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Dear Dr. Eich:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed several recent publications regarding the impact of anthropogenic disturbance on the Cook Inlet beluga whale population. Those findings suggest that disturbance from vessels occurs in summer and fall foraging habitat in and near the Kenai River, which could represent a significant threat to the recovery of this critically endangered whale population. The Commission encourages the National Marine Fisheries Service (NMFS) to work with the Alaska Department of Fish and Game (ADFG) to identify and implement additional management measures that strengthen current guidance for minimizing disturbance in foraging areas and help the beluga whale population in Cook Inlet recover.

In 2023, NMFS estimated that this population consisted of approximately 330 individuals, based on aerial surveys conducted in 2021 and 2022 (Goetz et al. 2023). Although that estimate was greater than the 2018 estimate of approximately 280 individuals, models have suggested that the population is likely to continue to decline, with a 17 to 32 percent probability of extinction in 150 years (Warlick et al. 2023), despite the cessation of subsistence hunting 25 years ago. The population's range within Cook Inlet has contracted significantly in recent decades (Rugh et al. 2010, Carter and Nielsen 2010). In the past, beluga whales were observed regularly throughout Cook Inlet, including the Kenai River—a historical foraging area in the middle inlet (Huntington 2000, Dutton et al. 2012). However, nearly the entire beluga whale population currently occurs in upper Cook Inlet[1] from late spring through early fall, with the exception of sporadic sightings of whales in the Kenai River area in May, September, and October (McGuire et al. 2020).

The declining population of Cook Inlet belugas led NMFS to finalize a recovery plan in 2016, which identified numerous known and potential threats to the population's recovery. Among the three most significant threats was anthropogenic sound, which NMFS ranked as a threat of relatively high concern. Anthropogenic sound in Cook Inlet originates from activities involving commercial and recreational vessels, seismic and high-resolution geophysical surveys, oil and gas

[1] Defined by NMFS as waters north of the Forelands (Goetz et al. 2023).

production, coastal construction, dredging, and commercial and military aircraft (Castellote et al. 2019). NMFS also recognized reduction of prey as a potential threat to the whale's recovery. Although the 2016 recovery plan identified "reduction of prey" as a threat of only medium concern, a review of recent papers indicates that this threat may be hindering beluga recovery to a greater degree than previously assumed.

Research efforts have focused primarily on beluga whale critical habitat Area 1 in upper Cook Inlet, where the majority of whales occur from late spring through early fall. However, a recent study used passive acoustic monitoring (PAM) to characterize whale presence in critical habitat Area 2. Researchers found that acoustic detections were negatively correlated with vessel presence and associated vessel-related sound from May through October in the Kenai River (Kumar et al. 2024), where considerable recreational and commercial fishing activity occurs due to the presence of spawning salmon.

Despite gaps in the PAM data caused by loss of and damage to the devices, beluga whales were detected in the Kenai River from late August through November; similarly, the whales were visually detected from only March through May and August through November (Kumar et al. 2024). Boat surveys revealed that commercial fishing vessels were present from May through September, with peak activity levels in July; while recreational (personal-use) fishing vessels were present in large numbers only in July during opening of the salmon dipnet fishery.

Information collected from interviews with local and traditional knowledge holders in the Kenai River area (Jones and Kukkonen 2017) and current monitoring data on habitat use suggest that the patterns of beluga occupancy have changed. No belugas were detected in or near the river by Kumar et al. (2024) in the summer months of June and July, even though interviews with local hunters and residents indicated that large groups of belugas occupied the river historically (Huntington 2000, Dutton et al. 2012), particularly in the summer months when salmon were abundant (Dutton et al. 2012). Stochastic dynamic programming models have suggested that beluga whales should be present in and near the Kenai River during peak spawning of salmon in July and August (McHuron et al. 2023). One possible factor to explain the whales' apparent absence in prime summer salmon spawning areas is the disturbance caused by the presence of, and sound emitted from, a large number of recreational and commercial fishing vessels. Although the foraging behavior of another population of beluga whales in Bristol Bay appears unaffected by vessel presence and associated vessel sound (R. Suydam, pers. comm.), the foraging behavior of other mid-frequency cetaceans, including Southern Resident killer whales (Lusseau et al. 2009) has been shown to be affected by such disturbance. The boat surveys conducted in the Kenai River by Kumar et al. (2024) confirmed that belugas were present only during the late fall, when vessel activity and vessel-related sound levels were at their lowest. Those times corresponded with waning salmon runs, suggesting that vessel presence and/or vessel-related sound may cause belugas to avoid this historical foraging area, even during peak salmon runs when prey is most abundant (Kumar et al. 2024).

Other factors could also be responsible for the lack of observed foraging activity by belugas in the Kenai River during peak salmon spawning months. Given that beluga whale movements often reflect prey availability, it is possible that their apparent absence in this historical foraging area is due to the depletion of spawning salmon runs. As summarized by Jones and Kukkonen (2017), local and traditional knowledge holders have noted that fewer and smaller salmon have been spawning in the Kenai River area, which was corroborated by historical harvest data collected by ADFG. In the past,

the presence (or absence) of Cook Inlet belugas in various foraging areas has been correlated with strong (or poor) salmon runs (Castellote et al. 2020). In upper Cook Inlet, specifically in the Susitna River Delta, peak beluga presence corresponds with peak salmon runs in early May and between June and July (Castellote et al. 2021). Although observational data for the Kenai River area are sparse, when beluga groups have been seen in the Kenai River, approximately 80 percent of the animals were feeding (McGuire et al. 2020). However, more research is needed to determine whether the recent absence of belugas from the Kenai River in the summer is due to depleted salmon runs or other factors, such as vessel disturbance. Given the continued lack of recovery of the Cook Inlet beluga population, the Commission recommends that NMFS re-evaluate "reduction of prey" to determine whether it should be elevated to a threat of relatively high concern rather than one of medium concern, as indicated in the 2016 recovery plan.

In the interim, strengthened management measures, such as vessel speed restrictions, species-specific marine mammal viewing guidelines, and enhanced outreach to vessel operators may help to mitigate beluga whale avoidance of the Kenai River during the peak summer spawning season. Vessel speed restrictions, or "go slow zones," could be an effective measure for reducing vessel-related disturbance and avoidance by beluga whales in this key feeding area. Vessel speed restrictions for other species vary both in seasonality and by speed. NMFS currently encourages boaters in Cook Inlet rivers and streams to reduce their speed to 5 knots or less during key beluga feeding times, from late spring through early fall.[2] This guidance, however, is difficult to find on NMFS's website and appears to be absent from ADFG's website. The Commission recommends that NMFS work with ADFG to conduct additional outreach to ensure that vessel operators are aware of, and comply with, NMFS's beluga-friendly boat-operating practices, which include slowing vessels to 5 knots or less in the Kenai River's lower reaches and mouth from late spring to early fall, including outreach specifically directed at vessels operating in the lower part of the river. The Commission further recommends that NMFS work with ADFG to revise the Kenai River fishing regulations to reduce vessel disturbance from the large number of personal-use fishing vessels that operate during the salmon dipnet fishery in July.

NMFS has established viewing guidelines for all marine mammals in Alaska, requiring that vessels maintain a distance of at least 100 yards.[3] Other states have enacted stricter guidelines for species that are known to be disturbed by vessels. For example, the State of Washington has imposed viewing guidelines that specify a distance of at least 300 yards from Southern Resident killer whales. The Commission commends NMFS for developing additional guidelines for vessel operators in Cook Inlet rivers and streams, advising that they maintain a 300-yard minimum distance from beluga whales. However, it is not clear from available studies whether vessel operators are complying with the NMFS approach guidelines in the Kenai River. The Commission recommends that, along with increased outreach to vessel operators concerning NMFS's beluga-friendly boat-operating practices, NMFS and ADFG work with researchers conducting visual surveys and PAM in the Kenai River area to (1) expand monitoring of beluga whale presence in the Kenai River during

[2] https://www.fisheries.noaa.gov/alaska/endangered-species-conservation/help-belugas#:~:text=Reduce%20boat%20speed%20to%205%20knots%20or,at%20least%20300%20feet%20away%20at%20all

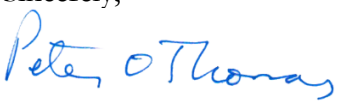
[3] https://www.fisheries.noaa.gov/alaska/marine-life-viewing-guidelines/alaska-marine-mammal-viewing-guidelines-and-regulations

the summer months, particularly in relation to vessel traffic, and (2) document compliance by vessel operators with NMFS's beluga-friendly, boat-operating guidelines.

It is crucial that in addition to strengthening management measures—regardless of whether they are voluntary or mandatory—that such measures are publicized and easily accessible to vessel operators operating throughout beluga whale critical habitat. The Cook Inlet Beluga Whale Recovery Implementation Task Force was established in 2018 by NMFS and ADFG to advise the agencies on issues related to Cook Inlet beluga whale recovery. The Task Force's Outreach Committee represents an additional entity to assist with mariner outreach to help reduce summertime disturbance to beluga whales, particularly in the Kenai River. The Commission recommends that NMFS work with ADFG and the Task Force's Outreach Committee to develop additional outreach materials targeted at Kenai River vessel operators, primarily recreational fishers and boaters, to inform them of the need to follow NMFS's beluga-friendly boat-operating guidelines in order to minimize any potential disturbance that summertime vessel activities in key foraging areas present to beluga whales. Such information also should be shared via ADFG's boat licensing and fishing license processes.

The Commission stands ready to assist NMFS and ADFG in addressing both the current concerns and the longer-term recovery of Cook Inlet beluga whales.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

cc: Dr. Lori Polasek, Marine Mammal Program Coordinator, Alaska Department of Fish and Game

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