling and projected impacts on sea otters and the surrounding environment. The agency must continue to monitor these affects over time in order to ensure that PCEs continue to function appropriately.

In addition, we disagree with FWS' decision that "designating only occupied areas is sufficient for the conservation of the species". 73 Fed. Reg. 76456. For purposes of addressing climate change as well as other considerations, we believe the agency should reconsider this approach. Impediments to recovery of this species extend far beyond the proposed critical habitat boundaries. In particular, the biological link between the coastal zone and the ocean (pelagic) zone is critical to the species recovery. "Although sea otter habitat occurs in the nearshore marine environment, it is important to note that activities that occur in the broader Bering Sea and Gulf of Alaska ecosystems may affect their habitat and populations (Estes et al. 1998, p. 475)." 73 Fed. Reg. at 76455.

Finally, we urge the agency to think broadly about threats to sea otters and other imperiled marine species both in its designation of critical habitat and in future management activities. In the pelagic and coastal zones, NOAA manages several ESA listed and MMPA protected marine mammal species including humpback whales, fin whales, Cook Inlet beluga whales, North Pacific right whales, killer whales, northern fur seals, and Steller sea lions. NOAA Fisheries also is responsible for numerous fish stocks throughout these regions, and FWS has responsibility for bird species (including under the ESA) in Alaska's coastal and offshore areas. NOAA has already designated critical habitat for right whales and Steller sea lions in the vicinity of the SADPS. Indeed, the Steller sea lion critical habitat and fishery management closures, in some areas, will

likely overlap SADPS critical habitat. FWS and NOAA should work together to develop a Memorandum of Understanding to identify the areas where critical habitat overlaps, coordinate conservation and monitoring efforts, evaluate the conservation benefits of marine protected areas (including commercial fishing closures) collectively for these listed species, and undertake a gap analysis to determine where additional conservation measures could be adopted or marine protected areas designated. In general, we urge action to promote an ecosystem-based conservation program throughout the North Pacific Ocean, Bearing Sea, and other areas in Alaska.

FWS Should Insure that Sea Otter Critical Habitat is Protected From all Major Threats

According to the FWS, habitat destruction or modification are not known to be major factors in the decline of the SADPS of the northern sea otter, and there is no curtailment of range due to past land use designations or activities. 69 Fed. Reg. 6600, 6615 (Feb. 11, 2004) (proposed rule designating SADPS as threatened). This assertion should be irrelevant to the designation of critical habitat. Especially in the face of climate change, it is essential to provide for the resiliency of species. Regardless of the primary cause of the decline of the SADPS, special management of appropriately designated PCEs will help insure that critical habitat will fulfill its purpose of providing for the survival and recovery of the species. We offer below a discussion of threats to the species that will require special management and should be addressed by the agency as quickly and comprehensively as possible. Also, we note that Section 7 consultation is required whenever a federal activity "may affect" critical habitat, meaning that even activities outside of critical habitat may need to undergo this type of assessment and management.

Oil and Gas Development

The Federal Register notes that offshore oil and gas development is under consideration in the Lease Sale Area 92 in the North Aleutian Basin region immediately offshore from several proposed critical habitat areas. 73 Fed. Reg. at 76462. This is now known as Lease Sale Area 214, and the U.S. Minerals Management Service (MMS) published a Notice of Intent to Prepare an Environmental Impact Statement (EIS) for leasing in this area. 73 Fed. Reg. 19095 (April 8, 2008). Thus, not only must the FWS consider current oil and gas development activities impacting sea otters, but the agency also must consider the dramatic expansion of such activities that is currently in the works. We are concerned that the infrastructure required for the proposed oil and gas development in the North Aleutian Basin planning area (Lease Sale 214), more commonly known as Bristol Bay, would impede access to some sensitive areas, degrade vital marine habitat and create increased commercial vessel traffic. Plans for offshore oil development in Bristol Bay include an extensive infrastructure: up to 200 production wells, up to 50 miles of onshore pipelines, six to eight offshore platforms and up to 20 exploration wells. The construction and maintenance of these operations could harm the critical habitat being proposed for the Port Moller area.

Federal studies anticipate that offshore oil and gas production in Bristol Bay will result in at least one major spill of up to 1,000 barrels and several smaller spills. A spill in the North Aleutian Basin planning area could push oil up along the Alaska Peninsula at all times of the year—oiling

the sensitive lagoons on the western Alaska Peninsula. Indeed, Lease Sale 214 is planned to almost directly abut the proposed SADPS critical habitat. Historically sea otters in Bristol Bay have dispersed far enough from the coastline which puts them at a high risk from an oil spill due to development or tanker traffic. Also, as we noted above, we believe that critical habitat should be expanded in Bristol Bay in order to ensure the conservation of the species. At a time when declines still threaten the SADPS of northern sea otters it is not prudent to be allowing additional impacts to this species, and especially oil development and drilling in sensitive areas like Bristol Bay.

Our groups have noted in separate comments regarding Lease Sale 214 that leasing should not be allowed in designated critical habitat for any threatened or endangered species and we reiterate the call for precaution here. Even leasing in the vicinity of the critical habitat could cause significant adverse modification and destruction of critical habitat in the event of a large spill, making Section 7 consultation on these activities especially important. If these lease sales do move forward, the FWS must ensure that the proper environmental impact statements are completed, a response gap analysis is completed, oil spill response plans are in place, and the necessary surveys and habitat use plans have been completed prior to the lease sale.

Also within the proximity of the SADPS, oil and gas development and production already occurs in Cook Inlet. While, the FWS claims that sea otters do not significantly overlap with the production and lease sale areas in Cook Inlet (e.g. sea otters are in the nearshore zone and the lease sale area is at least three miles off shore), the *Exxon Valdez* oil spill demonstrated that spilled oil can travel long distances and take large numbers of sea otters far from the point of initial release. FWS should require additional management considerations and protections to minimize the risk of crude-oil spills associated with oil and gas development and production that may impact this subunit.

It is well established that sea otters are particularly vulnerable to contamination by oil (Costa and Kooyman 1982). Indeed, the final rule designating the SADPS as threatened noted that protection from oil spills could be essential to the conservation of the species, especially if the population continues to decline. 70 Fed. Reg. at 46377. First, unlike other marine mammals, the sea otter has no blubber. It maintains its warmth through a pelt of dense, water-resistant underfur covered in guard hairs, which it grooms frequently. Air pockets in the sea otter's fur are needed to maintain insulation and keep the fur waterproof. Oiled sea otters are highly susceptible to hypothermia resulting from the reduced insulative properties of oil-matted fur.

When sea otters come into contact with oil, they engage in aggressive and obsessive grooming, which drives the oil deep into their fur, causing them to both lose valuable insulation and ingest the oil as they groom. Therefore, contaminated sea otters are susceptible to the toxic effects from oil ingested while grooming. In addition, volatile hydrocarbons may affect the eyes and lung tissues of sea otters in oil-contaminated habitats and contribute to mortality. 69 Fed. Reg. 6600.

Finally, sea otters may become sickened by eating oiled prey. Shellfish such as mollusks, a preferred sea otter prey, poorly metabolize petroleum hydrocarbons and contaminated mollusks will transfer the toxic substance to sea otters when eaten. For example, oil and gas extraction in Bristol Bay would release thousands of tons of contaminated drilling muds and cuttings into the ocean, leaving behind high levels of heavy metals such as mercury, cadmium, zinc, chromium and copper, that contaminate bottom-dwelling organisms, fish and crab eggs or larvae—all important sea otter prey species.

The biggest threat to sea otters from oil and gas development comes from the oil spills that are an inevitable byproduct of drilling and transport. The extreme cold, severe storms, unstable ice, poor visibility, high winds and lack of natural light off the Alaskan coast contribute to a high risk of accidental spills, which can occur during numerous phases of extraction, storage or transport. The same dangerous conditions that can lead to accidents make efforts to contain or clean up spilled oil extremely difficult, if not impossible. Most methods of cleanup are ineffective or impractical in the Bering Sea and Arctic environments (including areas in Bristol Bay and Cook Inlet) and the technology needed to clean up spills requires the support of aircraft, vessels and highly trained personnel, none of which could deploy quickly or easily to such remote and dangerous areas.

Using the Exxon Valdez oil spill as a case study, we have also learned that sea otter fatalities are not limited to the immediate area of a spill. In Prince William Sound, at least 1,000 sea otters died in the immediate aftermath of the Exxon Valdez oil spill. Oil remaining in the ecosystem continued to kill sea otters for years after the spill, including those that died from the long-term health impacts as well as those exposed to the oil many years later. Because the oil traveled so far and persisted so long in the environment, the final death toll for sea otters reached an estimated 4,000 animals. Two decades after the Exxon Valdez cracked open its hull, sea otters and the near-shore ecosystem contaminated by this spill have yet to fully recover.

The proposed critical habitat designation gestures that "various safeguards" "have been established since the 1989 Exxon Valdez oil spill to minimize the likelihood of another spill of catastrophic proportions in Prince William Sound," 73 Fed. Reg. at 76459, yet it provides no specific explanation of what these specific safeguards are or why they should impact the designation of critical habitat. Regardless of any actions taken thus far, vessels and fuel barges continue to be a potential source of oil spills that could impact sea otters in southwest Alaska. Furthermore, the proposed critical habitat designation also doesn't address the need for necessary modifications to tankers, tanker traffic, and traffic lanes to protect sea otters.

Since 1990 in Alaska, more than 4,000 spills of oil and chemicals on water have been reported to the U.S. Coast Guard National Response Center. Of these, nearly 1,100 occurred within the range of the southwest Alaska DPS of the northern sea otter. 69 Fed. Reg. at 6616. During a 10-year period from July 1, 1995, to June 30, 2005 there were 520 reported spills of refined products, 82 percent were from vessels; most of these (70 percent) involved quantities smaller than 10 gallons. The majority of vessel spills

occurred in the western Aleutian (149), eastern Aleutian (107), and Kodiak, Kamishak, Alaska Peninsula (130) management units. Only 7 spills were reported where the quantity was greater than 5,000 gallons of material. The largest was the *M/V Selendang Ayu*, which spilled 321,052 gallons of IFO 380 fuel and an additional 14,680 gallons of diesel. Reports of direct mortality of sea otters as a result of these spills are lacking and the impact of chronic oiling on sea otters in general, or on the SADPS, is unknown.

Finally, we note that in addition to direct adverse impacts to sea otters and their immediate habitats that would likely be caused by any large or small oil spills, there are also likely to be substantial impacts to the entire Bristol Bay ecosystem, which also will adversely affect sea otters. Izembek lagoon, as just one example, is identified as a RAMSCAR Convention wetland of international importance, and provides important roles in the habitat and food sources for sea otters and other marine mammals, as well as surrounding native subsistence communities. In an area as pristine as the home of the SADPS, any such impacts to the surrounding environment are likely to have strong ripple effects for sea otters as well.

Fisheries Impacts

The 2008 Stock Assessment Report for the Southwest Alaska Stock of Northern Sea Otters (FWS 2008) states that "[n]umerous fisheries exist within the range of the southwest Alaska stock of northern sea otters, with the only one identified as interacting with this stock being the Kodiak salmon set gillnet…" Based on observer data the estimated sea otter bycatch in this fishery was 62 and 28 otters respectively during the 2002 and 2005 fishing season. FWS claims that because half of the sea otters observed captured in the fishery were able to escape the nets unaided, 31 of the estimate 62 bycaught sea otters would escape the nets by themselves. Our concern with this theory is that FWS does not have data on the survival rates of the sea otters that escaped or where released by fishermen. Furthermore, FWS does not know whether these sea otters were injured or seriously injured in the course of escape or release. We believe that FWS incorrectly assumes that "based on these results, it would appear that although entanglement of sea otters does occur in this fishery, the rate of mortality or serious injury is low." (FWS 2008)

Additionally, salmon set and drift gillnet fisheries occur in Bristol Bay and the Alaska Peninsula/Aleutian Islands. FWS claims no interactions with salmon set and drift gillnets have been identified for this stock; but observer data to substantiate this claim is either lacking altogether or the coverage too low to be statistically reliable. FWS must take action to observe commercial fisheries (especially pot and gillnet fisheries) that are prosecuted in critical habitat, to secure statistically reliable estimates of bycatch. Finally, FWS should require NOAA Fisheries to consult under the ESA for all fishery plans in this area to impose any restrictions that are legally required to avoid jeopardy and critical habitat adverse modification and prohibit incidental take.

Other Human Disturbances

Development of harbors and channels by dredging may affect sea otter habitat on a local scale by disturbing the sea floor and benthic invertebrates that sea otters eat. FWS should insure that any infrastructure projects are only undertaken after the required consultation under Section 7 and 4 of the ESA and that all reasonable and prudent measures are taken to ensure the protection of benthic habitats vital to sea otter foraging.

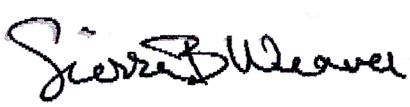
In addition, it has been demonstrated that fish processing operations produce large quantities of organic waste, which can affect the health of sea otters on a local scale. In Alaska, sea otters have been observed consuming fish waste and necropsies of carcasses recovered in Orca Inlet, Prince William Sound (which is not within the range of SADPS), revealed that some sea otters in these areas had developed parasitic infections and fish bone impactions that contributed to their deaths (Ballachey et al. 2002, King et al. 2000). Measures such as heating and grinding waste materials, or barging it further offshore, have proven successful at eliminating these impacts. The FWS should investigate whether fish processing operations within the proposed critical habitat area are resulting in disease and mortality and require that the processing operations take the necessary precautions to eliminate this source of mortality.

Conclusion

Critical habitat designation provides important legal protections to listed species. All federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(a)(2). Protection for the northern sea otter's critical habitat is particularly important given the precipitous decline of the SADPS.

We note here that FWS has deferred its economic analysis, making it impossible at this point for the public to comment on what exclusions from critical habitat may or may not be appropriate under the ESA. The agency must complete a full assessment of economic impacts, including both the conservation and economic benefits of critical habitat designation. We expect that the agency will undergo further notice and comment and encourage broad public participation if it decides to propose any such exclusions.

Sincerely,



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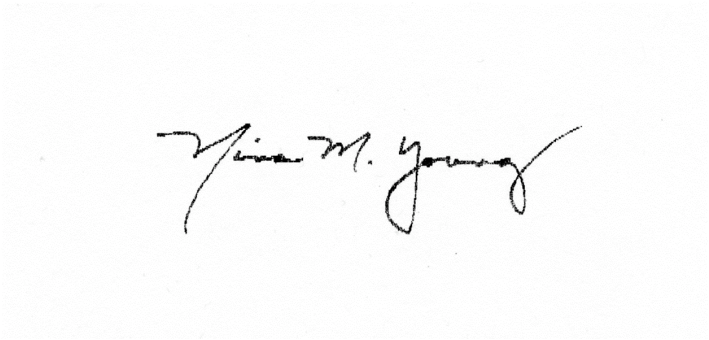

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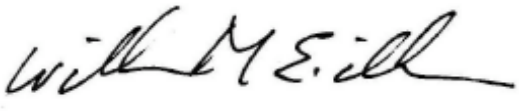

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