

## **U.S. Department of the Navy**

### **United States Fleet Forces Command**

#### **FINDING OF NO SIGNIFICANT IMPACT/FINDING OF NO SIGNIFICANT HARM (FONSI/FONSH) FOR ICE EXERCISE 2018**

##### **Introduction**

Pursuant to Section 102(2) of the National Environmental Policy Act (NEPA) of 1969, as amended; Council of Environmental Quality regulations (40 Code of Federal Regulations [CFR] parts 1500-1508) implementing NEPA; Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions*, Department of Defense regulations found at 32 Code of Federal Regulations Part 187; U.S. Department of Navy (Navy) regulations (32 C.F.R. part 775); and the Chief of Naval Operations Instruction 5090.1D and its accompanying manual (M-5090), CH-10, the Navy gives notice that an Environmental Assessment/Overseas Environmental Assessment (EA/OEA) and Finding of No Significant Impact/Finding of No Significant Harm (FONSI/FONSH) were prepared for Ice Exercise 2018 (ICEX 18) north of Alaska during February to April 2018.

##### **Purpose and Need**

The primary purpose of the Proposed Action is to evaluate submarine tactics and operability in an Arctic environment. Secondly, the Proposed Action would also evaluate emerging technologies and assess capabilities in the Arctic environment and gather data on Arctic environmental conditions.

The need for the Proposed Action is to prepare forces capable of extended operations and warfighting in the Arctic in accordance with Title 10 U.S.C. § 5062 and the U.S. Navy Arctic Roadmap Strategic Objectives.

##### **Description of the Proposed Action**

The Proposed Action is to conduct submarine training and testing activities, which includes the establishment of a tracking range and temporary ice camp, and to conduct research in an Arctic environment. The Proposed Action, as well as the construction and demobilization of the ice camp, would occur over a six-week period from late February through early April 2018 (considered winter through early spring). The submarine training and testing and the research activities would occur over approximately four weeks during the six-week period.

##### **Alternatives**

To develop and screen alternatives, the Navy used the following screening criteria:

- ICEX must be conducted during a time of year when there are sufficient hours of daylight to support several hours of training and testing each day.
- The location must be on a large area of stable ice that does not have (and is not likely to develop) leads or "gaps" and can sustain a runway and a camp for several weeks.
- The location must have sufficient water depth to accommodate safe submarine activities.
- The location must be in sufficient proximity to shore logistics centers to allow for transfers of personnel and equipment to and from the ice camp.

Based on these screening criteria, a No Action Alternative and two Action Alternatives were analyzed.

Under the **No Action Alternative**, ICEX would not occur. The Navy would not establish an ice camp and would not conduct submarine training and testing activities or research in the Arctic in winter/spring 2018. This alternative required no analysis of potential consequences to environmental resources as no action would occur. The No Action Alternative does not meet the purpose and need of the Proposed Action. However, it does serve as a baseline against which impacts of the Proposed Action were evaluated.

Under **Alternative 1**, Navy would establish an ice camp and conduct submarine training and testing activities at and near the camp.

Under **Alternative 2**, Navy would conduct the activities under Alternative 1, plus research activities aimed at gathering data on environmental conditions and evaluating various technologies and capabilities in the Arctic.

Other **action alternatives considered but not carried forward for detailed analysis** include geographic, seasonal, and operational variations. As discussed in the screening criteria, holding ICEX in a different location or at a different time of year would not satisfy the purpose and need. For example, holding ICEX closer to shore would not afford sufficiently thick ice to support an ice camp as well deep enough water for the submarine tracking range to conduct the required submarine training and testing. Positioning the camp further from shore would put the camp beyond the reach of logistics support required to sustain the activity. Seasonal alternatives are likewise not feasible because the ice conditions required to support the ice camp are only available in the timeframe identified for the Proposed Action. Additionally, altering how submarine training and testing is conducted is not feasible because the training and test plans are designed to specifically meet or test certain objectives. Conducting the training and testing differently would not meet the purpose and need of these requirements.

#### **Environmental Impacts of the Proposed Action**

The portion of the Proposed Action occurring in Prudhoe Bay would not increase the demands on local resources because the amount of personnel added to the community for the duration of ICEX would easily be absorbed into the community's existing infrastructure. Flights to and from the ice camp would utilize Deadhorse Airport, which usually experiences up to 90 commercial flights per day. ICEX would result in an increase of only nine flights per day at Deadhorse Airport. Additionally, the Proposed Action would not impact subsistence hunting for bearded and ringed seals as hunting does not occur within the Study Area during the timeframe of the Proposed Action. Although hunting for polar bears and arctic foxes does occur year-round, the Proposed Action is far outside of the normal areas used for hunting.

The EA/OEA evaluated the Proposed Action in terms of stressors and their potential to impact natural and physical resources. The following stressors were analyzed for their potential to affect the natural or manmade environment: acoustic transmissions, aircraft noise, on-ice vehicle noise, aircraft strike, on-ice vehicle strike, in-water vessel and vehicle strike, human presence, expended material, entanglement, and ingestion. Resources that were not considered for analysis because the Proposed Action has no potential to affect them include airspace, terrestrial wildlife (except Arctic fox), deep sea corals and coral reefs, sea turtles, and cultural resources.

The EA/OEA analyzed each stressors' potential effects to the following resources and Table 1 provides the determination summary for all resources.



**PHYSICAL ENVIRONMENT:**

**Air Quality**

- No significant impact/harm to local or regional air quality would be expected under the Proposed Action from either Action Alternative.
- Air emissions would occur from mobile generators, aircraft, and on-ice vehicles, however, the ice camp is located outside of the jurisdictional limit of the Clean Air Act, and therefore the conformity rule does not apply. Prudhoe Bay falls within in the North Slope attainment area, therefore, Prudhoe Bay is not subject to a conformity analysis. Emissions from aircraft at Prudhoe Bay would represent a negligible percentage of air emissions and none of the potential air emissions would cause or contribute to a violation of the National Ambient Air Quality Standards. Therefore, no significant impacts to local or regional air quality are expected, and a formal conformity determination is not required.
- In terms of greenhouse gases (GHG), implementing the Proposed Action would contribute directly to emissions of GHGs from the combustion of fossil fuels. However, due to the minor increase in overall average flights around Prudhoe Bay/ Deadhorse Airport, the emissions are very limited. Emissions of GHGs from the Proposed Action are similar amongst the Action Alternatives and do not conflict with DoD, Navy, state, or local GHG goals and programs.
- The potential effects of the GHG emissions from the Proposed Action are by nature global and cumulative, as individual sources of GHG emissions are not large enough to have an appreciable effect on climate change. Neither of the Action Alternatives would introduce significant emissions to affect climate change.

**Bottom Substrate**

No significant impact/harm to bottom substrates would be expected from either Action Alternative.

- Bottom disturbance could occur from expended buoys, expendable mobile anti-submarine training targets (EMATT), radiosondes, buoys, and radiofrequency tags (approximately 65 items total).
- Although these materials would result in a slightly increased risk of bottom disturbance, the overall harm would be minimal due to the large size of the area and the small number of items expended.

**Water Quality**

No significant impact/harm to water quality would be expected from either Action Alternative.

- Discharge of graywater from the galley and handwashing station, and reverse osmosis reject water to the water column could affect water quality, however, the short duration and relatively small release of this type of discharge would not negatively impact the water quality of the Beaufort Sea.
- Additionally, combustive byproducts and Otto Fuel II would only be potentially released into the water column from torpedoes during both Action Alternatives. The relatively small release and quick dilution into the water column would not negatively impact the water quality of the Beaufort Sea.

## **BIOLOGICAL ENVIRONMENT:**

### **Marine Vegetation**

No significant impact/harm to marine vegetation would be expected from either Action Alternative.

- Human presence would result in the discharge in graywater and reverse osmosis reject water to the water column.
- Although excess nutrients could result in a localized and temporary bloom of phytoplankton, it would not be to an extent that results in a decline of dissolved oxygen in the water column within the Study Area given the short duration of the Proposed Action and relatively small release.

### **Invertebrates**

No significant impact/harm to invertebrates would be expected from either Action Alternative.

- Although some invertebrates could be disturbed or killed by in-water vessel and vehicle strike, population level effects are not anticipated because of the few number of individuals potentially impacted relative to the total invertebrate biomass in the region. Additionally, since most of the macro-invertebrates within the Study Area are benthic and the Proposed Action takes place within the water column, potential for macro-invertebrate vessel or vehicle strike is extremely low.
- Under both Action Alternatives, the release of Otto Fuel II and other combustive byproducts would occur which could lead to a potential ingestion, no measurable effect on invertebrate populations would occur due to the low amount of combustion byproducts discharged and the amount of potentially affected invertebrates would be low relative to total invertebrate biomass.
- A low likelihood exists that invertebrates would be able to perceive the acoustic transmissions, and if perceived, that an individual animal would react.
- Hydrophones used for the underwater tracking range and in-water data collection devices would introduce potential for entanglement both within the water column and once the material sinks to the seafloor. Given that most invertebrates in the Study Area are benthic, the likelihood of entanglement is extremely limited.

### **Marine Birds**

No significant impact/harm to marine birds would be expected from either Action Alternative.

- Research activities would introduce materials available for ingestion (e.g., balloon fragments); though no measureable effect on bird populations are expected.
- There is potential for aircraft strike from small, fixed-wing aircraft, large fixed-wing aircraft (e.g., C-130), and helicopters. However, because birds are not expected to be traveling in large flocks and aircraft operations would be limited to a few flights a day over the course of a few weeks, any potential incidents of aircraft strike would be isolated and would not result in a significant adverse effect on migratory bird populations.
- Noise associated with aircraft and on-ice vehicles may elicit responses in individual birds potentially migrating through the area. However, due to the limited duration of activities, population-level effects would not be anticipated.



- The Proposed Action would not result in a significant adverse effect on a population of migratory bird species and therefore consultation under the Migratory Bird Treaty Act is not warranted.

### **Fish**

No significant impact/harm to fish would be expected from either Action Alternative.

- There is a low likelihood that fish within the Study Area would be able to perceive the acoustic transmissions, and if perceived, that an individual fish would react.
- Submarines, torpedoes, and unmanned underwater vehicles have the potential to strike fish. These vessels and in-water vehicles would be slow moving, occur in small numbers, and be of short-term use. Isolated cases of vessel strike could potentially injure individuals, but are not expected to result in population level effects.
- Entanglement of fish in hydrophone cables is not anticipated.
- The highest risk of harm from ingestion would be from parachutes, balloon fragments, and weather balloon ropes. Because of the small numbers of balloons and expended materials, and the distance at which they would be dispersed, they would not present a significant threat to fish populations, although one or a few individual fish could be impacted.

### **Essential Fish Habitat**

No significant impact/harm or reduction in the quality or quantity of Essential Fish Habitat (EFH) would be expected from either Action Alternative.

- Acoustic transmissions could have an effect on the features of the EFH due to the increase in ambient sound level during the transmissions. The water column is EFH for the Arctic cod; however, because the quality of the water column would only be affected locally and temporarily, acoustic transmissions would not result in significant harm to EFH.
- Graywater and reverse osmosis reject water discharge could result in a localized and temporary increase in oxygen demand, nutrients, and oil and grease, but would not have long-term effects on EFH.

### **Mammals**

No significant impact/harm to marine mammals would be expected from either Action Alternative.

- Under the Endangered Species Act (ESA) for both Action Alternatives, the Proposed Action may affect, but is not likely to adversely affect, bearded seals and polar bears.
- Regardless of the alternative selected, the Navy received an intentional take permit from U.S. Fish and Wildlife Service (USFWS) to allow certain trained ICEX participants to use specifically authorized deterrent measures to deter polar bears from entering the camp, or to reduce the potential for a lethal human-bear interaction. Allowable methods include vehicle noise, flares, and warning shots.
- The Proposed Action may adversely affect the ringed seal were it a listed species under the ESA, therefore consultation with NMFS was initiated but not completed.<sup>1</sup>

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<sup>1</sup> While the ringed seal is not currently listed as a threatened species under the ESA, litigation surrounding the de-listing of the species is ongoing. In an abundance of caution should the ringed seal be re-listed prior to ICEX 18, the Navy initiated consultation with NMFS.

## Finding Of No Significant Impact/Finding Of No Significant Harm for Ice Exercise 2018

- Under the Marine Mammal Protection Act (MMPA) for both Action Alternatives, the Proposed Action may cause a behavioral effect to ringed seals. The Navy applied to NMFS for an Incidental Harassment Authorization (IHA) for the Level B take of ringed seals due to acoustic transmissions. The effect would be expected, at most, as minor to moderate avoidance responses from a few animals over short and intermittent periods. The Proposed Action would not be expected to cause significant disruptions such as mass haul outs, or abandonment of breeding, that would result in significantly altered or abandoned behavior patterns.
- Aircraft noise associated from C-130 survey flights, small fixed-wing aircraft, tilt-rotor aircraft, and small (i.e., non-military) helicopters may cause a reaction if a flight occurs above a marine mammal, but any reaction would be temporary and would not result in behavioral patterns being significantly altered or abandoned.
- Noise from on-ice vehicles could affect marine mammals; however, these reactions would be temporary and within these animals' normal repertoire of behaviors, and would not result in behavioral patterns being significantly altered or abandoned.
- The potential for strike from an on-ice vehicle would be limited to snowmobiles. As discussed below, ICEX participants will maintain certain standoff distances from pressure ridges where ringed seals tend to build their lairs.
- Submarines, torpedoes, and unmanned underwater vehicles have the potential to strike marine mammals. However, the potential would be low because these vessels and in-water vehicles would be slow moving, occur in small numbers, and be of short-term use.
- Polar bears can be easily seen because of their large size; therefore, on-ice vehicle strike of a polar bear is not expected.

### **SOCIOECONOMIC ENVIRONMENT:**

#### **Subsistence Hunting**

No impact/harm to subsistence hunting would be expected from either Action Alternative.

- While the Proposed Action has the potential to temporarily impact species which are used in subsistence hunting, such as the ringed seal and bearded seal, this hunting would not be stopped or interrupted as part of the Proposed Action due to the distance from shore that the majority of the action would occur as well as the time of year.
- While aircraft may fly over subsistence hunting areas near the coast, it would be within flight corridors already used by aircraft from Deadhorse Airport. Any potential impact to ringed or bearded seals would be minor and temporary.
- Although subsistence hunting for polar bears and Arctic fox occur year-round, the Proposed Action is far outside of the normal areas hunting occurs.

**Table 1 Determination Summary**

Resource	Alternative 2
Air Quality	No significant impact/harm
Bottom Substrate	No significant impact/harm
Water Quality	No significant impact/harm
Marine Vegetation	No significant impact/harm
Invertebrates	No significant impact/harm
Marine Birds	No significant impact/harm
Fish	No significant impact/harm
Essential Fish Habitat	No significant impact/harm No reduction in quality or quantity of essential fish habitat
Mammals	No significant impact/harm May affect, but not likely to adversely affect, polar bears and bearded seals IHA for ringed seals
Subsistence Hunting	No effect
Conclusion	No significant impact/harm to the environment

The analysis provided in Chapter 3 and Chapter 4 of the EA/OEA, describes how the Proposed Action under NEPA would not result in significant impacts to the human, physical or biological environment. In accordance with E.O. 12114, the Proposed Action would also have not cause significant harm to the physical or biological environment.

No significant direct, indirect, or cumulative impacts would be expected on any of the resources analyzed for ICEX 18. As described in the EA/OEA, implementation of either Action Alternative would result in no significant impact/harm to the natural or physical environment.

**Cumulative Impact**

Under the Proposed Action, no significant cumulative impacts would be expected from other past, present, and reasonably foreseeable Navy and non-Navy projects. Resource areas that would be impacted are air quality, bottom substrate, water quality, marine vegetation, invertebrates, marine birds, fish, essential fish habitat, mammals, and subsistence hunting. However, these cumulative impacts would not be considered significant because the impacts are minor, short-term, and/or temporary.

**Mitigation and Standard Operating Procedures**

During ICEX18, the following standard operating procedures would be implemented:

- Ice camp activities and personnel movement within the camp would only occur during daylight hours.



## Finding Of No Significant Impact/Finding Of No Significant Harm for Ice Exercise 2018

- Pilots would make every attempt to avoid large flocks of birds (which are unlikely) in order to reduce the safety risk involved with a potential bird strike.
- The location for any air-dropped equipment and material would be visually surveyed prior to release of the equipment/material to ensure the landing zone is clear. Equipment and materials would not be released if any animal is observed within the landing zone.
- Air drop bundles would be packed within a plywood structure with honeycomb insulation to protect the material from damage.
- Spill response kits/material would be on-site prior to air-drop of any hazardous material (e.g. fuel).

In addition to the standard operating procedures above, the following mitigation measures would be implemented to reduce or avoid potential harm to marine resources.

- Safety permitting, as aircraft approach the camp, aircraft crew will ensure that the landing zone is clear of any animals and will report the presence and behavior of any seals observed on the ice.
- For activities involving active acoustic transmission from submarines and torpedoes, passive acoustic sensors on the submarines will listen for vocalizing marine mammals. If a marine mammal is detected, the submarine would cease active transmissions, including the launching of torpedoes, and not restart until after 15 minutes have passed with no marine mammal detections.
- Passengers on all on-ice vehicles would observe for marine and terrestrial animals; any marine or terrestrial animal observed on the ice would be avoided by 100 m.
- On-ice vehicles would not be used to follow any animal [with the exception of actively deterring polar bears if the situation requires].
- Personnel operating on-ice vehicles would avoid areas of snow drifts >0.5 m in depth (often near pressure ridges), which are preferred areas for ringed seal subnivean lairs.
- All material (e.g., construction material, unused food, excess fuel) and wastes (e.g., solid waste, hazardous waste) would be removed from the ice floe upon completion of ICEX18; only scientific buoys and radiofrequency identification tags would be left behind.

### **Agency Consultation and Coordination**

Marine Mammal Protection Act: The Navy submitted an application to United States Fish and Wildlife Service (USFWS) for the intentional take (deterrence) of polar bears and USFWS issued a letter of authorization (LOA) on November 16, 2017. The LOA authorizes the intentional taking of polar bears for safety reasons through active deterrence measures. The Navy applied for an IHA for the taking of ringed seals and NMFS provided a draft IHA on 5 January 2018; the IHA will be finalized and issued upon completion of this EA/OEA. Both of these authorizations are pursuant to 101(a)(4)(A), 109(h), and 1112(c) of the Marine Mammal Protection Act.

Endangered Species Act: The Navy informally consulted with the NMFS, Alaska Region, on bearded seals and NMFS concurred with Navy's determination of may affect, but not likely to adversely affect, on September 27, 2017. Due to the potential re-listing of the ringed seal prior to ICEX 18, NMFS also included an analysis of the Proposed Action on the ringed seal in their Letter of Concurrence. NMFS determined the construction and running of the ice camp, may affect, but would not adversely affect the ringed seal. NMFS did not provide an opinion on the acoustic transmission, which the Navy determined may adversely affect the ringed seal.

The Navy also informally consulted with USFWS, Fairbanks Fish and Wildlife Field Office, on polar bears and USFWS concurred with Navy's determination of may affect, but not likely to adversely affect, on November 16, 2017.



Finding Of No Significant Impact/Finding Of No Significant Harm for Ice Exercise 2018

Magnuson-Stevens Fishery Conservation and Management Act: NMFS concluded that the Proposed Action would not likely reduce the quantity or quality of Essential Fish Habitat for previous ICEX events on November 9, 2015 and recommended informing NMFS should there be a significant change to the action. Navy sent a letter on 15 December 2017 stating the Navy was conducting ICEX18 but it was not significantly different from ICEX16.

Clean Water Act: The Navy consulted with the Environmental Protection Agency, Region 10, on the modification to the ICEX 16 National Pollutant Discharge Elimination System (NPDES) permit for ICEX 18 in order to account for the expansion of the ice camp study area over the previous ICEX and to include the addition of the handwashing station to the graywater outfall and reverse osmosis reject water discharges previously analyzed. On 21 December 2017, the EPA Region 10 issued the NPDES permit modification to the Navy.

**Coastal Zone Management Act**

Alaska withdrew from the voluntary National Coastal Zone Management Program on 1 July 2011. Therefore, coastal zone resources were not evaluated for federal consistency under the Coastal Zone Management Act or any state enforcement policies.

**Outreach**

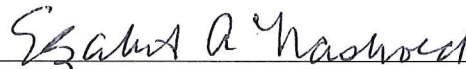
The Navy published Notice of Availability (NOA) in the Arctic Sounder (both in print and on the website) advertising the availability of the draft EA/OEA for a 17-day comment period. The draft EA/OEA was available electronically at <http://www.aftteis.com/ICEX>. Additionally, prior to the public release of the draft EA/OEA, the Navy informed the Village of Nuiqsut, the Village of Kaktovic, and the Inupiat Community of the Arctic Slope and mailed a CD containing the draft EA/OEA directly to them. No comments were received on the draft EA/OEA.

**Finding**

Alternative 2 is the preferred alternative. Based on analysis provided in the ICEX18 EA/OEA, the Navy finds that implementation of Alternative 2 will not significantly impact or harm the quality of the human or natural environment. Therefore, preparation of an Environmental Impact Statement/Overseas Environmental Impact Statement is not required. Copies of the EA/OEA, including this FONSI/FONSH, may be obtained at <http://www.aftteis.com/ICEX>.

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Date



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