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March 3, 2010

The Honorable Gary Locke
Secretary
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

Dear Mr. Secretary,

On December 2, 2009, the National Marine Fisheries Service (NMFS) published a proposed Critical Habitat Designation (CHD) for the Cook Inlet beluga whale. Based on our review of the proposed rule and the federal regulations for designating critical habitat under the Endangered Species Act at 50 C.F.R. § 424, we have concluded that designating critical habitat for the Cook Inlet Distinct Population Segment (DPS) of beluga whales is premature because it is not based on a sound interpretation of the available information. Given existing State and federal permitting requirements and protections in place, there are no special management considerations or protections currently required. In the event NMFS disregards the State's concerns and moves ahead to designate critical habitat, there are additional concerns that merit review by NMFA. Namely, the proposed CHD is overly expansive and ignores consideration of an alternative approach that would more specifically identify primary constituent elements and associated areas that are important for beluga survival and recovery.

We also have serious concerns with the methodology used to estimate the cost of the proposed designation. The basis for the economic analysis and its conclusion that the CHD will be beneficial is inconsistent and fundamentally flawed. The economic analysis grossly underestimates the true costs of the listing, making it impossible to determine whether certain areas should be considered for economic exclusion as required by law. Assuming the designation will have no economic impact, while simultaneously assuming that the environment will automatically improve as a result of the designation is a faulty conclusion. NMFS failed to adequately consider the possibility of excluding certain activities from the proposed designation per 16 U.S.C. § 1533(b)(2).

More specific comments are attached regarding our concerns. Given the magnitude of our concerns and the reality that an unnecessary, overly broad designation has the high potential of needlessly delaying or stopping otherwise responsible development projects, we request the NMFS revise its CHD proposal and provide an additional public comment period after the identified issues are addressed.

Notwithstanding the decision to list the Cook Inlet DPS of beluga whales under the Endangered Species Act, the State of Alaska has sovereign trustee responsibilities with respect to this species and takes an active role in protecting and conserving beluga whales and their habitat in Cook Inlet. We look forward to working with you on the responsible conservation of these whales.

Sincerely,

Sean Parnell
Governor

Enclosure

cc: The Honorable Lisa Murkowski, United States Senate
The Honorable Mark Begich, United States Senate
The Honorable Don Young, United States Congress
Dr. Jane Lubchenco, Under Secretary and Administrator, National Oceanic and Atmospheric, U.S. Department of Commerce
Eric Schwaab, Assistant Administrator, National Marine Fisheries Service
Doug Mecum, Alaska Region Administrator, National Marine Fisheries Service
John W. Katz, Director of State/Federal Relations and Special Counsel, Office of the Governor
The Honorable Larry Hartig, Commissioner, Alaska Department of Environmental Conservation
The Honorable Tom Irwin, Commissioner, Alaska Department of Natural Resources
The Honorable Denby Lloyd, Commissioner, Alaska Department of Fish and Game

STATE OF ALASKA

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DEPARTMENT OF FISH AND GAME

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March 3, 2010

Kaja Brix
Assistant Regional Administrator, Protected Resources,
NMFS, Alaska Region,
P.O. Box 21668
Juneau, AK 99802-1668

Re: Comments on the Proposed Designation of Critical Habitat for Cook Inlet DPS of the Beluga Whale in Alaska (50 CFR Part 226, RIN 0648-AX50 & -XT72)

Submitted Electronically via the Federal eRulemaking Portal website

Dear Ms. Brix:

On December 2, 2009, the National Marine Fisheries Service (NMFS) published a proposed critical habitat designation for the Cook Inlet Distinct Population Segment (DPS) of the beluga whale (*Delphinapterus leucas*). 74 Fed. Reg. 63080 (Dec. 2, 2009). These comments on the proposed critical habitat designation represent the consolidated comments for the State of Alaska based on input from the Alaska Department of Fish and Game, Alaska Department of Natural Resources, Alaska Department of Environmental Conservation, Alaska Department of Commerce, Community and Economic Development and the Alaska Department of Law. Please consider and include these comments within the administrative record for the critical habitat designation for the Cook Inlet DPS of the beluga whale.

I. Introduction

Notwithstanding the decision to list the Cook Inlet DPS of beluga whales under the Endangered Species Act, the State has sovereign trustee responsibilities with respect to this species and takes an active role in protecting and conserving beluga whales and their habitat in Cook Inlet. Based on our review of the proposed rule and the federal regulations for designating critical habitat under the ESA at 50 C.F.R. § 424, the State has concluded that designating critical habitat for the Cook Inlet DPS of beluga whales is premature because it is not based on a sound interpretation of the law and the available information and, given existing state and federal permitting requirements and protections in place, there are no special management considerations or protections currently

required. We also have serious concerns with the methodology used to estimate the cost of the proposed designation and believe the NMFS seriously underestimated the costs of the designation. As a result, NMFS failed to adequately consider the possibility of excluding certain activities from the proposed designation per 16 U.S.C. § 1533(b)(2) .

II. Comments on Proposed Critical Habitat Designation

A. Standards Generally Applicable to Critical Habitat Designation

The ESA directs the NMFS to designate critical habitat, to the extent determinable, for species listed as endangered or threatened under the Act. 16 U.S.C. § 1533(a)(3)(A). The ESA defines "critical habitat" as:

> (i) the specific areas within the geographical area occupied by the species, at the time it is listed . . . 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 protections; and
>
> (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

16 U.S.C. § 1532(5)(A). Except in special circumstances as determined by the NMFS, "critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species." 16 U.S.C. § 1532(5)(C).

The designation is required to be based on "the best scientific data available" considering "the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat." *Id.* § 1533(b)(2). Any area otherwise qualifying for designation as critical habitat may be excluded from designation if the benefits of excluding the area outweigh the benefits of including the area, unless excluding an area would result in the extinction of the species concerned. *Id.*

Areas where the listed species currently is not present may be designated as critical habitat only upon an express determination that the specific area outside the geographical area occupied by the species at the time it is listed is "essential for the conservation of the species." *Id.* § 1532(5)(A)(ii). The NMFS may decline to designate critical habitat if doing so would not be prudent (*i.e.*, where publicizing the location of a species is likely to lead to illegal collection) or where critical habitat is not determinable. *Id.* § 1533(a)(3)(A); *see also* 50 C.F.R. § 424.12(a).

NMFS regulations governing critical habitat designation require that critical habitat rulemaking be based on a determination that the geographical areas designated possess

the physical and biological features essential for the conservation of the species. *See* 50 C.F.R. § 424.12(b). Additionally, critical habitat must be defined "by specific limits using reference points and lines as found on standard topographic maps of the area. . . . Ephemeral reference points (e.g., trees, sand bars) shall not be used in defining critical habitat." 50 C.F.R. § 424.12(c). Lastly, areas outside the geographical area presently occupied by a species may be designated as critical habitat "only when a designation limited to [the species'] present range would be inadequate to ensure the conservation of the species." *Id.* § 424.12(e).

B. Specific Comments on Proposed Critical Habitat Designation

1. The NMFS Should Coordinate Designation of Critical Habitat with the State and Must Provide Justification for the Designation of Critical Habitat Inconsistent with These Comments

Under ESA Section 4(i), if the NMFS issues a final regulation that conflicts with comments submitted by a state agency (which under the Act means "any state agency, department, board, commission, or other governmental entity which is responsible for the management and conservation of fish, plant, or wildlife resources within a state"), then the NMFS "shall submit to the state agency a written justification for [its] failure to adopt regulations consistent with the agency's comments." 15 U.S.C. § 1533(i).

Congress intended states to have an important role in the implementation of the ESA. The Senate Report on the legislation that ultimately became the 1982 Endangered Species Act amendments highlighted the requirement that the NMFS provide a state agency with actual notice of any proposed regulation concerning the listing of species, and invite the comment of that agency on the proposed regulation, just as is required in the enacted version of ESA Section 4(i).

As that Senate Report noted: "The involvement and advice of such State agencies in the Federal regulatory process is crucial *and must not be ignored*." S. Rep. No. 97-418, at 12 (1982) (emphasis added). Similarly, in the promulgation of the ESA listing regulations in 1984, the NMFS noted that the requirement in 50 C.F.R. § 424.18(c) that implements ESA Section 4(i) requires "that State agencies be adequately informed of the basis for any action that is not in agreement with that agency's recommendation." 49 Fed. Reg. 38900, 38906 (Oct. 1, 1984).

Next, in the 1994 Notice of Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 59 Fed. Reg. 34275 (July 1, 1994), the NMFS stated that it is the policy of the NMFS in species listing activities to "[u]tilize the expertise and solicit the information of State agencies in preparing proposed and final rules to: . . . designate critical habitat."

Thus, both Congress and the agency itself recognized the importance of state agency input and the importance of adequately informing the state agency of the basis of any action not in agreement with the agency's recommendations or comments. While the

State and its political subdivision were provided an opportunity (like other members of the general public) to provide comments under an Advanced Notice of Proposed Rule Making, the NMFS has failed to coordinate in a meaningful manner with the State and its political sub-divisions in the actual development of the proposed designation of beluga whale critical habitat as Congress intended. Despite being the only state having beluga whales within its jurisdiction, there was no effort to consult in a meaningful manner with the State or its political subdivisions on the development of the proposed rule. The State and its political subdivisions could have provided information useful in the development of this proposal if coordination had occurred.

Pursuant to the ESA, the NMFS must consider these comments during its decision-making process and provide the requisite written justification to the State for any issues in the final designation of critical habitat that conflict with these comments.

2. Mischaracterization of the Cook Inlet Area

NMFS mischaracterizes the Cook Inlet area throughout the proposed rule. Readers unfamiliar with Alaska could easily be misled to view the Cook Inlet watershed as a densely populated urban area with development crowding the entirety of its shores and waters, and unregulated contaminants being discharged from a host of large industries. This is an incorrect characterization.

The Cook Inlet area is sparsely populated with only about 10 persons per square mile. Although it is the most populated area of Alaska, only about 420,000 people live in the entire Cook Inlet region, mostly concentrated in Anchorage, which has a population of about 285,000.

Of particular note, development is not spread over the entire inlet and most is inland. Rather, it is concentrated in a few key locations because of the lack of infrastructure, such as roads, throughout most of the area. In addition, the area is not at risk for large-scale development because a large percentage of the area is already designated for various habitat, fish, wildlife, and other environmental protections and is closed to development. Because of these differences, a large area of habitat for Cook Inlet beluga whales is unlikely to be threatened by the improbable effects listed by NMFS in its proposed rule.

Even though it is of critical economic importance to Alaska, development in Cook Inlet is significantly different from development in other areas of the United States. The Cook Inlet area experienced development in the form of industry and population growth much later than did other areas of the country, and most significantly, after most environmental laws and regulations were already in place. Therefore, environmental regulations have been in place since development began in the area. These regulations have ensured that harmful effects to the fish, wildlife, and habitats of Cook Inlet associated with resource development have been minimized. In addition, there is very little risk that these regulations will be loosened; rather, environmental regulations will likely continue to become stricter.

3. Threats Facing Beluga Whales in Cook Inlet

In proposing critical habitat, NMFS presents a list of potential impacts on Cook Inlet belugas (pg 63084 2nd paragraph). These impacts are speculative and have not been linked to specific threats.

For example, NMFS indicates that activities that restrict or deter use of, or access to, Area 1 could be a threat. However, NMFS has provided no data indicating which activities will deter use of or access to Area 1 or that there is any actual existing threat to beluga whales' access to Area 1.

The proposed rule states that "*activities that reduce anadromous fish runs could also negatively impact beluga foraging success...*" However, NMFS provides no data to indicate which, if any, activities in the Cook Inlet area will reduce anadromous fish runs. Pacific salmon stocks in Cook Inlet are some of the most carefully and intensively managed fish stocks in the world, and they have been sustainably managed for many decades by the State of Alaska. They are protected by a myriad of management plans and environmental and habitat regulations, and their protection and sustainability is mandated by the state's constitution. NMFS has provided no data to indicate that fish stocks in Cook Inlet are decreasing, or that there is any credible threat that any activities in Cook Inlet will reduce anadromous fish runs. In fact, available scientific data indicate that the opposite is true: anadromous fish runs in Cook Inlet are healthy and appropriately protected by a large network of well-established regulatory mechanisms which are at almost no risk of being relaxed.

In addition, the final rule should also acknowledge the increased riparian protections for forest practices in Region II, which under FRPA (AS 41.17) includes the Cook Inlet watershed. The new Region II riparian regulations were adopted after the state submitted earlier comments on the beluga listing in 2007. It is important that there be acknowledgement of the regulatory standards in place to protect freshwater habitats for fish that the belugas depend on. Current regulations, including the Region II riparian standards, as well as other regulations that provide for best management practices to protect water quality, ensure reforestation, and other protections can be found at http://forestry.alaska.gov/pdfs/2009FRPAregulations-GREENBOOK_%20EO114revisions.pdf.

The final reason NMFS gives for the designation of Area 1 as critical habitat is that "*the tendency for belugas to occur in high concentrations in Area 1 habitat predisposes them to harm from such events as oil spills.*" This statement is speculative. NMFS provides no supporting evidence that oil spills are a threat to belugas in Area 1, and provides no scientific data indicating that specific areas it has identified as particularly critical are susceptible to oil spills. Nor does NMFS explain the size of oil spill which would impact whales or identify the type of vessels utilizing area 1 that are capable of even holding large volumes of oil. Also, no distinction is made between crude and refined products. In fact, there is almost no development or other marine activities, such as shipping, in some of these areas.

For Area 2, NMFS provides only a cursory explanation of its rationale for the critical habitat designation, has not linked the proposed designation to any specific threats, and does not provide adequate scientific data to support the designation of the entire area as critical habitat.

NMFS needs to eliminate from the rule discussions of threats that are highly speculative and unsupported by scientific or commercial data. NMFS must not base its decisions on "speculation or surmise." *See Bennett v. Spear*, 520 U.S. 154, 176 (1997); *see also Bldg. Indus. Ass'n v. Norton*, 247 F.3d 1241, 1246-47 (D.C. Cir. 2001). NMFS needs to link its habitat designations to credible threats. It needs to fully explain its rationale for designating Area 1 and Area 2 as critical habitat, and it needs to fully disclose the methods and data it used for making those designations.

4. Primary Constituent Elements (PCEs)

With respect to the PCEs identified by the NMFS as essential for the conservation of beluga whales in Cook Inlet, the identified elements are habitat features important for beluga survival. However, the NMFS has not demonstrated that any of the identified elements are actually limiting beluga whale production or their recovery in Cook Inlet. The NMFS needs to further rationalize the inclusion of the identified PCEs in terms of their current impact on beluga whale survival and recovery in Cook Inlet.

We are also concerned with the lack of specificity for some of the identified PCEs. For example, "*the absence of toxins or other agents of a type or amount harmful to beluga whales*" is identified as a PCE. The meaning of this PCE, and more importantly, how it will be assessed during the consultation process is unclear. The same is true for prey where it is stated that a wide range of prey species constitute important food sources for beluga whales in Cook Inlet. Again, what precisely does this mean and how it will be assessed during the consultation process needs to be explained by the NMFS. The NMFS needs to provide further specificity and identify thresholds as part of the designation of the PCEs similar to how the PCE for in-water noise was treated.

The following comments refer to the proposed PCEs:

Intertidal and sub-tidal waters. PCE 1 is defined as, "*Intertidal and subtidal waters of Cook Inlet with depths <30 feet (9.1 m) (MLLW) and within 5 miles (8.0 km) of high and medium flow accumulation anadromous fish streams*". We agree that certain intertidal and sub-tidal waters are important habitat features for feeding, predator avoidance, calving, and molting. However, there is little evidence presented to suggest that the current scope of these areas is either limiting beluga whale production or their recovery in Cook Inlet and there is little evidence to support the expansive manner in which NMFS has defined intertidal and sub-tidal waters.

NMFS states, "*Because of their importance in the Cook Inlet beluga whale's feeding strategy, as predator escape terrain, and in providing other habitat values, we consider*

'mudflats'... to be a physical feature essential to the conservation of beluga whale". Without explanation or rationale based on scientific data, NMFS then proceeds to expand mudflats to "*shallow and nearshore waters proximate to certain tributary streams*". In its habitat model (Goetz et a. 2007), NMFS uses data in the form of polygon shapefiles that depict mudflats specifically rather than relying on the vague, unquantified expression "*shallow and nearshore waters*". NMFS needs to provide a complete, data-based explanation for equating mudflats with "shallow and nearshore waters proximate to certain tributary streams".

The use of the term "*proximate to certain tributary streams*" indicates that this is a discrete feature, that the feature occurs in conjunction with tributary streams as opposed to large rivers, that it occurs in conjunction with some tributary streams but not all tributary streams, and that it occurs close to those streams. NMFS apparently has data on which of these tributary streams are important to beluga whales, but fails to provide that information or take it into account in defining PCE 1. Rather, NMFS apparently uses the model of Goetz et al. (2007) to further expand PCE 1 to include all "*medium and high flow accumulation rivers*". We have serious objections to some of the methods, assumptions, and conclusions of this model, and the arbitrary use of this model for defining PCEs and critical habitat areas. Detailed concerns about the model follow below.

NMFS provides no rationale for expanding the definition of PCE 1 from "*mudflats*" and "*medium and high accumulation inlets*" as described in the Goetz et al. (2007) model to "*within the 30-foot (9.1 m) depth contour*". The only explanation NMFS provides for further expanding PCE 1 with a depth contour is *"...after consultation with the author." NMFS also provides no rationale for its use of "within 5 miles (8.0 km)*" for defining the area of importance around high and medium flow accumulation streams.

NMFS needs to provide a complete and thorough explanation of the scientific data and methods it used for defining PCE 1 so that the State of Alaska and the public have access to that data and can review and comment on the methods and procedures used to expand PCE 1 beyond the NMFS model presented in Goetz et al. 2007. Once this information is made available by NMFS, Alaska requests an additional public comment opportunity so that the public and agencies may review and comment on this information.

Habitat Model

NMFS appears to rely heavily on a model it developed for defining PCE 1 that was published by Goetz et al. (2007). This model has serious flaws, and is applied arbitrarily and inappropriately, as discussed below.

Fish Stocks of Cook Inlet

First, we object to NMFS dismissing from use in the model (Goetz et al. 2007, pg 254) readily available information on fish abundance and distribution that the authors acknowledge would improve the accuracy of their models. Ignoring data on fish populations is an especially serious flaw because the authors use flow accumulation instead of fish abundance "*as a mechanism to distinguish among tributaries entering*

Cook Inlet" (Goetz et al. 2007, pg 248). Fish abundance is actually the important variable, not flow accumulation which the authors use as a proxy. Flow accumulation does not necessarily equate to significant runs of fish. In fact, of the 88 streams and rivers identified by NMFS as medium and high flow accumulation rivers, only some of those actually contain significant runs of salmon. Conversely, Packers Creek, located on Kalgin Island, is small in terms of flow, and was not included despite the fact that it has a significant run of sockeye salmon with escapements numbering nearly 30-40,000 fish.

These data on fish populations of Cook Inlet are readily available, and in fact, some were provided directly to NMFS by ADF&G in response to its advance notice of rule making[1]. In addition to the data provided to NMFS, additional data are available directly to the public from databases on ADF&G's website[2], or are readily available in published reports, many of which are produced annually and are available directly to the public on ADF&G's website.

These data are not scanty. Although detailed information may not be available for all fish species for all rivers, a large volume of data, covering many decades, concerning abundance, run timing, locations, and harvests of fish populations is readily available for Cook Inlet. Particularly important for use in this context, information about which rivers contain significant runs of salmon and eulachon and the magnitude of those runs is readily available. In fact, the proposed rule itself provides some data on important fish stocks. For example, in the proposed rule NMFS discusses eulachon runs, including their location (to the Susitna River), timing (one run in May and another in July), and magnitude (early run estimated at several hundred thousand, late run estimated at several million).

In Goetz et al. (2007), NMFS summarily dismisses this large body of information, stating that "*data on prey availability have not been collected in a manner suitable for beluga research.*" It is important to note that little, if any, of the information used in this model was collected specifically for the purpose of modeling beluga habitat usage. While available information and data can be used to establish a model, the NMFS should explain and test the caveats and assumptions about the application of these data before applying model results. This was not done. This is especially true of the beluga data itself which were collected for the purpose of evaluating abundance and distribution, not habitat associations specifically.

In its proposed rule, NMFS states, "*Known salmon escapement numbers and commercial harvests have fluctuated widely throughout the last 40 years...*" as a reason for discounting available fish information. Certainly, escapements have fluctuated, but fluctuations are necessary for correlating two variables. In Goetz et al. 2007, NMFS also

[1] We include by reference, as if fully stated in this document, the State of Alaska's May 14, 2009 comments on the Advanced Notice of Public Rule Making for the Designation of Critical Habitat for the Cook Inlet DPS of the Beluga Whale (74 FR 17131, April 14, 2009) and the State of Alaska's July 2007 comments on the Proposed Rule to Designate the Cook Inlet DPS of the Beluga Whale as an Endangered Species (72 FR 19854, April 20, 2007).
[2] See www.cf.adfg.state.ak.us/ and www.sf.adfg.state.ak.us/statewide/index.cfm.

states that "*fish run data are currently biased toward commercially valuable fish stocks....*" Data are collected for commercially valuable fish stocks because those are generally the large runs of fish. One indication of the size of a fish run is whether or not it is commercially harvested.

NMFS has identified salmon as one of the most important prey species for belugas, and therefore this information should be incorporated into their models when it is available. ADF&G has collected salmon run and harvest information for many decades which has been used to sustainably manage large and complex fisheries in Cook Inlet. Without a full explanation of why these data on fish populations have been dismissed, NMFS has arbitrarily ignored an essential element for describing PCE 1.

A large body of scientific and commercial data on fish stocks of Cook Inlet is readily available, NMFS was aware of these data at the time they developed the model and at the time they issued the proposed rule, and NMFS arbitrarily dismissed the best scientific and commercial data available on fish stocks of Cook Inlet. The NMFS is prohibited from disregarding, and indeed must rely on, the scientific and commercial data available to it. *See Southwest Center for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000); *see also City of Las Vegas v. Lujan*, 891 F.2d 927, 933 (D.C. Cir. 1989). Data on fish runs, including their locations, magnitude, and timing, which are available, are essential for making critical habitat designations and defining PCEs that are based on biology and scientific data. NMFS needs to revise its habitat use models, PCEs, and critical habitat designations using this information and data.

Other Physical Parameters

In Goetz et al. (2007), NMFS states that "*it would be useful to incorporate other physical parameters such as sea surface temperature, turbidity, tidal cycles, and salinity into our habitat models as each of these parameters could play a role in explaining the distribution of more direct parameters... Unfortunately, these were not available for the Cook Inlet area*". NMFS has arbitrarily dismissed the large amount of information readily available on the physical parameters of Cook Inlet including studies on temperature, salinity, circulations, marine ice, rip tides, and tidal flows[3]. NMFS should revise its habitat models using this readily available information on the physical characteristics of Cook Inlet.

[3] Okkonen, S.R. and S.S. Howell. 2003. Measurements of temperature, salinity and circulations in Cook Inlet, Alaska. OCS Study MMS 2003-036.

Mulherin, N. D., W. B. Tucker, III, O. P. Smith and W. J. Lee. 2001. Marine ice atlas for Cook Inlet, Alaska. DRDC/CRREL TR-01-10, Cold Regions Research and Engineering Laboratory U.S. Army Corps of Engineers. http://www.crrel.usace.army.mil/library/technicalreports/TR-01-10.pdf

Haley, B., G. Tomlins, O. Smith, W. Wilson, and M. Link. 1998. Mapping Cook Inlet rip tides using local knowledge and remote sensing. OCS Study MMS 2000-025.

Oey, L., T. Ezer, C. Hu, F. E. Muller-Karger. 2007. Baroclinic tidal flows and inundation processes in Cook Inlet, Alaska: numerical modeling and satellite observations. Ocean Dynamics 57:205-221.

Spatial Application of the Model
Finally, application of the NMFS model published in Goetz et al. (2007) is flawed and arbitrary because it was applied across the entire upper and lower Cook Inlet. The survey protocol for the model clearly states that the beluga data were collected during June and July only. Because all of NMFS's other information indicates that beluga are concentrated in the northern part of upper Cook Inlet (Area 1) during June and July, the model should not be applied to Area 2, including lower Cook Inlet south of 60° 25.0' N.

For example, in its proposed rule, NMFS states, "*They concentrate in deeper waters in mid Inlet past Kalgin Island...*" In Goetz et al. (2007), NMFS states that "*...in winter, the distribution changes...primarily because sea ice – which often scrapes the ground while moving across tidal flats – makes inhabiting shallow waters too hazardous for marine mammals*". The beluga sighting data used in the model also support that the model should only be applied to the northern part of upper Cook Inlet (Area 1, summer distribution). NMFS states, "*Even though the habitat predicted by CART and RSF modeling includes coastal areas extending the entire length of Cook Inlet...only 3% of the beluga sightings were recorded south of the east and west Forelands*". (The East and West Forelands divide Area 2 approximately in half).

Thus, it is clear that since belugas inhabit Area 2 primarily during the winter, this summer model should not be applied to Area 2, especially south of 60° 25.0' N and lower Cook Inlet, areas with very few sightings of beluga whales and which are primarily inhabited in the winter . Applying this summer model to areas occupied by belugas in the winter has resulted in NMFS incorrectly identifying as PCE 1 habitats that are impossible or highly improbable for belugas to inhabit.

When an agency uses a model in its decision-making process, it must "explain the assumptions and methodology used in preparing the model, and, if the methodology is challenged, must provide a complete analytic defense." *United State Air Tour Ass'n v. F.A.A.*, 298 F.3d 997, 1008 (D.C. Cir. 2002) (quoting *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 535 (D.C. Cir. 1983)). An agency's use of a model is arbitrary if it has no rational relationship to the reality if purports to represent. *Greater Yellowstone Coal v. Kempthorne*, 577 F. Supp. 2d 183, 198 (D.D.C. 2008). To comply with these standards, the NMFS must explain its use of the models, and revise them to correspond to available data.

Conclusions
The NMFS should revise the models presented in Goetz et al. (2007) by including data for all appropriate variables, particularly for fish stocks and physical properties such as tides, currents, and ice. The model should only be applied to Area 1, and Area 2 north of the East and West Forelands. Once revised, the public comment period should be reopened to allow for public and agency review and comment on the application of revised model.

Primary prey species. PCE 2 is defined in the proposed rule as, "*Primary prey species consisting of four (4) species of Pacific salmon (Chinook, sockeye, chum, and coho),*

Pacific eulachon, Pacific cod, walleye pollock, saffron cod, and yellowfin sole". The primary prey species listed are consistent with what is known about the diet of Cook Inlet belugas. In addition to fish, several invertebrate species are also eaten, the most important of which is shrimp, which occurred at 75% frequency of occurrence in stomach content analyses (ADF&G unpubl. data). There is little evidence presented, however, to suggest that the availability of prey species is either limiting beluga whale production or their recovery in Cook Inlet or that there is any threat to the prey species.

NMFS states as its basis "*scientific research, direct observation and TEK*" but provides no citations for this information that would allow the State of Alaska and the public to review it.

NMFS states that "*two fish species that are highly utilized by Cook Inlet beluga whales are king or Chinook salmon and Pacific eulachon.*" A citation needs to be provided for this statement, as we are unaware of studies indicating that Chinook salmon specifically are important to belugas over other salmon species.

As discussed above in the section *Fish Stocks of Cook Inlet*, NMFS should fully utilize the large body of readily available scientific and commercial data on fish populations of Cook Inlet to define PCE 2. Once this analysis is completed the NMFS should redefine this element as "Prey abundances at "XXX" levels that affect the recovery of beluga whales in Cook Inlet" or some other definable standard.

The absence of toxins. PCE 3 is defined as, "*The absence of toxins or other agents of a type or amount harmful to beluga whales.*" We agree that the absence of toxins at harmful levels is important to overall health of prey and beluga whales. However, given that waivers to discharge into areas designated as critical habitat will be required, there is a need for greater specificity associated with this element.

Cook Inlet beluga whales have been tested for many contaminants such as PCBs, pesticides, and heavy metals. In the proposed rule it is stated that beluga whales of Cook Inlet "*have lower levels of contaminants stored in their bodies than other populations of belugas*". The study to which NMFS is referring is a study by Becker et al. (2000) which compared contaminants in belugas of Cook Inlet with belugas from other areas of Alaska that have much less development and industry. Results of this study indicate that contaminants in Cook Inlet waters are currently at a level that is not harmful to belugas.

Tests for other potential anthropogenic toxins from waste water have not been conducted; e.g., pharmaceuticals, solvents, and de-icer from airports. Testing for natural algal toxins such as those formed by phytoplankton blooms (e.g. red tide that results in paralytic shellfish poisoning) may also be important. Changes in water temperatures may be increasing blooms that produce domoic acid, which is known to cause stranding and death in cetaceans and other marine mammals. Domoic acid is strongly suspected in the deaths of two Steller sea lions and a harbor seal along the coast of the Kenai Peninsula in summer 2008 (C. Goertz, Alaska SeaLife Center, Marine Mammal Stranding Network Meeting, Seward AK 2009). These are the first recorded instances of domoic acid

poisoning in marine mammals from Alaska, suggesting an increase in toxin producing species and/or conditions favorable for toxin production.

Because of the wide range of potential toxins, this PCE is far too vague and broad. There are scientific data that are readily available for defining the types and amounts of contaminants that would be harmful to belugas in Cook Inlet, but NMFS has not used this information.

In defining PCE 2, NMFS relies on information from a Canadian population of beluga whales in the Gulf of St. Lawrence. The relevancy of the Canadian population, which has high levels of contaminants, is unclear. Relying on data from the Canadian population incorrectly implies that Cook Inlet beluga whales are experiencing similar conditions, which is not the case based on studies specific to the Cook Inlet population (Becker et al. 2000[4]). Without a clear connection of contaminants and conditions in the Gulf of St. Lawrence, Canada to those in Cook Inlet, NMFS should not rely on this study.

NMFS states that belugas are "*predisposed to adverse effects of pollution*". NMFS needs to provide the scientific data on which it bases this statement. We also request that NMFS clarify the statement, "*their range includes the most populated and industrialized area of the state*". This statement could easily be misconstrued by reviewers unfamiliar with Alaska to mean that Cook Inlet is densely populated with large industries and development. As we have noted above in the section *Mischaracterization of the Cook Inlet Area*, although it is of critical economic importance to Alaska, Cook Inlet is sparsely populated with only a few modest industries, there are a host of environmentally protective regulations in place, large areas of land and water are set aside specifically to protect fish and wildlife populations and their habitats, and the area as a whole is in largely pristine condition.

As an alternative we request that NMFS restate PCE 3 as: "Water that meets the standards of state and federal clean water regulations" or some other definable standard.

Unrestricted passage. PCE 4 is defined as, "*Unrestricted passage within or between the critical habitat areas*". The ability of belugas to have unrestricted passage within or between areas of critical habitat is consistent with the knowledge of the spatial and temporal dynamics of the primary beluga prey species. There is no evidence presented, however, to suggest that passage between areas is being restricted to an extent to either limit beluga whale productivity or their recovery in Cook Inlet. Also, this PCE is broad, vague, and NMFS has not used the best scientific and commercial data available to define this PCE. For example, Ireland et al. (2005[5]) state that "*movement through Knik Arm to*

[4] Becker, P. R., M. M. Krahn, E. A. Mackey, R. Demiralp, M. M. Schantz, M. S. Epstein, M. K. Donais, B. J. Porter, D. C. B. Muir and S. A. Wise. 2000. Concentrations of polychlorinated biphenyls (PCB's), chlorinated pesticides, and heavy metals and other elements in tissues of belugas, Delphinapterus leucas, from Cook Inlet, Alaska. Marine Fisheries Review 62(3):81-98. http://spo.nwr.noaa.gov/mfr623/mfr6238.pdf

[5] Ireland, D. S., S. McKendrick, D. W. Funk, T. M. Markowitz, A. P. Ramos, M. R. Link and M. W. Demarchi. 2005. Spatial analysis of beluga whale distribution in Knik Arm. Pages 7-1 - 7-22 in D. W.

and from areas of concentration tends to follow corridors primarily located along the eastern shoreline". Defining essential passage areas will be possible after NMFS refines its critical habitat designations and PCE 1, and if NMFS uses the full body of scientific and commercial data available.

The absence of in-water noise at levels resulting in the abandonment of habitat.

PCE 5 is defined as, "*Absence of in-water noise at levels resulting in the abandonment of habitat by Cook Inlet beluga whales*". The absence of noise at harmful levels is important to overall health of prey and beluga whales because of their extensive acoustic repertoire, and in particular for those areas of Cook Inlet (upper and mid inlet) where visibility is extremely restricted by naturally occurring turbidity and belugas use high-frequency 'clicks' for echolocation.

NMFS states that it considers "'*quiet' areas in which noise levels do not interfere with important life history functions and behavior of these whales to be an essential feature of this critical habitat*". This statement and the resulting PCE are far too vague and broad to be of use in defining a physical or biological feature that is essential for conservation. Although later in its proposed rule NMFS discusses what it considers to be the threshold for harassment, NMFS need to provide an objective, measurable noise level in the definition of PCE 5 itself.

In addition, NMFS provides only one short paragraph on the methods and rationale it used in defining PCE 5. NMFS states that "*empirical data exist*", but it has provided no sources for the information and data it used to develop this PCE. This information must be identified and disclosed during the comment period to allow for public and agency review and comment on this aspect of the proposed designation. *Idaho Farm Bureau Fed'n v. Babbitt*, 58 F.3d 1392, 1395 (9th Cir. 1995); *see also Gerber v. Norton*, 294 F.3d 173, 179 (D.C. Cir. 2002) (opportunity for public comment on ESA decisionmaking must be meaningful opportunity and provide documents and data relied on by Service in developing proposed rule). NMFS states that increased background noise may be "*analogous to a human's reduced visual acuity when confronted with heavy fog or darkness*" but provides no data to substantiate this claim. It lists a number of potential effects of noise, but does not provide the level at which those effects would occur, and provides no substantiating data. NMFS needs to clearly explain its methods for determining this PCE and the data it used so that the State of Alaska and the public can review its data and methods. An additional public comment period must be provided once this information is disclosed.

In its discussion of special management consideration (pg 63088), NMFS states, "*There exists a large body of information on the effects of noise on beluga whales*", but does not

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Funk, T. M. Markowitz and R. Rodrigues, editor. Baseline studies of beluga whale habitat use in Knik Arm, upper Cook Inlet, Alaska: July 2004 - July 2005. Prepared by LGL Alaska Research Associates in association with HDR Alaska,, Inc. for Knik Arm Bridge and Toll Authority. Anchorage. http://www.knikarmbridge.com/Tech_Reports/Boiler%20QC/Baseline%20Studies%20of%20Beluga%20Whale%20Habitat%20Use%20in%20Knik%20Arm.pdf

identify those sources. In fact, the 2006 status review (Hobbs et al. 2006[6]) conducted by NMFS on Cook Inlet belugas cites only nine sources of information on sound, none of which are specific to the effects of noise on beluga whales in Cook Inlet. One source was a marine mammal encyclopedia, one discussed sources of sound in Cook Inlet, one provided acoustic measurements of sound in Cook Inlet, several provided anecdotal or observational information, and several were citations to unpublished data.

Finally, NMFS needs to acknowledge and address the fact that beluga whales have coexisted with the noise from human activity in Cook Inlet for decades and that there is no information or data to indicate that noise is a threat or contributing factor to the abundance of belugas in Cook Inlet. In fact some studies have concluded that belugas may not be harassed by the daily anthropogenic background noises of Cook Inlet (Hobbs et al. 2006) or may be habituated to those noises (Moore et al. 2000[7]).

Summary

The NMFS has not demonstrated that any of the identified elements are actually limiting beluga whale production or their recovery in Cook Inlet. The NMFS needs to further rationalize the inclusion of the identified PCEs in terms of their current impact on beluga whale survival and recovery in Cook Inlet. The NMFS also needs to provide further specificity and identify thresholds as part of the designation of the PCEs similar to how the PCE for in-water noise was treated. Once these issues are addressed the NMFS should reopen a public comment period.

5. Geographic Extent of the Proposed Critical Habitat Designation

The NMFS has taken a relatively simplistic approach to defining geographies of critical habitat for beluga whales in Cook Inlet by drawing a line around the primary current occupied habitat. Alternatively, the NMFS should develop and analyze a more discrete approach to designating critical habitat for beluga whales in Cook Inlet based on the actual presence of the PCEs, once they have been defined with greater specificity as requested above.

The rationale for including all of the areas within Cook Inlet north of a line at 60° 25.0'N and including Kachemak Bay and the entirety of the near shore area along the west shore of the lower inlet is the presence of identified primary constituent elements (PCEs), based on a resource selection function model that indicates the importance of mudflats and high-medium flow accumulation, along with historical observations of belugas, predator avoidance, and movement among important feeding areas.

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[6] Hobbs, R. C., K. E. W. Shelden, D. J. Vos, K. T. Goetz and D. J. Rugh. 2006. Status review and extinction assessment of Cook Inlet belugas (*Delphinapterus leucas*). Alaska Fisheries Science Center, NOAA, AFSC Processed Rep. 2006-16, Seattle.
http://www.afsc.noaa.gov/Publications/ProcRpt/PR%202006-16.pdf

[7] Moore, S. E., K. E. W. Shelden, L. K. Litzky, B. A. Mahoney and D. R. Rugh. 2000. Beluga, *Delphinapterus leucas*, habitat associations in Cook Inlet, Alaska. Marine Fisheries Review 62(3):60-80. http://spo.nwr.noaa.gov/mfr623/mfr6237.pdf

NMFS has proposed to designate the entirety of Area 1 as critical habitat, which includes the portion of upper Cook Inlet that is currently most commonly occupied by beluga whales during the spring-fall period. Area 1 provides specific areas for feeding, predator avoidance, calving, and areas with low man-made noise levels. The NMFS's determination that mudflats are important in providing multiple essential features (i.e., feeding, predator avoidance, and calving and molting areas) is supported by the available scientific information. These specific areas are used most in the spring and summer months when anadromous fish runs are present, and when belugas most likely forage extensively and subsequently build up blubber layers depleted during winter.

NMFS has also proposed to designate the region south of Area 1 to the line at 60° 25.0' (~10 km south of Kalgin Island) within Area 2 as critical habitat. Limited survey data (vessel and aerial) and telemetry data indicate that belugas currently, and historically, use specific areas in this geography. Prior to the population decline of the 1990s, this area was possibly used year-round, yet currently it is used more frequently in winter months. This area has deeper waters, and the limited available telemetry data indicate belugas move further offshore into these waters in the winter months.

The presence of the identified PCEs within these general areas, once they are defined with greater specificity as requested above, is not likely uniform over the entirety of upper Cook Inlet. Rather, it is quite likely they are located in more discrete areas of Cook Inlet. As such, consideration should be given to identifying those specific areas and times within these broader geographies that actually contain the important habitat features as critical habitat rather than the areas in the entirety as proposed.

Available data, and most of the data cited by NMFS in its proposed rule, indicate that critical habitat can be much more precisely defined than a simplistic designation of the entire upper Cook Inlet. The following sample of statements from the proposed rule illustrate the discrete nature of beluga habitat, both geographically and temporally, as indicated from available scientific and commercial data (emphasis added):

- "Data from satellite tagged whales documented that Cook Inlet belugas ***concentrate*** in the upper Inlet ***at rivers and bays*** in the ***summer and fall***" (pg 63082).
- During the ***winter*** months, belugas "... ***concentrate*** in ***deeper waters*** in ***mid Inlet past Kalgin Island***..." (pg 63082).
- "Their ***winter*** distribution ***does not appear to be associated with river mouths***, as it is during the warmer months" (pg 63083).
- "There is obvious and repeated use of ***certain*** habitats by Cook Inlet beluga whales" (pg 63083).
- Surveys have "...consistently documented ***high use*** of ***Knik Arm***, ***Turnagain Arm***, ***Chickaloon Bay*** and the ***Susitna River delta*** areas..." in June and July (pg 63085).

- "...in fact they commonly occupy ***very discrete areas*** of the Inlet, particularly during ***summer*** months" (pg 63085).
- "In upper Cook Inlet, beluga whales ***concentrate*** offshore ***from several important salmon streams*** and appear to use a feeding strategy which takes advantage of the ***bathymetry*** in the area" (pg 63085).
- "Beluga whales are ***seldom*** observed near ***small flow tributaries***" (pg 63085).
- Beluga whales are associated with "***certain*** tributary streams" (pg 63086).
- "...large numbers of Cook Inlet belugas typically ***occupy very small habitats***" (pg 63087).
- "Beluga whales have adapted here by utilizing ***certain*** areas over ***time*** and ***space*** to meet their ecological needs" (pg 63087).

NMFS does not use other available data that would be useful for refining the proposed designations. For example, research by LGL, Limited Environmental Research Associates, has provided a host of scientific data specific to Knik Arm, but NMFS only makes one generalized application of that data. As part of the LGL studies, Ireland et al. (2005) state that "*...movements through Knik Arm appear to follow corridors along the eastern shoreline*". NMFS neglects to mention that this level of information concerning movement patterns is available for Area 1. Also, distribution patterns resulting from annual aerial survey counts were not analyzed to assess whether certain areas show higher counts than other areas. Assuming that belugas use areas at higher rates that are more critical, such an analysis would be beneficial and informative.

The remaining region of Area 2 is comprised of (1) the near shore area along the west coast of the lower inlet and (2) Kachemak Bay. NMFS has provided limited rationale to support including these areas in their entirety in the critical habitat designation.

With respect to the near shore area along the west coast of the lower inlet, the NMFS has not provided an adequate description of the area designated as critical habitat, except vaguely as "*...nearshore areas...along the west side of the Inlet...*" in its definition. Later, it specifies waters within 2 nautical miles, but gives no rationale for that definition. NMFS appears to be relying on the model developed in Goetz et al. (2007) to define critical habitat along the western coastline of lower Cook Inlet. While discrete areas within this area may contain habitat features important for beluga whales many areas within this broad area do not contain these features. Without additional justification, NMFS should at a minimum only designate those areas along the west side of the inlet that actually contain the habitat features important for belugas or remove from the critical habitat designation all of the west side of the inlet south of 60° 25.0' N.

Similarly, the rationale for including Kachemak Bay and the near shore area along the west shore of the lower inlet is the presence of identified PCEs based on the model by Goetz et al. (2007) that indicates the importance of mudflats and high-medium flow accumulation, along with historical observations of belugas, predator avoidance, and movement among important feeding areas. Again, the distribution of habitat features

important to beluga whales is not uniform within Kachemak Bay and consideration should be given to only identifying those areas that actually contain those important habitat features. Absent this approach, Kachemak Bay should be excluded from the designation of critical habitat.

We agree with the decision to not designate the remaining parts of Cook Inlet or other areas outside of Cook Inlet as critical habitat. Based on the aerial surveys conducted for population assessment, beluga use of the lower inlet is very limited during June and July. Similar to the rest of Cook Inlet, there is a paucity of data on the winter distribution and abundance of belugas in the lower inlet. Although a small number of sightings continue to occur, the available data indicate the use of these two areas is substantially less than the rest of the proposed critical habitat.

These are also discrepancies in the proposed rule that the official areas proposed by NMFS for critical habitat are different from those described in the opening section of the proposed rule. In addition, the maps NMFS provides in its proposed rule are at such low resolution that it is impossible for the public to infer that the proposed designations include waters of several important rivers. Specifically:

NMFS uses different definitions of Area 1 and Area 2 in different sections of the proposed rule.

Under the heading *Proposed Critical Habitat* (pg 63083), NMFS states:

> Area 1 encompasses 1,918 square kilometers (741 sq. mi.) of Cook Inlet northeast of a line from the mouth of Threemile Creek (61° 08.5′ N., 151° 04.4′ W.) to Point Possession (61° 02.1′ N., 150° 24.3′ W.).

Several pages later, under a separate section titled *Critical Habitat Boundaries* (pg 63087), NMFS expands this proposal to:

> We propose critical habitat be bounded on the upland by Mean Higher High Water (MHHW) datum, the lower reaches of certain important tributary waters entering the Inlet, and the following descriptions: (1) Area 1. All marine waters of Cook Inlet north of a line connecting Point Possession (61.04° N., 150.37°. W) and the mouth of Threemile Creek (61.0855° N., 151.0440° W.), including waters of the Susitna River south of 61.33.33 N latitude, the Little Susitna River south of 61.30° N. latitude, and the Chikaloon River north of 60.8833° N. latitude.

NMFS first defines Area 2 as (under the heading *Proposed Critical Habitat*, pg 63084):

> ...south of Area 1, north of a line at 60° 25.0' N., and includes nearshore areas south of 60° 25.0' N. along the west side of the Inlet and Kachemak Bay on the east side of the lower inlet.

NMFS later expands Area 2 to (under the heading *Critical Habitat Boundaries*, pg 63087):

> Area 2. All marine waters of Cook Inlet south of a line connecting Point Possession (61.04° N., 150.37° W.) and the mouth of Threemile Creek (61.0855° N., 151.0440° W.) and north of 60.25° N latitude, including waters within 2 nautical miles (3.2 km) of MHHW along the western shoreline of

> Cook Inlet between 60.25° N. latitude and the mouth of the Douglas River (59.04° N., 153.45° W.); all waters of Kachemak Bay east of 40.00 W longitude; and waters of the Kenai River below the Warren Ames bridge at Kenai, Alaska.

Further, the map coordinates NMFS provides in the proposed rule for defining its critical habitat boundaries are ambiguous. For example, it refers to "waters of the Susitna River south of 61.33.33 N latitude". The coordinates "61.33.33 N" could be interpreted as degrees, minutes, and seconds (61.33°33') or as decimal degrees (61.3333), resulting in completely different reference points for the boundaries. In addition, the spatial data NMFS provides on its website do not match the coordinates given in the critical habitat boundary descriptions. See attached Figures 1-3 for illustration of these discrepancies.

In conclusion, the NMFS has taken a relatively simplistic approach to defining geographies of critical habitat for beluga whales in Cook Inlet by drawing a line around the primary current occupied habitat and using broadly defined PCEs. Alternatively, the NMFS should develop and analyze a more discrete approach to designating critical habitat for beluga whales in Cook Inlet based on the actual presence of the PCEs, once they have been defined with greater specificity, as requested in Section 3 above. An additional public comment period is requested once this analysis is completed.

6. Special Management Considerations or Protections

In its proposed rule, NMFS discusses whether the PCEs identified for Cook Inlet beluga whales may require special management considerations or protection. We acknowledge that all 5 PCEs meet the criteria of "*may require special management consideration or protection*" simply by the fact that there are already management considerations or protections in place for all of them. However, we object to NMFS's summary statement, "*there remain additional and unmet management needs owing to the fact that none of these management regimes is directed at the conservation and recovery needs of Cook Inlet beluga whales.*" There is no evidence to support that a lack of effectiveness of any of the management regimes in place in Cook Inlet or that any management or regulatory gap contributed to the endangered listing of Cook Inlet beluga whales nor limit its recovery. Unregulated harvest is generally acknowledged to be the primary cause of the population decline preceding the listing decision. NMFS has had jurisdiction to regulate beluga harvest since the 1972 enactment of the Marine Mammal Protection Act. In addition, there is no indication that further management or regulatory restrictions to activities in Cook Inlet, beyond those already in place before the listing, will have any effect on increasing the abundance of beluga whales in Cook Inlet. Further, there is no convincing argument and therefore no reason to believe that the listing itself or the designation of critical habitat under the ESA will improve the status of Cook Inlet beluga whales.

In response to the advance notice of rule making, the State of Alaska submitted a 26-page attachment to NMFS concerning management and regulatory programs that are in place in Cook Inlet and that ensure protection of beluga whales and their habitat. This

document details thirteen protected areas that are set aside as refuges, sanctuaries, and critical habitat areas; protections for anadromous waters and stream crossings; requirements for oil spill contingency plans; requirements relative to the Alaska Coastal Management Program; the many mitigation measures required by the Division of Oil and Gas, including a number that impose temporal and spatial restrictions specifically requested by NMFS to protect beluga whales; requirements of the Alaska Department of Environment Conservation concerning discharges and emissions; and many others. This information was unjustifiably disregarded by NMFS during development of its proposed rule.

It is important to note that it is not required that management regimes be directed specifically at conservation and recovery of beluga whales to be considered effective for their conservation and recovery. The wide host of management and regulatory protections in place in Cook Inlet that are not specific to beluga whales in fact provide superior protection to beluga whales and have provided suitable habitat for beluga whales for decades.

The effectiveness of the state and federal environmental management and regulatory regimes that have been in place for many decades in Cook Inlet should be acknowledged. After all, those areas which do not require "special management consideration or protections" are not "critical habitat" and are not to be designated as such under the ESA. 16 U.S.C. § 1532(5)(A). The existing state and federal environmental management and regulatory regimes already protect the habitat for beluga whales justifying a more narrow identification of areas as critical habitat.

7. Implied Proposed Benefits of the Designation

In its proposed rule, NMFS weighs the benefits of designating critical habitat. We disagree with the characterization of most of these effects as beneficial. NMFS states that the primary benefit of designation is section 7 consultations. We disagree that this will be a benefit. As we have stated above under *Special Management Considerations or Protections*, beluga whales and their habitats are already protected by a comprehensive suite of management and regulatory regimes that have been in place for many decades, and have allowed human use of the area to coexist with beluga whales. There are no scientific data or other information to indicate that section 7 consultations will increase the likelihood that beluga whales will be removed from the endangered species list. Rather, consultations, both for the listing itself and for critical habitat, will only add additional layers of administrative processes without providing any additional effective protections for beluga whales or their habitat.

NMFS states that another benefit of designation may be "*education and outreach.*" We disagree. Particularly in this situation, where NMFS is proposing to indiscriminately designate huge portions of the beluga's range without using the best available scientific data, we are concerned that a backlash will occur that will undermine conservation efforts, not just for beluga whales, but for the many management and regulatory

programs that protect the fish, wildlife, habitats, and the human population of the Cook Inlet area.

NMFS provides a list of potential benefits of designating critical habitat. NMFS should provide scientific data or other specific information to support these possibilities. Otherwise, this list is speculative and should be removed from the final rule.

We strongly object to the statement, "*Yet another example could be reduced levels of pollution in Cook Inlet, with associated benefits accruing to a suite of ecological services, culminating in an improved quality of life for Cook Inlet residents and visitors, alike.*" As we discuss in the section "*Mischaracterization of the Cook Inlet Area*" above, this statement inaccurately implies that the Cook Inlet area is polluted and in environmental hardship, both for humans and beluga whales. On the contrary, the waters of Cook Inlet offer pristine habitat for beluga whales, and the area is one of the best locations in the world in regard to the environmental quality of life for humans, particularly regarding clean air, water, and land.

In summary, NMFS should revise its weighing of the benefits of designation by recognizing the reality that a critical habitat designation and subsequent section 7 consultations will not offer protections to beluga whales or their habitats above those already in place, will have no effect on delisting beluga whales, will add significantly to the federal administrative burden, could have a negative effect on beluga and other environmental education efforts, as well as a negative effect on other environmental regulatory and management programs and efforts.

8. Existing Regulatory Programs in Place to Beluga Whales in Cook Inlet

The State has previously submitted a comprehensive compendium of environmental protections and regulations in response to the advance notice of proposed rulemaking, and in its comments on the proposed listing decision. The NMFS failed to adequately explain the inadequacy of these rules in protecting beluga whales in Cook Inlet.

The Secretary may exclude areas based on management plans, programs, and partnerships, and that such exclusions may be considered a benefit if they preserve partnerships or programs, or if they reduce regulatory impacts. It is our understanding that the programs, plans, and partnerships considered for such exclusions are not required to be Habitat Conservation Plans. We request exclusion of all legislatively-designated areas, such as refuges, sanctuaries, and critical habitat under section 4(b)(2). These areas are already fully protected, and as discussed above in the section *Benefits of Designation*, including these areas in the critical habitat designation will offer no additional benefit to beluga whales, but will rather expand federal jurisdiction, increase regulatory burden, and decrease public acceptance. These are summarized under section 12 later in this document.

NMFS can exclude areas to preserve partnerships and existing protections if the designation risks losing important protections for beluga whales. Examples of such protections that could be considered for withdrawal include the Division of Oil and Gas mitigation measures A(1)(p)-(r) for Cook Inlet oil and gas leases.[8] These mitigation measures prohibit permanent or temporary oil and gas exploration or development on many Cook Inlet tracts, prohibit surface entry and structures on some tracts, and allow temporary activities such as exploration during certain seasonal windows only. These mitigation measures were put into effect by the Division of Oil and Gas beginning in 2004 specifically at the request of NMFS to protect Cook Inlet beluga whales.

9. Other Comments on the Proposed Designation

The large majority of scientific information on Cook Inlet belugas obtained in the last decade is from the summer period and primarily through observations of belugas during population assessment aerial surveys typically conducted in June. Additional information on the distribution of belugas in the upper inlet has been obtained through land and vessel based observations. Limited telemetry data are available from less than 15 whales, and data exists for the winter months (Jan, Feb, and Mar) from only 4 adult males. Knowledge of beluga distribution, movements, and behavior during the winter is very limited. In particular, the extent of feeding by belugas during the winter is uncertain, and the importance of this period for the nutritional status and body condition of belugas is essentially unknown. During winter, however, adult females are most likely either pregnant or pregnant and lactating and thus would have high energetic demands. Juvenile belugas aged 2-3 years old and newly nutritionally independent (i.e., no longer nursing) also have greater energetic demands, due to less capacity for storing blubber, and they are less efficient at foraging. Thus, if belugas need to feed during the winter it could represent an important period for the overall fitness of adult females and juveniles. Some clarification is needed in the Proposed Rule regarding what specific data is being referred to as '*available information indicates*'. For example, on page 63082, last paragraph, the following statement should include a citation: "*The available information indicates that Cook Inlet belugas continue to move within the Inlet during the winter months.*" Similarly, the following statement cites Hobbs et al. (2005), yet that publication does not contain dive behavior information: "*Dive behavior indicates beluga whales make relatively deeper dives (e.g., to the bottom) and are at the surface less frequently in Area 2, and hence are less frequently observed.*" On page 63088, middle panel first paragraph, the last sentence refers to "*...these four fish species...*," yet presumably it should refer to all the prey species listed at the beginning of the paragraph.

The RSF model represents important environmental features for the summer distribution of this population. To be consistent with determining the rest of the critical habitat areas, knowledge of beluga movement and behavior in winter should also be considered in determining the extent of critical habitat in the lower inlet; i.e., use of more offshore areas and more extensive movements. Further, the potential importance of the winter period

[8] Cook Inlet Areawide Oil and Gas Lease Sale Final Finding of the Director, January 20, 2009.

should be considered. Given the lack of available information at this time, we do not believe there is sufficient information to justify inclusion of lower inlet areas at this time.

10. Comments on the Draft RIR/4(b)(2) Preparatory Assessment/IRFA for the Critical Habitat Designation of the Cook Inlet Beluga Whale

We have serious concerns with the methodology used to estimate the cost of the proposed designation. We believe the NMFS's methodology vastly underestimated the costs of the designation, and as a result failed to adequately consider the possibility of excluding certain activities from the proposed designation. More specifically, we offer the following comments on the ***Draft RIR/4(b)(2) Preparatory Assessment/IRFA for the Critical Habitat Designation of the Cook Inlet Beluga Whale.***

This assessment has attempted to address the economic cost and benefit derived from a Critical Habitat Designation (CHD) for the Cook Inlet beluga whale. There are concerns that the analysis does not adequately attempt to estimate the total potential economic impact of this proposed designation. This analysis is limited in scope and information. The analysis focuses on the administrative costs associated with consultations. This ignores costs on businesses as well as the cost of development precluded by a CHD. Secondly, the analysis does not attempt to highlight any current or proposed economic activity at risk due to a CHD. The Cook Inlet region is home to many industries capitalizing on the region's natural resources. Restrictions on development of these resources will have significant economic impacts, as well as the potential increase in operational costs for business and municipalities that must access alternative, non-local resources as a result of the CHD.

Following are specific comments related to the corresponding sections of the document:

Section 4

<u>4.1 Direct Costs</u>

The direct costs analyzed in this report are limited to:

1) The administrative costs of conducting Section 7 consultation;
2) Implementation of any project modification requested by NMFS through Section 7 consultations to avoid or minimize potential destruction or adverse modification of the critical habitat.

The direct cost of the proposed CHD extends well beyond this limited definition. This definition only accounts for the administrative costs borne by parties involved. This analysis excludes labor costs, travel and time associated with the development of materials accompanying a consultation. Additionally, direct costs include lost revenue for industry as well as the associated lost tax revenue to the State of Alaska that would be lost.

4.1.2 Section 7 Project Modification Costs

This section mentions that it may be necessary to modify development projects in Cook Inlet due to the CHD. However, this section fails to estimate or mention that the costs associated with project modifications could be significant or, worse, make a proposed project uneconomical. If a project becomes uneconomical as a result of CHD, then the lost economic benefit from the project should be counted. The analysis assumes that all projects will continue forward under a CHD. One can assume that with CHD some projects will no longer meet the requirements established by the CHD and projects will cease development, thus losing all potential economic impacts. Further, the analysis should capture not only the economic loss directly associated with a project, but should include the loss of project dollars in downstream turnover in the economy. Dollars prevented from entering the marketplace as paid-for services cannot be used to buy groceries, pay rent, fund daycare, or be used as disposal income at retail businesses, for example.

The economic analysis fails to consider even the most obvious of extrapolations that could be applied to current uses in, or projects proposed for, the CHD area. For example, one of the physical or biological features essential to the conservation of the species is identified as: "Absence of in-water noise at levels resulting in the abandonment of habitat by Cook Inlet beluga whales." The threshold for acoustic harassment is further defined as "160 dB re: 1 μPa for impulsive sounds (e.g., pile driving) and 120 dB re: 1 μPa for continuous noise." A logical application of this information, for purposes of carrying out the economic analysis, is the application of these acoustic limits to current or proposed activities in the CHD. Would any existing uses of the CHD area exceed the limit for either impulsive or continuous noise? Would any proposed uses of the CHD area exceed those limits? The economic analysis should inform the public in this regard, yet it fails to address this in even the most cursory fashion.

NMFS has misled the public concerning the impacts of section 7 consultations during its public hearings on the proposed critical habitat designations for beluga whales. During its presentation at those meetings, NMFS provided potentially misleading statistics on the number of consultations nationwide that have resulted in decisions of "no adverse modification". NMFS stated that of 17,052 consultations conducted nationwide, 17,010 resulted in decisions of "no adverse modification". However, these statistics are potentially misleading because they likely do not reflect the number of projects for which changes were required in order to receive a determination of "no adverse modification" nor do they include projects which were abandoned due to increased project costs.

Both Section 4 and Section 5 limit the analysis of costs and impacts to a predetermined set, and make no attempt to analyze the broad criteria by which the public may define both costs and benefits. Such a limited analysis, in the absence of a clear rationale for such limitation, and lacking established definitions for the terms addressed, fails to provide an accurate picture of the economic impacts.

Section 5

5.1 Framework for Estimating Impacts

"The primary driver for benefits from CHD is a potential change in the quality or condition of the CH that is an improvement over the expected condition of the habitat absent CHD."

This statement located in the first sentence of section 5.1 sets the analysis to assume that the habitat destruction is inevitable in the absence of CHD. By establishing this it is easy to say that benefit can be derived from improvements in the natural environment. However, this misrepresents Cook Inlet, which in many areas is a relatively intact natural environment with marginal opportunity for improvement.

This section discusses the following public benefits:

1) Increased public awareness
2) Education
3) Scientific research
4) Well-being

While these are all positive benefits to society, in many cases they are non-market transactions or require government spending, which comes at a cost to the public through taxes. Much of the analysis includes discussion of increases in "*well-being*" resulting from CHD and the potential increases in population of the Cook Inlet Beluga. This result is measured through an assumption that the habitat will provide better goods and services to the public. It is unclear, other than a larger whale population, how the natural environment in Cook Inlet will provide better goods and services to the public with CHD over the absence of CHD. Rather, the effect of the CHD is likely, in fact, to hinder delivery of goods and services to the public at the level they are currently received, and therefore will have a negative effect on the public's general "well-being." Again, definitions for what the authors intend to communicate by the term "well-being" would be helpful, if only in illuminating the generally understood meaning of the term.

5.2 Overview of Types of Economic Impacts

This section does present the differences in "*use*" and "*nonuse/passive*" benefits as well as "*consumptive*" and "*non-consumptive*" uses. Again, the analysis is limited to the potential for "*significant generation of non-consumptive use benefits*". Since the only consumptive use of belugas is by Alaska Natives for subsistence, which is tightly regulated, one can assume that the potential marginal increase by society of non-consumptive use is fully realized. Furthermore, most non-consumptive uses do not take place in a market, so assigning value is subjective.

5.2.1.1 Direct Use Value

The direct use value is assumed to have a positive impact on users of the marine resource through the long-term stability in sustaining healthy stocks of beluga prey through the CHD. While this may increase the benefit to one user group, it will also have negative impacts on another, explained below, which neither can be accurately measured in

monetary or equivalent terms. Also, within a CHD, consumptive users will not be allowed to use any resource located within the CHD unless it has no adverse impact on the environment.

The example given relates to sport fishermen and the benefit they will receive from more fish. On one hand, the proposed CHD will protect fish stocks by limiting extraction, while the analysis assumes extraction will continue as normal. These assumptions are contradictory. Also, no marginal-benefit analysis has been completed on the benefit of harvesting an additional fish, which is assumed to be the result of CHD in this case. The analysis fails to account for the potential situation where no one can harvest marine species because harvesting activity can adversely affect the marine environment.
The example used for non-consumptive direct use is whale watching. The benefit assumed is that whale watchers will recognize benefits due to better opportunities (assuming of course that these activities will be allowed to occur within the proposed CHD). Again, while there is no disputing the benefit society receives from this activity, conversion of this benefit into monetary terms would allow comparison with other activities in the area that will be negatively affected by the CHD. Assignment of value to non-market benefits, while difficult, is not impossible, and the absence of a means of comparison leaves the public without pertinent information regarding the impact of the CHD. Further, such valuation of benefits is only useful if the full valuation of costs, such as project modifications or projects abandoned, is provided for purposes of the cost/benefit comparison.

5.2.1.2 Indirect Use Value

The analysis associated with indirect use, again assumes that the environment is worse off in the steady state. While there is potential for benefits to accrue from improvements to CH and the nearby habitat, it is unclear what the benefit to the public is. The analysis indicates that marine and shore-side users may benefit from a more aesthetically appealing environment, and that is associated with a higher value. It is inaccurate to assume that this is the case. Users of an already pristine environment may realize minimal or no marginal benefit resulting from CHD. This is also contradictory to the cost side of the analysis that indicates little economic cost as development will continue.

5.2.2 Nonuse or Passive-Use Benefits

This section is focused on the very controversial practice of assigning society benefits by estimating a monetary value to consumers through "Willingness to Pay". Assigning "benefit" through "Willingness to Pay" is done by surveying potential consumers of what the maximum price they are willing to pay for a specific product or service. Next step, the current market price for the good or service in question is established and subtracted from the identified maximum price willing to be paid. The difference is the "benefit" received by the consumer for consuming that service or product at a price below their maximum price. While this analysis can be useful, it also has issues. The major issue with this analysis is that people do not accurately assess the maximum amount they are willing to pay, since it is hypothetical. In many cases, it is easy for people to overestimate the price they are willing to pay because there is no monetary consequence to their answer. The

results of this analysis should be taken cautiously as the method used to quantify benefit is difficult to accurately assess.

Section 7

Section 7 is limited in its analysis of costs and benefits. While benefits are difficult to assess, as pointed out in paragraph two, the potential costs associated with CHD are more readily available, while estimating an overall economic impact is difficult. Section 6 highlights the industries potentially affected, but it fails to place a value on the industry. Some simple analysis on product value, wages, and potential costs could help in the understanding of the potential economic impact of CHD. This report focuses solely on the administrative costs associated with consultations as the only cost to industry of CHD, ignoring the associated cost to industry of consultations as well as the potential to block development projects.

7.1 Oil and Gas Development

7.1.1 Potential Costs to this Sector

This analysis only indicates the administrative costs associated with five formal consultations and five to seven informal consultations. Furthermore, in conclusion, it anticipates "minor cost impacts". This is far from an accurate assessment on the costs of CHD to the oil and gas industry. It is assumed that any exploration or development activity will have some adverse effect on the habitat in which it takes place. While we disagree with this statement, others may conclude that further development of the oil and gas reserves in Cook Inlet will be prevented. If this is the case, one assessment may include the market value of the known oil and gas resource contained in Cook Inlet. If the potential for development still exists with a CHD, then it should be feasible to study other areas where oil and gas development occurs within a CHD to assess the increased development costs borne by industry. The analysis estimates that the cost of each consultation is limited to $4,900, of which the majority falls to government entities. What is missing is the cost to industry related to the consultations, as wells as potential changes and delays to development plans. There is no estimation of what will happen to businesses in the industry if exploration and development are not permitted under the new regulations associated with CHD. While the administrative costs associated with consultations may be minimal, the resulting impact on current projects could be significant.

7.2 Mining

7.2.1 Potential Costs to this Sector

Same limited analysis of costs associated with the mining sector as oil and gas described above.

7.3 Transportation

7.3.1 Potential Costs to this Sector

Same issues as mining and oil and gas sectors as described above. Additionally, limiting transportation projects could have a huge impact on commerce in the region, a point not noted in the analysis. The analysis also ignores potential impacts on the movement of military personnel and equipment through the Port of Anchorage. Costs could be

measured financially as well as in national security terms. The goal of any transportation project is to improve the flow of people and goods in the region, which ultimately can improve economies through low-cost transportation.

7.6 Water Quality

7.6.1 Potential Costs to this Sector

As with other sections, the only cost analysis is based on *Section 7 consultations*. In the case of Water Quality, there are known impacts that CHD will have on municipalities and businesses operating under the identified "major discharge" permits. With a CHD, those permits may become inactive, and new costs could be borne by those entities to meet new water-quality standards. In cases where municipalities have water treatment facilities that don't produce the water quality to meet new standards, significant costs will be realized to make improvements to these facilities. Also, entities needing waivers to discharge into areas designated as critical habitat will have difficulty in obtaining permits and will likely incur greater costs to operate if they are able to obtain the necessary permits.

7.7 Power Projects/Development in Cook Inlet and Vicinity

7.7.1 Potential Costs to Power Projects

Again, limited to *Section 7 consultation*, impacts on project modifications to the developing entities are ignored. The analysis also does not mention the potential lost economic benefits from projects that could have lowered the cost of energy in the Cook Inlet area, but are now unfeasible due to the CHD. Alaska has some of the highest energy costs in the U.S. Limiting the ability to lower the cost of energy has huge economic impacts.

7.8 Commercial Fisheries

7.8.1 7.6.1 Potential Costs to this Sector

Again, costs are analyzed based on consultations. The true cost to the industry, as in all cases, goes well beyond consultations. In this industry, resources are extracted for the marine environment, which may be considered destructive to the habitat and be prevented based on regulations associated with CHD. If this is the case, then the economic loss could be significant. Also, the analysis ignores the fact that the primary fish harvest is for salmon, which have been identified as prey species for beluga requiring special consideration. Finally, seafood processors will have difficulty in obtaining permits to discharge wastes into areas identified as critical habitat and will likely incur greater costs to operate if they are able to obtain the necessary permits.

Section 7 Conclusions

All of the benefits derived from this analysis are based on the ability to attract and retain workers due to the natural beauty of Cook Inlet. Also brought forth in the analysis is the higher value people may experience while visiting or enjoying recreational activities in the Cook Inlet area, due to CHD. While these benefits are important, one must also realize that without jobs people will not receive the benefits presented in this analysis. Furthermore, the analysis assumes no change in development opportunities, while simultaneously assuming that the environment will improve.

The value of a user's experience in a free-market sense is related to the price a provider can charge. While studies cited in the report indicate a positive "willingness to pay" or "net benefit" associated with CHD, this does not translate into money flowing through the economy. While this analysis is useful, it does not lend itself to a cost benefit analysis used here. In this case, we have developed or are developing industries with a monetary value to the Cook Inlet economy. A stronger effort to highlight the over potential value-loss from CHD should be made. With CHD, the potential economic loss associated with project modifications, higher costs, lost efficiencies and potential lost revenue from future business activities is significant.

Section 8

The first sentence of section 8 is correct in stating; "*As is evident in Section 7, it is not possible to provide quantitative estimates of all the projected benefits that may be uniquely attributable to the designation of CH for Cook Inlet beluga whale.*" However, the last sentence includes the following; "*the anticipated benefits outweigh anticipated costs.*" It is hard to see how an assessment that only provides a qualitative determination could then provide a quantitative estimate of the anticipated benefits. The statement that the benefits of designating the CH outweigh the costs is speculative.

This section also includes the following: "*The expected costs identified for CHD are smaller, both in absolute terms and when compared to some of the benefits. NMS is of the opinion that the proposed Cook Inlet beluga whale CHD can be expected to result in a net benefit to the Nation.*" This statement is entirely subjective, as no quantitative analysis is present to prove this point.

Also, this proposal puts some of the nation's priorities in jeopardy. First, this proposal will limit the nation's efforts toward energy independence, as the Cook Inlet region is home to known oil and gas reserves. Second, job creation (another national priority) will be hindered as the ability for businesses to develop local resources will be limited, resulting in fewer jobs in the future based on development restrictions resulting from CHD.

11. Foreseeable Economic Impacts that should be considered when assessing Economic Impacts of Designating Critical Habitat

As a result of the limited analysis presented by NOAA estimating the economic impact of the proposed CHD, the State of Alaska partnered with others to conduct a separate economic impact assessment[9]. Currently, it is unclear what the economic impacts related to CHD will become due to the unspecific nature of the current proposal. Analysts have completed an economic impact analysis with multiple scenarios due to variable impacts faced by businesses as a result of CHD. While the economic impacts of CHD extend throughout the economy, the resulting impacts will have a direct impact on state

[9] Preliminary investigation of economic impacts related to proposed crtical habitat designation for Cook Inlet Beluga Whale. 2010. Resource Dimensions, Gig Harbor, WA.

government through tax and lease revenue, as well as costs associated with employees' time spent on issues resulting from CHD.

One clear issue as a result of the proposed CHD is the inability of stakeholders and agencies to clearly articulate the impacts resulting from a CHD. Due to inadequate specifications on industry impacts, making a clear determination of the economic impacts resulting from CHD is difficult. The state is concerned that CHD will result in a decline in economic output by industries operating in Cook Inlet. Some projects may move forward with little impacts, while others may incur costs resulting in a project becoming financially unfeasible. While it is unclear at this time which industries will be most negatively affected, below is a discussion of the state's foreseeable economic impacts.

The major sectors of Cook Inlet's economic industries potentially impacted by CHD include oil and gas, mining, commercial fishing, sport fishing, freight transportation, and cruise ships, along with public utilities. Also potentially impacted are tax revenues to the State, along with local government within the Cook Inlet region. While being directly impacted by CHD, these industries have downstream impacts on the local economy. These include the indirect spending with other businesses within the region, as well as induced impacts as a result of employee spending in the local economy.

Oil and Gas
The oil and gas industry contributes to the Cook Inlet economy through oil and gas production, drilling services, and other support services. It is estimated that the total economic output from production totals more than $2.0 billion. For every million dollars spent in oil and gas drilling activity, the total economic impact is estimated to be $1.4 million. Every million dollars spent with support services related to oil and gas in Cook Inlet has a total economic contribution of $1.6 million.

It is foreseen that CHD will impact investments in the oil and gas industry, which will increase the cost of doing business in the region, ultimately impacting business decisions.

Oil and Gas Taxes
State revenues from oil and gas activities in Cook Inlet have the potential to be adversely affected by the proposed CHD. In 2008, the oil and gas industry contributed $568 million to the state treasury through taxes, royalties, rents and interest. Tax revenue from industry activity is significant, and declines in production volume resulting from CHD will most likely decrease tax revenue.

Mining
Currently, industrial mining in the Cook Inlet region is limited to gravel, with no anticipated impacts from the proposed CHD. However, there are at least two major projects being developed in the region with anticipated impact resulting from CHD. Developers have made project modifications in response to the Endangered Species Act listing and anticipate few impacts as a result of CHD due to efforts under ESA.

Mining jobs are high-paying year-round jobs with average wages of $85,000 per year. Estimates of the two identified projects estimate the potential total economic output to be roughly $999.3 million. Although the exact marginal impacts on these projects as a result of CHD are unknown. CHD will become one of multiple variables impacting these projects' economic viability, which will result in future economic impacts.

Commercial Fishing

In 2009, there were 1,390 active salmon permits in Cook Inlet. Salmon fishermen harvested 20.7 million pounds in 2008 with an ex-vessel value of $22.3 million. Permit-value range, based on permit type over the last five years, show seine permits averaged $14,140, gillnet permits averaged $32,020, and setnet permits averaged $12,640.

Fishing revenue is highly variable, resulting from changes in harvest volume and market prices. Permit values fluctuate because expected potential revenues are based on the previous year and future harvest projections. Since salmon have been identified as a PCE, activities that are construed to adversely affecting salmon will be limited under CHD. The economic impact will be determined ultimately by restrictions resulting from CHD.

If the salmon harvest were restricted, resulting in a 5 percent reduction in harvest, and ex-vessel prices remained constant, the result would be $1.1 million decline in ex-vessel value. A loss in ex-vessel value of this magnitude would ripple through the economy, reducing the indirect and induced impacts from the industry.

Besides fishermen, seafood processors will also incur risks as a result of the designation of critical habitat. Seafood processors purchase a total of $59.1 million worth of seafood. Seafood processors may have difficulty in obtaining permits to discharge wastes into areas identified as critical habitat and will likely incur greater costs to operate if they are able to obtain the necessary permits. If seafood processing is limited, the effects will be felt not only in Cook Inlet but in surrounding areas where fishermen delivering seafood reside.

Sport fishing

Sport-fishing activity in the Cook Inlet region is estimated to provide roughly $319.1 million in economic impacts, excluding resident participation. Resident participation is excluded from the analysis since spending by residents is not considered "new money" in the economy, only recirculated money, that in the absence of sport-fishing opportunities, will be directed elsewhere into the local economy.

Sport fishing is also valuable to Alaska residents as a way to provide food for the family, offsetting the cost of protein purchased from the supermarket.

Water Transportation

Cook Inlet is an extremely important marine corridor for the movement of goods throughout Alaska, excluding the Southeast region. It is estimated that 80 percent of the goods entering Alaska come through the Port of Anchorage. A disruption resulting in additional costs associated with the shipment of goods in and out of the Cook Inlet will

ripple through the statewide economy, impacting not only the Southcentral region, but also rural Alaska. Most of the goods bound for rural Alaska are brought into Anchorage for repackaging and loading on barges. Additional costs associated with the movement of marine transportation through Cook Inlet will ultimately be passed along to end consumers through higher prices.

The marginal effect is unknown at this time as the extent of impact felt by marine transporters is unknown. It has been indicated that docking at the Port of Anchorage is highly dependent on ship arrivals, as tides play an important role in a ship's ability to dock safely. Restrictions on travel speed and time could significantly affect shipping operations and negatively impact the economy.

Cruise Industry
Today, the cruise industry has limited port calls in Anchorage. However, Anchorage is major air hub for visitors entering and exiting the state on cruise itineraries. This activity has significant economic impacts as visitors extend trips to include time in Anchorage and surrounding areas, as well as spend extra nights to match up with air travel. The current Anchorage Port Expansion project may create more opportunity for cruise vessels to make Anchorage a primary port call in the future. If CHD results in limitations on the cruise industry, future economic growth from the industry will be negatively impacted.

Public Utilities
Public utilities in Cook Inlet provide water treatment and electrical services to residents. Currently, there are no anticipated impacts on these utilities under CHD. However, with NMFS indicating that no exemptions will be made, it leads us to believe that there is potential for impacts on these utilities. Both water treatment facilities and electrical utilities in the region impact the waters of Cook Inlet with water discharge and undersea cables. Currently, utilities are operating under federal permits, which are reviewed periodically. It is believed that future reviews will require more effort by entities in the review process, resulting in increased costs. Also in the future, there may be potential for project modifications, again resulting in increased costs. One utility has indicated it has spent roughly $1 million in consultation and legal services related to a Section 7 consultation, as well as continual monitoring of equipment within the Cook Inlet water system. Based on this, it is anticipated that utilities will incur additional future costs, as a result of CHD, totaling millions of dollars.

List of economic costs

- *Transactional costs*- Includes studies, reports, negotiations, travel and fees.
- *Monitoring costs*- In other cases where projects are impacted by CHD, they have been required to conduct monitoring of the project and its potential impact.
- *Agency administrative costs*- Agency costs associated with consultation and regulation development.
- *Slippage costs*- Costs incurred by a project resulting from development delays. Costs come in many forms, including increases in material prices, stand-by labor costs, lost revenue, logistical cost increases, etc.

- *Uncertainty costs*- Project uncertainty imposes a cost in the form of risk premium to those involved. Typically this requires a higher return on investment for those parties willing to provide financing.

Overall, it is believed that the economic impact resulting from the proposed CHD will exceed the $600,000 identified by NMFS in the *Draft RIR/4(b)(2) Preparatory Assessment/IRFA for the Critical Habitat Designation of Cook Inlet Beluga Whale*. Interviews conducted indicate that currently identified spending by local entities in response to CHD already exceeds the $600,000 threshold. Also, the State of Alaska estimates that roughly $75,000 worth of state resources have been spent on this effort.

Thus, *the Draft RIR/4(b)(2) Preparatory Assessment/IRFA for the Critical Habitat Designation of Cook Inlet Beluga Whale* grossly under-represents the true economic impact of this proposed designation. A more robust analysis is necessary to fully understand the economic impacts of this action. While other critical habitat designations have occurred in the state, this proposal has the potential for the broadest negative impacts.

12. Areas requested for exclusion based on economic, natural security, or existing regulatory protection.

Areas requested for exclusion based on economic reasons: Cook Inlet is the economic hub of Alaska. The majority of the State's population throughout the State depends upon the shipping into and transportation out of Anchorage, and over half of the state's population reside near or engage in the activities described above associated with the Cook Inlet watershed. As a result, many ongoing and proposed activities/projects could be significantly impacted by the designation of critical habitat and its PCEs. The ESA requires the NMFS consider the economic and other relevant impacts that would result from the designation of critical habitat. Based on the new information we have provided in our comments, we request the NMFS exclude the following activities/project for exclusion per 16 U.S.C. § 1533(b)(2). More specifically, we request the NMFS reconsider excluding the following activities:

- Current and planned oil and gas activities
- Commercial, sport, personal use and subsistence fishing
- Current and proposed transportation projects including, but not limited, to the Port of Anchorage, shipping, roads and bridges, rail, and air.
- Current and planned sanitation projects.

Areas requested for exclusion based on national security reasons: The Port of Anchorage has been designated by the Department of Defense as one of 19 "National Strategic Ports" in the Untied States. Based on its importance for national security, we request the NMFS exclude the Port of Anchorage and its related activities from the final designation of critical habitat based on natural security reasons. The NMFS must take

into consideration the impact on national security of specifying this area as critical habitat. 16 U.S.C. § 1533(b)(2).

Areas requested for exclusion based on the adequacy of existing regulatory protection: There are several state special areas within the area proposed for designation as critical habitat. Because these critical habitat areas were established by Alaska statute and the accompanying management plans were developed with a strong stakeholder process and full cooperation and involvement of local, state, and federal agencies, there is almost no risk that these protections will be diminished in the future. Based on this, we request that these areas be excluded from the final rule designating critical habitat for beluga whales in Cook Inlet. Those areas which do not require "special management considerations or protections" are not "critical habitat" and are not to be designated as such under the ESA. 16 U.S.C. § 1532(5)(A).

Name of Special Area	Date Established	Enabling Statute		Date of Management Plan
Kachemak Bay State Critical Habitat Area	1974	AS 16.20.590		1993
Fox River Flats State Critical Habitat Area	1972	AS 16.20.580		1993
Anchor River and Fritz Creek State Critical Habitat Area	1985	AS 16.20.605		1989
Clam Gulch State Critical Habitat Area	1976	AS 16.20.595		None
Kalgin Island State Critical Habitat Area	1972	AS 16.20.575		None
Redoubt Bay State Critical Habitat Area	1989	AS 16.20.625		1994
Trading Bay State Game Refuge	1976	AS 16.20.038		1994
Susitna Flats State Game Refuge	1976	AS 16.20.036		1988
Goose Bay State Game Refuge	1975	AS 16.20.030 (c)		None
Palmer Hay Flats State Game Refuge	1975	AS 16.20.032		2002
Anchorage Coastal Wildlife Refuge	1977/1981	AS 16.20.031		1991
McNeil River State Game Refuge	1991	AS 16.20.150		2008
McNeil River State Game Sanctuary	1977/1991	AS 16.20.160		2008

The ADF&G special area management plans are available at:
http://www.wildlife.alaska.gov/index.cfm?adfg=refuge.main

Kachemak Bay State Critical Habitat Area and Fox River Flats State Critical Habitat Area: The area encompassed by these two critical habitat areas is essentially all of Kachemak Bay, and includes waters beyond those being proposed by NMFS for beluga critical habitat. The management plan for these areas was developed with the aid of an interagency planning team composed of representatives from state, federal, and local

agencies with jurisdiction over the critical habitat areas. Key marine mammal staff from NMFS (Barbara Mahoney) participated in development of the plan. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has the power to enforce the management plan through its ability to approve, condition, and deny permits.

Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, USFWS, NMFS, EPA, and the Kenai Peninsula Borough. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan protect PCE 1; goal I(B)(1)-(3) protects PCE 2; goals I(A)(1), I(B)(2), and I(B)(3) protect PCE 3; the overall goal of minimizing habitat fragmentation protects PCE 4; and goal I(A)(2) protects PCE 5.

Redoubt Bay State Critical Habitat Area and Trading Bay State Game Refuge: Tidal flats encompassed by Redoubt Bay State Critical Habitat Area and Trading Bay State Game Refuge overlap beluga critical habitat being proposed by NMFS. Please see the attached management plan for a full legal description of the State Critical Habitat Area and Game Refuge. The management plans for these areas were developed with the aid of an interagency planning team representing state, federal, and local agencies, including ADF&G, ADNR, ADEC, USFWS, and the Kenai Peninsula Borough. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has the power to enforce the management plan through its ability to approve, condition, and deny permits. Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, USFWS, NMFS, EPA, and the Kenai Peninsula Borough. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan protect PCE 1 and 4; goal I(C) protects PCE 2; goal I(D) protects PCE 3; and goal I(B) protects PCE 5.

Susitna Flats State Game Refuge: Tidal flats encompassed by Susitna Flats State Game Refuge overlap beluga critical habitat being proposed by NMFS. Please see the attached management plan for a full legal description of this State Game Refuge. The management plan (attached) for this area was developed with the aid of an interagency planning representing state, federal, and local agencies, including ADF&G, ADNR, ADEC, USFWS, the Kenai Peninsula Borough, and the Matanuska-Susitna Borough. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has

the power to enforce the management plan through its ability to approve, condition, and deny permits. Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, the Kenai Peninsula Borough, and the Matanuska-Susitna Borough. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan, particularly objective I(1) under Marine Mammal Populations and Their Habitat, protect PCE 1, 3 and 4; objectives I(1) and (2) under Fish Populations and Their Habitat protect PCE 2; and objective I(2) under Marine Mammal Populations and Their Habitat protects PCE 5.

Palmer Hay Flats State Game Refuge: Waters of Knik Arm encompassed by Palmer Hay Flats State Game Refuge overlap beluga critical habitat being proposed by NMFS. Please see the attached management plan for a full legal description of this State Game Refuge. The management plan for this area was developed with the aid of an interagency planning team representing state, federal, and local agencies. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has the power to enforce the management plan through its ability to approve, condition, and deny permits. Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, BLM, and the Matanuska-Susitna Borough. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan, particularly Goal 1, protect PCE 1, 3, 4 and 5; and goals 1.1, 1.2, and 1.3 protect PCE 2.

Anchorage Coastal Wildlife Refuge: Tidal flats encompassed by the Anchorage Coastal Wildlife Refuge overlap beluga critical habitat being proposed by NMFS. Please see the attached management plan for a full legal description of the State Wildlife Refuge. The management plan for this area was developed with the aid of an interagency planning team representing state, federal, and local agencies, including ADF&G, ADNR, ADEC, ADOT, USFWS, EPA, and the Municipality of Anchorage. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has the power to enforce the management plan through its ability to approve, condition, and deny permits. Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, USFWS, NMFS, EPA, and the Municipality of Anchorage. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan protect PCE 1; goal I(D) protects PCE 2; goal I(C) and (D) protect PCE 3; goal I(E) protects PCE 4; and goal I(A) protects PCE 5.

McNeil River State Game Refuge and McNeil River State Game Sanctuary: Tidal flats encompassed by the McNeil River State Game Refuge and McNeil River State Game

Sanctuary overlap beluga critical habitat being proposed by NMFS. The management plan for this area was developed with the aid of an interagency planning team representing state, federal, and local agency representatives with responsibilities on refuge and sanctuary lands. The plan is implemented by ADF&G. By law (5 AAC 95), a Special Area Permit is required for any habitat altering activity, including any construction work, in the areas. All proposed activities are reviewed by ADF&G for consistency with the goals and policies outlined in the plan. Activities are approved, conditioned, or denied based on the direction provided in the plan, as well as other state laws and regulations. ADF&G has the power to enforce the management plan through its ability to approve, condition, and deny permits. Other agencies use the plan as well. These include ADNR, ADEC, US Army Corps of Engineers, USFWS, NMFS, EPA, and the Municipality of Anchorage. The plan already provides superior protection of the PCEs proposed by NMFS, and will continue to do so. The overall habitat protections of the plan protect PCE 1; goal I(D) protects PCE 2; goal I(C) and (D) protect PCE 3; goal I(E) protects PCE 4; and goal I(A) protects PCE 5.

III. Conclusion

Based on our review of the proposed rule and the federal regulations for designating critical habitat under the ESA at 50 C.F.R. § 424, we have concluded that designating critical habitat for the Cook Inlet DPS of beluga whales is premature because it is not based on a sound interpretation the available information and, given existing state and federal permitting requirements and protections in place, there are no special management considerations or protections currently required. The proposed critical habitat designation is too expansive and ignores consideration of an alternative approach that would more specifically identify primary constituent elements and discretely identity those associated areas that are actually critical to beluga survival and recovery.

We also have serious concerns with the methodology used to estimate the cost of the proposed designation. The economic analysis grossly underestimates the true costs of the listing, making it impossible to determine whether certain areas should be considered for economic exclusion. The basis for the economic analysis and its conclusion that the CHD will be beneficial is inconsistent and fundamentally flawed. It cannot be assumed that there will be no impact when estimating costs while simultaneously assuming the environment will change as a result of the listing when quantifying benefits. As a result, NMFS failed to adequately consider the possibility of excluding certain activities from the proposed designation per 16 U.S.C. § 1533(b)(2).

Given the magnitude of our concerns and the reality that an unnecessary, overly broad designation has the high potential of needlessly delaying or stopping responsible development projects, we request the NMFS revise its CHD proposal and provide an additional public comment period after the identified issues are addressed.

Finally, the State of Alaska understands that others have filed comments on this proposed designation, and the State of Alaska urges the NMFS to carefully consider the comments and points raised in these comments.

We look forward to working with you on the responsible conservation of these whales. If you have any questions, please feel free to contact me.

Sincerely,

Doug Vincent-Lang, ESA Coordinator
Alaska Department of Fish and Game

Attachments: Figures 1-3 (separate files)

cc: Mike Nizich, Cora Campbell, Denby Lloyd, Tom Irwin, Larry Hartig, John Katz, Senator Lisa Murkowski, Representative Don Young, Senator Mark Begich

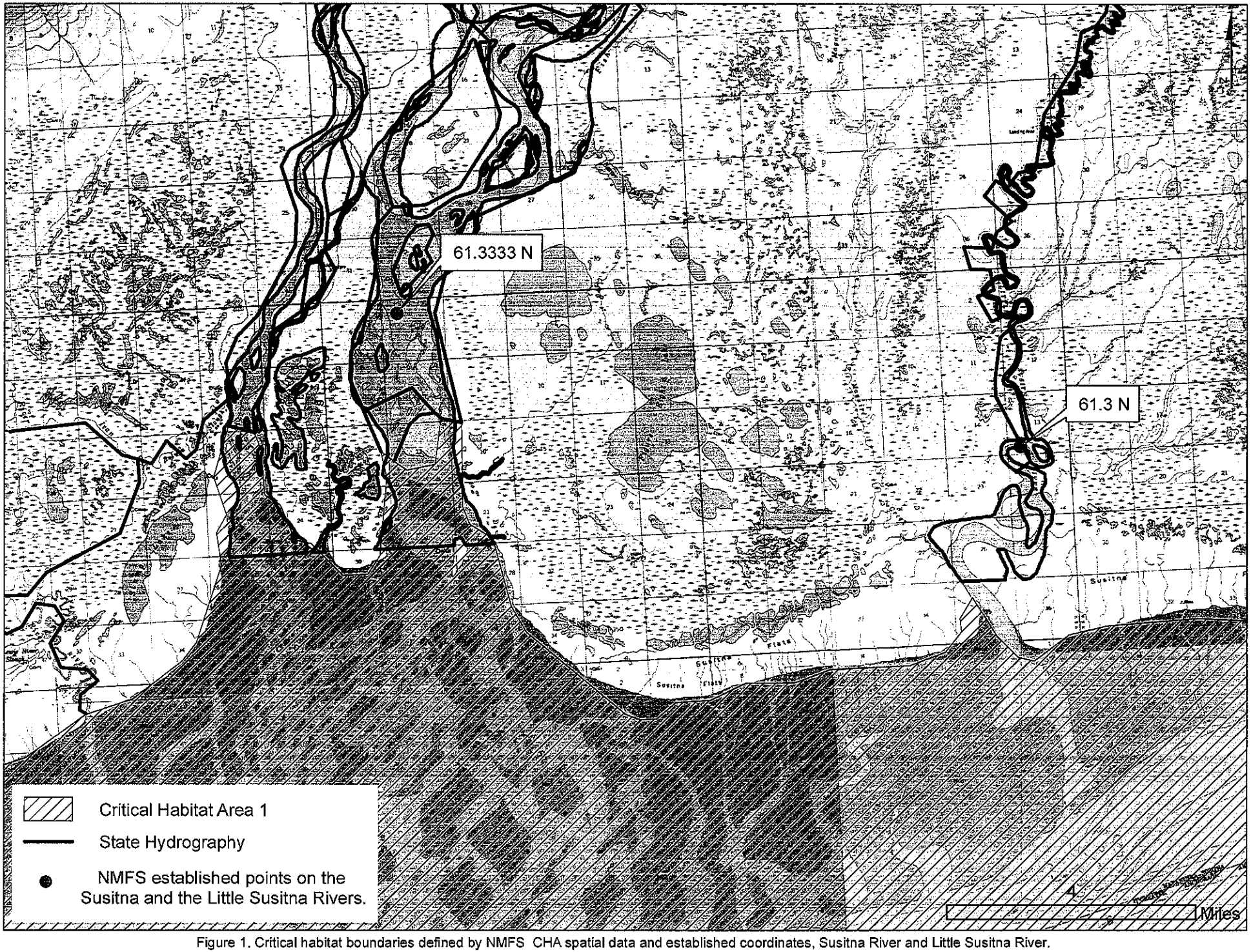

Figure 1. Critical habitat boundaries defined by NMFS CHA spatial data and established coordinates, Susitna River and Little Susitna River.

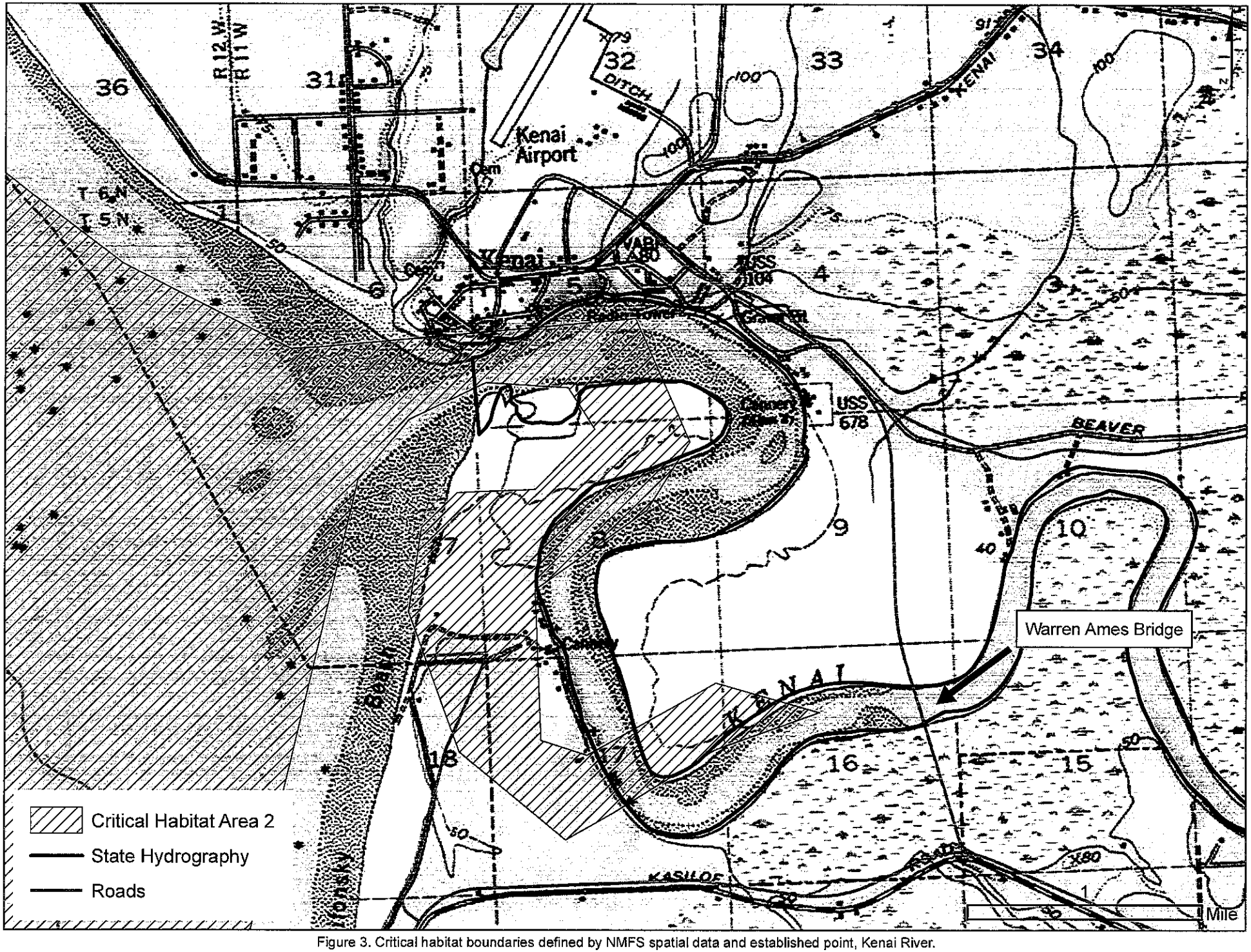

Figure 3. Critical habitat boundaries defined by NMFS spatial data and established point, Kenai River.

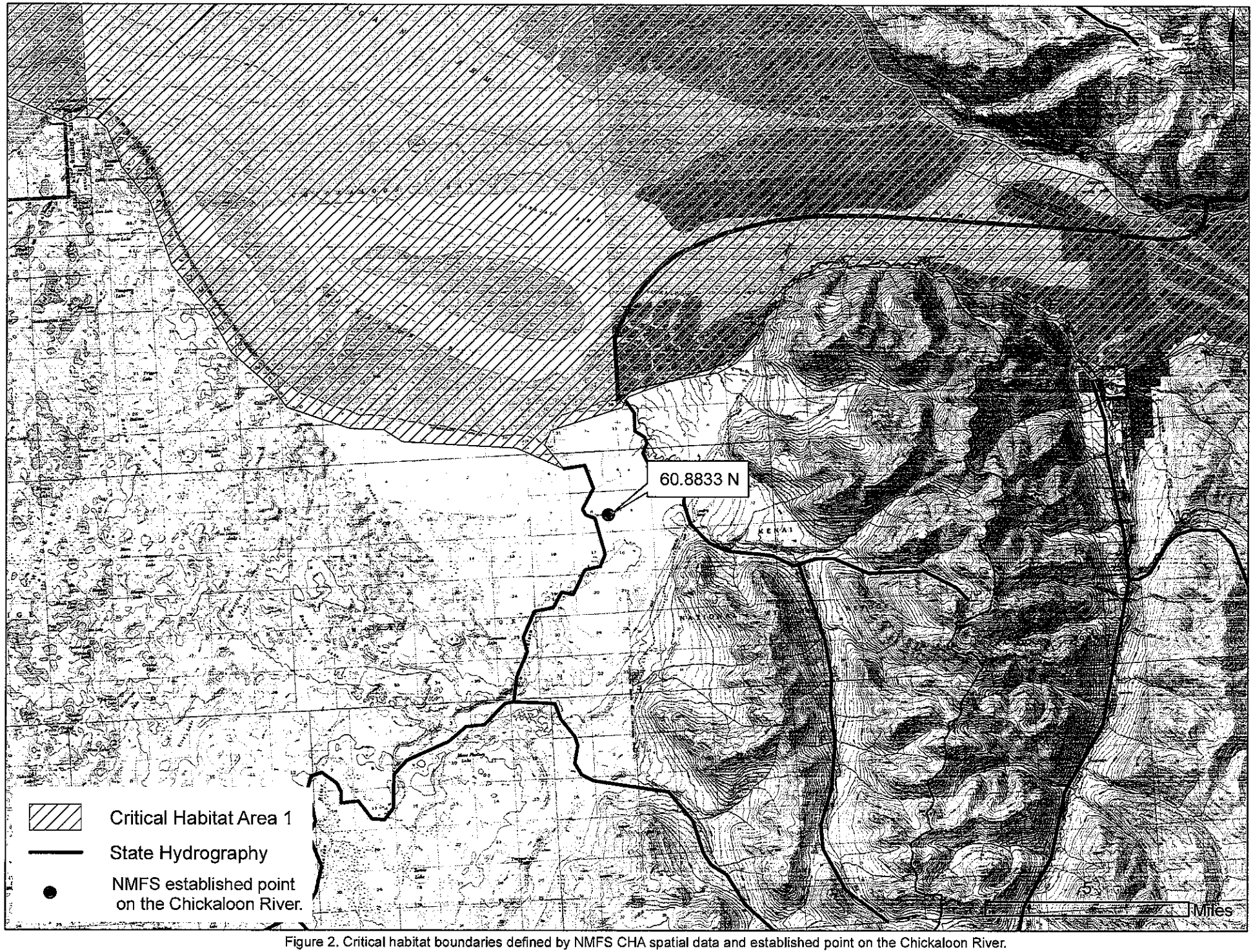

Figure 2. Critical habitat boundaries defined by NMFS CHA spatial data and established point on the Chickaloon River.