

March 8, 2018

Kelly Hammerle, Chief
National Oil and Gas Leasing Program Development and Coordination Branch
Leasing Division, Office of Strategic Resources, Bureau of Ocean Energy
Management
456000 Woodland Road
Sterling, VA 20166-9216



RE: 2019-2024 Draft Proposed Outer Continental Shelf Oil and Gas Leasing Program and Notice of Intent to Prepare a Programmatic Environmental Impact Statement for the 2019-2024 Program (Programmatic EIS) and the initiation of the formal scoping process.

Dear Ms. Hammerle,

The Environmental Investigation Agency (EIA) appreciates the opportunity to comment on the Bureau of Ocean Energy Management's (BOEM) Draft Proposed Outer Continental Shelf (OCS) Oil and Natural Gas Leasing Program (draft proposed program), and the Notice of Intent to Prepare a Programmatic Environmental Impact Statement. We regret that the administration has chosen to pursue this new draft proposed program at all, rather than implementing the current leasing plan scheduled to run from 2017-2022. We urge the administration to abandon this attempt to develop a new accelerated leasing program. Should you continue to develop the draft proposed program, EIA believes the leases in Cook Inlet, the Bering Sea, Chukchi Sea, and Beaufort Sea pose unacceptable risks to the region's fragile ecosystem in general and four of the state's five beluga populations in particular and should be withdrawn from consideration.

EIA is an international organization committed to investigating and exposing environmental crime and campaigns to protect species and the natural world.

Under section 18 of the Outer Continental Shelf Lands Act, the Secretary is required to prepare an oil and natural gas leasing program “which will best meet national energy needs following its approval or reapproval”.¹ This lease schedule must also be conducted in a manner which considers “environmental values of the renewable and nonrenewable resources...and the impact of oil and gas exploration on other resource values of the outer Continental Shelf and the marine, coastal, and human environments”. While EIA expressed its concerns and opposition to components of the 2017-2022 OCS program, the program at least attempted to address national energy needs in a way that balanced the ecological impact of new oil and gas leases.

In contrast to this careful, considered balance built on years of outreach and feedback, the draft new proposed program appears to pursue the opposite approach in accordance with Presidential Executive Order 13795.² All but one area of the OCS (98 percent) has been included at the outset, almost entirely without consideration for any areas BOEM previously identified and removed from past OCS programs. While the draft proposed program does include one alternative scenario for the EIS with certain additional areas, like Hanna Shoal in the Chukchi Sea, removed from the leasing area, no alternative scenario is included which excludes leases altogether from the Bering, Chukchi, and Beaufort Seas. This is inconsistent with 40 C.F.R. § 1502.14. Alternatives considered in an EIS, “should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall ... a) Rigorously

explore and objectively evaluate all reasonable alternatives... [and] d) include the alternative of no action”.³ In this regard the draft proposed program fails to evaluate all reasonable alternatives. EIA also echoes the concerns of other commenters that any new leases in offshore western Alaska or the Alaskan Arctic are incompatible with the urgent need to address climate change and out of step with the shifting reality of modern energy markets.

However, for the purposes of this comment, EIA is focusing on the impacts of the draft proposed program on the beluga whale (*Delphinapterus leucas*). EIA believes that the draft proposed program’s leases in the Arctic Ocean and Bering Sea, specifically, St. George Basin¹, Bowers Basin, Aleutian Basin, Navarin Basin, St. Matthew-Hall, Norton Basin, Hope Basin, Chukchi Sea, and Beaufort Sea (Bering, Chukchi, and Beaufort Seas), will cause harmful levels of noise pollution and pose an unjustifiably high risk of a catastrophic oil spill and should be withdrawn. The proposed two leases for Cook Inlet should also be withdrawn for posing a serious risk to the survival of the endangered Cook Inlet beluga population.

1. Drilling in the Bering, Chukchi and Beaufort will expose belugas to disruptive levels of noise pollution, and risk a potentially catastrophic oil spill.

The Bering, Chukchi and Beaufort Seas are home to three of five populations of beluga whale endemic to the United States, estimated respectively at 6,994, 20,675, and 39,258.⁴ While all three populations are not considered endangered, they are endemic to at least some of the leasing areas outlined in the proposal during all seasons. In summer the Bering Sea’s belugas occur near the Yukon River and Norton Sound within the Norton Basin planning area.⁵ In the early summer belugas in the Chukchi Sea use nearshore waters of certain estuaries and areas like Kasegaluk lagoon before migrating into the U.S. and Canadian Beaufort Sea by July and August.⁶ Belugas in the Beaufort similarly summer in the Arctic, traveling to areas like the Canadian Mackenzie Estuary.⁷ Notably, all three populations then migrate from their summering waters to winter in the Bering Sea, utilizing all the waters north of the Aleutian Arm identified in the draft proposed program as either seasonal habitat or migratory routes.⁸

Beluga whales will be exposed to greater noise pollution by the proposal.

Noise pollution from exploration, extraction, and shipping related to oil and natural gas activities poses a disruptive threat to the Bering, Chukchi and Beaufort Sea belugas. Like other cetacean species, belugas depend heavily on sound to communicate, navigate, and hunt for prey. While increased exposure to noise has been documented to lead to a higher level of noise required for a Temporary Threshold Shift (TTS), responses have also been triggered at levels as low as SELcum 158 dB in females.⁹ Beluga baseline hearing is also considered exceptional. In Castellote et al. 2014, seven belugas caught from the wild population of Bristol Bay exhibited hearing ranges from 4-150 kHz.¹⁰

Underwater noise associated with oil and natural gas exploration in the Bering, Chukchi, and Beaufort Seas includes primarily, but is not limited to, vessel noise, icebreaking activities, impact pile driving and related noise during platform construction, and most especially noise generated by airguns during seismic exploration. Seismic testing especially is recognized as an acute source of noise pollution which can expose marine mammals to levels of sound above the threshold for Level B disturbance under the Marine Mammal Protection Act (MMPA).²¹¹ Level B harassment is permitted under an Incidental Harassment Authorization (IHA) issued by the National Marine Fisheries Service (NMFS), provided no more than “small numbers” of marine mammals are taken and no more than a “negligible impact” on the overall health of the population.¹²

¹ EIA notes with concern that this area also includes critical habitat for the critically endangered north pacific right whale, which may number no more than 40 whales.

² Currently defined as 160 dB re 1 μ Pa rms from impulsive noise (eg. Air gun noise) and 120 dB re 1 μ Pa rms for non-pulse noise. EIA notes that Presidential Executive Order 13795 also ordered a review of the more updated auditory guidance released by the National Marine Fisheries Service in 2016.

Acute underwater sound like air guns or impact pile driving can have negative direct and indirect impacts on individual belugas and entire populations including changes to auditory signals,¹³ displacement, possible masking of acoustic signals vital for communication, disrupted development, TTS, a permanent threshold shift (PTS), higher stress, damaged reproduction or immune functions,¹⁴ or even stranding and death.¹⁵ Other disruptions and damage to prey species that would also impact the beluga, including fish and invertebrates like squid have also been documented from seismic gun activity.¹⁶ This includes disruption to larval development for scallops and acoustic trauma inflicted on squid.¹⁷

In the National Ocean and Atmospheric Administration's (NOAA) 2013 Supplemental Environmental Impact Statement on the Effects of Oil and Natural Gas Activities in the Arctic noise is identified as a source of impact on the region's populations, even if alternative technologies are pursued.¹⁸ Though BOEM stated in 2014 that "there has been no documented evidence of noise from air guns used in geological and geophysical (G&G) seismic activities adversely affecting marine mammal populations",¹⁹ this directly contradicts BOEM's own 2012-2017 PEIS which noted documented behavioral responses,²⁰ and the wealth of scientific evidence that does exist on the impacts of noise pollution on cetaceans.²¹

While much of the regulatory focus on noise impacts has typically been through IHAs for particular acute sources of noise pollution, cumulative and chronic noise associated with this draft proposed program will also have a negative effect on belugas. A major source of this chronic noise will be increased vessel traffic, which will use the same areas belugas utilize for their migration. As the only company that was actively pursuing exploration in the Chukchi Sea, Shell planned on sending 17 specialized vessels for exploratory purposes in 2014.²² Assuming that similar sized fleets are likely for each of the three new leasing areas in the Chukchi and Beaufort Seas, and each single lease in the Bering Sea areas, this would greatly increase the number of vessels traveling in and out of the beluga's habitat. This would also be multiplied by the need for Offshore Supply Vessels (OSV) to make resupply journeys to Dutch Harbor, likely along cetacean migratory routes.²³ Increasing vessel traffic has already been shown to have a marked impact on beluga whales. In 2009, the Environmental Protection Agency (EPA) found that noise from vessel traffic travelling to Red Dog Mine near Kotzebue had caused belugas to change their migratory route away from the area, negatively impacting the local subsistence hunters.²⁴

The cumulative effect of this additional chronic noise contributes to what the 2015 Cook Inlet Beluga Recovery Plan termed a "death by a thousand cuts" for cetaceans and runs contrary to the government's intended policy for mitigating noise pollution.²⁵ In 2017 NOAA adopted an agency wide *Ocean Noise Strategy Roadmap* to address "chronic effects and conserve the quality of acoustic habitats in addition to minimizing more acute adverse physical and behavioral impacts on specific species".²⁶ As a part of this strategy NOAA has worked collaboratively with BOEM to assess potential impacts associated with proposed offshore energy exploration and development activities to the acoustic conditions key to fish spawning locations, for instance in its 2014 Environmental Impact Statement for the Atlantic.²⁷ While EIA maintains that these leases should be withdrawn, should BOEM pursue its draft proposed program, as part of its PEIS BOEM should consult with NOAA to fully assess acoustic impacts on cetaceans and prey species, including acute and chronic noise impacts. This cumulative assessment should account for the likelihood of the same population facing exposure to the effects of noise pollution from multiple leases in the same year.

a. The possibility of a major oil spill poses a serious and untested risk.

The possibility of major oil spill in the Chukchi and Beaufort Sea is a serious concern, and further expanding hydrocarbon extraction in the Arctic Ocean only increases the possibility of a spill that poses a logistical nightmare for any attempted cleanup and an ecological catastrophe for a species like the beluga whale. In the proposal, a Catastrophic Discharge Event (CDE) is defined as a "spill of national significance", or one that:

“Due to its severity, size, location, actual or potential impact on public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of Federal, state, local, and responsible party resources to contain and clean up the discharge”.²⁸

Given the remoteness of the Chukchi and Beaufort Seas, essentially any spill would pose a serious challenge that meets the complexity of a CDE. The closest deep water port to the Arctic leasing areas in the proposal is Dutch Harbor in the Aleutian Islands, more than a thousand miles away. Under normal conditions, an OSV completes this roundtrip voyage in ten days.²⁹ Though ships could anchor in the closer Kotzebue Sound, there is no significant infrastructure to support a response to any major oil spill in the proposal’s leasing area.³⁰ For instance, under the 2012-2017 PEIS, no fewer than three larger spills (over 1,000bbl) were anticipated, and BOEM’s own Second Supplemental Environmental Impact Statement estimated the likelihood of at least one major spill as a 75 percent chance over the life cycle of leasing in the Chukchi Sea alone.³¹ In the event that such a spill occurred, former Coast Guard Admiral Papp suggested a full scale response might take as long as six weeks to mobilize.³² In fact this lack of infrastructure and support is even identified in the draft proposed program as a barrier to other commercial activity in the region, and as an explanation for lukewarm industry interest in past leasing opportunities in the Bering Sea.³³

The Bering, Chukchi, and Beaufort seas are also characterized by periods of prolonged seasonal darkness, sea ice³⁴, and heavy storms. All of these factors make responding to an oil spill of any size in these regions extraordinarily difficult. Conventional booms and skimmers for containment and recovery are increasingly ineffective in ice concentrations beyond 1/10 (10 percent or more ice coverage). Sea ice also prevents oil from dispersing or breaking into smaller molecules. Mechanical recovery of oil trapped under drifting ice floes in a pack ice environment is also challenging and at present there are no proven technologies or techniques for dealing with such a scenario after a medium to large spill.³⁵ Even under ideal circumstances only 15-25 percent of oil will be recovered by mechanical techniques.³⁶ New research also indicates that microbes which consume oil molecules are less present in the Arctic than they are in other areas like the Gulf of Mexico, further prolonging the impacts of an oil spill.³⁷

Moreover even if a spill were to occur in areas closer to Dutch Harbor, past experience indicates that spill response efforts would be difficult. On December 8, 2004, the cargo ship *M/V Selendang Ayu* lost power as it was transiting the North Pacific’s Great Circle Route, and in spite of the best efforts of the U.S. Coast Guard, eventually came ashore on Unalaska Island in the Aleutian Islands.³⁸ The ship split into two pieces, ultimately spilling an estimated 336,000 gallons of heavy fuel oil and diesel into the marine environment and killing six crew members.³⁹ Though the incident occurred just 90 miles from Dutch Harbor, strong winds and rough seas characteristic of the region prevented any cleanup for three weeks.⁴⁰

As cetaceans with consistent migratory patterns and recurring habitat, belugas are especially vulnerable to an oil spill in their habitat and may be exposed to oil by swimming through it, inhaling oiled fumes, or consuming oiled prey. Oil spill impacts have been divided into two phases, acute-phase mortality and long-term, population level impacts.⁴¹ Acute impacts include disorientation, stress, compromised immune systems, brain lesions, compromised enzyme systems, or mortality.⁴² In the long term these impacts can become a chronic exposure on the population, impairing recovery or even leading to abandonment of habitat altogether. While studies of the effects of oil on Arctic cetaceans are limited, after a 2003 ship-based oil spill in the near Arctic White Sea, local observers reported multiple adult male beluga carcasses near the site with no obvious injuries. In subsequent years the population effectively abandoned its former calving grounds, which continue to test positive for hydrocarbon levels up to 22 times the Russian Maximum Permissible Contamination Level.⁴³ Consequently, the leases in the Bering, Chukchi, and Beaufort Seas pose an unacceptable risk to belugas and must be withdrawn.

2. The proposal poses a serious threat to the endangered Cook Inlet beluga whales.

Cook Inlet is home to the United States' only population of beluga whales listed under the Endangered Species Act (ESA). Depleted by overhunting, the population was expected to stabilize after hunting was banned in 1999. However, though subsistence hunters have only taken five whales since, the population has continued to decline slowly to its current estimated size of 328.⁴⁴ In 2012, two areas were designated as critically endangered habitat for the Cook Inlet belugas.⁴⁵ The proposed leasing area for the two sales in Cook Inlet overlaps with the designated Critical Habitat Area 2, and follows closely after lease sale 244, which was auctioned off to Hilcorp Alaska in 2017.⁴⁶

In its response to BOEM's request for information in 2017, the Marine Mammal Commission (MMC) noted that the step-by-step process of exploration for oil posed a variety of risks to the belugas, and that the estimated oil and gas recovery potential in these federal waters is comparatively low.⁴⁷ These included possible noise pollution as described in the previous section from seismic testing and vessel traffic, and the impact of potential oil spills.⁴⁸

While the draft proposed program correctly terms Cook Inlet a mature area of operations with decades of established infrastructure and exploration, this fails to note that the infrastructure itself is now decades old and stresses are beginning to show. In 2016 a 52 year old pipeline in Cook Inlet ruptured, and leaked natural gas and a small amount of oil from December 2016 to April 15th 2017.⁴⁹ Sea ice was faulted for the delayed response, which took multiple dives to repair. This poor response, relatively close to facilities, suggests that cleanup and spill response is not adequate for the 40 to 50 year extraction timeline envisioned by the draft proposed program.

Under the ESA, all federal agencies must ensure their actions are not:

“likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical.”⁵⁰

While exemptions are permitted, the agency must prove that,

“(ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest;

(iii) the action is of regional or national significance;”⁵¹

The sale of a lease adjacent to or inside of Cook Inlet will jeopardize designated critical habitat, and the assessed hydrocarbons present does not outweigh the benefits of removing this area from consideration. As pursuing these leases both threaten the Cook Inlet beluga population and will potentially violate the ESA, EIA supports the recommendation of the MMC and believes all lease sales in Cook Inlet should be deferred until “the causes for the decline of the Cook Inlet beluga whale population are identified and addressed and progress in recovery of this species has been demonstrated”.⁵²

Conclusion

In considering the impact of oil and gas activities, including increased noise pollution and a potential oil spill on belugas, BOEM should remove the Bering, Chukchi, and Beaufort Sea leases from the draft proposed program. All leases in Cook Inlet should be further deferred as the endangered beluga population has yet to show any signs of recovery. Should BOEM choose to pursue this potentially dangerous course, EIA recommends that the full impact of these activities be carefully considered within the upcoming EIS.

Sincerely,

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Policy Analyst
Environmental Investigation Agency

¹ 43 U.S. Code § 1331

² BOEM. (2018). 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program.

³ 40 C.F.R. § 1502.14

⁴ NAMMCO. (2018). Global Review of Monodontids: Report. Available at: <https://nammco.no/wp-content/uploads/2017/01/report-and-annexes-global-review-of-monodontids.pdf>

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ BOEM 2018

⁹ Popov, V., V., Supin, A. Y., Rozhnov, V.V., Nechaev, D., I., Sysuyeva, E.V., Klshin, V.O., Pletenko, M.G., Tarakanov, M.B. (2013). Hearing threshold shifts and recovery after noise exposure in beluga whales, *Delphinapterus leucas*

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¹¹ 16 U.S.C. 1362

¹² NOAA Fisheries. (2018). Incidental Take Authorizations under the Marine Mammal Protection Act. Available at: <https://www.fisheries.noaa.gov/node/23111>

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¹⁶ BOEM 2012

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Brown, W. Y., (2014). “The Science Behind the Decision”. Bureau of Ocean Energy Management. Available at: <http://www.boem.gov/BOEM-Science-Note-August-2014/>

²⁰ Bureau of Ocean Energy Management (2012). “2012-2017 OCS and Gas Leasing Program Final Programmatic EIS”. Available at: <http://www.boem.gov/5-year/2012-2017/PEIS/>

²¹ Stocker, M. (2015). “Airgun Impacts With Citations”. Ocean Conservation Research. Available at: http://ocr.org/pdfs/papers/Airgun_Impacts_with_Citations.pdf

²² U.S. Army Corps of Engineers. (2015). “Draft Integrated Feasibility Report, Draft Environmental Assessment (EA), and Draft Finding of No Significant Impact (FONSI)”.

²³ Ibid.

²⁴ EPA, (2009). Red Dog Mine Extension: Aqqaluk Project. Available at:

<http://dnr.alaska.gov/mlw/mining/largemine/reddog/pdf/rdseis2009vol1.pdf>

²⁵ National Marine Fisheries Service. 2015. Draft Recovery Plan for the Cook Inlet Beluga Whale (*Delphinapterus leucas*). National Marine Fisheries Service, Alaska Regional Office, Protected Resources Division, Juneau, AK.

²⁶ NOAA (2016). Ocean Noise Strategy Roadmap. National Oceanic and Atmospheric Administration. Available at: <https://cetsound.noaa.gov/>

²⁷ Id. At pg. 87

²⁸ 40 CFR 300, Appendix E. “The National Oil and Hazardous Substances Pollution Contingency Plan”.

²⁹ USACE 2015

³⁰ O’Rourke. R. (2014). “Changes in the Arctic: Background and Issues for Congress”. Congressional Research Service. Available at: <http://www.fas.org/spp/crs/misc/R41153.pdf>

³¹ Bureau of Ocean Energy Management (2014). “Final Second Supplemental Environmental Impact Statement”. Available at: http://www.boem.gov/uploadedFiles/BOEM/About_BOEM/BOEM_Regions/Alaska_Region/Leasing_and_Plans/Leasing/Lease_Sales/Sale_193/2015_0127_LS193_Final_2nd_SEIS_Vol1.pdf

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- ⁴⁵ NOAA 2013
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- ⁵⁰ 16 U.S. Code § 1537
- ⁵¹ Ibid.
- ⁵² Marine Mammal Commission 2017