UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

February 24, 2017

Chris Hoidal, Director
PHMSA Pipeline Safety
Western Region Office
12300 W. Dakota Ave
Suite 110
Lakewood, CO 80228

Dear Director Hoidal:

Personnel from the Pipeline and Hazardous Materials Safety Administration (PHMSA) requested information about marine mammal species under the jurisdiction of the National Marine Fisheries Service (NMFS) that could be impacted by the ongoing natural gas release in Cook Inlet. This letter provides an outline of the species and designated critical habitat that occur in Cook Inlet and documents concerns regarding the potential effects of the discharge on marine mammals.

On February 7, 2017, NMFS was notified of an ongoing natural gas leak from a Hilcorp supply line to Platform A in Cook Inlet. NMFS understands that although the pressure on the line has been adjusted since that date, Hilcorp estimates that the leak continues to release 210,000-310,000 cubic feet of natural gas daily. The natural gas at the Hilcorp pipeline release site is thought to be 98-99% methane.

Methane is in the category of asphyxiant toxicants, and displaces oxygen in water and air. This could result in formation of a hypoxic (low oxygen) zone in the marine environment in the vicinity of the release site, and in the air at the location where the natural gas is surfacing. At this point, no air or water samples have been collected to determine methane or oxygen concentrations at the release site. Modeling suggests a relatively localized zone of low-oxygen, high-methane concentrations, but this has not been validated with incident-specific samples.

Marine mammal species under NMFS's jurisdiction that may be present near the ruptured Hilcorp natural gas line offshore from Nikiski in Cook Inlet include harbor seals, endangered western Distinct Population Segment (DPS) Steller sea lions, killer whales, threatened Mexico DPS humpback whales, endangered Western North Pacific DPS humpback whales, Hawaii DPS humpback whales, endangered fin whales, harbor porpoise, Dall's porpoise, and endangered Cook Inlet beluga whales. We are especially concerned about the potential effects of the ongoing release to Cook Inlet beluga whales, which exist only in Cook Inlet.

Cook Inlet Beluga Whale and Designated Critical Habitat
The discharge is within designated Cook Inlet beluga whale critical habitat (Figure 1). Critical habitat was designated for Cook Inlet beluga whales on May 11, 2011 (76 FR 20180; April 11,

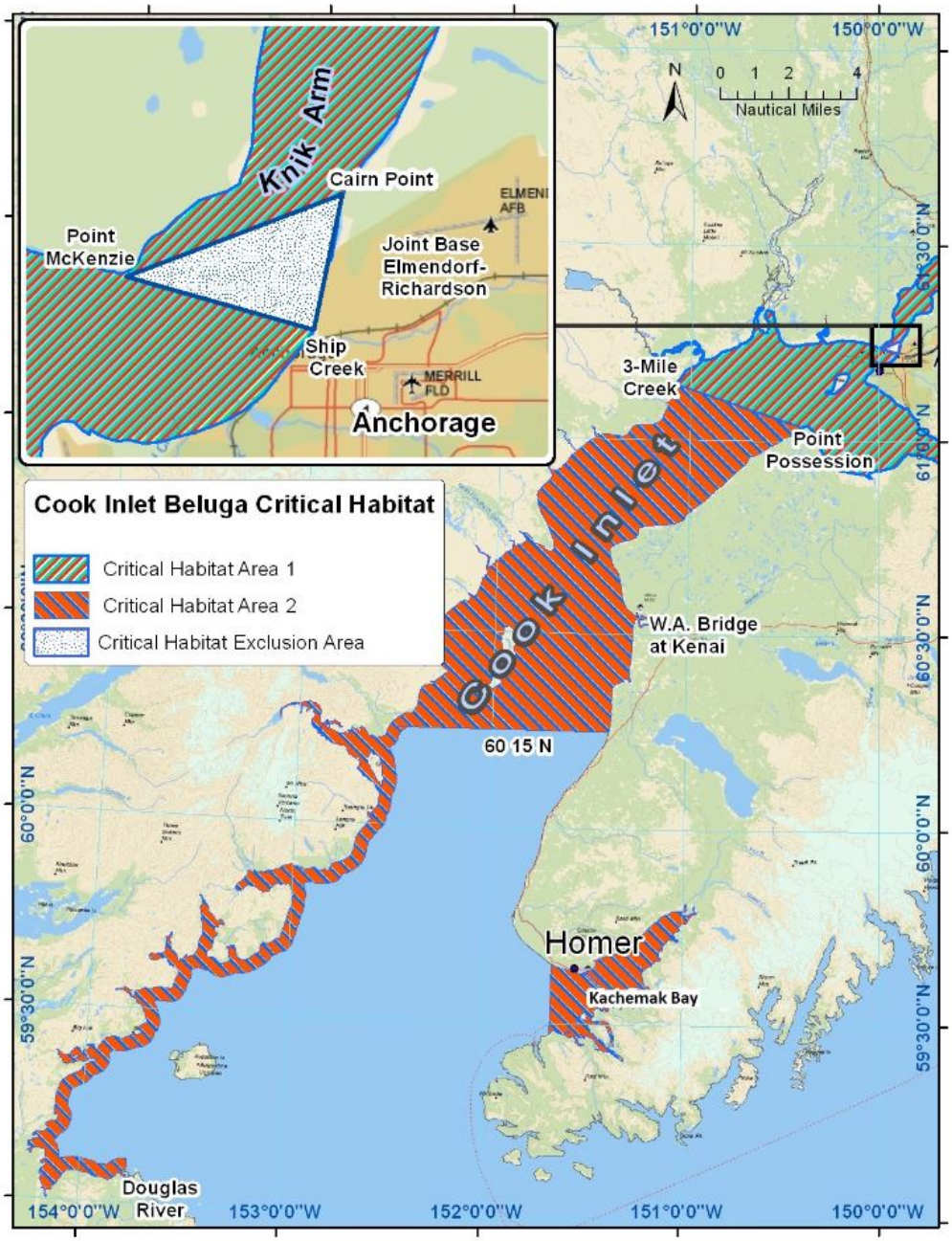

Figure 1. Map showing designated critical habitat for Cook Inlet beluga whales.

2011). Critical habitat for Cook Inlet beluga whales is determined by the physical and biological features (PBFs) essential for conservation of the population. The PBFs for Cook Inlet beluga whale critical habitat are: (1) Intertidal and subtidal waters of Cook Inlet with depths less than 30 feet (MLLW) (9.1 m) and within 5 miles (8km) of high and medium flow anadromous fish streams, (2) primary prey species consisting of four species of Pacific salmon (Chinook, sockeye, chum, and coho), Pacific eulachon, Pacific cod, walleye pollock, saffron cod, and yellowfin sole, (3) waters free of toxins or other agents of a type and amount harmful to Cook Inlet beluga whales, (4) unrestricted passage within or between the critical habitat areas, and (5) waters with in-water noise below levels resulting in the abandonment of critical habitat areas.

Cook Inlet beluga whales are expected to be present at the East Forelands near the ongoing natural gas release site, particularly at this time of year. The Hilcorp pipeline release site is within preferred Cook Inlet beluga whale winter foraging areas near the East Forelands (Figure 2) (Hobbs et al. 2005). Belugas equipped with satellite tags in 2002 and 2003 demonstrated relatively high use of the areas at and around the current natural gas release site during the months of February (Figure 3) and March (Figure 4). Additional detailed information about Cook Inlet beluga whale habitat use is available in the following publications: (Hobbs et al. 2005, Goetz et al. 2012, Shelden et al. 2015).

Cook Inlet belugas have shown a preference for ice cover. When ice was present, tagged whales were more likely to be associated with it (Goetz et al. 2012, Shelden et al. 2015).

NMFS is particularly concerned that if a significant hypoxic zone is created by a continuous natural gas discharge, Cook Inlet beluga whales and multiple PBFs of their critical habitat could be adversely affected. There are only an estimated 340 remaining Cook Inlet belugas, therefore, significant impacts to any individuals, particularly lethal take, could have population level effects.

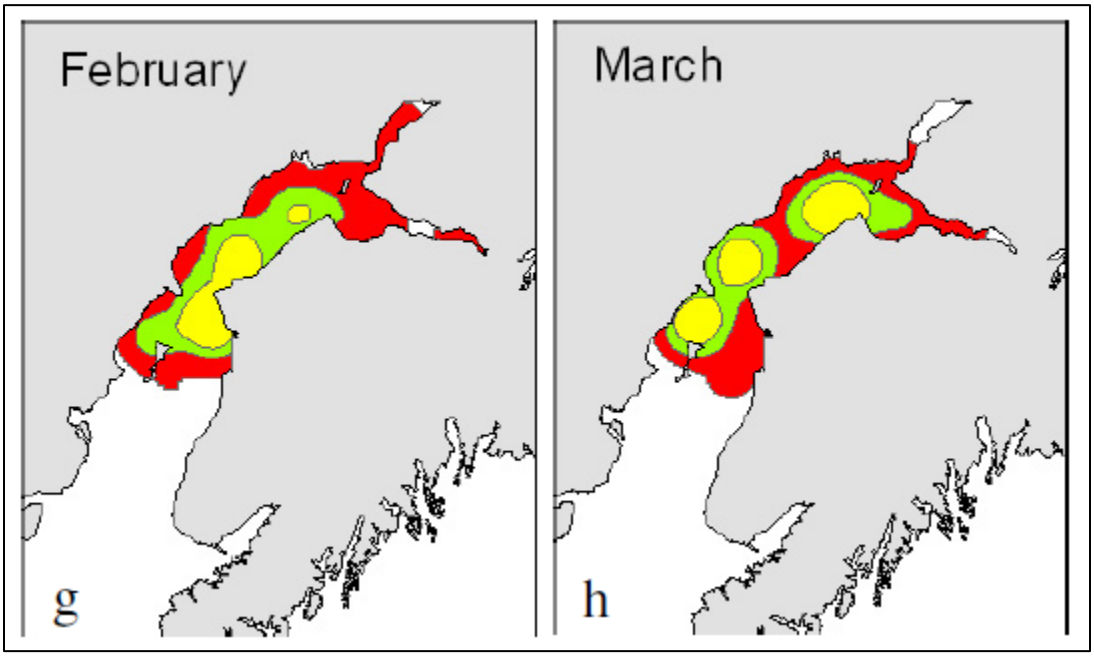

Figure 2. Kernel probability estimates in February and March for area use by beluga whales in Cook Inlet, derived from average daily good-quality positions for all whales in a given month. The red area (95% probability) encompasses the green (75%) and yellow (50%) regions. Overall habitat use may exceed area encompassed in 95% kernel concentration areas. Figure from (Hobbs et al. 2005).

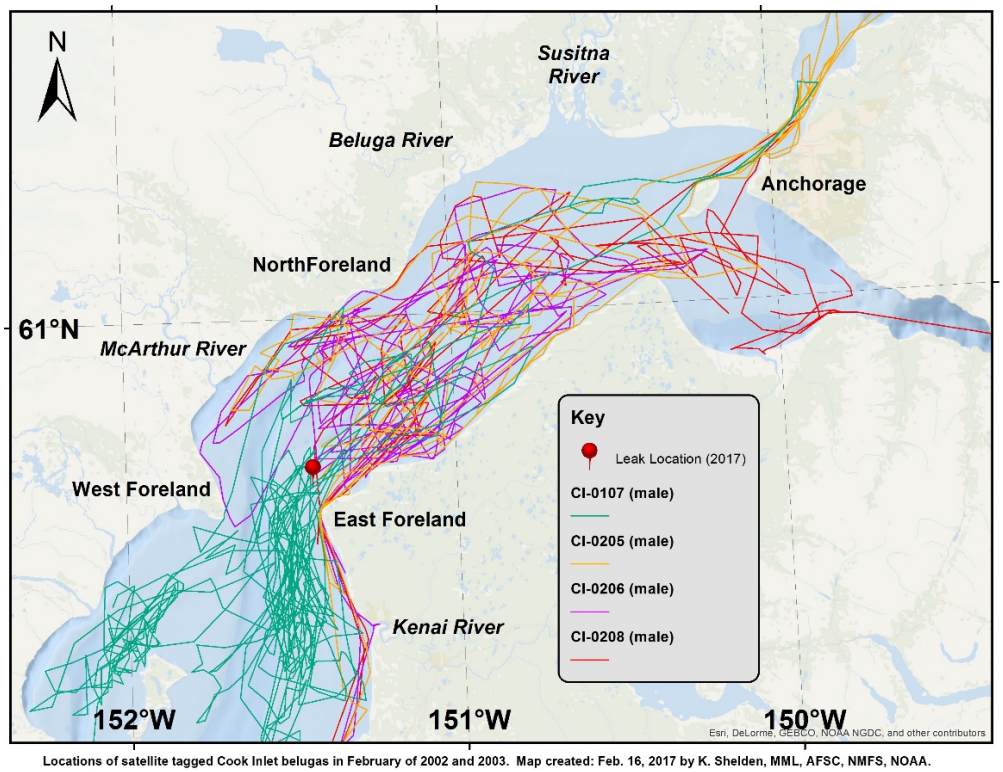

Figure 3. Map showing the locations of four Cook Inlet beluga whales in February 2002 and 2003. The red pin is the location of the ongoing Hilcorp pipeline natural gas release.

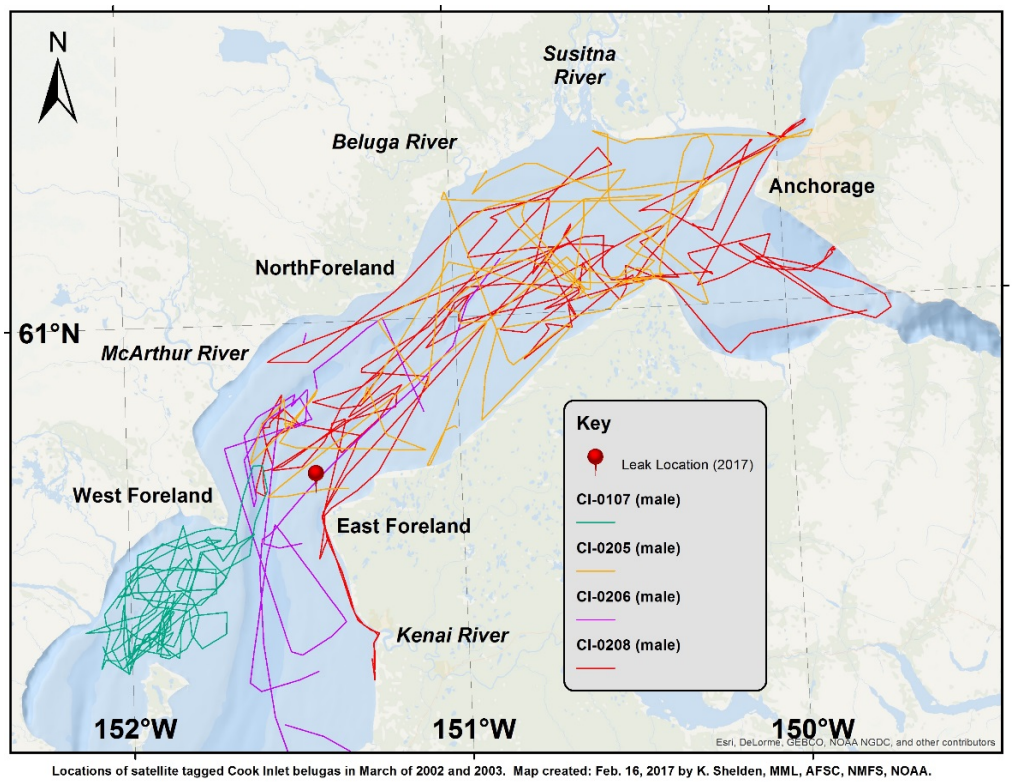

Figure 4. Map showing the locations of four Cook Inlet beluga whales in March 2002 and 2003. The red pin is the location of the ongoing Hilcorp pipeline natural gas release.

Harbor Porpoise

Harbor porpoise are present in Upper Cook Inlet during the winter months and have been detected via passive acoustic monitoring devices in Knik Arm nearly year round (C. Garner, pers. comm.) (Figure 5). This suggests there is a high likelihood of overlap in time and space of harbor porpoise and the natural gas release site. Additional detailed information about harbor porpoise use of habitat in Cook Inlet can be found here: (Shelden et al. 2014).

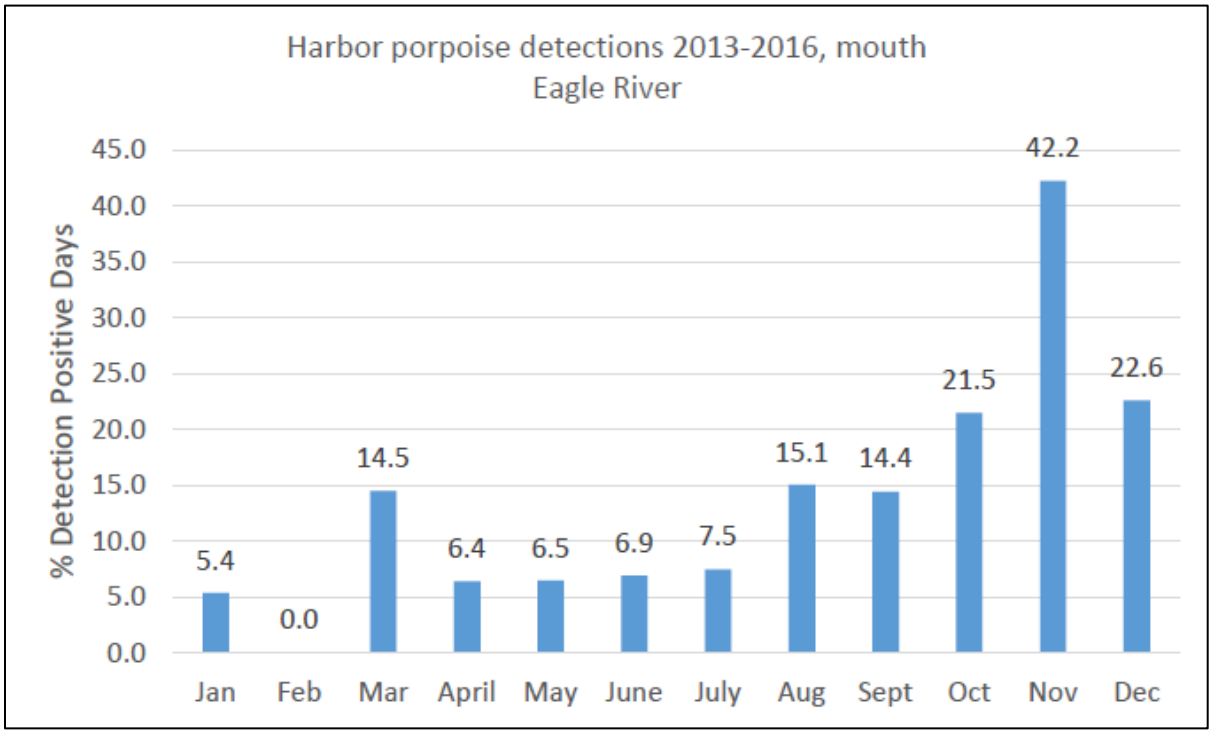

Figure 5. The percent of each month with at least one positive harbor porpoise detection per day between 2013 and 2016, Eagle Bay, Knik Arm, Alaska (C. Garner, unpublished data).

Harbor Seal

Harbor seals may be present in Cook Inlet throughout the year, but a tagging study indicates that many move to Lower Cook Inlet or the Gulf of Alaska during winter months (Boveng et al. 2012).

Other Marine Mammals Under NMFS Jurisdiction

While humpback whales, killer whales, fin whales, Steller sea lions, and Dall's porpoise are likely not present at the release site in February, their abundance in this area is expected to increase in the warmer months as they enter the inlet in pursuit of prey.

Potential Adverse Effects

NMFS is not aware of any evidence that this ongoing gas release is not negatively impacting marine species in Cook Inlet. Modeling efforts alone are not sufficient to reach a conclusion regarding potential effects to marine mammals. Water and air quality samples should be collected to determine the potential magnitude (methane and oxygen concentrations, and spatial extent) of anoxic conditions, and to validate modeling efforts.

Finally, PHMSA and other parties should note that any takes of marine mammals, whether lethal or sublethal, associated with a hazardous substance release are not authorized under the Marine Mammal Protection Act or (if the species is listed as threatened or endangered) the Endangered Species Act. We urge PHMSA and other parties to carefully consider the risks of the continued discharge to marine mammals and critical habitat as you evaluate other factors (e.g., the risk of further damage to the pipeline if it is shutdown).

If you have questions regarding this letter, please contact Sadie Wright at (907) 586-7630 or sadie.wright@noaa.gov.

Sincerely,

for James W. Balsiger, Ph.D.
Administrator, Alaska Region

Literature Cited

Boveng, P. L., J. M. London, and J. M. Ver Hoef. 2012. Distribution and abundance of harbor seals in Cook Inlet, Alaska. Task III: Movements, marine habitat use, diving behavior, and population structure, 2004-2006. Final Report. BOEM Report 2012-065. Bureau of Ocean Energy Management, Alaska Outer Continental Shelf Region, Anchorage, Alaska, USA.58.

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