



DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket Number USCG-2018-0193]

Polar Icebreaker Program; Record of Decision for the Polar Security Cutter

Environmental Impact Statement

AGENCY: Coast Guard, DHS.

ACTION: Record of decision.

SUMMARY: The U.S. Coast Guard, as lead agency, announces the availability of the Record of Decision for the approved Polar Security Cutter Programmatic Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA) for the Polar Security Cutter Program's design and build of up to six polar icebreakers. This publication serves as the Record of Decision on the final EIS and includes a full summary of the environmental analysis and consequences.

DATES: The decision became operative on March 18, 2019.

ADDRESSES: The complete text of the final EIS and any supporting documents related to this decision are available in the docket which can be found by searching the docket number USCG-2018-0193 at <https://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: If you have questions about this Record of Decision (ROD), email Ms. Christine Wiegand, Assistant Program Manager for Acquisition, Polar Security Cutter Program, U.S. Coast Guard; email PIBEnvironment@uscg.mil.

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I. Table of Abbreviations

CFR	Code of Federal Regulations
CGC	Coast Guard Cutter
EIS	Environmental Impact Statement
FR	Federal Register
NEPA	National Environmental Policy Act
PIBs	Polar Icebreakers
PSC	Polar Security Cutter
ROD	Record of Decision
U.S.C.	United States Code

II. Record of Decision

Pursuant to Section 102 (2)(c) of the National Environmental Policy Act (NEPA) of 1969, Sections 4321 et seq. of Title 42 U.S.C., Council on Environmental Quality Regulations (1500-1508 of Title 40 Code of Federal Regulations [CFR], and Executive Order 12114, Environmental Effects Abroad of Major Federal Actions), the Coast Guard announces its decision to implement the Coast Guard's preferred Alternative, Alternative 1, including the full range of mitigation measures, as described in the PSC's Final Programmatic EIS. This decision will enable the Coast Guard to carry out the Coast Guard's primary missions supported by PSC.

A detailed description of Alternative 1 is provided in Chapter 2 (Description of the Proposed Action and Alternatives) of the PSC Final Programmatic EIS.

III. Background and Issues

The Coast Guard is a military, multi- mission, maritime service within the Department of Homeland Security and one of the nation's five armed services. In executing its various missions, the Coast Guard protects the public, the environment, and U.S. economic and security interests in maritime regions, including international waters and the coasts, ports, and inland waterways of the U.S., as required to support national security.

As the polar regions of the Arctic and Antarctic become more accessible, they become more important to U.S. and international interests. Polar icebreakers enable the Coast Guard to enforce treaties and other laws needed to safeguard both industry and the environment; provide ports, waterways and coastal security; provide logistical support; and support all other Coast Guard missions. Any increase in vessel traffic in the polar regions increases the potential for more search and rescue missions, water pollution, illegal fishing, and infringement on the U.S. Exclusive Economic Zone, which requires Coast Guard presence. In response to this potential surge in vessel traffic, a long term increase in Coast Guard mission demand is projected, thus requiring additional capacity from PSCs. The Proposed Action would allow the Coast Guard to meet the increasing demand in the polar regions, as well as year- round mission requirements.

IV. Purpose and Need

The Coast Guard's current fleet of polar icebreakers consists of two heavy icebreakers, Coast Guard Cutter (CGC) POLAR STAR and CGC POLAR SEA, and one medium icebreaker, CGC HEALY. The Coast Guard's heavy icebreakers have both exceeded their designed 30-year service life. CGC POLAR STAR was commissioned in 1976 and CGC POLAR SEA in 1978.

CGC POLAR STAR completed a service life extension in 2013 to allow CGC POLAR STAR to operate for an additional seven to ten years. CGC POLAR SEA has remained out of service since 2010 and is not expected to be reactivated. The PSC program acquisition strategy to construct up to three PSCs and may (at a future date) expand to include up to three additional icebreakers, with design service lives of 30 years each. The first of these new PSCs is expected to be delivered in 2023. Because the first new PSC would not be operational in the Polar Regions until at least 2023, new information may become available after the completion of the Programmatic EIS. In that case, supplemental NEPA documentation may, as appropriate, be prepared in support of individual proposed actions and tiered to the PSC Final Programmatic EIS. Examples of new information may include, but are not limited to, changes to a species listing status or any other applicable laws and directives, and information regarding mission, training, homeporting, maintenance, and eventual decommissioning of the new PSCs.

PSCs will be designed to carry out the Coast Guard's primary missions supported by the current polar icebreaker fleet. Expected missions include Ice Operations; Defense Readiness; Aids to Navigation; Living Marine Resources; Marine Safety; Marine Environmental Protection; Other Law Enforcement; Ports, Waterways, and Coastal Security; and Search and Rescue. In executing its various missions, the Coast Guard protects the public, the environment, and U.S. economic and security interests in maritime regions, including international waters and the Nation's coasts, ports, and inland waterways, as required to support national security. Legislation and executive orders assign the Coast Guard a wide range of responsibilities applicable to Polar Regions. The Coast Guard derives its authority for the use of icebreaking from several statutes governing execution of its missions. These include 14 U.S.C. 81 (Coast Guard establishment, maintenance, and operation of aids to navigation), 14 U.S.C. 88 (Coast Guard saving of life and

property), 14 U.S.C. 89 (Coast Guard law enforcement), 14 U.S.C. 90 (Arctic maritime transportation), 14 U.S.C. 91 (controlling anchorage and movement of vessels), 14 U.S.C. 94 (conduct oceanographic research), and 14 U.S.C. 141 (cooperation with agencies, States, territories, and others). In addition, Executive Order 7521 (Use of Vessels for Icebreaking in Channels and Harbors; 1 FR 2184; December 24, 1936), directs the Coast Guard to assist in keeping channels and harbors open to navigation by means of icebreaking operations.

The Coast Guard proposes to conduct PSC operations and training exercises to meet Coast Guard mission responsibilities in the U.S., Arctic and Antarctic Regions of operation, in addition to vessel performance testing post-dry dock in the Pacific Northwest near the current polar icebreaker homeport of Seattle, Washington. While the exact location for future homeporting has not been determined, the current fleet of polar icebreakers is homeported in Seattle, Washington.

Polar Regions are becoming increasingly important to U.S. national interests. The changing environment in these regions could lead to a rise in human activity and increased commercial ship, cruise ship, and naval surface ship operations, as well as increased exploration for oil and other resources, particularly in the Arctic. One of the Coast Guard's highest priorities is safety of life at sea. This entails the Arctic responsibilities described above as well as assisting with Antarctica logistics at McMurdo Station. Long-term projected increases in Coast Guard mission demand in the Polar Regions would require additional support from PSCs. A lack of infrastructure, polar environmental conditions, and long distances between operating areas and support bases all influence the Coast Guard's ability to provide comparable service and presence in Polar Regions as compared to that provided in other non-polar areas of operation with existing Coast Guard assets.

The PSC Final Programmatic EIS analyzed the potential impacts of up to six new PSCs, as this is the maximum number anticipated to be operational in the Polar Regions under the current PSC program acquisition strategy. A lesser number of icebreakers is expected to result in a similar or reduced impact than what was discussed and evaluated in the EIS. Potential environmental stressors include acoustic (underwater acoustic transmissions, vessel noise, icebreaking noise, aircraft noise, and gunnery noise), and physical (vessel movement, aircraft or in-air device movement, in-water device movement, icebreaking, and marine expended materials).

V. Public Involvement

The public scoping period began with issuance of the Notice of Intent in the Federal Register (83 FR 18319) on April 26, 2018. The scoping period lasted 60 days, concluding on June 25, 2018. The public was provided a variety of methods to comment on the scope of the PSC Final Programmatic EIS during the scoping period. Communication methods used by the Coast Guard to distribute the proposed project information to residents of Alaska included: radio, newspapers, fliers, electronic mail (email), and websites. Public presentations of the Proposed Action and preliminary findings were provided at public meetings held in Alaska. These meetings were advertised with fliers and newspaper postings, as well as in radio announcements and on social media.

A project website was established to facilitate public input within and outside the Arctic, Antarctic, and Pacific Northwest regions (<http://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Acquisitions-CG-9/Programs/Surface-Programs/Polar-Icebreaker/>). The scheduling of public meetings was publicized in press releases available on the Coast Guard's website, in the Federal Register Notice (83 FR 18319; April 26, 2018), as well as

in local newspapers—the Anchorage Daily News, the Arctic Sounder, and the Nome Nugget and social media sites, such as Facebook. Targeted emails were sent to the Tribal communities in the regions of Nome (Bering Straits Region), Kotzebue (Nana Region), Anchorage, and Barrow/Utqiagvik (Arctic Slope Region) to notify them that the public meetings were taking place. Public meetings were held in Nome (May 7, 2018), Kotzebue (May 9, 2018), Anchorage (May 11, 2018), and in Barrow/Utqiagvik (May 14, 2018). The public meeting in Nome had 10 attendees, the meeting in Kotzebue had 4 attendees, and the meeting in Barrow/Utqiagvik had 5 attendees. The meeting in Anchorage was not attended by any members of the public. A Notice of Availability and request for comments was publicized in the Federal Register Notice (83 FR 38317; August 6, 2018) to notify the public of the 45-day public review period for the PSC Draft Programmatic EIS. Comments from the public are addressed in Appendix C of the PSC Final Programmatic EIS.

A notice of availability of final programmatic EIS was posted in the docket on February 15, 2019 along with the full text of the final EIS. The program waited 30 days to make a final decision on the proposal. The Coast Guard received one comment which did not require revisions to the Final PSC Programmatic EIS.

VI. Alternatives Considered

Two alternatives in addition to the Proposed Action (Alternative 1, Preferred Alternative) were evaluated in the PSC Final Programmatic EIS. The following provides a brief description of each alternative considered:

Alternative 1. Proposed Action (Preferred Alternative). The design, build, and operation of up to six PSCs.

Alternative 2. Leasing. Considered various forms of vessel leasing, such as those leases used by the U.S. Navy, the National Science Foundation, other federal agencies, and the domestic maritime industry.

Alternative 3. No Action. No new icebreakers would be built or leased, and the Coast Guard would fulfill its missions in the Arctic and Antarctic using existing polar icebreaker assets.

VII. Summary of Environmental Analysis and Consequences (Preferred Alternative)

A. Acoustic Stressors

The acoustic stressors from the Proposed Action include underwater acoustic transmissions (e.g., navigational technologies), vessel noise, icebreaking noise, aircraft noise, and gunnery noise. Potential acoustic impacts may include auditory masking (a sound interferes with the audibility of another sound that marine organisms may rely on), permanent threshold shift, temporary threshold shift, or a behavioral response. In general, the Coast Guard would use a PSC that would operate navigational technologies, including radar and sonar, while underway. Marine species within the Arctic and Antarctic proposed action areas may also be exposed to icebreaking noise associated with a PSC's activities. In assessing the potential impact to species from acoustic sources, a variety of factors were considered, including source characteristics, animal presence, animal hearing range, duration of exposure, and impact thresholds for those species that may be present. The Coast Guard evaluated the data and conducted an analysis of the species distribution and likely responses to the acoustic stressors based on available scientific literature. Icebreaking noise is generally described as a low frequency, 10 to 100 Hertz (Hz) (Roth et al. 2013), non-impulsive sound. Similarly, vessel noise is also characterized as low frequency. As such, a species response to icebreaking noise would be expected to be similar to their response to vessel noise. The Coast Guard used specific methods, described below, to

quantify potential effects to marine mammals from icebreaking. Non-marine mammal biological resources, such as seabirds, fish, and invertebrates that may potentially overlap with the proposed icebreaking area, were analyzed using qualitative methods, also described below, because the modeling exposure criteria were developed only for marine mammals and sea turtles. Sea turtles were not assessed for icebreaking sound exposure as their geographic ranges do not overlap any a proposed icebreaking areas.

Marine mammals are difficult to observe in real time and have varied behaviors based on species, geographic location, and time of year. Furthermore, field-based information on the effects of icebreaking on marine mammals is unavailable. Therefore, mathematical modeling was necessary to estimate the number of marine mammals that may be affected by icebreaking activities. The U.S. Department of the Navy (Navy) has invested considerable effort and resources analyzing the potential impacts of underwater sound sources (i.e., impulsive and non-impulsive sources) on marine mammals and sea turtles. The Navy has used the Navy Acoustic Effects Model (NAEMO) to model acoustic impacts to marine mammals. NAEMO has been refined since its inception and documented in many environmental assessments and impact statements developed for Navy exercises. NAEMO was developed based on published research, in collaboration with subject matter experts, and the Center for Independent Experts—an external peer-review system under the purview of National Marine Fisheries Service (NMFS). The Coast Guard used the Navy’s NAEMO model to quantify the potential impacts on marine mammals from icebreaking associated with the Proposed Action. Based on modeling results, the following marine mammals exposed to icebreaking would be expected to elicit a behavioral reaction: Antarctic minke whale (Balaenoptera bonaerensis), Arnoux’s beaked whale (Berardius arnuxii), bearded seal (Erignathus barbatus), blue whale (Balaenoptera musculus), bowhead

whale (Balaena mysticetus), crabeater seal (Lobodon carcinophaga), Gray's beaked whale (Mesoplodon grayi), humpback whale (Megaptera novaeangliae), killer whale (Orcinus orca), leopard seal (Hydrurga leptonyx), minke whale (Balaenoptera acutorostrata), polar bear (Ursus maritimus), ringed seal (Phoca hispida), Ross seal (Ommatophoca rossi), southern bottlenose whale (Hyperoodon planifrons), and Weddell seal (Leptonychotes weddellii).

In general, if marine mammal, invertebrate, fish, bird, or sea turtle hearing ranges did not overlap with the frequency of the acoustic sources, such as for acoustic transmissions, further analysis was not conducted in the Programmatic EIS. If hearing ranges did overlap, the analysis in the PSC Programmatic Final EIS considered the temporary nature of the Proposed Action and the current ambient noise levels in the proposed action areas, which all limited the exposure and impact from acoustic stressors to those species. Qualitative analyses of vessel noise and icebreaking noise were conducted similarly for all species groups, with the exception of marine mammals (where the NAEMO model was used to analyze potential impacts from icebreaking noise), as both sounds are typically characterized as low frequency (less than 1 kilohertz and between 10 to 100 Hz, respectively) (Roth et al. 2013) acoustic sources. Qualitative analyses of potential impacts from exposure to aircraft noise considered in-air hearing ranges for exposed species (when known or a surrogate species was evaluated) and the dominant tones in noise spectra from helicopters and fixed wing aircraft, as below 500 Hz (Richardson et al. 1995); qualitative analyses evaluated both in-air and underwater exposure from the air-to-surface interface. Since the typical operating altitude for helicopters and unmanned aerial vehicles (UAVs) associated with the Proposed Action would be at or above 1,000 feet (305 meters), it was assumed that the received levels from aircraft would significantly decrease from the sound levels expected at the source.

B. Summary of Impacts from Acoustic Stressors

Based on the analysis, impacts from acoustic sources associated with the Proposed Action are expected to result in, at most, minor to moderate behavioral responses over short and intermittent periods. Underwater acoustic transmissions, vessel noise, icebreaking noise, aircraft noise, and gunnery noise would not result in significant impact to invertebrates, fish, essential fish habitat (EFH), birds, sea turtles, and marine mammals. Those species listed as endangered or threatened under section 7 of the Endangered Species Act (ESA), would not be expected to respond in ways that would significantly disrupt normal behavior patterns which include, but are not limited to: migration, breathing, nursing, breeding, feeding, or sheltering. Acoustic stressors from the Proposed Action would not cause population level effects to any ESA-listed species in the proposed action areas. Additionally, when possible, the Coast Guard would avoid all known critical habitat areas. For those species where authorizations or permits may be required, the Coast Guard intends to consult with the appropriate regulatory agency to ensure environmental compliance. The timing of this permit request would coincide more closely with the time the first PSC is operational, due to expected updates to information and potential changes to a species listing status.

C. Physical Stressors

Vessels and aircraft associated with the Proposed Action would be widely dispersed throughout the proposed action areas. The physical stressors from the Proposed Action include vessel movement, aircraft movement, autonomous underwater vehicle (AUV) movement, icebreaking, and military expended materials (MEM). The physical presence of aircraft and vessels could lead to behavioral reactions from visual or auditory cues. In assessing the potential impact to species from physical sources, a variety of factors were considered, including vessel

and operation characteristics, animal presence, and likelihood of exposure. The Coast Guard evaluated the data and conducted an analysis of the species distribution and likely responses to the physical stressors based on available scientific literature. Reactions to vessels often include changes in general activity (e.g., from resting or feeding to active avoidance), changes in surface respiration or dive cycles (marine mammals), and changes in speed and direction of movement. The severity and type of response exhibited by an individual may also be influenced by previous encounters with vessels. Some species have been noted to tolerate slow-moving vessels within several hundred meters, especially when the vessel is not directed toward the animal and when there are no sudden changes in direction or engine speed (Richardson et al. 1995). In addition, vessels and aircraft could collide with resources found in all proposed action areas.

The PSC Final Programmatic EIS considered vessel tow training, when evaluating the potential impacts of vessel movement on resources in the proposed action areas. In general, short-term and localized disturbances are anticipated. The likelihood that an individual would interact with the vessel tow cable and become entangled is low because the tow lines would have no loops or slack, thereby reducing the likelihood of entanglement. Although the tow cable and towed vessel may impact fish, birds, and marine mammals encountered along a tow route, the chance that such an encounter would result in serious injury is extremely remote because of the low probability that an individual of a species would overlap with the infrequent tow training events.

Potential collision of vessels with biological resources was also considered in the analysis of vessel movement. The likelihood that a vessel would strike an invertebrate or a fish is extremely low because many of these animals would not be expected in the path of the vessel due to benthic distribution and any surface-dwelling species would be expected to avoid the

vessel. The probability of a seabird colliding with a vessel would increase at night and in situations of poor visibility; however, the likelihood of a vessel collision with a bird is extremely low because a PSC would likely operate farther offshore than where the majority of birds would be expected; a PSC would only operate navigational safety lights at night that would not be expected to attract birds; and during times of reduced visibility, a vessel would likely reduce vessel speeds for navigational safety. Flightless birds, including penguins and molting birds, would also be susceptible to a vessel collision; however, the Coast Guard's Standard Operating Procedures (SOP) and Best Management Practices (BMP) would minimize potential impacts. Sea turtles are also known to be attracted to lights, but similar to birds, the navigational safety lights would not be expected to act as an attractant to sea turtles.

Marine mammal species most vulnerable to collision are thought to be those that spend extended periods at the surface or species whose unresponsiveness to vessel sound makes them more susceptible to vessel collisions. Although the maximum speed of the PSC during vessel propulsion testing is 12–17 knots, a PSC is expected to operate at slower speeds during most of the Proposed Action activities. While slower speeds could decrease the chance of a fatal collision, it will not eliminate the risk of a collision. In addition, any vessel collision has the chance of causing serious injury or mortality. However, the Coast Guard's SOPs and BMPs, in addition to the slow vessel speeds, would decrease the risk of a collision with a marine mammal. AUV movement could impact biological resources, including invertebrates, fish, seabirds, and marine mammals; however, the potential for an AUV to strike individuals is similar to that identified for vessels in the analysis. Any animal that was displaced would be expected to resume normal activities due to the short-term and localized nature of the disturbance. Collision risk with an AUV is considered to be extremely low.

With the exception of birds, no other biological resources are expected to interact with aircraft, so other biological resources were not assessed. The aircraft used during the Proposed Action would be the MH-60 Jayhawk helicopter and UAVs for ice reconnaissance. Birds would be most at risk of a strike during takeoff and landing because the helicopter is passing through the lower altitudes where birds may be found. Bird strikes are a serious concern for helicopter crews not only because of the risk to the birds, but also because they can harm aircrews and equipment. For this reason, the Coast Guard would avoid large flocks of birds to increase personnel safety and minimize any risk associated with a bird-aircraft strike and would follow SOPs and BMPs to avoid critical habitat areas and areas where there are known gatherings of seabirds. While there is some risk of an aircraft-seabird strike associated with the Proposed Action, the risk of a strike is low. Should a collision occur, bird mortality or injuries due to the strike caused by helicopter or UAV movement may result, but population level impacts to seabirds are not expected.

Icebreaking would occur in the Arctic and Antarctic proposed action areas at speeds of 3 to 6 knots. It has the potential to impact marine species by altering habitats, causing behavior reactions, or colliding with resources. There would be no impact to sea turtles as they are not found in the icebreaking areas. Marine vegetation living under ice may encounter short-term and localized disturbances from icebreaking; however, no long-term or population level effects are expected as the amount of biomass that would potentially be impacted is insignificant relative to the overall biomass of the system. Due to the low speed of the PSC during icebreaking operations, it is expected that fish species, along with seabirds and marine mammals, would exhibit temporary behavioral responses to the presence of icebreaking. Icebreaking is not expected to significantly alter Arctic cod ice floe habitat, the only EFH that has the potential to

overlap with potential icebreaking areas. In the Antarctic proposed action area, Adélie penguins breed on land, and emperor penguins breed in the austral autumn; however, neither species would be exposed to icebreaking operations in the austral summer, when most icebreaking in the Antarctic is expected to occur. For marine mammal species, because the noise associated with icebreaking activities is most likely to result in marine mammals avoiding the PSC or area for a short period, it is highly unlikely that a PSC would strike a marine mammal or cause any physical harm. However, pinnipeds and polar bears that haul out on the ice may be more susceptible to icebreaking impacts. Icebreaking may result in localized changes to the polar bear and proposed ringed seal critical habitat as larger sheets of floating ice are broken down into smaller sizes. However, icebreakers do not diminish or destroy ice habitat because the amount of ice that is broken up relative to the overall total amount of available ice is small. Since the impact would be limited only to the area directly in the path of the PSC, short-term and localized disturbances would be expected and any animal that was displaced would be expected to resume normal activities after any brief disturbance.

MEM were assessed, including ingestion of MEM by marine species, when evaluating the potential impacts of gunnery training activities on resources in the proposed action areas. MEM from gunnery training activities would include targets, target fragments, and inert small caliber projectiles that would not be recovered. Most likely, the targets used would drift with currents until popping, then sink through the water column and end up on the seafloor. Impacts on soft bottom habitats from small caliber projectiles would be short term, as these are constantly moving and shifting. It is anticipated that, over time, projectiles could become colonized by invertebrates, thus becoming part of the bottom habitat. Due to the short-term impact of MEM on the seafloor, MEM is not anticipated to adversely affect the quality or quantity of EFH. Although

unlikely, small pieces of MEM may be ingested by an organism; however, targets and target fragments left as expended material are not in high enough densities to cause population level impacts.

D. Summary of Impacts from Physical Stressors

Based on the analysis, impacts from physical stressors associated with the Proposed Action are expected to result in, at most, minor to moderate behavioral responses over short and intermittent periods. Devices associated with the Proposed Action with a potential for entanglement include the lines used in vessel tow. For an organism to become entangled in a line or material, the materials must have certain properties, such as the ability to form loops and a high breaking strength. Towing lines would not be expected to have any loops or slack. The likelihood that a biological resource would become entangled in tow lines is extremely low. Vessel movement, aircraft movement, AUV movement, icebreaking, and MEM would not result in significant impact to bottom habitat and sediment, marine vegetation, invertebrates, fish, EFH, birds, sea turtles, and marine mammals.

Those species listed as endangered or threatened under section 7 of the ESA would not be expected to respond in ways that would significantly disrupt normal behavior patterns which include, but are not limited to: migration, breathing, nursing, breeding, feeding, or sheltering. Physical stressors from the Proposed Action would not cause population level effects to any ESA-listed species in the proposed action areas. When possible, the Coast Guard would avoid all known critical habitat areas.

The Proposed Action includes the breaking of ice and ice is a physical and biological feature essential to the conservation of ESA-listed species. However, during icebreaking, the Proposed Action would not alter the specific physical or biological features of that ice which is

essential to the conservation of ESA-listed species, including ringed seal and polar bear sea ice habitat. For those species where authorizations or permits may be required, the Coast Guard intends to consult with the appropriate regulatory agency to ensure environmental compliance. The timing of this permit request would coincide more closely with the time the first PSC is operational, due to expected updates to information and potential changes to a species listing status.

E. Socioeconomic Impacts

Commercial fishing, recreational fishing, research, transportation and shipping, tourism, and subsistence hunting and cultural resources are the socioeconomic resources that would be impacted by the Proposed Action. The predominant socioeconomic impact of a PSC would be an increased Coast Guard presence in the proposed action areas and the Coast Guard's jurisdictional areas. Replacement of the Coast Guard's aging polar icebreaker fleet would facilitate the Coast Guard's ability to support the Coast Guard missions including law enforcement, consistent search and rescue capabilities, and on-going research operation support.

F. Summary of Impacts to Resource Areas

An increase in the Coast Guard icebreaking fleet would be beneficial, and any potential negative impacts caused by the Coast Guard's presence and operations and training would be mitigated by the implementation of SOPs and BMPs. Additionally, outreach and educational programs conducted by the Coast Guard within the proposed action areas would facilitate communication between Coast Guard and the communities that they serve. More readily available Coast Guard support during an at-sea emergency is the principal benefit from the Proposed Action to commercial fishing, recreational fishing, transportation and shipping, tourism, and cultural resources and the communities that depend on them.

Vegetation. MEM may sink to the bottom during gunnery training, but any impacts to marine vegetation, if present, would be temporary. A PSC would also not set the anchor in areas where marine vegetation is likely to occur in the proposed action areas. No significant impacts or significant harm to marine vegetation is expected in all proposed action areas.

Invertebrates. Vessel and icebreaking noise, if perceived by an invertebrate, would likely result in avoidance behavior or other short term temporary responses, but would not result in any population level impact. Vessel and AUV movement has the potential to impact marine invertebrates either by disturbing the water column or directly striking the organism, if it is present on or near the ice. Although unlikely, invertebrates could be killed or displaced during icebreaking. Because the impact would be localized to the immediate path of a PSC, icebreaking disturbance would not be expected to have population level impacts. Vessel noise, icebreaking noise, vessel movement, AUV movement, and icebreaking would not result in significant impact or result in significant harm to invertebrates in all proposed action areas.

Habitats. Acoustic transmissions could increase in ambient sound level; however, this potential reduction in the quality of the acoustic habitat would be localized and temporary. Icebreaking associated with the Proposed Action may affect the quality or quantity of Arctic cod EFH; however, the effects of icebreaking on Arctic cod EFH would be minimal, due to the small area of icebreaking as compared to the overall quantity of ice floe habitat. MEM impacts on soft bottom habitats would be short term, as sediments are constantly moving and shifting. Underwater acoustic transmissions, icebreaking, and MEM would not result in significant impact or significant harm to EFH in the Arctic and Pacific Northwest proposed action areas. No EFH is designated in the Antarctic proposed action area.

Fish. Underwater acoustic transmissions, vessel noise, icebreaking noise, and icebreaking would likely result in short- term and insignificant behavioral reactions or avoidance behavior, and thus, would not be expected to have any population level impacts. AUV and vessel movement may result in short- term and local displacement of fish in the water column. Although unlikely, small pieces of MEM from gunnery training and small caliber practice munitions may be ingested by an individual. Vessel noise, icebreaking noise, vessel movement, AUV movement, icebreaking, and MEM, would not result in significant impacts or significant harm to fish in all proposed action areas.

Marine Mammals. Acoustic transmissions and icebreaking noise may result in minor to moderate behavioral responses to exposed individuals, but the behavioral response is expected to be temporary. Vessel noise may elicit a minor behavioral response by exposed individuals. Any noise generated by the UAV is expected to be minimal and below the hearing threshold of marine mammals, both in air and underwater. The noise from the UAV is not expected to penetrate below the water's surface; however, in the unlikely event that a marine mammal is exposed to UAV noise underwater, any behavioral response is expected to be very minor. The probability of a vessel encountering a marine mammal is expected to be low, decreasing the risk of a PSC- marine mammal collision. The risk of a collision between an AUV moving through the water and a marine mammal is extremely low. It is expected that icebreaking noise would alert marine mammals to the presence of a PSC before icebreaking would overlap with a marine mammal. Therefore, due to the expected avoidance behaviors caused by icebreaking noise, the likelihood that a PSC would collide with a marine mammal during icebreaking is extremely low. Pinnipeds or polar bears that may be observed on the surface of the ice may be more susceptible to impacts caused by icebreaking, but avoidance responses are also expected and SOPs and

BMPs, such as trained Coast Guard lookouts, would minimize any potential impacts. During the Arctic summer months, from May to September, pupping would not occur and subnivean lairs would not be occupied. Icebreaking would only occur when needed, and based on historical icebreaking, the majority occurs during the summer months. Therefore, the likelihood that a PSC would impact a subnivean lair is low. MEM has the potential to impact marine mammal species that feed on the bottom, if ingested, but the likelihood that a marine mammal would ingest MEM is extremely low. The Proposed Action is not expected to cause abandonment of breeding or avoidance of breeding areas, disruption of migration or feeding, or significant disruption to pinniped haul outs. Underwater acoustic transmissions, vessel noise, icebreaking noise, aircraft noise, vessel movement, AUV movement, icebreaking, and MEM would not result in significant impact or significant harm to marine mammals.

Sea Turtles. Vessel noise in the open ocean may cause a startle response in sea turtles; however, any response is expected to be short term and temporary. Vessel noise from a PSC would not be expected to impact a sea turtle's ability to perceive other biologically relevant sounds. Although sea turtles would likely hear and see approaching vessels, a risk of a vessel collision with a sea turtle exists; however, sea turtles spend most of their time submerged, which would reduce their risk of a vessel collision. Vessel noise and vessel movement would not result in significant impact or result in significant harm to sea turtles in the Pacific Northwest proposed action area or in the Arctic proposed action area (although the leatherback sea turtle is considered extralimital). Aircraft movement, aircraft noise, icebreaking, and icebreaking noise would have no significant impact or significant harm on sea turtles as sea turtles would not overlap in areas where aircraft operations and icebreaking are expected.

Birds. Vessel noise, icebreaking noise, vessel movement, and icebreaking would likely result in temporary behavioral responses. Any increase in ambient noise as a result of icebreaking or vessel movement would be temporary and localized to the position of the vessel as it transits or when icebreaking. Aircraft noise and gunnery noise may elicit, at most, short-term behavioral or physiological responses to exposed birds, such as an alert or startle response, or temporary increase in heart rate. While there is some risk of an aircraft-seabird strike, due to Coast Guard mitigation measures (e.g., limited duration of aerial operations) and avoidance of aircraft by seabirds, the risk of a strike is low. The potential for a bird strike by the AUV is extremely low, given the limited amount of time seabirds spend in the water relative to the air and low likelihood a diving seabird would overlap with AUV routes. Because of the small number of gunnery training targets, and the distance at which targets would be dispersed in the Arctic and Pacific Northwest proposed action areas, target and target fragments would not present a significant threat to seabird populations. Vessel noise, icebreaking noise, aircraft noise, gunnery noise, vessel movement, aircraft movement, AUV movement, icebreaking, and MEM would not result in significant impact or significant harm to seabirds.

G. Mitigation Measures

The Proposed Action includes SOPs and BMPs developed during federal and state agency permitting and approval processes, or as standard provisions for Coast Guard work. These SOPs and BMPs would be employed to avoid or minimize potential effects on the environment. Although SOPs and BMPs are established on a vessel-by-vessel basis, SOPs and BMPs currently in use by other icebreaking vessels would likely be used as guidance for any new PSC. Examples of SOPs and BMPs include avoidance of close approach to visible protected

species and habitats and posting lookouts to alert vessels when a protected species is sighted to try and avoid areas where protected species are commonly observed.

The programmatic approach that the Coast Guard has taken streamlines the procedures and time involved in consultations for broad agency programs or numerous similar activities with predictable effects on listed species and/or critical habitat, thus reducing the amount of time spent on individual project-by-project consultations. The Coast Guard has worked collaboratively with the appropriate regulatory agencies through the consultation process to develop mitigation measures. The Coast Guard also anticipates working collaboratively with the appropriate regulatory agencies through the permitting processes to finalize the mitigation measures. While these are subject to change (given the timeframe until PSCs are fully operational), the SOPs and BMPs in use by current icebreakers are as follows:

- Coast Guard Headquarters (HQ), Area, and District operating procedures and directives for Coast Guard vessels and aircraft designed to minimize negative interactions with MPS and within MPAs, including formalized speed and approach guidance around marine mammals.
- Enforcement of the ESA, MMPA, National Marine Sanctuaries Act (NMSA), and other pertinent environmental statutes designed to protect marine protected species and Marine Protected Areas.
- Participation in regional multiagency working groups, recovery teams, implementation teams, take reduction teams, sanctuary advisory councils, and task forces.
- Properly training lookouts on marine mammal detection and identification and maintaining those lookouts aboard vessels at all times.

- Establishment of Memoranda of Agreement (MOA) with the National Marine Sanctuaries (NMS) outlining procedures for coordinating enforcement activities.
- Providing routine surveillance of the NMS concurrently with other Coast Guard operations, and providing specific targeted or dedicated law enforcement as appropriate. NMS surveillance and enforcement is incorporated into routine patrol orders where feasible.
- Subject to availability of resources, providing other agencies with platforms to conduct critical MPS research and recovery efforts during stranding and recovery operations.
- Regional Fisheries Training Centers (RFTCs) provide applicable ESA, MMPA, and NMSA enforcement training to Coast Guard personnel supporting the MPS mission.
- Participation in the NMFS Marine Mammal Health and Stranding Response Program (MMHSRP) as a Co- Investigator. Via this designation, Coast Guard personnel provide the following support to NMFS: (a) responding to distressed marine mammals, (b) temporary restraint or captivity, (c) disentangling, (d) transporting, (e) attaching tags, and (f) collecting samples.
- Formal guidelines for appropriate disposal of animal carcasses.
- Providing opportunistic marine mammal sighting information to the National Marine Mammal Laboratory (NMML) Platforms of Opportunity Program (POP).

H. Monitoring, Research, and Reporting

Through its Living Marine Resource program, the Coast Guard is one of the nation's primary sponsors of scientific research and monitoring of marine species. Law enforcement operations are also a part of the Coast Guard mission. Law enforcement missions, including any PSC support of law enforcement activities, are covered under Title 14 U.S.C. and 6 U.S.C. §468

and 14 U.S.C. 89. The Coast Guard provides federal law enforcement presence over the entire U.S. Exclusive Economic Zone, covering nearly 3.4 million square miles of ocean. Coast Guard activities ensure compliance with fisheries and marine protected species regulations on domestic vessels; prevent over-fishing, reduce mortality of protected species, and protect marine habitats by enforcing domestic fishing laws and regulations; and, enforcing the MMPA and the ESA. The Coast Guard will submit a report documenting any incident involving protected resources or species to the appropriate regulatory agency. In these reports, the Coast Guard will describe the level of training conducted during the reporting period. These reports will also include information on biological resources that were sighted, specifically any marine mammals or seabirds, and will include information on each individual sighted related to mitigation implementation. If they occur, the Coast Guard will report incidents involving biological resource, such as bird aircraft strikes, marine mammal vessel strikes, observed injury or mortality to marine mammals or sea birds, and injury or mortality of ESA-listed species.

The Coast Guard and the regulatory agencies will use the information contained within monitoring, research, activity, and incident reports when evaluating the effectiveness and practicality of mitigation and determining if adaptive adjustments to mitigation measures may be appropriate.

VIII. Agency Consultation and Coordination

The Coast Guard consulted and coordinated with federal agencies, including the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), and federally recognized tribes (Alaska and Washington) in conjunction with actions addressed in the PSC Final Programmatic EIS.

- **Endangered Species Act.** The Coast Guard submitted a request for consultation under section 7 of the ESA in December 2017, to the USFWS and NMFS for those endangered or threatened species under their respective jurisdictions. On October 30, 2018 and November 15, 2018, the Coast Guard received a letter from the USFWS and NMFS, respectively, acknowledging the start of programmatic formal consultation pursuant to section 7(a)(2) of the ESA. On November 20, 2018, the Coast Guard sent a letter to the USFWS and NMFS under Section 7(d) of the ESA, indicating that the Coast Guard would proceed with the contract award and vessel construction. The Coast Guard determined that the design and construction of the PSCs would not constitute an irreversible or irretrievable commitment of resources which would foreclose the formulation or implementation of reasonable and prudent alternative measures that may be included in future biological opinions issued by the Services. The Coast Guard anticipates that any reasonable and prudent alternatives would focus on the future operations of the PSCs and not the design and construction of the vessels. Additionally, the design and build of the PSCs would have no effect on ESA- listed species or designated critical habitat.

The Coast Guard anticipates that both NMFS and the USFWS will issue their programmatic biological opinions on the Proposed Action in 2019. The Coast Guard recognizes that new information regarding the Proposed Action and biological resources in the proposed action area may change before the first PSC is operational (as soon as 2023). As part of the programmatic consultation process, the Coast Guard will continue to coordinate with both regulatory agencies and if necessary, reconsult under section 7 of

the ESA if there are any changes in the Proposed Action or biological resources in the proposed action areas.

- **The Marine Mammal Protection Act.** The MMPA of 1972, as amended (16 United States Code [U.S.C.] 1361 et seq.) prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas and the importation of marine mammals and marine mammal products. Coast Guard Instruction [CGD17INST] 16214.2A (U.S. Coast Guard 2011) outlines procedures for avoiding marine mammals and protected species; reporting marine mammal and protected species sightings, strandings and injuries; and enforcing the MMPA and ESA. The Coast Guard is not requesting authorization under Section 101(a)(5) of the MMPA at this time, because the Proposed Action discussed in the PSC Final Programmatic EIS will not occur until the first PSC is delivered and operational (2023); however, the PSC Final Programmatic EIS may contain information relevant and applicable to assist with future Coast Guard consultations that are in support of a request for future incidental take authorizations under the MMPA. As part of the MMPA, the Coast Guard intends to prepare a Plan of Cooperation that identifies what measures have been taken and/or will be taken to minimize any adverse effects on the availability of marine mammals for subsistence uses.
- **Magnuson-Stevens Fishery Conservation and Management Act.** In accordance with the Magnuson- Stevens Act, applicable regulations, and the Department of Homeland Security and Coast Guard instructions and directives, the PSC Final Programmatic EIS evaluates the potential for significant impact or environmental harm from the Proposed Action. The Coast Guard is not requesting Magnuson- Stevens Act consultation at this time, because the Proposed Action discussed in the PSC Final Programmatic EIS

concluded that based on the best available information, no effects to EFH are anticipated. However, since the first PSC is scheduled to be delivered in 2023; the PSC Final Programmatic EIS may contain information relevant and applicable to support future Coast Guard consultations on EFH as required under the Magnuson- Stevens Act, particularly as new information is obtained.

- **The Rights of Federally Recognized Tribes (Indian and Alaska Native).** As part of the MMPA process (see Section 1.5.17), the Coast Guard intends to prepare a Plan of Cooperation. To meet the Coast Guard’s mission responsibilities in the polar regions, the Coast Guard plans to establish regular and meaningful communication to consult and collaborate with Alaska Natives and tribal officials regarding the Proposed Action. The Coast Guard would not interfere with a tribe’s treaty rights or impinge on access to any area that provides these resources.

IX. Conclusion

Based on factors analyzed in the Final PSC Programmatic EIS, including training and operations objectives, best available science and modeling data, potential environmental impacts, and input and expertise of Federal agencies, federally recognized tribes, and the public, the Coast Guard selects Alternative 1 for implementation. Alternative 1, the Coast Guard’s Preferred Alternative, will fully meet the Coast Guard’s requirements in the polar regions. By implementing the mitigation measures identified in the Final PSC Programmatic EIS and associated regulatory documents, and adhering to monitoring requirements and management plans described herein, the Coast Guard has adopted all practicable means to avoid or minimize environmental harm associated with implementing Alternative 1. In addition, the Coast Guard assessed the effects of Alternative 1 in accordance with Executive Order 12114 and concluded

that there would be no significant harm to the environment in areas outside of the United States and possessions.

This notice is issued under authority of 5 U.S.C. 552(a).

Dated: March 29, 2019.

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