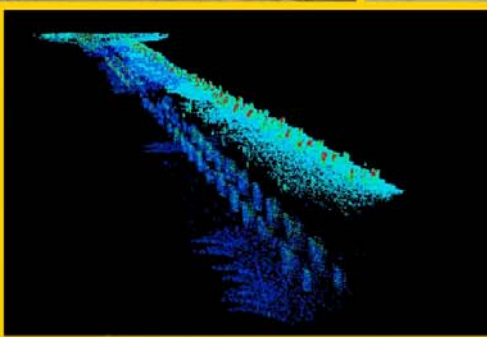


Draft



PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR THE NATIONWIDE USE OF HIGH FREQUENCY (HF) AND ULTRA HIGH FREQUENCY (UHF) ACTIVE SONAR TECHNOLOGY



December 2010

ACRONYMS AND ABBREVIATIONS

µg/m ³	micrograms per cubic meter	ESU	Evolutionary Significant Unit
µPa	micropascal	EWS	Early Warning System
µs	microsecond	FMC	Fishery Management Council
ABR	auditory brainstem response	FMP	Fishery Management Plan
ACHP	Advisory Council on Historic Preservation	FONSI	Finding of No Significant Impact
APLMRI	Atlantic Protected Living Marine Resource	GMFMC	Gulf of Mexico Fishery Management Council
AQCR	Air Quality Control Region	GOM	Gulf of Mexico
ASMFC	Atlantic States Marine Fisheries Commission	HAPC	habitat area of particular concern
ASW	Antisubmarine Warfare	HF	high frequency
AUV	Autonomous Underwater Vehicle	HF/M3	High Frequency Marine Mammal Mitigation
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement	Hz	Hertz
°C	degrees Celsius	IAS	Integrated Anti-swimmer System
CAA	Clean Air Act	IHA	Incidental Harassment Authorization
CEQ	Council on Environmental Quality	IP	Interested Party
CFMC	Caribbean Fishery Management Council	ITP	Incidental Take Permit
CFR	Code of Federal Regulations	kHz	kilohertz
CNMI	Commonwealth of the Northern Mariana Islands	km	kilometer
CO	carbon monoxide	km ²	square kilometers
COMDTINST	Commandant's Instruction	LFA	Low Frequency Active system
dB	decibels	LNG	Liquefied Natural Gas
DHS	Department of Homeland Security	LORAN-C	USCG Long Range Aids to Navigation
DPS	Distinct Population Segment	m/s	meters per second
DoN	Department of Navy	MAFMC	Mid-Atlantic Fishery Management Council
EA	Environmental Assessment	mg/m ³	milligrams per cubic meter
EEZ	Exclusive Economic Zone	MHLS	Maritime Homeland Security
EFH	Essential Fish Habitat	mi ²	square miles
EIS	Environmental Impact Statement	MMPA	Marine Mammal Protection Act
EMF	Electromagnetic Field	MMS	Minerals Management Service
ENSO	El Niño-Southern Oscillation	MPA	marine protected area
EO	Executive Order	ms	milliseconds
ESA	Endangered Species Act	MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act

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DRAFT

**PROGRAMMATIC
ENVIRONMENTAL ASSESSMENT
FOR THE
NATIONWIDE USE OF HIGH FREQUENCY (HF)
AND
ULTRA HIGH FREQUENCY (UHF)
ACTIVE SONAR TECHNOLOGY**



Prepared for

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U.S. COAST GUARD
FINDING OF NO SIGNIFICANT IMPACT'
FOR THE

U.S. COAST GUARD NATIONWIDE USE OF HIGH FREQUENCY (HF) AND
ULTRA HIGH FREQUENCY (UHF) ACTIVE SONAR TECHNOLOGY

The U.S. Coast Guard (USCG) is proposing the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms. Active SONAR technology would be used in support of USCG missions to locate, image, and classify submerged/underwater targets of interest (TOIs). The purpose of the Proposed Action is to broaden the USCG's capability to locate and classify underwater threats and other TOIs, and to safely and effectively accomplish the USCG missions. TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that have become submerged as a result of natural or man-made disaster and have the potential to interrupt maritime transportation, trade, commerce, recreational boating, or other maritime activities. The use of high frequency (HF) (50 to 999 kHz) and ultra high frequency (UHF) (1,000 kHz and higher) active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs.

This Programmatic Environmental Assessment (PEA) is considered to be a high-level National Environmental Policy Act (NEPA) document analyzing the use of a range of HF and UHF SONAR in a large geographic area. The HF and UHF SONAR could be in different forms and could be used on different types of platforms. The analysis in this PEA generally explains the types of forms and platforms that could be associated with HF and UHF SONAR. When a specific type of HF SONAR is proposed for use by the USCG in the future, this PEA will be reviewed to ensure that environmental issues specific to the chosen SONAR were adequately analyzed in this PEA. If the PEA analysis does not adequately analyze the environmental impacts from a particular SONAR package, form, or associated platform that the USCG proposes to utilize, additional tiered NEPA analysis could be required. Related environmental documentation and additional consultation under the Endangered Species Act (ESA) will be completed, as necessary.

HF and UHF SONAR use would fall into one of three general categories: (1) operational missions, (2) training and exercises, and (3) research and development. All SONAR use will be of relatively short-term duration (typically less than a week, unless required for an emergency or disaster). Regardless of the category, it would only be used for the amount of time necessary to complete the mission objectives. In no case is the USCG proposing long-term deployments of SONAR equipment in fixed positions (deployed for more than 2 weeks, unless required by an emergency or disaster) for continuous operations. In general, the duration of SONAR use would be from minutes to as long as several days. Typically, the duration of most deployments would be less than a week; however, for environmental disasters such as the Deepwater Horizon oil spill, SONAR equipment could be used on site until the emergency has ended. An example of a high-priority non-emergency operational mission is the anti-swimmer SONAR systems that would provide security zone protection during a 2-day special event. Once the event has concluded, the system would be shut down and removed.

Mobile platforms include ships, boats, remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs). Additionally, SONAR could be towed by a boat (i.e., a torpedo-shaped "towfish"), lowered from a boat on a pole, or temporarily fixed to a pier or a pile. Potential impacts on the seafloor from ROV and AUV operations would not be significant. ROVs would be used pierside or at a location appropriate for conducting vessel inspections. An appropriate location for inspection would be at a water

1 depth that would preclude seafloor disturbance. That is, ROVs and AUVs would typically be suspended
2 in the water column and would rarely contact the seafloor. Typically, ROVs and AUVs would be used in
3 open, navigable waterways or safe anchorages. However, an ROV or AUV might contact the seafloor if
4 there is a suspected threat on the seafloor that needs to be investigated; such contact would be short-term
5 and transient in nature.

6 The SONAR equipment that would be operated under the Proposed Action is commercially and readily
7 available. This equipment is currently available for sale by manufacturers such as Simrad, Farsounder,
8 L3-Klein, Echoscope, Blue View, Tritech, Imagenex, and Sound Metrics for commercial and private uses
9 such as fish finders, depth sounders, underwater research, oil and gas exploration, surveying, search and
10 rescue, inspection of infrastructure such as harbor walls and bridge pilings, ship hull inspection, pipeline
11 construction and inspection, dredging, and rock dumping. The equipment would be low in power
12 (as opposed to high-powered military systems), would have a short pulse-width (length of the sound
13 pulse), similar spacing between pulses, and is typically designed to focus in a single direction (fish finders
14 are typically focused downward). The SONAR systems under the Proposed Action would always be
15 focused in the direction of a target. Equipment that operates at frequencies of 50 to 200 kHz and higher
16 has source levels of 206 to 234 decibels (dB) re 1 micro Pascal (μPa), pulse lengths of 25 to
17 1,300 microseconds (μs), and beamwidths of 0.7° to 90° . Equipment that operates at frequencies greater
18 than 200 kHz have source levels of 195 to 249 dB, pulse lengths of 4 to 1,000 μs , and beamwidths of
19 0.3° to 50° .

20 The Proposed Action only includes SONAR systems with frequencies above 50 kHz. These SONAR
21 systems are within the hearing range of toothed whales (150 Hz to 180 kHz) and pinnipeds swimming in
22 the water (75 Hz to 75 kHz) (Southall et al. 2007). Without mitigation, short-term, minor, adverse effects
23 on toothed whales and pinnipeds would be expected from such SONAR operations.

24 The USCG is committed to the protection of living marine resources, including threatened and
25 endangered species and nonthreatened and nonendangered marine mammals. The USCG would develop
26 and implement specific procedures for the operation of specific SONAR systems to avoid and minimize
27 impacts on marine mammals and other marine species, to the extent practicable, while still completing the
28 mission. The operational procedures will include a plan for monitoring and adaptive management. The
29 procedures that would be developed and implemented for the operation of specific SONAR systems that
30 operate at frequencies between 50 kHz and 200 kHz would be based on the following measures to avoid
31 potential adverse effects on protected marine mammals and other marine species.

- 32 • USCG personnel would monitor the appropriately sized safety zone at all times of deployment.
33 The size of the safety zone would be determined through sound propagation and loss modeling
34 based on empirical data and SONAR specifications. All monitors would have extensive marine
35 mammal monitoring experience.
- 36 • During an emergency, if a marine mammal is observed in or approaching the safety zone, the
37 operational commander would take prudent measures to avoid impacting the wildlife, such as
38 shutting down the system, moving away from the animal, or slowing down the platform, tactical
39 situation permitting. Prudent measures are based on the operational commander's knowledge and
40 professional assessment of the situation with respect to safety and feasibility as to whether or not
41 to operate the SONAR in the presence of a marine mammal.
- 42 • If a threatened or endangered species of marine mammal is affected (i.e., "take" as defined by the
43 ESA or Level A or B harassment, as defined by the Marine Mammal Protection Act [MMPA])
44 during operational missions, the USCG would conduct emergency consultation with the National
45 Marine Fisheries Service (NMFS) or U.S. Fish and Wildlife Service (USFWS), as appropriate.
46 During emergency consultation, the NMFS or USFWS can provide recommendations on how to

1 minimize or avoid adverse effects on listed species during the emergency response. Such
2 recommendations are strictly advisory and are to be implemented at the discretion of the
3 emergency response personnel. If, during an emergency situation, an unauthorized take under the
4 MMPA should occur, USCG would conduct activities that are necessary to protect human lives
5 but consult with NMFS immediately to investigate the circumstances of the unauthorized take
6 and jointly consider the steps that should be taken to avoid similar occurrences in the future.

- 7 • For training exercises and research and development missions, if a marine mammal is detected
8 within or approaching the safety zone, SONAR systems would be shut down until the marine
9 mammal has left the area or safety zone.
- 10 • For training exercises and research and development missions, SONAR equipment would not be
11 placed in a location that interferes with obvious marine mammal movement, and prevents entry or
12 exit of marine mammals into and out of an area.
- 13 • Except for emergency situations, the safety zone would be visually monitored for 30 minutes
14 prior to turning on the SONAR device to ensure that marine mammals are not present.
- 15 • Ramp-up (also known as soft-start) would entail the gradual increase in intensity of a sound
16 source. When the operational situation allows, ramp-up or soft-start procedures would be used
17 prior to operating the SONAR.
- 18 • SONAR systems would not be employed in a location that interferes with obvious marine
19 mammal or sea turtle movements, or prevents entry or exit of marine mammals or sea turtles into
20 and out of an area (e.g., the mouth of a bay or narrow chokepoints), where SONAR could deter
21 them from traveling through or by. The only exception to this is under circumstances that require
22 deployment for emergency purposes.
- 23 • The USCG will continue to implement programs that protect marine mammals and other marine
24 species (e.g., USCG's Ocean Steward and Ocean Guardian initiatives, Atlantic Protected Living
25 Marine Resources Initiative [APLMRI] [where applicable], and guidance regarding vessel speed
26 [available online: <http://www.uscg.mil/hq/cg5/cg531/lmr.asp>]).
- 27 • Per the USCG's commitment to protection of living marine resources, vessel crews would
28 immediately report sightings of any injured, entangled, or dead protected species, regardless of
29 whether the injury or death is caused by SONAR operations or otherwise. Vessel crews would
30 use procedures already in place to report such sightings.

31 A protected species monitoring plan would be developed in coordination with NMFS for specific types of
32 equipment or groups of equipment that operate at frequencies of 50 to 200 kHz (as appropriate).
33 Monitoring would serve as a precautionary measure. The monitoring plan would identify the
34 appropriately sized safety zone and monitoring devices to be used. The size of the safety zone would be
35 contingent on the SONAR specifications. Monitoring devices could include dedicated, trained observers
36 with binoculars for daytime detection, and passive acoustic equipment for detection in low-light
37 conditions and inclement weather. USCG would seek recommendations and guidance NMFS in the
38 development of the operating procedures and monitoring plan, prior to operating equipment at frequencies
39 from 50 to 200 kHz.

40 Because the effects of HF- and UHF-active SONAR on marine mammals are not well understood and
41 SONAR science is continuously improving and changing, operational procedures would include an
42 adaptive management plan. Adaptive management would facilitate the ability to consider new data from
43 different sources to determine if and how avoidance or monitoring measures would be modified, added,
44 or deleted, if new data suggest that such modifications are warranted. Additionally, new technology and

1 monitoring measures that become available in the future would be considered for monitoring under the
2 adaptive management plan.

3 In the development of operating procedures, the USCG will seek NMFS guidance and recommendations
4 for various aspects such as mitigation measures, monitoring plans, and adaptive management plans.

5 All equipment is commercially and readily available to the general market. This routinely and globally
6 used standard navigational and imaging equipment has not previously been shown to adversely affect
7 marine mammals and has not previously required incidental take permits (ITPs). Additionally, long-term
8 continuous use of the equipment is not being proposed. As such, it is not anticipated that a NMFS
9 MMPA incidental take permit would be required for emergency or non-emergency use. However, if
10 NMFS consultation determines that an ITP would be required for specific pieces of equipment and
11 circumstances (e.g., equipment that operates at 50 to 200 kHz and can be heard by toothed whales and
12 pinnipeds swimming in water, under emergency situations where mitigation measures are not possible),
13 then the USCG would apply for an ITP. Given the proposed operating characteristics and monitoring,
14 potential impacts on marine mammals are considered highly unlikely. This is based on the following
15 characteristics of the proposed SONAR signals: intermittent nature, brief pulse duration ($< \mu\text{s}$ to
16 milliseconds [ms]), low-duty cycle and source level, short duration of use (minutes to typically several
17 days or sometimes up to a week period), relatively high attenuation rate given the high frequencies,
18 generally narrow downward-directed beam, and small area of ensonification. Furthermore, because both
19 the vessel and animal are moving, repeated exposure of an individual is highly unlikely to occur and
20 exposure time would be short (unlike shipping noise). Monitoring would further reduce the likelihood of
21 the occurrence of an impact.

22 Under the Proposed Action, if an emergency operational situation occurs where activities are necessary to
23 protect human lives but could have an adverse effect (i.e., “take” which is defined under the ESA “to
24 harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such
25 conduct”) on federally listed species, the USCG would contact NMFS or USFWS personnel as early as
26 practicable. This would allow identification of the best procedures for handling the situation, while
27 avoiding or minimizing adverse effects on threatened or endangered species, to the maximum extent
28 feasible given human safety considerations.

29 The Proposed Action is subject to MMPA regulations; thus, the “taking” (i.e., defined under the MMPA
30 as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal”) of
31 small numbers of marine mammals could be allowed by NMFS, if the total taking will not have an
32 “unmitigable adverse impact” on those species or stocks of marine mammals intended for subsistence
33 uses (50 CFR 216.102 [a]). Under the Proposed Action, HF and UHF SONAR would be used above 60°
34 North latitude (i.e., just north of the Aleutian Islands in Alaska, including the Kenai Peninsula and Prince
35 William Sound) only in emergency situations involving a threat to human life or national security.
36 Non-emergency situations would be considered on a case-by-case basis. If an emergency requires
37 SONAR use above 60° North latitude, SONAR that operates at 200 kHz or higher would be used to the
38 extent practicable. Other areas identified as subsistence fishing or hunting areas during the review
39 process would be subject to the same requirements. The USCG Office of Counterterrorism & Defense
40 Operations (CG-532) and Office of Environmental Management (CG-47) would coordinate with NMFS
41 and the potentially affected subsistence communities in accordance with MMPA regulations at 50 CFR
42 216.104(a)(12) to develop a Communications Plan and Conflict Avoidance Agreement to ensure that
43 non-emergency use would not interfere with subsistence activities.

44 ROVs and AUVs would be used pierside or at a location appropriate for conducting vessel inspections
45 and at a water depth that would preclude seafloor disturbance. However, to further avoid potential

1 impacts, known locations of Johnson's seagrass and branching corals, including critical habitat would be
2 avoided, if the operational scenario permits.

3 This project has been thoroughly reviewed by the USCG and it has been determined, by the undersigned,
4 that this project will have no significant effect on the human environment.

5 This Finding of No Significant Impact (FONSI) is based on the attached contractor-prepared PEA, which
6 has been independently evaluated by the USCG and determined to adequately and accurately discuss the
7 environmental issues and impacts of the proposed project and provides sufficient evidence and analysis
8 for determining that an Environmental Impact Statement is not required. The USCG takes full
9 responsibility for the accuracy, scope, and content of the attached PEA.

Date	Environmental Reviewer	Title/Position
I have considered the information contained in the PEA, which is the basis for this FONSI. Based on the information in the PEA and this FONSI document, I agree that the Proposed Action as described above, and in the PEA, will have no significant impact on the environment.		

Date	Responsible Official	Title/Position

U.S. COAST GUARD
PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
FOR THE
NATIONWIDE USE OF HIGH FREQUENCY (HF) AND
ULTRA HIGH FREQUENCY (UHF) ACTIVE SONAR TECHNOLOGY

This U.S. Coast Guard Programmatic Environmental Assessment (PEA) was prepared in accordance with Commandant's Instruction M16475.1D and the National Environmental Policy Act of 1969 (Public Law [P.L.] 91-190) and the Council of Environmental Quality Regulations dated 28 November 1978 (40 Code of Federal Regulations [CFR] Parts 1500–1508).

This PEA is a public document intended to provide decisionmakers within the U.S. Coast Guard with concise but sufficient evidence and analyses to understand potential environmental consequences and to determine whether there is a need to prepare an environmental impact statement or a finding of no significant impact.

This PEA describes the Proposed Action, the need for the proposal, the alternatives considered, and the potential environmental impacts associated with the Proposed Action and alternatives. This PEA also contains a comparative analysis of the Proposed Action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during the preparation of this PEA.

	<i>TBD</i>	
Date	Preparer/Environmental Project Manager	Title/Position
		Chief, Environmental Management
Date	Environmental Reviewer	Title/Position
	<i>Mr. Ed Wandelt</i>	

In reaching my decision on the USCG's Proposed Action, I will consider the information contained in this PEA on environmental impacts.

	<i>TBD</i>	
Date	Responsible Official	Title/Position

EXECUTIVE SUMMARY

The U.S. Coast Guard (USCG) is proposing the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms. Active SONAR technology would be used in support of USCG missions to locate, image, and classify submerged/underwater targets of interest (TOIs).

The following Programmatic Environmental Assessment (PEA) documents in detail the purpose of and need for the nationwide use of active SONAR technologies, the Proposed Action, and alternative solutions considered. This PEA is a program-level document that will provide the USCG with management-level analysis of the potential impacts of each alternative on the human and natural environments. This PEA is considered to be a high-level National Environmental Policy Act (NEPA) document analyzing the use of a range of high frequency (HF) and ultra high frequency (UHF) SONAR in a large geographic area. The HF and UHF SONAR could be in different forms and could be used on different types of platforms. The analysis in this PEA generally explains the types of forms and platforms that could be associated with HF and UHF SONAR. When a specific type of HF SONAR is proposed for use by the USCG in the future, this PEA will be reviewed to ensure that environmental issues specific to the chosen SONAR were adequately analyzed in this PEA. If the PEA analysis does not adequately analyze the environmental impacts from a particular SONAR package, form, or associated platform, additional tiered NEPA analysis, and documentation will be completed and additional consultation under ESA, as necessary, will be conducted prior to use.

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to broaden the USCG capability to locate and classify underwater threats and other TOIs, and to more safely and effectively accomplish the USCG missions. TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that have become submerged as a result of natural or man-made disaster and have the potential to interrupt maritime transportation, trade, commerce, recreational boating, or other maritime activities. The use of HF (50 to 999 kHz) and UHF (1,000 kHz and higher) active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs.

HF and UHF SONAR technology could be used to support the following:

- Maritime security by allowing rapid response to threats of underwater improvised explosive devices or maritime mines in U.S. ports, harbors, and waterways
- Maritime safety by allowing for the safe and efficient location and identification of navigational obstructions
- Maritime stewardship through rapid response and recovery from environmental accidents and disasters.

These are examples of how the HF and UHF SONARs could be used. If the HF and UHF SONAR technologies were to be used in other ways to help achieve USCG mission success, the use would be within the guidelines and mitigating procedures as set forth in this PEA.

Proposed Action and Alternatives

Proposed Action. This PEA evaluates the use of the HF and UHF SONAR within all areas of USCG jurisdiction along the U.S. continental coastline, Hawaii, Alaska, U.S. territories, and all inland operating areas. Selected HF and UHF SONAR systems would be operated from mobile platforms, as needed. The USCG could also modify existing SONAR systems to meet specific mission requirements. All existing commercially available systems and future systems that fall into the stated HF and UHF ranges are included under the Proposed Action.

The SONAR systems would operate in fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor environments and offshore environments throughout the United States. The inland operating area would typically include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river system. The offshore operating area would typically include areas up to 12 nautical miles (NM) offshore and most areas shoreward. The most common use of USCG SONAR technology will occur in navigable waterways in these areas. Deployment locations would include the ports and waterways of the nation's top-tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by water.

HF and UHF SONAR use would fall into one of three general categories: (1) operational missions, (2) training and exercises, and (3) research and development. All SONAR use will be of relatively short-term duration and, regardless of the category, only used for the amount of time necessary to complete the mission objectives. In no case is the USCG proposing to employ SONAR in fixed positions for long-term, continuous operations. In general, the duration of SONAR use would be from minutes to as long as several days. Typically, the duration of most deployments would be less than a week; however, for environmental disasters such as the Deepwater Horizon oil spill, SONAR equipment might need to be used on site until the emergency has ended. An example of a high-priority, non-emergency operational mission could be anti-swimmer SONAR systems to provide security zone protection during a 2-day special event. Once the event has concluded, the system would be shut down and removed.

Mobile platforms include ships, boats, remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs). Additionally, SONAR could be towed by a boat (i.e., a torpedo-shaped "towfish"), lowered from a boat on a pole, or temporarily fixed to a pier or a pile. Impacts on the seafloor from ROV and AUV operations would not be significant. ROVs would be used pierside or at a location appropriate for conducting vessel inspections. An appropriate location for inspection would be at a water depth that would preclude seafloor disturbance. That is, ROVs and AUVs would usually be suspended in the water column and would rarely contact the seafloor. Typically, ROVs and AUVs would be used in open, navigable waterways or safe anchorages. However, an ROV or AUV might contact the seafloor if there is a suspected threat on the seafloor that needs to be investigated; such contact would be short-term and transient in nature.

The SONAR equipment that would be operated under the Proposed Action is commercially and readily available "off-the-shelf" equipment equivalent to many commercially available, high-frequency fish finders. Shared characteristics of the proposed SONAR and such fish finders include low power with short pulse-width (length of the sound pulse) typically designed to focus in a single direction (fish finders are typically focused downward) (NRC 2003, Hildebrand 2005).

The Proposed Action only includes SONAR systems with frequencies above 50 kHz. These SONAR systems are within the hearing range of toothed whales (150 Hz to 180 kHz) and pinnipeds swimming in the water (75 Hz to 75 kHz) (Southall et al. 2007). Without mitigation, short-term, minor, adverse effects on toothed whales and pinnipeds would be expected from such SONAR operations.

1 The USCG is committed to the protection of living marine resources, including threatened and
2 endangered species and nonthreatened and nonendangered marine mammals. The USCG would develop
3 and implement specific procedures for the operation of specific SONAR systems to avoid and minimize
4 impacts on marine mammals and other marine species, to the extent practicable while still completing the
5 mission. The operational procedures will include a plan for monitoring and adaptive management. The
6 procedures that would be developed and implemented for the operation of specific SONAR systems that
7 operate at frequencies between 50 kHz and 200 kHz would be based on the following measures, in order
8 to avoid potential adverse effects on protected marine mammals and other marine species.

- 9 • USCG personnel would monitor the appropriately sized safety zone at all times of deployment.
10 The size of the safety zone would be determined through sound propagation and loss modeling
11 based on empirical data and SONAR specifications. All monitors would have extensive marine
12 mammal monitoring experience.
- 13 • During an emergency, if a marine mammal is observed in or approaching the safety zone, the
14 operational commander would take prudent measures to avoid impacting the wildlife, such as
15 shutting down the system, moving away from the animal, or slowing down the platform, tactical
16 situation permitting. Prudent measures are based on the operational commander's knowledge and
17 professional assessment of the situation with respect to safety and feasibility as to whether or not
18 to operate the SONAR in the presence of a marine mammal.
- 19 • If a threatened or endangered species of marine mammal is affected (i.e., "take" as defined by the
20 Endangered Species Act [ESA] or Level A or B harassment, as defined by Marine Mammal
21 Protection Act [MMPA]) during operational missions, the USCG would conduct emergency
22 consultation with the National Marine Fisheries Service (NMFS) or U.S. Fish and Wildlife
23 Service (USFWS), as appropriate. During emergency consultation, the NMFS or USFWS can
24 provide recommendations on how to minimize or avoid adverse effects on listed species during
25 the emergency response. Such recommendations are strictly advisory and are to be implemented
26 at the discretion of the emergency response personnel. If, during an emergency situation, an
27 unauthorized take under the MMPA should occur, USCG would conduct activities that are
28 necessary to protect human lives but consult with NMFS immediately to investigate the
29 circumstances of the unauthorized take and jointly consider the steps that should be taken to
30 avoid similar occurrences in the future.
- 31 • For training exercises and research and development missions, if a marine mammal is detected
32 within or approaching the safety zone, SONAR systems would be shut down until the marine
33 mammal has left the area or safety zone.
- 34 • For training exercises and research and development missions, SONAR equipment would not be
35 placed in a location that interferes with obvious marine mammal movement, and prevents entry or
36 exit of marine mammals into and out of an area.
- 37 • Except for emergency situations, the safety zone would be visually monitored for 30 minutes
38 prior to turning on the SONAR device to ensure that marine mammals are not present.
- 39 • Ramp-up (also known as soft-start) would entail the gradual increase in intensity of a sound
40 source. When the operational situation allows, ramp-up or soft-start procedures would be used
41 prior to operating the SONAR.
- 42 • SONAR systems would not be employed in a location that interferes with obvious marine
43 mammal or sea turtle movements, or prevents entry or exit of marine mammals or sea turtles into
44 and out of an area (e.g., the mouth of a bay or narrow chokepoints), where SONAR could deter
45 them from traveling through or by. The only exception to this is under exceptional circumstances
46 that require deployment for emergency purposes.

- The USCG will continue to implement programs that protect marine mammals and other marine species (e.g., USCG's Ocean Steward and Ocean Guardian initiatives, Atlantic Protected Living Marine Resources Initiative [APLMRI] [where applicable], and guidance regarding vessel speed [available online: <http://www.uscg.mil/hq/cg5/cg531/lmr.asp>]).
- Per the USCG's commitment to protection of living marine resources, vessel crews would immediately report sightings of any injured, entangled, or dead protected species, regardless of whether the injury or death is caused by SONAR operations or otherwise. Vessel crews would use procedures already in place to report such sightings.

A protected species monitoring plan would be developed in coordination with NMFS for specific types of equipment or groups of equipment that operate at frequencies of 50 to 200 kHz (as appropriate). Monitoring would serve as a precautionary measure. The monitoring plan would identify the appropriately sized safety zone and monitoring devices to be used. The size of the safety zone would be contingent on the SONAR specifications. Monitoring devices could include dedicated, trained observers with binoculars for daytime detection, and passive acoustic equipment for detection in low-light conditions and inclement weather. USCG would seek recommendation and guidance from NMFS in the development of operating procedures and the monitoring plan, prior to operating equipment at frequencies from 50 to 200 kHz.

Because the effects of HF- and UHF-active SONAR on marine mammals are not well understood and SONAR science is continuously improving and changing, operational procedures would include an adaptive management plan. Adaptive management would facilitate the ability to consider new data from different sources to determine if and how avoidance or monitoring measures would be modified, added, or deleted, if new data suggest that such modifications are warranted. Additionally, new technology and monitoring measures that become available in the future would be considered for monitoring under the adaptive management plan.

In the development of operating procedures, the USCG will seek NMFS guidance and recommendations for various aspects such as mitigation measures, monitoring plans, and adaptive management plans

All equipment is commercially and readily available to the general market. This routinely and globally used standard navigational and imaging equipment has not previously been shown to adversely affect marine mammals and has not previously required incidental take permits (ITPs). Additionally, long-term continuous use of the equipment is not being proposed. As such, it is not anticipated that an NMFS MMPA ITP would be required for emergency or non-emergency use. However, if NMFS consultation determines that an ITP would be required for specific pieces of equipment and circumstances (e.g., equipment that operates at 50 to 200 kHz and can be heard by toothed whales and pinnipeds swimming in water, under emergency situations where mitigation measures are not possible), then the USCG would apply for an ITP. Given the proposed operating characteristics and monitoring, potential impacts on marine mammals are considered highly unlikely. This is based on the following characteristics of the proposed SONAR signals: intermittent nature, brief pulse duration (i.e., microseconds [μ s] to milliseconds [ms]), low-duty cycle and source level, short duration of use (minutes to typically several days or sometimes up to a week period), relatively high attenuation rate given the high frequencies, generally narrow downward-directed beam, and small area of ensonification. Furthermore, because both the vessel and animal are moving, repeated exposure of an individual is highly unlikely to occur and exposure time would be short (unlike shipping noise). Monitoring would further reduce the likelihood of the occurrence of an impact.

Under the Proposed Action, if an emergency operational situation occurs where activities are necessary to protect human lives but could have an adverse effect (i.e., “take” which is defined under the ESA “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct”) on federally listed species, the USCG would contact NMFS or USFWS personnel as early as practicable. This would allow identification of the best procedures for handling the situation, while avoiding or minimizing adverse effects on threatened or endangered species, to the maximum extent feasible given human safety considerations.

The Proposed Action is subject to MMPA regulations; thus, the “taking” (i.e., defined under the MMPA as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal”) of small numbers of marine mammals may be allowed by NMFS, if the total taking will not have an “unmitigable adverse impact” on those species or stocks of marine mammals intended for subsistence uses (50 CFR 216.102 [a]). Under the Proposed Action, HF and UHF SONAR would be used above 60° North latitude (i.e., just north of the Aleutian Islands in Alaska, including the Kenai Peninsula and Prince William Sound) only in emergency situations involving a threat to human life or national security. Non-emergency situations would be considered on a case-by-case basis. If an emergency requires SONAR use above 60° North latitude, SONAR that operates at 200 kHz or higher would be used to the extent practicable. Other areas identified as subsistence fishing or hunting areas during the review process would be subject to the same requirements. The USCG Office of Counterterrorism & Defense Operations (CG-532) and Office of Environmental Management (CG-47) would coordinate with NMFS and the potentially affected subsistence communities in accordance with MMPA regulations at 50 CFR 216.104(a)(12) to develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities.

As stated above, ROVs and AUVs would be used pierside or at a location appropriate for conducting vessel inspections and at a water depth that would preclude seafloor disturbance. However, to further avoid potential impacts, known locations of Johnson’s seagrass and branching corals, including critical habitat would be avoided, if the operational scenario permits.

Alternatives Considered but Eliminated from Further Detailed Study. High-frequency sounds typically travel shorter distances compared to low- and medium-frequency SONAR, which usually require higher power. Low- and medium-frequency SONAR were eliminated from consideration and will not be included under the Proposed Action. The use of HF and low-powered SONAR helps to reduce the impacts by reducing the area ensonified by the equipment. Additionally, Radio Detection and Ranging (RADAR), optical systems, underwater barriers, and trained marine mammals have also been eliminated from further detailed studies. All the alternatives that were eliminated would not meet the USCG’s purpose and need for the Proposed Action.

No Action Alternative. Implementing regulations under NEPA require that the No Action Alternative be analyzed in an EA or EIS, and this alternative can provide a baseline for comparison with the action alternatives. The No Action Alternative identifies and describes the potential environmental impacts if an agency chooses not to implement the Proposed Action or some other action alternative. For the purposes of this project, the No Action Alternative is defined as conducting normal USCG operations throughout the defined regions of influence (ROIs) without the use of HF and UHF SONAR technology.

Affected Environment, Environmental Consequences, and Cumulative Impacts

Affected Environment. For each resource area presented in the PEA, an Existing Conditions subsection describes the environmental conditions most likely to be affected by the Proposed Action and serves as a baseline from which to identify and evaluate potential impacts associated with the implementation of the Proposed Action. The ROIs for this Proposed Action are defined as the potential operating areas associated with the SONAR systems, which include all the areas under USCG jurisdiction along the

U.S. continental coastline, Great Lakes, Hawaii, Alaska, the U.S. territories, and inland operating areas. As such, seven broad ROIs have been defined based on the jurisdictional regions of NMFS (rather than the USCG districts). However, the most probable location for use of the SONAR systems within these seven regions is in militarily and economically significant ports. The ROIs are composed of unique environmental characteristics. To address the substantial differences between geographic regions and to maintain the programmatic scope of the analysis, the following ROIs are addressed, when applicable, under each resource area:

- The Northeast ROI (Maine through Virginia)
- The Southeast ROI (North Carolina through Texas and the U.S. Caribbean)
- The Southwest ROI (California)
- The Northwest ROI (Oregon and Washington)
- The Pacific Islands ROI (Hawaii, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands [CNMI], and other U.S. Pacific islands)
- The Alaska ROI
- The Great Lakes ROI.

Environmental Consequences. Table ES-1 provides an overview of potential impacts anticipated under each of the alternatives considered, broken down by resource area. This assessment is drawn from the description of the affected environment analyses presented in detail in Section 3 of the PEA. No significant impacts are expected as a result of the Proposed Action. The use of HF and UHF SONAR as proposed herein would result in negligible effects on ambient noise levels, biological resources, air quality, water quality, and cultural resources. Overall, the only marine species that are expected to be capable of hearing the HF and UHF SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These impacts are expected to be avoided with mitigation measures. The reasoning for this determination is further detailed under “**Biological Assessment**” on page ES-12. No effects on Essential Fish Habitat (EFH) are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect, beneficial, cumulative effects on public safety.

Biological Assessment

The following PEA also serves to fulfill the requirement for the Biological Assessment for the ESA Section 7 consultation. The following supporting rationale was used to reach a determination of “May Affect, But Not Likely to Adversely Affect” all species covered under the PEA/Biological Assessment.

The relevant criteria that lead to this conclusion are as follows:

- **Measures to Avoid Impacts.** The USCG would develop and implement stringent policies and procedures based on SONAR specifications, intended use, and operation of specific SONAR systems, to avoid and minimize impacts on marine mammals and other protected marine species, to the extent practicable while still completing the mission and ensuring human safety.
- **Use in Developed Areas.** The HF and UHF SONAR equipment is principally intended for use within the nation’s top economically and militarily significant ports. SONAR in those locations would be perceived only against the ongoing background noise from military, commercial, and recreational vessel traffic.

Table ES-1. Summary of the Potential Impacts of the Proposed Action and the No Action Alternative

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Underwater Acoustics			
No detailed resource area necessary.	Short-term, minor, adverse localized increases in ambient underwater sound levels (at frequencies above 50 kHz).	No mitigation measures would be necessary.	Potential short-term, significant, adverse effects on the ambient underwater noise are possible if a successful terrorist attack occurred.¹
Biological Resources			
Marine Protected Areas (MPAs)	- Without mitigation measures, potential short-term, minor to potentially significant, adverse, indirect impacts on MPAs could occur due to potential adverse impacts on marine mammals, sea turtles, fish, marine birds, and invertebrates that use the MPAs. Without mitigation, there is potential for Level A or B harassment of toothed whales and pinnipeds through noise exposure. As some clupeid fish (e.g., shad) can detect frequencies above 50 kHz, there is potential for their disturbance, which could be prey for other fish, sea turtles, marine mammals, and birds. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	Mitigation measures such as those presented on page ES-3 and ES-4 of the PEA would be implemented to avoid impacts on protected marine mammals and other species that use MPAs. Measures would be developed in coordination with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals.^{2,3}	Potential short- and long-term, significant, adverse effects on the MPAs are possible if a successful terrorist attack or an environmental threat occurred (e.g., the Deepwater Horizon oil spill).¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Baleen Whales, Sirenians, Sea Otters, and Polar Bears (Non-ESA- and ESA-listed)	- Impacts on baleen whales, sirenians, sea otters, and polar bears would occur. SONAR technologies (above 50 kHz) associated with the Proposed Action are above known or expected auditory thresholds of these species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on baleen whales, sirenians, sea otters, and polar bears are possible if a successful terrorist attack or an environmental threat occurred, including ESA-listed species.¹
Nonendangered and Nonthreatened Toothed Whales and Pinnipeds in Water	- Without mitigation measures, short-term, minor to potentially significant, adverse, direct and indirect effects on nonendangered and nonthreatened toothed whales and pinnipeds in water would be expected from the operation of the SONARs without mitigation. Direct effects relate to potential for Level A or B harassment of toothed whales and pinnipeds without mitigation measures. Level A and Level B harassment would not be expected with mitigation measures (e.g., equipment would be shut down if a marine mammal was approaching or within a safety zone and ramp ups would be used). Indirect effects relate to the potential for disturbance of prey species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	- Mitigation measures such as those presented on page ES-3 and ES-4 of the PEA would be implemented to avoid impacts on protected marine mammals. Measures would be developed in coordination with NMFS and USFWS and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals. - Mitigation measures would avoid Level A and Level B harassment of non-ESA-listed marine mammal species. - USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.^{2,3}	Potential short- and long-term, significant, adverse effects on nonendangered and nonthreatened whales and pinnipeds in water are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
ESA-Listed Toothed Whales and Pinnipeds in Water	- Without mitigation measures, short-term, minor to potentially significant adverse, direct and indirect effects on Endangered Species Act- (ESA) listed toothed whales (sperm whale, Cook Inlet population of beluga whale, and Southern Resident Killer Whale), candidate toothed whale species – Hawaiian insular stock of false killer whale; and pinnipeds (Hawaiian monk seal, Guadalupe fur seal, Steller sea lion, and candidate species ringed and bearded seals) could occur from the operation of the SONARs. Direct effects relate to the potential for Level A or B harassment due to noise. Level A and B harassment would not be expected with the implementation of mitigation measures (e.g., equipment would be shut down if a marine mammal was approaching or within a safety zone and ramp ups would be used). Indirect effects relate to the potential for disturbance of prey species. However, based on the short distances for attenuation of the HF signals, low potential for encounter, and the low level of indirect impacts, it has been concluded that the Proposed Action may affect, but is not likely to adversely affect these species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	- Mitigation measures such as those presented on pages ES-3 and ES-4 of the PEA would be implemented to avoid impacts on protected marine mammals. Measures would be developed in coordination with NMFS and USFWS and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals. - Based on the mitigation measures the potential for impacts on ESA-listed species would be so low, as to be discountable. Therefore, the Proposed Action may affect, but is not likely to adversely affect, ESA-listed species. - Mitigation measures would avoid Level A and Level B harassment of non-ESA-listed marine mammal species. - USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.^{2,3}	Potential short- and long-term, significant, adverse effects on ESA-listed toothed whales and pinnipeds in water are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Sea Turtles	- Potential short-term, minor and insignificantly adverse, indirect effects on Kemp's ridley and olive ridley sea turtles from potential prey disturbance. Based on the low level of potential impacts, the Proposed Action may affect, but is not likely to adversely affect Kemp's ridley and olive ridley sea turtles. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on sea turtles are possible if a successful terrorist attack or an environmental threat occurred.¹
ESA-listed Coastal, Marine, and Aquatic Birds	- Short-term, minor and insignificantly adverse, indirect effects on ESA-listed coastal, marine, and aquatic birds. Potential prey disturbance coastal and pelagic diving birds from prey disturbance. Based on the low level of potential impacts, the Proposed Action may affect, but is not likely to adversely affect coastal and pelagic diving birds. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on ESA-listed coastal, marine, and aquatic birds are possible if a successful terrorist attack or an environmental threat occurred.¹
Essential Fish Habitat	- Short-term to long-term, minor impacts on EFH could occur from ROV and AUV operations. - Minor to moderate, direct and indirect, beneficial impacts on EFH could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on EFH are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Nonendangered and Nonthreatened Fish	• Short-term, minor, direct and indirect, adverse effects on fish. Some clupeid fish (e.g., shad) can detect frequencies greater than 50 kHz; there is the potential for disturbance to these fish. Indirect effects related to prey disturbance of higher trophic-level fish. Note that mitigation measures are not aimed at protecting fish which are more numerous and less visible than marine mammals. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on nonendangered and nonthreatened fish are possible if a successful terrorist attack or an environmental threat occurred.¹
ESA-listed Fish	• Short-term, minor, indirect, and insignificantly adverse effects on ESA-listed fish species from seafloor disturbance. However, seafloor disturbance would be rare. Therefore, the Proposed Action, may affect, but is not likely to adversely affect ESA-listed fish species. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on ESA-listed fish are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Benthic Resources	• Short-term, negligible to minor, direct effects on benthic resources would occur under the Proposed Action. However, seafloor disturbance would be rare. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on benthic resources are possible if a successful terrorist attack or an environmental threat occurred.¹
ESA-listed Plants and Invertebrates	• Short-term, minor, insignificantly adverse, indirect effects on ESA-listed marine plants and invertebrates. However, seafloor disturbance would be rare. All impacts on ESA-listed plants and invertebrates would be avoided through mitigation measures, because the equipment would be shut down if a marine mammal were detected approaching or within a safety zone. Therefore, the Proposed Action may affect, but is not likely to adversely affect ESA-listed marine plants and invertebrates. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• Known locations of Johnson's seagrass and branching corals, including critical habitat would be avoided, if the operational scenario permits.²	• Potential short- and long-term, significant, adverse effects on ESA-listed plants and invertebrates are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Public Safety			
No detailed resource area necessary.	Short- and long-term, minor to moderate, beneficial impacts on public safety by increasing the USCG's ability to protect port infrastructure, safeguard vessels, and preserve the flow of interstate and international commerce. Potential adverse effects on recreational divers would be avoided. Popular recreational dive spots are well-documented and potential impacts would be avoided. Implementation of mitigation measures would help to avoid impacts on divers when they are within an area that HF and UHF SONAR is deployed.	Implementation of mitigation measures on pages ES-3 and ES-4 would avoid impacts on divers when they are within an area that HF and UHF SONAR is deployed.	Potential short- and long-term, significant, adverse effects on port infrastructure, marine transportation, and public safety are possible.¹
Air Quality			
No detailed resource area necessary.	Short-term, minor, adverse effects on local and regional air quality from the operations of gasoline generators.	No mitigation measures would be necessary.	Significant adverse effects on air quality are possible if a successful terrorist attack occurred.¹
Water Quality			
No detailed resource area necessary.	Minor adverse effects from suspended sediments and ROV and AUV emissions.	No mitigation measures would be necessary.	Significant adverse effects on water quality are possible if a successful terrorist attack or environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Cultural Resources			
No detailed resource area necessary.	No effect to minor adverse effects on historic properties. Minor adverse impacts would include noise or seafloor disturbance at locations where systems are deployed. Potential for negligible to moderate beneficial effects by reducing the risk of a successful terrorist attack and replacing damaging activities such as dragging for submerged objects during search-and-rescue operations.	USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.³	Significant adverse effects on cultural resources if a successful terrorist attack occurred. USCG would not have the increased capability of locating and identifying additional cultural resources. USCG would continue the practice of dragging for submerged objects during search and rescue operations.

Notes:

1. USCG would not have nationwide capabilities to locate and classify underwater threats and other TOIs. USCG would also not have the ability to detect or prevent environmental threats (e.g., the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline).
2. If an emergency operational situation occurs where activities are necessary to protect human lives but could have an adverse effect (i.e., “take” which is defined under the ESA “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct”) on federally listed species, the USCG would contact NMFS or USFWS personnel as early as practicable. This would allow identification of the best procedures for handling the situation, while avoiding or minimizing adverse effects on threatened or endangered species, to the maximum extent feasible given human safety considerations.
3. If a threatened or endangered species of marine mammal is affected (i.e., Level A or B harassment, as defined by Marine Mammal Protection Act [MMPA]) during operational missions, the USCG would conduct emergency consultation with the National Marine Fisheries Service (NMFS) or U.S. Fish and Wildlife Service (USFWS), as appropriate. During emergency consultation, the NMFS or USFWS can provide recommendations on how to minimize or avoid adverse effects on listed species during the emergency response. Such recommendations are strictly advisory and are to be implemented at the discretion of the emergency response personnel. If, during an emergency situation, an unauthorized take under the MMPA should occur, USCG would conduct activities that are necessary to protect human lives but consult with NMFS immediately to investigate the circumstances of the unauthorized take and jointly consider the steps that should be taken to avoid similar occurrences in the future.

- 1 • **Benefit to the Ecosystem.** Prevention of a terrorist attack and the detection of other
2 environmental threats (e.g., the detection of a leak in an oil pipeline) would benefit the
3 environment and marine life, such as marine mammals and fish. These types of threats could
4 result in the catastrophic release of massive quantities of toxic materials into the marine
5 ecosystem. The preventative protection provided by using HF and UHF SONAR equipment
6 under the Proposed Action contributes overall to a beneficial effect.
- 7 • **Short Duration.** The SONAR equipment under the Proposed Action is intended to be used to
8 provide temporary protection to selected vessels and facilities during heightened periods of threat
9 and events of national significance.

10 The USCG has the primary responsibility of protecting the U.S. maritime domain, ensuring maritime
11 safety, and facilitating maritime mobility. The USCG has a broad range of environmental management,
12 enforcement, and homeland security roles and responsibilities. The USCG needs to broaden its capability
13 to locate, image, and classify submerged/underwater TOIs to safely and efficiently accomplish mission
14 activities. Commercially available HF and UHF SONAR equipment is a linchpin in the USCG's strategy
15 to provide the United States with credible tools to deter, detect, and interdict threats to the Nation's
16 critical port infrastructure. However, as an environmental law enforcement agency, the USCG also takes
17 their duty of environmental stewardship very seriously. As such, the USCG would continue the
18 implementation of existing programs to guard against adverse impacts on protected living marine
19 resources (e.g., USCG's Ocean Steward and Ocean Guardian initiatives, APLMRI [where applicable],
20 and guidance regarding vessel speed [available online: <http://www.uscg.mil/hq/cg5/cg531/lmr.asp>]).

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DRAFT
PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
FOR THE NATIONWIDE USE OF HIGH FREQUENCY (HF) AND
ULTRA HIGH FREQUENCY (UHF) ACTIVE SONAR TECHNOLOGY

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FINDING OF NO SIGNIFICANT IMPACT

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1. Purpose of and Need for the Proposed Action

1.1 Introduction

The U.S. Coast Guard (USCG) is proposing the nationwide use of commercial-off-the-shelf active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms. Active SONAR technology would be used in support of USCG missions to locate, image, and classify submerged/underwater targets of interest (TOIs). This Programmatic Environmental Assessment (PEA) is a program-level document that will provide the USCG with management-level analysis of the potential impacts of each alternative on the human and natural environments.

The PEA is being prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations in Title 40 Code of Federal Regulations (CFR) Parts 1500–1508, Department of Homeland Security (DHS) Management Directive 5100.1 (*Environmental Planning Program*), and Coast Guard Commandant's Instruction (COMDTINST) M16475.1D (*National Environmental Policy Act Procedures and Policy for Considering Environmental Impacts*). The PEA provides general environmental information to USCG decisionmakers, expert regulatory agencies, and the interested and affected public to ensure that the USCG makes fully informed decisions before choosing its final course of action.

This PEA is considered to be a high-level NEPA document analyzing the use of a range of high frequency (HF) and ultra high frequency (UHF) SONAR in a large geographic area. The HF and UHF SONAR could be in different forms and could be used on different types of platforms. The analysis in this PEA generally explains the types of forms and platforms that could be associated with HF and UHF SONAR. When a specific type of HF SONAR is proposed for use by the USCG in the future, this PEA will be reviewed to ensure that environmental issues specific to the chosen SONAR were adequately analyzed in this PEA. If the PEA analysis does not adequately analyze the environmental impacts from a particular SONAR package, form, or associated platform, additional tiered NEPA analysis, and documentation will be completed and additional consultation under ESA, as necessary, will be conducted prior to use.

1.2 Coast Guard Missions

The USCG is a multi-missioned military and maritime service within the DHS and is one of the nation's five armed services. It is the lead Federal agency for Maritime Homeland Security (MHLS). MHLS is the concerted national effort led by the USCG to secure the country within the U.S. Maritime Domain from terrorist attacks. The core roles of the USCG are to protect the public, the environment, and U.S. economic and security interests in any maritime region in which those interests could be at risk, including international waters and America's coasts, ports, and inland waterways.

The USCG provides unique benefits to the nation because of its distinctive blend of military, humanitarian, and civilian law enforcement capabilities. To serve the public, the USCG has five fundamental roles:

- **Maritime Safety.** Eliminate deaths, injuries, and property damage associated with maritime transportation, fishing, and recreational boating. The USCG's motto is *Semper Paratus* (Always Ready), and the service is always ready to respond to calls for help at sea.
- **Maritime Security.** Protect America's maritime borders from all intrusions by (a) halting the flow of illegal drugs, aliens, and contraband into the United States through maritime routes; (b) preventing illegal fishing; and (c) suppressing violations of Federal law in the maritime arena.

- 1 • **Maritime Mobility.** Facilitate maritime commerce and eliminate interruptions and impediments
2 to the efficient and economical movement of goods and people, while maximizing recreational
3 access to and enjoyment of the water.
- 4 • **National Defense.** Defend the nation as one of the five U.S. armed services. Enhance regional
5 stability in support of the National Security Strategy, using the USCG's unique and relevant
6 maritime capabilities.
- 7 • **Protection of Natural Resources.** Eliminate environmental damage and the degradation of
8 natural resources associated with maritime transportation, fishing, and recreational boating
9 (USCG 2008).

10 1.3 Purpose of the Action

11 The purpose of the Proposed Action is to broaden the USCG capability to locate and classify underwater
12 threats and other TOIs, and to more safely and effectively accomplish the USCG missions outlined in
13 **Section 1.2.** TOIs could include combat swimmers/divers; explosives, or other offensive devices that
14 could be delivered to underwater hulls, piers, or other shore structures; and objects that become
15 submerged as a result of natural or man-made disasters and have the potential to interrupt maritime
16 transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and
17 UHF active SONAR technology would provide USCG operational commanders with the ability to locate,
18 image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used
19 in response to events, such as September 11, 2001, and for natural disasters such as Hurricanes Katrina
20 and Rita of 2005; for use in established security areas around high-value vessels, infrastructures, and
21 special security events; and search-and-rescue activities. In addition, the HF and UHF SONAR
22 technology could be used in other unforeseen ways to help achieve USCG mission success. For the
23 purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher.
24 The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide, as
25 needed. The USCG could also modify existing SONAR systems to meet specific mission requirements.

26 1.4 Need for the Action

27 As described in **Sections 1.1** and **1.2**, the USCG has the primary responsibility of protecting the
28 U.S. maritime domain, ensuring maritime safety, and facilitating maritime mobility. The USCG has a
29 broad range of environmental management, enforcement, and homeland security roles and
30 responsibilities. The USCG needs to broaden its capability to locate, image, and classify
31 submerged/underwater TOIs to safely and efficiently accomplish mission activities. The USCG needs to
32 detect targets in the range of 1 or 2 kilometers (km) (0.6 or 1.2 miles). The USCG also needs to operate
33 in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or
34 night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor
35 and offshore environments throughout the United States. The USCG's current research of commercially
36 available and reliable technology indicates that the nationwide employment of HF and UHF active
37 SONAR technology systems would provide the needed capability.

38 1.5 Project Scope and Area

39 This PEA encompasses the USCG's proposed nationwide use of the HF and UHF active SONAR
40 systems. This PEA is considered to be a high-level NEPA document analyzing the use of a range of HF
41 and UHF SONAR in a large geographic area. The HF and UHF SONAR could be in different forms and
42 could be used on different types of platforms. The analysis in this PEA generally explains the types of
43 forms and platforms that could be associated with HF and UHF SONAR. When a specific type of HF
44 SONAR is proposed for use by the USCG in the future, this PEA will be reviewed to ensure that

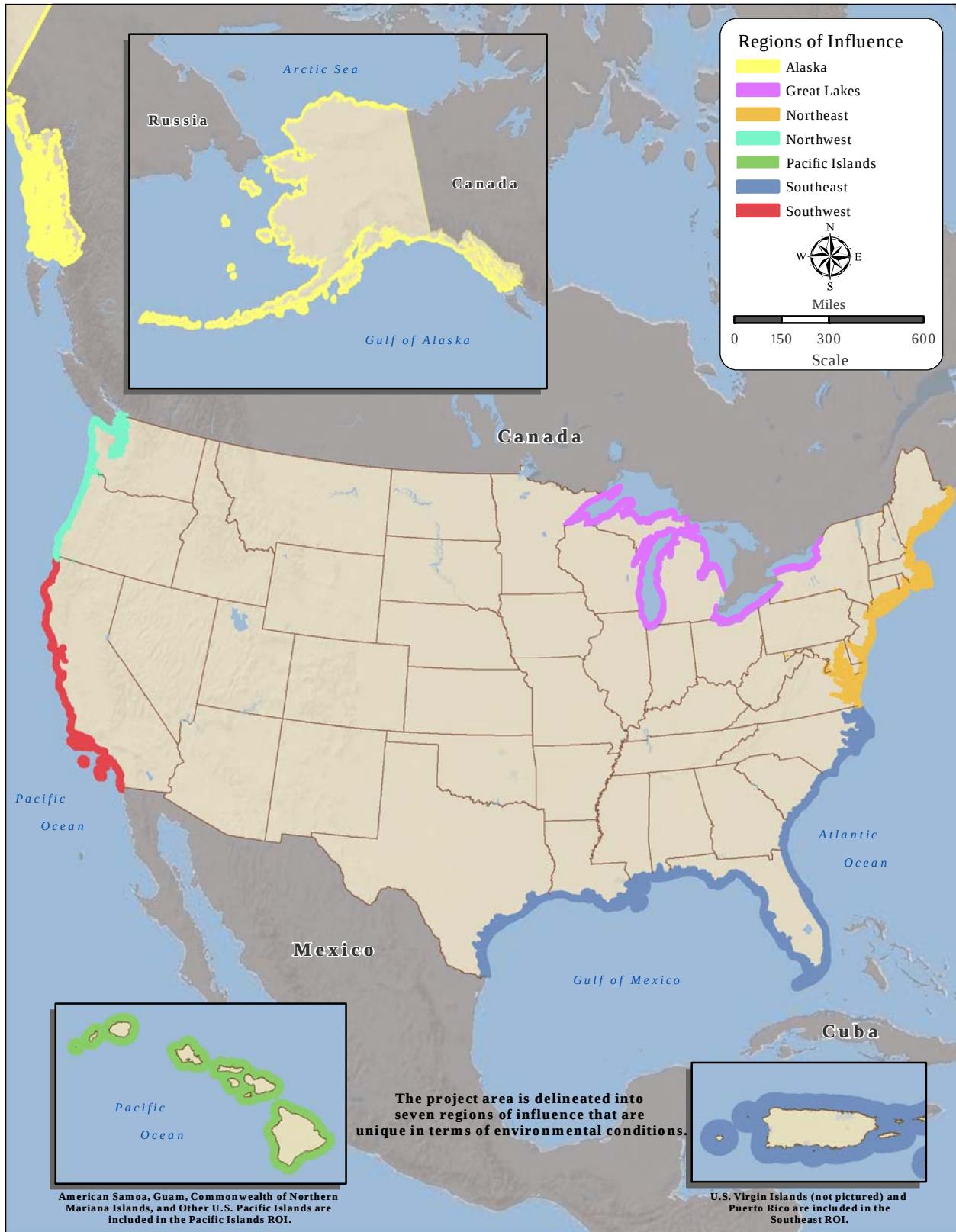
environmental issues specific to the chosen SONAR were adequately analyzed in this PEA. If the PEA analysis does not adequately analyze the environmental impacts from a particular SONAR package, form, or associated platform, additional tiered NEPA analysis and related environmental documentation will be completed and additional consultation under ESA, as necessary, will be conducted prior to use.

The systems would be used to help achieve USCG mission success (described in **Section 1.2**). Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. Of the roughly 750 USCG cutters and shore-based units the USCG estimates that less than 10 percent would be equipped with HF or UHF SONAR capabilities. SONAR could be towed by a boat (i.e., a torpedo-shaped “towfish”), lowered from a boat on a pole, or temporarily fixed to a pier or a pile. In no case is the USCG proposing to employ SONAR in fixed positions for long-term, continuous operations. In general, the duration of SONAR use would be from minutes to as long as several days. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). Mission activities, platforms, and existing power sources have been covered by existing NEPA documentation and are beyond the scope of this PEA. The scope of this PEA focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities, as described in **Section 1.2**. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site-specific operating scenarios or newly developed technologies fall outside of the scope of this assessment.

The scope of the PEA encompasses geographic locations where the systems are expected to operate. Based on the need for the Proposed Action, as presented in **Section 1.4**, the systems would operate in fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the U.S. territories, and inland operating areas. The inland operating area would include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating area would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation’s top-tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

The Regions of Influence (ROIs) for this PEA include the potential operating areas of the SONAR systems and encompass the environmental concerns specific to regional areas of U.S. waters (see **Figure 1-1**). The ROIs have been defined based on jurisdictional regions of the National Oceanic and Atmospheric Administration’s (NOAA) National Marine Fisheries Service (NMFS), rather than the USCG districts, to account for NMFS regulatory oversight for a majority of the protected species of concern associated with the nationwide employment of HF and UHF SONAR technology. The NMFS jurisdictional ROIs defined for this PEA are as follows:

- The Northeast ROI (Maine through Virginia)
- The Southeast ROI (North Carolina through Texas and the U.S. Caribbean)
- The Southwest ROI (California)
- The Northwest ROI (Oregon and Washington)



Source of ROIs: USCG 2002b

Figure 1-1. Regions of Influence for the Nationwide Use of HF and UHF SONAR Technology

- The Pacific Islands ROI (Hawaii, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands [CNMI], and other U.S. Pacific islands)
- The Alaska ROI
- The Great Lakes ROI.

Each ROI comprises unique environmental, economic, and social characteristics. The ROIs also include the internal continental areas to coincide with the jurisdictional regions of NMFS. **Figure 1-1** presents regions in which the HF and UHF active SONAR technology might reasonably be employed.

The Southeast ROI is a large area composed of three marine ecosystems. These ecosystems are the U.S. Southeastern Atlantic coast (Southeast Atlantic ecosystem), the Gulf of Mexico (GOM), and Puerto Rico and U.S. Caribbean coasts (U.S. Caribbean ecosystem). Because these three ecosystems have unique characteristics, they are discussed separately under the Southeast ROI.

1.6 Agency Coordination and Public Involvement Process

The PEA has been prepared in accordance with all applicable laws and executive orders (EOs) associated with natural and historic resources. Federal and state agencies that have been consulted during the preparation of this PEA include State Historic Preservation Offices (SHPOs), NMFS, U.S. Fish and Wildlife Service (USFWS), and all approved state Coastal Zone Management Programs (see **Appendix A**).

To announce the availability of the Draft PEA and proposed Finding of No Significant Impact (FONSI), a notice will be published in the *Federal Register* and *Local Notices to Mariners*. Letters will also be sent to interested parties, and all appropriate Federal and state agencies (see **Appendix B**). The USCG will solicit comments on this Proposed Action throughout the PEA process. An announcement on the availability of the Final PEA and, if appropriate, the FONSI will also be placed in the *Federal Register* and *Local Notices to Mariners*.

1.7 Organization of the PEA

Acronyms and abbreviations are used throughout the document to avoid unnecessary length. A list of acronyms and abbreviations is provided on the inside cover of the PEA.

Section 1: Purpose of and Need for the Proposed Action. As required under NEPA, this section provides an overview of the Proposed Action, identifies the purpose and need for the Proposed Action, describes the area in which the Proposed Action would occur, and explains the public involvement process.

Section 2: Proposed Action and Alternatives. This section describes the Proposed Action, the action alternatives considered, and the No Action Alternative. Action alternatives other than the Proposed Action were considered but eliminated from further detailed study because they did not meet the purpose and need of the Proposed Action (see **Section 2.2.1**). Therefore, only the Proposed Action and the No Action Alternative are discussed in detail.

Section 3: Affected Environment, Environmental Consequences, and Cumulative Effects. This section describes the existing environmental conditions in the areas in which the Proposed Action would occur, and the potential environmental impacts on each resource area under the Proposed Action and the No Action Alternative. In addition, cumulative effects that could result from the Proposed Action and alternatives will be identified for each resource area.

Appendices: The PEA includes five appendices that provide additional information.

- **Appendix A** will include the correspondence relating to coordination with Federal and state agencies.
- **Appendix B** contains the materials related to the review of the Draft PEA. A copy of the Interested Party (IP) letter with attachments, the IP distribution list, and a copy of the announcements in the *Federal Register* and *Local Notices to Mariners* are included. Public comments received during the review period will also be included in this appendix.
- **Appendix C** includes a list of those regulations, laws, and EOs that might reasonably apply to the Proposed Action.
- **Appendix D** contains detailed descriptions of past, ongoing, and reasonably foreseeable USCG programs used for the cumulative impacts analysis.
- **Appendix E** contains the detailed methodologies for estimating acoustic levels that result from examples of SONAR equipment that would be used under the Proposed Action.
- **Appendix F** contains additional information on biological resources within each ROI.
- **Appendix G** contains the detailed methodologies for estimating air emissions associated with the Proposed Action.

1.8 Environmental Regulations, Laws, and Executive Orders

The USCG plays an important role in protecting biological resources by serving as the primary maritime enforcer of U.S. laws within the Exclusive Economic Zone (EEZ). Several of these laws protect marine species and areas, including the Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] 1531–1534), Marine Mammal Protection Act (MMPA) of 1972 (16 U.S.C. 1361 et seq.), Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1976 (16 U.S.C. 1801–1883), and National Marine Sanctuaries Act (NMSA) of 1974 (16 U.S.C. 1431–1445a). These are described as follows because they are most directly related to the Proposed Action. Additional EOs, and various Federal and international laws that might reasonably apply to the Proposed Action are reviewed under **Appendix C**.

1.8.1 Endangered Species Act

The ESA is administered by the USFWS and NMFS and establishes protection and conservation of threatened and endangered species and the ecosystems upon which they depend. Under the ESA, an “endangered species” is defined as any species in danger of extinction throughout all or a significant portion of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. “Critical habitat” is designated under the ESA as a specific geographic area that is essential for the conservation of a threatened or endangered species and that could require special management or protection. Critical habitat can include an area that is not occupied by a species, but is needed for the recovery of that species. A “candidate” species is one that is the subject of either a petition to list or status review, and for which the NMFS or USFWS has determined that listing might be or is warranted. The NMFS is further charged with the listing of all “species of concern” that fall under its jurisdiction. A “species of concern” is one about which the NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA.

In addition to allowing the listing of species and subspecies, the ESA allows listing of “distinct population segments” of vertebrate species. NMFS policy stipulates that a salmon population will be considered

“distinct” for purposes of the ESA it if represents an Evolutionary Significant Unit (ESU) of the biological species. To qualify as an ESU, a population (or group of populations) must be (a) reproductively isolated from other populations of the same species, and (b) an important representative component in the evolutionary legacy of the species.

Section 7 of the ESA requires that all Federal agencies consult with the USFWS or NMFS, as applicable, before initiating any action that may affect a listed species. Section 7 requires Federal agencies to ensure that actions they authorize, fund, or conduct 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 to be critical.”

The major responsibilities of the NMFS and USFWS under the ESA include (1) the identification of threatened and endangered species, (2) the identification of critical habitats for these species, (3) the implementation of research programs and recovery plans for these species, and (4) the consultation with other Federal agencies concerning measures to ensure compliance with Section 7 of the ESA. Further duties of the NMFS and USFWS include regulating “takes” of listed species on public or private land (Section 9) and granting incidental take permits to agencies that could unintentionally “take” listed species during their activities (Section 7(b)(4)). The ESA allows the designation of geographic areas as critical habitat for threatened or endangered species. The physical and biological features essential to the conservation of a threatened or endangered species are included in the habitat designation. Designation of critical habitat affects only Federal agency actions and federally funded or permitted activities.

1.8.2 Marine Mammal Protection Act

Under the authority of the MMPA of 1972 (16 U.S.C. §§ 1361 et seq.), the Secretary of Commerce is responsible for the protection of all marine mammals except walruses, polar bears, sea otters, manatees, and dugongs, which are the responsibility of the Secretary of the Interior. These responsibilities have been delegated to NMFS and the USFWS and include providing overview and advice to regulatory agencies on all Federal actions that might affect these species.

The MMPA prohibits the “take” of marine mammals, with certain exceptions, in waters under U.S. jurisdiction and by U.S. citizens on the high seas. Under Section 3 of the MMPA, “take” is defined as “harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill any marine mammal.” In the 1994 amendments to the MMPA, two levels of “harassment” were defined. “Harassment” is defined as any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild (Level A), or any act that has the potential to disturb a marine mammal or marine mammal stock in the wild by disrupting behavioral patterns, including, migration, breathing, nursing, breeding, feeding, or sheltering (Level B). In cases where U.S. citizens are engaged in activities, other than fishing, that result in “unavoidable” incidental take of marine mammals, the Secretary of Commerce can issue a “small take authorization.” The authorization can be issued after notice and opportunity for public comment if the Secretary of Commerce finds negligible impacts. The MMPA requires consultations with NMFS if impacts on marine mammals are unavoidable.

Section 101(a)(5)(A) of the MMPA directs the Secretary of Commerce, upon request, to authorize the unintentional taking of small numbers of marine mammals incidental to activities (other than commercial fishing) when, after notice and opportunity for public comment, the Secretary (1) determines that total takes during a 5-year (or less) period have a negligible impact on the affected species or stock, and (2) prescribes necessary regulations that detail methods of taking and monitoring and requirements for reporting. The MMPA provides that the moratorium on takes may be waived when the affected species or population stock is at its optimum sustainable population and will not be disadvantaged by the authorized takes (i.e., be reduced below its maximum net productivity level). Section 101(a)(5)(A) also

specifies that the Secretary has the right to deny permission to take marine mammals if, after notice and opportunity for public comment, the Secretary finds (1) that applicable regulations regarding taking, monitoring, and reporting are not being followed, or (2) that takes are, or might be, having more than a negligible impact on the affected species or stock.

Under Section 101(a)(5)(D) of the MMPA, NMFS may authorize the incidental taking by harassment of small numbers of marine mammals for activities that occur within a specified geographical region for a period of up to one year. An Incidental Harassment Authorization (IHA) may be issued by NMFS if such activities will have only a negligible impact on the affected species or stocks (see above). The IHA prescribes methods of taking by harassment, means of affecting the least practicable adverse impact on the affected species or stock and its habitat, and requirements pertaining to the monitoring and reporting of such taking. The issuance of an IHA is considered an expedited process because the MMPA mandates several relatively short timeframes for processing applications. Within 45 days of receiving a complete IHA application, NMFS must publish a proposed IHA in the *Federal Register* for a public comment period of 30 days if it considers the project consistent with Section 101(a)(5)(D) requirements. In contrast, applications determined to be incomplete or inappropriate for the type of taking requested, will be returned to the applicant with an explanation of why the application is being returned. Not later than 45 days after the close of the public comment period, NMFS must determine whether issuance of the IHA is appropriate. If, subsequent to the public review period, NMFS finds the issuance of an IHA is appropriate and after NMFS complies with the requirements of NEPA and the ESA (see below), NMFS would issue an IHA to the applicant and publish a notice in the *Federal Register* notifying the public of the IHA issuance. This process usually takes at least 120 days, but could take substantially longer if the applicant does not provide information sufficient for NMFS to comply with NEPA (see below).

Since the issuance of small-take regulations or an IHA is a Federal action, NMFS must also comply with the requirements of NEPA and the ESA when considering whether to issue these authorizations. For these reasons, NMFS encourages applicants to provide sufficient information on the impact of the taking of marine mammals, including a detailed discussion of possible alternatives.

Applications submitted to NMFS without this information could take longer to process. At the time of publishing either a proposed small-take regulation or a proposed IHA in the *Federal Register*, NMFS will usually make a draft Environmental Assessment (EA) or Environmental Impact Statement (EIS) available for public review and will request comments. Before NMFS issues a final small-take rule or final IHA, NMFS will consider comments received on the proposal, and either issue or adopt the EA and sign a FONSI, issue a new draft EA or EIS, or adopt or release a final EIS.

1.8.3 Magnuson-Stevens Fisheries Conservation and Management Act

The MSFCMA calls for direct actions to stop or reverse the continued loss of fish habitats. Toward this end, Congress mandated the identification of habitats essential to managed species and measures to conserve and enhance this habitat. Under the MSFCMA, Congress directs NMFS and the eight regional Fishery Management Councils (FMCs) (under the authority of the Secretary of Commerce) to describe and identify Essential Fish Habitat (EFH) in each Fishery Management Plan (FMP); minimize, to the extent practicable, the adverse effects of fishing on EFH; and identify other actions to encourage the conservation of EFH. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

The MSFCMA requires cooperation among NMFS, the FMCs, fishing participants, and Federal and state agencies to protect, conserve, and enhance EFH. Section 305(b) of the MSFCMA mandates that Federal agencies must consult with the Secretary of Commerce on all proposed activities authorized, funded, or undertaken by the agency that might adversely affect EFH. NMFS recommends consolidated EFH

1 consultations with interagency coordination procedures required by other statutes, such as NEPA or the
2 ESA, to reduce duplication and improve efficiency (50 CFR 600.920(e)(1)).

3 **1.8.4 National Marine Sanctuaries Act**

4 Title III of the NMSA authorizes the Secretary of Commerce to designate and manage discrete marine
5 areas of special national significance as National Marine Sanctuaries (NMSs). The purpose of these
6 sanctuaries is to promote comprehensive long-term management of their conservation, recreational,
7 ecological, historical, research, educational, or aesthetic values. NMSs are built around the existence of
8 distinctive natural and cultural resources whose protection and beneficial use require comprehensive
9 planning and management. Similar to underwater parks, NMSs are managed according to management
10 plans, which are prepared by the NOAA on a site-by-site basis. NOAA is the Federal agency responsible
11 for administering the NMS Program.

12 The NMSA prohibits the destruction, loss of, or injury to any sanctuary resource managed under law or
13 regulations for the sanctuary in question and any violation of the act, any regulations, or permits issued
14 there under 16 U.S.C. 1436. In addition, Section 304(d) of the NMSA (16 U.S.C. 1434(d)) requires
15 Federal agencies to consult with the Secretary of Commerce, through NOAA, on Federal agency actions
16 internal or external to any NMS that are likely to destroy, cause the loss of, or injure any sanctuary
17 resource.

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2. Proposed Action and Alternatives

2.1 Proposed Action

The USCG proposes the nationwide use of commercial-off-the-shelf HF (50 to 999 kHz) and UHF (1,000 kHz and higher) active SONAR systems. The Proposed Action would provide the USCG with the ability to use HF and UHF SONAR technology to accomplish USCG missions (see **Section 1.2**) within the ROIs described in **Section 1.5**. All existing commercially available systems and future systems that fall into the stated HF and UHF ranges are included under the Proposed Action. Examples of systems included under the Proposed Action are presented in **Table 2-1**. Under the Proposed Action, the USCG could also modify SONAR systems to meet specific mission requirements. USCG would use HF and UHF active SONAR technology to locate and classify underwater threats and other TOIs, and to more safely and effectively accomplish USCG missions. TOIs could include combat swimmers/divers; explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that have become submerged as a result of natural or man-made disaster and have the potential to interrupt maritime transportation, trade, commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used to support the following:

- Maritime security by allowing rapid response to threats of underwater improvised explosive devices or maritime mines in U.S. ports, harbors, and waterways
- Maritime safety by allowing for the safe and efficient location and identification of navigational obstructions
- Maritime stewardship through rapid response and recovery from environmental accidents and disasters.

These are examples of how the HF and UHF SONARs could be used. If the HF and UHF SONAR technologies were to be used in other ways to help achieve USCG mission success, the use would be within the guidelines and mitigating procedures as set forth in this PEA.

SONAR systems would be available for use by any USCG operational commanders in those areas where the USCG normally conducts operations, including along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, and the territories and all inland operating areas. Selected HF and UHF SONAR systems would be operated from mobile platforms.

Mobile platforms include ships, boats, remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs). Additionally, SONAR could be towed by a boat (i.e., a torpedo-shaped “towfish”), lowered from a boat on a pole, or temporarily fixed to a pier or a pile. See **Figures 2-1** and **2-2** for examples of an ROV and AUV, respectively. Impacts on the seafloor from ROV and AUV operations would not be significant. ROVs would be used pierside or at a location appropriate for conducting vessel inspections. An appropriate location for inspection would be at a water depth that would preclude seafloor disturbance. That is, ROVs and AUVs would usually be suspended in the water column and would rarely contact the seafloor. Typically, ROVs and AUVs would be used in open, navigable waterways or safe anchorages. However, an ROV or AUV might contact the seafloor if there is a suspected threat on the seafloor that needs to be investigated; such contact would be short-term and transient in nature.

Table 2-1. Examples of SONAR^a Technology Covered under the PEA

Type	Frequency (kHz)	Maximum Source Level (dB re 1 µPa at 1 meter)	Pulse Length	Range in meters (feet)	Depth Rating in meters (feet)	Beamwidth (degrees) ^b	Applications
Simrad 50/200 kHz Combi Transducer	50	221	NA	NA	NA	longitudinal: 10° transverse: 16°	Fishfinder, depthsounder.
	200	227	NA	NA	NA	longitudinal: 7° transverse: 7°	Fishfinder, depthsounder.
Simrad SH80 Fish Finding SONAR	116	210	NA	50 (164) – 2,000 (10,761)	NA	Horizontal: 8° or 360° Vertical: 9° or 60°	Fishfinder, depthsounder.
FarSounder, FS3 and FS3DT, 3D Forward Looking	60	Proprietary but less than 228 ^c	NA	FS3: 305 (1,000) FS3 DT: 439 (1,440) depends on beamwidth.	46 (150)	Horizontal: 60° - 90° Vertical: 90°	Target detection (e.g., marine mammals) and imaging.
Simrad SM2000 multibeam ^d	90	206	30–1,300 µs	5–396 (15–1,300)	1,000 (3,280) to 2,500 (8,202)	60° x 18° 120° x 20° 180° x 20°	Widely used throughout the underwater research and exploration community.
L3-Klein 3000 Dual Frequency SONAR	132	234	25–400 µs	457 (1,500)	1,524 (5,000) (standard) 3,048 (10,000) and 6,096 (20,000) (optional)	Horizontal: 0.7° at 100 kHz, 0.21° at 500 kHz Vertical: 40°	Survey, search and rescue, oil and gas exploration.
	445	242		152 (500)			
Echoscope II (Optional)	150	NA	NA	1–251 (3–825)	3,048 (10,000) (optional) 610 (2,000) (standard)	50° x 50°	Harbor wall, ship hull, and bridge piling inspection; pipeline construction and inspection; dredging/rock dumping; bathymetry; subsea metrology.
	250	NA	NA	1–201 (3–660)		50° x 50°	
	500	NA	NA	1–152 (3–500)		30° x 30°	

Type	Frequency (kHz)	Maximum Source Level (dB re 1 μ Pa at 1 meter)	Pulse Length	Range in meters (feet)	Depth Rating in meters (feet)	Beamwidth (degrees) ^b	Applications
Echoscope II (Standard)	375	NA	NA	1–201 (3–660)		50° x 50°	
Blue View Proviever P450-15	305–575	205 $\pm$ 5	1,000 μ s	15–137 (50–450)	Up to 91 (300)	1° x 15°	Underwater inspection, search and recovery, fish tracking/counting, diver/vehicle detection/tracking.
L3-Klein 5000 Multibeam SONAR	455	249	20 to 200 μ s	150 (492)	201 (660)	NA	Survey, search and rescue, and oil and gas exploration.
Tritech MiniKing SONAR	675	NA	NA	5–46 (15–150)	1,000 (3,280)	Vertical: 40° Horizontal: 3°	ROV and AUV obstacle avoidance and target recognition.
Tritech SeaSprite/Micron DST SONAR	650– 950	NA	NA	2–76 (6–250)	503 (1,650)	Vertical: 35° Horizontal: 3°	Small ROV obstacle avoidance and target recognition; AUV guidance.
Imagenex 852 Ultra-Miniature Scanning SONAR	675–850	NA	100 μ s	5–46 (16–150)	299 (980)	2.5° x 22°	ROV navigation, diving support, inspection, search and recovery.
Sound Metrics Dual-frequency IDentification SONar Long Range (DIDSON-LR) ^d	700 Detection Mode	NA	23, 46, 92, 184 μ s	1–23 (2.5–76)	Up to 152 (500)	0.8° x 12°	Underwater surveillance, hull/berth sweeps, fisheries management, underwater structure inspection, monitor particle dynamics, bottom typing/underwater analysis, crime evidence recovery.
	1,200 Identification Mode	NA	7, 13, 27, 54 μ s	1–12 (2.5–38)	Up to 152 (500)	0.5° x 12°	
BlueView Miniature Multibeam Imaging SONAR 900E-20	610	195 $\pm$ 5	500 μ s	55 (180)	Up to 305 (1,000)	1° x 20°	Underwater inspection, search and recovery, and bottom searches.

Type	Frequency (kHz)	Maximum Source Level (dB re 1 μ Pa at 1 meter)	Pulse Length	Range in meters (feet)	Depth Rating in meters (feet)	Beamwidth (degrees) ^b	Applications
Sound Metrics Dual-frequency IDentification SONar (DIDSON) ^d	1,000 Detection Mode	202 dB @ 1,000 kHz	16, 32, 64, 128 μ s	0.8–23 (2.5–76)	Up to 152 (500)	0.4° X 12°	Underwater surveillance, hull/berth sweeps, fisheries management, underwater structure inspection, monitor particle dynamics, bottom typing/underwater analysis, crime evidence recovery.
	1,800 Identification Mode	202 dB @ 1,800 kHz	4, 8, 16, 32 μ s	0.8–11.6 (2.5–38)	Up to 152 (500)	0.3° x 12°	
BlueView 1350-45 Ultra High Resolution MicroBathymetry (3-D)	1,350	Has not been tested, but expected to be lower than the BlueView 900E-20.	NA	27 (90)	305 (1,000)	1° x 1°	Site survey, three-dimensional structure rendering, post-hurricane inspection, environmental assessments.
BlueView Dual Frequency Multibeam DF900-2250 (2D)	900	Has not been tested, but expected to be lower than the BlueView 900E-20.	NA	55 (180)	305 (1,000)	1° x 20°	Zero visibility ROV and diver operations, hull inspection, and underwater construction.
	2,250		NA	5 (15)	305 (1,000)	1° x 30°	

Sources: Simrad 2005, 2008a, 2008b; FarSounder 2006; Zimmerman 2008; Kongsberg undated; L3-Klein undated a, undated b; Cobis 2008, 2009; Coda 2005; Fletcher 2008; Tritech undated, 2002; Wright 2008; Imagenex 2004; SoundMetrics undated.

Notes:

- All these SONAR forms are commercially and widely available to and used by the general public for the application indicated, as “off-the-shelf” products.
- Under the Proposed Action, the SONAR would be directed at the intended target (see the “Range” column for possible distances from the target).
- At a range of 100 meters (328 feet) from a FarSounder FS-3 DT system, the intensity level of the SONAR ping is less than 150 dB reference to 1 μ s.
- Analyzed in the PEA of the Installation and Operation of the Integrated Anti-swimmer System.

Key:

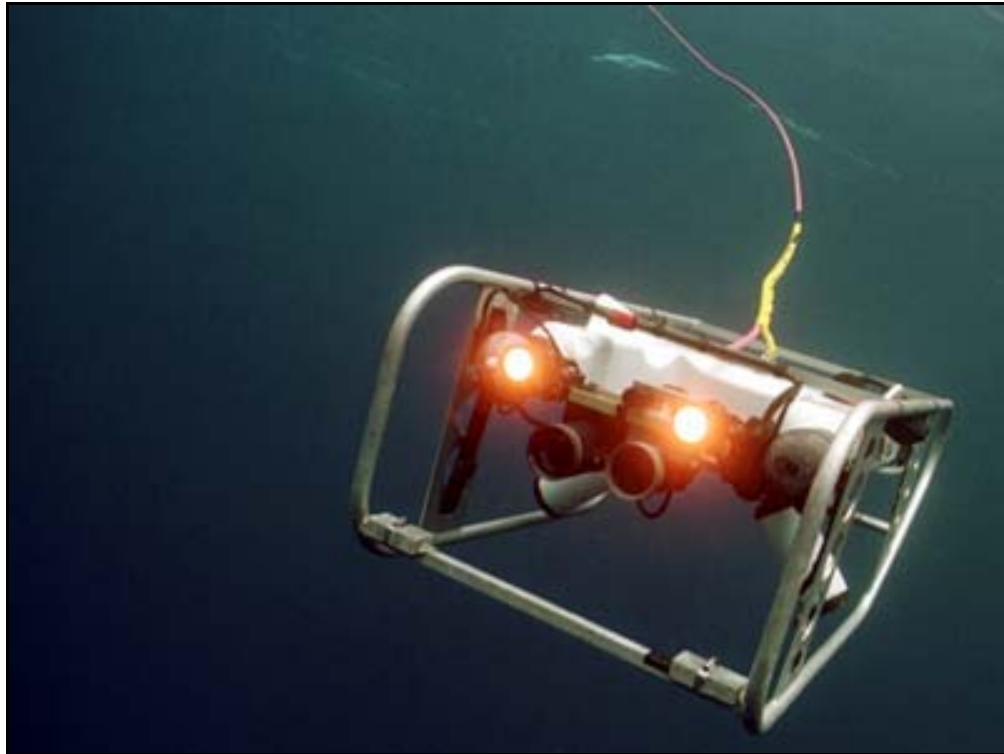
NA = Not Available

ROV = remotely operated vehicle

ms = milliseconds

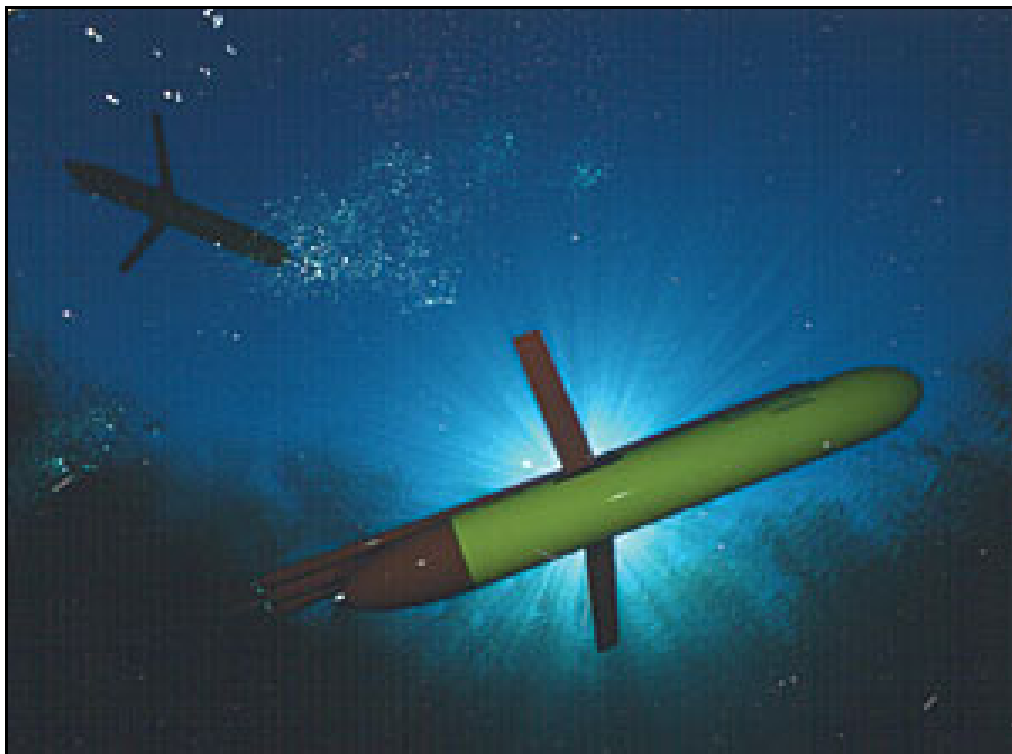
AUV = autonomous underwater vehicle

μ s = microseconds



Source: URC 2003

Figure 2-1. Example of a ROV, Underwater Research Center's Spectrum II



Source: ESRI 2008

Figure 2-2. Example of an AUV, Naval Research Laboratory's Slocum Glider

Pierside seafloor disturbance is expected to be insignificant because the areas within a port are already disturbed. The draft of a vessel docking or departing in these areas is expected to have a greater impact than the impact caused by the ROVs and AUVs used as mobile platforms for the SONAR technology under the Proposed Action. All mobile platforms used under the Proposed Action would be platforms of opportunity (i.e., SONAR systems would be deployed on ROVs, AUVs, or from vessels that are available at the time necessary) and would have other USCG uses.

Additionally, SONAR could be towed by a boat (i.e., a torpedo-shaped “towfish”) lowered from a boat on a pole, or temporarily fixed to a pier or a pile. While, towed SONAR systems would be used as part of the Proposed Action, towed arrays would not be covered under the Proposed Action. Arrays are typically used to provide direction and range for targets at long distances, which is beyond the scope of the Proposed Action and not currently a USCG mission. As indicated in **Sections 1.3** and **1.4**, the USCG would use the SONAR systems for locating and imaging, which is a much shorter range application. The types of SONAR systems deployed on a towfish would include sidescan, multi-beam, or similar SONAR systems from a single unit.

The SONAR systems would operate in fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor environments and offshore environments throughout the United States. The inland operating area would include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river system. The offshore operating area would include areas up to 12 NM offshore and most areas shoreward. Typical USCG operations occur in navigable waterways in these areas. Deployment locations would include the ports and waterways of the nation’s top-tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by water.

HF and UHF SONAR use would fall into one of three general categories: (1) operational missions, (2) training and exercises, and (3) research and development. All SONAR use will be of relatively short-term duration (typically less than a week, unless required for an emergency or disaster). Regardless of the category, it would only be used for the amount of time necessary to complete the mission objectives. In no case is the USCG proposing long-term deployments of SONAR equipment in fixed positions (deployed for more than 2 weeks, unless required by an emergency or disaster) for continuous operations. In general, the duration of SONAR use would be from minutes to as long as several days. Typically, the duration of most deployments would be less than a week; however, for environmental disasters such as the Deepwater Horizon oil spill, SONAR equipment could be used on site until the emergency has ended. An example of a high-priority nonemergency operational mission is the anti-swimmer SONAR systems that would provide security zone protection during a 2-day special event. Once the event has concluded, the system would be shut down and removed.

The USCG is committed to the protection of living marine resources, including threatened and endangered species and nonthreatened and nonendangered marine mammals. The USCG would develop and implement specific procedures for the operation of specific SONAR systems to avoid and minimize impacts on marine mammals and other marine species, to the extent practicable while still completing the mission. The operational procedures will include a plan for monitoring and adaptive management. The procedures that would be developed and implemented for the operation of specific SONAR systems that operate at frequencies between 50 kHz and 200 kHz would be based on the following measures to avoid potential adverse effects on protected marine mammals and other marine species.

- USCG personnel would monitor the appropriately sized safety zone at all times of deployment. The size of the safety zone would be determined through sound propagation and loss modeling

based on empirical data and SONAR specifications. All monitors would have extensive marine mammal monitoring experience.

- During an emergency, if a marine mammal is observed in or approaching the safety zone, the operational commander would take prudent measures to avoid impacting the wildlife, such as shutting down the system, moving away from the animal, or slowing down the platform, tactical situation permitting. Prudent measures are based on the operational commander's knowledge and professional assessment of the situation with respect to safety and feasibility as to whether or not to operate the SONAR in the presence of a marine mammal.
- If a threatened or endangered species of marine mammal is affected (i.e., "take" as defined by the ESA or Level A or B harassment, as defined by MMPA) during operational missions, the USCG would conduct emergency consultation with the NMFS or USFWS, as appropriate. During emergency consultation, the NMFS or USFWS can provide recommendations on how to minimize or avoid adverse effects on listed species during the emergency response. Such recommendations are strictly advisory and are to be implemented at the discretion of the emergency response personnel. If, during an emergency situation, an unauthorized take under the MMPA should occur, the USCG would conduct activities that are necessary to protect human lives but consult with NMFS immediately to investigate the circumstances of the unauthorized take and jointly consider the steps that should be taken to avoid similar occurrences in the future.
- For training exercises and research and development missions, if a marine mammal is detected within or approaching the safety zone, the SONAR systems would be shut down until the marine mammals has left the area or safety zone.
- For training exercises and research and development missions, SONAR equipment would not be placed in a location that interferes with obvious marine mammal movement, and prevents entry or exit of marine mammals into and out of an area.
- Except for emergency situations, the safety zone would be visually monitored for 30 minutes prior to turning on the SONAR device to ensure that marine mammals are not present.
- Ramp-up (also known as soft-start) would entail the gradual increase in intensity of a sound source. When the operational situation allows, ramp-up or soft-start procedures would be used prior to operating the SONAR.
- SONAR systems would not be employed in a location that interferes with obvious marine mammal or sea turtle movements, or prevents entry or exit of marine mammals or sea turtles into and out of an area (e.g., the mouth of a bay or narrow choke-points), where SONAR could deter them from traveling through or by. The only exception to the above is under exceptional circumstances that require deployment for emergency purposes.
- The USCG will continue to implement programs that protect marine mammals and other marine species (e.g., USCG's Ocean Steward and Ocean Guardian initiatives, Atlantic Protected Living Marine Resources Initiative [APLMRI] [where applicable], and guidance regarding vessel speed [available online: <http://www.uscg.mil/hq/cg5/cg531/lmr.asp>]).
- Per the USCG's commitment to protection of living marine resources, vessel crews would immediately report sightings of any injured, entangled, or dead protected species, regardless of whether the injury or death is caused by SONAR operations or otherwise. Vessel crews would use procedures already in place to report such sightings.

A protected species monitoring plan would be developed in coordination with NMFS for specific types of equipment or groups of equipment that operate at frequencies of 50 to 200 kHz (as appropriate). Monitoring would serve as a precautionary measure. The monitoring plan would identify the

1 appropriately sized safety zone and monitoring devices to be used. The size of the safety zone would be
2 contingent on the SONAR specifications. Monitoring devices could include dedicated, trained observers
3 with binoculars for daytime detection, and passive acoustic equipment for detection in low-light
4 conditions and inclement weather. USCG would seek recommendations and guidance from NMFS in the
5 development of operating procedures and the monitoring plan, prior to operating equipment at frequencies
6 from 50 to 200 kHz.

7 Because the effects of HF- and UHF-active SONAR on marine mammals are not well understood and
8 SONAR science is continuously improving and changing, operational procedures would include an
9 adaptive management plan. Adaptive management would facilitate the ability to consider new data from
10 different sources to determine if and how avoidance or monitoring measures would be modified, added,
11 or deleted, if new data suggest that such modifications are warranted. Additionally, new technology and
12 monitoring measures that become available in the future would be considered for monitoring under the
13 adaptive management plan.

14 In the development of operating procedures, the USCG will seek NMFS guidance and recommendations
15 for various aspects such as mitigation measures, monitoring plans, and adaptive management plans

16 All equipment is commercially and readily available to the general market. This routinely and globally
17 used standard navigational and imaging equipment has not previously been shown to adversely affect
18 marine mammals and has not previously required incidental take permits (ITPs). Additionally, long-term
19 continuous use of the equipment is not being proposed. As such, it is not anticipated that an NMFS
20 MMPA ITP would be required for emergency or non-emergency use. However, if NMFS consultation
21 determines that an ITP would be required for specific pieces of equipment and circumstances
22 (e.g., equipment that operates at 50 to 200 kHz and can be heard by toothed whales and pinnipeds
23 swimming in water, under emergency situations where mitigation measures are not possible), then the
24 USCG would apply for an ITP. Given the proposed operating characteristics and monitoring, potential
25 impacts on marine mammals are considered highly unlikely. This is based on the following
26 characteristics of the proposed SONAR signals: intermittent nature, brief pulse duration (i.e., μ s to
27 milliseconds [ms]), low-duty cycle and source level, short duration of use (minutes to typically several
28 days or sometimes up to a week period), relatively high attenuation rate given the high frequencies,
29 generally narrow downward-directed beam, and small area of ensonification. Furthermore, because both
30 the vessel and animal are moving, repeated exposure of an individual is highly unlikely to occur and
31 exposure time would be short (unlike shipping noise). Monitoring would further reduce the likelihood of
32 the occurrence of an impact.

33 Under the Proposed Action, if an emergency operational situation occurs where activities are necessary to
34 protect human lives but could have an adverse effect (i.e., “take” which is defined under the ESA “to
35 harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such
36 conduct”) on Federally listed species, the USCG would contact NMFS or USFWS personnel as early as
37 practicable. This would allow identification of the best procedures for handling the situation, while
38 avoiding or minimizing adverse effects on threatened or endangered species, to the maximum extent
39 feasible given human safety considerations.

40 The Proposed Action is subject to MMPA regulations; thus, the “taking” (i.e., defined under the MMPA
41 as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal”) of
42 small numbers of marine mammals may be allowed by NMFS, if the total taking will not have an
43 “unmitigable adverse impact” on those species or stocks of marine mammals intended for subsistence
44 uses (50 CFR 216.102 [a]). Under the Proposed Action, HF and UHF SONAR would be used above 60°
45 North latitude (i.e., just north of the Aleutian Islands in Alaska, including the Kenai Peninsula and Prince
46 William Sound) only in emergency situations involving a threat to human life or national security.

Non-emergency situations would be considered on a case-by-case basis. If an emergency requires SONAR use above 60° North latitude, SONAR that operates at 200 kHz or higher would be used to the extent practicable. Other areas are identified as subsistence fishing or hunting areas during the review process would be subject to the same requirements. The USCG Office of Counterterrorism & Defense Operations (CG-532) and Office of Environmental Management (CG-47) would coordinate with NMFS and the potentially affected subsistence communities in accordance with MMPA regulations at 50 CFR 216.104(a)(12) to develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities.

As stated above, ROVs and AUVs would be used pierside or at a location appropriate for conducting vessel inspections and at a water depth that would preclude seafloor disturbance. However, to further avoid potential impacts, known locations of Johnson's seagrass and branching corals, including critical habitat would be avoided, if the operational scenario permits.

Section 7 of the ESA directs all Federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the USFWS and NMFS, to ensure that their actions do not jeopardize listed species or destroy or adversely modify proposed critical habitat. While sections 7(a)(d) continue to apply to agency responses to situations such as acts of God, disasters, casualties, and national defense or security emergencies, the regulations implementing these sections provide for expedited procedures to accommodate the need for Federal agencies to respond promptly to emergencies. During emergency consultation, the NMFS or USFWS can provide recommendations on how to minimize or avoid adverse effects on listed species during the emergency response. Such recommendations are strictly advisory and are to be implemented at the discretion of the emergency response personnel. If during an emergency situation, an unauthorized take under the MMPA should occur, USCG would conduct activities that are necessary to protect human lives but consult with NMFS immediately to investigate the circumstances of the unauthorized take and jointly consider the steps that should be taken to avoid similar occurrences in the future.

2.2 Analysis of Alternatives to the Proposed Action

NEPA requires Federal agencies to consider reasonable alternatives to a proposed action. Identifying and considering reasonable alternatives helps to ensure that the agency's assessment of potential environmental impacts includes a comparative measure to gauge decisions regarding the action proposed for implementation.

2.2.1 Alternatives Considered but Eliminated from Further Detailed Study

To warrant detailed evaluation by the USCG, an alternative must be reasonable and satisfy the purpose of and need for the Proposed Action. To be considered reasonable, an alternative must also be "ripe" for decisionmaking (any necessary preceding events have taken place). The active SONAR system must be able to operate underwater, detect underwater swimmers/divers and threats in all water conditions at a range that allows effective action, and not be easily defeated. The system must also be mobile and proven effective, as stated in the purpose of and need for the Proposed Action (see **Section 1.3**). The USCG evaluated several potential alternatives to satisfy the purpose and need. This section describes the alternatives that were considered but eliminated from further detailed study and the basis for such decisions. These alternatives will not be carried forward for further detailed evaluation in this PEA.

The alternatives to SONAR technology for tracking, detection, and classification that were considered include mid- and low-frequency SONAR technology, Radio Detection and Ranging (RADAR), optical systems, underwater barriers, trained marine mammals, and underwater patrols. For the reasons described

below, the only type of system that would satisfy the action's purpose and need are HF and UHF SONAR systems.

Low-Frequency SONAR Technology

Low-frequency SONAR systems are used by the military for long-range surveillance (a few hundred km/miles) (ICES 2005). One example of low-frequency SONAR currently in use is the U.S. Navy's (USN) Surveillance Towed Array Sensor System – Low Frequency Active system (SURTASS-LFA) that uses a frequency range of 100 to 500 Hertz (Hz). The USCG does not have a current need for long-range surveillance systems, is aware of issues with the use of SONAR in these frequency ranges, and does not believe its current mission requirements justify the potential adverse impacts on marine mammals. Therefore, this alternative was not carried forward for further detailed consideration.

Mid-Frequency SONAR Technology

Military mid-frequency SONAR systems are used to survey areas tens of km/miles in radius and are used to find and track underwater targets. USN SONAR systems, such as the AN/SQS-53C and AN/SQS-56, transmit at frequencies of 2 to 10 kHz range (typically 3.5 kHz) (ICES 2005). These systems do not meet the USCG's need because they do not provide imaging capabilities. As discussed in **Section 1.3**, the systems must be able to detect underwater swimmers, other targets, and threats in all water conditions at a range that allows effective action. These systems do not meet those criteria. Additionally, these systems provide a longer-range (tens of km/miles) surveillance than what is needed (1 or 2 km [0.6 to 1.2 miles]) (as described in **Section 1.3**). The USCG is aware of issues with the use of SONAR in these frequency ranges and does not believe its current mission requirements justify the potential adverse impacts on marine mammals. Therefore, this alternative was not carried forward for further detailed analysis in this PEA.

RADAR

RADAR systems that are currently used in detecting surface swimmers and other potential threats at the surface of the water were also considered. RADAR systems are currently available on the USCG's Defender Class Boats. However, the USCG's evaluation found that RADAR systems have no capability to detect underwater swimmers and other underwater threats. As discussed in **Section 1.3**, the systems must be able to operate underwater and these systems do not meet this criterion. Therefore, this alternative was not carried forward for further detailed analysis in this PEA.

Optical Systems

Available underwater optical devices (visible light and infrared) were found to have little or no capability to see swimmers in turbid water and only limited capability in clear water, except in cases where the swimmer is very near the surface. Some consideration was given to supplementing SONAR technologies with an optical system to more definitively classify a target, but the potential for additional benefit was not evident and use of optics alone would not sufficiently detect underwater threats. As discussed in **Section 1.3**, the systems must be able to detect underwater swimmers and other targets and threats in all water conditions at a range that allows effective action, and these systems do not meet those criteria. Therefore, this alternative was not carried forward for further detailed analysis in this PEA.

Underwater Barriers

Underwater barriers have been used in the past by the military. These barriers have been successful; however, they do not contain detection capabilities. Without a detection capability, the barriers could be very easily defeated by swimmers going under, around, or through them. As discussed in **Section 1.3**, the systems must be able to detect underwater swimmers and other targets and threats in all water conditions,

1 and these systems do not meet those criteria. Therefore, this alternative was not carried forward for
2 further detailed analysis in this PEA.

3 **Trained Marine Mammals**

4 The USN Marine Mammal Program uses trained marine mammals to locate and mark underwater objects.
5 Although this alternative was not removed from future consideration as a tool to be used in addition to a
6 solution that meets all the underwater criteria discussed in **Sections 1.3** and **1.4**, use of this alternative is
7 unreasonable to meet the immediate port security needs provided by SONAR technology. This concept
8 has significant cost, maintenance, time, and deployment issues generally associated with the training,
9 care, and handling of large marine mammals. As discussed in **Sections 1.3** and **1.4**, the systems must also
10 be capable of imaging targets and use of trained marine mammals does not meet this criterion. Therefore,
11 this alternative was not carried forward for further detailed analysis in this PEA.

12 **2.2.2 No Action Alternative**

13 Implementing regulations under NEPA require that the No Action Alternative be analyzed in an EA or
14 EIS, and this alternative can provide a baseline for comparison with the action alternatives. The No
15 Action Alternative identifies and describes the potential environmental impacts if an agency chooses not
16 to implement the Proposed Action or some other action alternative.

17 The continuation of the existing conditions without implementation of the Proposed Action is referred to
18 as the No Action Alternative. For the purposes of this project, the No Action Alternative is defined as
19 conducting normal USCG operations throughout the defined ROIs without the use of HF and UHF
20 SONAR technology. The No Action Alternative serves as the baseline against which potential Federal
21 actions can be evaluated. Inclusion of the No Action Alternative is prescribed by CEQ regulations and,
22 therefore, will be carried forward for further analysis in the PEA.

23 If the No Action Alternative were selected, as described in this PEA, it would not fulfill the USCG's
24 requirement to provide USCG operational commanders with the ability to locate, image, and classify
25 explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore
26 structures or other submerged/underwater locations. However, the No Action Alternative includes the
27 continued use of the IAS, which allows for the use of the two HF SONARs, the Simrad 2000 and
28 DIDSON, when used as part of the IAS. Additionally, under the No Action Alternative, the USCG would
29 not be able to accomplish its current missions and activities more safely and effectively.

30 **2.3 Selection of the Proposed Action**

31 The Proposed Action to use HF and UHF SONAR technology was selected because it meets the purpose
32 and need, has the potential for positive impacts on security and safety, and eases environmental concerns.
33 It has several distinct technical advantages over the alternative systems considered (see **Section 2.2**).
34 Specific considerations include the following:

- 35 • It would broaden the USCG capability to locate, image, and classify underwater threats and other
36 TOIs, and to more safely and effectively accomplish USCG missions
- 37 • Use of HF and UHF SONAR technology could provide added security from the threat of
38 underwater terrorist attacks for ships entering and leaving the ROI, numerous commercial
39 interests, and the general population who work and live in and near a port
- 40 • Preventing such attacks would also protect the environment from the impacts resulting from
41 damaged or destroyed infrastructure, facilities, or vessels

- The Proposed Action would allow the USCG to conduct underwater inspections without the need for a diver
- The Proposed Action would be able to replace some environmentally damaging activities, such as dragging for submerged objects.

Under current conditions, the added safety and security provided by HF and UHF SONAR technology would not be available. The USCG would not be able to locate, image, and classify underwater threats and other TOIs. While the USCG would increase their level of protection for shoreside infrastructure, credible underwater threats would still exist that need to be addressed. The potential environmental damage from a terrorist attack or interruption of maritime transportation, trade, and commerce could be significant.

Table 2-2 provides an overview of potential impacts anticipated under each of the alternatives considered, broken down by resource area, and is drawn from the description of the affected environment analyses presented in detail in **Section 3** of the PEA. Overall, no significant impacts are expected as a result of the Proposed Action. The only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These impacts are expected to be avoided with mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on EFH are expected as a result of the Proposed Action.

2.4 Past, Ongoing, and Reasonably Foreseeable Projects

CEQ defines cumulative impacts as the “impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time by various agencies (Federal, state, and local) or individuals. Informed decisionmaking is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future. Reasonably foreseeable future actions consist of activities that have been approved and can be evaluated with respect to their effects. The cumulative impacts analysis for each resource area is presented in **Section 3**.

This section describes the projects determined to be past, ongoing, and reasonably foreseeable that are within the geographic and time scope of the Proposed Action that are considered in the cumulative effects analysis for each resource area in **Section 3**. Detailed descriptions of these can be found in **Appendix C**. In accordance with CEQ guidance, the current effects of past actions are considered in aggregate as appropriate for each resource area without delving into the historical details of individual past actions (CEQ 2005).

The geographic scope of the analysis varies by resource area. For example, the geographic scope of cumulative impacts on noise, visual resources, soils, and vegetation is very narrow and focused on the location of the resource. The geographic scope of air quality, wildlife and sensitive species, and socioeconomics is much broader and considers more nationwide activities. Actions that were considered for this analysis were identified by reviewing USCG documents, news releases, and published media reports.

Table 2-2. Summary of the Potential Impacts of the Proposed Action and the No Action Alternative

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Underwater Acoustics			
No detailed resource area necessary.	Short-term, minor, adverse localized increases in ambient underwater sound levels (at frequencies above 50 kHz).	No mitigation measures would be necessary.	Potential short-term, significant, adverse effects on the ambient underwater noise are possible if a successful terrorist attack occurred.¹
Biological Resources			
Marine Protected Areas (MPAs)	- Without mitigation measures, potential short-term, minor to potentially significant, adverse, indirect impacts on MPAs could occur due to potential adverse impacts on marine mammals, sea turtles, fish, marine birds, and invertebrates that use the MPAs. Without mitigation, there is potential for Level A or B harassment of toothed whales and pinnipeds through noise exposure. As some clupeid fish (e.g., shad) can detect frequencies above 50 kHz, there is potential for their disturbance, which could be prey for other fish, sea turtles, marine mammals, and birds. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	Mitigation measures such as those presented in Section 2.1 of the PEA would be implemented to avoid impacts on protected marine mammals and other species that use MPAs. Measures would be developed in coordination with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals.^{2,3}	Potential short- and long-term, significant, adverse effects on the MPAs are possible if a successful terrorist attack or an environmental threat occurred (e.g., the Deepwater Horizon oil spill).¹
Baleen Whales, Sirenians, Sea Otters, and Polar Bears (Non-ESA- and ESA-listed)	- Impacts on baleen whales, sirenians, sea otters, and polar bears would occur. SONAR technologies (above 50 kHz) associated with the Proposed Action are above known or expected auditory thresholds of these species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on baleen whales, sirenians, sea otters, and polar bears are possible if a successful terrorist attack or an environmental threat occurred, including ESA-listed species.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Nonendangered and Nonthreatened Toothed Whales and Pinnipeds in Water	- Without mitigation measures, short-term, minor to potentially significant, adverse, direct and indirect effects on nonendangered and nonthreatened toothed whales and pinnipeds in water would be expected from the operation of the SONARs without mitigation. Direct effects relate to potential for Level A or B harassment of toothed whales and pinnipeds without mitigation measures. Level A and Level B harassment would not be expected with mitigation measures (e.g., equipment would be shut down if a marine mammal was approaching or within a safety zone and ramp ups would be used). Indirect effects relate to the potential for disturbance of prey species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	- Mitigation measures such as those presented in Section 2.1 of the PEA would be implemented to avoid impacts on protected marine mammals. Measures would be developed in coordination with NMFS and USFWS and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals. - Mitigation measures would avoid Level A and Level B harassment of non-ESA-listed marine mammal species. - USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.^{2,3}	Potential short- and long-term, significant, adverse effects on nonendangered and nonthreatened whales and pinnipeds in water are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
ESA-Listed Toothed Whales and Pinnipeds in Water	- Without mitigation measures, short-term, minor to potentially significant adverse, direct and indirect effects on Endangered Species Act- (ESA) listed toothed whales (sperm whale, Cook Inlet population of beluga whale, and Southern Resident Killer Whale), candidate toothed whale species – Hawaiian insular stock of false killer whale; and pinnipeds (Hawaiian monk seal, Guadalupe fur seal, Steller sea lion, and candidate species ringed and bearded seals) could occur from the operation of the SONARs. Direct effects relate to the potential for Level A or B harassment due to noise. Level A and B harassment would not be expected with the implementation of mitigation measures (e.g., equipment would be shut down if a marine mammal was approaching or within a safety zone and ramp ups would be used). Indirect effects relate to the potential for disturbance of prey species. However, based on the short distances for attenuation of the HF signals, low potential for encounter, and the low level of indirect impacts, it has been concluded that the Proposed Action may affect, but is not likely to adversely affect these species. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	- Mitigation measures such as those presented in Section 2.1 of the PEA would be implemented to avoid impacts on protected marine mammals. Measures would be developed in coordination with NMFS and USFWS and implemented for specific SONAR systems to avoid and minimize impacts on marine mammals. - Based on the mitigation measures the potential for impacts on ESA-listed species would be so low, as to be discountable. Therefore, the Proposed Action may affect, but is not likely to adversely affect, ESA-listed species. - Mitigation measures would avoid Level A and Level B harassment of non-ESA-listed marine mammal species. - USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.^{2,3}	Potential short- and long-term, significant, adverse effects on ESA-listed toothed whales and pinnipeds in water are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Sea Turtles	- Potential short-term, minor and insignificantly adverse, indirect effects on Kemp's ridley and olive ridley sea turtles from potential prey disturbance. Based on the low level of potential impacts, the Proposed Action may affect, but is not likely to adversely affect Kemp's ridley and olive ridley sea turtles. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on sea turtles are possible if a successful terrorist attack or an environmental threat occurred.¹
ESA-listed Coastal, Marine, and Aquatic Birds	- Short-term, minor and insignificantly adverse, indirect effects on ESA-listed coastal, marine, and aquatic birds. Potential prey disturbance coastal and pelagic diving birds from prey disturbance. Based on the low level of potential impacts, the Proposed Action may affect, but is not likely to adversely affect coastal and pelagic diving birds. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on ESA-listed coastal, marine, and aquatic birds are possible if a successful terrorist attack or an environmental threat occurred.¹
Essential Fish Habitat	- Short-term to long-term, minor impacts on EFH could occur from ROV and AUV operations. - Minor to moderate, direct and indirect, beneficial impacts on EFH could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	No mitigation measures would be necessary.	Potential short- and long-term, significant, adverse effects on EFH are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
Nonendangered and Nonthreatened Fish	• Short-term, minor, direct and indirect, adverse effects on fish. Some clupeid fish (e.g., shad) can detect frequencies greater than 50 kHz; there is the potential for disturbance to these fish. Indirect effects related to prey disturbance of higher trophic-level fish. Note that mitigation measures are not aimed at protecting fish which are more numerous and less visible than marine mammals. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on nonendangered and nonthreatened fish are possible if a successful terrorist attack or an environmental threat occurred.¹
ESA-listed Fish	• Short-term, minor, indirect, and insignificantly adverse effects on ESA-listed fish species from seafloor disturbance. However, seafloor disturbance would be rare. Therefore, the Proposed Action, may affect, but is not likely to adversely affect ESA-listed fish species. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on ESA-listed fish are possible if a successful terrorist attack or an environmental threat occurred.¹
Benthic Resources	• Short-term, negligible to minor, direct effects on benthic resources would occur under the Proposed Action. However, seafloor disturbance would be rare. • Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	• No mitigation measures would be necessary.	• Potential short- and long-term, significant, adverse effects on benthic resources are possible if a successful terrorist attack or an environmental threat occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Biological Resources (continued)			
ESA-listed Plants and Invertebrates	- Short-term, minor, insignificantly adverse, indirect effects on ESA-listed marine plants and invertebrates. However, seafloor disturbance would be rare. All impacts on ESA-listed plants and invertebrates would be avoided through mitigation measures, because the equipment would be shut down if a marine mammal were detected approaching or within a safety zone. Therefore, the Proposed Action may affect, but is not likely to adversely affect ESA-listed marine plants and invertebrates. - Minor to moderate, direct and indirect, beneficial impacts on biological resources could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats.	Known locations of Johnson's seagrass and branching corals, including critical habitat would be avoided, if the operational scenario permits.²	Potential short- and long-term, significant, adverse effects on ESA-listed plants and invertebrates are possible if a successful terrorist attack or an environmental threat occurred.¹
Public Safety			
No detailed resource area necessary.	Short- and long-term, minor to moderate, beneficial impacts on public safety by increasing the USCG's ability to protect port infrastructure, safeguard vessels, and preserve the flow of interstate and international commerce. Potential adverse effects on recreational divers would be avoided. Popular recreational dive spots are well-documented and potential impacts would be avoided. Implementation of mitigation measures would help to avoid impacts on divers when they are within an area that HF and UHF SONAR is deployed.	Implementation of mitigation measures in Section 2.1 would avoid impacts on divers when they are within an area that HF and UHF SONAR is deployed.	Potential short- and long-term, significant, adverse effects on port infrastructure, marine transportation, and public safety are possible.¹
Air Quality			
No detailed resource area necessary.	Short-term, minor, adverse effects on local and regional air quality from the operations of gasoline generators.	No mitigation measures would be necessary.	Significant adverse effects on air quality are possible if a successful terrorist attack occurred.¹

Detailed Resource Area	Impacts of the Proposed Action	Mitigation Measures	No Action Alternative
Water Quality			
No detailed resource area necessary.	Minor adverse effects from suspended sediments and ROV and AUV emissions.	No mitigation measures would be necessary.	Significant adverse effects on water quality are possible if a successful terrorist attack or environmental threat occurred.¹
Cultural Resources			
No detailed resource area necessary.	No effect to minor adverse effects on historic properties. Minor adverse impacts would include noise or seafloor disturbance at locations where systems are deployed. Potential for negligible to moderate beneficial effects by reducing the risk of a successful terrorist attack and replacing damaging activities such as dragging for submerged objects during search-and-rescue operations.	USCG would develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities in cooperation with NMFS and the affected communities. HF and UHF SONAR above 60° North latitude would be used only in emergency situations or on a case-by-case basis for non-emergency situations.³	Significant adverse effects on cultural resources if a successful terrorist attack occurred. USCG would not have the increased capability of locating and identifying additional cultural resources. USCG would continue the practice of dragging for submerged objects during search and rescue operations.

Notes:

1. USCG would not have nationwide capabilities to locate and classify underwater threats and other TOIs. USCG would also not have the ability to detect or prevent environmental threats (e.g., the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline).
2. If an emergency operational situation occurs where activities are necessary to protect human lives but could have an adverse effect (i.e., “take” which is defined under the ESA “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct”) on federally listed species, the USCG would contact NMFS or USFWS personnel as early as practicable. This would allow identification of the best procedures for handling the situation, while avoiding or minimizing adverse effects on threatened or endangered species, to the maximum extent feasible given human safety considerations.
3. If a threatened or endangered species of marine mammal is affected (i.e., Level A or B harassment, as defined by Marine Mammal Protection Act [MMPA]) during operational missions, the USCG would conduct emergency consultation with the National Marine Fisheries Service (NMFS) or U.S. Fish and Wildlife Service (USFWS), as appropriate. During emergency consultation, the NMFS or USFWS can provide recommendations on how to minimize or avoid adverse effects on listed species during the emergency response. Such recommendations are strictly advisory and are to be implemented at the discretion of the emergency response personnel. If, during an emergency situation, an unauthorized take under the MMPA should occur, USCG would conduct activities that are necessary to protect human lives but consult with NMFS immediately to investigate the circumstances of the unauthorized take and jointly consider the steps that should be taken to avoid similar occurrences in the future.

2.4.1 Coastal and Marine Uses

A large portion of the United States economy depends on use of the oceans (USCOP 2004). Therefore, increases in human population, urbanization, and industrialization result in increases in activities that impact the oceans and the valuable resources within the EEZ for the United States. These activities include marine transportation and ports; marine fishing; offshore energy, minerals, and emerging uses; human health uses; tourism and recreation; and coastal development and real estate (USCOP 2004). Overseas trade through U.S. ports is expected to double over the next 20 years (USCOP 2004). General impacts that result from an increase of coastal and marine use (including coastal development and urbanization) include water degradation; an increase in ocean noise; increased risk of collision with marine mammals and sea turtles; increased risk of entanglement of marine mammals, sea turtles, and sea birds; interference with the migration of coastal and marine birds and sea turtles from light pollution; seawater intake; and thermal discharge.

The Proposed Action would be used by any USCG operational commander in those areas where the USCG normally conducts operations, including along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, and the U.S. territories, and all inland operating areas (including the ports and waterways of the nation's top-tiered militarily and economically significant ports). These will be high-use areas that are dominated by shipping and other vessel traffic. Other past, ongoing, and reasonably foreseeable activities in the ROIs include construction of infrastructure, dredging, and industrial activity.

2.4.2 USCG Programs and Projects

In addition to the marine and coastal uses cited above, the USCG has increased safety and security measures on U.S. ports and waterways since September 11, 2001. Past, ongoing, and reasonably foreseeable USCG programs, including various Homeland Security activities implemented or to be implemented by the USCG, are briefly discussed below. The following is a list of actions that are temporally or geographically related to the Proposed Action and, as such, have the potential to result in cumulative impacts. Detailed descriptions of these actions are presented in **Appendix C**.

- Response Boat Acquisitions
- Stand-up and Operation of Maritime Safety and Security Teams (MSSTs)
- Establishment and Operation of the Mark 11 Static Barrier Running Gear Entanglement System (MK 11 RGES)
- Establishment of Safety and Security Zones
- Approximately 50 onshore and offshore Liquefied Natural Gas (LNG) terminals (includes existing, approved, proposed, and potential terminals [FERC 2009])
- Installation and Operation of the Integrated Anti-swimmer System (IAS)
- Nationwide Automatic Identification System (NAIS) Project
- Programmatic Environmental Impact Statement on the Future of the USCG Long Range Aids to Navigation (LORAN-C) Program
- EIS for USCG Pacific Area Operations: Districts 11 and 13.

The implementation of the Response Boat Acquisitions, MSSTs, MK 11 RGES, Establishment of Safety and Security Zones, IAS, NAIS, and LORAN-C Program would provide increased safety and security for Homeland Security through their development. These projects do not duplicate existing protective measures, but provide complementary, nonredundant capabilities for port security.

3. Affected Environment, Environmental Consequences, and Cumulative Impacts

3.1 Introduction

3.1.1 Resources for Analysis

For each resource area presented in this section of this PEA, an Existing Conditions subsection describes the environmental conditions most likely to be affected by the Proposed Action and serves as a baseline from which to identify and evaluate potential impacts associated with the implementation of the Proposed Action. In accordance with NEPA, CEQ regulations, COMDINST M16475.1D, and the DHS Management Directive 5100.1 (Environmental Planning Program), the description of the affected environment focuses on those conditions and resource areas that are potentially subject to impacts. These resources include underwater acoustics, biological resources, public safety, air quality, water quality, and cultural resources. Because of the size and limited range of impacts associated with the Proposed Action, some environmental resources and conditions that are often analyzed in a PEA have been omitted from this analysis. The following paragraphs identify the omitted resource areas and the basis for such exclusions:

- **Soils and Land Use.** The Proposed Action would not involve any physical disturbances, earth moving, or construction activities, nor would it involve any actions inconsistent with present and foreseeable land use patterns. Implementation of the Proposed Action would not alter the existing soil or land use at these locations. Accordingly, the USCG has omitted detailed examination of land use.
- **Socioeconomics.** The Proposed Action does not involve any activities that would contribute to changes in socioeconomic resources. The HF and UHF SONAR systems would be operated in combination with existing USCG operations. No additional personnel would be required as a result of the Proposed Action and there would be no effects. Additionally, the SONAR equipment associated with the Proposed Action would be used in support of existing USCG mission activities. Any restriction of activities would be related to existing operational, training and exercise, and research and development mission activities rather than SONAR usage. As such, the Proposed Action would have no effect on fishing, tribal or otherwise. Accordingly, the USCG has omitted detailed examination of socioeconomics.
- **Environmental Justice.** Implementation of the Proposed Action would not result in adverse impacts in any environmental resource area that would be expected to disproportionately affect minority and low-income populations. Therefore, there would be no effects. The SONAR equipment associated with the Proposed Action would be used in support of existing USCG mission activities. Any restriction of activities would be related to existing operational, training and exercise, and research and development mission activities rather than SONAR usage. As such, the Proposed Action would have no effect on fishing, tribal or otherwise. Accordingly, the USCG has omitted detailed examination of environmental justice.
- **Hazardous Materials and Hazardous Wastes.** The HF and UHF SONAR systems would be operated in combination with existing USCG operations; therefore, the Proposed Action would not involve additional maintenance and repair work. The systems would be operated using generators (e.g., Honda 1,000-watt generator) or existing power sources. Mission activities, platforms, and existing power sources have been covered by existing NEPA documentation and

are beyond the scope of this PEA. Therefore, there would be no effects. Accordingly, the USCG has omitted detailed examination of hazardous materials and hazardous wastes.

- **Wetlands.** The Proposed Action would not involve the physical disturbances of wetlands. No construction is required; therefore, there would be no effects such as filling in of wetlands. Accordingly, the USCG has omitted detailed examination of wetlands. This does not preclude analysis of impacts on species that use wetlands; specifically, all species that use wetlands that could be impacted by HF and UHF underwater noise are included in the analysis in **Section 3.3**.
- **Terrestrial species.** The Proposed Action would not affect species that do not occur under water at any point in their life cycle. These species would not occur in the ROIs. Accordingly, the USCG has omitted detailed examination of fully terrestrial species.
- **Freshwater aquatic species (including threatened and endangered species, which would not be affected by the Proposed Action).** Based on a review of the best available literature, the Proposed Action would have no effect on freshwater aquatic species because the frequencies of noise produced by the equipment associated with the Proposed Action are well above the hearing range of freshwater aquatic species. This applies to amphibians, reptiles, and birds that might spend part of their time under water, and freshwater fish and invertebrates.

Based on the information presented in **Section 3.3.4.6.1**, freshwater aquatic invertebrates such as mussels would not be able to detect the noise frequencies associated with the Proposed Action. Federally endangered, freshwater mussels that occur in major river systems include pink mucket (*Lampsilis abrupta*), fat pocketbook (*Potamilus capax*), orangefoot pimpleback (*Plethobasus cooperianus*), rough pigtoe (*Pleurobema plenum*), ring pink (*Obovaria retusa*), fanshell (*Cyprogenia stegaria*), and clubshell (*Pleurobema clava*). Candidate species of freshwater mussels that occur in major river systems include the sheepnose (*Plethobasus cyphus*) and *Cumberlandia monodonta*.

Amphibian underwater hearing is sensitive to frequencies below about 12 kHz (Narins and Feng 2006), which is below the frequencies of the proposed SONAR. It should be noted, however, that there is recent evidence of ultrasonic communication in an Asian frog species, with the species hearing sounds up to 38 kHz (Arch et al. 2009). Amphibians are not expected to be able to hear and respond to frequencies of the proposed SONAR, which are 50 kHz and higher.

The reptile ear is generally tuned to low frequencies (Dooling et al. 2000). Crocodilians have their best hearing (in air and water) sensitivity in a broad region of 300 to 2,500 Hz (Wever 1971, Higgs et al. 2002). In water, alligators respond to tones from 100 to 2,000 Hz, with peak sensitivity at 800 Hz (Higgs et al. 2002).

Bird hearing falls between two other major vertebrate groups: reptiles and mammals (Dooling 1978). At the high-frequency end of the audiogram, there are no cases in which birds hear at frequencies higher than about 15 kHz (Dooling 2002).

Most tested fish cannot hear sounds above 3 to 4 kHz (Popper 2008). Fish are classified as hearing generalists and hearing specialists. Hearing generalists, such as salmonids and perches, are only able to detect the particle motion associated with low-frequency sounds (<1 kHz) at relatively high sound intensities. The hearing specialists, such as carps and catfishes, detect the pressure component of sounds over a broader frequency range (up to several kHz) at much lower sound intensities. They are able to do so because of accessory hearing structures, which bring an air-filled cavity in close contact with the inner ear (Amoser and Ladich 2005). Several fish from the Family Clupeidae can detect ultrasound (greater than 20 kHz). These are considered anadromous (migrate between salt and fresh water), estuarine, and marine species and are described in **Section 3.3.2.5.3**. Most freshwater fish would not hear SONAR noise associated with the Proposed Action. Because SONAR would operate within the perceptible range of some

clupeid fish (from the subfamily Alosinae), these species are further described and assessed in **Sections 3.3.2.5.3 and 3.3.4.5.1.**

Based on the preceding information, the Proposed Action would not affect freshwater aquatic threatened and endangered species.

3.1.2 Regions of Influence

The ROIs for this Proposed Action are defined as the potential operating areas associated with the SONAR systems, which include all the areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the U.S. territories, and inland operating areas (see **Figure 1-1**). The HF and UHF SONAR systems would be used in support of USCG missions to locate, image, and classify submerged/underwater TOIs and would be operated in combination with existing USCG operations. Unforeseeable security concerns could require the HF and UHF SONAR systems to protect any port facility in all coastal and inshore areas in which the USCG currently operates, which includes the entire U.S. coastline, the Great Lakes, Hawaii, Alaska, Guam, Puerto Rico, and the U.S. Virgin Islands. As such, seven broad ROIs have been defined based on the jurisdictional regions of NMFS (rather than the USCG districts). However, the most probable location for use of the SONAR systems within these seven regions is in militarily and economically significant ports. The ROIs are composed of unique environmental characteristics. To address the substantial differences between geographic regions and to maintain the programmatic scope of the analysis, the following ROIs are addressed, when applicable, under each resource area:

- Northeast ROI (Maine through Virginia)
- Southeast ROI (North Carolina through Texas and the U.S. Caribbean)
- Southwest ROI (California)
- Northwest ROI (Oregon and Washington)
- Pacific Islands ROI (Hawaii and U.S. Territories)
- Alaska ROI
- Great Lakes ROI.

The ROIs also include the internal continental areas to coincide with the jurisdictional regions of NMFS. The Southeast ROI is further divided into subregions: the Atlantic Ocean, the GOM, and the Caribbean Sea, where appropriate, because of unique environmental characteristics.

3.2 Sound in the Marine Environment

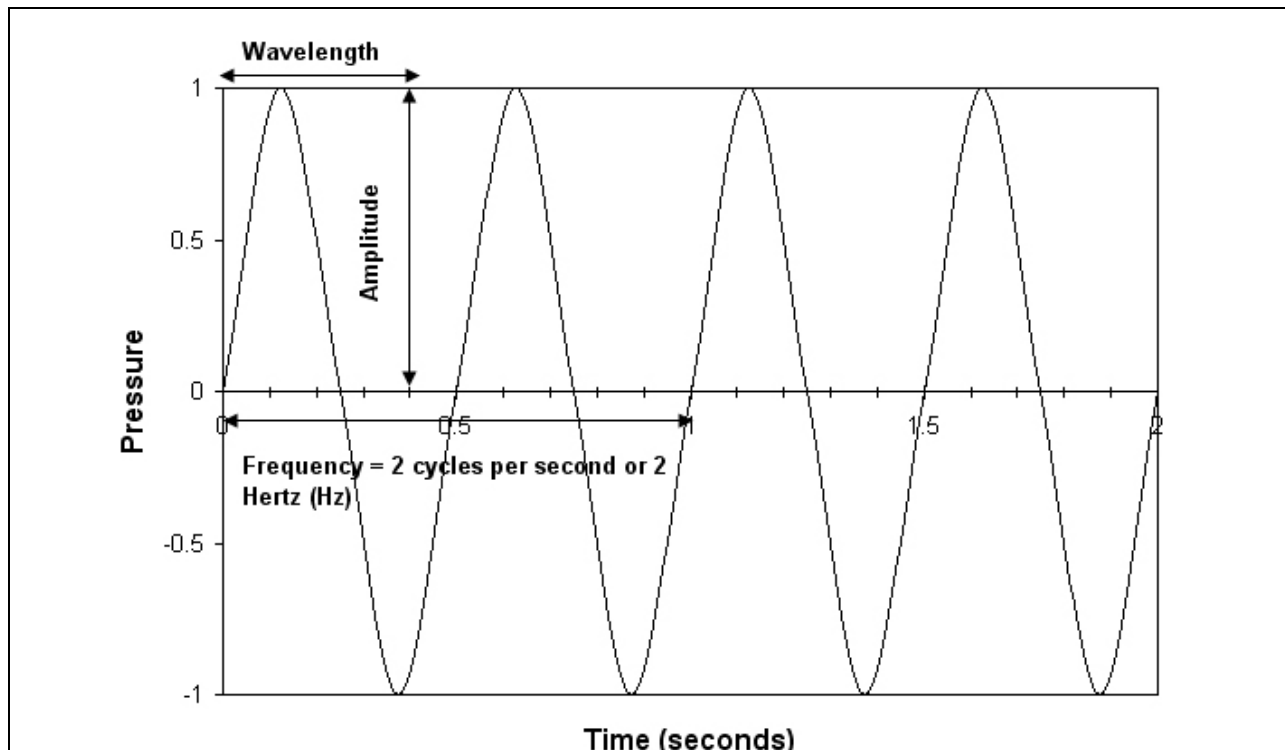
3.2.1 Definition of the Resource

The underwater acoustic environment consists of ambient sounds, defined as environmental background sound levels lacking a single source or point of origin (Richardson et al. 1995). This section explains the sound level standards and describes the existing ambient sound levels in the study areas and the methodology used to discuss a change in sound levels. It is important to understand properties of sound in the underwater environment in order to assess the impact of the Proposed Action on existing ambient sound levels in **Section 3.2.1**. These concepts were used to assess the impacts of the sound produced by the Proposed Action on existing noise levels in **Section 3.2.4**, on biological resources in **Section 3.3**, and public safety in **Section 3.4**. Note that all impacts of noise associated with the Proposed Action on all marine life were addressed in **Section 3.3**.

“Sound is a disturbance that moves through a material” (Bradley and Stern 2008). When underwater sound sources vibrate, sound-pressure waves are created. These waves alternately compress and

decompress the water as the sound wave travels or propagates. Underwater sound waves can radiate in all directions (omnidirectional) away from the source (similar to ripples on the surface of a pond). If the frequency is high and the sound source is large, compared to a wavelength of the sound radiated, the source can also be directional—or have a preferred direction of travel. The compressions and decompressions associated with sound waves are detected as changes in pressure by physiological linkage mechanisms in ears and man-made sound receptors such as hydrophones (NOAA 2009).

As presented in **Figure 3-1**, sound travels (or propagates) through space and time as waves and the basic components of sound waves are period, frequency, wavelength, amplitude, and phase (Bradley and Stern 2008). Period is the time it takes the sound to repeat, measured in seconds. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in Hz or cycles per second. Wavelength is the distance between two peaks of a sound wave. Lower frequency sounds have longer wavelengths than higher frequency sounds. The wavelength of a sound equals the velocity of sound divided by the frequency. In other terms, the speed or velocity of sound is the wavelength multiplied by the frequency. The speed of sound is slower in air (340 meters per second [m/s]) than in water (1,500 m/s) (Bradley and Stern 2008). Velocity also varies with temperature, salinity, and depth. Amplitude is the height of the sound pressure wave or the “loudness” of a sound and is typically measured using the dB scale (see **Figure 3-1**) (NOAA 2009). A dB is the ratio between a measured pressure (with sound) and a reference pressure. It is a logarithmic unit that accounts for large variations in amplitude; therefore, relatively small levels in dB ratings correspond to large changes in sound.



Source: NOAA 2009

Figure 3-1. The Basic Components of a Sound Wave

As stated above, the amplitude of a sound wave is measured in dB (a dB is the ratio between a measured pressure [with sound] and a reference pressure). In water, the standard reference of Sound Pressure Level (SPL) is 1 micro Pascal (μPa), while in air a standard sound reference pressure of 20 μPa is used. The source level for underwater sound usually represents the sound level at a distance of 1 meter (3.3 feet) from the source, referenced to 1 μPa (re 1 μPa at 1 m).

As sound travels or propagates away from its source, it loses intensity; this loss in intensity is considered transmission loss. Transmission loss occurs due to spreading, scattering, and absorption. Spreading occurs as sound moves away from the source; there is no net loss in energy, it is just spread over a wider area. There are two types of spreading: spherical and cylindrical spreading. Spherical spreading is when sound propagates equally in all directions; intensity varies inversely with the square of the range (distance from the source). Cylindrical spreading occurs when the sound propagation is affected by boundaries and it travels as if contained within the volume of a cylinder; the range of the sound is the radius of the cylinder and the distance between the boundaries is the height of the cylinder. This occurs because the sound is assumed not to be able to escape the parallel boundaries, such as the ocean bottom and the surface of the ocean (known as the air-water interface). Cylindrical spreading occurs when depth is significantly less than the range of the sound and intensity varies inversely with the range (distance from the source). Absorption is caused when acoustic energy is converted into heat or other mechanisms that cause the decrease of level and represents a loss of acoustic energy to the medium through which sound travels.

Boundaries, such as the sea surface and seafloor also affect the propagation of sound. Sound interacts with boundaries resulting in reflection, scattering, refraction, and reverberation. The sea surface would reflect sound if it were completely smooth, but because it is usually never smooth, the sea surface also scatters sound. The roughness of the sea surface is affected by wind and is described by a term “sea state.” Hard bottoms like rock would reflect sound, while soft sediments like mud would absorb sound. As stated above, the velocity of sound can change with salinity, temperature, and depth, which is not uniform in the ocean (Bradley and Stern 2008). Refraction is the bending of sound because of changes in speed to due to changes in temperature, salinity, or pressure. Reverberation is the term used to describe sound energy scattered toward a listener, and can be qualitatively thought of as being similar to a “burst” of static occasionally heard on a radio. This “burst” of sound is created due to sound scattered from a boundary region and is related to the angle between the direction the sound is traveling relative to the boundary and roughness of the boundary. The geometry causes the sound to “spread out” causing the “burst” (Bradley and Stern 2008).

In many cases, underwater sound levels are reported only for limited frequency bands, while airborne sound levels are usually reported as an integrated value over a very wide range of frequencies (Southall et al. 2007). For example, the human ear is more susceptible to higher frequency than lower frequency sounds, so a sound scale that is weighted to account for the response of the human ear is typically used to estimate sound effects on people. This is known as the A-weighted scale, which assigns a weighting of 0 to sounds with a frequency below 10 cycles per second (also known as Hz) and a maximum weighting for sounds with a frequency of 2,000 to 5,000 cycles per second (USCG and MARAD 2007). Underwater sound measurements typically do not have any frequency weighting applied (e.g., flat-weighted scale) because they are reported for specific frequencies (Southall et al. 2007). This EA only reports sound levels for underwater sources and consistently uses dB re 1 μ Pa.

3.2.2 Existing Conditions

As described above, conditions in the ROIs that would affect the propagation of sound and thus the detection of sound include temperature, salinity, sea state, and sediment or bottom type. The Proposed Action includes the nationwide use of HF and UHF SONAR systems; therefore, there are too many variables to adequately assess the propagation of sound associated with all operational scenarios. It is assumed that operations could occur throughout the full range of salinities, bottom types, temperatures, and depths that occur in each ROI. **Table 3-1** presents the temperature and depth ranges for the ROIs. Note that salinity is assumed to be 35 parts per thousand [ppt] for all ROIs except the Great Lakes, where it is assumed to be 0 ppt.

Table 3-1. Temperature and Depth Ranges of the ROIs

ROI	Temperature		Maximum Depth	
	Lower (°C)	Upper (°C)	Meters	Feet
Northeast	0.65	28	202	663
Southeast	2.2	31	363	1,191
Southwest	10	21	2,282	7,487
Northwest	5.6	19	350	1,148
Pacific ROI	22	29	4,524	14,843
Alaska	-0.55	14	99	325
Great Lakes	-2.8	25	320	1,050

Sources: GLIN 2006, NESDIS undated, Divins et al. 2008.

Key: °C = degrees Celsius

The ambient sound level of a region is defined by the total acoustical energy being generated by known and unknown sources, including sounds from both natural and man-made sources. The magnitude and frequency of environmental sound levels can vary considerably over the course of the day and throughout the week, due in part to changing weather conditions.

Existing underwater ambient sound levels result from a combination of natural and anthropogenic (man-made) sources. One of the largest and interrelated natural sources of sound is wind and waves. Wind and wave sound levels occur over a broad range of frequencies and the sound levels are related to the wind speed and consequent sea conditions (Richardson et al. 1995, Hildebrand 2005, Bradley and Stern 2008). Wind noises can range from a few hundred Hz to approximately 30 kHz. The intensity of wind and wave noise initially increases (but this contribution is usually masked by shipping noise), peaks, and decreases with increasing frequency (Wenz 1962). Other natural sources of sound that could occur in the study areas of underwater acoustics include noise caused by seismic activity, precipitation (e.g., raindrops impacting the water surface), sea ice, thermal activity (i.e., molecular agitation), and marine organisms such as fish, marine mammals, and other marine life (Hildebrand 2005). Environmental noises that operate within the frequency range of the Proposed Action include wind-related noise (including bubbles and surface agitation), precipitation, sea ice, marine organisms, and thermal noise (Bradley and Stern 2008).

The largest and most important source of anthropogenic sound is noise from vessel traffic (including shipping, recreational boating, and fishing) (Hildebrand 2005). Other anthropogenic sound sources in the study areas include the operation of oil and gas platforms and drilling rigs, seismic exploration, dredging, shoreline construction (e.g., bulkheads, revetments, docks, and pile-driving), urban and industrial development, aircraft, and other SONAR operations (Bradley and Stern 2008). Sound levels generated from these activities can be generated in water or air, and might be stationary or transient. The intensity and frequency of the sound level emissions are highly variable, both between and among industry sources. In general, the frequencies of anthropogenic sounds begin in the range of 10 to 100 Hz, peak in the region of a few hundred Hz and fall off quite rapidly above 1,000 Hz (Richardson et al. 1995).

Shipping is a major contribution to underwater SPLs, which range in frequency from 0.005 to 0.5 kHz (NRC 2003, Hildebrand 2005, Bradley and Stern 2008). SPLs for various types of ships are presented in **Table 3-2**. The sound levels emitted from recreational boating are not quantified. Commercially available fish finders and depth sounders used during recreational boating activities have frequencies within the range of 3 to 200 kHz and a SPL of 201 dB (NRC 2003, Hildebrand 2005). Fish finders have a short pulse-width (length of the sound pulse) and are typically designed to focus sound in a downward direction (NRC 2003, Hildebrand 2005).

Table 3-2. Examples of Underwater SPLs for Various Vessels

Vessel (length) and Description	Frequency (Hz)*	Source Level (dB re 1 μ Pa at 1 m)
Zodiac – 5 meters (16 feet)	6,300; 1/3 octave	152
Outboard drive – 7 meters (23 feet) (2 engines, 80 horsepower each)	630; 1/3 octave	156
Twin Diesel – 34 meters (112 feet)	630; 1/3 octave	159
Freighter – 135 meters (443 feet)	41	172
Tanker1 – 135 meters (443 feet)	428	169
Tanker 2 – 179 meters (587 feet)	60	180
Container Ship – 219 meters (718 feet)	33	181
Supertanker – 340 meters (1,115 feet)	6.8	90

Source: Richardson et al. 1995

Notes:

These underwater sound pressure levels cannot be directly compared to airborne decibel levels.

* Associated with the noise emitted by the vessels.

Seismic exploration uses low-frequency energy waves to map layers and features below the seafloor. It can also be used to measure foundation stability, detect groundwater, locate mineral deposits, and search for oil and gas. It was estimated that a typical seismic array with 240 dB re 1 μ Pa at 1 m would have a received level of 180 dB re 1 μ Pa at approximately 225 meters (738 feet) from the array (NRC 2000).

Underwater sound levels from fixed structures such as drilling rigs and platforms range in intensity from 20 to 40 dB above background levels and range in frequency from 0.03 to 0.3 kHz (MMS 2007). Aircraft generate below-water sounds with frequencies generally below 0.5 kHz (MMS 2007). These sounds are usually transient and are very temporary in nature. There are a number of other scientific equipments that use acoustic energy; typically, they are high frequency (100–400 kHz) and are used in limited locations and for limited time periods to measure marine properties such as current, sediment transport, and drift rates.

While some site-specific underwater ambient noise data might be available for different areas and times, there are too many potential operating areas, scenarios, and conditions to provide underwater ambient noise levels for all situations. Underwater ambient noise is highly variable (Hildebrand 2005). At a given time and place, a broad range of sources could be combined and conditions at that location can affect sounds that are received (e.g., sound propagation, water depth, and bathymetry) (Hildebrand 2005).

Generally, underwater ambient noise levels can be characterized by the natural and anthropogenic sources that are predominant in the area (Bradley and Stern 2008). These noise sources can be prevailing noises (those noises that are constantly present and that could come from both near and far) and intermittent and local noises (Bradley and Stern 2008). As stated above, the most important sources of sound are wind, waves, and shipping. Ambient underwater sound levels can range from 0.001 kHz to 100 kHz with higher decibel levels at the lower frequencies. However, intensity level depends on factors such as wind speed and distance from the other sources (e.g., shipping) (Bradley and Stern 2008).

Because the study areas are busy port areas, it is assumed that existing ambient underwater sound levels would be dependent upon the levels of shipping and boating in each study area. Generally, ambient levels in ports and coastal areas are higher than observed in deepwater open ocean situations (Urick 1983). Ambient noise levels can vary by 10 to 20 dB re 1 μ Pa from day to day and can also vary in shorter time

spans (e.g., minutes) (Richardson et al. 1995). Other sources of man-made sound in the study areas include maintenance dredging and construction and maintenance of port infrastructure. Other characteristics that could affect sound propagation include substrate type and depth (Richardson et al. 1995). Not only does ambient noise vary with noise sources, it also varies with sound propagation conditions. As described above, propagation conditions can change with temperature and salinity, which can also change within the span of hours. These factors can affect the detection of sound, by equipment and other receivers, including marine mammals (Richardson et al. 1995, Bradley and Stern 2008).

3.2.3 Significance Criteria

The significance of the effects on existing ambient sound levels in the marine environment are based on the duration and magnitude of a change in sound level, often caused by a noise event. Physically, there is no distinction between sound and noise. Sound is a sensory perception. The complex pattern of sound waves is labeled noise, music, speech, and so on. Thus, noise is defined as any sound that is undesirable because it interferes with communication, can be intense enough to alter hearing, or is otherwise annoying. Therefore, if the Proposed Action results in a substantial permanent, periodic, or temporary increase in existing ambient sound levels, the impacts would be significant. The effects of the sound would only be cumulative if the systems operated on the same frequency (as described above). Note that impacts of sound associated with the Proposed Action on biological resources are assessed in **Section 3.3** and on human health are assessed in **Section 3.4**.

3.2.4 Environmental Consequences of the Proposed Action

The Proposed Action includes the nationwide use of HF and UHF SONAR systems; therefore, there are too many variables to adequately assess the propagation of sound associated with all operational scenarios. In addition, site-specific analyses are beyond the scope of the PEA. General propagation modeling based on frequency and temperature was conducted and is presented in **Appendix E**. Sound associated is pulsed noise (as opposed to continuous noise). Pulses are typically relatively short and can be as short as microseconds, but can also be as long as several seconds. In the case of the Proposed Action, the pulses would be μ s or ms. This analysis estimated that the distance the source levels would be reduced would be below 180 dB re μ Pa and 160 dB re 1 μ Pa at the maximum source levels expected for 50 kHz, 70 kHz, 132 kHz, and 200 kHz. These thresholds are based on NMFS guidance for Level A harassment of marine mammals of 180 dB re 1 μ Pa and level B harassment of 160 dB re 1 μ Pa for pulsed sound. These thresholds and the meaning of Level A and B harassment are discussed in further detail in **Section 3.3.4.2.2**. For the analysis, the upper limit of 200 kHz was chosen because no injury or incidental harassment of marine mammals or other species is expected above 200 KHz, based on known and projected hearing capabilities of marine species (Southall et al. 2007). The maximum distance that sound would attenuate to below 180 dB re 1 μ Pa and 160 dB re 1 μ Pa in freshwater and saltwater environments (based on all scenarios analyzed) is presented in **Table 3-3**. Therefore, short-term, minor, adverse localized increases in ambient underwater sound levels (at frequencies greater than 50 kHz) would be expected under the Proposed Action. However, this varies based on a combination of frequency and source level and in many cases would be lower (see **Appendix E**).

Long- and short-term, minor, localized increases in ambient underwater sound levels would occur as a result of the Proposed Action; therefore the cumulative effects are expected to be negligible. Detailed specifications for these types of SONAR systems covered under the Proposed Action are presented in **Table 2-3**. The SONAR equipment that would be operated under the Proposed Action is similar to many commercially available, high-frequency fish finders, inasmuch as this equipment is low in power and would have a short pulse-width (length of the sound pulse) and is typically designed to focus in a single direction (fish finders are typically focused downward) (NRC 2003, Hildebrand 2005).

Table 3-3. The Maximum Distance Sound Associated with the Proposed Action Would Attenuate to Below 180 dB re 1 μ Pa and 160 dB re 1 μ Pa in Freshwater and Saltwater Environments

Environment	Maximum Distance to 180 dB re 1 μ Pa in meters (feet)	Maximum Distance to 160 dB re 1 μ Pa in meters (feet)
Freshwater	500 (1,640)	2,800 (9,186)
Saltwater	300 (984)	900 (2,953)

High-frequency sounds typically travel short distances compared to low- and medium-frequency SONAR, which usually require higher power. These types of SONAR were eliminated from consideration (see **Section 2.2.1**) and will not be included under the Proposed Action. The use of high-frequency and low-powered SONAR helps to reduce the impacts by reducing the area ensonified by the equipment.

The equipment would be used at a range necessary to locate and classify underwater threats and other TOIs and would be focused at the TOI. TOIs could include combat swimmers/divers, explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures or objects that have become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade, commerce, recreational boating, or other maritime activities. Additionally, USCG operations would typically occur in navigable waterways in these areas. Normal locations for deployments would include the ports and waterways of the nation's top-tiered militarily and economically significant ports.

Sound is expected to drop below the 180- and 160- dB re 1 μ Pa threshold in relatively shorter distances than those shown in **Table 3-3**, due to rapid attenuation of the HF and UHF signals. Additionally, the SONAR systems are most likely to be used from mobile platforms in heavily trafficked ports and waterways. This is an already noisy environment, with many sources of sound at broad range of frequencies. The Proposed Action would not substantially increase the ambient sound level in a heavily trafficked area. Multiple sources operating at one time at the same frequency can increase or decrease the noise level, depending on the number of sources, the intensity of each source, and the manner in which the energy interacts (the energy could combine in a coherently [increase] or interfere [decrease]). However, any contribution of 10 dB re 1 μ Pa or smaller can be neglected. Therefore, in order for multiple sources of sound to interact at the high frequencies under the Proposed Action, the sources must be situated at fairly short distances, because at these frequencies the sound attenuates in short distances. For example, **Table E-1** (in **Appendix E**) indicates that a 50 kHz SONAR with a source level of 221 would have a received level of 180 dB re 1 μ Pa at 200 meters (656 feet) (when the salinity and temperature are both 0).

Cumulative in this context is used to describe the impact of ambient sound levels when they are present for long period of time and result in behavior change and hearing damage. Typical port activities that add to the existing ambient sound levels include shipping and boating, aircraft, dredging, construction and maintenance of port infrastructure, and industrial activity (these are examples of activities that result in activities that result in cumulative impacts, as they are effectively constantly occurring). The Proposed Action, in conjunction with other USCG MHLS measures such as Response Boat Acquisitions, the MSSTs, and the IAS, would also result in an increase of underwater ambient noise levels, but not in a continuous manner. The Response Boat Acquisition would only replace existing assets and, therefore, would not result in an overall increase in noise. The NAIS and LORAN projects are not expected to result in production of underwater sound. The MSSTs and the IAS could result in minor increases in noise. However, as described above, the impact of sound is cumulative when it is produced in the hearing

range of the extant marine life, is above the naturally occurring background noise, and is present for enough time to cause hearing damage or behavior change. While the IAS is the same frequency as the some of the equipment that would be used under the Proposed Action, it is unlikely that the testing of the SONAR equipment would occur while the IAS is being operated. If the Proposed Action were to result in the use of multiple SONAR technologies in a given area, it would be nonredundant capabilities of the different systems. This means that the different systems would have different purposes and thus operate at different ranges and frequencies and the increase in sound in the area would be distributed over both time and space. The Proposed Action would result in a minor, localized, and temporary or periodic increase in ambient sound levels; therefore, the cumulative effects are expected to be negligible. Cumulative impacts on biological resources are presented in **Section 3.3** and on public safety are presented in **Section 3.4**.

3.2.5 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, existing conditions would remain as is and the USCG would not implement nationwide use of HF and UHF SONAR systems. The USCG would not have nationwide capabilities to locate and classify underwater threats and other TOIs. If the Proposed Action was not implemented it could result in the increased risk of a terrorist attack. An explosion associated with a terrorist attack would result in an impact that would have a temporary, substantial increase on ambient underwater sound levels. The No Action Alternative could result in a short-term, significant, adverse effect on the ambient underwater noise of an area.

3.3 Biological Resources

3.3.1 Definition of the Resource

Biological resources include native or naturalized plants and animals, and the habitats in which they exist. Sensitive and protected biological resources include plant and animal species listed as threatened or endangered by a Federal agency, such as the USFWS and NMFS or a state regulatory agency, or that are otherwise protected under Federal, state, or tribal laws. Determining which species and habitats occur in an area affected by a proposed action was accomplished through literature reviews and coordination with appropriate Federal and state regulatory agency representatives, resource managers, and other subject matter experts. Only threatened or endangered species that could be affected by the Proposed Action were described and assessed in detail. Because freshwater aquatic species do not have the capability to hear the proposed SONAR, and thusly would not be affected by the Proposed Action, they are not described or assessed in detail (see **Section 3.1.1**).

3.3.2 Existing Conditions

3.3.2.1 Marine Protected Areas

Presidential EO 13158 defines a Marine Protected Area (MPA) as “any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.” EO 13158 was signed to enhance the management, protection, and conservation of U.S. marine resources through more effective and collaborative uses of MPAs as an ecosystem management tool. MPAs span a range of habitats including areas in the open ocean, coastal areas, intertidal zone, estuaries, and Great Lakes waters (MPA 2008).

Nearly 1,700 MPAs are currently in place in the United States. These areas cover 34 percent of U.S. marine waters, and vary widely in purpose, legal authorities, managing agencies, management

approaches, level of protection, and restrictions on human uses. Approximately 68 percent of the nation's MPAs are managed by coastal states and territories, while fewer than 30 percent are under Federal jurisdiction. Many state MPAs were created to protect specific coastal habitats (e.g., beaches) and resources (e.g., nesting birds). Less than 1 percent of U.S. MPAs are managed by a local agency. Although the majority of MPAs in the United States are not federally managed, several Federal MPAs (e.g., Federal fishery closures) are very large and can span several states. For this reason, approximately 85 percent of the total MPA area in U.S. waters is under Federal jurisdiction (MPA 2008).

The following text presents MPA regional statistics, including the count of MPAs and percent of U.S. MPA area in each region. Site counts are separated into two categories: Federal; and state, territorial, and partnership (see **Appendix F** for a list of all U.S. MPAs).

Northeast ROI

The Northeast ROI has the highest percentage of regional waters (0–200 NM) in some form of MPA. In the Northeast ROI, there are 79 Federal and 210 state, territorial, and partnership MPAs covering approximately 413,685 square kilometers (km²), or 3 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

Southeast ROI

In the Southeast Atlantic, there are 42 Federal and 254 state, territorial, and partnership MPAs covering approximately 513,613 km², or 4 percent of the total MPA areas in the United States (see **Appendix F**). In the GOM, there are 56 Federal and 231 state, territorial, and partnership MPAs covering approximately 698,689 km², or 6 percent of the total MPA areas in the United States. The highest percentage of natural heritage MPAs are found in the GOM region (see **Appendix F**). In the Caribbean, there are 10 Federal and 29 state, territorial, and partnership MPAs covering approximately 227,574 km², or 2 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

Northwest ROI and Southwest ROI

The Northwest and Southwest ROIs combined have the highest number of MPAs. Along the west coast there are 81 Federal and 215 state, territorial, and partnership MPAs covering approximately 821,716 km², or 7 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

Pacific Islands ROI

The Pacific Islands ROI has the largest area of MPAs and has the most area in no-take MPAs. In the Pacific Islands region, there are 23 Federal and 67 state, territorial, and partnership MPAs covering approximately 5,865,559 km², or 47 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

Alaska ROI

The Alaska ROI contains the highest percentage of sustainable production MPAs. In the Alaska region, there are 30 Federal and 29 state, territorial, and partnership MPAs covering approximately 3,685,319 km², or 30 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

Great Lakes ROI

The highest percentage of cultural heritage MPAs are found in the Great Lakes ROI. In the Great Lakes ROI, there are 6 Federal and 34 state, territorial, and partnership MPAs covering approximately 156,740 km², or 1 percent of the total MPA areas in the United States (see **Appendix F**) (MPA 2008).

3.3.2.2 Marine Mammals

There are more than 120 species of marine mammals worldwide (Rice 1998). The term “marine mammal” is purely descriptive, referring to mammals that carry out all or a substantial part of their foraging in marine or, in some cases, freshwater environments. Marine mammals as a group are composed of various species from three orders (i.e., Cetacea, Carnivora, and Sirenia).

The Order Cetacea (cetaceans) is divided into two major suborders: Mysticeti (baleen whales) and Odontoceti (toothed whales). Baleen whales use baleen to filter their prey, while toothed whales use their teeth to grasp their prey. Beyond contrasts in feeding methods, there are also life history and social organization differences between baleen and toothed whales (Tyack 1986). The Order Carnivora includes fissipeds and pinnipeds. Pinnipeds are divided into three families: Phocidae (“true” or earless seals), Otariidae (sea lions and fur seals), and Odobenidae (walruses). Beyond physical differences, there are also life history differences (e.g., Riedman 1990). The sea otter and polar bear are fissipeds. Manatees and the dugong are the only living members of the Order Sirenia.

All marine mammals in U.S. waters are afforded Federal protection by the MMPA; several are also listed under the ESA (see **Table 3-4**). Marine mammal species occurrences in each ROI are discussed by ROI and summarized in **Table 3-4**. Strategic stocks for each ROI are listed within each ROI below. The term “strategic stock” is defined as a marine mammal stock: (A) for which the level of direct human-caused mortality exceeds the Potential Biological Removal level; (B) which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the ESA of 1973 within the foreseeable future; or (C) which is listed as a threatened species or endangered species under the ESA of 1973 or is designated as depleted under [the MMPA].

3.3.2.2.1 General Marine Mammal Occurrence

The ROIs include fresh, brackish, and marine waters throughout the United States. The offshore operating area would include areas up to 12 NM offshore and most areas shoreward. The seaward boundary of each ROI includes shelf break (or in the case of island chains, the insular shelf), and in some cases upper slope (or even deeper) waters, which means that any deepwater species (e.g., sperm whales, beaked whales, and oceanic delphinids) with documented occurrence in an ROI (see **Table 3-4**) have the potential to be affected by the Proposed Action. Areas of complex bottom topography including (but not limited to) shelf margin/shelf break; seamounts; canyons and troughs are areas of high biological productivity and are important foraging areas for marine mammals.

Northeast ROI

Cetaceans are the primary marine mammal species occurring in the Northeast ROI, along with two pinniped species (see **Table 3-4**). Some species are resident year-round, while others make seasonal migrations through the area.

Strategic stocks in this ROI include ESA-listed species, the harbor porpoise, management units of the coastal stock of bottlenose dolphin, and the pygmy sperm whale (Waring et al. 2009).

1 **Table 3-4. Marine Mammal Species Occurring in the U.S. Coast Guard Regions of Influence**

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs					
			Northeast	Southeast	Northwest	Southwest	Alaska	Pacific Islands
Order Cetacea								
Suborder Mysticeti (baleen whales)								
Family Balaenidae (right whales)								
North Atlantic right whale	<i>Eubalaena glacialis</i>	E	X	X				
North Pacific right whale	<i>Eubalaena japonica</i>	E			X	X	X	X
Bowhead whale	<i>Balaena mysticetus</i>	E					X	
Family Balaenopteridae (rorquals)								
Humpback whale	<i>Megaptera novaeangliae</i>	E	X	X	X	X	X	X
Minke whale	<i>Balaenoptera acutorostrata</i>		X	X	X	X	X	X
Bryde's whale	<i>Balaenoptera edeni</i>			X		X		X
Sei whale	<i>Balaenoptera borealis</i>	E	X	X*	X	X	X	X
Fin whale	<i>Balaenoptera physalus</i>	E	X	X	X	X	X	X
Blue whale	<i>Balaenoptera musculus</i>	E	X	X	X	X	X	X
Family Eschrichtiidae (gray whale)								
Gray whale	<i>Eschrichtius robustus</i>	¹			X	X	X	
Suborder Odontoceti (toothed whales)								
Family Physeteridae (sperm whale)								
Sperm whale	<i>Physeter macrocephalus</i>	E	X	X	X	X	X	X
Family Kogiidae (pygmy sperm whales)								
Pygmy sperm whale	<i>Kogia breviceps</i>		X	X	X	X		X
Dwarf sperm whale	<i>Kogia sima</i>		X	X		X		X
Family Ziphiidae (beaked whales)								
Cuvier's beaked whale	<i>Ziphius cavirostris</i>		X	X	X	X	X	X
Blainville's beaked whale	<i>Mesoplodon densirostris</i>		X	X		X		X
True's beaked whale	<i>Mesoplodon mirus</i>		X	X				
Gervais' beaked whale	<i>Mesoplodon europaeus</i>		X	X				
Sowerby's beaked whale	<i>Mesoplodon bidens</i>		X					
Ginkgo-toothed beaked whale	<i>Mesoplodon ginkgodens</i>					X		X
Hubbs' beaked whale	<i>Mesoplodon carlhubbsi</i>				X	X		
Stejneger's beaked whale	<i>Mesoplodon stejnegeri</i>				X	X	X	
Perrin's beaked whale	<i>Mesoplodon perrini</i>					X		
Pygmy beaked whale	<i>Mesoplodon peruvianus</i>					X		
Longman's beaked whale	<i>Indopacetus pacificus</i>					X		X
Baird's beaked whale	<i>Berardius bairdii</i>				X	X	X	
Northern bottlenose whale	<i>Hyperoodon ampullatus</i>		X					
Family Montodontidae (beluga and narwhal)								
Beluga	<i>Delphinapterus leucas</i>	²					X	

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs					
			Northeast	Southeast	Northwest	Southwest	Alaska	Pacific Islands
Order Cetacea (continued)								
Family Delphinidae (dolphins)								
Rough-toothed dolphin	<i>Steno bredanensis</i>			X		X		X
Bottlenose dolphin	<i>Tursiops truncatus</i>		X	X		X		X
Pantropical spotted dolphin	<i>Stenella attenuata</i>		X	X		X		X
Atlantic spotted dolphin	<i>Stenella frontalis</i>		X	X				
Striped dolphin	<i>Stenella coeruleoalba</i>		X	X	X	X		X
Spinner dolphin	<i>Stenella longirostris</i>		X	X				X
Clymene dolphin	<i>Stenella clymene</i>		X	X				
Short-beaked common dolphin	<i>Delphinus delphis</i>		X	X*	X	X		X
Long-beaked common dolphin	<i>Delphinus capensis</i>					X		
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>		X			X		
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>				X	X	X	
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>		X					
Risso’s dolphin	<i>Grampus griseus</i>		X	X	X	X	X	X
Northern right whale dolphin	<i>Lissodelphis borealis</i>				X	X	X	
Fraser’s dolphin	<i>Lagenodelphis hosei</i>			X				X
Melon-headed whale	<i>Peponocephala electra</i>			X		X		X
Pygmy killer whale	<i>Feresa attenuata</i>			X		X		X
False killer whale	<i>Pseudorca crassidens</i>	⁶		X	X	X		X ⁶
Killer whale	<i>Orcinus orca</i>	³	X ³	X ³	X	X	X	X
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>		X	X	X	X	X	X
Long-finned pilot whale	<i>Globicephala melas</i>		X	X				
Family Phocoenidae (porpoises)								
Harbor porpoise	<i>Phocoena phocoena</i>		X	X	X	X	X	
Dall’s porpoise	<i>Phocoenoides dalli</i>				X	X	X	
Order Carnivora								
Suborder Pinnipedia (seals, sea lions, walruses)								
Family Phocidae (true seals)								
Harbor seal	<i>Phoca vitulina</i>		X		X	X	X	
Gray seal	<i>Halichoerus grypus</i>		X					
Hawaiian monk seal	<i>Monachus schauinslandi</i>	E						X
Northern elephant seal	<i>Mirounga angustirostris</i>				X	X	X	
Harp seal	<i>Paqophilus groenlandicus</i>		X					

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs					
			Northeast	Southeast	Northwest	Southwest	Alaska	Pacific Islands
Order Carnivora (continued)								
Family Phocidae (true seals) (continued)								
Hooded seal	<i>Cystophora cristata</i>		X					
Ringed seal	<i>Phoca hispida</i>	C					X	
Ribbon seal	<i>Histiophoca fasciata</i>						X	
Spotted seal	<i>Phoca largha</i>	7					X	
Bearded seal	<i>Erignathus barbatus</i>	C					X	
Family Otariidae (sea lions and fur seals)								
Northern fur seal	<i>Callorhinus ursinus</i>				X	X	X	
Guadalupe fur seal	<i>Arctocephalus townsendi</i>	T			X	X		
Steller sea lion	<i>Eumetopias jubatus</i>	4			X	X	X	
California sea lion	<i>Zalophus californianus</i>				X	X	X	
Family Odobenidae (walrus)								
Walrus	<i>Odobenus rosmarus</i>						X	
Suborder Caniformia (‘dog-like’ carnivores)								
Family Mustelidae (mustelids)								
Sea otter	<i>Enhydra lutris</i>	5			X	X	X	
Family Ursidae								
Polar bear	<i>Ursus maritimus</i>	T					X	
Order Sirenia								
Family Trichechidae (manatees)								
West Indian manatee	<i>Trichechus manatus</i>	E	X	X				
Family Dugongidae (dugong)								
Dugong	<i>Dugong dugong</i>	E						X

Notes:

Recorded presence of the species within the ROI is indicated by an X. Extralimital occurrences of threatened and endangered species were taken into consideration for conservation consideration of species occurrence in each ROI. Taxonomy follows that used by NOAA. ESA Status: E = endangered, T = threatened, C = candidate.

1. Only the western Pacific population is listed; it does not occur within the ROIs.
2. Refers to Cook Inlet population (there are 5 total beluga populations in Alaska waters).
3. The species itself has no ESA status; only the distinct population segment known as the Southern Resident killer whale is listed as endangered.
4. The species as a whole is listed as threatened; the eastern population that is expected in the Northwest, Southwest, and Alaska ROI is listed as threatened while the western population that occurs only in the Alaska ROI is listed as endangered. The NMFS recently initiated a status review of the eastern population.
5. There are 2 subspecies of sea otters: southern and northern, divided into 5 stocks in U.S. waters. The southern sea otter (California stock) is listed as threatened. The northern sea otter is composed of 4 stocks, only the southwest Alaska stock is listed as threatened; the Washington stock is not ESA-listed.
6. The species itself has no ESA status; only the distinct population segment, Insular Hawaiian, was recently considered a candidate by the NMFS.
7. The species itself has no ESA status; only the distinct population segment, Southern, is proposed for listing as a threatened species by the NMFS.

Key: * = Species does not occur in Caribbean or GOM component of ROI.

Two major oceanographic regimes dominate in this ROI: the Gulf of Maine, which is characterized by relatively cold, less saline water; and the Georges Bank/mid-Atlantic region, which is characterized by warmer, more saline water. Several baleen whale species occur seasonally to feed in the Gulf of Maine, including fin, minke, humpback, sei, and North Atlantic right whales. Blue whales are only occasionally sighted in the Gulf of Maine during the summer, which might represent the current southern limit of its feeding range (Waring et al. 2009). The western margin of the Gulf of Maine is intensively used by cetaceans (Kenney and Winn 1986). Seasonal north-south movements, as well as inshore/offshore movements have been documented in the ROI for some species including pilot whales, common dolphins, and Atlantic white-sided dolphins (Selzer and Payne 1988, Payne and Heinemann 1993). Alterations in distribution shifts of humpback, fin, sei, and North Atlantic right whales; white-beaked dolphins; Atlantic white-sided dolphins; and harbor porpoise have been correlated to human-induced changes in abundances of fish stocks by a number of studies (Kenney et al. 1996). A key area for beaked whales is from Cape Hatteras to southern Nova Scotia and east to the start of the abyssal plain (MacLeod and Mitchell 2006).

Southeast ROI

Cetaceans are the primary marine mammal species occurring in the Southeast ROI, along with the West Indian manatee (see **Table 3-4**). Extralimital occurrences (outside of the normal range) of hooded seals have been reported for areas as far south as within this ROI (Mignucci-Giannoni and Odell 2001). Some species are resident year-round, while others make only seasonal migrations through the area.

Strategic stocks in this ROI include those species with ESA-status (see **Table 3-4**), and the harbor porpoise; management units of the coastal stock of bottlenose dolphin occurring in both the western North Atlantic and the GOM; GOM bay, sound, and estuarine bottlenose dolphin stocks; and the pygmy sperm whale in the western North Atlantic (Waring et al. 2009).

In an effort to reduce ship collisions, an early warning system (EWS), the Right Whale Sighting Advisory System, was instigated in 1994 for the region. This system was extended in 1996 to the feeding areas off New England. In 1999, a Mandatory Ship Reporting System was implemented by the USCG. This reporting system requires specified vessels to report their location while in the nursery and feeding areas of the North Atlantic right whale (Ward-Geiger et al. 2005). At the same time, ships receive information on locations of right whale sightings in order to avoid whale collisions. Geographical boundaries of the area in the southeastern United States include coastal waters within roughly 46 km (28 miles) offshore along a 167-km (103-mile) stretch of the Atlantic coast in Florida and Georgia.

Atlantic Ocean. The marine mammal fauna of the continental shelf in the mid-Atlantic United States (Virginia and North Carolina) ordinarily consists of only six species: the bottlenose dolphin, harbor porpoise, North Atlantic right whale, humpback whale, and occasional sightings of the West Indian manatee and the killer whale. Extralimital sightings of seals (harp, gray, harbor, and hooded), whales (minke and fin), and dolphins (common dolphin) have been recorded here. The Chesapeake Bay seasonally contains bottlenose dolphins as well as occasional sightings of manatees, harbor seals, and North Atlantic right whales. Cape Hatteras, North Carolina, is generally considered to be the boundary between temperate and tropical species in the western North Atlantic and a dividing line for many marine species. Many marine mammal species occurring in North Carolina are year-round residents, but others migrate into inshore and nearshore waters during the summer/fall and winter/spring months (Webster et al. 1995). Some toothed whale species in this area have seasonal changes in their occurrence patterns. For example, mid-Atlantic (into North Carolina waters) harbor porpoise occurrence is from December through May, based on bycatch data (Cox et al. 1998, Waring et al. 2009).

The Gulf Stream Current is the single most influential oceanographic feature in this region, influencing water temperature, salinity, and nutrient availability. Meanders of the Gulf Stream typically form frontal

eddies that result in localized areas of high surface primary productivity. Many toothed whale species, such as pilot whales and Risso's dolphin, frequent waters near the shelf break, where concentrations of their preferred prey (squid) occur. The bottlenose dolphin, Atlantic spotted dolphin, humpback whale, and North Atlantic right whale are the most likely species to be sighted on the shelf. Some baleen whales, such as the humpback whale and the North Atlantic right whale, migrate through the nearshore waters.

During the winter (as early as November and through March), right whales can be found in coastal waters off North Carolina, Georgia, and northern Florida (Winn et al. 1986). The coastal waters of the Carolinas are suggested to be a migratory corridor for the North Atlantic right whale (Winn et al. 1986). As noted earlier, the only calving ground for the North Atlantic right whale occurs within this ROI and is designated as critical habitat.

During the winter, most of the North Atlantic population of humpback whales is believed to migrate south to calving grounds in the West Indies region; however, there has been an increasing occurrence of this species, which appear to be primarily juveniles, during the winter along the U.S. Atlantic Coast, from Florida north to Virginia (Barco et al. 2002). It has recently been proposed that the mid-Atlantic region primarily represents a supplemental winter feeding ground for the humpback whale (Barco et al. 2002).

Communities of coastal bottlenose dolphins occur in coastal embayments and estuaries along the western Atlantic coast, and can exhibit either resident or migratory patterns in these areas (Waring et al. 2009). The coastal morphotype (form) stock in the western North Atlantic is most often found within 7.5 km (4.7 miles) of the coast (approximately 25 meters [82 feet] in bottom depth), although occurrences much further offshore are known (Torres et al. 2003, Waring et al. 2009). The coastal morphotype stock of the bottlenose dolphin (which is separated into seven management units by NMFS) shows a temperature-limited distribution. It should be noted that the offshore morphotype has been sampled as close as 7.3 km (4.5 miles) from shore in waters with a bottom depth of 13 meters (42.7 feet). During winter months and south of Cape Hatteras, the range of the coastal and offshore morphotypes overlaps to some degree. Over the continental shelf south of Cape Hatteras, the two morphotypes overlap spatially, though the probability of encountering the offshore morphotype increases with increasing depth, though there is significant spatial overlap (Waring et al. 2009). The nearshore waters of the Outer Banks are known to serve as winter habitat for coastal bottlenose dolphins (Read et al. 2003, Torres et al. 2005).

Manatees occur along both the Atlantic and Gulf coasts of Florida. On the Atlantic Coast, summer sightings drop off rapidly north of Georgia and are rare north of Cape Hatteras. Manatees occur in very shallow waters (2 to 4 meters [7 to 13 feet] in bottom depth), generally close to shore (<1 km [<0.6 miles]). Shallow seagrass beds that are close to deep channels are preferred feeding areas in coastal and riverine habitats (USFWS 2001). Although manatees are expected to inhabit nearshore areas, some have been sighted offshore as well.

Gulf of Mexico. The vast majority of the marine mammal fauna of the GOM are cetacean species, with the West Indian manatee being the only exception. Endangered marine mammal species with expected occurrence within this section of the Southeast ROI are the sperm whale and West Indian manatee. ESA-listed baleen whales sporadically make their way here; the humpback whale has the most records, then the North Atlantic right whale. These records likely represent extralimital strays from the wintering grounds or might even reflect a more extensive historic range beyond the known (right whale) calving and wintering ground in the waters of the southeastern United States (Jefferson and Schiro 1997, Waring et al. 2009). Infrequent reports of fin, sei, and blue whales have also been recorded (Jefferson and Schiro 1997).

Marine mammal species on the continental shelf ordinarily consist of only the bottlenose dolphin, Atlantic spotted dolphin, and the manatee (Jefferson and Schiro 1997, Würsig et al. 2000, Fulling et al.

2003). Sighting and tagging data indicate the use of continental shelf waters off the Florida panhandle by the rough-toothed dolphin (Wells et al. 1999, Fulling et al. 2003). Beyond the shelf break, in deeper, oceanic waters, the cetacean community primarily consists of the Bryde's whale, the sperm whale, pygmy and dwarf sperm whales, 3 species of beaked whales, and 12 members of the oceanic dolphin family (Würsig et al. 2000). A key area for beaked whales is in northern Gulf of Mexico continental shelf margins, north of a line at the U.S./Mexico border, east to 84.87° West longitude south to the western end of Cuba, east to 81.34° West longitude and north to Florida; northern Puerto Rico and the Virgin Islands 16.75 to 19.50° North latitude, 64.0 to 67.75° west longitude (MacLeod and Mitchell 2006).

The region of the Mississippi River Delta has been recognized for high densities of sperm whales and appears to represent an important calving and nursery area for these marine mammals (Jochens et al. 2008). The continental shelf is very narrow near the Mississippi River Delta, so the nutrient-rich river plume extends into deep waters where primary productivity and zooplankton abundance are amplified (Baumgartner et al. 2001, Davis et al. 2002).

The Wakulla River is the northern limit of the manatee's typical warm-season range on the Gulf Coast (Lefebvre et al. 2001). Manatees are sometimes reported in the Florida Keys; these sightings are typically in the upper Florida Keys, with some reports as far south as Key West. Since 1990, sightings and strandings west of Florida have been increasing (Fertl et al. 2005).

Caribbean Sea. The vast majority of the marine mammal fauna of the Caribbean Sea are cetacean species, with the West Indian manatee being the only exception. The varied physiography of the Caribbean Sea, with deep basins, oceanic islands, and narrow continental or insular shelves provides a diverse range of habitats for a variety of marine mammal species. Most species, such as the West Indian manatee or bottlenose dolphin, use this area year-round. Others species, such as the endangered humpback whale, have a seasonal occurrence. Humpback whales migrate to calving grounds in the Caribbean during the fall, overwinter, and then make return migrations to the feeding grounds much further north during the spring. The insular shelf waters of the geologic formation the Puerto Rico Platform are considered an area of concentrated occurrence for the species, based on the habitat preferences of mother-calf pairs for shallow waters (e.g., Smultea 1994). Some marine mammals, such as the hooded seal, occasionally travel into the Caribbean Sea, a region far beyond their normal distributional range (Mignucci-Giannoni and Odell 2001).

Many sightings are reported on the insular shelf of the Puerto Rico Platform. Manatees are found in coastal waters, well inside the continental shelf and, rarely, if at all, near the shelf break (Mignucci-Giannoni 1989). This distribution is probably more a reflection of the topography and substrate requirements for seagrasses, which manatees feed upon (Mignucci-Giannoni 1989). Manatees in this area are known to swim between Puerto Rico and Vieques islands. The distribution of cetaceans near Puerto Rico and the Virgin Islands is highly correlated to the area's bathymetric relief (Mignucci-Giannoni 1989, 1998). In a review of the available information prior to any systematic cetacean surveys in this area, Mignucci-Giannoni (1989, 1998) determined that most marine mammal species occur on the continental shelf. With deep water (greater than 200 meters [656 feet]) in very close proximity to the shore in the northeastern Caribbean Sea, there are many oceanic cetacean species that can be found near shore or on the continental shelf in contrast to locales in other parts of the world where the continental shelf is wider.

As noted for the Gulf of Mexico, a key area for beaked whales is from northern Gulf of Mexico continental shelf margins, north of a line from the U.S./Mexico border, east to 84.87° west longitude south to the western end of Cuba, east to 81.34° west longitude and north to Florida; and Northern Puerto Rico and the Virgin Islands 16.75 to 19.50° North latitude, 64.0 to 67.75° West longitude (MacLeod and Mitchell 2006).

Northwest ROI

Marine mammal species occurring in the Northwest ROI include cetaceans (e.g., whales, dolphins, and porpoises), pinnipeds (e.g., seals, sea lions, and fur seals), and the sea otter (see **Table 3-4**). Some species are resident year-round, while others make only seasonal migrations through the area. Strategic stocks in this ROI include those species (or in the case of the Southern Resident killer whale, distinct population segment) with ESA-status, as well as the short-finned pilot whale (Carretta et al. 2010).

The physical oceanography of the region is largely controlled by circulation within the California Current System, the Columbia River plume, the formation of large eddies (e.g., the Juan de Fuca Eddy), and seasonal wind stress (Hickey and Banas 2003). The combination of these forces creates an ecosystem of diverse oceanographic conditions. Occurrence patterns (the presence or absence) of cetaceans in the Pacific Northwest are often related to the regionalized differences in hydrographic and oceanographic variables, with sea surface temperature, salinity, chlorophyll, and location of the thermocline explaining the majority of distribution variability (Tynan et al. 2005). In addition, circulation in the Strait of Juan de Fuca follows the typical patterns of estuarine flow with fresher surface water flowing seaward above the colder, saltier seawater. This deep seawater flows landward resulting in the presence of cold oceanic water far inland of the Pacific Coast (Ott and Garrett 1998); the presence of deep, cold oceanic water inshore allows for deepwater marine mammals to enter the shallower waters of Puget Sound.

In the Pacific Northwest, the distribution and movement patterns of some marine mammal species are driven by occurrences of salmon, an important prey source. Pinnipeds haul out and aggregate near areas where migrating salmon run. For example, in the San Juan Islands, harbor seals congregate near a constricted channel in which migrating salmon are funneled through by the incoming tidal currents (Zamon 2001). In Oregon, harbor seals also aggregate near a constriction in Netarts Bay and wait for chum salmon (*Oncorhynchus keta*) runs during the incoming tide (Brown and Mate 1983). These constrictions in tidal flow represent important foraging habitat for pinnipeds due to the predictability of salmon in these areas (Zamon 2001). Resident killer whale distribution, in particular, is also often dependent on salmon. Resident killer whales congregate during the summer at particular coastal locations that are in association with high densities of migrating salmon (Wiles 2004, Zamon et al. 2007, NMFS 2008a). Their strong preference for Chinook salmon (*Oncorhynchus tshawytscha*) could influence the year-round distribution patterns of resident killer whales in coastal British Columbia and adjacent waters (Ford and Ellis 2005).

Temperate and warm-water toothed whales often change their distribution and abundance as oceanographic conditions vary seasonally (Forney and Barlow 1998) and inter-annually (Forney 2000). Forney and Barlow (1998) noted significant north/south shifts in distribution for Dall's porpoises, common dolphins, and Pacific white-sided dolphins, and they identified significant inshore/offshore differences for northern right whale dolphins and humpback whales. Unusual marine mammal distributions can be observed during incursions of warm water related to El Niño-Southern Oscillation (ENSO) events, allowing some species to move temporarily into more northerly latitudes. Several authors have noted the impact of the El Niño events on marine mammal occurrence patterns and population dynamics in the waters off the Pacific Coast (Wells et al. 1990, Forney and Barlow 1998, Benson et al. 2002, Norman et al. 2004). Norman et al. (2004) remarked that most of the stranding events for species that have a more extralimital occurrence in Washington State and Oregon occurred during or within a year of an El Niño event.

A group of gray whales known as the Pacific Coast Feeding Aggregation feeds along the Pacific coast between southeastern Alaska and southern California throughout the summer and fall (Calambokidis et al. 2002). The gray whales in this feeding aggregation are a relatively small proportion (few hundred individuals) of the overall eastern gray whale population and typically arrive and depart from these

feeding grounds concurrently with the migration to and from the wintering grounds (Calambokidis et al. 2002).

Southwest ROI

Marine mammal species occurring in the Southwest ROI include cetaceans, pinnipeds, and the sea otter (see **Table 3-4**). Some species are resident year-round, while others make only seasonal migrations through the area.

Strategic stocks in this ROI include those species with ESA-status (or in the case of the Southern Resident killer whale, the population segment is considered a strategic stock) (see **Table 3-4**), as well as the short-finned pilot whale (Carretta et al. 2010).

The California Current passes through this ROI creating a mixing of temperate and tropical waters, and making this area one of the most productive ocean systems in the world. Because of this productive environment, there is a rich marine mammal fauna, as evidenced in abundance and species diversity (Leatherwood et al. 1998, Bonnell and Dailey 1993). In addition to many marine mammal species that live here year-round and use the region's coasts and islands for breeding and hauling out, there is a community of seasonal residents and migrants. The narrow continental shelf along the Pacific coast and the presence of the cold California Current sweeping down from Alaska allows coldwater marine mammal species to reach nearshore waters as far south as Baja California.

The Point Conception region is one of the most important biogeographic and oceanographic discontinuities on the U.S. West Coast. The Southern California Bight (SCB) is a highly complex marine ecosystem situated off the southern California coast between Point Conception and a point just south of the U.S./Mexico international border; it is a complex combination of islands, ridges, and basins that exhibit wide ranges in water temperature. These islands provide suitable habitat for a number of marine organisms year-round. Not only do these islands serve as a breeding ground for marine birds, they also possess protected shorelines that are often used by marine mammals, especially pinnipeds. Distributed between the southern California mainland and the Channel Islands (and beyond) are a series of embayments, submarine canyons, ridges, banks, basins, and seamounts. The SCB has one of the largest and most diverse marine mammal populations in the world (Bonnell and Dailey 1993).

Bottlenose dolphins are the only marine mammal species occasionally sighted in San Diego Bay (DoN 2005a). Based on observations made by Norris and Prescott (1961), a small population of approximately 25 to 35 bottlenose dolphins inhabited San Diego Bay during the late 1950s. However, it appears that they abandoned (or nearly so) the bay as the industrial/shipping presence increased (DoN 2005a). It is possible that free-ranging individuals might continue to use this area, though this is not a preferred area. It is not known whether more recent bottlenose dolphin sightings are of individuals from the wild, free-ranging population, or USN dolphins (areas just off the SPAWAR piers are frequently used for marine mammal training sessions).

A key area for beaked whales is from the California Coast, west to 125.0° west longitude; and from the coasts of the Americas between the U.S./Mexico international border and 35.0° South latitude west to 170.0° West longitude and including the Gulf of California (MacLeod and Mitchell 2006).

As noted in the Northwest ROI write-up, temperate and warm-water toothed whales often change their distribution and abundance as oceanographic conditions vary seasonally. In years with poor prey recruitment (e.g., during El Niño events or when seasonal upwelling patterns are disrupted as during 2005) (Peterson et al. 2006), marine mammals might concentrate in the most productive nearshore areas,

such as Monterey Bay and adjacent Sanctuary waters (Benson et al. 2002, Forney 2007, Henkel and Harvey 2008).

Pacific Islands ROI

Marine mammal species occurring in the Pacific Islands ROI include cetaceans and pinnipeds (see **Table 3-4**). Some species are resident year-round, while others are here only seasonally, making migrations through the area. Rare occurrences of the dugong have been made at Guam; these likely represent extralimital, long-distance movements from Palau by the species (DoN 2005b).

Strategic stocks in this ROI include those species with ESA-status (see **Table 3-4**), as well as the Hawaii Pelagic Stock of the false killer whale (one of three false killer whale stocks recognized by NMFS in Hawaiian waters) (Carretta et al. 2010). The Hawaii insular stock was recently (2010) recognized by the NMFS as a candidate species (75 FR 316-319). NOAA stock assessment information is currently not available for the majority of the Pacific Islands ROI, aside from Hawaiian waters. It should be noted that many of the species present in the Pacific Islands ROI are virtually unstudied in large portions of the Pacific Islands Region (with the exception of the Hawaiian Islands) (e.g., PIFSC 2006).

Gannier (2002) reviewed cetacean occurrence in various locations of the tropical Pacific and provided a general assessment. Areas without a significant continental shelf domain do not shelter large densities of bottlenose dolphins. A stable component of four oceanic or semi-oceanic species is present in all areas: spinner and pantropical spotted dolphins, Risso's dolphin, and pilot whale. Spinner and pantropical spotted dolphins are among the two most frequent species in all areas. A general rule is that in most tropical areas, spinner dolphins and pantropical spotted dolphins are the most common cetacean species.

The Hawaiian Islands are the most isolated archipelago in the world. While the islands rise steeply from the ocean floor, they create substantial shallow-water habitat that might be used by some cetaceans for avoidance of predators (Norris et al. 1994) or for feeding on benthic or slope-associated prey (Benoit-Bird and Au 2003). At least 15 species of cetaceans are regularly documented in Hawaiian waters, yet until recently virtually all research has been focused on just two species, the humpback whale and spinner dolphin. Hawaiian waters represent one of the winter calving grounds for humpback whales in the North Pacific. Humpback whales migrate here to overwinter primarily in nearshore waters shallower than 200 meters (656 feet) in bottom depth (Mobley et al. 1999, Johnston et al. 2007); females with calves tend to use shallower water closer to shore (Smultea 1994). The spinner dolphin is found in nearshore waters; the Hawaiian population is famous due to their daytime behavior of resting in shallow bays (Norris et al. 1994). Area usage is becoming increasingly better understood for bottlenose dolphins, pantropical spotted dolphins, short-finned pilot whales, false killer whales, rough-toothed dolphins, dwarf sperm whales, Blainville's beaked whales, and melon-headed whales (Baird 2005; McSweeney et al. 2007; Baird et al. 2001, 2002, 2006, 2008a, 2008b; Schorr et al. 2008). All of these species are broadly distributed across tropical and subtropical waters of the Pacific, and most have somewhat pelagic habits. Individuals of most open ocean species likely range over wide areas in search of ephemeral sources of prey. The presence of the Hawaiian Islands in an otherwise vast and somewhat unproductive expanse of deep, oceanic waters can provide both a temporally and spatially predictable source of prey for a wide range of cetacean species, and, as such, can attract concentrations of these species. A key area for beaked in the Pacific Islands ROI is from 18.5° to 22.5° North latitude and 154.5° to 160.25° West longitude (MacLeod and Mitchell 2006).

Marine mammals are not well-documented in Micronesia (Eldredge 1991, Reeves et al. 1999, Eldredge 2003, DoN 2005b, Jefferson et al. 2006, Dalebout et al. 2008). The vast majority of marine mammal species with documented occurrence here are cetaceans (DoN 2005b). Eldredge (1991) called attention to the possibility that Hawaiian monk seals and northern elephant seals wander far enough from their normal

ranges to appear at the Marshall or Gilbert islands in the Micronesia region. The Mariana archipelago is composed of a series of volcanic islands that have broken the sea surface where the offshore bottom topography is steep and slopes rapidly reaching the ocean basin floor (4,000 meters [13,123 feet]) within tens of km/miles. With a narrow insular shelf, deep water is very close to shore, which means that deepwater species could be sighted close to land. The winter range of the Western North Pacific stock of humpback whales extends, at least occasionally, into this region (Darling and Mori 1993, DoN 2007a) February and March are the months when this species is most often sighted here. The first cetacean survey in waters off Guam and the CNMI took place in Spring 2007 funded by the USN, documenting occurrence of various cetacean species, including the endangered humpback whale, Bryde's whale, and most surprising, the endangered sei whale, a species not expected to occur in this area (DoN 2007a). Lagoons and bays are likely high-use areas for spinner dolphins here (Trianni and Kessler 2002).

Marine mammal occurrence at American Samoa is also not well-documented (PIFSC 2006), though some survey work has taken place to the west in Samoa (Walsh and Paton 2003, SPWRC 2008). NOAA conducted a cetacean survey in September 2003 here (Walsh and Paton 2003). As typical with other tropical island areas in the Pacific, species composition includes spinner dolphins, short-finned pilot whales, bottlenose dolphins, and beaked whales (Walsh and Paton 2003, SPWRC 2008). As of 2008, the fifth season of collaborative humpback whale research was conducted (SPWRC 2008). Humpback whales that winter near American Samoa migrate to feeding grounds in the Antarctic during the non-winter months (PIFSC 2006). Photo matches for humpback whales have been made between American Samoa and three other wintering areas of Southern Hemisphere humpbacks: Cook Islands, French Polynesia, and Tonga (PIFSC 2006, SPWRC 2008). One individual, satellite-tagged at the Cook Islands, was tracked to American Samoa and then Fiji (SPWRC 2008).

Alaska ROI

Close to 30 marine mammal species are documented for Alaska's waters; these include cetaceans, pinnipeds, and the sea otter (see **Table 3-4**) (Wynne 1997).

Strategic stocks in this ROI include those species (and in the case of the Cook Inlet beluga and the southwest stock of the northern sea otter, distinct population segments) with ESA-status, as well as the transient stock of killer whale which occurs from Prince William Sound through the Kenai Fjords and is referred to as AT1; Southeast Alaska, Gulf of Alaska, and Bering Sea stocks of harbor porpoise; walrus; and the northern fur seal (Allen and Angliss 2010).

Waters surrounding Alaska are the North Pacific Ocean (including the Gulf of Alaska and Bering Sea) and the Arctic Ocean (including the Chukchi and Beaufort seas). The Bering Sea contains a diversity of cold temperate, subarctic, and arctic marine mammal species (NRC 1996). Several North Pacific species are resident throughout the area; these include the harbor seal, Steller sea lion, sea otter, beluga whale, and Dall's porpoise. Other species migrate into this area during the summer to feed; these include the gray, fin, blue, North Pacific right, and humpback whale. The majority of the marine mammal species are found over the continental shelf and in coastal waters (e.g., Moore et al. 2002). Ice-associated species (e.g., polar bear, walrus, bearded and ringed seals, and bowhead whale) are found in the Bering Sea during the fall and winter in association with seasonal sea ice. Ice plays an important role in marine mammal ecology in the Bering Sea, since it provides habitat to some, while serving as a barrier to others.

Twenty-six marine mammal species use the Gulf of Alaska (Calkins 1986). Some species, such as the northern fur seal and gray whale, move through the Gulf of Alaska on their way to the Bering Sea. Other species are seasonal, such as the North Pacific right whale, which uses these waters during the summer for feeding, and the bowhead whale which uses Bering Sea waters during the winter. Some species are present year-round with no change in abundance, such as the Steller sea lion, sperm whale, and the sea

otter, while others, such as the humpback whale, sperm whale, fin whale, and blue whale are known to occur here year-round (based on acoustic sampling), but in varying levels of abundance (Mellinger et al. 2004, Stafford et al. 2007a).

Marine mammals occurring in the Beaufort Sea along the Alaskan coastline include bowhead and gray whales; beluga whale; walrus; sea otter; polar bear; and ringed, spotted, and bearded seals. In Alaskan waters, the majority of bowhead whales winter in the central and northwestern Bering Sea (November to March), migrate through the Chukchi Sea in the spring (March through June) following offshore ice leads around the coast of Alaska, and summer in the Canadian Beaufort Sea (mid-May through September) (Moore and Reeves 1993). Most summering gray whales congregate in the northern Bering Sea, and in the southern Chukchi Sea (Moore et al. 2000); however, more recently, calls of gray whales were recently recorded throughout the winter in the western Beaufort Sea (Stafford et al. 2007b). As noted by Moore and Huntington (2008), in addition to recent records of gray whales in the Beaufort Sea, fin, humpback, and minke whales and harp, hooded, ribbon, and spotted seals, are poised to disperse and become established further northward if the current overall trend toward a warmer Arctic climate continues. The polar bear, walrus, bearded seal, and ringed seal are ice-obligate species (species whose life histories are dependent on sea ice), whose future is uncertain if the trend towards a warming climate continues. The polar bear, recently with ESA-status, occurs on pack ice in the Chukchi and Beaufort seas, while the ringed seal (an ice-dependent seal) in this same area is currently under status review by NMFS. The northern extent of the harbor porpoise's range is the Chukchi Sea near Point Barrow south through the Bering Sea, southeastern shore of Bristol Bay, and south to San Luis Obispo, California (Suydam and George 1992). There are extralimital records of harbor porpoise documented further east of Point Barrow near the mouth of the Mackenzie River in the Northwest Territories, Canada.

Great Lakes ROI

No marine mammal species occur within the Great Lakes.

3.3.2.2.2 *ESA-Listed Marine Mammals*

The following is a description of the ESA-listed marine mammals in the ROIs. Additional pertinent life history information is provided in the general marine mammals descriptions above.

Northeast ROI

ESA-listed marine mammals in this ROI are the North Atlantic right whale, humpback whale, sei whale, fin whale, blue whale, sperm whale, and extralimital (outside of the typical range) occurrences of the West Indian manatee. Extralimital occurrences of two candidate species, the ringed seal and the bearded seal (both are ice seal species) are also known in this ROI (Slocum and Schoelkopf 2001, Sardi and Merigo 2006) (status reviews for both species are currently underway by NMFS). The North Atlantic right whale has critical habitat designated within this ROI: the Cape Cod Bay and Great South Channel feeding grounds (see **Figure 3-2**). NMFS is currently considering expansion of the current boundaries of the critical habitat (75 FR 61690- 61691).

Mandatory speed restrictions of 10 knots or less for vessels greater than or equal to 19.8 meters (65 feet) in length are required in Seasonal Management Areas (SMAs) along the U.S. East Coast during times when right whales are likely to be present (50 CFR 224.105). In the Northeast U.S. SMAs, the timing for Cape Cod Bay is January 1 to May 15; off Race Point during March 1 to April 30; and in the Great South Channel during April 1 to July 31. The Mid-Atlantic U.S. SMA is from Block Island south to Brunswick, Georgia, during the time of right whale migration through the area, November 1 to April 30.



Figure 3-2. Marine Mammal Critical Habitat in the Northeast ROI

Southeast ROI

ESA-listed marine mammal species in this ROI are the North Atlantic right whale, humpback whale, sei whale, fin whale, blue whale, sperm whale, and West Indian manatee. The sei whale is uncommon in warm waters in the southern extent of this ROI. All stocks of threatened or endangered species are considered strategic.

There is designated critical habitat in the Southeast ROI for two species: the North Atlantic right whale and the West Indian manatee. In addition to critical habitat in the Northeast ROI, the North Atlantic right whale has critical habitat designated within the Southeast ROI: the calving and nursery grounds for this species is in the waters off Georgia and northern Florida (see **Figure 3-3**). NMFS is currently considering expansion of the current boundaries of the critical habitat (75 FR 61690-61691). Critical habitat for the West Indian manatee is designated within several watersheds of Florida (see **Figure 3-3**). USFWS recently announced that revision of critical habitat for the manatee in Florida waters is needed, but the revision process is precluded by higher priority listing-related actions and funding constraints (75 FR 1574-1581). Additionally, there are two types of manatee protection areas in the state of Florida: manatee sanctuaries and manatee refuges.

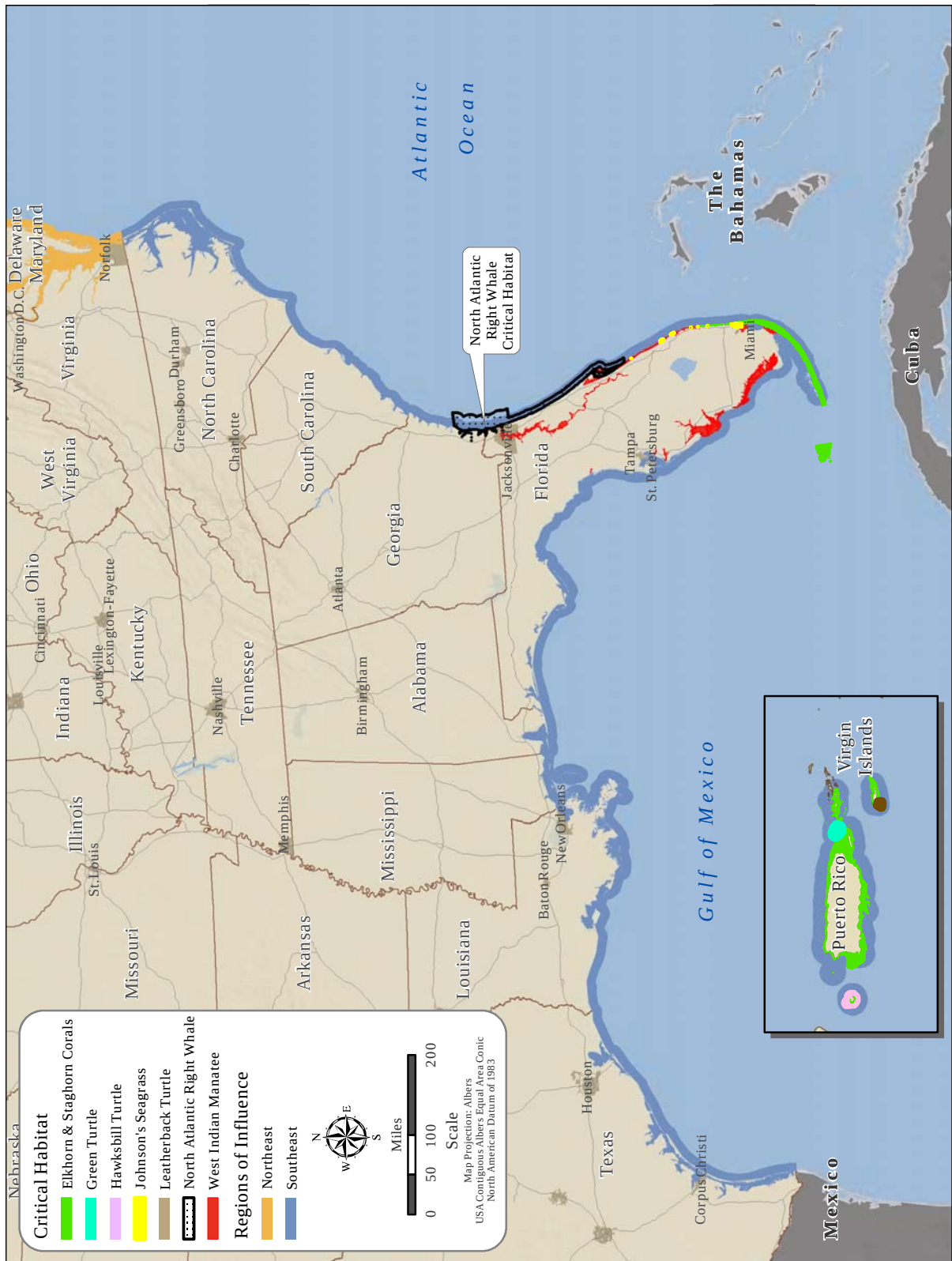
In an effort to reduce ship collisions, an EWS (the Right Whale Sighting Advisory System) was instigated in 1994 for the region. This system was extended in 1996 to the feeding areas off New England. In 1999, a Mandatory Ship Reporting System was implemented by the USCG. This reporting system requires specified vessels to report their location while in the nursery and feeding areas of the right whale (Ward-Geiger et al. 2005). At the same time, ships receive information on locations of right whale sightings in order to avoid whale collisions. Geographical boundaries of the area in the southeastern United States include coastal waters within roughly 46 km (28 miles) of shore along a 167-km (103-mile) stretch of the Atlantic coast in Florida and Georgia.

Mandatory speed restrictions of 10 knots or less for vessels greater than or equal to 19.8 meters (65 feet) in length are required in SMAs along the U.S. East Coast during times when right whales are likely to be present (50 CFR 224.105). The Mid-Atlantic U.S. SMA is from Block Island south to Brunswick, Georgia, during the time of right whale migration through the area, November 1–April 30. The Southeast U.S. SMA, which is in effect November 15–April 15, is the area of the right whale’s calving and nursery grounds. Vessel speed in this SMA is restricted in the area bounded to the north by latitude 31°27'N, to the south by latitude 29°45'N, to the east by longitude 080°51'36"W, and west to the coastline.

Northwest ROI

Marine mammal species listed under the ESA include the North Pacific right whale, humpback whale, sei whale, fin whale, blue whale, sperm whale; Southern Resident killer whale, Guadalupe fur seal, and the Steller sea lion (the species as a whole is listed as threatened; the eastern population that is expected here is listed as threatened while the western population, which is not expected to occur here, is listed as endangered).

The Southern Resident killer whale and the Steller sea lion are the only marine mammal species with critical habitat designated in the Northwest ROI. Critical habitat is designated for the Southern Resident killer whale Distinct Population Segment (DPS) within Puget Sound. The designated critical habitat area encompasses approximately 6,630 km² (2,560 square miles [mi²]) of marine habitat within the area occupied by Southern Resident killer whales in three specific areas: (1) the Summer Core Area in Haro Strait and waters around the San Juan Islands, (2) Puget Sound, and (3) the Strait of Juan de Fuca (see **Figure 3-4**). These three areas were designated because they contain physical or biological features essential to the conservation of the species (71 FR 69054–69070).



Sources: Critical Habitats: USFWS, 2008.

Figure 3-3. Marine Mammal, Sea Turtle, and Benthic Species Critical Habitat in the Southeast ROI

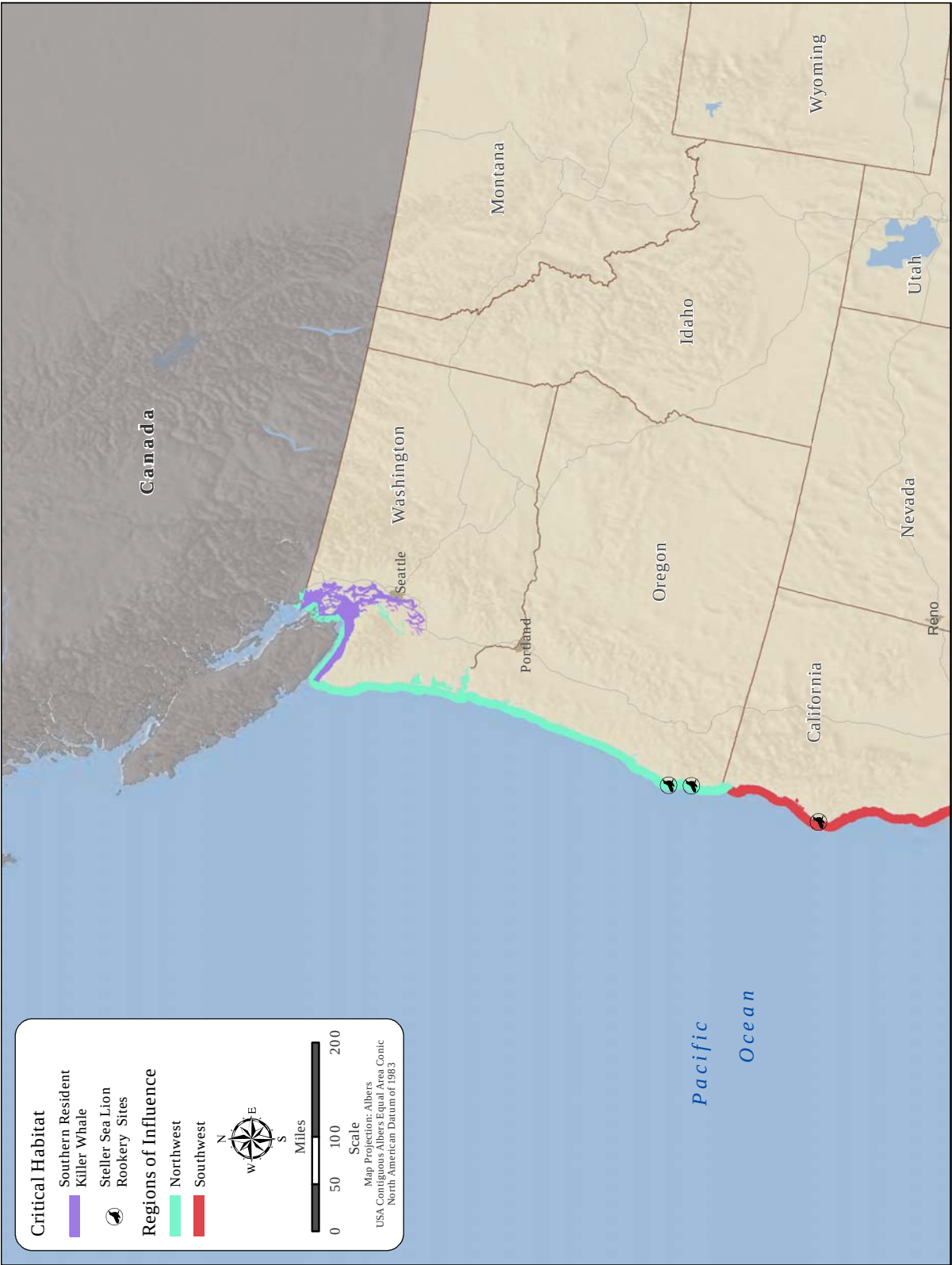


Figure 3-4. Marine Mammal Critical Habitat in the Northwest ROI

1 In California and Oregon, Steller sea lion critical habitat is designated as major rookeries and their
2 associated air and aquatic zones (see **Figure 3-4**). For both critical habitats, air zones have been
3 designated that extend 0.9 km (3,000 feet) above rookery areas historically occupied by sea lions, and
4 aquatic zones extend 0.9 km (3,000 feet) seaward from these areas (58 FR 45269–45285).

5 **Southwest ROI**

6 Marine mammal species listed under the ESA are the North Pacific right whale, humpback whale, sei
7 whale, fin whale, blue whale, sperm whale, Southern Resident killer whale, southern sea otter, Guadalupe
8 fur seal, and Steller sea lion (the species as a whole is listed as threatened; the eastern population that is
9 expected here is listed as threatened while the western population which is not expected to occur here is
10 listed as endangered). Southern Resident killer whale pods are known to travel as far south as Monterey
11 Bay in central California during winter (Wiles 2004).

12 As stated earlier in the Northwest ROI writeup, Steller sea lion critical habitat is designated in California
13 as major rookeries and their associated air and aquatic zones (see **Figure 3-5**). For both critical habitats,
14 air zones have been designated that extend 0.9 km (3,000 feet) above rookery areas historically occupied
15 by sea lions, and aquatic zones extend 0.9 km (3,000 feet) seaward from these areas
16 (58 FR 45269–45285). As detailed earlier, the Southern Resident killer whale has critical habitat
17 designated in the Northwest ROI.

18 **Pacific Islands ROI**

19 Marine mammal species listed under the ESA are the North Pacific right whale, humpback whale, sei
20 whale, fin whale, blue whale, sperm whale, Hawaiian monk seal, and dugong. The Hawaiian insular
21 stock of the false killer whale is a recent (2010) candidate species of NMFS (75 FR 316–319).

22 Critical habitat for the Hawaiian monk seal is designated within this ROI in the Northwestern Hawaiian
23 Islands (see **Figure 3-6**). Currently, critical habitat for the Hawaiian monk seal is defined as all beach
24 areas, sand spits, and islets (including all beach crest vegetation to its deepest extent inland), lagoon
25 waters, inner reef waters, and ocean waters out to a depth of 20 fathoms around Kure Atoll, Midway
26 Islands (except Sand Island and its harbor), Pearl and Hermes Reefs, Lisianski Island, Laysan Island,
27 Maro Reef, Gardner Pinnacles, French Frigate Shoals, Necker Island, and Nihoa Island (see **Figure 3-6**)
28 (53 FR 18998). In June 2009, the NMFS announced that it will be revising critical habitat to include
29 essential habitat areas for the monk seal in the main Hawaiian islands (74 FR 27988–27994); the actual
30 boundaries have not yet been designated.

31 **Alaska ROI**

32 Marine mammal species listed under the ESA occurring in Alaska are the North Pacific right whale,
33 bowhead whale, humpback whale, sei whale, fin whale, blue whale, sperm whale, Cook Inlet distinct
34 population segment of beluga whale, southwest stock of northern sea otter, polar bear, and the Steller sea
35 lion (as a species is not listed as threatened; the eastern population is listed as threatened while the
36 western population is listed as endangered). The only documented extralimital occurrence of the
37 threatened Guadalupe fur seal in the ROI occurred during July 2007 in Kachemak Bay (Armstrong 2007).
38 Candidate species are two ice seal species: the ringed seal and bearded seal. The only proposed species is
39 the Southern distinct population segment of the spotted seal, which NMFS has proposed as threatened.

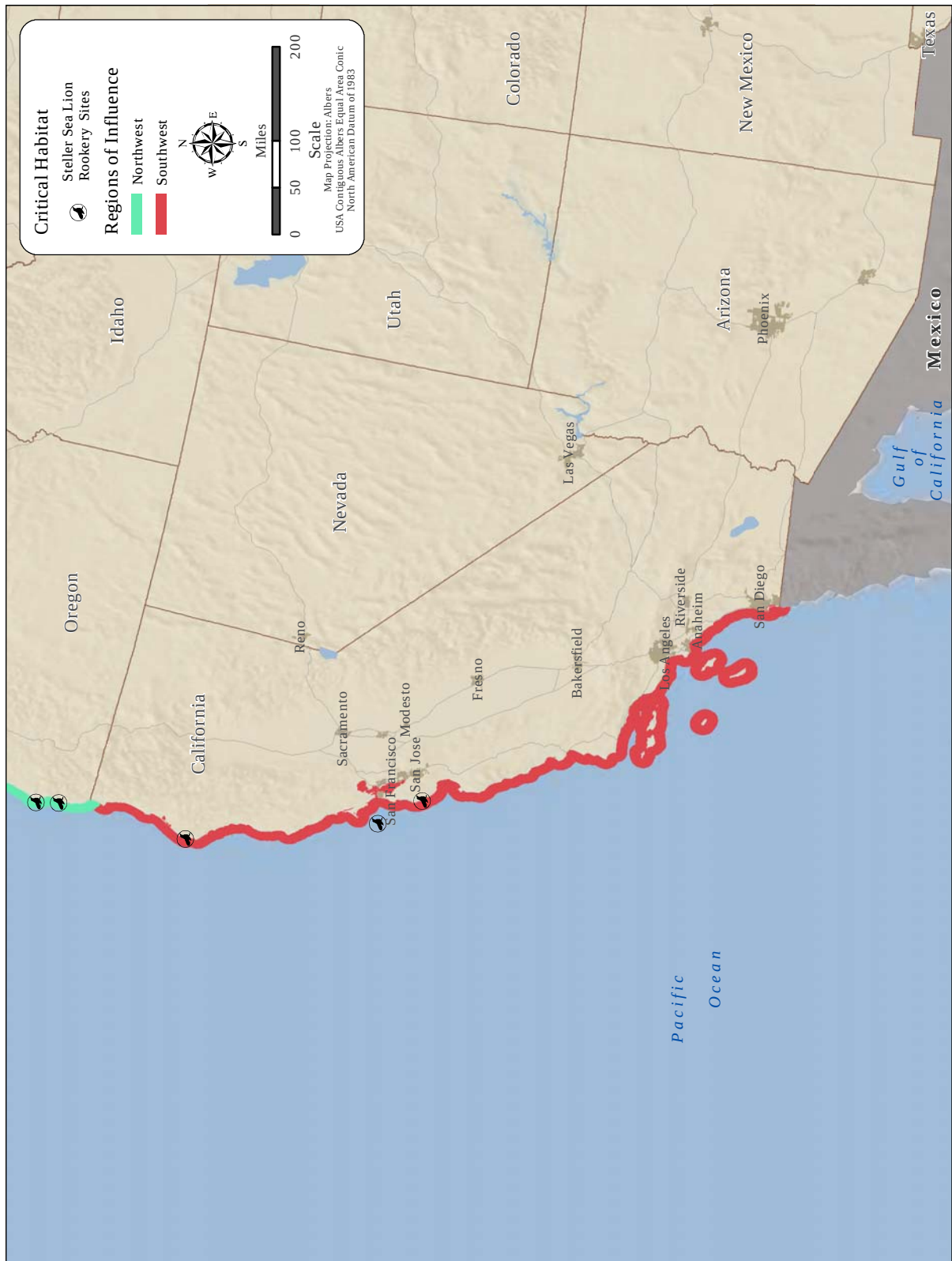


Figure 3-5. Marine Mammal Critical Habitat in the Southwest ROI



Figure 3-6. Marine Mammal Critical Habitat in the Pacific Islands ROI

Three marine mammal species/population segments have critical habitat designated in the Alaska ROI: North Pacific right whale, Steller sea lion, and the southwest distinct population segment of the northern sea otter. Two marine mammal species have proposed critical habitat designations in the Alaska ROI: the polar bear and the Cook Inlet distinct population segment of the beluga whale.

Critical habitat for the North Pacific right whale has been designated in the western Gulf of Alaska and southeastern Bering Sea (see **Figure 3-7**) (73 FR 38277 and 73 FR 19000). The area described by these boundaries lies completely within the waters of the United States and its EEZ and outside of waters of the State of Alaska. Only the portion of critical habitat in the Gulf of Alaska occurs within the Alaska ROI.

Designated critical habitat for the Steller sea lion includes a 37-km (23-mile) buffer around all major haulout sites and rookeries; associated terrestrial, air, and aquatic zones; and three large offshore foraging areas: Bogoslof Island area and Seguam Pass (in the Bering Strait), and the Aleutian Islands area (58 FR 45269–45285) (see **Figure 3-7**).

The southwest Alaska distinct population segment of the northern sea otter has critical habitat is designated in five discrete units considered important to the recovery of the northern sea otter (74 FR 51988–52012). From west to east, these are: (1) Western Aleutian Unit; (2) Eastern Aleutian Unit; (3) South Alaska Peninsula Unit; (4) Bristol Bay Unit; and (5) Kodiak, Kamishak, Alaska Peninsula Unit. Within these five discrete units, critical habitat occurs in nearshore marine waters ranging from the mean high tide line seaward for a distance of 100 meters, or to a water depth of 20 meters (see **Figure 3-7**).

In October 2009, USFWS proposed to designate critical habitat for the polar bear (74 FR 56058-56086; comment period was reopened in 75 FR 24545-24546). The proposal would designate three critical habitat areas or units: barrier islands, sea ice, and terrestrial denning habitat. The total area proposed as critical habitat would cover approximately 187,166 square miles of lands and waters within the United States.

In December 2009, NMFS proposed to designate critical habitat for the Cook Inlet beluga whale distinct population in two areas of Cook Inlet (74 FR 63080-63095; comment period extended in 75 FR 1582). Area 1 encompasses 1,918 km² (741 mi²) northeast of a line from the mouth of Threemile Creek (61°08.5'N., 151°04.4'W.) to Point Possession (61°02.1'N., 150°24.3'W.) Area 2 consists of 5,891 km² (2,275 mi²) of less concentrated spring and summer beluga use, but known fall and winter use areas. It is located south of Area 1, north of a line at 60°25.0'N., and includes nearshore areas south of 60°25.0'N. along the west side of the Inlet and Kachemak Bay on the east side of the lower inlet.

Great Lakes ROI

No threatened or endangered marine mammal species occur within the Great Lakes.

3.3.2.2.3 Marine Mammal Hearing

When considering the influence of various kinds of noise on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of sound. Southall et al. (2007) delineated five groups of marine mammals (not including sirenians, sea otter, or polar bear) based on similarities in their hearing (see **Table 3-5**).

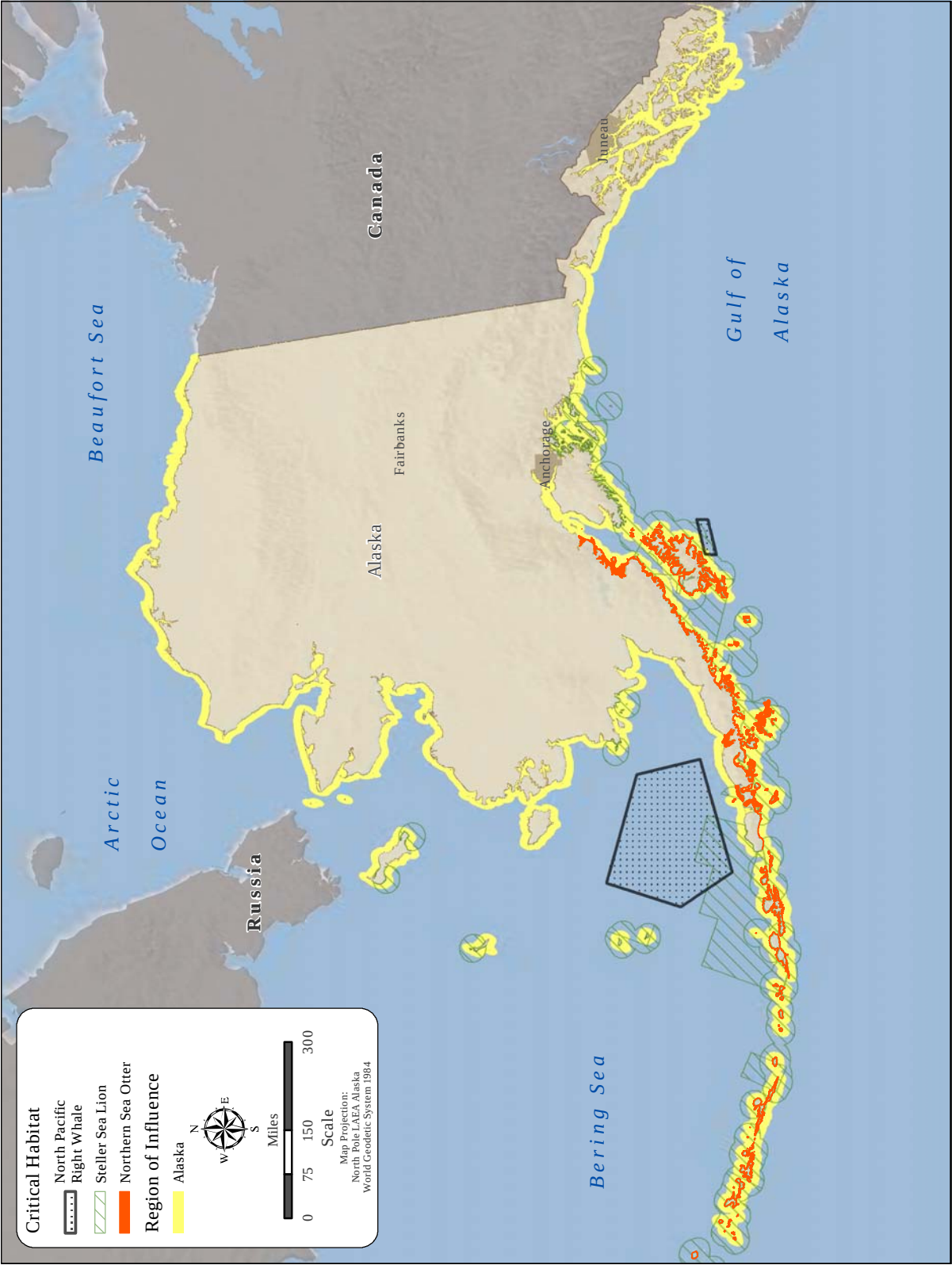


Figure 3-7. Marine Mammal Critical Habitat in the Alaska ROI

1

Table 3-5. Five Groups of Marine Mammals Based on Hearing Capabilities

Functional Hearing Group	Estimated Auditory Bandwidth	Genera Represented (Number species/subspecies)	Frequency-Weighting Network
Low-frequency cetaceans	7 Hz to 22 kHz	<i>Balaena</i> , <i>Caperea</i> , <i>Eschrichtius</i> , <i>Megaptera</i> , <i>Balaenoptera</i> (13 species/ subspecies)	M _{lf} (lf: low-frequency cetacean)
Mid-frequency cetaceans	150 Hz to 160 kHz	<i>Steno</i> , <i>Sousa</i> , <i>Sotalia</i> , <i>Tursiops</i> , <i>Stenella</i> , <i>Delphinus</i> , <i>Lagenodelphis</i> , <i>Lagenorhynchus</i> , <i>Lissodelphis</i> , <i>Grampus</i> , <i>Peponocephala</i> , <i>Feresa</i> , <i>Pseudorca</i> , <i>Orcinus</i> , <i>Globicephala</i> , <i>Orcaella</i> , <i>Physeter</i> , <i>Delphinapterus</i> , <i>Monodon</i> , <i>Ziphius</i> , <i>Berardius</i> , <i>Tasmacetus</i> , <i>Hyperoodon</i> , <i>Mesoplodon</i> (57 species/subspecies)	M _{mf} (mf: mid-frequency cetaceans)
High-frequency cetaceans	200 Hz to 180 kHz	<i>Phocoena</i> , <i>Neophocaena</i> , <i>Phocoenoides</i> , <i>Platanista</i> , <i>Inia</i> , <i>Kogia</i> , <i>Lipotes</i> , <i>Pontoporia</i> , <i>Cephalorhynchus</i> (20 species/ subspecies)	M _{hf} (hf: high-frequency cetaceans)
Pinnipeds in water	75 Hz to 75 kHz	<i>Arctocephalus</i> , <i>Callorhinus</i> , <i>Zalophus</i> , <i>Eumetopias</i> , <i>Neophoca</i> , <i>Phocarcos</i> , <i>Otaria</i> , <i>Erignathus</i> , <i>Phoca</i> , <i>Pusa</i> , <i>Halichoerus</i> , <i>Histriophoca</i> , <i>Pagophilus</i> , <i>Cystophora</i> , <i>Monachus</i> , <i>Mirounga</i> , <i>Leptonychotes</i> , <i>Ommatophoca</i> , <i>Lobodon</i> , <i>Hydrurga</i> , and <i>Odobenus</i> (41 species/subspecies)	M _{pw} (pw: pinnipeds in water)

Source: Southall et al. 2007

2 Data on the hearing abilities of cetaceans are sparse, particularly for the larger cetaceans such as the
3 baleen whales. The auditory thresholds of some of the smaller odontocetes have been determined in
4 captivity. It is generally believed that cetaceans should at least be sensitive to the frequencies of their
5 vocalizations. Comparisons of the anatomy of cetacean inner ears and models of the structural properties
6 and the response to vibrations of the ear's components in different species provide an indication of likely
7 sensitivity to various sound frequencies. The ears of small toothed whales are structurally optimized for
8 receiving high-frequency sound, while baleen whale inner ears are best optimized for low to infrasonic
9 frequencies (Ketten 1992, 1997). Baleen whales are considered to be low-frequency cetaceans; the lower
10 and upper frequency limits for functional hearing is considered to be 7 Hz and 22 kHz (Southall et al.
11 2007). The only available behavioral audiogram for a sirenian is from the West Indian manatee, where
12 peak sensitivity of hearing was between 16 and 18 kHz with functional hearing limits at 400 Hz and
13 46 kHz (Gerstein et al. 1999). No audiograms are available for the sea otter, though work is currently
14 underway to study the hearing capability of this species (Reichmuth 2007). Based on available
15 vocalization data and the assumption that a species hears in the range of its vocalizations (3–5 kHz)
16 (Richardson et al. 1995), hearing range for the sea otter is expected to be lower than that of the SONAR
17 range. Polar bears swim; they have an in-air hearing range of 11.2 to 22.5 kHz (Nachtigall et al. 2007),
18 which is also lower than the SONAR frequency. Baleen whales and sirenians that are exposed to SONAR
19 transmissions greater than 50 kHz will not be able to hear the sounds. Since no impacts on baleen whales,
20 sirenians, sea otter, or polar bear are expected, they will not be discussed further here.

21 Toothed whales and pinnipeds listening in water are the focus of this PEA because their hearing range is
22 in the area of the Proposed Action. Some toothed whales are designated as mid-frequency cetaceans,
23 whose estimated range of hearing is 150 Hz to 160 kHz (see **Table 3-5**) (Southall et al. 2007); this
24 includes all of the toothed whales (including threatened and endangered species of toothed whales in the
25 ROIs), except the porpoises, listed in **Table 3-4**. High-frequency cetaceans are those whose estimated

range of hearing is 200 Hz to 180 kHz (see **Table 3-6**) (Southall et al. 2007); these are the porpoises in **Table 3-4** (i.e., harbor porpoise and Dall's porpoise). There are no threatened or endangered cetaceans in this latter category in the ROIs.

Table 3-6. Sea Turtle Occurrence, Status, and Critical Habitat within the ROIs

Common Name (Scientific Name)	Northeast	Southeast	Southwest	Northwest	Alaska	Pacific Islands
Green turtle (<i>Chelonia mydas</i>)	T*	T*, CH	T*	T*	T*	T*
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	E	E, CH	--	--	--	E
Kemp's ridley turtle (<i>Lepidochelys kempii</i>)	E	E	--	--	--	--
Leatherback turtle (<i>Dermochelys coriacea</i>)	E	E, CH	E, CH*	E, CH*	E	E
Loggerhead turtle (<i>Caretta caretta</i>) ¹	T	T	T	T	T	T
Olive ridley turtle (<i>Lepidochelys olivacea</i>)	T*	T*	T*	T*	T*	T*

Note:

1. NMFS recently announced recognition of 9 distinct population segments for the species, proposing to list 2 as threatened and 7 as endangered (75 FR 12598- 12656).

Key:

T = Threatened

CH = critical habitat in the ROI

E = Endangered

CH*= proposed critical habitat in the ROI

T* = Although the species as a whole is listed as threatened, the Florida and Mexican Pacific nesting stocks of the green turtle and the Mexican Pacific nesting stocks of the olive ridley turtle are listed as endangered. Since the nesting areas for green and olive ridley turtles encountered at sea often cannot be determined, a conservative approach to management requires the assumption that all greens and olive ridleys found in the study area are endangered.

Comparisons of the hearing characteristics of otariids and phocids suggest two types of pinniped ears, with phocids being better adapted for underwater hearing (Richardson et al. 1995, Kastak and Schusterman 1998, Ketten 1998, Wartzok and Ketten 1999). Collectively, pinnipeds swimming in water have an estimated range of hearing of 75 Hz to 75 kHz (see **Table 3-5**) (Southall et al. 2007). As noted earlier in the document, there are three threatened and endangered pinniped species in the ROIs, as well as some species currently under NMFS status review.

3.3.2.3 Sea Turtles

Worldwide, there are seven species of sea turtles in two distinct families, the Cheloniidae (hard-shelled sea turtles, six species) and the Dermochelyidae (leatherback sea turtle, one species). Of those seven species, six are found in U.S. waters: the green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), loggerhead (*Caretta caretta*), and olive ridley (*Lepidochelys olivacea*). All six species found in U.S. waters are currently listed as either threatened or endangered under the ESA (see **Table 3-6**).

Sea turtle hearing sensitivity, in air and underwater, is not well-studied. Sea turtles do not have an external ear; rather the tympanum is a continuation of the facial tissue (Bartol and Musick 2003).

Reception of sound is also through bone conduction, with the skull and shell acting as receiving structures (Lenhardt et al. 1983). Sea turtles appear to hear best in the lower-frequencies (<1 kHz) (Moein Bartol and Ketten 2006). The effective dynamic hearing range for sea turtles is probably between 0.1 to 1 kHz (Ridgway et al. 1969, Lenhardt 1994, Moein et al. 1994, Moein Bartol et al. 1999). Also, calculated in-water hearing thresholds appear to be high (160 to 200 dB re 1 μ Pa) (Lenhardt 1994). Research based on brain physiology indicates that sea turtles are able to hear sounds with frequencies ranging from 0.08 to 2 kHz, with maximum sensitivity levels reported between 0.1 and 0.8 kHz and 0.3 and 0.4 kHz (Lenhardt 1994, NRC 2003). Moein Bartol et al. (1999) reported that juvenile loggerhead turtles hear sounds between 250 (lowest frequency that could be tested due to equipment) and 1,000 Hz (most sensitive at 250 Hz) using the auditory brainstem response (ABR) technique, while Lenhardt (2002) found that adults can hear sounds from 30 Hz to 1 kHz (most sensitive at 0.4 to 0.5 kHz) using startle response (i.e., contract neck or dive) and ABR techniques. Loggerhead sea turtle hearing ranges from 0.25 to 0.75 kHz with peak sensitivity at 0.25 kHz (Richardson et al. 1995). ABR data analyzed in Moein Bartol and Ketten (2006) found that subadult green turtles detect frequencies between 100 and 800 Hz and that their most sensitive hearing was between 0.2 and 0.7 kHz Moein Bartol and Ketten (2006) also found that two juvenile Kemp's ridley turtles had a more restricted range of between 100 and 500 Hz with their most sensitive hearing between 0.1 and 0.2 kHz (Moein Bartol and Ketten 2006).

Northeast ROI

Six species of sea turtles are known to occur in the waters of the North Atlantic: green, leatherback, loggerhead, Kemp's ridley, hawksbill, and olive ridley turtles. NMFS has not designated any waters in this ROI as critical habitat for sea turtles.

Leatherback and loggerhead turtles are the most common in the waters of the North Atlantic (Shoop and Kenney 1992). Inshore areas such as Delaware Bay, Long Island Sound, and Cape Cod Bay are highly utilized as developmental habitats for juvenile loggerhead, Kemp's ridley, and green turtles while coastal waters off New York, New England, and Canada, especially the Gulf of Maine, are often frequented by adult leatherback turtles (Lazell 1980, Morreale and Standora 2005). It has been suggested that New England waters from the Nantucket Lightship north to the Canadian border and out to 200 NM from shore are a critical foraging habitat for these sea turtles (Lazell 1980). Thus far, however, NMFS has not designated any waters in this region as critical habitat for these species. Olive ridleys and juvenile hawksbills rarely make their way as far north as this ROI (Lazell 1980, Stokes and Epperly 2006). Most sea turtle nesting in the western North Atlantic takes place south of Virginia (Shoop et al. 1985).

Southeast ROI

Six species of sea turtles have documented occurrence in waters off the southeastern United States, Caribbean, and GOM. These are the green, hawksbill, leatherback, loggerhead, olive ridley, and Kemp's ridley turtles. In 1998, NMFS designated critical habitat for hawksbill and green turtles in Puerto Rico and in St. Croix, U.S. Virgin Islands, for leatherback turtles (see **Section 3.3.2.1**).

In the Southeast ROI, features such as the major surface current systems and warm- and cold-core eddies factor into the distribution and habitat use of sea turtles. Depending on the location of hatching, the major current systems off the southeastern United States, such as the Gulf Stream or the Florida current, act as transportation vectors for early life stages of sea turtles. These currents facilitate hatchling dispersion into the Sargasso Sea where they are thought to associate with *Sargassum* as protection from predation and for food (Witherington 2002). At the end of the pelagic juvenile phase, sea turtles are thought to leave the current systems to enter developmental habitats along the U.S. Atlantic Coast or in the Caribbean (Musick and Limpus 1997).

Atlantic Ocean. Along the U.S. Atlantic Coast, leatherbacks are present April to November, with peak sightings progressively earlier in the year moving south along the eastern seaboard (Plotkin 1995). In North Carolina sightings of leatherbacks inshore and offshore are highest in May (Epperly et al. 1995a). Hawksbills and Kemp's ridleys occur throughout Florida's coastal waters, bays, and lagoons. Juvenile and subadult Kemp's ridleys are widely distributed through U.S. coastal waters from Texas to Maine, but Florida's western coast is considered as an area of "maximum abundance" for Kemp's ridleys in the U.S. (Viada 2000). Loggerhead sea turtles are the most common sea turtle in Florida (FWRI 2006). The contiguous beaches of Brevard, Indian River, St. Lucie, Martin, and Palm Beach counties are the most important loggerhead nursery areas in the Western Hemisphere, attracting more than 15,000 female loggerheads each May through August (FWRI 2006). Green sea turtles are found throughout the coastal waters of Florida and the GOM, where they inhabit reefs, bays, and inlets and tend to be found in areas with marine grass and algae (NMFS and USFWS 2007b). There are three recent records of olive ridleys from Florida's waters (Foley et al. 2003). North of Cape Hatteras, North Carolina's Pamlico-Albemarle Estuarine Complex is an important developmental habitat for loggerhead, green, and Kemp's ridley sea turtles (Epperly et al. 1995b) during April through December. Loggerheads, greens, and leatherbacks nest regularly on Florida's beaches (Meylan et al. 1995, 2006).

Gulf of Mexico. In the GOM, the number of turtle sightings is highest in continental shelf waters in summer and fall but sightings occur in the shelf and deeper waters throughout the study area in winter and spring (McDaniel et al. 2000). Reports by Lohofener et al. (1990), Davis et al. (2000), McDaniel et al. (2000), and Mullin and Davis (2001) indicate that sea turtles are far more abundant in GOM waters east of the mouth of the Mississippi River than in waters to the west. Coastal waters of the GOM also serve as developmental habitat for juvenile Kemp's ridleys (Musick and Limpus 1997). Loggerhead sea turtles are the most abundant sea turtle in the GOM (NMFS and USFWS 2008). Leatherbacks are the most abundant along the northern GOM continental slope (Viada 2000). The hawksbill turtle occurs along all of the Gulf States and along the eastern seaboard as far north as Massachusetts, but sightings north of Florida are rare. Although hawksbill sea turtles are the least common sea turtle in the GOM, they have been recorded in waters of all of the states along the GOM (NMFS and USFWS 1993).

Caribbean Sea. Puerto Rico and the Virgin Islands provide critical nesting, foraging, and developmental habitat for three species of sea turtle: the leatherback, green, and hawksbill (Hillis-Starr et al. 1998). The loggerhead has also been documented to occur in the waters surrounding these islands but on infrequent occasions (Rainey 1979). Isolated occurrences of both Kemp's ridley and olive ridley have been noted for the Caribbean (Renaud and Williams 2005, Caldwell and Erdman 1969, Horta et al. 2000). Sea turtles concentrate year-round in the waters surrounding Culebra, Puerto Rico; Vieques, Puerto Rico; Buck Island, U.S. Virgin Islands; eastern St. Croix, U.S. Virgin Islands; and along the east coast of Puerto Rico (Hillis-Starr et al. 1998, Eckert and Abreu-Grobois 2001, Fleming 2001). Small numbers of green turtles use beaches on Puerto Rico and some of the U.S. Virgin Islands as nesting habitat.

Southwest ROI (California) and Northwest ROI (Oregon and Washington)

Four species of sea turtles occur in the Southwest ROI: green, leatherback, loggerhead, and olive ridley turtles. Revision of the current critical habitat for the leatherback sea turtle was proposed in January 2010 (75 FR 319). Specific areas proposed for designation include two adjacent marine areas totaling approximately 119,400 km² (46,100 mi²) stretching along the California coast from Point Arena to Point Vicente; and one 63,455 km² (24,500 mi²) marine area stretching from Cape Flattery, Washington, to the Umpqua River (Winchester Bay), Oregon, east of a line approximating the 2,000-meter depth contour. The areas proposed for designation compose approximately 182,854 km² (70,600 mi²) of marine habitat.

Sea turtle sightings in the eastern Pacific typically occur in southern California and peak from July to September and during El Niño years.

Aerial surveys off the coasts of California, Oregon, and Washington have shown that most leatherback turtles occur in continental slope waters, with fewer occurring over the continental shelf. During summer and fall, nearshore waters off central California (Monterey Bay region) represent an important foraging region for the leatherback turtle (Benson et al. 2007). During warm months, feeding leatherbacks are also sighted in inshore waters, including the Strait of Juan de Fuca (Tsao et al. 2005).

Green turtle sightings are concentrated southward of southern California (Stinson 1984, NMFS and USFWS 1998a). The northernmost resident population of green turtles in the eastern North Pacific Ocean occurs in the southern half of San Diego Bay (Dutton and McDonald 1990, NMFS and USFWS 1998a). Water temperatures off northern California, Oregon, and Washington are near the minimum tolerable limits for green turtles throughout much of the year.

Large aggregations of juvenile and subadult loggerheads, numbering in the thousands, are found off the southwestern coast of Baja California (Pitman 1990). Juvenile loggerheads are common year-round in the coastal waters of southern California, although most sightings occur between July and September (Stinson 1984).

Olive ridley sea turtles are rarely found north of southern California due to the cold waters of the California and Humboldt currents (Eckert 1993).

There is no nesting on beaches adjacent to the ROI.

Pacific Islands ROI

Five species of sea turtles are known to occur in the Pacific Islands ROI: green, hawksbill, leatherback, olive ridley, and loggerhead sea turtles.

Hawaii. All five sea turtle species are common inhabitants of the Hawaiian Islands. Mixed aggregations of adult and immature green turtles reside in coastal waters throughout the archipelago; however, pelagic waters are also important (Eckert 1993). The Hawaiian population of hawksbill turtles is small and only known to occur in coastal waters of the eight main and inhabited islands at the southeastern end of the archipelago (Balazs 1995). The highest densities of olive ridley are likely found just south of the Hawaiian Islands (Polovina et al. 2004). Satellite telemetry studies show that loggerhead turtles tend to follow 17 and 20 degrees Celsius (°C) sea surface isotherms north of the Hawaiian Islands (Polovina et al. 2000).

Guam and CNMI. The green sea turtle is the most commonly observed sea turtle around Guam and the CNMI (Kolinski et al. 2001, 2006). There are no records for loggerhead turtles around Guam and the CNMI. Leatherbacks are not typically associated with insular habitats, but individuals are occasionally encountered in deep water proximal to prominent archipelagos, such as the Northern Mariana Islands and Hawaii (Eckert 1993). A resident population of hawksbill sea turtles is known to forage offshore of Guam (NMFS and USFWS 1998b). Only one record of an olive ridley exists for Guam and the CNMI, an alleged capture in the waters near Saipan (Pritchard 1977).

Marshall Islands and Palau. There are occurrences of loggerhead, hawksbill, and olive ridley sea turtles from the Republic of Palau in the western Pacific (NMFS and USFWS 1998b, 1998c; Sagun et al. 2005; Witzell 1983; Pritchard 1982a, 1982b; Eckert 1993; Pritchard 1995).

In the U.S. Pacific, more than 90 percent of green sea turtle nesting throughout the Hawaiian archipelago occurs at French Frigate Shoals, where about 200 to 700 females nest each year (Eckert 1993). Elsewhere in the U.S. Pacific, sea turtle nesting takes place at scattered locations in the CNMI, Guam, and American Samoa (NMFS and USFWS 1998a). There are only a few documented records of hawksbill sea turtles

nesting in the Marianas region (DoN 2005b). There is no loggerhead nesting on Pacific beaches under U.S. jurisdiction (NMFS and USFWS 1998d).

Alaska ROI

Four species of sea turtles have documented occurrence in the Alaska ROI: green, leatherback, loggerhead, and olive ridley turtles (Hodge and Wing 2000).

Most sea turtles prefer warm waters and are therefore extremely rare inhabitants of ocean waters off Alaska. However, the leatherback is a cold-tolerant species that can occur in the area during the summer and early fall (Hodge and Wing 2000).

Sea turtle nesting is not expected on beaches adjacent to the Alaska ROI.

3.3.2.4 Coastal, Marine, and Aquatic Birds

3.3.2.4.1 General Coastal, Marine, and Aquatic Bird Occurrence

Thousands of bird species inhabit the ROIs, including seabirds, shorebirds (including gulls and terns), marsh and wading birds, and waterfowl. There are more than 270 species of seabirds, representing 5 orders, in the ROIs and each order has species that dive to depths exceeding 25 meters (82 feet) (DoN 2001).

Seabirds spend extended periods away from land and obtain all or most of their food from the sea while flying, swimming, or diving. Albatrosses, petrels, and shearwaters (Families Diomedidae and Procellariidae) come to land only when nesting. They feed on small animals and carrion found at the water's surface; some species make shallow dives when foraging. Order Pelecaniformes, including anhingas, boobies, cormorants, frigatebirds, gannets, pelicans, and tropicbirds (Families Anhingidae, Fregatidae, Pelecanidae, Phaethontidae, Phalacrocoracidae, and Sulidae), are also fish-eating waterbirds (Sibley 2000).

Shorebirds are a diverse avian group of species including sandpipers, plovers, stilts, avocets, snipes, oystercatchers, turnstones, and phalaropes (families: Charadriidae, Haematopodidae, Jacanidae, Recurvirostridae, and Scolopacidae). Many North American shorebirds seasonally traverse between the high Arctic and South America. Outside of their migratory cycles, shorebirds are generally restricted to coastline margins, where they feed in coastal and inland wetlands along their migration route. Gulls, terns, and skimmers (Family Laridae) forage by plunge-diving into the water or by skimming the surface of the water for small fish (Sibley 2000).

Marsh and wading birds live in or around marshes and swamps. Marsh birds include species from the Order Gruiformes, such as rails, coots, and moorhens (Families Aramidae, Gruidae, and Rallidae), and species from the Order Podicipediformes, such as grebes (Family Podicipedidae). All inhabit marshy wetlands, where they feed on plants and small animals. Wading birds are from the Order Ciconiiformes and have adaptations such as long legs, long necks, and probing bills, which allow them to forage in shallow water (Sibley 2000).

Waterfowl are members of the Order Anseriformes and include eiders and sea ducks. These species typically inhabit and feed in freshwater and marine habitats (Sibley 2000).

Studies with other (noncoastal) species indicate that birds are sensitive to low-frequency sounds in air. However, there are little data on seabird hearing or underwater hearing, and there is no evidence that seabirds are affected by changes in underwater sound (DoN 2001).

3.3.2.4.2 ESA-Listed Coastal, Marine, and Aquatic Birds

The USCG is required to provide protection for threatened and endangered seabirds under the ESA (see **Table 3-7**). Because all sources of noise associated with the proposed project would be underwater, terrestrial feeding birds are not considered. Additionally, bird critical habitat is not considered, because in all cases it is on land and would not be affected by the Proposed Action.

Northeast ROI

One threatened, one candidate, and two endangered coastal and marine bird species occur in the Northeast ROI: piping plover (*Charadrius melodus*), threatened; red knot (*Calidris canutus rufa*), candidate; brown pelican (*Pelecanus occidentalis*), endangered; and roseate tern (*Sterna dougallii dougallii*), endangered (see **Table 3-7**).

Southeast ROI

One threatened, one candidate, and five endangered coastal and marine bird species occur in the Southeast ROI: piping plover, threatened; red knot, candidate; Everglade snail kite (*Rostrhamus sociabilis plumbeus*), endangered; brown pelican, endangered; wood stork (*Mycteria americana*), endangered; least tern (*Sterna antillarum*), endangered; and roseate tern, endangered (see **Table 3-7**). The USFWS is currently considering downlisting the wood stork from endangered to threatened (75 FR 57426-57431).

Southwest ROI

Three threatened, one candidate, and six endangered coastal and marine bird species occur in the Southwest ROI: Steller's eider (*Polysticta stelleri*), threatened; marbled murrelet (*Brachyramphus marmoratus marmoratus*), threatened; western snowy plover (*Charadrius alexandrinus nivosus*), threatened; Xantus's murrelet (*Synthliboramphus hypoleucus*), candidate; short-tailed albatross (*Phoebastria albatrus*), endangered; brown pelican, endangered; California clapper rail (*Rallus longirostris obsoletus*), endangered; light-footed clapper rail (*Rallus longirostris levipes*), endangered; Yuma clapper rail (*Rallus longirostris yumanensis*), endangered; and California least tern (*Sterna antillarum browni*), endangered (see **Table 3-7**).

Northwest ROI

Three threatened and two endangered coastal and marine bird species occur in the Northwest ROI: Steller's eider, threatened; marbled murrelet, threatened; western snowy plover, threatened; short-tailed albatross, endangered; and brown pelican, endangered (see **Table 3-7**).

Pacific Islands ROI

One candidate and eight endangered coastal and marine bird species occur in the Pacific Islands ROI: band-rumped storm-petrel (*Oceanodroma castro*), candidate; Hawaiian coot (*Fulica Americana alai*), endangered; Hawaiian duck (*Anas wyvilliana*), endangered; laysan duck (*Anas laysanensis*), endangered; Hawaiian common moorhen (*Gallinula chloropus sandwicensis*), endangered; Mariana crow (*Corvus kubaryi*), endangered; Mariana common moorhen (*Gallinula chloropus guami*), endangered; Hawaiian dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), endangered; Newell's Townsend's shearwater (*Puffinus auricularis newelli*), endangered; Hawaiian stilt (*Himantopus mexicanus knudseni*), endangered; and short-tailed albatross (*Phoebastria albatrus*), endangered (see **Table 3-7**).

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Table 3-7. ESA-Listed Birds of the ROIs

Common Name	Scientific Name	Federal Status	Occurrence in ROI	Behavior
Albatross, short-tailed*	<i>Phoebastria albatrus</i>	E	Pacific Islands, Alaska, Northwest, Southwest	Breeds in Japan. Range covers most of the North Pacific into the Bering Sea and Gulf of Alaska, south to Baja California, and through the North Pacific including the northwestern Hawaiian Islands.
Coot, Hawaiian	<i>Fulica americana alai</i>	E	Pacific Islands	Year-round resident Hawaiian Islands.
Crow, Mariana	<i>Corvus kubaryi</i>	E	Pacific Islands	Endemic to Guam and Rota.
Curlew, Eskimo	<i>Numenius borealis</i>	E	Alaska	Fall migration begins in July, moving from the Pacific to the Atlantic coast before turning south at Labrador and heading out across the ocean to South America.
Duck, Hawaiian	<i>Anas wyvilliana</i>	E	Pacific Islands	Year-round resident on selected Hawaiian Islands.
Duck, Laysan	<i>Anas laysanensis</i>	E	Pacific Islands	Year-round resident Laysan Atoll, Hawaii.
Eider, spectacled	<i>Somateria fischeri</i>	T/CH	Alaska	Breeds on the coast of Alaska on the Bering Sea and the Arctic Ocean. Wintering flocks of spectacled eiders have been observed in the Bering Sea between St. Lawrence and St. Matthew islands.
Eider, Steller's	<i>Polysticta stelleri</i>	T	Alaska, Northwest, Southwest	Breeds in eastern Arctic coast of Alaska and migrates south and west to Aleutian Islands and western Alaska coast.
Kite, Everglade snail	<i>Rostrhamus sociabilis plumbeus</i>	E	Southeast	Nests in Florida January–August.
Knot, red	<i>Calidris canutus rufa</i>	C	Northeast, Southeast	Winters near the tip of South America and migrates north in mid-February. Arrives at Delaware Bay beginning in mid-May. May–June the birds depart the mid-Atlantic coast arriving in the Arctic in early to mid-June.
Loon, yellow-billed	<i>Gavia adamsii</i>	C	Alaska	Nest near freshwater lakes on the Arctic Coastal Plain, northwestern Alaska and St. Lawrence Island. Winter in coastal waters of southern Alaska from the Aleutian Islands to Puget Sound.
Moorhen, Hawaiian common	<i>Gallinula chloropus sandvicensis</i>	E	Pacific Islands	Found only on the islands of Kaua'i and O'ahu.

Common Name	Scientific Name	Federal Status	Occurrence in ROI	Behavior
Moorhen, Mariana common	<i>Gallinula chloropus guami</i>	E	Pacific Islands	Nonmigratory form found in moderate numbers in wetland habitats of the Mariana Islands.
Murrelet, Kittlitz's	<i>Brachyramphus brevirostris</i>	C	Alaska	Breeding range is limited to Alaska.
Murrelet, marbled	<i>Brachyramphus marmoratus</i>	T/CH	Northwest, Southwest	Breeds from north of Washington to San Francisco coast. Summers and winters along the Pacific coast of North America.
Murrelet, Xantus's	<i>Synthliboramphus hypoleucus</i>	C	Southwest	Nests from the Channel Islands off the southern California coast south to San Benito Islands in Mexico.
Pelican, brown	<i>Pelecanus occidentalis</i>	E	Northeast, Northwest, Southeast, Southwest	Breeds in southern California March to April and is found from southern Mexico to central California and occasionally from northern California to Washington. Some individuals migrate south in winter, while most are year-round residents of the northeast coast.
Petrel, Hawaiian dark-rumped	<i>Pterodroma phaeopygia sandwichensis</i>	E	Pacific Islands	Breeds on the Hawaiian Islands from May to mid-November. Wanders throughout the central Pacific from mid-November through April.
Plover, piping	<i>Charadrius melodus</i>	T/CH	Northeast, Great Lakes, Southeast	Breeds in Great Lakes region and northeast coast spring and summer. Winters on the southeast and Gulf coasts and the Caribbean October to March.
Plover, western snowy	<i>Charadrius alexandrinus nivosus</i>	T/CH	Southwest	Summers along Pacific coast and migrates south to Mexico and South America during winter.
Rail, California clapper	<i>Rallus longirostris obsoletus</i>	E	Southwest	Year-round resident on central and southern California coast.
Rail, light-footed clapper	<i>Rallus longirostris levipes</i>	E	Southwest	Year-round resident on central and southern California coast.
Rail, Yuma clapper	<i>Rallus longirostris yumanensis</i>	E	Southwest	Occurs along the stream-sides and marshlands of Colorado River from Lake Mead to Mexico.
Shearwater, Newell's Townsend's	<i>Puffinus auricularis newelli</i>	E	Pacific Islands	Breeds on the island of Kauai April through September, on the open ocean from October to April.
Stilt, Hawaiian	<i>Himantopus mexicanus</i>	E	Pacific Islands	Year-round resident Hawaiian Islands.

Common Name	Scientific Name	Federal Status	Occurrence in ROI	Behavior
Stork, wood	<i>Mycteria Americana</i>	E	Southeast	Nests in the southeast. After breeding, moves as far north as North Carolina on the Atlantic coast and into Alabama and eastern Mississippi along the Gulf coast.
Storm-Petrel, band-rumped	<i>Oceanodroma castro</i>	C	Pacific Islands	Breeds in three archipelagoes in the Pacific: Japan, Galapagos, and Hawaii.
Tern, California least	<i>Sterna antillarum browni</i>	E	Southwest	Breeds and spends spring and summer on southern and central California coasts. Migrates to Central America and south in fall for the winter.
Tern, least	<i>Sterna antillarum</i>	E	Southeast	Breeds in the Mississippi, Missouri, and Rio Grande river systems and winters along the GOM and on Caribbean Islands.
Tern, roseate	<i>Sterna dougallii dougallii</i>	E	Northeast, Southeast	Breeds in southern Florida May–June, migrates to the Caribbean in the fall. Breeds on islands and protected sand spits. Occurs on northeast coast during spring and summer.

Sources: USFWS 2009; USFWS 2010

Note: *observed in May 2000

Key:

E = Federally listed endangered

C = Candidate species

T = Federally listed threatened

CH = Critical habitat in the ROI

1 Alaska ROI

2 Two threatened, one candidate, and two endangered coastal bird species occur in the Alaska ROI:
3 spectacled eider (*Somateria fischeri*), threatened; Steller's eider, threatened; Kittlitz's murrelet
4 (*Brachyramphus brevirostris*), candidate; short-tailed albatross, endangered; and Eskimo curlew
5 (*Numenius borealis*), endangered (see **Table 3-7**).

6 Great Lakes ROI

7 One threatened coastal and marine bird species occurs in the Great Lakes ROI: piping plover (see
8 **Table 3-7**).

9 3.3.2.5 Fish

10 3.3.2.5.1 EFH and Fisheries Resources

11 Under the MSFCMA, Congress directs NMFS and the eight regional FMCs (under the authority of the
12 Secretary of Commerce) to describe and identify EFH in each FMP; minimize, to the extent practicable,
13 the adverse effects of fishing on EFH; and identify other actions to encourage the conservation of EFH.
14 EFH is defined as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or
15 growth to maturity" (NOAA 2007). EFH that is judged to be particularly important to the long-term
16 productivity of populations of one or more managed species, or to be particularly vulnerable to

degradation, should be identified as habitat areas of particular concern (HAPCs) to help provide additional focus for conservation efforts. NMFS regulations further define the following terms:

- **Waters.** Aquatic areas and their associated physical, chemical, and biological properties that are used by fish and can include aquatic areas historically used by fish where appropriate
- **Substrate.** Sediment, hard-bottom, structures underlying the waters, and associated biological communities
- **Necessary.** The habitat required to support sustainable fisheries and managed species' contribution to a healthy ecosystem
- **Spawning, breeding, feeding, or growth to maturity.** Stages representing a species' full life cycle.

The MSFCMA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance EFH for those species regulated under a Federal FMP. Section 305(b)(2) of the MSFCMA requires Federal action agencies to consult with NOAA's NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that might adversely affect EFH. The EFH Guidelines (50 CFR 600.05-600.930) outline the process for Federal agencies, NOAA NMFS, and the FMC to satisfy the EFH consultation requirement under Section 305(b)(2)-(4) of the MSFCMA. Adverse effect means any impact that reduces quality or quantity of EFH. Adverse effects might include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on EFH could result from actions occurring within EFH or outside of EFH and might include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810(a)).

The commercially managed fish species that have EFH within the ROIs are presented in **Appendix F** (see **Table F-10**). Fish species that occur in each ROI are discussed briefly below.

Northeast ROI

The New England Fishery Management Council (NEFMC), the Mid-Atlantic Fishery Council (MAFMC), Atlantic States Marine Fisheries Commission (ASMFC), and NMFS Northeast Regional Office manage commercial and recreational fisheries in the Northeast ROI.

Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the nearshore and inshore waters of the Northeast ROI are presented in **Appendix F** (see **Table F-10**) (NMFS undated a). NEFMC has designated 11 rivers or streams in Maine as HAPC for Atlantic salmon: the Dennys, Machias, East Machias, Pleasant, Narraguagus, Ducktrap, Sheepscot, Kennebec, Penobscot, and St. Croix rivers; and Tunk Stream. MAFMC has designated seagrasses in estuaries where summer flounder occurs as HAPC for juvenile summer flounder.

Southeast ROI

The fisheries in the Southeast ROI are managed by the South Atlantic Fishery Management Council (SAFMC), ASMFC, the Gulf of Mexico Fishery Management Council (GMFMC), the Caribbean Fishery Management Council (CFMC), the Gulf States Marine Fisheries Commission, and NMFS Southeast Regional Office.

Atlantic Ocean. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the Southeast Atlantic ecosystem are presented in **Appendix, Table F-10** (SAFMC 1998; NMFS 1999a, 1999b).

Gulf of Mexico. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the GOM ecosystem are presented in **Appendix F, Table F-10** (GMFMC 1998; NMFS 1999a, 1999b). The GMFMC has designated HAPC for GMFMC-managed species as nearshore areas of intertidal and estuarine habitats with emergent and submerged vegetation, sand and mud flats, shell and oyster reefs, and other substrates that might provide food and rearing for juvenile fish and shellfish and migration route areas for adult and juvenile fish and shellfish that are sensitive to natural or human-induced environmental degradation, especially in urban areas and in other areas adjacent to intensive human-induced developmental activities. Examples include submerged aquatic vegetation, emergent vegetated wetlands, oyster reefs, shellfish beds, and certain intertidal zones. Many of these areas are unique, and have a high potential to be affected by shore-based activities. The coastal zone is under the most intense development pressure, and estuarine and intertidal areas are limited in comparison with the areal scope of other marine habitats (GMFMC 1998).

Caribbean Sea. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the U.S. Caribbean ecosystem are presented in **Appendix F, Table F-10** (CFMC 1998; NMFS 1999a, 1999b). The CFMC has designated all Puerto Rico and U.S. Virgin Island estuaries as HAPC, because they are important to many fishery species, particularly as nursery grounds.

Southwest ROI

The Pacific Fishery Management Council (PFMC) and NMFS Southwest Regional Office manage fisheries in the Southwest ROI. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the Southwest ROI are presented in **Appendix F, Table F-10** (PFMC 1998, 1999, 2003a, 2003b; NMFS 1999a, 1999b).

Northwest ROI

The PFMC and NMFS Northwest Regional Office manage fisheries in the Northwest ROI. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the Northwest ROI are presented in **Appendix F, Table F-10** (PFMC 1998, 1999, 2003a, 2003b; NMFS 1999a, 1999b).

Pacific Islands ROI

The Western Pacific Fishery Management Council (WPFMC) and NMFS Pacific Island Regional Office manage fisheries in the Pacific Islands ROI. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the Pacific Islands ROI are presented in **Appendix F, Table F-10** (NMFS 1999a, 1999b).

Alaska ROI

The North Pacific Fishery Management Council (NPFMC) and NMFS North Pacific Regional Office manage fisheries in the Alaska ROI. Federally managed finfish and shellfish (crustaceans and mollusks) species that have EFH in the Alaska ROI are presented in **Appendix F, Table F-10** (NPFMC 1999; NMFS 1999a, 1999b).

The NPFMC has designated the following nearshore areas of intertidal and estuarine habitats as HAPC if they contain submerged vegetation, rock, and other substrates that might provide food and rearing for juvenile groundfish, salmon, and shellfish; provide spawning or mating areas for adults of some crab and groundfish species (e.g., Atka mackerel, yellowfin sole, red king crab); or provide migration route areas

for adult and juvenile salmon. These areas are sensitive to natural or human-induced environmental degradation, especially in urban areas and in other areas adjacent to intensive human-induced developmental activities. Examples include eelgrass beds, submerged aquatic vegetation, emergent vegetated wetlands, and certain intertidal zones. Many of these areas are rare and have a high potential to be affected by shore-based activities. The coastal zone is under the most intense development pressure, and estuarine and intertidal areas are limited in comparison with the areal scope of other marine habitats.

Great Lakes ROI

Commercial fisheries in the Great Lakes ROI are managed by the states. Because EFH only applies to federally managed estuarine, marine, and anadromous fisheries, there is no EFH designated in the Great Lakes ROI.

3.3.2.5.2 ESA-Listed Fish

ESA-listed and candidate fish species that could potentially occur in the ROIs are presented in **Tables 3-8** and **3-9**, respectively.

Northeast ROI

Threatened and endangered species that have been identified in the Northeast ROI include the Gulf of Maine DPS of the Atlantic salmon and shortnose sturgeon. NMFS is currently proposing to list three populations of Atlantic sturgeon (Gulf of Maine DPS as threatened, and New York Bight and Chesapeake Bay DPSs as endangered) in the Northeast ROI (75 FR 61872-61903) (see **Table 3-8**). Candidate species include Atlantic bluefin tuna, cusk, and Atlantic wolffish (see **Table 3-9**). Critical habitat has been designated for the Atlantic salmon (Gulf of Maine DPS) in the Northeast ROI.

Southeast ROI

Threatened or endangered species that have been identified in the Southeast ROI include the Gulf sturgeon, pallid sturgeon, shortnose sturgeon, and smalltooth sawfish (see **Table 3-8**). NMFS is currently proposing to list two populations of Atlantic sturgeon (Carolina and South Atlantic DPSs) (75 FR 61872-61903) and the largemouth sawfish (75 FR 25174 – 25184) as endangered in the Southeast ROI (see **Table 3-9**). The Atlantic bluefin tuna is a candidate species, (see **Table 3-9**). Critical habitat has been designated for the Gulf sturgeon and smalltooth sawfish in the Southeast ROI.

Southwest ROI

Threatened or endangered species that have been identified in the Southwest ROI include the Chinook salmon, coho salmon, green sturgeon, Pacific eulachon, steelhead trout, tidewater goby, and totoaba (see **Table 3-9**). Critical habitat has been designated for the Chinook salmon (California coastal ESU, Central Valley spring-run ESU, Sacramento River winter-run ESU), coho salmon (Central California coast ESU, Southern Oregon/Northern California coasts ESU), green sturgeon, steelhead trout (Central California coast ESU, Southern California ESU, Northern California ESU, South-Central California coast ESU, California Central Valley ESU), and tidewater goby in the Southwest ROI.

Northwest ROI

Threatened or endangered species that have been identified in the Northwest ROI include bocaccio, bull trout, canary rockfish, Chinook salmon, chum salmon, coho salmon, green sturgeon, sockeye salmon, steelhead trout, yelloweye rockfish, and Pacific eulachon (see **Table 3-8**). Critical habitat has been designated for bull trout, Chinook salmon (Lower Columbia River ESU, Upper Columbia River

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Table 3-8. Threatened or Endangered Fish Occurring in Each ROI

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Atlantic salmon	<i>Salmo salar</i>	Gulf of Maine DPS–E, CH	Northeast
Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	Gulf of Maine DPS–P, T New York Bight DPS–P, E Chesapeake Bay DPS–P, E Carolina DPS–P, E South Atlantic DPS–P, E	Northeast
Boccaccio	<i>Sebastes paucispinis</i>	Puget Sound/ Georgia Basin DPS–E	Northwest
Bull trout	<i>Salvelinus confluentus</i>	T, CH	Northwest
Canary rockfish	<i>Sebastes pinniger</i>	Puget Sound/ Georgia Basin DPS–T	Northwest
Chinook salmon	<i>Oncorhynchus tshawytscha</i>	California coastal ESU–T, CH Central Valley spring-run ESU–T, CH Lower Columbia River ESU–T, CH Upper Columbia River spring-run ESU–E, CH Puget Sound ESU–T, CH Sacramento River winter-run ESU–E, CH Snake River fall-run ESU–T, CH Snake River spring/summer-run ESU–T, CH Upper Willamette River ESU–T, CH	Southwest, Northwest
Chum salmon	<i>Oncorhynchus keta</i>	Columbia River ESU–T, CH Hood Canal summer-run ESU–T, CH	Northwest
Coho salmon	<i>Oncorhynchus kisutch</i>	Central California coast ESU–E, CH Lower Columbia River ESU–T Oregon coast ESU–T, CH Southern Oregon/Northern California coasts ESU–T, CH	Southwest, Northwest
Green sturgeon	<i>Acipenser medirostris</i>	Southern DPS–T, CH	Northwest, Southwest
Gulf sturgeon	<i>Acipenser oxyrinchus desotoi</i>	T,CH	Southeast
Largetooth sawfish	<i>Pristis perotteti</i>	P, E	Southeast
Pacific eulachon	<i>Thaleichthys pacificus</i>	Southern DPS–T	Southwest, Northwest
Pallid sturgeon	<i>Scaphirhynchus albus</i>	E	Southeast
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	Northeast, Southeast
Smalltooth sawfish	<i>Pristis pectinata</i>	E, CH	Southeast
Sockeye salmon	<i>Oncorhynchus nerka</i>	Ozette Lake ESU–T, CH Snake River ESU–E, CH	Northwest

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Steelhead trout	<i>Oncorhynchus mykiss</i>	Puget Sound ESU–T Central California coast ESU–T, CH Snake River Basin ESU–T, CH Upper Columbia River ESU–E, CH Southern California ESU–E, CH Middle Columbia River ESU–T, CH Lower Columbia River ESU–T, CH Upper Willamette River ESU–T, CH Northern California ESU–T, CH South-Central California coast ESU–T, CH California Central Valley ESU–T, CH	Southwest, Northwest
Tidewater goby	<i>Eucyclogobius newberryi</i>	E, CH	Southwest
Totoaba	<i>Cynoscion macdonaldi</i>	E (F)	Southwest
Yelloweye rockfish	<i>Sebastes ruberrimus</i>	Puget Sound/Georgia Basin DPS–T	Northwest

Sources: USFWS 2009, NMFS 2010a

Key:

CH = critical habitat designated in the ROI

E = endangered

T = threatened

(F) = foreign

P = proposed

DPS = Distinct Population Segment

ESU = Evolutionary Significant Unit, an ESU is considered to be a DPS

1 **Table 3-9. Candidate Fish Species Occurring in Each ROI**

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	C	Northeast
Atlantic bluefin tuna	<i>Thunnus thynnus</i>	C	Northeast, Southeast
Bumphead parrotfish	<i>Bolbometopon muricatum</i>	C	Pacific Islands
Cusk	<i>Brosme brosme</i>	C	Northeast
Pacific herring*	<i>Clupea pallasii</i>	C	Alaska

Source: NMFS 2010a

Note: * Southeast Alaska Distinct Population Segment is the only DPS currently being considered.

Key:

C = candidate

- 2 spring-run ESU, Puget Sound ESU, Snake River fall-run ESU, Snake River spring/summer-run, Upper
3 Willamette River ESU), chum salmon (Columbia River ESU, Hood Canal summer-run ESU), coho
4 salmon (Oregon coast ESU, Southern Oregon/Northern California coasts ESU), green sturgeon, sockeye
5 salmon (Ozette Lake ESU, Snake River ESU), and steelhead trout (Snake River Basin ESU, Upper
6 Columbia River ESU, Middle Columbia River ESU, Lower Columbia River ESU, Upper Willamette
7 River ESU) in the Northwest ROI.

Pacific Islands ROI

No threatened or endangered species of fish occur in the Pacific Islands ROI. The only candidate species is the bumphead parrotfish (*Bolbometopon muricatum*) (see **Table 3-9**).

Alaska ROI

No threatened or endangered fish species occur in the Alaska ROI. The only candidate is the Southeast Alaska DPS of Pacific herring (see **Table 3-9**). There is no critical habitat designated for these species in the Alaska ROI.

Great Lakes ROI

No threatened or endangered species of fish occur in the Great Lakes ROI.

3.3.2.5.3 Fish Hearing

Hearing sensitivity is known for approximately 100 of the 250,000 extant species of fish (NRC 2003). The hearing sensitivity of fish (including sharks and rays) ranges from 0.5 to 200 kHz; however, most marine fish species are “hearing generalists” in that their hearing capabilities typically range from up to 0.5 Hz to 1 kHz, with best hearing from 0.1 to 0.4 kHz (NRC 2003, Popper 2003). Known hearing sensitivities for fish are presented in **Table 3-10**.

It has been reported that some clupeid fish from the subfamily Alosinae, such as menhaden and shad, can detect frequencies higher than 20 kHz (and actively avoid it) (Mann et al. 2005). Clupeids from the subfamily Clupeinae (e.g., sardines [*Sardinella* spp. and *Harengula* spp.] and other herrings [*Clupea* spp.]) can only detect sounds up to 5 kHz (Mann et al. 2001, 2005). Pacific herring (*Clupea pallasii*) have hearing thresholds at lower frequencies (0.1–5 kHz) that are typical of other non-ultrasound-detecting clupeids (Mann et al. 2005). Gulf menhaden (*Brevoortia patronus*) and American shad (*Alosa sapidissima*) respond to frequencies as high as 180 kHz (Gregory and Clapburn 2003, Higgs et al. 2004, Mann et al. 2001). Studies conducted on the alewife (*Alosa pseudoharengus*) (Dunning et al. 1992, Ross et al. 1996) and blueback herring (*A. aestivalis*) (Nestler et al. 2002), Gulf menhaden (Mann et al. 2001) and American shad (Popper and Carlson 1998) showed avoidance to sound at frequencies over 100 kHz.

3.3.2.6 Benthic Resources

3.3.2.6.1 General Benthic Species

Benthos refers to both substrate (habitat) and organisms that occupy that substrate. Benthic habitats are characterized by physical or structural features, such as topography, substrate type, sediment grain size, and water depth, and by the presence of emergent biogenic structures (i.e., structures formed by plants or animals), such as coral reefs, oyster reefs, and tube assemblages (GMFMC 2004). In general seafloor disturbance associated with the Proposed Action is expected to be minimal. Therefore, a descriptive analysis of benthic resources in the ROIs is not necessary. However, Johnson’s seagrass (*Halophila johnsonii*), staghorn coral (*Acropora cervicornis*), elkhorn coral (*Acropora palmata*), black abalone (*Haliotis cracherodii*), and white abalone (*Haliotis sorenseni*) are assessed because they are ESA-listed species that occur within the ROIs. Only the Southeast and Southwest ROIs have ESA-listed benthic species and therefore, will be the only ROIs discussed below.

Table 3-10. Reported Hearing Sensitivities, Vocalizations, and Transmissions of Selected Marine Fish

Order	Description of Order	Common Name	Scientific Name	Hearing Range (kHz)
Perciformes	Tunas (Scombridae)	Yellowfin	<i>Thunnus albacares</i>	0.05–1.1 (best hearing from 0.3–0.5)
		Kawakawa	<i>Euthynnus affinis</i>	0.05–1.1 not as sensitive as <i>Thunnus albacares</i>
	Damselishes (Pomacentridae)	Various species	<i>Eupomacentrus</i> spp.	0.1–1.2 (best hearing from 0.3–0.6)
		Black Goby	<i>Gobius niger</i>	0.1–0.16
		European Perch	<i>Perca fluviatilis</i>	0.1–0.16
		Pike perch	<i>Lucioperca sandra</i>	0.1–0.16
	Serranidae (Sea basses)	Red hind	<i>Epinephalus guttatus</i>	0.1–1 (best hearing from 0.2–0.4)
	Snappers	Schoolmaster	<i>Lutjanus apodus</i>	0.1–1 (best hearing from 0.2–0.6)
	Drums and croakers (Sciaenidae)	Chubby	<i>Equetus acuminatus</i>	0.1–2 (best hearing from 0.2–1)
	Grunts (Haemulidae)	Blue-striped grunt	<i>Haemulon sciurus</i>	0.75–1.0 (best hearing from 0.75–0.8)
	Wrasses (Labridae)	Blue-head wrasse	<i>Thalossoma birasciatum</i>	0.1–1.2 (best hearing from 0.2–0.4)
		Tautog	<i>Tautoga onitis</i>	0.1–0.16
Batrachoidformes	Toadfish	Oyster toadfish	<i>Opsanuss tau</i>	0.1–0.16
Scorpaeniformes	Searobbins	Slender searobin	<i>Prionotus scitulus</i>	0.1–0.6 (best hearing from 0.3–0.4)
Pleuronectiformes	Flounders, sole, halibut	Plaice	<i>Pleuronectes platessa</i>	0.03–0.2
		Dab	<i>Limanda limanda</i>	0.1–0.2
Anguilliformes	Eels	American eel	<i>Anguilla anguilla</i>	up to 0.3
Abuleiformes	Bonefishes	Bonefish	<i>Abula vulpes</i>	0.05–0.7
Salmoniformes	Salmon, trout, char	Atlantic salmon	<i>Salmo salar</i>	0.03–0.4
Gadiformes	Cods, hakes, haddock, pollock	Atlantic cod	<i>Gadus morhua</i>	0.01–0.5
		Haddock	<i>Melanogrammus aegelfinus</i>	0.03–0.47
		Pollock	<i>Pollachius pollachius</i>	0.03–0.47
		Common ling	<i>Molva molva</i>	0.04–0.55

Order	Description of Order	Common Name	Scientific Name	Hearing Range (kHz)
Lamniformes	Pelagic sharks	Bull shark	<i>Carcharhinus leucas</i>	0.1–1.4
		Lemon shark	<i>Negaprion brevirostris</i>	0.1–0.64
		Hammerhead shark	<i>Sphyrna lewini</i>	0.25–0.75
Beryciformes	Squirrelfish	Shoulderbar soldierfish	<i>Myripristis kuntzei</i>	0.1–3 (best hearing from 0.3–2)
		Squirrelfish	<i>Holocentrus adscensionis</i>	0.3–2
		Dusky squirrelfish	<i>Holocentris vexillarius</i>	0.1–1.2
		Striped squirrelfish	<i>Sargocentron xantherythrum</i>	≤ 1
Clupeiformes	Herrings, shads, sardines, and anchovies	Alewife	<i>Alosa pseudoharengus</i>	120+
		American shad	<i>Alosa sapidissima</i>	10–180 +
		Blueback herring	<i>Alosa aestivalis</i>	200 +
		Gulf menhaden	<i>Brevoortia patronus</i>	10–180+
		Pacific herring	<i>Clupea pallasii</i>	< 5 (best hearing 0.2–0.5)
		Atlantic herring	<i>Clupea harengus</i>	0.03–4 (best hearing from 0.3–1)
		Sardines and anchovies	(<i>Harengula</i> spp., <i>Anchoa</i> spp., <i>Sardinella</i> spp.)	< 4

Sources: NPS 2003, Mann et al. 2001, Plachta and Popper 2003, NRC 2003, Tavalga et al. 1981, Mann et al. 1998

3.3.2.6.2 ESA-Listed Benthic Species

Southeast ROI

Staghorn coral, listed as threatened, is found throughout the Florida Keys, the Bahamas, the Caribbean islands, and the west coast of South America. This coral occurs in the western GOM, but is absent from U.S. waters in the GOM. The northern limit is on the east coast of Florida, near Boca Raton. Critical habitat was designated for staghorn coral on November 26, 2008 (73 FR 72210).

Elkhorn coral, listed as threatened, is found on coral reefs in southern Florida, the Bahamas, and throughout the Caribbean. Its northern limit is Biscayne National Park, Florida, and it extends south to Venezuela; it is not found in Bermuda. Critical habitat was designated for elkhorn coral on November 26, 2008 (73 FR 72210).

Johnson's seagrass, listed as threatened, has a very limited distribution; it is the least abundant seagrass within its range. It has patchy distribution along the east coast of Florida from central Biscayne Bay to

Sebastian Inlet. The largest patches have been documented inside Lake Worth Inlet. The southernmost distribution is reported to be in the vicinity of Virginia Key in Biscayne Bay. Critical habitat was designated on April 5, 2000 (65 FR 17786).

Southwest ROI

Black abalone is listed as endangered from Crescent City, California, to Cape San Lucas, Baja California, Mexico, including all offshore islands (74 FR 1937–1946). Black abalone might exist, but are considered extremely rare, north of San Francisco to Crescent City, California, USA, and south of Punta Eugenia to Cabo San Lucas, Baja California, Mexico. Within this broad geographic range, black abalone generally inhabits coastal and offshore island intertidal habitats on exposed rocky shores where bedrock provides deep, protective crevice shelter. NMFS has proposed designating critical habitat for this species (75 FR 59900-59931).

The white abalone is listed as endangered. White abalone range from Point Conception in southern California southward to Baja California, Mexico. They dwell in deep (25 to more than 60 meters [80 to 200 feet]) subtidal waters, where they attach to substratum such as pinnacles, rock piles, and deep reefs. There is no critical habitat designated for this species.

3.3.3 Significance Criteria

3.3.3.1 Protected and Sensitive Habitat

Impacts on protected and sensitive habitats would be significant if HF and UHF SONAR resulted in any of the following outcomes:

- Temporary or permanent loss of any sensitive or protected habitat; this includes impacts on habitat from noise from the Proposed Action that lessen habitat value because of sublethal effects (e.g., behavioral impacts), including loss of feeding and breeding areas
- Direct loss or damage of any sensitive resource within a protected or sensitive habitat
- Noise from the Proposed Action that lessens the habitat value, including sublethal effects (e.g., behavioral impacts), and loss of feeding and breeding areas.

Cumulative effects consider those related to the Proposed Action combined with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect MPAs in the same general area of the Proposed Action.

3.3.3.2 Marine Mammals

Impacts on marine mammals would be significant if the Proposed Action resulted in any of the following outcomes:

- Permanent loss of habitat
- Temporary loss of habitat that adversely affects a substantial number of a specific species
- Direct loss of an individual or a take (as defined by the ESA or MMPA Level A harassment)
- Sublethal effects (i.e., MMPA Level B harassment) that could result in changes in behavior, because a letter of authorization is not being obtained
- Permanent loss of feeding and breeding areas

- Temporary loss of feeding and breeding areas that adversely affects a substantial number of individuals of a species
- Substantial interference with movement of any resident species that results in the inability of the species to survive.

Cumulative effects consider those related to the Proposed Action along with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect populations of marine mammals in the same general area of the Proposed Action.

3.3.3.3 Sea Turtles

Impacts on sea turtles would be significant if HF and UHF SONAR resulted in any of the following outcomes:

- Permanent loss of critical habitat
- Temporary loss of critical habitat that adversely affects a substantial number of a specific species
- Direct loss of an individual or a take (as defined under ESA)
- Permanent loss of breeding areas
- Temporary loss of breeding or nesting areas that adversely affects a substantial number of a specific species
- Substantial interference with movement of any resident species that results in the inability of the species to survive.

Cumulative effects consider those related to the Proposed Action along with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect sea turtles in the same general area of the Proposed Action.

3.3.3.4 Coastal and Marine Birds

Impacts on coastal and other birds, particularly diving birds, would be significant if HF and UHF SONAR resulted in any of the following outcomes:

- Harassment of threatened or endangered bird species in nesting and foraging areas
- Permanent loss of critical habitat
- Temporary loss of critical habitat that adversely affects a substantial number of a specific species
- Direct loss of an individual or take (as defined under ESA) of a threatened or endangered species
- Permanent loss of breeding areas
- Temporary loss of breeding or nesting areas for threatened or endangered species
- Substantial interference with movement of any resident species that results in the inability of the species to survive.

Cumulative effects consider those related to the Proposed Action along with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect bird species in the same general area of the Proposed Action.

3.3.3.5 Fish

Potential fisheries impacts would primarily affect fish populations by altering or impacting fish habitat. Impacts on fisheries would be significant if HF and UHF SONAR resulted in any of the following outcomes:

- Permanent loss of breeding areas or HAPC
- Substantial interference with movement of any resident species or migration of anadromous or catadromous species
- Direct loss of an individual or take (as defined under ESA) of a threatened or endangered species.

Cumulative effects consider those related to the Proposed Action along with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect fish species in the same general area of the Proposed Action.

3.3.3.6 Benthic Resources

Impacts on benthic resources would be significant if the HF and UHF SONAR resulted in any of the following outcomes:

- Loss of individuals or habitat that results in the inability of the species to survive
- Permanent loss of critical habitat
- Temporary loss of critical habitat that adversely affects recolonization by threatened or endangered benthic resources
- Direct loss of an individual or take (as defined under ESA) of a threatened or endangered species.

Cumulative effects consider those related to the Proposed Action along with impacts of other commercial, military, recreational, offshore, and coastal activities that might occur and adversely affect benthic resources in the same general area of the Proposed Action.

3.3.4 Environmental Consequences of the Proposed Action

3.3.4.1 Marine Protected Areas

Without mitigation measures, short-term, minor to potentially significant, indirect, adverse and beneficial impacts on MPAs would occur as a result of adverse impacts on marine mammals, sea turtles, fish, and birds that use the MPAs. Minor, direct, adverse impacts on some marine mammal and fish species that use the MPAs would occur as a result of implementation of the Proposed Action (see **Sections 3.3.4.2 and 3.3.4.5**, respectively). Minor, indirect adverse impacts on sea turtle and coastal and marine bird species would occur as a result of implementation of the Proposed Action. Indirect impacts would result from impacts on fish that serve as prey species for sea turtles and birds (see **Sections 3.3.4.3 and 3.3.4.4**, respectively). Normal locations for deployments would include the ports and waterways of the nation's top-tiered militarily and economically significant ports. However, if it is determined that use of HF and UHF SONAR could occur in an MPA, activities will be carried out in a manner that avoids or minimizes adverse impacts on the marine species that use the MPA. Indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. The USCG is committed to the protection of living marine resources,

including threatened and endangered species and nonthreatened and nonendangered marine mammals. To that end, the USCG would develop and implement procedures for the operation of specific SONAR systems to avoid and minimize impacts on marine mammals and other marine species, to the extent practicable while still completing the mission. These procedures would be included in any future policies that are developed authorizing the use of specific SONAR systems. Additionally, operational missions have a higher priority than missions involving training, exercises, research, development, or testing and, as such, in developing mitigation procedures, the USCG would consider the frequency, source level of the equipment, mission importance, and the risk to the safety and security of the nation and its citizens by taking no action. All mitigation measures would be developed in coordination with USFWS and NMFS. Examples of mitigation measures that would be developed are presented in **Section 2.1**.

Under the Proposed Action, there is the potential for short-term, negligible adverse impacts on protected and sensitive habitats from ROV and AUV operations. However, in most cases, ROVs would be used dockside or at a location appropriate for conducting vessel inspections at a water depth that would preclude seafloor disturbance. See **Section 2.1** for additional detail on ROV and AUV operations associated with the Proposed Action.

Threats to MPAs include unsustainable tourism, pollution, coastal development, and illegal fishing and overfishing. Increased globalization of shipping has also increased the introduction of invasive and nonnative species; for MPAs, such invasions pose a major threat. MPAs must also adapt to natural threats exacerbated by increasing climate change.

Cumulative impacts on MPAs from the HF and UHF SONAR as a result of the current uses and threats to MPAs could result in indirect effects. An increase in noise could disturb marine species that use the MPAs. Based on mitigation measures, impacts of the Proposed Action are expected to be short-term and minor (see **Sections 3.3.4.2** through **3.3.4.5**). Typical port activities that add to the existing ambient sound levels include shipping and boating, aircraft, dredging, construction and maintenance of port infrastructure, and industrial activity. As described in **Section 3.2.4**, sound is only cumulative when it operates at the same frequency. Therefore, contribution of the Proposed Action would be negligible.

No permanent loss or damage or loss of protected or sensitive habitat is expected. As such no irreversible or irretrievable commitment of this resource area would occur.

3.3.4.2 Marine Mammals

This section evaluates potential direct and indirect effects on marine mammals as a result of exposure to underwater sound associated with the alternatives. **Table 2-1** presents acoustic outputs of the types of SONAR systems proposed to be used during USCG activities. The proposed HF and UHF SONAR systems are commercially and widely available off-the-shelf equipment. These systems would be used for specific purposes such as obstacle or target detection, identification, or classification. Typically, these commercially available systems project relatively low-power sounds, and have significant spatial resolution with generally narrower beam patterns and shorter pulse lengths than mid- and low-frequency military SONAR systems (NRC 2003). The Proposed Action only includes SONAR systems with frequencies above 50 kHz. These SONARs are within the hearing range of toothed whales (150 Hz to 180 kHz) and pinnipeds swimming in the water (75 Hz to 75 kHz) (Southall et al. 2007). Without mitigation, short-term, minor, adverse effects on toothed whales and pinnipeds would be expected from such SONAR operations. However, mitigation measures would be designed and implemented to avoid and minimize such potential impacts on protected marine species (see **Section 2.1**).

The genera of toothed whales (mid-frequency and high-frequency cetaceans) and pinnipeds in water that would be potentially affected by the Proposed Action are presented in **Table 3-5**. No impact on other

marine mammal species is expected, since their hearing range (7 Hz to 22 kHz) is lower than that of the SONAR transmissions. Genera of marine mammals not expected to be affected by the Proposed Action are listed as low-frequency cetaceans in **Table 3-5**.

All equipment under the Proposed Action is commercially and readily available to the general market. This routinely and globally used standard navigational and imaging equipment has not previously been shown to adversely affect marine mammals and has not previously required incidental take permits (ITPs). Additionally, long-term continuous use of the equipment is not being proposed. As such, it is not anticipated that a NMFS MMPA incidental take permit would be required for emergency or non-emergency use. However, if NMFS consultation determines that an ITP would be required for specific pieces of equipment and circumstances (e.g., equipment that operates at 50 to 200 kHz and can be heard by toothed whales and pinnipeds swimming in water, under emergency situations where mitigation measures are not possible), then the USCG would apply for an ITP.

Given the proposed operating characteristics and monitoring, potential impacts on marine mammals are considered highly unlikely. This is based on the following characteristics of the proposed SONAR signals: intermittent nature, brief pulse duration (i.e., μ s to ms), low duty cycle and source level, short duration of use (minutes to typically several days or sometimes up to a week period), relatively high attenuation rate given the high frequencies, generally narrow downward-directed beam, and small area of ensonification. Furthermore, because both the vessel and animal are moving, repeated exposure of an individual is highly unlikely to occur and exposure time would be short (unlike shipping noise). Monitoring would further reduce the likelihood of the occurrence of an impact.

3.3.4.2.1 General Effects of Noise on Marine Mammals

There are many sources of natural and anthropogenic (human-made) noise in the marine environment. Natural noise sources include wind, waves, rain, undersea earthquakes, undersea volcano eruptions, and lightning strikes on the water surface, in addition to biotic noise sources from snapping shrimp (Family Alpheidae), fish, and marine mammals (Richardson et al. 1995). Anthropogenic noise sources include transportation (shipping/vessel traffic), dredging, construction, hydrocarbon and mineral exploration and recovery, geophysical surveys (i.e., seismic surveys), SONAR, explosions, acoustic harassment devices (e.g., to repel marine mammals from aquaculture facilities or fishing nets from which they can steal fish) and ocean science studies (Richardson et al. 1995; Hildebrand 2005). The principal anthropogenic noise sources producing the highest overall sound pressure levels with resulting higher potentials for acute or injurious effects are underwater explosions, shipping, seismic exploration (oil/gas industry-related), and naval SONAR operations (Hildebrand 2005, Weilgart 2007a). The following section discusses general anthropogenic noise impacts.

Our present understanding of how marine mammals respond to sound is insufficient to allow reliable predictions of behavioral responses to anthropogenic noise (Hildebrand 2005); the available data on behavioral responses do not converge on specific exposure conditions resulting in particular reactions, nor do they point to a common behavioral mechanism (Southall et al. 2007). Known effects of anthropogenic noise on marine mammals have been reviewed by various sources (Richardson et al. 1995; Hildebrand 2005; NRC 2005; Nowacek et al. 2007; Weilgart 2007a, 2007b). Human-made sounds could affect the ability of marine mammals to communicate and to receive information about their environment. Such noise could interfere with or mask the sounds used and produced by marine mammals, and thereby interfere with their natural behavior. Observed effects of anthropogenic activities on marine mammals include changes in vocalizations, respiration, swim speed, diving, and foraging behavior; displacement; avoidance; shifts in migration path; stress; hearing damage; and strandings. The responses of marine mammals to sound depend on a variety of factors, including (a) the SPL of the noise source and its other properties (e.g., frequency, duration), (b) the physical and behavioral state of the animals, and

(c) the ambient acoustic and ecological features of the surrounding environment (Hildebrand 2005). The response threshold could depend on whether habituation (gradual waning of behavioral responsiveness) or sensitization (increased behavioral responsiveness) occurs (Richardson et al. 1995); however, as noted by Wright et al. (2007a), interpretation of a reduction in behavioral responses to noise as acclimation might be a mistake in many situations, as alternative reasons for the observed results are much more likely. Sounds can cause reactions that might include disruption of marine mammals' normal activities (behavioral and social disruption) and, in some cases, short- or long-term displacement from areas important for feeding and reproduction (Richardson et al. 1995). The energetic consequences of one or more disturbance-induced periods of interrupted feeding or rapid swimming, or both, have not been evaluated quantitatively. Energetic consequences would depend on whether suitable food is readily available. Of the marine mammals responding to noise, females in late pregnancy or lactating would probably be most affected. Human-made noise can cause temporary or permanent hearing impairment in marine mammals if the noise is strong enough or if the noise is a pulse-type or a continuous pulse (e.g., pile driving). Such impairment would have the potential to diminish the individual's chance for survival.

Anthropogenic noise acts as a stressor to marine mammals (Wright et al. 2007a, 2007b). As noted by Wright et al. (2007a), a range of issues might arise from the extended stress response including suppression of reproduction (physiologically and behaviorally), accelerated aging, and sickness-like symptoms. Stressed marine mammals are more vulnerable to parasites, disease, environmental contaminants, and predation. The effects of cumulative and synergistic responses to stressors can be very important (Wright et al. 2007a).

Determining if short-term changes in behavior represent a "biologically significant" effect is difficult (Wright 2006). Immediate or short-term changes in behavior could represent short- or long-term effects on a population. Short-term changes in behavior can include many of the changes described in previous literature including increases in dive duration or changes in direction of travel. However, long-term impacts include changes such as reduced health and viability of a population. For example, short-term changes in activity budgets that reduce amount of time feeding could represent long-term challenges by reducing energy acquisition. These short-term changes could also have a greater impact on a population depending on resource availability.

Marine mammal responses to ultrasonic frequencies are varied. A tagged sperm whale did not obviously react to high-frequency (30–60 kHz) pulses (Watkins et al. 1985). Strong avoidance reactions by Dall's porpoise in response to pulsed sounds at 20 to 143 kHz were documented by Hatakeyama et al. (1994). Underwater pulsed signals of 50, 70, and 120 kHz were determined to cause harbor porpoises to move away from the sound source (Kastelein et al. 2008a, 2008b). Captive false killer whales showed some avoidance when first exposed to pulse sequences at 24 to 115 kHz and received levels above about 170 dB re 1 μ Pa, with little or no reaction at lower received levels, and responses diminished with repeated exposure (Akamatsu et al. 1993). Richardson et al. (1995) noted that some tuna fishermen in the Eastern Tropical Pacific found that oceanic dolphins were alarmed by SONAR and that echosounders are among the noisemaking methods used to drive long-finned pilot whales to shore during the Faroese drive fishery. Some harp seals seemed to alter their swimming patterns when they encountered the beam of the echosounder, nominally at 200 kHz (Terhune 1976). However, behavior of ringed seals did not seem to be affected by 60 to 69 kHz acoustic pingers attached to the seals (Wartzok et al. 1992a, 1992b).

The impact of SONAR on marine mammals is a topic of recent concern (ICES 2005, Buck and Calvert 2008, Parsons et al. 2008). Military SONARs generally cover a broader frequency range with higher source levels than civilian SONARs (Hildebrand 2005). Around the world, mid-frequency military SONARs have been correlated with strandings of beaked whales (Weilgart 2007a). ICES (2005) noted that there appear to have been no dire consequences of using high-frequency, or low- or medium-intensity

1 SONAR on cetaceans over the period that such navigation and surveying SONARs have been in use.
2 However, two mass stranding events have been suggested to have links to the use of high-frequency
3 SONAR, an event in Australia and one in southwestern England, which are discussed in detail below.
4 While it is possible that the SONAR transmissions influenced the behavior of the cetaceans in each
5 scenario, the report authors have noted that is also possible that they had no effect at all
6 (e.g., Australia event: DEWHA 2005). Although the results are inconclusive, they do suggest a need to
7 err on the side of caution when considering possible impacts of any SONAR.

8 During the period of 25 to 27 October 2005, 145 long-finned pilot whales stranded and died in a series of
9 three stranding events in the Marion Bay region in southeastern Tasmania, Australia (DEWHA 2005).
10 On investigation, it was found that the whales stranded during three separate periods, the first occurring
11 6 hours before the arrival of two Royal Australia naval vessels (DEWHA 2005). However, the second
12 event began just over an hour after the vessels began using HF (50 to 200 kHz) SONAR in the vicinity of
13 the stranding, and a behavioral reaction to the SONAR facilitating the second and third stranding events
14 could not be ruled out (DEWHA 2005). The investigation concluded that direct physical trauma caused
15 by the SONAR was highly unlikely based on biological samples. However, behavioral responses of the
16 whales to the SONAR transmissions were not ruled out because of the coincidence in time and space of
17 the SONAR transmissions and the second and possibly third stranding events. It is not possible to
18 conclude whether or not the SONAR transmissions influenced the second and third stranding events, as
19 the level at which the whales perceived the SONAR transmissions and their behavioral responses to those
20 sounds, especially under stranding conditions, are unknown. Pilot whales in the vicinity of the stranding
21 site were likely to be in a stressed and disoriented state and might have been more vulnerable to acoustic
22 or other disturbance, but no further elaboration relative to the cause(s) of the animals' behavioral state
23 was provided in the report.

24 On 9 June 2008, in southwestern England, approximately 40 short-beaked common dolphins stranded or
25 attempted to strand in and around a small tidal tributary of the Fal Estuary in Cornwall (Jepson and
26 Deaville 2009, CWTMSN and BDMLR 2009). A number of theories were proposed for the cause of the
27 event, each of which was investigated and reported by Jepson and Deaville (2009) in their pathology
28 report. The highest profile and most extensive event at the time of the stranding was a Royal Navy
29 exercise, involving vessels from the navies of seven other countries, which was in progress along the
30 southwestern coast (Jepson and Deaville 2009, CWTMSN and BDMLR 2009). Mid-frequency SONARs
31 (2–4 kHz and 5–8 kHz) were reported by the Royal Navy to have been used during the event; however,
32 the length of time between the use of the SONAR (cessation of 60 hours before the stranding event) and
33 the stranding event, suggests it is unlikely that this was the ultimate trigger that caused the mass
34 stranding. The Royal Navy issued statements saying that the only SONAR in use around the time of the
35 mass stranding event was that being used by the seabed survey vessel, which was undertaking
36 navigational training with a towed, low-power, high-frequency, short-range SONAR transmission
37 (2094D) at approximately 100 kHz and using routine, high-frequency echo sounders at 50 kHz, at least
38 12 NM off the coast. As noted earlier, no conclusive evidence currently ties the use of SONAR to the
39 mass stranding event.

40 The USN has utilized a High Frequency Marine Mammal Mitigation (HF/M3) SONAR system
41 specifically designed to meet the marine mammal mitigation plan proposed by the USN for the
42 SURTASS LFA project (Ellison and Stein 2001, Stein et al. 2001). No published information is available
43 on whether any responses to the SONAR signals (30–40 kHz) by marine mammals were noted, although
44 the system has been tested and successfully used for the detection of marine mammals (Ellison and Stein
45 2001, DoN 2007b).

3.3.4.2.2 Noise Criteria

The hearing range of all baleen whales and sirenians, sea otters, and polar bears, is below the range of the SONARs (>50 kHz) of the Proposed Action (see **Table 3-5**). Toothed whales and pinnipeds swimming in the water have a hearing range that includes the range of the SONARs of the Proposed Action (see **Table 3-5**). Therefore, the species of concern are the before-mentioned toothed whales and pinnipeds.

The NMFS uses underwater criteria to assess exposure of marine mammals to underwater anthropogenic noise. These limits are based on exposure to air guns (a pulsed sound) and are concerned only with SPLs. With this approach, regardless of the anthropogenic sound, if a marine mammal's received exposures exceed the relevant (pulse or nonpulse) criterion, harassment or injury is assumed to be likely (Southall et al. 2007). A disadvantage to this approach (as noted by NMFS) is that this considers only the SPL of an exposure but not its other attributes, such as duration, frequency, or repetition rate, all of which are critical for assessing impacts on marine mammals. As a result, NMFS has proposed new science-based thresholds to improve and replace the current generic exposure level thresholds that have been used since 1997. The proposed new noise exposure criteria are based on five functional hearing groups (see **Table 3-5**) and different types of anthropogenic sound; these are currently undergoing the NEPA process and are therefore, not established criteria. The following analysis is not based on these criteria, but the criteria typically used by NMFS for Level A and Level B harassment, as described below (e.g., 70 FR 1871–1875).

Very high sound source levels can rupture the eardrum or damage the small bones in the middle ear. Lower level exposures of sufficient duration can cause permanent or temporary hearing loss; such an effect is called a sound-induced threshold shift, or simply a threshold shift. A threshold shift can be either permanent, in which case it is termed a permanent threshold shift (PTS), or it can be temporary, in which case it is termed a temporary threshold shift (TTS). Still lower levels of sound can result in auditory masking, which could interfere with a marine mammal's ability to hear other concurrent sounds.

The Proposed Action is for the use of HF and UHF SONARs. Presented below are the noise criteria only as they apply to pulsed sounds. It should be noted that the effect of sound on an animal is a function of sound pressure and exposure duration. NMFS treats harassment or injury from pulsed sound as a function of total energy received. The total energy of the sound to which an animal is exposed (a combination of the sound intensity and the duration of exposure to that intensity) is a much better predictor of whether or not TTS will occur than is the sound intensity alone. Conclusions on auditory thresholds resulting in auditory damage in marine mammals are highly speculative due to lack of data (DOSITS 2007).

Injury (Level A Harassment). Level A harassment has the potential to injure a marine mammal or marine mammal stock in the wild. This refers to affecting an individual or an entire stock (i.e., population, management stock, collectively a group of animals at a population level) in the wild. A nonlethal injurious acoustic impact is defined as eardrum rupture (i.e., tympanic membrane [TM] rupture). This is considered symptomatic of the onset of auditory injury. This recognizes that TM rupture is not necessarily a life-threatening injury, but is a useful index of possible injury that is well-correlated with measures of permanent hearing impairment. This is often referred to as PTS. NMFS uses a “do not exceed” exposure criterion of 180 dB re 1 μ Pa; this is equivalent to Level A harassment (e.g., 70 FR 1871–1875).

TTS and Sub-TTS (Level B Harassment). Level B harassment has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including migration, breathing, nursing, breeding, feeding, or sheltering, but which does not have the potential to injure a marine mammal or marine mammal stock in the wild. This refers to affecting an individual or an

entire stock (i.e., population, management stock, collectively a group of animals at a population level) in the wild. There are two thresholds for noninjurious harassment, also known as Level B harassment. The first is TTS, which is a temporary, recoverable, loss of hearing sensitivity. The second threshold is termed “sub-TTS” and is used to account for behavioral disturbance significant enough to be judged as harassment, but occurring at lower sound energy levels than those that might cause TTS.

Behavioral modification has been defined to address a noise level or other activities that might potentially cause marine mammals to alter normal biological behavior. NMFS defines these behavior responses as modifications resulting from repeated noise exposures (below TTS) to the same marine mammals (i.e., resident) over a relatively short period of time.

Level B harassment for pulsed sounds (e.g., explosions, SONARs, pile driving) have typically been set at an SPL value of 160 dB re 1 μ Pa (e.g., 70 FR 1871–1875). However, Southall et al. (2007) noted the relevance of the 160 dB re 1 μ Pa disturbance criterion for toothed whales and pinnipeds exposed to pulsed sounds is not well-established. The exposure zone for Level B harassment includes both behavioral effects and physiological effects and includes the region in which TTS is predicted to occur.

Exposure Zone. In order to ensure that any marine mammal takes, including Level A and Level B harassment, do not occur incidental to the Proposed Action, an appropriate safety range would be established. The maximum distance sound associated with the Proposed Action would attenuate to 180 dB re μ Pa is 200 meters (656 feet) in salt water. The maximum distance sound associated with the Proposed Action would attenuate to below 160 dB re 1 μ Pa is 900 meters (2,952 feet) in salt water. Note that distances would be greater in fresh water (see **Table 3-3**). See **Appendix E** for additional detail regarding the analysis and associated assumptions. Based on this analysis, the Exposure Zones in salt water for Level A and Level B harassment are approximately 200 meters and 900 meters (656 feet and 2,952 feet). Some of the proposed use of equipment under the Proposed Action can detect marine mammals. The use of the SONAR system could alert officials to any marine mammals that might be in the area, allowing for mitigating circumstances (e.g., shutting down 50–200 kHz SONAR, if the operational scenario permits). However, USCG does not plan to use SONAR to actively monitor for protected species under the Proposed Action unless otherwise recommended by NMFS.

3.3.4.2.3 Summary of Effects on Marine Mammal Species

The hearing range of all baleen whales and sirenians, sea otters, and polar bears is below the range of the SONARs (> 50 kHz) of the Proposed Action (see **Table 3-5**); that is, these signals are imperceptible to these species. Toothed whales and pinnipeds swimming in the water have a hearing range that includes the range of the SONARs of the Proposed Action (see **Table 3-5**). The impact ranges for Level A and Level B harassment are summarized in **Table 3-11**. Our present understanding of how marine mammals respond to sound is insufficient to allow reliable predictions of behavioral responses to anthropogenic noise (Hildebrand 2005); the available data on behavioral responses do not converge on specific exposure conditions resulting in particular reactions (Southall et al. 2007). Cetacean and pinniped species occurring in the ROI and potentially impacted by the SONARs of the Proposed Action are shown in **Table 3-12**.

As stated, the effect of sound on an animal is a function of sound pressure and exposure duration. NMFS treats harassment or injury from pulsed sound as a function of total energy received. The total energy of the sound to which an animal is exposed (a combination of the sound intensity and the duration of exposure to that intensity) is a much better predictor of whether or not TTS will occur than is the sound intensity alone. Conclusions on auditory thresholds resulting in auditory damage in marine mammals are highly speculative due to lack of data (DOSITS 2007). Sounds from the SONAR equipment under the

**Table 3-11. Acoustic Impact Zones^a for Marine Mammals
for the Use of HF and UHF SONARs in the ROIs**

Equipment Frequencies	Distance to Level A Harassment in meters (feet)	Distance to Level B Harassment in meters (feet)	Distance to Level A Harassment in meters (feet)	Distance to Level B Harassment in meters (feet)	Distance to Level A Harassment in meters (feet)	Distance to Level B Harassment in meters (feet)	Distance to Level A Harassment in meters (feet)	Distance to Level B Harassment in meters (feet)
Operating Scenarios	Salinity = 0, Temperature = 0		Salinity = 0, Temperature = 20		Salinity = 30, Temperature = -1.8		Salinity = 30, Temperature = 30	
50–70 kHz ^a	~200 (~656)	1,000–1,100 (3,281–3,609)	100–200 (328–656)	500–1,200 (1,640–3,937)	100–200 (328–656)	500–600 (1,640–1,969)	100–200 (328–656)	500–700 (1,640–2,297)
70–100 kHz ^b	200–500 (200–1,640)	1,000–1,900 (3,281–6,234)	200–500 (200–1,640)	1,200–2,800 (3,937–9,186)	100–300 (328–984)	500–900 (1,640–2,953)	100–200 (328–656)	500–700 (1,640–2,297)
100–200 kHz ^c	200–500 (200–1,640)	600–1,900 (1,969–6,234)	200–500 (200–1,640)	1,000–2,800 (3,281–9,186)	200–300 (656–984)	500–900 (1,640–2,953)	100–200 (328–656)	200–400 (656–1,312)
> 200 kHz	Distance to Level A and Level B Harassment were not modeled because these signals are not expected to be audible to marine mammals. Therefore impacts are not expected.							

Notes:

- Acoustic impact zones are based on general propagation modeling based on frequency and temperature (see Appendix E). This analysis estimated the distance the source levels would be reduced would be below 180 dB re μ Pa and 160 dB re 1 μ Pa at the maximum source levels expected for 50 kHz, 70 kHz, 132 kHz, and 200 kHz. Acoustic impact zones are expressed in distance from sound source in meters (and feet).
- The operating scenarios assume that no 50–70 kHz SONAR system will have a source level greater than 221 dB re 1 μ Pa.
- The operating scenarios assume that no 70–100 kHz SONAR system will have a source level greater than 234 dB re 1 μ Pa.
- The operating scenarios assume that no 100–200 kHz SONAR system will have a source level greater than 227 dB re 1 μ Pa.

Proposed Action are very short pulses and the beams associated with most equipment are also generally narrow and focused. For example, the L3-Klein 3000 Dual Frequency SONAR has a frequency of approximately 132 kHz and a source level of 234 dB re 1 μ Pa at 1 m, with a pulse length of 25 to 400 μ s; a 5 percent duty cycle (i.e., a pulse is only emitted for 5 percent of the time the SONAR is in operation); and the beam is extremely narrow at 0.7 to 1 degree, which means that only a very small area of the water is ensonified. These characteristics would help to reduce and avoid the effects of the Proposed Action on marine mammals.

All equipment is commercially and readily available to the general market. This routinely and globally used standard navigational and imaging equipment has not previously been shown to adversely affect marine mammals and has not previously required ITP. Additionally, long-term continuous use of the equipment is not being proposed. As such, it is not anticipated that a NMFS MMPA incidental take permit would be required for emergency or non-emergency use. However, if NMFS consultation

Table 3-12. Cetaceans, Pinnipeds, and the Possible Impacts of Use of HF and UHF SONARs

Functional Hearing Group	Estimated Auditory Bandwidth	Genera Represented (Number species/subspecies)	Potentially Impacted by Proposed Action
Low-frequency cetaceans	7 Hz to 22 kHz	<i>Balaena, Eschrichtius, Megaptera, Balaenoptera</i> (10 species/subspecies)	No
Mid-frequency cetaceans	150 Hz to 160 kHz	<i>Steno, Tursiops, Stenella, Delphinus, Lagenodelphis, Lagenorhynchus, Lissodelphis, Grampus, Peponocephala, Feresa, Pseudorca, Orcinus, Globicephala, Physeter, Delphinapterus, Monodon, Ziphius, Berardius, Hyperoodon, Mesoplodon</i> (36 species/subspecies)	Yes
High-frequency cetaceans	200 Hz to 180 kHz	<i>Phocoena, Phocoenoides, Kogia</i> (4 species/subspecies)	Yes
Pinnipeds in water	75 Hz to 75 kHz	<i>Arctocephalus, Callorhinus, Zalophus, Eumetopias, Erignathus, Phoca, Pusa, Halichoerus, Pagophilus, Cystophora, Monachus, Mirounga, and Odobenus</i> (15 species/subspecies)	Yes

Source: Adapted from Southall et al. 2007

determines that an ITP would be required for specific pieces of equipment and circumstances (e.g., equipment that operates at 50 to 200 kHz and can be heard by toothed whales and pinnipeds swimming in water, under emergency situations where mitigation measures are not possible), then the USCG would apply for an ITP. Given the proposed operating characteristics and monitoring, potential impacts on marine mammals are considered highly unlikely. This is based on the following characteristics of the proposed SONAR signals: intermittent nature, brief pulse duration (i.e., μ s to ms), low duty cycle and source level, short duration of use (minutes to typically several days or sometimes up to a week period), relatively high attenuation rate given the high frequencies, generally narrow downward-directed beam, and small area of ensonification. Furthermore, because both the vessel and animal are moving, repeated exposure of an individual is highly unlikely to occur and exposure time would be short (unlike shipping noise). Monitoring would further reduce the likelihood of the occurrence of an impact.

For focused echo sounders, high sound levels will be found in the narrow main lobe immediately below the transducer. Hence, the most likely scenario for injury of an animal by acoustic equipment would be if the equipment were turned on full power while the animal was close to it (SCAR AHGMATE 2002).

The Proposed Action is subject to MMPA regulations that indicate that the taking of small numbers of marine mammals may be allowed by NMFS, if the total taking will not have an “unmitigable adverse impact” on those species or stocks of marine mammals intended for subsistence uses (50 CFR 216.102 [a]). The USCG Office of Counterterrorism & Defense Operations (CG-532) and Office of Environmental Management (CG-47) would coordinate with NMFS and the potentially affected subsistence communities in accordance with MMPA regulations at 50 CFR 216.104(a)(12) to develop a Communications Plan and Conflict Avoidance Agreement to ensure that non-emergency use would not interfere with subsistence activities. Under the Proposed Action, use of HF and UHF SONAR above 60° North latitude (i.e., just north of the Aleutian Islands in Alaska, which includes the Kenai Peninsula and

Prince William Sound) would be used only in emergency situations (e.g., threat to human life, threat to national security) or on a case-by-case basis for non-emergency situations. In the event that an emergency situation requires SONAR use in the area above 60° North latitude, SONAR that operates at 200 kHz or higher would be used to the extent practicable. If during the public review process, other areas are identified as subsistence fishing and hunting areas, they would be subject to the same requirements.

When considering the potential cumulative effects of the Proposed Action, one must consider a multitude of man-made and natural sources that affect Cetaceans. These occur as a result of recreational and commercial fisheries, oil/gas exploration/development activities, alternative energy source development/operations, military operations, vessel traffic, ecotourism, habitat degradation, ensonification, pollution, toxic algal blooms, disease, predators, intentional hunting, and climate change. Threats to threatened/endangered marine mammals are outlined in recovery plans and status reviews drafted by NMFS and USWFS.

Interactions with commercial and recreational fisheries are a serious threat to many populations of marine mammals, particularly in terms of entanglement in fish gear and as incidental bycatch (Read 2008). For example, Young and Iudicello (2007) reviewed cetacean bycatch issues worldwide and noted that for the western North Atlantic, the species most affected by accidental entrapments in fishing gear is the harbor porpoise. Also, entanglement in fixed fishing gear, in particular in sink gillnets and a variety of pot and trap fisheries, is an important factor depressing the growth rate of the North Atlantic right whale (Johnson et al. 2007). Fisheries also impact marine mammals by reducing prey stocks (DeMaster et al. 2001, Plagányi and Butterworth 2005). Three possible effects of finfish aquaculture on marine mammals are entanglement, habitat exclusion, and vessel disturbance (Würsig and Gailey 2002).

The major impact-producing factors from oil/gas exploration/development activities that might affect marine mammals as a result of routine activities include the degradation of water quality from operational discharges; oil spills; noise generated by helicopters, vessels, operating platforms, and drillships; vessel traffic; explosive structure removals; seismic surveys; and marine debris from service vessels and offshore structures. These are reviewed in detail by the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) (formerly known as the Minerals Management Service [MMS]) for the entire United States in their 5-year leasing program EIS (MMS 2007). Any oil or gas activities occurring within state waters would be state-regulated; impacts would be similar to those assessed by the BOEMRE.

The BOEMRE held a workshop to review the potential impacts from construction and operation phases of alternative energy sources (these include wave energy, wind energy, and current energy) (Michel et al. 2007), while the European Cetacean Society held a workshop to discuss similar concerns (Evans 2008). For wind farms, construction phase is divided into three main impact categories: (1) increased vessel activity, (2) impulse noise, and (3) habitat alteration. The operational phase is divided into four main categories: (1) continual operation noise and vibration, (2) physical presence of structures, (3) electromagnetic fields (EMFs), and (4) increased vessel activity. Of all the impacts discussed in the literature, noise is considered to be the most critical because the complexities of submarine sound make it difficult to study or model (Michel et al. 2007, Evans 2008).

Major impact-producing factors associated with military operations include vessel and aircraft traffic, explosives, SONAR, and gunnery exercises. These are most recently reviewed in Department of Navy (DoN) EISs for various training exercises in the Atlantic and Pacific (DoN 2008a, 2008b). Military SONARs generally cover a broader frequency range with higher source levels than civilian SONARs (Hildebrand 2005). These SONARs are used for target detection, localization, and classification. Low-frequency active (LFA) SONARs are used for broadscale surveillance; they operate in the frequency

range from 100 to 500 Hz; the effective source level of an LFA array can be 235 dB re 1 μ Pa or higher, with signal transmissions emitted in patterned sequences that can last for days or weeks (Hildebrand 2005). Mid-frequency tactical antisubmarine warfare (ASW) SONARs are designed to detect submarines over several tens of km/miles (Hildebrand 2005). The AN/SQS-53C is the most advanced surface ship ASW SONAR in use by the USN, and it generates pulses of 1 to 2 second durations in the 1- to 5-kHz band, at source levels of 235 dB re 1 μ Pa or higher (Hildebrand 2005). Other mid-frequency SONARs are used by the USN for depth sounding, communication between platforms, and device activation. HF SONARs are incorporated either into weapons (torpedoes and mines) or weapon countermeasures (mine countermeasures or antitorpedo devices); other HF military SONARs include side-scan SONAR for seafloor mapping, generally operated at frequencies near 100 kHz (Hildebrand 2005).

Studies examining interactions between boats and marine mammals have shown effects ranging from changes in behavior to physical injury and death. Many of these examples suggest an evasive response to boat traffic. Behavioral changes include increases in dive duration, changes in direction of travel, and changes in habitat usage (Janik and Thompson 1996, Miksis-Olds et al. 2007, Miller et al. 2008). Slow-moving marine mammals, such as manatees, are often victims of boat collisions (Rommel et al. 2007). Commercial shipping composes a large portion of this traffic and is known to strike and sometimes cause mortality, particularly of large whales (Knowlton and Brown 2007, Douglas et al. 2008). The most vulnerable marine mammals are those that spend extended periods of time at the surface to restore oxygen levels within their tissues after deep dives (e.g., the sperm whale). Laist et al. (2001) identified 11 species known to be hit by ships. Of these, fin whales are struck most frequently; right whales, humpback whales, sperm whales, and gray whales are hit commonly.

There continues to be great concern about the increasing introduction of sound into the ocean (NRC 2003, 2005, Parsons et al. 2008). Sources of anthropogenic noise include commercial shipping, defense-related activities, hydrocarbon exploration/development, research, acoustic deterrent devices, and recreation. Long-term trends in ocean noise are discussed by Hildebrand (2005) and Tyack (2008). As noted by Clark et al. (2007), expanding ship traffic results in increased amounts of underwater noise pollution or “acoustic smog.”

Hildebrand (2005) identified underwater explosions, USN ship shock trials, mid-frequency and low-frequency active SONARs, and seismic air guns as the most potent individual anthropogenic sound sources in the oceans. Recent research indicates that increased ocean acidity affects sound absorption for frequencies less than 10 kHz. As such, it would not result in cumulative impacts with the Proposed Action, which covers frequencies of 50 kHz and higher (Hester et al. 2008).

Marine mammal unusual mortality events occur occasionally. Some of these have been linked with morbillivirus outbreaks. Further, it has been suggested that the impact of such viral outbreaks could be influenced by organochlorine pollutants that weaken the immune system (Perrin and Geraci 2008). Gulland and Hall (2007) reported on the recent rise in reporting of diseases in marine mammals. They report that there has been an increase in the frequency of marine mammal die-offs resulting from exposure to harmful algal blooms over the past 40 years.

Habitat destruction can have both direct and indirect impacts on marine mammals. Directly, coastal urban, and industrial development (e.g., construction of harbors), for example, can result in degradation of seagrass beds, which affect manatees that feed directly on seagrasses, or by affecting nursery habitat for fish species, thereby indirectly affecting dolphins, since the impact is on lower trophic levels in their food webs. Habitat degradation associated with development is frequently associated with effluents that can lead to increased sedimentation, bioaccumulation of toxic substances, and changes in water current patterns (Kemp 1996). Harmful algal blooms seem to be increasing with runoff and other coastal ecosystem changes (Van Dolah 2005).

Chemical pollution can kill marine mammals or affect reproductive, metabolic, and immune functions, which alters population dynamics (Johnston et al. 1996, Harwood 2001, O'Hara and O'Shea 2005). Harmful marine debris consists of plastic garbage washed or blown from land into the sea, fishing gear abandoned by recreational and commercial fishers, and solid nonbiodegradable floating materials (such as plastic bottles) disposed of by ships at sea. Not only is debris a hazard because of possible entanglement, marine mammals could mistake plastics and other debris for food (Laist 1997).

Ecotourism in the form of whale-watching, swim-with-dolphin programs, and feeding wild dolphins takes place in U.S. waters. These activities can affect marine mammals by changes in respiration patterns, variation in path directedness, changes in vocal behavior, and other short-term behavioral alterations resulting from apparent horizontal and vertical avoidance tactics (Bejder and Samuels 2003). Long-term behavior changes can include shifts in habitat usage. The NMFS recently noted that harassment of spinner dolphins by tour operations (including swim-with-dolphins programs) in the Pacific Islands ROI is a management issue that requires immediate research (PIFSC 2006). Food provisioning of marine mammals in U.S. waters is illegal, though is likely the basis for in-water encounters off the Florida Panhandle (Samuels and Bejder 2004).

Climatic fluctuations have produced a growing concern about the effects of climate change on marine mammal populations (Learmonth et al. 2006). Responses of marine mammals to climate change are difficult to interpret due to the confounding effects of natural responses and human influences. Additionally, the time scale on which marine mammals respond to direct or indirect effects of climate change can be diluted or muted. Large-scale climatic events can affect the distribution and abundance of marine mammal species, either directly or indirectly, through alterations of habitat characteristics and distribution (Harwood 2001, Simmonds and Issac 2007). Sea level rises will reduce terrestrial habitat in the Northwestern Hawaiian Islands, impacting critical habitat for the Hawaiian monk seal (Baker et al. 2006). Moore and Huntington (2008) recently reviewed impacts for Arctic marine mammal species, suggesting that anticipated changes for various species (based on a species' level of dependence of sea ice) might include declines in recruitment and body condition, migration alteration and occupation of new feeding areas, and novel occupation of Arctic latitudes and longer residence time.

It should be noted that the size and configuration of the Pacific Islands ROI requires consideration of issues in both the Northern (western, central, and eastern Pacific) and Southern hemispheres (e.g., PIFSC 2006). Impacts on marine mammals in the South Pacific are reviewed by Reeves et al. (1999).

Currently, the myriad of threats to marine mammals (including recreational and commercial fisheries, oil/gas exploration/development activities, alternative energy source development/operations, military operations, vessel traffic, ecotourism, habitat degradation, ensonification, pollution, toxic algal blooms, disease, predators, intentional hunting, and climate change) result in cumulative impacts. However, based on mitigation measures, impacts of the Proposed Action are expected to be short-term and minor. Therefore, incremental contribution of the Proposed Action is relatively small. Cumulative impacts of USCG operations would be minor, but recoverable and would not be significant. No marine mammal deaths are anticipated as a result of the proposed action. As such no irreversible or irretrievable commitment of this resource area would occur.

3.3.4.2.4 *Summary of Effects on Non-ESA-Listed Marine Mammal Species*

Without mitigation, the operation of proposed SONAR equipment at frequencies of 50 to 75 kHz could result in potential for short-term, minor to possibly significant adverse effects on all nonendangered and nonthreatened toothed whales, and pinnipeds in water. Pinnipeds are included here given that they are capable of hearing frequencies of up to 75 kHz. Short-term negligible minor, adverse effects on all

nonendangered and nonthreatened toothed whales could occur from the operation of SONAR equipment at frequencies of 76 to 200 kHz. These effects would be mitigated by measures developed and implemented (in coordination with NMFS and USFWS) for specific SONAR systems to avoid and minimize impacts on marine mammals.

Examples of the types of measures that would be implemented are presented in **Section 2.1**. Mitigation measures are proposed as precautionary measures. All equipment is commercial-off-the-shelf equipment, which has not previously shown to adversely affect marine mammals and have not previously required incidental take permits. Additionally, long-term, continuous use of the equipment is not being proposed. Even though an animal's exposure to these active SONAR may be more than one time, the intermittent nature of the SONAR signal, its low duty cycle, small area of ensonification, and the fact that both the vessel and animal are moving provide a small chance that exposure to active SONAR for individual animals and stocks would be repeated over extended periods of time, such as with shipping noise. As such, impacts on marine mammals are unlikely. Mitigation measures such as ramp-up and monitoring would further reduce the likelihood of the occurrence of an impact. It is difficult to determine the efficacy of mitigation measures with any type of certainty.

Ramp-up (also known as soft-start) would entail the gradual increase in intensity of a sound source. Ramp-up is a practiced mitigation measure used during pile-driving (see recent environmental impact assessment documents and marine mammal permit authorizations [Thomsen et al. 2006] and seismic surveys [MMS 2007, Weir and Dolman 2007, Abgrall et al. 2008]). The intent of ramp-up is to either avoid or reduce the potential for instantaneous hearing damage to an animal (from the sudden initiation of an acoustic source at full power) that might be in close proximity. Increasing sound levels are designed to warn animals of pending operations and to allow sufficient time for those animals to leave the immediate area. There is ongoing discussion about its effectiveness and the level of safety it provides to marine mammals (Richardson et al. 1995, David 2006). Numerous sources including the Marine Mammal Commission, the NMFS, and the BOEMRE note that the effectiveness of soft start, although theoretically sound, has yet to be verified empirically (David 2006, Ragen 2008). There are many variables that play into how easily a marine mammal may be detected by an observer at the surface. Some of these variables affect (or are affected by) the observer, the platform, and the conditions under which the observations are being made. Many of the variables, however, are directly related to the animal, its external appearance, its behavior and its life history. The size of the animal, its surface behavior, its dive behavior, and the overall gregariousness of the species all impact the ability of the observer to detect an individual(s) at the surface. In addition to (or in lieu of) visual detection, some species may be detected acoustically. This type of detection is limited to species that (1) vocalize commonly and (2) vocalize within the range of human hearing. Acoustic information, including how frequently or in what range a species may vocalize, is not available for all species (DoN 2008a).

The genera of nonendangered and nonthreatened toothed whales (mid-frequency and high-frequency cetaceans) and pinnipeds in water that would be potentially affected by the Proposed Action are presented in **Table 3-12**. No impacts on the three non-ESA-listed baleen whale species (minke, Bryde's, gray) are expected since their hearing ranges, as low-frequency cetaceans, are lower than those of the SONAR transmissions (see **Table 3-12**). Additionally, no impacts are expected on nonendangered and nonthreatened pinnipeds in water are expected from the operation of SONAR equipment at frequencies of 76 kHz to 200 kHz, since these signals are outside the expected or known hearing range of these species. No impacts on any nonendangered or nonthreatened marine mammals are expected from the operation of SONAR equipment at frequencies above 200 kHz.

Direct and indirect, beneficial impacts could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil

pipeline. This would reduce direct impacts on marine mammals from environmental hazardous and indirect impacts from the contamination of their food sources.

3.3.4.2.5 Summary of Effects on ESA-Listed Marine Mammal Species

Without mitigation measures, short-term, minor to potentially significant, adverse effects on ESA-listed toothed whales and pinnipeds in water would be expected from the operation of the SONAR equipment at frequencies of 50 to 75 kHz, without mitigation. Short-term, negligible to potentially significant, adverse effects on ESA-listed toothed whales and pinnipeds in water would be expected from the operation of the SONAR equipment at frequencies of 76 to 200 kHz. However, the potential for impacts would be so low, it would be discountable, due to the mitigation measures that would be developed (in coordination with USFWS and NMFS) and implemented for specific SONAR systems to avoid and minimize impacts on protected marine species during training and testing.

Most ESA-listed marine mammal species (including all baleen whales) have hearing ranges that are lower than that of the SONAR transmissions; included in this group are the North Atlantic right whale, North Pacific right whale, humpback whale, sei whale, fin whale, blue whale, bowhead whale, West Indian manatee, dugong, sea otter, and polar bear. The genera of ESA-listed toothed whales (mid-frequency and high-frequency cetaceans) and pinnipeds in water that would be potentially affected by the Proposed Action are presented in **Table 3-12**. ESA-listed toothed whale species in the ROIs capable of hearing the SONAR transmissions are the sperm whale, Southern Resident killer whale, and the Cook Inlet beluga whale. Additionally, there is a candidate species, the Hawaiian insular stock of false killer whale. The Hawaiian monk seal, Steller sea lion, and Guadalupe fur seal are ESA-listed pinniped species capable of hearing the SONAR transmissions while in water. Candidate pinniped species are the ringed and bearded seals.

Because of the operating measures that would be developed and implemented to avoid and minimize impacts on protected species, the Proposed Action may affect, but is not likely to adversely affect, threatened and endangered toothed whales and pinnipeds with the ability to hear in the frequency range of the SONARs associated with the Proposed Action (see **Section 2.1**). Examples of the types of measures that would be implemented are the measures that were developed and implemented for the IAS (see **Section 2.1**). See **Section 3.3.4.2.4** for a discussion of the efficacy of mitigation measures. USCG would consider the frequency, source level of the equipment, mission importance, and the risk to the safety and security of the nation and its citizens by taking no action.

Under the Proposed Action, if an emergency situation occurs that could have an adverse effect on federally listed species, the USCG would conduct activities that are necessary to protect human lives. However, they would contact the USFWS or NMFS personnel as early as practicable to determine the best procedures for handling the situation, while avoiding or minimizing adverse effects on threatened or endangered species, to the extent possible.

Direct and indirect, beneficial impacts could also occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on marine mammals from environmental hazardous and indirect impacts from the contamination of their food sources.

Section 7 of the ESA directs all Federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with the USFWS and NMFS, to ensure that their actions do not jeopardize listed species or destroy or adversely modify proposed critical habitat. While sections 7(a)–(d) continue to apply to agency responses to situations such as acts of God, disasters, casualties,

national defense, or security emergencies, the regulations implementing these sections provide for expedited procedures to accommodate the need for Federal agencies to respond promptly to emergencies. During emergency consultation, the NMFS or USFWS can provide recommendations on how to minimize or avoid adverse effects on listed species during the emergency response. Such recommendations are strictly advisory and are to be implemented at the discretion of the emergency response personnel. If during an emergency situation, an unauthorized take under the MMPA should occur, the USCG would conduct activities that are necessary to protect human lives but consult with NMFS immediately to investigate the circumstances of the unauthorized take and consider jointly the steps that should be taken to avoid similar occurrences in the future.

SONAR usage within critical habitat would result in a short-term localized increase in HF and UHF sound over a short period. Critical habitat and the physical environment would return to normal once the SONAR stops operating. There would be no permanent impacts on critical habitat. The Proposed Action would not destroy nor adversely modify critical habitat designated or proposed for marine mammals, since no changes to habitat or prey distribution would occur.

3.3.4.3 Sea Turtles

Short-term, minor and insignificantly adverse, indirect effects on sea turtles are expected as a result of the Proposed Action. However, no direct effects are expected. The SONAR operates at frequencies higher than sea turtles are capable of detecting (see **Table 2-1**). While little information is available on sea turtle hearing, research shows hearing sensitivities generally range from 0.08 to 2 kHz with the best dynamic hearing range between 0.1 and 1 kHz (Ridgway et al. 1969, Lenhardt 1994, Moein et al. 1994, Moein Bartol et al. 1999). Because their best hearing range is outside of the frequencies used during the Proposed Action (greater than 50 kHz), it is expected that the HF and UHF SONARs would be imperceptible to sea turtles and would, therefore, have no direct impact.

Short-term, negligible, indirect effects would occur because Kemp's and olive ridley sea turtles are known to feed on fish species which could be affected by the SONAR systems used during the Proposed Action. **Section 3.3.4.5** describes the potential consequences of the Proposed Action on fish. While fish species might be affected by the Proposed Action, it is not anticipated that fish species would be affected in large enough numbers to impact the ability for sea turtles to feed. Therefore, impacts are expected to be negligible.

Under the Proposed Action, there is the potential for short-term, negligible impacts on sea turtle foraging habitat from ROV and AUV operations. However, in most cases, ROVs would be used dockside or at a location appropriate for conducting vessel inspections at a water depth that would preclude seafloor disturbance. See **Section 2.1** for additional detail on ROV and AUV operations associated with the Proposed Action.

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on sea turtles from environmental hazardous and indirect impacts from the contamination of their food sources.

Sea turtles face threats from both anthropogenic and natural sources including destruction and alteration of nesting and foraging habitats (i.e., oil/gas exploration and development, marina and dock construction, dredging), incidental capture in commercial and recreational fisheries, entanglement in marine debris, increased underwater noise, and boat traffic. To effectively address all threats to marine turtles, NOAA

1 Fisheries and the USFWS have developed recovery plans to direct research and management efforts for
2 each sea turtle species.

3 The development of marinas and docks in inshore waters can negatively impact foraging habitats.
4 Seagrass beds and macroalgae are important foraging habitat for sea turtles. Some turtle species, the
5 loggerhead, Kemp's ridley, green, and hawksbill, are known to use benthic habitats for foraging.
6 Although sea turtles do not directly use such habitat, they might feed on benthic species that could be
7 temporarily displaced or destroyed. An increase in the number of docks built could also increase boat and
8 vessel traffic. High volumes of vessel traffic adjacent to shallow foraging habitat could be particularly
9 dangerous for turtles because of the tendency to flee toward deeper water and to use deeper water to rest
10 between foraging bouts.

11 Degradation or alteration of nesting habitat can occur as the result of artificial lighting on or near nesting
12 beaches. Artificial lighting on or near the beach adversely affects both nesting and hatchling sea turtles.
13 Artificial lighting can also disorient hatchlings once they reach the water. Specifically, artificial lighting
14 can deter adult female turtles from emerging from the ocean to nest and can disorient emerging hatchlings
15 away from the ocean. Hatchlings have a tendency to orient toward the brightest direction, which on
16 natural, undeveloped beaches is commonly toward the broad open horizon of the sea. However, on
17 developed beaches, the brightest direction is often away from the ocean and toward lighted structures.
18 Hatchlings unable to find the ocean, or delayed in reaching it, are likely to incur high mortality from
19 dehydration, exhaustion, or predation.

20 Marine turtles living in the pelagic (open-ocean) environment commonly ingest or become entangled in
21 marine debris (e.g., tar balls, plastic bags, plastic pellets, balloons, and ghost fishing gear) as they feed
22 along oceanographic fronts, where debris and their natural food items converge. Entanglement of sea
23 turtles in discarded fishing gear and other marine debris is a serious and growing problem (NMFS and
24 USFWS 1998a,b,c,d, 2008). Turtles can become entangled in gillnets, pound nets, and the lines
25 associated with longline and trap/pot fishing gear. Once entangled, turtles can be injured by the line
26 itself, become susceptible to predation because of reduced mobility, or drown if they are unable to surface
27 for air. In addition to entangling turtles, longline gear can also hook turtles in the jaw, esophagus, or
28 flippers. Trawls that are not outfitted with turtle excluder devices (TEDs) do not allow turtles to escape,
29 which could result in mortality through drowning. Fishing dredges, extremely heavy metal frames
30 dragged along the ocean floor, can crush and entrap turtles, causing death or serious injury.

31 The relatively low frequency range of sea turtle hearing lies well within the broad frequency spectrum of
32 vessel noise. Yet despite turtles' known auditory capacity, several factors mitigate against their reliance
33 on sound cues, including complex propagation of underwater sound and masking of sounds by heavy
34 traffic and other anthropogenic sources (Hazel et al. 2007). Increases in underwater noise could result in
35 physical auditory impacts, such as TTSSs or masking, or behavioral disruptions such as disorientation or
36 the alteration of foraging activities. Noise could also elicit avoidance behaviors such as surfacing, diving,
37 or evasive swimming. Noise produced oil/gas exploration and development might cause physiological
38 stress and make animals more susceptible to disease or predation, or disrupt their normal activities.

39 Sea turtles can be injured or killed if struck by a vessel, particularly if struck by an engaged propeller.
40 Increased vessel traffic could result in a higher number of collisions between ships and sea turtles, thereby
41 increasing the occurrence of serious sea turtle injuries or fatalities. Turtles swimming or feeding at or just
42 beneath the surface of the water are particularly vulnerable to boat and vessel strikes, which can result in
43 serious propeller injuries and death (NOAA 2008). The collision risk for turtles in all areas is likely to be
44 further exacerbated if water clarity is low and during the night (Hazel et al. 2007). Although adult turtles
45 are visible at the surface during the day and in clear weather, they can be difficult to spot from a moving

1 vessel when resting below the water surface or during nighttime or periods of inclement weather. Sea
2 turtles spend most of their lives submerged and thus not visible by vessel operators.

3 Global warming could potentially have an extensive impact on all aspects of a turtle's life cycle and
4 impact the abundance and distribution of prey items. A major concern among scientists is the direct
5 effect of global warming on sea turtle nesting beaches. When a nest becomes too hot, the hatching
6 success rate drops. One of the most important effects of temperature on marine turtles is in determining
7 gender. The sex of turtle hatchlings is determined by the temperature of eggs during incubation. Warmer
8 nest temperatures produce females, and cooler nests result in males.

9 No direct impacts on sea turtles from the SONAR technologies are expected. However, indirect effects in
10 conjunction with the current threats could result in cumulative effects on sea turtles. Kemp's and olive
11 ridley turtles are known to feed on fish species which could be affected by the SONAR systems used
12 during the Proposed Action. However, we do not anticipate that fish species would be affected in large
13 enough numbers to impact the ability for sea turtles to feed.

14 Currently, the myriad of threats to sea turtles include destruction and alteration of nesting and foraging
15 habitats (i.e., oil/gas exploration and development, marina and dock construction, dredging), incidental
16 capture in commercial and recreational fisheries, entanglement in marine debris, increased underwater
17 noise, and boat traffic, resulting in cumulative impacts. However, the impacts of the Proposed Action are
18 expected to be short-term, minor, and indirect. Therefore, incremental contribution of the Proposed
19 Action is relatively small.

20 No sea turtle deaths are anticipated as a result of the Proposed Action. As such, no irreversible or
21 irretrievable commitment of this resource would occur.

22 For purposes of ESA compliance, the USCG analyzed effects of the action to make a determination of
23 effect on designated or proposed critical habitat. Vessel movements and SONAR usage within the critical
24 habitat could cause short-term disturbance to the water column due to displacement of water and increase
25 in sound. Critical habitat and the physical environment would return to normal once the SONAR is
26 turned off and a vessel has left the immediate area. There would be no permanent impacts on the critical
27 habitat. The Proposed Action will not destroy nor adversely modify critical habitat designated or
28 proposed for sea turtles, since no changes to habitat or prey distribution would occur.

29 3.3.4.4 Coastal, Marine, and Aquatic Birds

30 Threats, other than sound, to coastal and other birds include entanglement in fishing gear such as
31 longlines, ingestion of marine debris, and habitat loss caused by coastal development. Birds could be
32 seriously injured or killed if they became entangled in or ingested debris or other materials accidentally
33 released by transiting vessels or vessels moored at a port. Marine debris could also affect a bird's ability
34 to successfully migrate, feed, mate, or nest.

35 The Proposed Action could represent minor increases in underwater noise that could temporarily displace
36 fish that are prey to some diving birds, but are not expected to result in serious injury to coastal and other
37 birds. Increases in noise disturbances could disrupt foraging, breeding, migration, or even cause
38 persistent behavioral changes, such as the avoidance of these areas. The incremental contribution of the
39 Proposed Action is relatively small. Cumulative impacts of the Proposed Action would be minor, and
40 would not be significant. No population-level effects or deaths of threatened or endangered coastal
41 marine and aquatic birds are anticipated as a result of the Proposed Action. As such, no irreversible or
42 irretrievable commitment of this resource would occur.

3.3.4.4.1 Non-ESA-Listed Coastal, Marine, and Aquatic Birds

Short-term, negligible, indirect effects on coastal, marine, and aquatic birds could occur from the implementation of the Proposed Action. Based on available information, the sound produced by the SONAR systems covered under the Proposed Action would not be perceptible to birds. Waterborne noise could result in indirect, minor effects on coastal and pelagic diving birds. This conclusion is based on the fact that some species of prey for coastal and pelagic diving birds might have the ability to hear the land-based SONAR.

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on coastal, marine, and aquatic birds from environmental hazardous and indirect impacts from the contamination of their food sources.

3.3.4.4.2 ESA-Listed Coastal, Marine, and Aquatic Birds

Short-term, minor, insignificantly adverse, indirect effects on ESA-listed birds could occur from the implementation of the Proposed Action. Localized, short-term increases in waterborne noise could potentially affect coastal, marine, and aquatic birds, particularly diving birds. But diving birds spend relatively minimal time under water and would only be exposed to short durations of underwater sound. Based on available information, the sound produced by the SONAR systems covered under the Proposed Action would not be perceptible to birds. Waterborne noise could result in indirect, minor effects on coastal and pelagic diving birds. This conclusion is based on the fact that some species of prey for coastal and pelagic diving birds might have the ability to hear the land-based SONAR. Therefore, the Proposed Action could affect, but is not likely to adversely affect, ESA-listed coastal, marine, and aquatic birds. As discussed in **Section 3.3.4.5**, the portable SONAR operates at frequencies higher than most fish species are capable of perceiving (see **Table 3-10**). However, some clupeid fish occurring in the ROIs, including the Gulf menhaden and American shad, are capable of hearing HF and UHF SONAR (see **Table 3-10**). These species could be prey for coastal and pelagic diving birds. However, it is not anticipated that fish species would be affected in large enough numbers to impact the ability for birds to feed. Indirect effects could occur. As such, the Proposed Action, may affect, but are not likely to adversely affect ESA-listed coastal, marine, and aquatic birds.

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on ESA-listed coastal, marine, and aquatic birds from environmental hazardous and indirect impacts from the contamination of their food sources.

3.3.4.5 Fish

Threats to fish include overfishing, habitat degradation caused by fishing (such as by trawls and dredges), habitat loss caused by dams (in the case of West Coast salmon species and shortnose sturgeon), introduced species, and a general degradation of water quality. Habitat destruction can have both direct and indirect impacts on fish. Directly, coastal urban and industrial development (e.g. construction of harbors), can result in degradation of seagrass beds, which affect nursery habitat for fish species. Indirectly, the degradation of water quality can limit food availability for fish.

Cumulative impacts on fisheries resources from the SONAR equipment in conjunction with the current threats to fisheries resources and EFH could result in a minor increase in noise. An increase in noise

associated with the Proposed Action would be temporary and localized in areas with existing noise from shoreside infrastructure. As stated above, the Proposed Action is only expected to affect certain species of clupeid fish, from the subfamily Alosinae. Therefore, the incremental contribution of the Proposed Action is relatively small. Cumulative impacts would be minor and not significant.

No population-level effects on federally managed species or deaths of threatened or endangered fish species are anticipated as a result of the Proposed Action. As such, no irretrievable or irreversible commitment of this resource would occur. Additionally, short-term use of SONAR equipment would not affect the long-term productivity of fish stocks.

3.3.4.5.1 EFH and Fisheries Resources

HF and UHF SONAR operation could result in short-term, minor, direct, adverse impacts on some fish species. The SONAR operates at frequencies higher than most fish species are capable of perceiving (see **Table 3-10**). However, the SONAR would operate within the perceptible range of some clupeid fish (from the subfamily Alosinae) occurring in the ROIs, including alewife, American shad, blueback herring, and Gulf menhaden (see **Table 3-10**). Hearing capability data are only available for a small percentage of fish; therefore, it is difficult to apply these results to all fish. To be conservative, this analysis assumed that many marine hearing generalists could potentially detect high-frequency SONAR.

Recent studies have shown that some clupeid fishes (from the subfamily Alosinae), including shad and menhaden, can detect ultrasound (sound with frequencies greater than 20 kHz) and actively avoid it. However, other clupeids, including sardines and anchovies (from the subfamily Clupeinae), do not detect ultrasound (Mann et al. 2005). Studies conducted on the following alosid species showed avoidance to sound at frequencies over 100 kHz: alewife (Dunning et al. 1992), blueback herring (Nestler et al. 2002), Gulf menhaden (Mann et al. 2001) and American shad (Popper and Carlson 1998). The only experiments to show mortality in fish have been investigations on juvenile herring (*Clupea harengus*) which were exposed to intense mid-frequency active SONAR (Kvadsheim and Sevaldsen 2005). Because in most cases the SONAR would only be used in a particular location for several days, the Proposed Action is not expected to have a significant impact on migration or upstream access. If SONAR would need to be used for a longer duration for an environmental disaster, such as the Deepwater Horizon oil spill, it would not be used continuously or in the same location during the disaster. Additionally, it is likely that the impacts of such a disaster would outweigh the impacts of the SONAR. Based on the evaluation presented here, effects are expected to be short-term, minor, and direct.

It is possible, but not probable, that operation of the ROV or AUV and anchoring by the support vessel could affect EFH such as seagrass, hard bottom, live bottom, or reef habitat. However, in most cases, ROVs would be used dockside or at a location appropriate for conducting vessel inspections at a water depth that would preclude seafloor disturbance. See **Section 2.1** for additional detail on ROV and AUV operations associated with the Proposed Action. The potential for ROVs and AUVs to contact hard bottom, coral, or seagrass habitat in emergency situations is low. These impacts could result in long-term, minor, impacts on EFH. However, known locations of threatened and endangered benthic resources would be avoided (see **Section 3.3.4.6.2**).

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on EFH and fisheries resources from environmental hazardous and indirect impacts from the contamination of their food sources.

3.3.4.5.2 ESA-Listed Fish

The Proposed Action could have short-term, minor, indirect, insignificantly adverse effects on threatened or endangered fish species habitat due to the potential for seafloor disturbance. However, seafloor disturbance would be rare. The Proposed Action would have no direct effects on ESA-listed fish. All acoustic components associated with the SONAR operations are above the known hearing ranges of similarly tested fish (see **Tables 3-8** and **3-9**). The SONAR operates at frequencies higher than most fish species are capable of perceiving (see **Table 3-10**). However, the SONAR would operate within the perceptible range of some clupeids. The only listed clupeid species in the ROI is Pacific herring (a candidate species under the ESA). Although some clupeid fishes can detect ultrasound, Pacific herring have hearing thresholds at 0.1 to 5 kHz (Mann et al. 2005). Therefore, this species would not be able to hear the sounds associated with the SONAR systems. Therefore, this species and other listed species would not be adversely affected.

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on ESA-listed fish and indirect impacts from the contamination of their food sources.

3.3.4.6 Benthic Resources

3.3.4.6.1 General Effects on Benthic Resources

Based on this review of the best available information, marine invertebrates are not expected to be able to detect the frequencies of the proposed SONARs.

Very little information exists regarding the hearing capability of marine invertebrates, although a number of cephalopods (e.g., octopods and squid), and crustaceans (e.g., crabs), possess statocysts, or structures that are similar in many ways to the ears of fishes (NRC 2003, Popper 2008). Cephalopods are low-frequency hearers (Packard et al. 1990). At least two cephalopod species are able to detect sounds up to 1,500 Hz (Hu et al. 2009). Squid do not respond to ultrasonic frequencies, indicating that they are not able to detect those frequencies (Wilson et al. 2007). Wilson et al. (2008) concluded that echosounders do not affect cephalopods.

It has been determined that prawns can hear between 100 and 3,000 Hz, with best hearing capabilities at 100 Hz (Lovell et al. 2005). Pye and Watson (2004) tested hearing capabilities of the American lobster (*Homarus americanus*) and found that immature lobsters detected sounds in the range of 20 to 1,000 Hz, while sexually mature lobsters exhibited two distinct peaks in their acoustic sensitivity (20 to 300 Hz and 1,000 to 5,000 Hz).

In a preliminary experiment, cockles (*Cardium edule*, a coastal bivalve) retracted their siphon in response to vibrations (Kastelein 2008). Jumars (1999) found that prolonged vibrations in the 50 to 200 Hz range caused digging in the bivalve *Macoma balthica*; the author suggested that these frequencies might be indicative of intense near-bed turbulence and impending sediment transport. In a study of effective acoustic exposures (including both low-frequency and ultrasonic frequencies) required to control fouling by zebra mussels (*Dreissena polymorpha*) (eggs and larvae to adults), found that cavitation can be used to control larvae (veligers). Low-frequency vibrations also achieved 100 percent mortality of the mussels (Donskoy et al. 1996). However, it is assumed that the energy associated with ultrasound cavitation that was required for 100 percent mortality of zebra mussels is much higher and more directed than the energy

that would be experienced by freshwater mussel veligers, in the unlikely chance they are encountered by SONAR under the Proposed Action.

Some species of semi-terrestrial fiddler crabs and ghost crabs detect sounds and use sounds to communicate; as such, it is possible that marine crabs are also capable of detecting sounds, although it has not been proven (NRC 2003). Swimming crab larvae moved towards an artificial source of reef sound, exhibiting a possible propensity to seek out a settlement habitat (Radford et al. 2008).

Short-term, negligible to minor, direct effects on benthic resources from ROV and AUV operations could occur. However, seafloor disturbance would be rare. ROVs would be used pierside or at a location appropriate for conducting vessel inspections and at a water depth that would preclude seafloor disturbance. See **Section 2.1** for additional detail on ROV and AUV operations associated with the Proposed Action.

3.3.4.6.2 ESA-Listed Benthic Resources

Short-term, minor, insignificantly adverse, indirect effects on Johnson's seagrass, elkhorn coral, and staghorn coral could occur as a result of the Proposed Action. However, the Proposed Action is not likely to adversely affect these species. The endangered Johnson's seagrass and its critical habitat and threatened elkhorn and staghorn corals occur in the Southeast ROI (see **Figure 3-3**). White and black abalone occur within the Southwest ROI. Based on the information presented in **Section 3.3.4.6.1**, these species would not be able to detect the frequencies associated with the proposed SONAR equipment. As such, there would be no effect on white and black abalone.

It is possible, but not probable, that operation of the ROV or AUV and anchoring by the support vessel could adversely impact Johnson's seagrass and elkhorn or staghorn corals or their critical habitat or proposed black abalone critical habitat. ROVs would be used pierside or at a location appropriate for conducting vessel inspections and at a water depth that would preclude seafloor disturbance. See **Section 2.1** for additional detail on ROV and AUV operations associated with the Proposed Action. To further avoid potential impacts, known locations of Johnson's seagrass and branching corals, including critical habitat (see **Figure 3-3**) would be avoided, if the operational scenario permits. If these known locations cannot be avoided, emergency consultation procedures would be implemented as detailed in **Section 2.1**. It would not be necessary to avoid known locations of black abalone, as this species does not have the same type of structure as the Johnson's seagrass and corals.

Direct and indirect, beneficial impacts could occur because SONAR could be used under the Proposed Action to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would reduce direct impacts on ESA-listed benthic species from environmental hazardous and indirect impacts from the contamination of their food sources.

Threats to Johnson's seagrass include prop scarring, dredging, siltation, and altered water quality. Populations near inlets are likely to experience erosional forces and siltation associated with storms (NMFS undated b). The Proposed Action is not expected to result in significant adverse impacts on Johnson's seagrass. The Proposed Action would not contribute incrementally to the severity of the impacts resulting from the current threats to Johnson's seagrass.

Threats to elkhorn and staghorn corals include disease outbreaks, with losses compounded locally by hurricanes, increased predation, bleaching, and other factors. These species are also particularly susceptible to damage from sedimentation (NMFS 2010b). The Proposed Action may affect, but are not likely to adversely affect elkhorn and staghorn corals. Therefore the Proposed Action would not

1 contribute incrementally to the severity of the impacts resulting from the current threats to elkhorn and
2 staghorn corals.

3 Permanent loss of critical benthic habitat or population-level effects on threatened or endangered benthic
4 species are not expected. As such no irreversible or irretrievable commitment of this resource area would
5 occur. Additionally, short-term use would not affect the long-term productivity of this resource.

6 3.3.5 Environmental Consequences of the No Action Alternative

7 Under the No Action Alternative, the USCG would not implement a program of nationwide use of HF
8 and UHF SONAR systems. The USCG would continue to implement additional MHLS measures.
9 However, under this alternative, the USCG would be unable to detect underwater threats to the U.S. coast.
10 This includes environmental threats, such as the increased ability to detect leaks in pipelines. This would
11 not meet the USCG's requirement to provide maritime security and could possibly make it easier for an
12 underwater attack to occur. Significant adverse impacts would be expected should this alternative be
13 selected due to the increased risk of a terrorist attack. Terrorists could strike at military or commercial
14 facilities in these ports creating the potential for impacts on the environment. The impacts could be
15 immediate or long-lasting. Recovery time would be dependent on the severity and extent of the impact.

16 3.4 Public Safety

17 3.4.1 Definition of the Resource

18 A safe environment is one in which there is no, or an optimally reduced, potential for death, serious
19 bodily injury or illness, or property damage. Transportation and marine navigation systems are essential
20 elements of the social and commercial fabric of the nation. The free flow of goods between locations and
21 the free travel of individuals has been a hallmark of the United States since the founding of the nation and
22 remains a fundamental right protected by the Constitution. U.S. ports must provide safe and efficient
23 rapid turnaround capabilities to accommodate expanding trade and the increasing size and speed of
24 oceangoing ships, many of which are foreign. U.S. ports also handle a large volume of coastal and inland
25 traffic. Since the events of September 11, 2001, the safety of the country's ports and its maritime system
26 has received increased scrutiny and concern. Port safety could once be evaluated in terms of the risk of
27 collision. Today, port safety evaluations must also include the prevention and response to terrorist threats
28 and activities.

29 The USCG is charged with implementing programs and providing assets to help ensure the safety and
30 security of the U.S. Marine Transportation System¹ (MTS). Major members of the MTS include Federal
31 agencies; and commercial, state, local, public and community groups (USDOT 2008). Infrastructure is
32 wholly human-made, with a high correlation between the type and extent of infrastructure and the degree
33 to which an area is characterized as "urban" or developed. The MTS includes ocean, coastal, and inland
34 waterways, ports, and intermodal connections (i.e., linkages at the land-water boundary that allow the
35 transfer of cargo and passengers between transportation modes) (USDOT 2008). It also includes the
36 network of railroads, roadways, and pipelines that connect the waterborne portions of the system to the
37 rest of the nation (USDOT 1999). The physical elements of the MTS also include the vessels and
38 vehicles that move goods and people within the system. The physical network is supported by a series of
39 systems that facilitate the movement of goods and people, and provide access for recreation and to natural
40 resources. Utilities include electricity and communications, potable and wastewater systems, and solid
41 waste.

¹ The U.S. MTS consists of waterways, ports, and their intermodal connections, vessels, vehicles, and system users, as well as Federal maritime navigation systems.

3.4.2 Existing Conditions

There are approximately 326 ports in the MTS. Within the individual ports, cargo is transferred between water and landside transportation modes at publicly and privately owned marine terminals. Typically, major ports on the Atlantic and Pacific coasts service container trades, while the major GOM ports are involved primarily in tanker and dry bulk trades (USDOT 1999). For cruise ships, Miami, Port Canaveral, and Fort Lauderdale, Florida, were by far the largest U.S. ports of call in 2007 (MARAD 2008a). The MTS has two major types of port facilities:

- Coastal seaports and Great Lakes port facilities (deepwater ports)
- Inland river and intracoastal waterways port facilities (shallow draft ports).

There are 28 states with deepwater ports; these include 1,914 terminals that contain 3,158 berths (e.g., locations where vessels dock). Berths can be specialized to serve specific types of freight (e.g., cargo, dry and liquid bulk cargo, automobiles and other cargo that can roll-on/roll-off vessels, and general cargo) and passenger movements (e.g., ferries or large cruise vessels) (USDOT 1999).

There are more than 1,800 U.S. inland waterways, ports, and terminals in 21 states with depths of 4.2 meters (14 feet) or less (shallow draft ports). The inland system is less concentrated geographically and provides almost limitless access points to the waterways (USDOT 1999).

The MTS includes 926 federally maintained harbor channels which include both deep draft and shallow draft ports. In addition, non-Federal interests maintain and improve a network of channels, connecting channels, and berths. The U.S. deepwater port system includes more than 300 Federal harbor channel projects. There are 51 ports with depths greater than or equal to 12.2 meters (40 feet). The 25 ports most active in foreign trade have depths of at least 12.2 meters (40 feet) (USDOT 1999).

There are approximately 40,000 km (25,000 miles) of inland, intracoastal, and coastal waterways and channels in the United States. Nearly 20,000 km (12,000 miles) of this network constitute the commercially active inland and intracoastal waterway system. Lock and dam structures allow vessels to move vertically when traveling navigable waterways with different water levels. There are 192 commercially active lock sites, with 238 chambers in the MTS (USDOT 1999).

Vessels and vehicles move goods and people throughout the MTS. The U.S. domestic fleet includes more than 30,000 vessels that transport goods and people between U.S. ports. As reported in the *Assessment of the Maritime Transportation System* (USDOT 1999), in 1999 the domestic fleet included the following:

- Domestic coastal and oceangoing vessels (55 container ships, 104 tankers, 982 dry cargo barges, and 456 tank barges)
- An inland-barge fleet (22,279 dry cargo barges and 2,791 tank barges)
- Shipdocking, vessel escort, lightering, and other services fleet (5,424 tugs and towing vessels)
- The Great Lakes fleet (56 dry bulk carriers, 8 cement carriers, 3 tankers, 101 dry cargo barges, and 41 tank barges)
- Hundreds of passenger vessels that serve as ferries, excursion vessels, and gaming vessels.

In addition, the MTS is served by an international fleet that transports goods and people among U.S. and foreign ports. The international fleet consists of a wide variety of vessel types such as tankers, dry bulk carriers, containerships, roll-on/roll-off ships, and cruise ships. In 2007, approximately 6,900 vessels

made 63,804 calls in United States ports (MARAD 2008b). In terms of capacity, these ships averaged approximately 52,000 metric tons of cargo (MARAD 2008a, 2008b). The intermodal component of the MTS includes an inland freight rail system and trucks. While many of these vehicles move domestic cargo, a significant number are involved in a variety of port-related activities, including transporting international cargo to customers (USDOT 1999).

Several Federal agencies have roles in ensuring the efficiency, reliability, and safety of the ground and maritime transportation in the United States and its coastal waters. Among these are the DHS and the Department of Transportation, which include USCG and the Maritime Administration, respectively. DHS's mission is to lead the unified national effort to secure the United States, prevent and deter terrorist attacks, and protect against and respond to threats and hazards to the United States (DHS 2008). The USCG is one of seven components of DHS. As described in **Section 1.2**, the USCG became the leader of the MHLS but its underlying authorities to establish, maintain, and operate aids to navigation remains in full effect (14 U.S.C. Section 81) (DOD et al. 2005). USDOT's primary mission is to ensure a fast, safe, efficient, accessible, and convenient transportation system (USDOT 2009).

The health and safety of the general public, such as boaters, recreational fishermen, scuba divers, and port personnel, have a potential to be affected. As presented in **Section 1.5**, the SONAR systems would operate in fresh, brackish, and marine environments; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The ports are busy waterways and are not expected to contain members of the general public (e.g., involved in recreational activities such as swimming, scuba diving, or snorkeling); however, recreational boaters could use the ports as throughways and swimmers or scuba divers could use waters outside of ports but under the jurisdiction of the USCG.

There are no Occupational Safety and Health Administration (OSHA) standards specifically for SONAR systems, but there are a variety of OSHA standards and directives, other Federal standards, and national consensus standards that regulate the generation of and exposure to noise. Human response to noise varies according to the type and characteristics of the noise, the distance between the source and the receptor, receptor sensitivity, and time of day. Human hearing varies in sensitivity for different sound frequencies. The ear is most sensitive to sound frequencies between 0.8 kHz and 8.0 kHz and is least sensitive to sound frequencies below 0.4 kHz or above 12.5 kHz. However, USN guidelines limit a diver's exposure at any frequency. The USN Diving Manual prohibits divers from working where the SPL exceeds 200 dB re 1 μ Pa without a wetsuit hood, or above 215 dB re 1 μ Pa with a wetsuit hood (USN 2008).

3.4.3 Significance Criteria

Threats facing the national security and well being of the United States are not always obvious or conventional. Intelligence reports establish credible underwater threats to U.S. ports and waterways that include combat swimmers and divers. Operational commanders responsible for maritime security must have at their disposal underwater capabilities to detect, track, intercept, and interdict, if necessary, a combat swimmer or diver. It is due to these concerns that this Proposed Action is being considered.

Significant impacts are considered to occur if an action results in substantially increased risks to either USCG personnel or the public health and welfare or hinders the USCG's ability to respond to an emergency or accomplish its MHLS mission. It is assumed that loss of life, loss of or damage to a vessel, or destruction of other property/port infrastructure would be significant.

Impacts on port infrastructure are evaluated based on their potential for disruption or improvement of existing level of service, and potential demands that would exceed existing utility capacities. Impacts on

marine transportation are considered significant if an action results in a violation of USCG regulations, if the safety of transportation was degraded or improved, or if commercial interests were impacted in ways that would substantially decrease or increase efficiency or costs. Impacts might also arise from changes to the level of service on local roads that support the MTS, and electric power consumption from the proposed SONAR systems. Impacts on transportation systems could be minor to major depending on the number of users affected and the magnitude of the impact.

The significance of SONAR impacts on humans is based on the duration and magnitude of the received sound level (based on attenuation as sound travels away from the source). The noise impacts on humans from SONAR would be considered significant if the received sound levels associated with the Proposed Action exceed 200 dB re 1 μ Pa. This threshold is based on guidelines in the USN Manual for any frequency (USN 2008).

3.4.4 Environmental Consequences of the Proposed Action

As the lead agency for MHLS, the USCG has been placed at an elevated state of alert for an indefinite period of time. The USCG is responsible for protecting more than 361 ports and 152,000 km (95,000 miles) of coastline, America's longest border. USCG forces must accomplish the MHLS mission while minimizing impacts on the environment and unduly interfering with legitimate trade and commerce. Minor to moderate beneficial impacts on public safety would be expected from implementation of the Proposed Action. The Proposed Action would increase the USCG's ability to protect critical domestic port infrastructure, safeguard vessels, and preserve the flow of interstate and international commerce. The Proposed Action would enable the USCG to locate and classify underwater threats and other TOIs, allow for the safe and efficient identification of navigational obstructions, and allow for rapid response and recovery from environmental accidents and disasters. The HF and UHF SONAR systems would operate in typical harbor, anchorage, and wharf environments including fresh, marine, and brackish waters, and in air and water temperatures typical of port/harbor environments. The installation and operation of the HF and UHF SONAR systems would close an identified significant security gap in our nation's strategic ports.

The HF and UHF SONAR systems would be used on mobile platforms (i.e., ships, boats, ROVs, and AUVs) to detect, locate, and identify possible underwater threats and TOIs that would potentially prevent the interruption of maritime transportation, trade and commerce, recreational boating, other maritime activities; or a terrorist attack. Therefore, short- and long-term, minor to moderate, beneficial impacts on port infrastructure, marine transportation, and public safety would be expected as a result of the Proposed Action.

The HF and UHF SONAR systems would be used in areas such as busy ports, offshore anchorages, and commercial fairways where recreational scuba divers would not be; therefore impacts on recreational divers are not expected. While commercial divers could occur in the port area, they would not be expected to occur in the appropriately sized safety zone (based on monitoring of the safety zone and coordination with appropriate port personnel). Possible interactions between USCG operations within the offshore areas and recreational scuba divers would be minimized because the locations of the popular diving spots are well-documented and dive boats (typically well-marked) and diver-down flags are visible from the USCG vessels. If practicable, the USCG would avoid areas where recreational divers are; however, in the event of an emergency situation USCG would secure the area and "clear" the area of recreational divers and boaters.

The sound level of all the SONAR components would attenuate to below 200 dB re 1 μ Pa within 100 meters (328 feet), under any scenario. UHF SONARs are above the human hearing threshold. The primary effect on humans from UHF SONAR is heating. Additionally, the USCG would maintain an

appropriately sized safety zone. See **Section 3.2** for additional information on the impact of the Proposed Action on existing ambient sound levels. The power of UHF SONAR falls off rapidly with distance, a safe operating distance is 9.1 meters (30 feet) or greater. Therefore, adverse effects on recreational divers could result if they are within an area that HF and UHF SONAR are used. Therefore, the risks to human swimmers or divers from HF and UHF SONAR systems would be negligible.

The implementation of the Proposed Action and other USCG projects discussed in **Section 2.4.2** and **Appendix C** (i.e., Response Boat Acquisitions, MSSTs, MK 11 RGS, Integrated Deepwater System Program, Establishment of Safety and Security Zones, IAS, Underwater Inspection/Detection Systems, NAIS, and LORAN-C program) would provide increased safety and security for Homeland Security through their development. These projects would provide increased security for the general public, port infrastructure, recreational swimmers and divers, and the U.S. MTS. These projects do not duplicate existing protective measures and would provide complementary, nonredundant capabilities that would close significant readiness gaps in port security. Therefore, minor to moderate, beneficial, cumulative impacts from the implementation of the Proposed Action and the above-mentioned USCG projects would be expected.

3.4.5 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the HF and UHF SONAR systems would not be established. The USCG would continue to conduct normal USCG operations throughout the defined ROIs without the use of HF and UHF SONAR technology. However, under this alternative, the USCG would not have nationwide capabilities to locate and classify underwater threats and other TOIs, such as a navigational obstruction. The USCG would also not have the ability to detect or prevent environmental threats, for example the ability to respond and remediate a hazardous marine spill more quickly and efficiently and the ability to detect a leak in an oil pipeline. This would not meet the USCG's requirement to provide maritime security and could possibly make it easier for an underwater threat and natural disasters to impact the U.S. MTS. Significant adverse impacts on public safety would be expected should this alternative be selected, due to the increased risk of a terrorist attack and lack of rapid response. Terrorists could more easily strike at military or commercial facilities in these ports creating health and safety hazards for the surrounding populace, impacting appropriate emergency responses, and increasing the potential for impacts on the environment. Results could range from interruption of maritime transportation, trade and commerce, recreational boating, or other maritime activities to loss of life. The impacts could be immediate or long-lasting. Recovery time would be dependent on the severity and extent of the impact. The impacts of not having rapid response and recovery from natural disasters and environmental accidents are expected to be similar, although not the same severity as a terrorist attack that was not prevented. Additionally, under the No Action Alternative, USCG would not be able to accomplish its current missions and activities more safely and effectively.

3.5 Air Quality

3.5.1 Definition of the Resource

The air quality in a given region or area is measured by the concentration of various pollutants in the atmosphere. The measurements of these "criteria pollutants" in ambient air are expressed in units of parts per million (ppm), micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), milligrams per cubic meter (mg/m^3), or tons per year (tpy).

The Clean Air Act (CAA) directed USEPA to develop National Ambient Air Quality Standards (NAAQS) for pollutants that have been determined to affect human health and the environment. NAAQS

are currently established for six criteria air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulates equal to or less than 10 microns in diameter [PM₁₀] and particulates equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb). The primary NAAQS are ambient air quality standards to protect the public health; secondary NAAQS specify levels of air quality to protect the public welfare such as effects on vegetation, crops, wildlife, economic values, and visibility.

States designate any area that does not meet the national primary or secondary ambient air quality standard for a criteria pollutant as a nonattainment area. For O₃, each designated nonattainment area is classified as marginal, moderate, serious, severe, or extreme, based on ambient O₃ concentrations.

Table 3-13 presents the primary and secondary USEPA NAAQS.

Table 3-13. National Ambient Air Quality Standards

Pollutant	Averaging Time	National Standard	
		Primary	Secondary
O ₃	1 Hour ^a	----	Same as Primary Standard
	8 Hours ^b	0.08 ppm (157 µg/m ³)	
	8 Hours	0.075 ppm ^g	
PM ₁₀	24 Hours ^c	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean ^d	----	
PM _{2.5}	24 Hours ^e	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean ^f	15 µg/m ³	
CO	8 Hours ^c	9.0 ppm (10 mg/m ³)	None
	1 Hour ^c	35 ppm (40 mg/m ³)	
NO ₂	Annual Arithmetic Mean	0.053 ppm (100 µg/m ³)	Same as Primary Standard
SO ₂	Annual Arithmetic Mean	0.030 ppm (80 µg/m ³)	----
	24 Hours ^c	0.14 ppm (365 µg/m ³)	----
	3 Hours ^c	----	0.5 ppm (1,300 µg/m ³)
Pb	Quarterly Average	1.5 µg/m ³	Same as Primary Standard

Source: USEPA 2008

Notes: Parenthetical values are approximate equivalent concentrations.

- (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1. (b) As of June 15, 2005, USEPA revoked the 1-hour ozone standard in all areas except the 14 8-hour ozone nonattainment Early Action Compact Areas.
- To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
- Not to be exceeded more than once per year.
- To attain this standard, the expected annual arithmetic mean PM₁₀ concentration at each monitor within an area must not exceed 50 µg/m³.
- To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³.
- To attain this standard, the 3-year average of the annual arithmetic mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.
- To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (effective May 27, 2008).

State Implementation Plans (SIPs), which are required to be developed by each state or local regulatory agency and approved by USEPA are a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS. Any changes to the compliance schedule or plan (e.g., new regulations, emissions budgets, controls) must be incorporated into the SIP and approved by USEPA.

USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. All areas within each AQCR are therefore designated as either “attainment,” “nonattainment,” “maintenance,” or “unclassified” for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS, nonattainment indicates that criteria pollutant levels exceed NAAQS, maintenance indicates that an area was previously designated nonattainment but is now attainment, and unclassified means that there is not enough information to appropriately classify an AQCR, so the area is considered attainment.

Federal Prevention of Significant Deterioration (PSD) regulations also define air pollutant emissions from proposed major stationary sources or modifications to be adverse if (1) a proposed project is within 10 km (6.2 miles) of any Class I area, and (2) regulated pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 $\mu\text{g}/\text{m}^3$ or more [40 CFR 52.21(b)(23)(iii)]. A Class I area is designated as pristine natural areas or areas of natural significance. PSD regulations also define ambient air increments, limiting the allowable increases to any area’s baseline air contaminant concentrations, based on the area’s designation as Class I, II, or III [40 CFR 52.21(c)].

3.5.2 Existing Conditions

SONAR operations could be conducted within either an attainment or nonattainment area or within the vicinity of a Class I area. Since the exact location of SONAR operations is unknown at this time, air quality impacts would be addressed in follow-on NEPA documentation, if necessary, to determine if operations would be in compliance with General Conformity, Title V, and PSD requirements. An example of necessary follow-on NEPA documentation is if the USCG wanted to operate SONAR equipment using larger generators than the generators used for this analysis. This determination would be based on USEPA air quality standards and coordinated with each site’s state and regional air pollution control agencies and air quality management district offices.

The Federal *de minimis* threshold emissions rates were established by USEPA in the General Conformity Rule to focus analysis requirements on those Federal actions with the potential to substantially affect air quality. **Table 3-14** presents these thresholds, by regulated pollutant. As shown in **Table 3-14**, *de minimis* thresholds vary depending on the severity of the nonattainment area classification.

3.5.3 Significance Criteria

The environmental consequences to local and regional air quality conditions near a proposed Federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Specifically, the impact in NAAQS “attainment” areas would be considered significant if the net increases in pollutant emissions from the Federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Expose sensitive receptors to substantially increased pollutant concentrations

Table 3-14. Conformity *de minimis* Emissions Thresholds

Pollutant	Status	Classification	<i>de minimis</i> Limit (tpy)
O ₃ (measured as NO _x or VOCs)	Nonattainment	Extreme Severe Serious Moderate/marginal (inside ozone transport region) All others	10 25 50 50 (VOCs)/100 (NO _x) 100
	Maintenance	Inside ozone transport region Outside ozone transport region	50 (VOCs)/100 (NO _x) 100
CO	Nonattainment/ maintenance	All	100
PM ₁₀	Nonattainment/ maintenance	Serious Moderate Not Applicable	70 100 100
PM _{2.5} (measured directly, as SO ₂ , or as NO _x)	Nonattainment/ maintenance	All	100
SO ₂	Nonattainment/ maintenance	All	100
NO _x	Nonattainment/ maintenance	All	100

Source: 40 CFR 93.153

- Represent an increase of 10 percent or more in an affected AQCR emissions inventory
- Exceed any Evaluation Criteria established by a SIP.

Effects on air quality in NAAQS “nonattainment” areas are considered significant if the net changes in project-related pollutant emissions result in any of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Increase the frequency or severity of a violation of any ambient air quality standard
- Delay the attainment of any standard or other milestone contained in the SIP.

With respect to the General Conformity Rule, effects on air quality would be considered significant if the proposed Federal action would result in an increase of a nonattainment or maintenance area’s emissions inventory by 10 percent or more for one or more nonattainment pollutants, or if such emissions exceed *de minimis* threshold levels established in 40 CFR 93.153(b) for individual nonattainment pollutants or for pollutants for which the area has been redesignated as a maintenance area.

In addition to the *de minimis* emissions thresholds, Federal PSD regulations define air pollutant emissions to be significant if the source is within 10 km (6.2 miles) of any Class I area, and emissions would cause an increase in the concentration of any regulated pollutant in the Class I area of 1 µg/m³ or more (40 CFR 52.21(b)(23)(iii)).

3.5.4 Environmental Consequences of the Proposed Action

As discussed in **Section 1.5**, mission activities, platforms, and power sources have been covered by existing NEPA documentation and will not be evaluated for air quality emissions in this PEA. Therefore, this PEA would only analyze emissions from gasoline generators used to power the SONAR systems.

Short-term, minor, adverse effects would be expected on local and regional air quality from the operations of gasoline generators used to power SONAR systems. SONAR systems would be operated by Honda 1,000-watt gasoline generators (Honda 2008) or equivalent. The exact number of generators and hours of operation are not known at this time. Therefore, analysis of air quality emissions from these generators was based on their potential to emit (PTE). CO is the limiting criteria pollutant for generators.

Table 3-15, shows the PTE emissions from operation of gasoline generators. Emissions were calculated for the generators based on emissions factors from AP-42, *Gasoline and Diesel Industrial Engines*, Table 3.3-1 (USEPA 1996). PTE emissions were then calculated by estimating how many generators could be operated running 8,760 hours per year. Based on these assumptions, approximately 20 generators could be operated 8,760 hours per year and stay below 100 tpy CO emissions. Emissions factors, calculations, and estimates of emissions for the Proposed Action are shown in detail in **Appendix G**.

As shown in **Table 3-15**, emissions from the Proposed Action would not exceed the *de minimis* thresholds in any nonattainment area and would be less than 10 percent of emissions inventories for any attainment area. In addition, emissions from operation of the gasoline generators would not cause an adverse impact on Federal Class I areas. A conformity determination in accordance with 40 CFR 93-153(1) would not be required, as the total of direct and indirect emissions from the Proposed Action would not be regionally significant (e.g., the emissions are below *de minimis* thresholds, not greater than 10 percent of any AQCR emissions inventory, and would not cause an adverse impact on Class I areas).

Table 3-15. Potential to Emit Emissions from Operation of Gasoline Generators

Criteria Air Pollutant	Hourly Emissions (lb/hr)	PTE (tpy)
CO	1.1254	98.5878
CO ₂	2.7642	242.1456
NO _x	0.0293	2.5630
PM ₁₀	0.0018	0.1572
PM _{2.5}	0.0018	0.1572
SO _x	0.0015	0.1321
VOCs	0.0544	4.7643

Source: USEPA 1996

Cumulative impacts on air quality from the Proposed Action in conjunction with other ongoing and future projects would result in a minor increase in emissions. However, the effects on air quality emissions associated with the Proposed Action are minor, well below *de minimis* thresholds, and localized. Therefore, there would be no cumulative adverse impacts on air quality from the Proposed Action in conjunction with other ongoing and future projects.

3.5.5 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the USCG would conduct normal operations throughout the ROI without the use of HF and UHF SONAR technology. USCG would not have nationwide capabilities to locate and classify underwater threats and other TOIs (with the exception of the IAS). This would not meet the USCG's requirement to provide maritime security and could possibly make it easier for an underwater threat and natural disasters to impact the U.S. MTS. Terrorists could more easily strike at military or commercial facilities in these ports. Significant adverse impacts on air quality would be expected should this alternative be selected, due to the increased risk of a terrorist attack and lack of rapid response. The impacts could be immediate or long-lasting. Recovery time would be dependent on the severity and extent of the impact.

3.6 Water Quality

3.6.1 Definition of the Resource

Water quality is a determining factor in the ability of a water body to maintain the ecosystems it supports or influences. In the case of coastal and marine environments, water quality is influenced by river drainage (including sediments), and wet (e.g., precipitation) and dry (e.g., dust) atmospheric deposition. The natural aquatic processes of mixing and circulation can either improve the water quality through flushing or contribute to the decline in water quality.

3.6.2 Existing Conditions

A large portion of the U.S. economy depends on the oceans and navigable waterways. Approximately 43 percent of the U.S. population lives on the narrow fringe of coastal land, even though this area represents only 13 percent of the total contiguous land area of the United States (USEPA 2007). Increases in population, urbanization, and industrialization have resulted in impacts on water and sediment quality in the onshore, estuarine, and marine waters of the United States. These activities include marine transportation and ports; marine fishing; offshore energy, minerals, and emerging uses; human health uses; tourism and recreation; and coastal development and real estate (USCOP 2004). Overseas trade through U.S. ports is expected to double over the next 20 years (USCOP 2004). The coastal areas surrounding estuaries are among the most populated areas in the nation. General impacts that result from an increase of coastal and marine use (including coastal development and urbanization) include water and sediment degradation.

The goal of the *National Estuary Program Coastal Condition Report* (NEPCCR) is to report on the condition of the nation's 28 National Estuary Program (NEP) estuaries (USEPA 2007). A score of good, fair, or poor was assigned to each NEP based on four indicators. The four indicators of estuarine condition include indices for water quality (e.g., dissolved inorganic nitrogen, dissolved inorganic phosphorus, chlorophyll *a*, water clarity, and dissolved oxygen), sediment quality (e.g., sediment toxicity, sediment contaminants, and sediment total organic carbon), benthic condition, and fish tissue contaminants. These ratings were averaged to create overall regional and national scores. Although population pressures in the NEPs were greater than non-NEP estuaries from 1990 to 2000, NEP estuaries showed the same or better estuarine condition than U.S. coastal waters overall (USEPA 2007). The scores were based on estuarine monitoring data collected as part of USEPA's National Coastal Assessment surveys and estuarine monitoring data collected by the individual NEPs or in partnership with interested stakeholders, including state environmental agencies, universities, or volunteer monitoring groups.

1 The overall condition of the NEP estuaries was “fair,” however 37 percent of NEP estuaries are in poor
2 condition (USEPA 2007). The NEPCCR indicates that of the four indicators of estuarine condition,
3 sediment quality, fish tissue contaminants, and benthic condition have the poorest ratings throughout the
4 United States. Water quality generally showed the best rating of the four indicators.

5 3.6.3 Significance Criteria

6 Significant effects on water quality are those that measurably threaten human health; result in persistent
7 degradation of the environment; or cause an existing Federal, state, or local water quality criterion or a
8 federally recognized international criterion to be exceeded.

9 3.6.4 Environmental Consequences of the Proposed Action

10 Minor adverse effects on water quality would result from suspended sediments, and ROV and AUV
11 emissions associated with the Proposed Action.

12 ROV and AUV operations have the potential to disturb sediments. As described in **Section 2.1**, ROV use
13 would either be pierside or while a ship is at a safe location outside of the port or harbor. A safe area for
14 inspection would have enough depth to preclude sediment disturbance. That is, ROVs and AUVs would
15 usually be suspended in the water column and are unlikely to contact the seafloor. Typically, ROVs and
16 AUVs would be used in open, navigable waterways or safe anchorages. An ROV or AUV might cause
17 seafloor disturbance if there is a suspected threat on the seafloor that needs to be investigated. Any
18 increased sedimentation in a port or harbor as a result of ROV use would not contribute to the overall
19 degradation of water quality relative to the sedimentation already in place due to general port operations
20 (i.e., vessel operations). Therefore, seafloor disturbance would be rare and any impact as a result of the
21 investigation of the threat would be negligible compared to the possibility of that threat detonating.

22 Cumulative effects on water quality from the Proposed Action in conjunction with the current threats to
23 water quality could result in an increase in degradation. However, the effects on water quality associated
24 with the Proposed Action would be short-term, infrequent, and localized. Additionally, USCG use of
25 SONAR systems in the ROIs would compose only a fraction of the future and current uses of onshore,
26 estuarine, and marine navigable waterways in the United States. Therefore, the incremental contribution
27 of the Proposed Action would be negligible when compared to the ongoing effects on water quality from
28 typical port operations, vessel traffic, and USCG operations. The Proposed Action and existing USCG
29 actions, as described in **Section 2.4**, would not result in a significant cumulative effect on water quality.

30 3.6.5 Environmental Consequences of the No Action Alternative

31 Under the No Action Alternative, the USCG would not implement a program of nationwide use of
32 HF and UHF SONAR systems. The USCG would continue to implement additional MHLS measures,
33 including the use of the IAS. However, under this alternative, the USCG would be unable to locate,
34 image, and classify other submerged/underwater TOIs to safely and efficiently accomplish mission
35 activities. This would not meet the USCG’s requirement to provide maritime security and could possibly
36 increase the threat of an underwater attack. Significant adverse impacts on water and sediment quality
37 could be expected if this alternative is selected due to the increased risk of a terrorist attack. The effects
38 of a terrorist attack could be immediate or long-lasting. Recovery time would depend on the severity and
39 extent of the attack.

3.7 Cultural Resources

3.7.1 Definition of the Resource

Cultural resources include historic properties; archaeological resources; Native American human remains, burials, and cultural items and sacred sites; human environment; shipwrecks; and other resources as defined and protected by a variety of laws and their implementing regulations:

- The National Historic Preservation Act (NHPA) of 1966 (as amended in 2000) (Public Law [P.L.] 89-665, October 15, 1966; 16 U.S.C. 470 et seq.)
- NEPA of 1969, as amended in 1970 (P.L. 91-190, 42 U.S.C. 4321–4347)
- Archeological and Historic Preservation Act of 1974 (P.L. 86-523, 16 U.S.C. 469–469c-2)
- Archaeological Resources Protection Act of 1979 (P.L. 96-95; 16 U.S.C. 470aa–mm)
- EO 11593, Protection and Enhancement of the Cultural Environment, May 13, 1971
- American Indian Religious Freedom Act of 1978 and Amendments of 1994 (P.L. 95–341, 42 U.S.C. 1996 and 1996a)
- Native American Graves Protection and Repatriation Act of 1990 (P.L. 101–601; 25 U.S.C. 3001 et seq.)
- Abandoned Shipwreck Act of 1988 (P.L. 100-298; 43 U.S.C. 2101–2106).

Depending on their condition and use, such resources can provide insight into living conditions of previous existing civilizations, or can retain cultural and religious significance to modern groups, referred to as Traditional Cultural Properties (TCPs). Procedurally, Federal agencies conducting an analysis of impacts under NEPA (40 CFR 1508.1) must examine whether the action is likely to have physical, visual, or other effects on historic properties, while their discovery, assessment, and management are mandated through Section 106 of the NHPA. Section 106 requires Federal agencies to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. “Historic properties” refers to cultural resources listed in, or eligible for inclusion in the National Register of Historic Places (NRHP). In order to be determined a “historic property,” the resource must meet one or more of the criteria established by the National Park Service, and outlined in 36 CFR 60.4, that make the resource eligible for inclusion in the NRHP. The Section 106 process (36 CFR Part 800) requires consultation with the SHPO, Indian tribes, and other consulting parties as appropriate.

USCG is responsible for identifying and evaluating the NRHP eligibility of cultural resources potentially affected by an undertaking in consultation with the SHPO. The SHPO also provides guidance and recommendations concerning identified historic properties. Cultural resources on and near shore might include prehistoric sites and shell middens; historical sites; built resources (e.g., lighthouses, warehouses and other industrial and commercial buildings, rail yards and terminals, and residential row houses); landscapes; and resources of traditional, religious, or cultural significance to Native American tribes. Inundated prehistoric sites and shipwrecks might be located offshore within the navigable and open waterways

Generally, for areas considered moderate to high probability for containing submerged resources, the Federal agency responsible for the undertaking would conduct a remote sensing survey or other appropriate action for the purpose of providing adequate information to determine the existence of archaeological resources potentially affected by a Proposed Action. If an NRHP-eligible archaeological resource is present and project-related impacts on the resource cannot be avoided, the responsible agency

must determine the procedures required to mitigate or minimize impacts on the resource. The significance of impacts on TCPs would need to be determined in consultation with the affected community. However, it is understood that for the current broad undertaking, which is driven by force protection or other emergency where the initiation, location, and duration of deployment cannot be predicted, lead-time to conduct surveys and mitigate adverse effects on submerged resources is not always possible. Should the USCG determine that it might deploy SONAR in certain areas repeatedly over time, it could systematically identify potential cultural resources including shipwrecks in that area in consultation with the SHPO and Native American tribes, as necessary, and then take actions to avoid or minimize effects on identified resources to the extent feasible. In any case, the USCG could use the SONAR for the purpose of immediate rescue and salvage operations conducted to preserve life or property related to an emergency or disaster as defined under 36 CFR 800.12. Under this regulation, use would be exempt from consultation with the SHPO and other parties. However, if feasible, the USCG might attempt to invite comments by the SHPO and other parties to the extent that it could within the available time for the rescue and salvage operations. As such, SHPOs and federally recognized Native American tribes for coastal states will be contacted regarding the availability of the Draft PEA. Their comments will be invited during the public review period. The list of SHPOs and federally recognized tribes that will be notified is presented in **Appendix B**.

3.7.2 Existing Conditions

Identification of existing and known cultural resources within all ROIs would be beyond the scope of this PEA. However, general statements can be made about certain types of resources that would be expected within proximity of port, harbor, and shore locations, and, insofar as possible, the USCG should be aware of the effects of its activities in the vicinity of these resources. Under routine conditions outside of a national emergency, the USCG could undertake efforts to identify cultural resources in areas where it might repeatedly need to concentrate its future SONAR activities. The SHPO should be contacted as part of this effort and actions undertaken to avoid or minimize any impact on cultural resources that might be present to the extent feasible.

3.7.3 Significance Criteria

Impacts on submerged and aboveground cultural resources are measured as to the degree to which physical loss or destruction of cultural resources might occur. There is no absolute threshold for significance of impact on cultural resources, but significant impacts can be assumed to be most or full destruction. Minor to moderate impacts are less than significant impacts and would cover a lesser extent or range of damage to some portion of the resource. Impacts would not occur on standing historic structures and buildings within a port, assuming they would not be physically altered or modified in any way. Potential impacts on both onshore and submerged resources could include the following:

- Dislocation of some portion of a submerged site or shipwreck
- Destruction of a submerged site or shipwreck
- Damage or destruction of on- or nearshore archaeological sites
- High noise levels that could undermine structural stability or cause changes of use over time.

3.7.4 Environmental Consequences of the Proposed Action

Whether for operations, training, or research and development purposes, the Proposed Action would have no effect to minor adverse effects on historic properties, such as minor impact from noise or seafloor disturbance at locations where systems are deployed. The SONAR is principally intended for use within busy, highly trafficked, and industrial port environments. Some of these areas have been subject to past

1 dredging and modifications by entities other than USCG. USCG personnel will monitor the SONAR
2 equipment at all times of deployment to avoid cultural resources to the extent feasible. Transient use of
3 the portable SONAR would have localized, short-term, negligible to minor, adverse effects on the
4 existing ambient noise levels at locations where it is deployed. It would be perceived against the
5 background noise from military, commercial, and recreational vessel traffic. The systems would be
6 operated from mobile platforms in navigable waterways within close proximity to piers, docks, or locks.
7 Negligible to possibly minor, adverse impacts could occur as a result of seafloor disturbance from
8 operation of ROVs and AUVs during inspection of a suspected threat on the seafloor, if a site is located
9 on the seafloor and not buried beneath protective layers of silt.

10 The Proposed Action would provide negligible to moderate, beneficial effects. The use of underwater
11 imaging technology that is more widely used could potentially result in the location of additional cultural
12 resources. The Proposed Action would reduce the risk of a successful terrorist attack and would replace
13 damaging activities such as dragging for submerged objects during search-and-rescue operations. A
14 successful terrorist attack involving explosive devices could directly impact inundated sites and
15 shipwrecks depending upon the proximity of the devices to cultural and historic resources. Dragging
16 could damage submerged resources by dislodging or completely destroying the resource. The Proposed
17 Action would be operated from mobile platforms and no construction is expected; therefore, there would
18 be no visual impact on historic buildings or structures. Since the equipment is used for underwater
19 imaging and location, the use of the equipment could help to locate and avoid shipwrecks and other
20 cultural resources.

21 The SONAR equipment associated with the Proposed Action would be used in support of existing USCG
22 mission activities. Any restriction of activities would be related to existing operational, training and
23 exercise, and research and development mission activities rather than SONAR usage. As such, the
24 Proposed Action would have no effect on fishing, tribal or otherwise. However, the Proposed Action is
25 subject to MMPA regulations that indicate that the taking of small numbers of marine mammals may be
26 allowed by NMFS, if the total taking will not have an “unmitigable adverse impact” on those species or
27 stocks of marine mammals intended for subsistence uses (50 CFR 216.102 [a]). The USCG Office of
28 Counterterrorism & Defense Operations (CG-532) and Office of Environmental Management (CG-47)
29 would coordinate with NMFS and the potentially affected subsistence communities in accordance with
30 MMPA regulations at 50 CFR 216.104(a)(12) to develop a Communications Plan and Conflict Avoidance
31 Agreement to ensure that non-emergency use would not interfere with subsistence activities. Under the
32 Proposed Action, use of HF and UHF SONAR above 60° North latitude (i.e., just north of the Aleutian
33 Islands in Alaska, which includes the Kenai Peninsula and Prince William Sound) would be used only in
34 emergency situations (e.g., threat to human life, threat to national security) or on a case-by-case basis for
35 non-emergency situations. In the event that an emergency situation requires SONAR use in the area
36 above 60° North latitude, SONAR that operates at 200 kHz or higher would be used to the extent
37 practicable. If during the public review process, other areas are identified as subsistence fishing or
38 hunting areas, they would be subject to the same requirements.

39 While archaeological sites or historic buildings or structures can be destroyed during a single event, more
40 often it is the cumulative effect of recurrent disturbing actions that diminish the integrity of the cultural
41 resource and its significant characteristics. Disturbance of both the offshore seafloor and onshore areas
42 has the potential to cause minor adverse and cumulative impacts on archaeological sites. There could be
43 loss of unique archaeological information. Avoidance measures for any long-term SONAR deployment
44 outside of national emergency conditions that would involve seafloor disturbance such as the port
45 entrance inspection station would include consultation with the SHPO before deployment to assist in
46 identifying known historic properties and avoiding impact on those resources.

1 **3.7.5 Environmental Consequences of the No Action Alternative**

2 Under the No Action Alternative, the added safety and security provided by the SONAR would not be
3 available. The USCG would not be able to detect, track, and interdict underwater threats. While the
4 USCG would increase their level of protection for shoreside infrastructure, credible underwater threats
5 would still exist. The potential damage to both on- and offshore resources from a terrorist attack could
6 result in major, permanent, adverse impacts. Detonation devices have the potential to cause major,
7 adverse, cumulative impacts on cultural resources by undermining the stability of historic structures
8 onshore over time and dislodging on- or nearshore inundated prehistoric and historical sites and
9 underwater shipwrecks, and could remove the archaeological resources from a buried and therefore more
10 protective environment.

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This PEA has been prepared by engineering-environmental Management, Inc. (e²M) under the direction of USCG. The individuals that contributed to the preparation of this document are listed below. Individuals that are responsible for particular analyses are also identified.

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APPENDIX A

AGENCY CONSULTATION AND COORDINATION



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AUG 6 2009

Ms. Jolie Harrison
National Marine Fisheries Service
Office of Protected Resources
131 5 East West Hwy
Silver Springs, MD 2091 0-3282

Dear Ms. Harrison:

The U.S. Coast Guard (USCG) is preparing a Draft Programmatic Environmental Assessment (PEA) for the *Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. Preparation of the PEA is being conducted in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations, Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). Enclosed is a synopsis of the Proposed Action.

The USCG is committed to the protection of living marine resources, including threatened and endangered species and nonthreatened and nonendangered marine mammals. To that end, the USCG would develop and implement procedures for the operation of specific SONAR systems to avoid and minimize impacts on marine mammals and other protected marine species, to the extent practicable while still completing the mission. These procedures would be included in any future policies that are developed authorizing the use of specific SONAR systems. Additionally, operational missions have a higher priority than missions involving training, exercises, research, development, or testing; therefore, in developing mitigation procedures, the USCG would consider the frequency, source level of the equipment, mission importance, and the risk to the safety and security of the nation and its citizens by taking no action. All mitigation measures would be developed in coordination with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). The PEA will assess the potential impacts associated with the Proposed Action on nonlisted species of marine mammals. As such, the USCG seeks to coordinate with your office regarding the proposed use of HF and UHF SONAR technology.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil with questions regarding the Proposed Action or Ms. Kebbby Kelley (CG-47), USCG Environmental Planning Program Manager, by telephone 202-475-5690, or by email Kebbby.Kelley@uscg.mil with questions regarding compliance with the MMPA or NEPA.

Sincerely,

Michael A. Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counterterrorism and Defense Operations

Enclosure: Synopsis of the Proposed Action

June 26, 2009
Rev 1.0

Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sonar Technology

Synopsis

The United States Coast Guard (USCG) needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and efficiently accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various HF and UHF active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001, and for natural disasters such as Hurricanes Katrina and Rita of 2005; for use in established security areas around high-value vessels, infrastructures, and special security events; maritime environmental response; and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the PEA will focus on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA will address potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating area would include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating area would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered military and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.



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Ms. Karen Abrams
NMFS Headquarters, F/HC2
Office of Habitat Conservation
SSMC3, Room: 14111
1315 East-West Highway
Silver Spring, MD 20910

Dear Ms. Abrams:

The U.S. Coast Guard (USCG) is preparing a Draft *Programmatic Environmental Assessment (PEA)* for the *Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. Preparation of the PEA is being conducted in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations, Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). Enclosed is a synopsis of the Proposed Action.

The Draft PEA will be provided when it is available. In accordance with Section 305(b) of the Magnuson-Stevens Act, as amended, the USCG seeks to consult with the National Marine Fisheries Service (NMFS) regarding essential fish habitat (EFH) that might be affected by the Proposed Action. We intend to have the PEA stand as our EFH Assessment for this proposal and have assessed the potential impacts associated with the Proposed Action on EFH in the Draft PEA.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil with questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), USCG Environmental Planning Program Manager, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil with any questions regarding compliance with the Magnuson-Stevens Act or NEPA.

The USCG will also consult with the NMFS Office of Protected Resources and the U.S. Fish and Wildlife Service regarding the presence of threatened and endangered species under their respective jurisdictions. We look forward to working with your office on this project.

Sincerely,


Michael A. Mohr

CAPT, U.S. Coast Guard
Chief, Office of Counterterrorism and Defense
Operations

Enclosure: Synopsis of the Proposed Action

June 26, 2009
Rev 1.0

Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sonar Technology

Synopsis

The United States Coast Guard (USCG) needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and efficiently accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various HF and UHF active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001, and for natural disasters such as Hurricanes Katrina and Rita of 2005; for use in established security areas around high-value vessels, infrastructures, and special security events; maritime environmental response; and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the PEA will focus on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA will address potential impacts on living marine resources based on these operating criteria.

Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating area would include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating area would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.



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Ms. Angela Somma, Division Chief
Endangered Species Division (F/PR 3)
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Re: Request for Consultation under Section 7 of the Endangered Species Act

Dear Ms. Somma:

The U.S. Coast Guard (USCG) proposes to implement the nationwide use of (HF) and ultra-high frequency (UHF) Active Sound Navigation and Ranging (SONAR) technology. Enclosed are lists of species and a synopsis of the Proposed Action to initiate informal consultation under Section 7(a)(2) of the Endangered Species Act (ESA). Please approve the list of potentially affected species or provide a list of additional species that might be affected and any concerns relative to impacts of the Proposed Action on listed species. Additionally, the USCG is preparing a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sound Navigation and Ranging (SONAR) Technology* and intends to have the PEA stand as the biological assessment.

The USCG is committed to the protection of living marine resources, including threatened and endangered species and nonthreatened and nonendangered marine mammals. To that end, the USCG would develop and implement procedures for the operation of specific SONAR systems to avoid and minimize impacts on threatened and endangered species and other protected marine species, to the extent practicable while still completing the mission. These procedures would be included in any future policies that are developed authorizing the use of specific SONAR systems. Additionally, operational missions have a higher priority than missions involving training, exercises, research, development, or testing; therefore, in developing mitigation procedures, the USCG would consider the frequency, source level of the equipment, mission importance, and the risk to the safety and security of the nation and its citizens by taking no action. All mitigation measures would be developed in coordination with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). The PEA will assess the potential impacts associated with the Proposed Action on threatened and endangered marine species and other marine life. As such, the USCG seeks to coordinate with your office regarding the proposed use of HF and UHF SONAR technology.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil with questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), USCG Environmental Planning Program Manager, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil with any questions regarding ESA or NEPA compliance.

The USCG will also consult with U.S. Fish and Wildlife Service regarding the presence of threatened and endangered species under their jurisdiction and with the National Marine Fisheries Office of Habitat Conservation regarding essential fish habitat that could be affected by the Proposed Action. We look forward to working with your office on this project.

Sincerely,

Michael A. Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counterterrorism and Defense Operations

Enclosure: (1) Species Lists
(2) Description of the Proposed Action

AUG 6 2009

Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF)
and Ultra High Frequency (UHF) Active Sonar Technology
July 8, 2009
Lists of Species - National Marine Fisheries Service Jurisdiction
Threatened and Endangered Marine Mammals Occurring in the Regions of Influence

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs				
			Northeast	Southeast	Northwest	Southwest	Pacific Islands
Order Cetacea							
Suborder Mysticeti (baleen whales)							
Family Balaenidae (right whales)							
North Atlantic right whale	<i>Eubalaena glacialis</i>	E	X	X			
North Pacific right whale	<i>Eubalaena japonica</i>	E			X	X	X
Bowhead whale	<i>Balaena mysticetus</i>	E					X
Family Balaeopteridae (rorquals)							
Humpback whale	<i>Megaptera novaeangliae</i>	E	X	X	X	X	X
Sei whale	<i>Balaenoptera borealis</i>	E	X	X*	X	X	X
Fin whale	<i>Balaenoptera physalus</i>	E	X	X	X	X	X
Blue whale	<i>Balaenoptera musculus</i>	E	X	X	X	X	X
Family Eschrichtiidae (gray whale)							
Gray whale	<i>Eschrichtius robustus</i>	1			X	X	X
Suborder Odontoceti (toothed whales)							
Family Physeteridae (sperm whale)							
Sperm whale	<i>Physeter macrocephalus</i>	E	X	X	X	X	X
Family Monodontidae (beluga and narwhal)							
Beluga	<i>Delphinapterus leucas</i>	E ²					X
Family Delphinidae (dolphins)							
Killer whale	<i>Orcinus orca</i>	3	X ³	X ³	X	X	X

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs				
			Northeast	Southeast	Northwest	Southwest	Pacific Islands
Order Carnivora							
Suborder Pinnipedia (seals, sea lions, walruses)							
Family Phocidae (true seals)							
Hawaiian monk seal	<i>Monachus schauinslandi</i>	E					X
Ringed seal	<i>Phoca hispida</i>	C					X
Spotted seal	<i>Phoca largha</i>	C					X
Family Otariidae (sea lions and fur seals)							
Guadalupe fur seal	<i>Arctocephalus townsendi</i>	T			X	X	
Steller sea lion	<i>Eumetopias jubatus</i>	T ⁴			X	X	X

Notes:

Recorded presence of the species within the ROI is indicated by an X. Extralimital occurrences of threatened and endangered species were taken into consideration for conservation consideration of species occurrence in each ROI. Taxonomy follows that used by NOAA. ESA Status: E = endangered, T = threatened, C = candidate.

- Only the western Pacific population is listed; it does not occur within the ROIs.
- Refers to Cook Inlet population (there are 5 total beluga populations in Alaska waters).
- The species itself has no ESA status; only the population segment known as the Southern Resident Killer Whale is listed as endangered.
- The species as a whole is listed as threatened; the eastern population that is expected in the Northwest, Southwest, and Alaska ROI is listed as threatened while the western population that occurs only in the Alaska ROI is listed as endangered.

* Species does not occur in Caribbean or GOM component of ROI.

Threatened and Endangered Sea Turtles Occurring in the ROIs

Common Name (Scientific Name)	Northeast	Southeast	Southwest	Northwest	Alaska	Pacific Islands
Green (<i>Chelonia mydas</i>)	T*	T*, CH	T*	T*	T*	T*
Hawksbill (<i>Eretmochelys imbricata</i>)	E	E, CH	--	--	--	E
Kemp's ridley (<i>Lepidochelys kempi</i>)	E	E	--	--	--	--
Leatherback (<i>Dermochelys coriacea</i>)	E	E, CH	E	E	E	E
Loggerhead (<i>Caretta caretta</i>)	T	T	T	T	T	T
Olive ridley (<i>Lepidochelys olivacea</i>)	T*	T*	T*	T*	T*	T*

Notes:

T = Threatened

E = Endangered

CH = Critical Habitat in the ROI

T* = Although the species as a whole is listed as threatened, the Florida and Mexican Pacific nesting stocks of the green turtle and the Mexican Pacific nesting stocks of the olive ridley turtle are listed as endangered. Since the nesting areas for green and olive ridley turtles encountered at sea often cannot be determined, a conservative approach to management requires the assumption that all greens and olive ridleys found in the study area are endangered.

Threatened and Endangered Fish Occurring in the ROIs

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Smalltooth sawfish	<i>Pristis pectinata</i>	E, prop CH	Southeast
Chum salmon	<i>Oncorhynchus keta</i>	CH Columbia River-T Hood Canal summer-run-T	Northwest
Coho salmon	<i>Oncorhynchus kisutch</i>	Southwest and Northwest-CH Central California coast-E Lower Columbia River-T Oregon coast-T Southern Oregon/Northern California coasts-T	Southwest, Northwest
Steelhead	<i>Oncorhynchus mykiss</i>	Southwest and Northwest-CH Puget Sound-T Central California coast-T Snake River Basin-T Upper Columbia River-E Southern California-E Middle Columbia River-T Lower Columbia River-T Upper Willamette River-T Northern California-T South-Central California coast-T California Central Valley-T Oregon Coast-S	Southwest, Northwest, Alaska
Sockeye salmon	<i>Oncorhynchus nerka</i>	Northwest-CH Ozette Lake-T Snake River-E	Northwest, Alaska
Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Northwest-CH California coastal-T Central Valley spring-run-T Lower Columbia River-T Upper Columbia River spring-run-E Puget Sound-T Sacramento River winter-run-E Snake River fall-run-T Snake River spring/summer-run-T Upper Willamette River-T	Southwest, Northwest, Alaska
Atlantic Salmon	<i>Salmo salar</i>	CH Gulf of Maine-E	Northeast
Totoaba	<i>Cynoscion macdonaldi</i>	E (F)	Southwest
Green sturgeon	<i>Acipenser medirostris</i>	T, prop CH	Southwest
Gulf sturgeon	<i>Acipenser oxyrinchus desotoi</i>	T, CH	Southeast

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	Northeast, Southeast
Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	C	Northeast
Atlantic wolffish	<i>Anarhichas lupus</i>	C	Northeast
Bocaccio	<i>Sebastes paucispinis</i>	P-E	Northwest
Canary rockfish	<i>Sebastes pinniger</i>	P-T	Northwest
Cusk	<i>Brosme brosme</i>	C	Northwest
Pacific halibut/smelet	<i>Thaleichthys pacificus</i>	P-T	Southwest, Northwest
Pacific herring	<i>Clupea pallasi</i>	C	Alaska
Yelloweye rockfish	<i>Sebastes ruberrimus</i>	P-T	Northwest

Source: NMFS 2009

Notes:

C = candidate
P = proposed
T = threatened
E = endangered

Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sonar Technology

Synopsis

The United States Coast Guard (USCG) needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and efficiently accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various HF and UHF active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives, or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001, and for natural disasters such as Hurricanes Katrina and Rita of 2005; for use in established security areas around high-value vessels, infrastructures, and special security events; maritime environmental response; and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the PEA will focus on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA will address potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating area would include existing harbor infrastructure and adjacent inland waters including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating area would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.



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Dr. John Fay
National Section 7 Coordinator
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, Room 452
Arlington, VA 22203

Dear Dr. Fay:

The U.S. Coast Guard (USCG) proposes to implement the nationwide use of high-frequency (HF) and ultra-high frequency (UHF) Active Sound Navigation and Ranging (SONAR) technology. Enclosed are lists of species and a synopsis of the Proposed Action to initiate informal consultation under Section 7(a)(2) of the Endangered Species Act (ESA). Please approve the list of potentially affected species or provide a list of additional species that might be affected and any concerns relative to impacts of the Proposed Action on listed species. Additionally, the USCG is preparing a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sound Navigation and Ranging Technology* and intends to have the PEA stand as the biological assessment.

The USCG is committed to the protection of living marine resources, including threatened and endangered species and nonthreatened and nonendangered marine mammals. To that end, the USCG would develop and implement procedures for the operation of specific SONAR systems to avoid and minimize impacts on threatened and endangered species and other protected marine species, to the extent practicable while still completing the mission. These procedures would be included in any future policies that are developed authorizing the use of specific SONAR systems. Additionally, operational missions have a higher priority than missions involving training, exercises, research, development, or testing; therefore, in developing mitigation procedures, the USCG would consider the frequency, source level of the equipment, mission importance, and the risk to the safety and security of the nation and its citizens by taking no action. All mitigation measures would be developed in coordination with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). The PEA will assess the potential impacts associated with the Proposed Action on threatened and endangered marine species and other marine life. As such, the USCG seeks to coordinate with your office regarding the proposed use of HF and UHF SONAR technology.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil with technical questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Environmental Planning Program Manager by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil with any questions regarding USCG ESA or NEPA compliance.

We will also consult with the National Marine Fisheries Service, Offices of Protected Resources and Habitat Conservation Division regarding species and habitat of concern under their purview. We look forward to working with your office on this project.

Sincerely,

Michael A. Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counterterrorism and Defense Operations

Enclosure: (1) Species Lists
(2) Synopsis of the Proposed Action

**Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF) and
Ultra High Frequency (UHF) Active Sonar Technology**

Lists of Species – U.S. Fish and Wildlife Service Jurisdiction

Threatened and Endangered Marine Mammals Occurring in the Regions of Influence (ROIs)

Common Name	Scientific Name	ESA Status	Occurrence in the ROIs				
			Northeast	Southeast	Northwest	Southwest	Alaska
Order Carnivora							
Suborder Caniformia ("dog-like" carnivores)							
Family Mustelidae (mustelids)							
Sea otter	<i>Enhydra lutris</i>	I			X	X	X
Family Ursidae							
Polar bear	<i>Ursus maritimus</i>	T					X
Order Sirenia							
Family Trichechidae (manatees)							
West Indian manatee	<i>Trichechus manatus</i>	E	X	X			
Family Dugongidae (dugong)							
Dugong	<i>Dugong dugone</i>	E					X

Notes:

Recorded presence of the species within the ROI is indicated by an X. Extralimital occurrences of threatened and endangered species were taken into consideration for conservation consideration of species occurrence in each ROI. Taxonomy follows that used by NOAA. ESA Status: E = endangered, T = threatened, C = candidate.

¹ There are 2 subspecies of sea otters: southern and northern, divided into 5 stocks in U.S. waters. The southern sea otter (California stock) is listed as threatened. The northern sea otter is composed of 4 stocks, only the southwest Alaska stock is listed as threatened; the Washington stock is not ESA-listed.

Threatened and Endangered Sea Turtles Occurring in the ROIs

Common Name (Scientific Name)	Northwest	Southwest	Northwest	Alaska	Pacific Islands
Green (<i>Chelonia mydas</i>)	T*	T*	T*	T*	T*
Hawksbill (<i>Eretmochelys imbricata</i>)	E	E, CH	--	--	E
Kemp's ridley (<i>Lepidochelys kempi</i>)	E	E	--	--	--
Leatherback (<i>Dermochelys coriacea</i>)	E	E, CH	E	E	E
Loggerhead (<i>Caretta caretta</i>)	T	T	T	T	T
Olive ridley (<i>Lepidochelys olivacea</i>)	T*	T*	T*	T*	T*

Notes:

T = Threatened

E = Endangered

CH = Critical Habitat in the ROI

T* = Although the species as a whole is listed as threatened, the Florida and Mexican Pacific nesting stocks of the green turtle and the Mexican Pacific nesting stocks of the olive ridley turtle are listed as endangered. Since the nesting areas for green and olive ridley turtles encountered at sea often cannot be determined, a conservative approach to management requires the assumption that all greens and olive ridleys found in the study area are endangered.

Threatened and Endangered Coastal, Marine, and Aquatic Birds Occurring in the ROIs

Common Name	Scientific Name	Federal Status	Occurrence in ROI	Behavior
Albatross, short-tailed	<i>Phoebastria albatrus</i>	E	Alaska, Northwest, Southwest	Breeds in Japan, Midway, and Hawaii and migrates north for summer and south for winter.
Coot, Hawaiian	<i>Fulica americana alai</i>	E	Pacific Islands	Year-round resident Hawaiian Islands.
Crow, Mariana	<i>Corvus kubaryi</i>	E	Pacific Islands	Endemic to Guam and Rota
Curlew, Eskimo	<i>Numenius borealis</i>	E	Alaska	Fall migration begins in July, moving from the Pacific to the Atlantic coast before turning south at Labrador and heading out across the ocean to South America.
Duck, Hawaiian	<i>Anas wyvilliana</i>	E	Pacific Islands	Year-round resident on selected Hawaiian Islands.
Duck, Laysan	<i>Anas laysanensis</i>	E	Pacific Islands	Year-round resident Laysan Atoll, Hawaii.
Eider, spectacled	<i>Somateria fischeri</i>	T/CH	Alaska	Breeds on the coast of Alaska on the Bering Sea and the Arctic Ocean. Migrates south for the winter but winter range is unknown.
Eider, Steller's	<i>Polysticta stelleri</i>	T	Alaska, Northwest, Southwest	Breeds in eastern Arctic coast of Alaska and migrates south and west to Aleutian Islands and western Alaska coast.
Kite, Everglade snail	<i>Rostrhamus sociabilis plumbeus</i>	E	Southeast	Nests in Florida January–August.
Knot, red	<i>Calidris canutus rufa</i>	C	Northeast, Southeast	Winters near the tip of South America and migrates north in mid-February. Arrives at Delaware Bay beginning in mid-May. May–June the birds depart the mid-Atlantic coast arriving in the Arctic in early to mid-June.
Moorhen, Hawaiian common	<i>Gallinula chloropus sandwicensis</i>	E	Pacific Islands	Found only on the islands of Kauai and Oahu.
Moorhen, Mariana common	<i>Gallinula chloropus guami</i>	E	Pacific Islands	Nonmigratory form found in moderate numbers in wetland habitats of the Mariana Islands.
Murrelet, Kittlitz's	<i>Brachyramphus brevirostris</i>	C	Alaska	Breeding range is limited to Alaska.
Murrelet, marbled	<i>Brachyramphus marmoratus</i>	T/CH	Alaska, Northwest, Southwest	Summers from Alaska's Kenai Peninsula, Barren Islands, and Aleutian Islands south along the coast of North America. Breeds from northern Washington to San Francisco coast. Winters along entire Pacific coast.
Murrelet, Xantus's	<i>Synthliboramphus hypoleucus</i>	C	Southwest	Nests from the Channel Islands off the southern California coast south to San Benito Islands in Mexico.

Threatened and Endangered Coastal, Marine, and Aquatic Birds Occurring in the ROIs (cont.)

Common Name	Scientific Name	Federal Status	Occurrence in ROI	Behavior
Pelican, brown	<i>Pelecanus occidentalis</i>	E	Northeast, Northwest, Southeast, Southwest	Breeds in southern California March to April and is found from southern Mexico to central California and occasionally from northern California to Washington. Some individuals migrate south in winter, while most are year-round residents of the northeast coast.
Petrel, Hawaiian dark-rumped	<i>Pterodroma phaeopygia sandwicensis</i>	E	Pacific Islands	Breeds on the Hawaiian Islands from May to mid-November. Wanders throughout the central Pacific from mid-November through April.
Plover, piping	<i>Charadrius melodus</i>	T/CH	Northeast, Great Lakes, Southeast	Breeds in Great Lakes region and northeast coast spring and summer. Winters on the southeast and Gulf coasts and the Caribbean October to March.
Plover, western snowy	<i>Charadrius alexandrinus hiwasensis</i>	T/CH	Southwest	Summers along Pacific coast and migrates south to Mexico and South America during winter.
Rail, California clapper	<i>Rallus longirostris obsoletus</i>	E	Southwest	Year-round resident on central and southern California coast.
Rail, light-footed clapper	<i>Rallus longirostris levipes</i>	E	Southwest	Year-round resident on central and southern California coast.
Rail, Yuma clapper	<i>Rallus longirostris yumanensis</i>	E	Southwest	Occurs along the stream-sides and marshlands of Colorado River from Lake Mead to Mexico.
Shearwater, Newell's Townsend's	<i>Puffinus auricularis newelli</i>	E	Pacific Islands	Breeds on the island of Kauai April through September; on the open ocean from October to April.
Stilt, Hawaiian	<i>Himantopus mexicanus</i>	E	Pacific Islands	Year-round resident Hawaiian Islands.
Stork, wood	<i>Mycteria Americana</i>	E	Southeast	Nests in the southeast. After breeding, moves as far north as North Carolina on the Atlantic coast and into Alabama and eastern Mississippi along the Gulf coast.
Storm-Petrel, band-rumped	<i>Oceanodroma castro</i>	- C	Pacific Islands	Breeds in three archipelagos in the Pacific: Japan, Galapagos, and Hawaii.
Tern, California least	<i>Sterna antillarum browni</i>	E	Southwest	Breeds and spends spring and summer on southern and central California coasts. Migrates to Central America and south in fall for the winter.
Tern, least	<i>Sterna antillarum</i>	E	Southeast	Breeds in the Mississippi, Missouri, and Rio Grande river systems and winters along the GOM and on Caribbean Islands.
Tern, roseate	<i>Sterna dougallii</i>	E	Northeast, Southeast	Breeds in southern Florida May–June, migrates to the Caribbean in the fall. Breeds on islands and protected sand spits. Occurs on northeast coast during spring and summer.

Source: USFWS 2008

Notes:

E = Federally listed endangered, T = Federally listed threatened, C = Candidate species, CH = Critical Habitat in the ROI

Threatened and Endangered Fish Occurring in the ROIs

Common Name	Scientific Name	Federal ESA Status	Occurrence in the ROI
Tidewater goby	<i>Eucyclogobius newberryi</i>	E, CH	Southwest
Bull trout	<i>Salvelinus confluentus</i>	T, CH	Northwest
Pallid sturgeon	<i>Scaphirhynchus albus</i>	E	Southeast

Source: USFWS 2008

Notes:

CH = critical habitat designated in the ROI

E = endangered

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Programmatic Environmental Assessment for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sonar Technology

Synopsis

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DEC 14 2010

Mr. Howard Goldstein
NOAA NMFS
Office of Protected Resources
1315 East-West Highway, Room 3539
Silver Spring, MD 20910-3226

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Goldstein:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide responses to all comments on the Preliminary Draft PEA. The Draft PEA stands as the USCG's Final Biological Assessment (BA) for the ESA Section 7 consultation. **Table 1** is a crosswalk showing the location of the pertinent parts required for a BA within the Draft PEA.

As you review the document, please feel free to contact the USCG via phone or email if you have questions. The main point of contact at USCG for questions is Ms. Kebby Kelley at 202-475-5690 and Kebby.Kelley@uscg.mil. Kebby will coordinate any questions with others in the USCG and with me, as necessary.

Table 1. Crosswalk between the Programmatic Environmental Assessment and the Biological Assessment

Endangered Species Act Required Biological Assessment Content (50 CFR 402.12)	Corresponding SONAR PEA Sections
Description of the Action Area.	The Region of Influence (ROI), which is described in Section 3.1.2 is the Action Area.
The results of an onsite inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally.	Because of the scope of the Proposed Action, it is not possible to conduct an onsite inspection of the area affected. It is assumed that all ESA-listed species that could potentially occur in an area would be present in the defined ROIs.
A review of the literature and other information,	Aquatic Species - Section 3.1.1

including the views of recognized experts on the species at issue.	Marine Mammals - Sections 3.3.2.2, 3.3.2.2.1, 3.3.2.2.2, 3.3.2.2.3, 3.3.4.2.1, and 3.3.4.2.2 Sea Turtles - Section 3.3.2.3 Coastal, Marine, and Aquatic Birds - Section 3.3.2.4.2 Fish - Sections 3.3.2.5.2 and 3.3.2.5.3 Benthic Resources - Section 3.3.2.6.2
An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies.	Aquatic Species - Section 3.1.1 Marine Mammals - Sections 3.3.3.2, 3.3.4.2, 3.3.4.2.2, 3.3.4.2.3, and 3.3.4.2.5 Sea Turtles - Sections 3.3.3.3 and 3.3.4.3. Coastal, Marine, and Aquatic Birds - Sections 3.3.3.4 and 3.3.4.4.2 Fish - Sections 3.3.3.5 and 3.3.4.5.2 Benthic Resources - Sections 3.3.3.6 and 3.3.4.6.2
An analysis of alternate actions considered by the Federal agency for the Proposed Action.	Section 2.2 describes the alternatives considered for the Proposed Action. Low- and medium-frequency SONAR were eliminated from consideration and will not be included under the Proposed Action. The use of high-frequency and low-powered SONAR helps to reduce the impacts by reducing the area ensounded by the equipment. Additionally, Radio Detection and Ranging (RADAR), optical systems, underwater barriers, and trained marine mammals have also been eliminated from further detailed studies. All the alternatives that were eliminated would not meet the USCG's purpose and need for the Proposed Action. The environmental consequences of the No Action Alternative were assessed for all biological resources in Section 3.3.5.

The Draft PEA and Draft FONSI have been published and can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166. The Federal Register Notice of Availability for these documents can also be downloaded. Comments should be sent to the Federal Register at the same web address and Docket Number. Please provide comments by January 31, 2011.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



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DEC 14 2010

Ms. Kellie Foster
NMFSE/Endangered Species Division
1315 East-West Highway
Silver Spring, MD 20910

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Foster:

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The Draft PEA and Draft FONSI have been published and can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166. The Federal Register Notice of Availability for these documents can also be downloaded. Comments should be sent to the Federal Register at the same web address and Docket Number. Please provide comments by January 31, 2011.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



U.S. Department of
Homeland Security
United States
Coast Guard

2100 Second Street, S.W.
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Commandant
United States Coast Guard

Ms. Therese Conant
NMFS/Endangered Species Division
1315 East-West Highway
Silver Spring, MD 20910

DEC 14 2010

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Conant:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide responses to all comments on the Preliminary Draft PEA. The Draft PEA stands as the USCG's Final Biological Assessment (BA) for the ESA Section 7 consultation. **Table 1** is a crosswalk showing the location of the pertinent parts required for a BA within the Draft PEA.

As you review the document, please feel free to contact the USCG via phone or email if you have questions. The main point of contact at USCG for questions is Ms. Kobby Kelley at 202-475-5690 and Kobby.Kelley@uscg.mil. Kobby will coordinate any questions with others in the USCG and with me, as necessary.

Table 1. Crosswalk between the Programmatic Environmental Assessment and the Biological Assessment

Endangered Species Act Required Biological Assessment Content (50 CFR 402.12)	Corresponding SONAR PEA Sections
Description of the Action Area.	The Region of Influence (ROI), which is described in Section 3.1.2 is the Action Area.
The results of an onsite inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally.	Because of the scope of the Proposed Action, it is not possible to conduct an onsite inspection of the area affected. It is assumed that all ESA-listed species that could potentially occur in an area would be present in the defined ROIs.
A review of the literature and other information,	Aquatic Species - Section 3.1.1

including the views of recognized experts on the species at issue.	Marine Mammals - Sections 3.3.2.2, 3.3.2.2.1, 3.3.2.2.2, 3.3.2.2.3, 3.3.4.2.1, and 3.3.4.2.2 Sea Turtles - Section 3.3.2.3 Coastal, Marine, and Aquatic Birds - Section 3.3.2.4.2 Fish - Sections 3.3.2.5.2 and 3.3.2.5.3 Benthic Resources - Section 3.3.2.6.2
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Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



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DEC 14 2010

Mr. John Fay
National Section 7 Coordinator
U.S. Fish and Wildlife Service
4401 North Fairfax Drive, Room 452
Arlington, VA 22203

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Fay:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide responses to all comments on the Preliminary Draft PEA. The Draft PEA stands as the USCG's Final Biological Assessment (BA) for the ESA Section 7 consultation. **Table 1** is a crosswalk showing the location of the pertinent parts required for a BA within the Draft PEA.

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Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



U.S. Department of
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United States
Coast Guard

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DEC 14 2010

Ms. Jeannine Cody
NMFS/OPR/Incidental Take
1315 East-West Highway
Silver Spring, MD 20910

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Cody:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide responses to all comments on the Preliminary Draft PEA. The Draft PEA stands as the USCG's Final Biological Assessment (BA) for the ESA Section 7 consultation. **Table 1** is a crosswalk showing the location of the pertinent parts required for a BA within the Draft PEA.

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Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



Commandant
United States Coast Guard

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DEC 14 2010

Ms. Jolie Harrison
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Harrison:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide responses to all comments on the Preliminary Draft PEA. The Draft PEA stands as the USCG's Final Biological Assessment (BA) for the ESA Section 7 consultation. **Table 1** is a crosswalk showing the location of the pertinent sections required for a BA within the Draft PEA.

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Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



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DEC 14 2010

Ms. Karen Abrams
NMFS Headquarters
Office of Habitat Conservation
1315 East-West Highway
SSMC3, Room 14111
Silver Spring, MD 20910

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Abrams:

The U.S. Coast Guard (USCG) is pleased to provide the Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency Active Sonar Technology* and associated Draft Finding of No Significant Impact (FONSI) for your review. This document incorporates the comments provided by the Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) during the USCG's informal agency consultation for the Preliminary Draft PEA. A consolidated comment response matrix (CRM) has also been included to provide a response to all comments on the Preliminary Draft PEA. The Draft PEA will be used for the USCG Essential Fish Habitat (EFH) consultation. The required components of this EFH consultation and the sections of the PEA where the EFH discussions and other related material are presented are as follows:

- A description of the Proposed Action is in Section 2.0.
- A description of EFH within the project area is in Section 3.3.2.5.1.
- Analyses of the impacts, including cumulative impacts, of the project impacts on EFH are presented throughout Sections 3.3.3.5 and 3.3.4.5.1.
- The USCG's and MARAD's assessment and conclusion of the impacts of the action on EFH are included in Section 3.3.4.5.1.

As you review the document, please feel free to contact the USCG via phone or email if you have questions. The main point of contact at USCG for questions is Ms. Kebby Kelley at 202-475-5690 and Kebby.Kelley@uscg.mil. Kebby will coordinate any questions with others in the USCG, as necessary.

The Draft PEA and Draft FONSI have been published and can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166. The Federal Register Notice of Availability for these documents can also be downloaded. USCG invites public comment on the Draft PEA. Comments should be sent to the Federal Register at the same web address and Docket Number. Please provide comments by January 31, 2011.

Thank you,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations



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United States Coast Guard

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DEC 14 2010

Ms. Ruth Ehinger
Program Manager
Coastal Management Office
Department of Environmental Protection
401 East State Street
PO Box 418
Trenton, NJ 08625

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Ehinger:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the New Jersey Department of Environmental Protection (DEP), Coastal Management Office with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under New Jersey's Coastal Zone Management Rules (New Jersey Administrative Code [NJAC], Title 7, Chapter 7E, Section 1.2[e]), DEP has the authority to determine "the consistency or compatibility of proposed actions by Federal, State and local agencies within or affecting the coastal zone, including, but not limited to, determinations of Federal consistency under Section 307 of the Federal Coastal Zone Management Act...." The PEA will assess the impacts of the Proposed Action on coastal resources in accordance with the Coastal Zone Management Rules.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on New Jersey's coastal resources are anticipated. The Proposed Action, which serves to enhance port security, is consistent with New Jersey State law, including the Waterfront Development Law (New Jersey Statute Annotated [N.J.S.A.] 12:5-3), the Wetlands Act of 1970 (N.J.S.A. 13:9A-1) and the Coastal Area Facility Review Act (N.J.S.A. 13:19-1). Additionally, the Proposed Action, is consistent with the policies enumerated in the Coastal Zone Management Rules (NJAC 7:7E-1.5) in that it is a water-dependent use that "protect(s) the health, safety and welfare of people who reside, work and visit the coastal zone" and "maintain(s) active port and industrial facilities."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in New Jersey coastal waters is consistent to the maximum extent practicable with the enforceable policies of the New Jersey Coastal Management Program.

In accordance with 15 CFR Section 930.41, the New Jersey Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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Ms. Janice Hodge
Director
Division of Coastal Zone Management
Department of Planning and Natural Resources
8100 Lindberg Bay, Ste. #61
Cyril E. King Airport Terminal Building
St. Thomas, VI 00802

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Hodge:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(g)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Territory's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

DEC 14 2010

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Virgin Islands Department of Planning and Natural Resources, Division of Coastal Zone Management with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Virgin Islands Coastal Zone Management Act, Section 903(b), the Division of Coastal Zone Management aims to "Protect, maintain, preserve, and where feasible, enhance and restore the overall quality of the environment in the coastal zone, the natural and man-made resources of the coastal zone for the benefit of residents and visitors of the Virgin Islands." The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under the Division of Coastal Zone Management.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421).

However, at this time, no significant impacts on the Virgin Islands' coastal resources are anticipated. The Proposed Action is a water-dependent action and no CZM permits would be necessary as the Proposed Action would not alter of the shoreline or submerged lands; construct new structures for commercial or private use; discharge or disposal of waste materials; enlarge or expand existing structures; require land clearing, grading, or excavations; or place permanent or temporary structures on submerged lands (e.g. moorings, docks, etc.). Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Virgin Islands coastal waters is consistent to the maximum extent practicable with the goals of the Virgin Islands Division of Coastal Zone Management.

In accordance with 15 CFR Section 930.41, the Virgin Islands Division of Coastal Zone Management has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Territory's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kobby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Laura McKay
Program Manager
Virginia Coastal Program
Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. McKay:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>. Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Virginia Department of Environmental Quality, Virginia Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under the Code of Virginia, Title 10, Chapter 1, Section 1183, the Department of Environmental Quality has the authority to "coordinate state reviews with federal agencies on environmental issues, such as environmental impact statements." Under Executive Order Thirty-Three, this authority extends to ensuring that Federal programs and activities are carried out in a manner that is consistent with the federally-approved Virginia Coastal Management Program.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Virginia's coastal resources are anticipated. Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Virginia coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Virginia Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Carolyn Boltin-Kelly
Deputy Commissioner
Office of Ocean and Coastal Resource Management
Department of Health and Environmental Control
1362 McMillan Avenue
Suite 400
Charleston, SC 29405-2029

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Boltin-Kelly:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(e)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLSOURCE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management (OCRM) with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent

inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under South Carolina's Coastal Zone Management Act (South Carolina Code of Laws, Title 48, Chapter 39, Section 80), the State Coastal Management Program "shall provide for consideration of whether a proposed activity of any applicant for a federal license or permit complies with the State's coastal zone program and for the issuance of notice to any concerned federal agency as to whether the State concurs with or objects to the proposed activity." The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under South Carolina's Coastal Zone Management Act and OCRM's Critical Area Permitting Regulations (South Carolina Code of Regulations, Chapter 30, Section 11).

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on South Carolina's coastal resources are anticipated. The Proposed Action, which will serve to enhance port security, is consistent with the State Coastal Zone Management Act in that it "protects the resources of the State's coastal zone for this and succeeding generations." Additionally, in accordance with state regulations governing activities in coastal areas, the Proposed Action is a water-dependent use that does not "harmfully obstruct the natural flow of navigable water" or "unreasonably interfere with commercial navigation and shipping."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in South Carolina coastal waters is consistent to the maximum extent practicable with the enforceable policies of the South Carolina Coastal Management Program.

In accordance with 15 CFR Section 930.41, the South Carolina Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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Mr. Gordon White

Manager
Shoreland & Environmental Assistance Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. White:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Melin

CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

DEC 14 2010

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Washington State Department of Ecology, Shoreland & Environmental Assistance Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Washington Administrative Code, Title 173, Chapter 27, Section 060, "Direct federal actions and projects (within the coastal counties) shall be consistent to the maximum extent practicable with the approved Washington state coastal zone management program." Therefore, the PEA will assess the impacts of the Proposed Action on coastal resources in the context of the Washington State Coastal Zone Management Program's enforceable policies, including the Shoreline Management Act (Revised Code of Washington (RCW), Chapter 90.58).

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Washington's coastal resources are anticipated. The Proposed Action, which enhances port security and public safety, is consistent with both the Shoreline Management Act and the State Environmental Policy Act (43 RCW 21C.020) in that it facilitates "safe, healthful and productive surroundings" and "preserves important historic, cultural and natural aspects of (the State's) natural heritage." Furthermore, the Proposed Action is consistent with state policies and laws regarding clean water, clean air and ocean resource management, and should present no foreseeable effects on these resources.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Washington coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Washington State Coastal Zone Management Program.

In accordance with 15 CFR Section 930.41, the Washington State Coastal Zone Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebbly Kelley regarding NEPA (see contact information on cover letter).



Commandant
United States Coast Guard

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Staff Symbol: CG-532
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DEC 14 2010

Ms. Anne McMahon
Acting Federal Program Manager
California Coastal Commission
45 Fremont Street
Suite 2000
San Francisco, CA 94105

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. McMahon:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA)* for the *Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the California Coastal Commission (Commission) with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under the California Coastal Act of 1976 (Public Resources Code, Division 20, Section 30330), the Commission is "designated as the state coastal zone planning and management agency for any and all purposes, and may exercise any and all powers set forth in the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.)." Therefore, all activities authorized, funded, or carried out by the Federal Government that affect coastal zone resources must be reviewed by the Commission for consistency with the federally approved California Coastal Management Program and the California Coastal Act. The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under the California Coastal Act, Chapter 3, Coastal Resources Planning and Management Policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time no significant impacts on California's coastal resources are anticipated. The Proposed Action is consistent with enforceable policies regarding the marine environment, particularly Article 4, Section 30230, which states that "marine resources shall be maintained" and that "uses of the marine environment should be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms." The Proposed Action, which provides enhanced port security, is also consistent with policies pertaining to development and public access (Article 2, § 30210) in that it is a water-dependent use that protects public safety while preserving "maximum access....and recreational opportunities....for all the people."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program.

In accordance with 15 CFR Section 930.41, the California Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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Mr. John Watkins
Chief
Office of Coastal Management
Department of Natural Resources
105 West Shoreline Drive
Sandusky, OH 44870

DEC 14 2010

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Watkins:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][e]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Ohio Department of Natural Resources, Office of Coastal Management with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Ohio Revised Code Title XV 1506.03, it is the responsibility of the director of natural resources to determine that actions affecting Ohio's coastal zone are consistent with the policies in the Coastal Management Program document. The PEA will assess the impacts of the Proposed Action on coastal resources of Ohio.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Ohio's coastal resources are anticipated. Based upon the preceding information, data, and analysis, the USCG finds that the operation of HF and UHF SONAR systems in Ohio coastal waters is consistent with the enforceable policies provided in the Ohio Coastal Management Program Environmental Impact Statement, Ohio Revised Code Title XV Chapter 1506, and the Ohio Coastal Management Program document. Furthermore, in accordance with Ohio Coastal Management Program, Policy 19—Lake Erie Ports, the Proposed Action serves to "promote and provide for maritime commerce and related economic development along the Lake Erie shore" by providing enhanced port security.

In accordance with 15 CFR Section 930.41, the Ohio Office of Coastal Management has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).

Consistency Certification Statement

I, MICHAEL MOLES, do certify that the proposed activity complies with the enforceable policies of Ohio's approved coastal management program and will be conducted in a manner consistent with such program (15 C.F.R. 930.57 and O.R.C. 1506.03).

Address: 2100 SECOND ST., S.W., STOP 7363

City: WASHINGTON State: DC Zip Code: 20580-7363

Telephone Number: (202) 372-2101

Applicant's Signature: [Signature] Date: 12-14-10

Project Name/Description: PEA FOR THE NATIONWIDE USE OF HIGH FREQUENCY + ULTRA HIGH FREQUENCY SONAR TECHNOLOGY

Please send a signed, original copy of this document to:

Steve Holland, Consistency Coordinator
Office of Coastal Management
Ohio Department of Natural Resources
105 West Shoreline Drive
Sandusky, Ohio 44870



2100 Second Street, S.W.
Stop 7353
Washington, DC 20593-7353
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Commandant
United States Coast Guard

Mr. Gary Obleski
Coastal Resources Program Manager
Water Planning Office
Department of Environmental Protection
400 Market Street
P.O. Box 2063
Harrisburg, PA 17105-2063

DEC 14 2010

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Obleski:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][g]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475-1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

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Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Pennsylvania Department of Environmental Protection, Water Planning Office with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

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The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Pennsylvania Code Title 4 Chapter 1 Subchapter EE, the Pennsylvania Department of Environmental Protection is designated as the lead agency for implementing and administering the Federal Coastal Zone Management Program for the Commonwealth of Pennsylvania. The PEA will assess the impacts of the Proposed Action on coastal resources of Pennsylvania.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no impacts on Pennsylvania's coastal resources are anticipated. Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Pennsylvania coastal waters is consistent with the enforceable policies of Pennsylvania's approved coastal management program that are provided in the Chapters 2 and 4 and Appendix A of the Commonwealth of Pennsylvania's Coastal Zone Program Guidance Document. Additionally, the Proposed Action is consistent with Encouragement Policies 7.1 and 7.2, because it enhances economic viability and supports future development and growth of the coastal ports of the Commonwealth of Pennsylvania.

In accordance with 15 CFR Section 930.41, the Pennsylvania Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Ted Diers
Program Manager
New Hampshire Coastal Program
Department of Environmental Services
50 International Drive, Suite 200
Pease Tradeport
Portsmouth, NH 03801

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Diers:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the New Hampshire Department of Environmental Services (DES), New Hampshire Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under New Hampshire Revised Statute, Title 1, Chapter 4e, Section 1, DES "shall administer the state coastal zone management program." As such, DES is responsible for ensuring that direct Federal activities are conducted in a manner that is consistent to the maximum extent practicable with the state coastal management program. The PEA will assess the impacts of the Proposed Action on coastal resources in accordance with the enforceable policies delineated in the New Hampshire Coastal Program.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on New Hampshire's coastal resources are anticipated. The Proposed Action is consistent with policies pertaining coastal resources, recreation and public access, coastal development and historic and cultural resources, and should present no foreseeable effects in these areas. Furthermore, it is a water-dependent activity, as its specific purpose is to enhance port security.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in New Hampshire coastal waters is consistent to the maximum extent practicable with the enforceable policies of the New Hampshire Coastal Program.

In accordance with 15 CFR Section 930.41, the New Hampshire Coastal Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Jan Boyd
Director
Mississippi Coastal Program
Department of Marine Resources
1141 Bayview Avenue
Suite 101
Biloxi, MS 39530

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Boyd:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kehby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kehby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Mississippi Department of Marine Resources, Mississippi Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Mississippi Code, Title 57, Chapter 15, Section 6, the Mississippi Marine Resources Council (Council) is "directed to prepare and implement a coastal program." Under this authority, and in accordance with the Federal CZMA (16 United States Code [U.S.C.] §1452), the Council is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Mississippi Coastal Program. Therefore, the PEA will assess the impacts of the Proposed Action on coastal resources within the context of the policies enumerated in Mississippi Code, Sections 39-7-3, 49-15-1, 49-17-3, 49-27-3 and 51-3-1.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 U.S.C. §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Mississippi's coastal resources are anticipated. The Proposed Action, which serves local, State and national interests by providing enhanced port security, is consistent with the Mississippi Coastal Program's policies in that it is a water-dependent use that protects aquatic life, wetlands, and historical and archeological resources.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Mississippi coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Mississippi Coastal Program.

In accordance with 15 CFR Section 930.41, the Mississippi Coastal Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Pat Collins
Program Manager
Minnesota Lake Superior Coastal Program
Department of Natural Resources
1568 Highway 2
Two Harbors, MN 55616

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Collins:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Minnesota Department of Natural Resources, Minnesota Lake Superior Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under the State of Minnesota's Lake Superior Coastal Management Program (LSCMP), Federal consistency is conducted coordinated through the Minnesota Department of Natural Resources' Coastal Management Program. The PEA will assess the impacts of the Proposed Action on coastal resources of Minnesota according to the guidelines presented in the LSCMP Part V, Chapter 6.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no impacts on Minnesota's coastal resources are anticipated. Additionally, the Proposed Action is an activity considered by Minnesota to be of national interest under national defense and transportation, ports, and navigation. Based upon the preceding information, data and analysis, the USCG finds that the use of HF and UHF SONAR systems in Minnesota coastal waters is consistent to the maximum extent practicable with the enforceable policies of Minnesota's approved coastal management program and will be conducted in a manner consistent with such program.

By this determination that the use of HF and UHF SONAR systems is consistent to the maximum extent practicable with *Minnesota's Lake Superior Coastal Program*, the State of Minnesota is notified that it has 45 days (plus any appropriate extension under 15 C.F.R. Section 930.41(b) from the receipt of this letter in which to agree or disagree with the USCG's determination. The agreement or disagreement of the State of Minnesota with the Federal agency's consistency determination shall be sent to Mr. Kenneth McDaniel via <http://www.regulations.gov>, Docket Number USCG-2009-0166.


Signature
12-14-10

Title
Deputy Division Chief



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United States Coast Guard

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DEC 14 2010

Ms. Evangeline Lujan
Administrator
Guam Coastal Management Program
Bureau of Statistics and Plans
P.O. Box 2950
Hagatna, GU 96932

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Lujan:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination, including the Guam Coastal Management Program Assessment Format, under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Territory's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination and Guam Coastal Management Program Assessment Format

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Guam Bureau of Statistics and Plans, Guam Coastal Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Pursuant to the Coastal Zone Management Act, Public Law (P.L.) 95-583, as amended in P.L. 94-37, the Guam Bureau of Statistics and Plans, Coastal Management Program is designated as the lead agency for implementing and administering the Federal Coastal Zone Management Program for Guam. The PEA will assess the impacts of the Proposed Action on coastal resources of Guam.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Guam's coastal resources are anticipated. Based on the information, data, and analysis in the Guam Assessment Format, the USCG finds that the nationwide use of active SONAR technologies in Guam coastal waters is consistent to the maximum extent practicable with the development and resource policies of the Guam Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Guam Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Territory's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kobby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Susan Shipman
Director
Coastal Coastal Resources Division
Department of Natural Resources
One Conservation Way
Suite 300
Brunswick, GA 31520

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Shipman:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebbby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebbby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard

Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides Georgia Department of Natural Resources, Coastal Resources Division with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

2. Under Georgia's Coastal Management Act (Official Code of Georgia, Title 12, Chapter 5, Section 323), the Department of Natural Resources has the authority to "concur or object to a determination of consistency filed by a federal agency in connection with a federal activity based on the policies of the Georgia coastal management program..." Therefore, the PEA will assess the impacts of the Proposed Action on coastal resources that are provided under the Georgia Coastal Management Program Document and all State laws subject to the Federal Consistency provisions of the CZMA.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time no significant impacts on Georgia's coastal resources are anticipated. The Proposed Action is consistent with state policies regarding coastal marshlands, tidelands, protected areas and shore protection, and should not present any foreseeable effects on these resources. Furthermore, it is consistent with policies pertaining to transportation utilities (i.e., ports and commercial waterways) management, in that it provides enhanced port security while appropriately considering the national interest of defense within the context of coastal resource protection.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Georgia coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Georgia Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Georgia Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Danny Clayton
Coastal Program Administrator
Florida Coastal Management Program
Department of Environmental Protection
3900 Commonwealth Boulevard
Douglas Building, Mail Station 47
Tallahassee, FL 32399

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Clayton:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Florida Department of Environmental Protection, Florida Coastal Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Florida's Coastal Zone Management Act (Title XXVIII, Chapter 380, Section 23), the Florida Department of Environmental Protection may review all "federal development projects and activities of federal agencies which significantly affect coastal waters and the adjacent shorelands of the state" to ensure that they "are conducted in accordance with the state's coastal management program." The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under the 23 State Statutes that compose the Florida Coastal Management Plan.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time no significant impacts on Florida's coastal resources are anticipated. The Proposed Action is consistent with state policies regarding living resources, water resources and beach and shore preservation, and should not present any foreseeable effects on these resources. Furthermore, in accordance with Florida's legislative policy for conservation (Title XXXV, Chapter 582, Section 5), the Proposed Action serves to "protect the tax base, protect public lands, and protect and promote the public health, safety and general welfare of the people" by providing enhanced port security.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies is consistent to the maximum extent practicable with the enforceable policies of the Florida Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Florida Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Kate Angel
Program Manager
Wisconsin Coastal Management Program
Department of Administration
101 East Wilson Street, 9th Floor
PO Box 8944
Madison, WI 53708

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Angel:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

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Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Wisconsin Department of Administration, Wisconsin Coastal Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

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The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. The Department of Administration is designated as the lead agency for implementing and administering the Federal Coastal Zone Management Program for Wisconsin. The PEA will assess the impacts of the Proposed Action on coastal resources of Wisconsin.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, not more than minor impacts on Wisconsin's coastal resources are anticipated. Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Wisconsin coastal waters is consistent with Chapter 1, Part C of the document entitled *Wisconsin Coastal Management Program: A Strategic Vision for the Great Lakes*. The Proposed Action would have minor adverse effects on water quality; no effects on coastal erosion and flood hazard areas; no adverse effects on community development but potential beneficial effects on public safety; and potential beneficial effects on economic development as the Proposed Action would not interfere with legitimate trade and commerce, but would increase USCG's ability to protect critical domestic port infrastructure, safeguard vessels, and preserve the flow of interstate and international commerce. The Proposed Action would not have more than minor effects on special coastal areas. The Proposed Action occurs in the water and does not involve construction or the development of land, but could result in insignificant impacts on sediments. Whether for operations, training, or research and development purposes, the Proposed Action would have no effect to minor adverse effects on historic properties but would provide negligible to moderate beneficial effects on historical and archaeological sites.

The USCG supports the state's policy on Government interrelationships and is coordinating with all appropriate governmental agencies. The PEA will be available for public review for a period of 30 days and will meet the public review requirements under NEPA.

In accordance with 15 CFR Section 930.41, the Wisconsin Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from

receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebbby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. George Stafford
Director
Office of Coastal, Local Government and Community Sustainability
New York State Department of State
99 Washington Avenue
Suite 1010
Albany, NY 12231

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Stafford:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2](c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the New York State Department of State, Office of Coastal, Local Government and Community Sustainability with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under New York State's Waterfront Revitalization and Coastal Resources Act (New York State Executive Law 42, Section 912), it is New York state policy to ensure consistency of Federal actions with "policies of the coastal area and inland waterways, and with accepted waterfront revitalization programs of the area defined or addressed by such programs." The PEA will assess the impacts of the Proposed Action on coastal resources within the context of the policies described in Part II, Section 6 of the New York Coastal Management Program (CMP) document.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on New York's coastal resources are anticipated. The Proposed Action is consistent with CMP policies regarding fish and wildlife, natural protective features, historic and scenic resources and wetlands, and should not present any foreseeable effects on these resources.

The Proposed Action is also a water-dependent activity, consistent with CMP Policy 2, in that its sole purpose is to provide enhanced port security. Furthermore, in accordance with CMP Policy 18, the Proposed Action gives full consideration to "the vital economic, social and environmental interests of the state and of its citizens", as well as to "the safeguards which the state has established to protect valuable coastal resource areas."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in New York coastal waters is consistent to the maximum extent practicable with the enforceable policies of the New York CMP.

In accordance with 15 CFR Section 930.41, the New York CMP has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Randy Bates
Director
Division of Coastal & Ocean Management
Department of Natural Resources
302 Gold Street, Suite 202
P.O. Box 110030
Juneau, AK 99811-1030

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Bates:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Alaska Department of Natural Resources (DNR), Division of Coastal & Ocean Management with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Alaska's Coastal Management Program Statute (Title 46, Chapter 39, Section 10), "the Department of Natural Resources shall render, on behalf of the state, all federal consistency determinations and considerations authorized by 16 U.S.C. 1456 (Section 307, Coastal Zone Management Act of 1972)." As such, DNR is responsible for ensuring that all Federal activities are compliant with the enforceable policies of the Alaska Coastal Management Program. The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under 1) the Standards of the Alaska Coastal Management Program (Alaska Administrative Code [AAC], Title 6, Chapter 80, Article 2, Uses and Activities) and 2) the Anchorage Coastal District Enforceable Policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Alaska's coastal resources are anticipated. The Proposed Action is consistent with enforceable policies regarding coastal development, transportation utilities (i.e., ports), marine habitats, and water quality, and would have no foreseeable effects to these areas. Additionally, the Proposed Action is consistent with Subsection 6 AAC 80.040 in that it is a water dependent use, as its specific purpose is to enhance port security.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Alaska coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Alaska Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Alaska Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Scott Brown
Program Chief
Coastal Programs Office
Department of Environmental Management
4171 Commanders Drive
Mobile, AL 36615-1421

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Brown:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2](c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475 ID, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Alabama Department of Environmental Management (ADEM), Coastal Programs Office with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

2. Under the Code of Alabama, Title 9, Chapter 7, Section 16, ADEM may "develop and promulgate...such rules and regulations as may be necessary to carry out the management program provided for in this chapter." Under this authority, and in accordance with the Federal CZMA (16 United States Code [U.S.C.] §1452), ADEM is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Alabama Coastal Area Management Program (ACAMP). Therefore, the PEA will assess the impacts of the Proposed Action on coastal resources within the context of ACAMP's Provisions Relating to Coastal Activities (ADEM Administrative Code, Chapter 335, Division 8, Section 2).

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 U.S.C. §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Alabama's coastal resources are anticipated. In accordance with ADEM Administrative Code 335-8-2, the Proposed Action does not adversely affect (a) historical, architectural, or archeological sites; (b) wildlife and fishery habitat; or (c) public access to tidal and submerged lands, navigable waters, and beaches or other public recreational resources. Moreover, the Proposed Action, which is a water-dependent use that serves to enhance port security, supports ADEM's policy to "preserve, protect, develop and, where possible, to restore or enhance the resources of the state's coastal area for this and succeeding generations (Code of Alabama, Section 9-7-12)."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Alabama coastal waters is consistent to the maximum extent practicable with the enforceable policies of the ACAMP.

In accordance with 15 CFR Section 930.41, the ADEM has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. David Kozak
Director
Office of Long Island Sound Programs
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Kozak:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Connecticut Department of Environmental Protection, Office of Long Island Sound Programs with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Connecticut's Coastal Management Act, (Connecticut General Statute, Title 22a, Chapter 444, Section 96), the Department of Environmental Protection is granted the authority to "represent the state in formal proceedings regarding 'federal consistency' as defined in the federal act," and to "into written agreements with federal agencies concerning matters having an interest in or regulatory authority in the coastal area." Such matters are to "provide for cooperation and coordination in the implementation of state and federal programs with jurisdiction in the coastal area in a manner consistent with (the Coastal Management Act) Sections 22a-90 to 22a-96, inclusive." The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under the Coastal Management Act and the Connecticut Coastal Manual.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Connecticut's coastal resources are anticipated. The Proposed Action is consistent with the Coastal Management Act in that it is "consistent with the capability of the land and water to support development, preservation and use without significantly disrupting either the natural environment or sound economic growth." It also "ensures maximum protection of coastal resources while minimizing conflicts and the disruption of economic development." Furthermore, the Proposed Action is a water-dependent use solely designed to enhance port security. As such, it serves the "national interests" defined in Section 22a-93 by making "improvement to the existing interstate rail, highway and water-borne transportation system," and providing "essential maintenance and improvement to existing water-dependent military, navigational, resource management and research facilities."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Connecticut coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Connecticut Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Connecticut Coastal Management Program has sixty days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through

the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebbby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Doug Tom
Program Manager
Hawaii Coastal Zone Management Program
Dept of Business, Economic Development, and Tourism
P.O. Box 2359
Honolulu, HI 96804

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Tom:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Hawaii Department of Business, Economic Development and Tourism, Hawaii Coastal Zone Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent

inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Hawaii's Coastal Zone Management Statute (Hawaii Revised Statutes [H.R.S.], Chapter 205A, Section 3), the Department of Business, Economic Development and Tourism, Office of Planning is authorized to "review federal programs, federal permits, federal licenses, and federal development proposals for consistency with the coastal zone management program." The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under Hawaii Revised Statutes, Chapter 205A, Section 2, Coastal Zone Management Program, Objectives and Policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time no significant impacts on Hawaii's coastal resources are anticipated. The Proposed Action is consistent with enforceable state policies regarding coastal ecosystems, beach protection, marine resources and economic uses, and should present no foreseeable effects in these areas. Additionally, the Proposed Action facilitates H.R.S. Subsection 205A-2(c)-5, in that it is a coastal-dependent use that provides enhanced port security in a manner that minimizes "adverse social, visual, and environmental impacts in the coastal zone management area."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies is consistent to the maximum extent practicable with the enforceable policies of the Hawaii Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Hawaii Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Michael Molnar
Program Manager
Lake Michigan Coastal Program
Indiana Department of Natural Resources
402 W. Washington
Room W267
Indianapolis, IN 46204

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Molnar:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][g]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Molnar
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Indiana Department of Natural Resources, Lake Michigan Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under the State of Indiana's Lake Michigan Coastal Management Program (LCMP), Federal consistency in Indiana is coordinated through the Indiana Department of Natural Resources' Division of Soil Conservation. The PEA will assess the impacts of the Proposed Action on the coastal resources of Indiana.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Indiana's coastal resources are anticipated. Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Indiana coastal waters complies with Indiana's approved coastal management program and will be conducted in a manner consistent with such program. Furthermore, the Proposed Action is a water-dependent use solely designed to enhance port security. As such, it serves the meet the goals of the Indiana Coastal Program as outline in Chapter 1, Page 27. In particular, the Proposed Action seeks to "protect and restore significant natural resources" as well as "prevent the loss of life and property in coastal hazard areas."

In accordance with 15 CFR Section 930.41, the Lake Michigan Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>. Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Kathleen Leyden
Program Director
Maine Coastal Program
State Planning Office
187-189 State Street
State House Station #38
Augusta, ME 04333

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Leyden:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Molin
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Maine State Planning Office, Maine Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kHz and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

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The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

2. Under Maine General Statute (Annotated) (M.R.S.A.), Title 38, Chapter 19, Section 1801, "state and local agencies and federal agencies with responsibility for regulating, planning, developing or managing coastal resources, shall conduct their activities affecting the coastal area consistent with the following policies...." The Statute then enumerates several enforceable policies that are further delineated by the federally-approved Maine Coastal Program. The PEA will assess the impacts of the Proposed Action on coastal resources that are provided under 38 M.R.S.A. 1801 and the "Maine Guide to Federal Consistency Review."

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Maine's coastal resources are anticipated. The Proposed Action is consistent with policies pertaining, but not limited to, air quality, water quality, recreation and tourism, and marine resource management, and should present no foreseeable effects in these areas. Additionally, the Proposed Action facilitates Maine's Coastal Management policies regarding shoreline management and port and harbor development, as it is a water-dependent activity that "promote(s) the maintenance, development and revitalization of the State's ports and harbors for fishing, transportation and recreation," by providing enhanced port security.

Based upon the preceding information, data and analysis, the USCG finds that the nationwide use of active SONAR technologies in Maine coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Maine Coastal Program.

In accordance with 15 CFR Section 930.41, the Maine Coastal Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kobby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Jeffrey Willis
Deputy Director
Rhode Island Coastal Resources Management Council
4808 Tower Hill Road
Stedman Building - Suite 3
Wakefield, RI 02879

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Willis:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the Federal Register at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Rhode Island Coastal Resources Management Council (CRMC) with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Rhode Island's Coastal Resources Management Act (Rhode Island General Law [RIGL], Title 46, Chapter 23, Section 1), the CRMC is directed to "exercise effectively its responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone." Under this authority, and pursuant to the Federal Coastal Zone Management Act (16 U.S.C. §1452), the CRMC is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Rhode Island Coastal Management Program (RICMP). The PEA will assess the impacts of the Proposed Action on coastal resources within the context of the policies enumerated in the Coastal Resource Management Act and in the RICMP's "Red Book".

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained. However, at this time, no significant impacts on Rhode Island's coastal resources are anticipated. In accordance with RIGL 46-23-6(B)(2), the Proposed Action does not, "(a) conflict with any resource management plan or program; (b) make any area unsuitable for any uses or activities to which it is allocated by a resource management plan...; or (c) significantly damage the environment of the coastal region."

Additionally, the Proposed Action, which serves to enhance port security, is consistent with RICMP policies regarding Type 4 (Multiple Purpose) and Type 6 (Industrial Waterfronts and Commercial Navigation Channels) waters, in that it is a "water-dependent" use that supports the "maintenance of port facilities and navigation channels." It is also consistent with policies regarding Type 3 (High Intensity Boating) and Type 5 (Commercial and Recreational Harbors) waters in that it "maintains a balance among diverse port-related activities" and "does not significantly interfere with recreational boating activities and values."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Rhode Island coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Rhode Island Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Rhode Island Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from

receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebbby Kelley regarding NEPA (see contact information on cover letter).



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DEC 4 2010

Mr. Matthew Fleming
Director
Chesapeake Bay and Coastal Programs
Department of Natural Resources
Tawes State Office Building, E-2
580 Taylor Avenue
Annapolis, MD 21401

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Fleming:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Maryland Department of Natural Resources (DNR), Chesapeake Bay and Coastal Programs with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Maryland Executive Order 01.01.1978.05 establishes the state's Coastal Program and grants DNR the authority to administer the program. Under this authority, and pursuant to the Federal CZMA (16 U.S.C. §1452), DNR is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Maryland Coastal Program. The PEA will assess the impacts of the Proposed Action on coastal resources within the context of the Maryland Coastal Program's Goals.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Maryland's coastal resources are anticipated. The Proposed Action, which serves local, state and national interests by providing enhanced port security, is a water-dependent activity that supports the Maryland Coastal Program's goals by (a) protecting coastal land and water habitats; (b) sustaining ports, harbors, marinas, and urban waterfronts; and (c) preserving historic and cultural resource.

Based upon the preceding information, data, and analysis, the Coast Guard finds that the nationwide use of active SONAR technologies in Maryland coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Maryland Coastal Program.

In accordance with 15 CFR Section 930.41, the Maryland Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>. Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Ernesto Diaz
Program Manager
Coastal Zone Management Program
Department of Natural and Environmental Resources
P.O. Box 3661470
San Juan, PR 00936

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Diaz:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Puerto Rico Department of Natural and Environmental Resources, Coastal Zone Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent

inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Pursuant to Resolution PU-002, the Puerto Rico Department of Natural and Environmental Resources, Coastal Management Program is designated as the lead agency for implementing and administering the Federal Coastal Zone Management Program for Puerto Rico. The PEA will assess the impacts of the Proposed Action on coastal resources of Puerto Rico.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Puerto Rico's coastal resources are anticipated. The Proposed Action is a water-dependent program and would have no direct effects on shoreline, lagoon and reef, wetlands and mangrove, port and industrial areas, and coastal hazards areas. Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Puerto Rico coastal waters is consistent to the maximum extent practicable with the objectives and public policies of the Puerto Rico Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Puerto Rico Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Jody Henneke
Deputy Commissioner
Coastal Resources Program
Texas General Land Office
PO Box 12873
Austin, TX 78711

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Henneke:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>. Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Texas General Land Office, Coastal Resource Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Texas' Natural Resource Code, Section 33.053, the Texas Coastal Management Program (CMP) includes a procedure for "determining the consistency of a federal action or activity with the goals and policies of the coastal management program." To facilitate this, the PEA will assess the impacts of the Proposed Action on coastal resources in the context of the goals and policies detailed in the Texas CMP Final Environmental Impact Statement. These goals and policies are enforceable under Texas Administrative Code (TAC), Title 31, Chapter 501.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Texas' coastal resources are anticipated. The Proposed Action, which provides enhanced port security, is a water-dependent use that is consistent with the policies enumerated in 31 TAC §501.14.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Texas coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Texas Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Texas Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Deerin Babb-Brott
Director
Office of Coastal Zone Management
Executive Office of Environmental Affairs
251 Causeway Street
Suite 800
Boston, MA 02114

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Deerin Babb-Brott:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Massachusetts Executive Office of Environmental Affairs, Office of Coastal Zone Management (CZM) with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. According to the Massachusetts Coastal Zone Management Program Federal Consistency Review Regulations (Code of Massachusetts Regulation [CMR], Title 301, Chapter 21, Section 6), CZM is responsible for "determining the consistency, to the maximum extent practicable, of federal activities in or affecting the Massachusetts Coastal Zone with CZM policies." The PEA will assess the impacts of the Proposed Action on coastal resources with the enforceable policies that are enumerated in 301 CMR 21.98 and the federally-approved CZM Program Plan.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Massachusetts' coastal resources are anticipated. The Proposed Action is consistent with CZM policies pertaining to water quality, habitat, and protected areas, and should not present any foreseeable effects on these resources. Furthermore, the proposed use is consistent with CZM's smart growth policy, as it is a water-dependent use that "meets the needs of urban and community development centers" by providing enhanced port security.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Massachusetts coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Massachusetts Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Massachusetts Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Cathie Cunningham Ballard
Director
Coastal Program Unit
Environmental Science and Services Division
Constitution Hall, 525 West Allegan Street
P.O. Box 30457
Lansing, MI 48909

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Cunningham Ballard:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>. Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Michigan Environmental Science and Services Division, Coastal Program Unit with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(G)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Michigan's Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, DEQ is authorized to enforce regulations regarding the development and use of Michigan's coastal zone. Under this authority, and pursuant to the Federal Coastal Zone Management Act (16 U.S.C. §1452), DEQ is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Michigan Coastal Management Program. The PEA will assess the impacts of the Proposed Action on coastal resources within the context of these policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

At this time, no significant impacts on Michigan's coastal resources are anticipated. The Proposed Action is consistent with enforceable policies regarding water resources, soil erosion, wetlands, shorelands, farmlands, natural areas, endangered species, and aboriginal records and antiquities. The Proposed Action should present no foreseeable effects on these resources. Additionally, the Proposed Action, which provides enhanced port security, is a water-dependent use that "ensures adequate and continued public access" and "does not impair the public interest in the use of navigable waters."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Michigan coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Michigan Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Michigan Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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Mr. Stephen Rynas
Coordinator

Division of Coastal Management
Department of Environment and Natural Resources
400 Commerce Avenue
Morehead City, NC 28557

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Rynas:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102/2[e]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475 ID, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

DEC 14 2010

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the North Carolina Department of Environment and Natural Resources, Division of Coastal Management with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 KiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under North Carolina's Administrative Code, Title 15A, Chapter 7A, "the purpose of the Division of Coastal Management is to provide staff support to the Secretary of Environment and Natural Resources...in the administration of the Coastal Area Management Act of 1974 and North Carolina's participation in the Federal Coastal Zone Management Act of 1972." As such, the Division is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the North Carolina Coastal Management Program. Therefore, the PEA will assess the impacts of the Proposed Action on coastal resources within the context of the Coastal Area Management Act (CAMA) (North Carolina General Statute, Article 7, Chapter 113A, Sections 100-134.3).

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on North Carolina's coastal resources are anticipated. In accordance with CAMA policies on development and use of Estuarine and Ocean Systems, the Proposed Action "conserves the biological, economic and social values of coastal wetlands, estuarine waters and public trust areas" and "does not cause major or irreversible damage to valuable archeological or historic resources." Additionally, the Proposed Action, which provides enhanced port security, is consistent with CAMA policies in that it is a water-dependent use that "protects public rights of navigation and recreation in public trust areas."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in North Carolina coastal waters is consistent to the maximum extent practicable with the enforceable policies of the North Carolina Coastal Management Program.

In accordance with 15 CFR Section 930.41, the North Carolina Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Keby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Bob Bailey
Manager
Ocean and Coastal Program
Department of Land Conservation and Development
635 Capitol Street NE
Suite 150
Salem, OR 97301-2540

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Bailey:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Oregon Department of Land Conservation and Development (DLCD), Ocean and Coastal Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Oregon Revised Statute 196, Section 435, the DLCD is the "designated Coastal Management Agency for purposes of carrying out and responding to the Coastal Zone Management Act of 1972." As such, under the provisions of Oregon Administrative Code 660, Division 35, Section 20, "all consistency determinations, consistency certifications and proposals for federal assistance shall be sent to and reviewed by (DLCD) for consistency with the approved Oregon Coastal Management Program." The PEA will assess the impacts of the Proposed Action on coastal resources in accordance with the 19 Statewide Planning Goals that comprise the Oregon Coastal Management Program, particularly Goals 16-19, which specifically address coastal and ocean resources.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Oregon's ocean and coastal resources are anticipated. The Proposed Action, which serves to provide enhanced port security, is consistent with Goal 16 (Estuarine Resources) and 17 (Coastal Shorelands) in that it is a "water-dependent use that maintains the integrity of estuarine ecosystems and coastal waters." Additionally, it is consistent with Goal 19 (Ocean Resources) in that it "protects and encourages the beneficial uses of ocean resources, such as navigation...."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Oregon coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Oregon Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Oregon Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Sarah Cooksey
Program Administrator
Delaware Coastal Programs
Department of Natural Resources and Environmental Control
89 Kings Highway
Dover, DE 19901

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Ms. Cooksey:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102(2)(c)) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Delaware Department of Natural Resources and Environmental Control (DNREC), Delaware Coastal Programs with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kiloHertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorages, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Delaware's Coastal Zone Act (Delaware Code [Del.C.], Title 7, Chapter 70), DNREC is authorized to develop regulations regarding the development and use of Delaware's coastal zone. Under this authority, and pursuant to the Federal CZMA (16 U.S.C. §1452), DNREC is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the Delaware Coastal Management Program. These policies include the Coastal Zone Act, the Beach Preservation Act (7 Del.C. 68), the Wetlands Act (7 Del.C. 66) and the Underwater Lands Act (7 Del.C. 72). The PEA will assess the impacts of the Proposed Action on coastal resources within the context of these policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Delaware's coastal resources are anticipated. The Proposed Action is consistent with enforceable policies regarding wetland, beach and coastal waters management, and should present no foreseeable effects on these resources. Additionally, the Proposed Action, which provides enhanced port security, is a water-dependent use that "ensures adequate and continued public access" and "does not impair the public interest in the use of tidal or navigable waters." Furthermore, the Proposed Action does not meet the criteria of a Prohibited Use as defined in *Regulations Governing Delaware's Coastal Zone*, Section D and does not require a permit as defined in Section F.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Delaware coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Delaware Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Delaware Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>. Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Gregory DuCote
Coastal Management Division Administrator
Louisiana Coastal Resources Program
Department of Natural Resources
P.O. Box 44487
Baton Rouge, LA 70804

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. DuCote:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102/2[e]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(e)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,

Michael Mohn
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the Louisiana Department of Natural Resources, Louisiana Coastal Resource Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Louisiana's State and Local Coastal Resources Management Act (Louisiana Revised Statutes, Title 49, Section 214.32), "any governmental body undertaking, conducting, or supporting activities directly affecting the coastal zone shall ensure that such activities shall be consistent to the maximum extent practicable with the state program and any affected approved local program having geographical jurisdiction over the action." The PEA will assess the impacts of the Proposed Action on coastal resources in accordance with the policies enumerated in Louisiana Administrative Code (L.A.C.), Title 43, Chapter 7, Section 701.F, Guidelines Applicable to All Uses.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on Louisiana's coastal resources are anticipated. The Proposed Action, which serves to enhance public safety and port security, is consistent with the guidelines listed in 43 L.A.C. 701 in that it is a water-dependent activity serving regional, state and national interests, while avoiding adverse impacts to biological, cultural, historical, and archeological resources.

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in Louisiana coastal waters is consistent to the maximum extent practicable with the enforceable policies of the Louisiana Coastal Management Program.

In accordance with 15 CFR Section 930.41, the Louisiana Coastal Management Program has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The State's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Mr. Will Travis
Executive Director
San Francisco Bay
Conservation & Development Commission
50 California Street
Suite 2600
San Francisco, CA 94111

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Mr. Travis:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>. Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Commission's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION

This document provides the San Francisco Bay Conservation and Development Commission (BCDC) with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under McAtee-Petris Act, the BCDC is authorized to prepare an enforceable plan to protect the San Francisco Bay and its shoreline. Under this authority, and pursuant to the Federal Coastal Zone Management Act (16 United States Code [U.S.C.] §1452), BCDC is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of the San Francisco Bay Plan. The PEA will assess the impacts of the Proposed Action on coastal resources within the context of these policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 U.S.C. §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

At this time, no significant impacts on San Francisco Bay's coastal resources are anticipated. The Proposed Action is consistent with enforceable policies regarding water quality, surface area, and volume; wetlands, tidal marshes, and tidal flatlands; appearance and scenic views; shell deposits; freshwater inflow. The Proposed Action should present no foreseeable effects on these resources. Additionally, the Proposed Action, which provides enhanced port security, is a water-dependent use that "ensures adequate and continued public access" and "does not impair the public interest in the use of navigable waters." Furthermore, the Proposed Action is consistent with Objectives 1, as defined in Part 1 of the San Francisco Bay Plan to "Protect the Bay as a great natural resource for the benefit of present and future generations."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in San Francisco Bay coastal waters is consistent to the maximum extent practicable with the enforceable policies of the San Francisco Bay Plan.

In accordance with 15 CFR Section 930.41, the BCDC has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commission's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).



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United States Coast Guard

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Dr. John B. Joyner
Director
Coastal Resources Management Office
Office of the Governor
P.O. Box 10007
Second Floor Morgan Building
San Jose, Saipan, MP 96950

DEC 14 2010

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

Dear Dr. Joyner:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

Enclosed for your review is the USCG's Consistency Determination under the Coastal Zone Management Act (CZMA), Section 307(c)(1) and Title 15 CFR Part 930, subpart C, for the Proposed Action (enclosed). Pursuant to 15 CFR Section 930.41, you have 60 days from the receipt of this letter and accompanying information in which to concur with or object to this Consistency Determination, or to request an extension. The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. The response should be sent to the same web address and Docket Number as above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kobby Kelley (CG-47), Program Manager, USCG NEPA & Historic Resources, by telephone 202-475-5690, or by email Kobby.Kelley@uscg.mil regarding NEPA.

Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard
Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the Commonwealth of Northern Mariana Islands (CNMI), Office of the Governor, Coastal Resources Management Office with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(e)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems.

The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Under Public Law 3-47, the Office of Coastal Resources Management is authorized to prepare an enforceable plan promote the conservation and wise development of coastal resources of the CNMI. Under this authority, and pursuant to the Federal CZMA (16 United States Code [U.S.C.] §1452), the Office of Coastal Resources Management is responsible for ensuring that Federal activities in the coastal zone are consistent to the maximum extent possible with the enforceable policies of Title 15. The PEA will assess the impacts of the Proposed Action on coastal resources within the context of these policies.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 U.S.C. §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

At this time, no significant impacts on CNMI coastal resources are anticipated. The Proposed Action does not require construction and would have no direct effects of areas of particular concern including shoreline, lagoon and reef, wetlands and mangrove, port and industrial areas, and coastal hazards areas. The Proposed Action is consistent with the goals of CNMI Public Law 3-47, the standards and policies in Title 15, Chapter 10, and federal air and water quality standards. Additionally, the Proposed Action, which provides enhanced port security, is a water-dependent use that "ensures adequate and continued public access" and "does not impair the public interest in the use of navigable waters."

Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in CNMI coastal waters is consistent to the maximum extent practicable with the enforceable policies of the CNMI Coastal Resources Management program.

In accordance with 15 CFR Section 930.41, the Office of Coastal Resources Management has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Commonwealth's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kobby Kelley regarding NEPA (see contact information on cover letter).



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DEC 14 2010

Ms. Lupe Aumavae-Tauanu'u
Program Manager
Coastal Management Program
American Samoa Department of Commerce
P.O. Box 6351
Pago Pago, AS 96799

Subject: Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency and Ultra High Frequency SONAR Technology

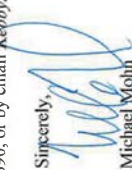
Dear Ms. Aumavae-Tauanu'u:

The U.S. Coast Guard (USCG) is announcing the availability of a Draft *Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Active Sound Navigation and Ranging (SONAR) Technology*. The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]) and its implementing regulations (Title 40 Code of Federal Regulations [CFR], Part 1500) and USCG policy (Commandant's Instruction M16475.1D, *Procedures for Considering Environmental Impacts*). The Draft PEA, Draft FONSI, and Federal Register Notice of Availability can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166.

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Sincerely,


Michael Mohr
CAPT, U.S. Coast Guard

Chief, Office of Counter-Terrorism and Defense Operations

Enclosures: Consistency Determination

**ENCLOSURE 1:
U.S. COAST GUARD COASTAL ZONE MANAGEMENT ACT
CONSISTENCY DETERMINATION**

This document provides the American Samoa Department of Commerce, Coastal Management Program with the U.S. Coast Guard's (USCG) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C, for the nationwide use of active sound navigation and ranging (SONAR) technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms.

Necessary Data and Information:

1. The USCG needs to broaden its capability to locate, image, and classify submerged/underwater Targets of Interest (TOIs) to safely and effectively accomplish mission activities. The USCG needs to detect targets in ranges of less than 1 or 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters; day or night regardless of visibility; and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various high frequency (HF) and ultra high frequency (UHF) active SONAR technology systems would provide the needed capability. For the purposes of this document, HF is defined as 50 to 999 kHz and UHF is defined as 1,000 kHz and higher. The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide.

TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that become submerged as a result of natural or man-made disasters and have the potential to interrupt maritime transportation, trade and commerce, recreational boating, or other maritime activities. The use of HF and UHF active SONAR technology would provide USCG operation commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as September 11, 2001 and the Deepwater Horizon oil spill; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructures, and special security events; and maritime environmental response and search-and-rescue activities.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator). The scope of the Programmatic Environmental Assessment (PEA) focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, Great Lakes, Hawaii, Alaska, the territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles (NM) offshore and most areas

shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports. Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

No significant impacts are expected as a result of the Proposed Action. The addition of HF and UHF SONAR would result in negligible, direct and indirect, beneficial and adverse effects on ambient noise levels, biological resources, air quality, water quality and cultural resources. Overall, the only marine species that are expected to be able to hear SONAR under the Proposed Action are toothed whales, pinnipeds in water, and some clupeid fish. Level A and B harassment of marine mammals could occur without mitigation measures. These effects are expected to be avoided with the development and implementation of mitigation measures. ESA-listed species are not likely to be adversely affected by the Proposed Action. No effects on Essential Fish Habitat are expected as a result of the Proposed Action. The Proposed Action would result in negligible, direct and indirect beneficial effects on public safety.

2. Pursuant to the American Samoa Coastal Management Act of 1990, ASCA § 24.0506, the American Samoa Department of Commerce, Coastal Resources Management Office is designated as the lead agency for implementing and administering the Federal Coastal Zone Management Program for American Samoa. The PEA will assess the impacts of the Proposed Action on coastal resources of American Samoa.

3. The USCG has initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to explore potential impacts to species protected under the Endangered Species Act (16 United States Code [U.S.C.] §§1531-1544) and the Marine Mammal Protection Act (16 U.S.C. §§1361-1421). If necessary, all permits required will be obtained.

However, at this time, no significant impacts on American Samoa's coastal resources are anticipated. No construction is associated with the Proposed Action, and there would be no direct effects on land-use. The Proposed Action is a water-dependent program and in accordance with Title 26 Chapter 2 of the American Samoa Coastal Management Program Administrative Rule 26.0208 would "not adversely impact coastal resources, and thus shall not require a land-use permit." Based upon the preceding information, data, and analysis, the USCG finds that the nationwide use of active SONAR technologies in American Samoa coastal waters is consistent to the maximum extent practicable with the Administrative Rules of the American Samoa Coastal Management Program and Land Management Code.

In accordance with 15 CFR Section 930.41, the Coastal Resources Management Office has 60 days from the receipt of this letter and accompanying information in which to concur with or object to this USCG's Consistency Determination, or to request an extension under 15 CFR Section 930.41(b). The Territory's concurrence will be presumed if a response is not received by the USCG on the 60th day from receipt of this Determination. You may request a copy of the Draft PEA or submit your response through the Federal Docket at <http://www.regulations.gov>, Docket Number USCG-2009-0166. Questions can be directed to Mr. Kenneth McDaniel (Counterterrorism) regarding the Proposed Action and Ms. Kebby Kelley regarding NEPA (see contact information on cover letter).

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APPENDIX B

**INTERESTED PARTY LETTER, MAILING LIST,
NOTICE OF AVAILABILITY, AND PUBLIC RESPONSES**



The United States Coast Guard (USCG) announces the availability of the Draft Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) SONAR Technology and Draft Finding of No Significant Impact (FONSI).

The Draft PEA and Draft FONSI have been published and can be downloaded at <http://www.regulations.gov>, Docket Number USCG-2009-0166. The Federal Register Notice of Availability for these documents can also be downloaded. USCG invites public comment on the Draft PEA. Comments should be sent to the Federal Register at the web address and Docket Number above.

Please contact Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), by telephone 202-372-2119, or by email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action or Ms. Kebby Kelley (CG-47), Program Manager, USCG National Environmental Policy Act (NEPA) & Historic Resources, by telephone 202-475-5690, or by email Kebby.Kelley@uscg.mil regarding NEPA or to request a paper copy.

USCG SONAR Programmatic EA
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Conshohocken, PA 19428

Name_First	Name_Last	Job_Title	Organization	Department
Joe	Bagnoll	Union for Economy and Infrastructure Manager		
Anne	McMahon	Acting Federal Program Manager		California Coastal Commission
Don	Klima	Director	Advisory Council on Historic Preservation	Office of Planning and Review
Ole	Olsen	President	Afognak Native Corporation	Alaska Native Village Corporation
Nancy	Nelson	President	Afognak Native Village	
Shelley	Yachmeneff	President	Aadaagux Tribe of King Cove	
Richard	Milovich	Chairperson	Aqua Caliente Tribal Council	Aqua Caliente Band of Cahuilla Indians
Ken	Johns	President	Altma, Inc.	
Ralph	Eliska	President	Alchik-kgayyak, Inc.	
Charles K.	James	Chairperson	Alachak Limited	
Daniel	George	Chairperson	Alachak Native Community (IRA)	
Moses	Owen	Chief	Alaik Native Community (IRA)	
Darryle	Belley	President	Alutan Corporation	
Jeanie	Weister	President	Alutan Native Village	Alutan Traditional Council
		Director	Alabama Dept of Environmental Management	
Frank	White	Executive Director & SHPO	Alabama Historical Commission	
Debbie	Thomas	NAGPRA Contact	Alabama-Coushatta Tribe of Texas	
Ronnie	Thomas	Chairperson	Alabama-Coushatta Tribes of Texas	
Paul M.	Phillip Sr.	Chairperson	Alakanuk Native Corporation	
Judith	Bittrier	State Historic Preservation Officer	Alaska Department of Natural Resources	Office of History and Archaeology
Larry	Hartig	Commissioner	Alaska Dept of Environmental Conservation	
Sam	Harding	Chief	Alaska Village	Alutka Tribal Office
Joseph	Chythook	President	Aleknagik Natives Ltd.	
Michael	Zacharof	President	Aleut Community of St. Paul Island	
Carol L.	Smith	NAGPRA Contact	Aleut Corporation	
Vincent	Tutakoff Sr.	President	Aleut Corporation	
Stephanie Thiele	Thompson	President	Alexander Creek, Inc.	
Sven	Paulsen Sr.	President	Algaicq Native Village (St. Mary's)	Algaicq Tribal Government
Herbie	Moses	Chief	Alalaklet Village	
Phillip	Del Rosa	Chairperson	Alturas Rancheria	
Gail	Alstrom	President	Andreafski Tribal Council	Yupit of Andreafski
Ed	Gamble	President	Argoon Community Association (IRA)	
Myrtle	Olsen	President	Arton Larsen, Inc.	
Carl	Jenue	Chief	Arvik Village	Arvik Tribal Council
Nathan		NAGPRA Contact	Apache Tribe of Oklahoma	Cultural Heritage Committee
Jacob	Tseele	Chairperson	Apache Tribe of Oklahoma	Business Committee
Aaron	Trint	President	Arctic Slope Regional Corporation	
Tracy	Copeland	First Chief	Arctic Village	Arctic Village Council
William	Phillips	Manager	Arkansas State Clearinghouse	Intergovern. Services, Finance & Admin
Peter	Samuels	Chief	Aroostook Band of Micmac Indians	
James C.	Landford	Chairperson	Arviq Incorporated	
James	Kaganak	First Chief	Asa cansamut Tribe	
Mark	Shigaroff	Chairperson	Askinuk Corporation	
James	Nicholai	President	Ata Native Village (IRA)	
Moses A.	Paula Sr.	Chairperson	Armatluak Limited	
James	Allen Sr.	President	Armatluak Village	Armatluak Traditional Council
Candace	Itta	President	Atqasuk Corporation	
Michael D.	Peterson	President	Atqasuk Village	
Lawrence	Prokopieff	NAGPRA Contact	Atqasuk Village	Arctic Slope Native Assoc., Limited
		President	Atam Corporation	

Name_First	Name_Last	Job_Title	Organization	Department
Mary Ann	Martin	Chairperson	Augustine Band of Mission Indians	
Nick	Peterson Sr.	President	Ayakulik, Inc.	
Felix P.	Hess	Chairperson	Azaborok Incorporated	
Linda	Evens	President	Baan-O-Yeel Kon Corporation	
Eugene	Bigboy Sr.	Chairperson	Bad River Band of Lake Superior Chippewa	
Rhonda	Welch-Scalco	Spokeperson	Barona Band of Mission Indians	Captain Grande Band of Diegueno Mission
Jeffrey D.	Parker	President	Bay Mills Indian Community	
Nick	Shangin	President	Bay View Inc.	
Leonard	Bowman	Chairperson	Bear River Band of Rehnaville Rancheria	
Selma	Petruska	Chief	Beaver Village	Beaver Village Council
Glaude	Kuzakin	President	Belkofski Corporation	
		Entity Designated to deal with NAGPRA Issues	Bering Straits Foundation	Native Village of White Mountain
Tim	Towerak	President	Bering Straits Native Corporation	
James	Edwards	Chairperson	Berry Creek Rancheria	
Ruth	Richardson	Chairperson	Bethel Native Corporation	Tyne Maidu Tribe
Virgil	Moorehead	Chairperson	Big Lagoon Rancheria	
Jessica	Baoch	Chairperson	Big Pine Paiute Tribe of the Owens Valley	
Connie	Levis	Chairperson	Big Sandy Rancheria	
Anthony	Jack	Chairperson	Big Valley Rancheria	
Winston	James	First Chief	Birch Creek Tribe	
Claudia	Brundin	Chairperson	Blue Lake Rancheria	
Gordon	Adams Jr.	NAGPRA Contact	Bois Forte Band of Chippewa	Bois Forte Reservation Tribal Council
Kerin	Leecy	Chairperson	Bois Forte Band of Chippewa	
Raymond	Villebrun	NAGPRA Contact	Bois Forte Band of Chippewa	
Rosemary	Berens	NAGPRA Contact	Bois Forte Heritage Center & Cultural Museum	
William	Ladady	NAGPRA Contact	Bois Forte Heritage Center & Cultural Museum	
David	Morrison	NAGPRA Contact	Bois Forte Tribal Council	
Kevin	Strong	NAGPRA Contact	Bois Forte Tribal Council	
Arthur	Tooktoo	President	Brevig Mission Native Corporation	
Charlotte	Baker	Chairperson	Bridgeport Indian Colony	
LouAnn	Backford	NAGPRA Contact	Bristol Bay Native Corporation	
Halmar	Olson	President	Bristol Bay Native Corporation	
Tobey	Baker	NEPA State Single Point of Contact	Budget Planning and Policy Office	
Rhonda L.	Morningstar	Spokeperson	Buena Vista Rancheria	
Bill	McDonald	Regional Director	Bureau of Reclamation	Pacific Northwest Regional Office
Linda	Reed-Jerofke	NAGPRA Contact	Burns Paiute Tribe	
Barbara	Sam	Chairperson	Burns Paiute Tribe	
Judy	Stapp	NAGPRA Contact	Cabazon Band of Mission Indians	
John A.	James	Chairperson	Cabazon Band of Mission Indians	Cabazon Tribal Business Committee
Wayne	Mitchum	Chairperson	Cachil DeHe Band of Wintun Indians	Colusa Indian Community
Bobby	Gonzalez	NAGPRA Contact	Caddo Nation	
La Rue	Parker	Chairperson	Caddo Nation of Oklahoma	
Cristy	Taylor	Chairperson	Cahto Indian Tribe of the Laytonville	Cahto Tribal Executive Committee
Jerome	Salgado Sr.	Chairperson	Cahuilla Band of Mission Indians	
Linda	Adams	Secretary for Environmental Protection	California Environmental Protection Agency	

Name_First	Name_Last	Job_Title	Organization	Department
Millford Wayne	Donaldson	State Historic Preservation Officer	California Office of Historic Preservation	Department of Parks and Recreation
Terry	Roberts	Chief	California State Clearinghouse	Governor's Office of Planning and Research
Silvia	Burley	Chairperson	California Valley Miwok Tribe	
Matthew	Nicoli	President	Calista Corporation	
Tia	Brown	NAGPRA Contact	Campo Band of Mission Indians	Governor's Office of Planning and Research
Brian	Gomolly	NAGPRA Contact	Campo Band of Mission Indians	
Nancy	Quero	NAGPRA Contact	Campo Band of Mission Indians	
Dobres	Quero	NAGPRA Contact	Campo Band of Mission Indians	
Harry Paul	Quero Jr.	NAGPRA Contact	Campo Band of Mission Indians	
Maria	Dyche	NAGPRA Contact	Campo Band of Mission Indians	
Jackie	Leffia	NAGPRA Contact	Campo Band of Mission Indians	
Linda	Porchetti	NAGPRA Contact	Campo Band of Mission Indians	
Junico	Pinto	NAGPRA Contact	Campo Band of Mission Indians	
Frank	Sulzar	NAGPRA Contact	Campo Band of Mission Indians	
Kern	Shupp	NAGPRA Contact	Campo Band of Mission Indians	
		NAGPRA Contact	Cape Fox Corporation	
Marilyn	Blair	President	Cape Fox Corporation	
Carl-Axel	Soderberg	Director	Caribbean Environmental Protection Division	
Gilbert	Blue	Chairperson	Catawba Indian Tribe	
Clint	Half Town	Chief	Cayuga Nation of New York	
Virginia	Lash	Chairperson	Cedarville Rancheria of the Northern	Palute - Community Council
Edward K.	Thomas	President	Central Council of Tlingit & Haida	Indian Tribes of Alaska
Reba	Fuller	NAGPRA Contact	Central Sierra Me-Wuk	Cultural and Historic Preservation Committee
Woody	Salmon	President	Chaikytisk Native Corporation	Department of Natural Resources
Paul T.	Edwin	First Chief	Chaikytisk Village	
Dora	Johnson	President	Chalka Corporation	
Larry	Sinon	President	Cheesh-Na Tribe	
Peter	Matthew Sr.	Chairperson	Chefarrimute, Incorporated	
Lynn	Fraser-Petach	NAGPRA Contact	Chemehuevi Indian Tribe	
Charles	Wood	Chairperson	Chemehuevi Indian Tribe	
Pete	Kompkoff	President	Chenega Native Village IIA Council	
		Chairperson	Cher-Ae Heights Indian Community	
Garth	Sundberg	Director	Chesapeake Bay and Coastal Programs	
Matthew	Heming	Chairperson	Chevak Company Corporation	
David	Ufoan	Chairperson	Chevak Native Village	
Peter	Tuluk	Chairperson	Chickaloon Native Village	
Jennifer	Harrison	Alternate NAGPRA contact	Chickaloon Village Traditional Council	
Gary	Harrison	Chairperson	Chickaloon Native Village	
Jennifer	Harrison	Alternate NAGPRA contact	Chickaloon Village Traditional Council	
Gary	Harrison	President	Chickaloon-Moose Creek Native Association Inc.	
Lloyd	Mathieson	Chairperson	Chicken Ranch Rancheria of Me-Wuk	
Douglas	Pederson	President	Chignik Lagoon Native Corporation	Chignik Lake Traditional Village Council
Virginia	Aleck	President	Chignik Lake Village	
John	Land	President	Chignik Lake Village	
Kimberly A.	Strong	President	Chikot Indian Village (Klukwan)	
Bill	Thomas	President	Chilkoot Indian Association (IRA)	
Eleanor R.	Anaktolik	President	Chinik Eskimo Community (Golovin)	
Sam	Anthony	Chairperson	Chinuruk, Incorporated	
LeBlanc Jr.	Alton	Chairperson	Chitimacha Tribe Louisiana	
Marlene	Johnson	Chairperson	Chitina Native Corporation	

Name_First	Name_Last	Job_Title	Organization	Department
Harry	Billum	President	China Traditional Indian Village	Chugach Alaska Corporation
Victor	Sitof	President	Chogjung Ltd.	
John F.C.	Johnson	NAGPRA Contact	Chugach Alaska Corporation	
Barney	Uhart	Chairperson	Chugach Alaska Corporation	
Plus A.	Hoover	President	Chulconawick Native Village	
Larry	Nathaniel	First Chief	Circle Native Community (IRA)	
		Entry Designated to deal with NAGPRA issues	CIRI Foundation	
Lydia	Hays	NAGPRA Contact	CIRI Foundation	
John A.	Barrett	NAGPRA Contact	Citizen Potawatomi Nation	
Lisa	Kraft	NAGPRA Contact	Citizen Potawatomi Nation	
Patricia	Hermosillo	Chairperson	Cloverdale Rancheria	American Samoa Department of Commerce
Lupe	Aumavae-Taunu'u	Program Manager	Coastal Management Program	
Ruth	Ehinger	Program Manager	Coastal Management Program	
Cathie	Cunningham Ballard	Director	Coastal Program Unit	
Scott	Brown	Program Chief	Coastal Programs Office	
John	Joyner	Director	Coastal Resources Management Office	
Jody	Henneke	Deputy Commissioner	Coastal Resources Program	
Ernesto	Diaz	Program Manager	Coastal Zone Management Program	
Susan	Shipman	Director	Coastal Zone Management Program	
J.	Allan	Chairperson	Coeur d'Alene Indian Tribe	Department of Natural Resources
Travis	Coleman	Chairperson	Cold Springs Rancheria	
Betty	Cornelius	NAGPRA Contact	Colorado River Indian Tribes	
Daniel	Eddy Jr.	Chairperson	Colorado River Indian Tribes	
Wallace	Coffey	Chairperson	Comanche Nation	
Ron	Brinard	Chairperson	Confederated Tribes of Coos	
Robert	Kentta	NAGPRA Contact	Confederated Tribes of Siletz Indians	
Debres	Pigley	Chairperson	Confederated Tribes of Siletz Indians	
Cheryl	Kennedy	Chairperson	Confederated Tribes of the Grand Ronde	
Elaine	Suterliet	NAGPRA Contact	Confederated Tribes, Chehalis Res.	Community of Oregon
David	Burnett	Chairperson	Confederated Tribes, Chehalis Reservation	
Harvey	Moses	Chairperson	Confederated Tribes, Colville Reservation	
Harvey	Moses	Chairperson	Confederated Tribes, Colville Reservation	
Camille	Pleasants	NAGPRA Contact	Confederated Tribes, Colville Reservation	
Antone	Minthorn	Chairperson	Confederated Tribes, Umatilla Reservation	
Ron	Suppah	Chairperson	Confederated Tribes, Warm Springs Reservation	
Karen	Senich	State Historic Preservation Officer	Connecticut Commission on Culture and Tourism	
Gina	McCarthy	Commissioner	Connecticut Dept of Environmental Protection	
Carl	Marrs	President	Cook Inlet Region, Inc.	Wintun Indians of California
Edward L.	Metcalf	Chairperson	Coquille Indian Tribe	
Sharon	Parrish	NAGPRA Contact	Coquille Indian Tribe	
Donald B.	Ivy	NAGPRA Contact	Coquille Tribe of Oregon	
Elaine	Patterson	Chairperson	Cortina Indian Rancheria	
Barbara	Gray	President	Council Native Corporation	

Name_First	Name_Last	Job_Title	Organization	Department
Horst	Grezniel	Associate Director	Council on Environmental Quality	NEPA oversight
Kevin	Sickey	Chairperson	Coushatta Indian Tribe	
Sue	Schaffer	Chairperson	Cow Creek Band of Umpqua Indians of Oregon	
John	Barnett	Chairperson	Cowlitz Indian Tribe	
John	Felt Jr.	Chairperson	Coyote Valley Band of Pomo Indians	Coyote Valley Reservation
A. Millie	Stevens	President	Craig Community Association (IRA)	
Johnny	Johns Jr.	President	Crooked Creek Native Village	Crooked Creek Traditional Council
Thomas	Pillben	Chief	Curving Tribal Council	
Albert	Carroll Jr.	President	Danahit Hanial Corporation	
David	Maloney	State Historic Preservation Officer	DC Historic Preservation Office	
John A.	Hughes	Secretary	DE Dept of Natural Resources & Env Control	
Timothy A.	Slavin	State Historic Preservation Officer	DE Div of Historical & Cultural Affairs	
Joe	Kennedy	Chairperson	Death Valley Timb-Sha Shoshone	Band of California
Sarah	Cooksey	Program Administrator	Delaware Coastal Programs	Dept. of Natural Resources & Env. Control
Robert L.	Scaglietti	Deputy Budget Director	Delaware Executive Budget Office	
Tamara	Francis	NAGPRA Contact	Delaware Nation	
Edgar L.	Stevens	President	Delaware Nation	
Linda	Podaw	NAGPRA Contact	Delaware Nation	
Frank H.	Turner	President	Deloycheet, Inc.	
Jasmin	Raffington	Coordinator, Florida State Clearinghouse	Department of Community Affairs	
Ian	Reisma	Director	Department of Environmental Management	
Joseph	Sieber		Dept of Env Protection Policy & Press Office	
Donald	Honea Sr.	President	Dinega Corporation	
AI	Stevens	President	Dineya Corporation	
Michael	Scoobok, Sr	President	Diomedie Native Corporation	
Randy	Bates	Director	Division of Coastal & Ocean Management	Department of Natural Resources
Stephen	Rynas	Coordinator	Division of Coastal Management	Department of Env. and Natural Resources
Janice	Hodge	Director	Division of Coastal Zone Management	Department of Planning and Natural Resources
Tracy C.	Smith	President	Dot Lake Native Corporation	
William J.	Miller	President	Dot Lake Village	
Clarence	Laiti	President	Douglas Indian Association (IRA)	
Orrie	Williams	President	Doyon, Ltd.	
Harvey Elizabe	Hopkins	Chairperson	Dry Creek Rancheria of Pomo Indians	
Michell	Hicks	Principal Chief	Eastern Band of Cherokee Indians of NC	
Kathy	McCoy	NAGPRA Contact	Eastern Band of Cherokee Indians of NC	
Russell	Townsend	NAGPRA Contact	Eastern Band of Cherokee Indians of NC	
Charles D.	Enyart	Chief	Eastern Shawnee Tribe of Oklahoma	
Charles S.	Abilana	First Chief	Egegik Village	
Dorothy	Cook	President	Ekutna Native Village	
Stephan	Lee	NAGPRA Contact	Ekutna Native Village	
Michael	Curry	Vice-President	Ekutna, Incorporated	
Luki	Akelook	President	Elwok Village	
Raymond	Brown Sr.	Chairperson	Elem Indian Colony of Pomo Indians	

Name_First	Name_Last	Job_Title	Organization	Department
Robert A.	Keith	President	Elim IRA Council	
Luther	Nagaruk	President	Elim Native Corporation	
Dale A.	Miller	Chairperson	Elk Valley Rancheria	
Robert K.	Moore	Chairperson	Enmonak Corporation	
Stan	Jimmy	President	Enmonak Village	
John	Krasnikoff	Chairperson	English Bay Corporation	
Glenda	Nelson	Chairperson	Enterprise Rancheria of Maidu Indians	
Barbara	Ritchie	NEPA Coordinator	Environmental Coordination Section	Washington Department of Ecology
Rhoda	Musser	Chief	Evensville Village	
Shirley	Lee	President	Evensville, Inc.	
Harlan	Pinto Sr.	Chairperson	Ewiapaayp Band of Kumeyaay Indians	
Nancy	Barnes	President	Eyak Corporation	
Alvin	Moyle	Chairperson	Fallon Paiute Shoshone Band of Indians	
Greg	Sarris	Chairperson	Federated Indians of Graton	Tribal Business Council
Mark	Allen	President	Flairdout Santee Sioux Band of Indians	Executive Committee
Danny	Clayton	Coastal Program Administrator	Florida Coastal Management Program	Department of Environmental Protection
Michael W.	Sole	Secretary	Florida Dept of Environmental Protection	
Frederick	Gaskle	State Historic Preservation Officer	Florida Division of Historical Resources	Department of State
Peter	Defoe	Chairperson	Fond du Lac Reservation Business Comm.	Fond du Lac Center
Harold G.	Frank	Chairperson	Forest County Potawatomi Community	
Clarice M.	Worle	NAGPRA Contact	Forest County Potawatomi Community	
Lawrence	Harlan	Chairperson	Fort Bidwell Reservation	
Carl A.	Dahlberg	Chairperson	Fort Independence Indian Community	of Paiute Indian
Karen	Crutcher	Chairperson	Fort McDermitt Paiute and Shoshone Tribes	Fort McDermitt Tribal Council
Karen	Crutcher	Chairperson	Fort McDermitt Tribal Council	
Raphael	Bear	President	Fort McDowell Yavapai Nation	
Elda	Bulter	NAGPRA Contact	Fort Mojave Indian Tribe	
Nora	McDowell	Chairperson	Fort Mojave Tribal Council	
Leland Michael	Darrow	NAGPRA Contact	Fort Sill Apache Tribe	
Jeff	Houser	Chairperson	Fort Sill Apache Tribe of Oklahoma	
Adial R.	Alexander	First Chief	Fort Yukon Native Village (IRA)	
Peter	Captain Sr.	First Chief	Galena Village (aka Loudon Village)	
Edmund	Apasingok	President	Gambell IRA Council	
Max	Hundorf	President	Gana-A Yoo, Ltd.	
Glen W.	Federicks	President	Georgetown Native Village	
Carol	Couch	Director	Georgia Department of Natural Resources	Environmental Protection Division
Ray	Luce	State Historic Preservation Officer	Georgia Department of Natural Resources	Historic Preservation Division
Jim	Sommerville	Acting Branch Chief, Prog Coordination Branch	Georgia Department of Natural Resources	
Harold T.	Larson	President	Gold Creek Suetna	
Gary	Droubay	President	Goldbelt, Incorporated	
Nina	Pakotak	President	Golovin Native Corporation	
Evan S.	Evan	Chairperson	Goodnews Bay Native Village	
Norman	DesChamps	Chairperson	Grand Portage Reservation Business Committee	
Jack C.	Chamber Jr.	NAGPRA Contact	Grand Traverse Band	Ottawa & Chippewa Indians
Robert	Kewagotikum	Chairperson	Grand Traverse Band	Ottawa & Chippewa Indians
Gabriel	Nicholi	President	Graying Organized Village (aka Heilkechu)	

Name_First	Name_Last	Job_Title	Organization	Department
Lorie	James	Chairperson	Greenville Rancheria of Maidu Indians	
Kenneth	Swearinger	Chairperson	Grindstone Indian Rancheria	of Wintun-Walaki Indians
Evangeline	Lujan	Administrator	Gum Coastal Management Program	Bureau of Statistics and Plans
Lorilee T.	Crosstomo	Administrator	Gum Environmental Protection Agency	
Merlene	Sanchez	Chairperson	Guidville Rancheria	
Roy S.	Ewan	President	Gulkana Village	
Nancy	James	President	Gwitchyaa Zhe Corporation	
Carmela	Icay-Johnson	Interim Chairperson	Habematolel Pomo of Upper Lake	
Sam	Mooney	President	Haida Corporation	
George A. E.	Williams	President	Hamilton Nakae Village	
Kenneth	Meshiguard	Chairperson	Hannahville Indian Community Council	
Doug	Tom	Program Manager	Hawaii Coastal Zone Management Program	Dept of Business, Economic Dvpt, & Tourism
Linda	Thielen	Chairperson	Hawaii Dept of Land and Natural Resources	
Nalei	Kahalelau	Chairperson	Hawaii Island Burial Council	
Patricia	Tummons	Vice Chair	Hawaii Office of Env Quality Control	
Ben	Saylor	President	Healy Lake Village	
Henry	Deason	President	Hee-Yea-Ungde Corporation	
George R.	Lewis	President	Ho-Chunk Nation	
Mary K.	Leika	Chairperson	Hoh Tribal Business Council	
Troy	Turner	First Chief	Holy Cross Village	
Frank	Wright Jr.	President	Hoonah Indian Association (IRA)	
Clifford Lyle	Marshall	Chairperson	Hoopa Valley Tribal Council	
Edger	Hoelsher	President	Hooper Bay Native Village	
Wanda	Balderama	Chairperson	Hopland Band of Pomo Indians	
Brenda	Commander	Chief	Houlton Band of Maliseet Indians	
Sharri	Verno	NAGPRA Contact	Houlton Band of Maliseet Indians	
Wimer	Bertus	First Chief	Hughes Village	Hughes Village Council
Kunani	Nhipali	President	Hui Malama I Na Kupuna O Hawai'i Nei	
Albert	Dick	President	Huna Totem Corporation	
Laura	Spurr	Chairperson	Huron Potawatomi, Inc.	
William	Derendoff	First Chief	Huslia Village Council	
Toni	Btonti	President	Hydaburg Cooperative Association (IRA)	
Dalia	Andrew	President	Igiugig Native Corporation	
Lydia	Olympic	President	Igiugig Village	
Myrtle	Anelon	President	Iliamna Natives Limited	
Harvey	Anelon	President	Iliamna Village	
Douglas P.	Scott	Director	Illinois Environmental Protection Agency	
William L.	Wheeler	State Historic Preservation Officer	Illinois Historic Preservation Agency	
Rebecca	Osuna	Chairperson	Inaja Band of Diegueño Mission Indians	
Dustin	Stohler	Deputy Commissioner of Legal Affairs	Indiana Dept of Environmental Mgmt	Indiana Government Center North
Robert	Carter, Jr	Director	Indiana Dept of Natural Resources	Indiana Government Center South
Ken	Chase	President	Ingalk, Inc.	
Arnold	Brower Jr.	President	Inupiat Community of Arctic Slope (IRA)	
George W.	Garvin	NAGPRA Contact	Iowa Tribe of Kansas & Nebraska	

Name_First	Name_Last	Job_Title	Organization	Department
Leon	Campbell	Chairperson	Iowa Tribe of Kansas and Nebraska	
Emily Berndtette	Huber	Chairperson	Iowa Tribe of Oklahoma	
Erin C.	Tipton	NAGPRA Contact	Iowa Tribe of Oklahoma	
Steven	White	President	Idjilouag Company	
Olga	Changsak	Suite 101	Iqumiut Traditional Council	
Tom	Hoblet	Chairperson	Isonoski Corporation	
Edgar	Shanigan	President	Jennoff Bay Village Council	
Margaret	Dalton	Chairperson	Jackson Rancheria of Me-Wuk Indians	
William Ron	Allen	Chairperson	Jamestown S'Kallam Tribe	
Leon	Acabedo	Chairperson	Jamil Indian Village	
Jesse	Pinto Sr.	NAGPRA Contact	Jamil Indian Village	
Christine	Norris	Principal Chief	Jena Band of Choctaw Indians	
Levi	Peata	President	Jicarilla Apache Nation	
Luba	Eluka	President	Kaguyak Village	
Corrien	Bradley	Chairperson	Kahala Paiute Tribal Council	
Sam	Jackson Jr.	President	Kake Tribal Corporation	
Fenton	Restford	President	Kaktovik Inupiat Corporation	
Isaac K.	Acotchook	President	Kaktovik Native Village	
Kathleen	Duncan	NAGPRA Contact	Kaispel Indian Community	
Glen	Nemina	Chairperson	Kaispel Indian Community	
Fred	Alexie Sr.	First Chief	Kaitag Tribal Council	
Sadie	Spargur	President	Kenata Native Village (IRA)	
Alicia L.	Reft	President	Kerlux Native Village (IRA)	
Arch	Super	Chairperson	Kerlux Tribe of California	
Severino	Gomes	Chairperson	Kashia Band of Pomo Indians	
Levi	Hooper	Chairperson	Kasigluk Incorporated	
Levi	Hooper	President	Kasigluk Traditional Elders Council	
LaFrance	Kapake-Aboleda	Chairperson	Kauai/Niihau Island Burial Council	
Louis	Thompson	President	Kavlico, Inc.	
Thomas	Strausman	President	Kenai Native Association	
Rosalee	Tepp	Chairperson	Kenaitze Indian Tribe, IRA	
Samuel	Bergeson	President	Ketchikan Indian Corporation (IRA)	
Summer Sky	Cohen	NAGPRA Contact	Keweenaw Bay Indian Community	Office of Planning and Development
Summer Sky	Cohen	NAGPRA Contact	Keweenaw Bay Indian Community	Office of Planning and Development
Susan J.	LaFrenier	President	Keweenaw Bay Indian Community	
Juan	Garza Jr.	Chairperson	Kickapoo Traditional Tribe of Texas	
Russell	Bradley	Chairperson	Kickapoo Tribe of Kansas	
Tony	Salazar	Chairperson	Kickapoo Tribe of Oklahoma	
Donald	Gallahorn	President	Kikikagruk Inupiat Corporation	
Don	McCallum	President	King Cove Corporation	
Gabriel	Muktoyuk Sr.	Chief	King Island Native Community	
Teddy	Majet	President	King Island Native Corporation	
Ralph	Angean Sr.	President	King Salmon Tribe	
Sherman	Chaddaveone	NAGPRA Contact	Kiowa Tribe of Oklahoma	Cultural Resource Management
Billy E.	Horse	Chairperson	Kiowa Tribe of Oklahoma	Business Committee
Dewey	Tonneskoy Sr.	NAGPRA Contact	Kiowa Tribe of Oklahoma	Cultural Resource Management
Jerry R.	Norton Sr.	President	Kiowa Native Village (IRA)	
Allen	Foreman	Chairperson	Klamath Tribes	
Gerald	Skelton Jr.	NAGPRA Contact	Klamath Tribes	Klamath General Council
Dewey	Skon	President	Klawock Cooperative Association	
Patty	Rowan	President	Klawock Heenyo Corporation	
Karl	Pete	President	Klutti-Kash Native Village (aka Copper Center)	
Michael	Tucker	President	Knik Village	
Paul	Theodore	President	Knikatu Incorporated	
Edward E.	Gooden Jr.	President	Kobuk Traditional Council	
Sam	Jackson	Chairperson	Kokumuit Corporation	

Name_First	Name_Last	Job_Title	Organization	Department
John	Nelson	President	Kokhnok Village	
Charles H.	Nelson	President	Kongiganak Natives Ltd.	
Roland P.	Andrew Sr.	President	Kongiganak Native Village	Kongiganak Traditional Council
Jeanie	Bender	Chairperson	Kongigiklomiut Yuta Corporation	
Dennis	Metroten	President	Koniag, Inc.	
Robert	Hamilton	President	Kootnoowoo Incorporated	
John	Leonard	NAGPRA Contact	Kootnoowoo, Inc.,	Kootnoowoo Cultural & Educational Fdn.
Reynold	Okkun	President	Kotik Village	
Joseph	McGarty	Chairperson	K'nyil'ot's'ina, Ltd.	
Esther	McGarty	President	Kovuk Native Corporation	
Elvina	Swenson	President	Kovuk Native Village (IBA)	
Merlin	Herry	President	Kovuk Native Village	
Percy	Lohitz	First Chief	Kovuk Native Village	
Jimmy	Anover	Chairperson	Kuklaklik, Incorporated	
James M.	Smith	President	Kutsarak, Incorporated	
Steve	Benagas	NAGPRA Contact	Kumeyay Cultural Repatriation Committee	
Michael	Harper	President	Kuskawm Corporation	
Joe	Nadapag	President	Kutukik Corporation	
NICK J.	Ayajan	Chairperson	Kwehtluk, Incorporated	
Owen	Lewis	President	Kwiglingok Native Village (IBA)	Kwiglingok IRA Council
Fred K.	Philip	Chairperson	Kwik, Incorporated	
John	Mark	President	Kwinagak Native Village (aka Quinagak)	
Scott	Hutcheson	State Historic Preservation Officer	LA Dept of Culture, Recreation & Tourism	
Tracy Lee	Nelson	Chairperson	La Jolla Band of Luiseno Mission Indians	
James	Hill	NAGPRA Contact	La Posta Band of Mission Indians	
Gwendolyn	Parada	Chairperson	La Posta Band of Mission Indians	
Louis	Taylor	Chairperson	Lac Courte Oreilles Band of Lake Superior Chippewa Indians	Superior Chippewa Indians of Wisconsin
George	Brown Jr.	Alternate NAGPRA contact	Lac du Flambeau Band	Lake Superior Chippewa Indians
Victoria A.	Doud	President	Lac du Flambeau Band	Lake Superior Chippewa Indians
Kelly	Jackson-Anderson	NAGPRA Contact	Lac du Flambeau Band	Lake Superior Chippewa Indians
Malinda	Young	NAGPRA Contact	Lac du Flambeau Band	Lake Superior Chippewa Indians
Giweigizhigoolway	Martin	NAGPRA Contact	Lac du Flambeau Band	Lake Superior Chippewa Indians
James	Williams Jr.	Chairperson	Lac Vieux Desert Band	Lake Superior Chippewa Indians
Michael	Molnar	Program Manager	Lac Vieux Desert Band	Lake Superior Chippewa Indians
Jack	Wick	President	Lake Michigan Coastal Program	Indiana Department of Natural Resources
Alfreda L.	Mitre	Chairperson	Larsen Bay Tribal Council	
Gina	Papasodora	NAGPRA Contact	Las Vegas Tribal Council	
George	Goggeley	Chairperson	Leech Lake Band of Ojibwe	
Gordon	Pullar Ph.D.	President	Leech Lake Reservation Business Comm.	
John M.	Walker	President	Lenox Village	Woody Island Tribal Council
Patricia	Asakodak	President	Lenox, Inc.	
Howard	Nelson	President	Leenlock Buttes, Ltd.	
Joe R.	Bobby	President	Leenlock Village	
Jerome	Seby	General Manager	Line Village Traditional Council	
Mathew	Franklin	Chairperson	Lithic, Inc.	
Catherine	Saibel	Chairperson	Lone Band of Miwok Indians of California	
Gregory	DuCote	Coastal Management Division Administrator	Los Coyotes Band of Calumilla & Cupena Indians	Department of Natural Resources
Mike	McDaniel	Secretary	Louisiana Coastal Resources Program	Louisiana Department of Natural Resources
Mike	McDaniel	Secretary	Louisiana Department of Environmental Quality	Louisiana Department of Environmental Quality
Mike	McDaniel	Secretary	Louisiana Department of Environmental Quality	Office of the Secretary

Name_First	Name_Last	Job_Title	Organization	Department
Frances G.	Charles	Chairperson	Lower Elwha Tribal Council	
Phyllis	Evan	President	Lower Kalkag, Village of	
Daniel	Beltran	Chairperson	Lower Lake Rancheria	
Sheldon	Wolchikid	President	Lower Sioux Indian Community Council	
Darrell	Hilaire	Chairperson	Lummi Indian Business Council	
Marjorie	Mejia	Chairperson	Lytton Rancheria	
Kathleen	Leyden	Program Director	Maine Coastal Program	State Planning Office
David P.	Littell	Commissioner	Maine Department of Environmental Protection	
Earle G.	Shettleworth, Jr.	State Historic Preservation Officer	Maine Historic Preservation Commission	
Ben	Johnson Jr.	Chairperson	Makah Tribal Council	
Jack	Wright	Chairperson	Marquette-Point Arena Band of Pomo Indians	
Nels C.	Franklin	President	Manley Hot Springs Village	
Mike	Minista	President	Manokotak Natives Ltd.	
Leroy J.	Elliott	Chairperson	Manokotak Village	
Nick	Andrews Sr.	President	Manzanita Band of Mission Indians	General Council
Shari T.	Wilson	Secretary	Marshall Native Village aka Fortuna Lodge	
J. Rodney	Little	State Historic Preservation Officer	Maryland Department of Environment	
Linda C.	Janey, J.D.	Manager	Maryland Historic Trust	
Ruby	Topkok	Acting President	Maryland State Clearinghouse	Maryland Office of Planning
Norman	Menadebook	President	Mery's Igloo Native Corporation	
Timothy C.	Andrew	Chairperson	Mery's Igloo Traditional Council	
Theresa	Bell	NAGPRA Contact	Meserulling, Incorporated	
Michael J.	Thomas	Chairperson	Meshtanuct Pequot Tribe	
Laurie	Burt	Commissioner	Massachusetts Environmental Policy Act Office	Executive Office of Environmental Affairs
Jay	Wickselsham	Director	Massachusetts Environmental Policy Act Office	Executive Office of Environmental Affairs
Brona	Simon	State Historic Preservation Officer	Massachusetts Historical Commission	
Charles K.	Maxwell Sr.	Chairperson	Mau/Lanal Island Burial Council	
Sharon Gurtler	Strick	First Chief	McGrath Native Village Council	
Steve C.	Santos	Chairperson	Mechoopda Indian Tribe of the Chico Rancheria	
Gary	Lee	President	Mendias Chaag Native Corporation	
David	Grignon	NAGPRA Contact	Menominee Indian Tribe	Historic Preservation Department
Michael	Chapman	Chairperson	Menominee Indian Tribe of Wisconsin	
Caroline	David	First Chief	Mentasta Lake Tribal Council	
Louis	Guassac	NAGPRA Contact	Mesa Grande Band of Diegueno Mission Indians	(aka Mentasta Lake Village)
Michael	Unton	Chairperson	Mesa Grande Band of Mission Indians	Kumeyaay Cultural Repatriation Committee
Mark R.	Chino	President	Mescalero Apache Tribe	
Victor V.	Wellington	Chairperson	Metlakatla Indian Community	
Floyd E.	Leonard	Chairperson	Miami Tribe of Oklahoma	
Julie	Olds	NAGPRA Contact	Miami Tribe of Oklahoma	
Billy	Cypress	Chairperson	Miccosukee Indian Tribe	
Fred	Dayhoff	NAGPRA Contact	Miccosukee Indian Tribe	
Steve	Terry	NAGPRA Contact	Miccosukee Indian Tribe	
Steven E.	Chester	Director	Michigan Department of Environmental Quality	
Brian D.	Conway	State Historic Preservation Officer	Michigan Historical Center	Department of History, Arts, and Libraries
Joe	Simon III	Chairperson	Middletown Rancheria	
Melanie A.	Benjamin	Chairperson	Millie Lac Band Assembly	

Name_First	Name_Last	Job_Title	Organization	Department
Elise	Aune	NAGPRA Contact	Millie Lucs Band of Chippewa Indians	
Brenda	Boyd	NAGPRA Contact	Millie Lucs Band of Chippewa Indians	
Travis	Amnette	NAGPRA Contact	Minnesota Chippewa Tribe	
Norman	Deschampe	President	Minnesota Chippewa Tribe	Executive Committee
Mark	Holsten	Commissioner	Minnesota Department of Natural Resources	
Nina	Archabal	State Historic Preservation Officer	Minnesota Historic Society	
Pat	Collins	Program Manager	Minnesota Lake Superior Coastal Program	Department of Natural Resources
Andrew	Jimmy	Chief	Minto Native Village (IRA)	
Kenneth	Carleton	NAGPRA Contact	Mississippi Band of Choctaw Indians	Choctaw Branch
Phillip	Martin	Chief	Mississippi Band of Choctaw Indians	Choctaw Branch
Jan	Boyd	Director	Mississippi Coastal Program	Department of Marine Resources
H.T.	Holmes	State Historic Preservation Officer	Mississippi Dept of Archives & History	
Charles	Chisolm	Executive Director	Mississippi Dept of Environmental Quality	
Trudy	Fisher	Executive Director	Mississippi Dept of Environmental Quality	
Ewell	Lawson	Coordinator	Missouri Federal Assistance Clearinghouse	Office of Administration
Tom	Dalton	Chairperson	Moapa Band of Paiute Indians	Moapa Business Council
Bruce	Borsum	Chairperson	Mohegan Indian Tribe	
Melissa	Fawcett	NAGPRA Contact	Mohegan Indian Tribe of Connecticut	
Colette	Machado	Chairperson	Molokai Island Burial Council	
Herbert	Theodore	President	Montana Creek Native Association	
Gary	Archuleta	Chairperson	Mooretown Rancheria of Maidu Indians	
Maurice	Lyns	Chairperson	Morongo Band of Cahuilla Mission Indians	
Jo	Royal	President	MTNT, Ltd.	
John	Daniels Jr.	Chairperson	Muckleshoot Tribal Council	
Joyce A.	Bear	NAGPRA Contact	Muscogee (Creek) Nation, Oklahoma	
A.D.	Ellis	Principal Chief	Muscogee (Creek) Nation, Oklahoma	
Patrick	Peterson Jr.	President	Naknek Native Village	
Marie	Greene	President	NANA Regional Corporation	
Wally	Kvasnikoff	Chief	Nanwalek Native Village (aka English Bay)	
Maricle	Sherr	President	Napaimute Native Village	
James	Willie	President	Napaklak Corporation	
Steven	Maxi Jr.	Chairperson	Napaskiak Corporation	
Chris G.	Brown	President	Napaskiak Native Village	
John	Brown	NAGPRA Contact	Narragansett Indian Tribe	
Matthew	Thomas	Chief Sachem	Narragansett Indian Tribe	
Lloyd	Wilcox	Traditional Religious Leader	Narragansett Indian Tribe	
Roy	Crabtree	Regional Administrator	National Marine Fisheries Service	Southeast Regional Office
Joie	Harrison		National Marine Fisheries Service	Office of Protected Resources
Patricia	Kurkul	Regional Administrator	National Marine Fisheries Service	Northeast Regional Office
Rodney	McInnis	Regional Administrator	National Marine Fisheries Service	Southwest Regional Office
Doug	Mecum	Acting Regional Administrator	National Marine Fisheries Service	Alaska Region

Name_First	Name_Last	Job_Title	Organization	Department
Bill	Robinson	Regional Administrator	National Marine Fisheries Service	Pacific Islands Regional Office
Angela	Soma		National Marine Fisheries Service	Office of Protected Resources
Barry	Thom	Acting Regional Administrator	National Marine Fisheries Service	Northwest Regional Office
Jon	Jarvis	Regional Director	National Park Service	Pacific West Region
Sue	Maska	Regional Director	National Park Service	Alaska Area Region
Peggy	O'Dell	Regional Director	National Park Service	National Capital Region
Ernie	Quintana	Regional Director	National Park Service	Midwest Region
Dennis	Reidbach	Regional Director	National Park Service	Northeast Region
Mike	Snyder	Regional Director	National Park Service	Intermountain Region
David	Vela	Regional Director	National Park Service	Southeast Region
Dan	Work	Acting Director	National Park Service	
Bojin M.	Amodo	President	Native Village of Ahikok	
Wissilie	Iutalik	President	Native Village of Aleknagik	Aleknagik Traditional Council
Truman	Cleveland Sr.	Chief	Native Village of Ambler	
Tommy	Olumoun	President	Native Village of Barrow Inupiat	Traditional Government
Simeon	Kusakin	President	Native Village of Belkovich	
Gilbert	Tootook	President	Native Village of Bieing Mission	Traditional Council
Jimmy	Geary	President	Native Village of Buckland (IRA)	
Gordon	Canwell	President	Native Village of Cantwell	
Roderick	Carlson	President	Native Village of Chignik	
Laura J.	Stepanoff	President	Native Village of Chignik Lagoon	
Helen	Pitka	Chairperson	Native Village of Chuathbaluk	(aka Russian Mission, Kuskokwim)
Steven	Longley	Chief	Native Village of Council	
Emerson	Moto	President	Native Village of Deering (IRA)	
Orval	Ahkinga	President	Native Village of Dornede (IRA)	(aka Ialik)
Isaac	Juneby	First Chief	Native Village of Eagle (IRA)	
Nick A.	Carter	President	Native Village of Eek	
Robert	Hevano	President	Native Village of Eek	
Robert	Henrichs	President	Native Village of Eyak (aka Cordova)	
Ruth	Hoblet	President	Native Village of False Pass	
Darin	Gene	President	Native Village of Gakona	
Raven	Jackson Sr.	President	Native Village of Kiana	Kijik Corporation
Charlie K.	Paul	President	Native Village of Kipnuk	
Linda	Joule	Executive Director	Native Village of Kotzebue	
Daniel T.	Olun Sr.	President	Native Village of Mekoryuk (IRA)	
Ronald	Dushkin	President	Native Village of Nikolski (IRA)	
Ruth	Riley	President	Native Village of Pitka's Point	
Henry	Matson Jr.	President	Native Village of Port Heiden	
		Entry Designated to deal with NAGPRA issues	Native Village of Savoonga	Bering Straits Foundation
		Entry Designated to deal with NAGPRA issues	Native Village of Shishmaref	Bering Straits Foundation
Darlene	Turner	President	Native Village of Shishmaref	
Linda	Lee	President	Native Village of Shungnak (IRA)	
Suanna	Hom	President	Native Village of St. Michael (IRA)	
Kathy	Johnson	President	Native Village of Unalakleet (IRA)	
		Entry Designated to deal with NAGPRA issues	Native Village of Wales	Bering Straits Foundation
Ida E.	Lincoh	President	Native Village of White Mountain (IRA)	
Anthony	Drabek	President	Natives of Kodiak, Inc.	
William G.	Ross, Jr.	Secretary	NC Dept of Environment & Natural Resources	
Jeffrey J.	Crow	State Historic Preservation Officer	NC Div of Archives & History	

Name_First	Name_Last	Job_Title	Organization	Department
Alan	Tritt	NAGPRA Contact	Neet'al Corp.	
Paul M.	Gundersen	President	Nelson Lagoon Corporation	
Ray	Johnson	President	Nelson Lagoon Tribal Council	
Gilbert	Ketler	First Chief	Nenana Native Association	
William F.	Alstrom	Chairperson	Neriklunute Native Corporation	
Ted	Diers	Program Manager	New Hampshire Coastal Program	Department of Environmental Services
G. Bana	Bisbee	Assistant Commissioner	New Hampshire Dept of Environmental Services	
Thomas S.	Burack	Commissioner	New Hampshire Dept of Environmental Services	
Lisa	Jackson	Commissioner	New Jersey Dept of Environmental Protection	
Ken C.	Kouchek	Supervising Environmental Specialist	New Jersey Dept of Environmental Protection	Office of Permit Coordination & Env Rev
Herman	Nelson Sr.	President	New Kolliganek Village Council	
Dennis	Andrew Sr.	President	New Stuyzhok Village	
Raymond	Wassille	President	Newstien Village	
David	Kasaliit	Chairperson	Newok Corporation	
Moses	Carl	President	Newok Traditional Council	
Rebecca	Miles	Chairperson	Nez Perce Tribe of Idaho	
Elizabeth	Muzzey	Director, State Historic Preservation Officer	NH Div of Historic Resources	Executive Council
Joseph	Post	Chairperson	Nightmute Traditional Council	
Tony	Alova	First Chief	Nikohi Village	
Jimmy C.	Smith	Chairperson	Nima Corporation	
Elaine K.	Cooper	President	Ninilchik Natives Association, Inc.	
Richard G.	Enelewski	President	Ninilchik Traditional Council	
Dorian	Sanchez	Chairperson	Nisqually Indian Community Council	
Thor A.	Hyre	NAGPRA Contact	Nisqually Indian Tribe	
Lisa P.	Jackson	State Historic Preservation Officer	NJ Dept of Environmental Protection	
Karen	Abrams		NMFS Headquarters, F/H CZ	Office of Habitat Conservation
Kellie	Foster		NMFS/Endangered Species Division	
Therese	Conant		NMFS/Endangered Species Division	
Jeanine	Cody		NMFS/OPR/Incidental Take	
Howard	Goldstein	Fisheries Biologist	NOAA NMFS	Office of Protected Resources
Larry	Jones	President	Noatak Native Village (IRA)	
		Entity Designated to deal with NAGPRA issues	Nome Eskimo Community	Bering Straits Foundation
Dawn	Salesky	President	Nome Eskimo Community	
Jack	Holson Sr.	President	Nondalton Village	
Narciso	Cuanan	Chairperson	Nooksack Indian Tribal Council	
Oscar	Henry	Vice-President	Noorvik Native Community (IRA)	
Chrys	Baggett	Environmental Policy Act Coordinator	North Carolina State Clearinghouse	Department of Administration
Judy E.	Fink	Chairperson	Northfork Rancheria of Mono Indians	
Enna	Hildebrand	President	Northway Natives Incorporated	
Loraine	Titus	President	Northway Village	
Leonard	Lampe Sr.	President	Nuikut Native Village (Ika Noileut)	
Michael J.	Stickman	First Chief	Nulato Tribal Council	
Joseph	Henry	Chairperson	Nunakauak Yupik Corporation	
Joseph	Henry	Chairperson	Nunakauayarmiut Tribe	
Riley	Morley	President	Nunamut Corporation	
Zachariah C.	Challak	Chairperson	Nunapitchuk Limited	
Edward L.	Paul	President	Nunapitchuk Native Village (IRA)	

Name_First	Name_Last	Job_Title	Organization	Department
Carol	Ash	State Historic Preservation Officer	NY Parks, Recreation & Historic Preservation	
Ken	Markunas		NY Parks, Recreation & Historic Preservation	Historic Preservation Field Services Bureau
Pete	Grannis	Commissioner	NY State Dept of Environmental Conservation	
A. Van Horn	Diamond	Chairperson	O'ahu Island Burial Council	
Bob	Bailey	Manager	Ocean and Coastal Program	Dept of Land and Conservation and Development
Richard	Larson	President	Oceanside Corporation	
John	Watkins	Chief	Office of Coastal Management	Department of Natural Resources
Deerin	Babb-Brott	Director	Office of Coastal Zone Management	
George	Stafford	Director	Office of Coastal, Local Gov. and Comm. Syst.	Executive Office of Environmental Affairs
Huanani	Apeliana	NAGPRA Contact	Office of Hawaiian Affairs	New York State Department of State
Clyde	Namoo	Executive Director	Office of Hawaiian Affairs	
Lance	Foster	NAGPRA Contact	Office of Hawaiian Affairs (OHA)	
David	Kozak	Director	Office of Long Island Sound Programs	Department of Environmental Protection
Carolyn	Bolton-Kelly	Deputy Commissioner	Office of Ocean and Coastal Resource Mgmt.	Department of Health and Env. Control
Lawrence	Schmidt	Director	Office of Program Coordination	NJ Dept of Environmental Quality
Omegalga	Burgess	Grant Coordinator	Office of State Budget	
Brooke E.	Barnes		Office of the Commissioner of Env Protection	State of Maine
David	Littell		Office of the Commissioner of Env Protection	State of Maine
Paul D. Leon	Guerrero	Acting Director	Office of the Governor	Bureau of Budget and Management Research
Bill	Jeffress	Director, Division of Governmental Coordination	Office of the Governor	
Chris	Korleski	Director	Ohio Environmental Protection Agency	Office of Federal Facility Oversight
Graham E.	Mitchell	Chief	Ohio Environmental Protection Agency	Office of Federal Facility Oversight
William	Laidlaw, Jr.	State Historic Preservation Officer	Ohio Historic Preservation Office	Ohio Historical Society
Nicholas	Boots	President	Ohogamiut Traditional Council	
Nick	Isaac	General Manager	Ohogamiut, Inc.	
Emil	Christenson	President	Old Harbor Native Corporation	
Dilly	Nasholook	President	Oligoonik Corporation	
Brian	Patterson	NAGPRA Contact	Oneida Indian Nation	
Tony	Wonderley	NAGPRA Contact	Oneida Indian Nation	
Raymond	Halbritter	Representative	Oneida Indian Nation of New York	
Bob	Brown	NAGPRA Contact	Oneida Tribe of Indians of Wisconsin	On yote a'la Repatriation Program
Carol	Cornelius	Alternate NAGPRA contact	Oneida Tribe of Indians of Wisconsin	Cultural Heritage Development
Gerald	Darforth	Chairperson	Oneida Tribe of Indians of Wisconsin	
Ernie	Stevens Jr.	Alternate NAGPRA contact	Oneida Tribe of Indians of Wisconsin	Oneida Business Committee
Danette	Woodmansee	NAGPRA Contact	Oneida Tribe of Indians of Wisconsin	On yote a'la Repatriation Program
Ivring	Powless Jr.	Chief	Onondaga Indian Nation	
Bob	Gisner	Naval Operations	OPNAV N45	Energy & Environmental Readiness Division
Ron	Tickle	Chief of Naval Operations	OPNAV N456	Energy and Environmental Readiness Division

Name_First	Name_Last	Job_Title	Organization	Department
Dick	Pedersen	Director	Oregon Department of Environmental Quality	
Tim	Wood	State Historic Preservation Officer	Oregon State Parks & Recreation Department	
Henrich	Kadake Jr.	President	Organized Village of Kake (IRA)	
Richard J.	Peterson	President	Organized Village of Kasaan (IRA)	
Martin	Andrew	President	Organized Village of Kwehluik	
Lee	Wallace	President	Organized Village of Saxman (IRA)	
Raymond	Watson	Chairperson	Oustsarmut Native Council (aka Bethel)	
Ignati	Jacob	Chairperson	Oscarville Native Corporation	
Ignati	Jacob	Chairperson	Oscarville Tribal Council	
Charles	Todd	Chief	Ottawa Tribe of Oklahoma	
Richard	Davis	President	Ounalaska Corporation	
Richard	Knecht	NAGPRA Contact	Ounalaska Corporation	U/o Museum of the Aleutians
William	Anderson	President	Ouzinkie Native Corporation	
Robert	Keanitoff	President	Ouzinkie Native Village	
Janet	Napoleon	General Manager	Paimut Corporation	
Franklin I.	Napoleon	President	Paimut Native Village	
Lora	Tom	Chairperson	Palute Indian Tribe of Utah	
Gerald	Howard	Chairperson	Palute-Shoshone Indians	of the Bishop Community
Marjianne	Yonge	Chairperson	Palute-Shoshone Indians of the Lone Pine	
Robert	Smith	Chairperson	Pala Band of Mission Indians	
Everett	Freeman	Chairperson	Paskenta Band of Nomlaki Indians	
Robert	Newell	Governor	Passamaquoddy Tribe	Indian Township Reservation
Mark	Altwater	Governor	Passamaquoddy Tribe of Maine	
Darrell	Newell	NAGPRA Contact	Passamaquoddy Tribe of Maine	
John J. C.	Knutson	President	Paug-Vik Incorporated, Ltd.	
Anthony B.	Merculief	President	Paul & St. George Islands	St. George Traditional Council
Paul K.	Gundersen Jr.	President	Pauloff Harbor Village	
Christobal C.	Devers Sr.	Chairperson	Puma/Nauma Band of Mission Indians	
Mark	Macario	Chairperson	Pechanga Band of Mission Indians	
Norman	Jacko	President	Piedro Bay Native Corporation	
Keith	Jensen	President	Piedro Bay Village Council	
John	Hanger	Acting Secretary	Pennsylvania Dept. of Environmental Protection	
Barbara	Franco	State Historic Preservation Officer	Pennsylvania Historical & Museum Commission	
James	Suppler	Chief	Penobscot Indian Nation	
Reuben 'Butch'	Phillips	NAGPRA Contact	Penobscot Nation	
John P.	Froman	Chief	Peoria Tribe of Indians of Oklahoma	
Charla K.	Reeves	NAGPRA Contact	Peoria Tribe of Indians of Oklahoma	
Gerald	Kozbruk	President	Perryville Native Village (IRA)	
William	Ware	President	Petersburg Indian Association	
Dixie	Jackson	Chairperson	Piawnee Rancheria of Chukchansi Indians	
Bobby Jo	Kramer	President	Pilot Point Native Corporation	
Suzanne	Evansoff	President	Pilot Point Tribal Council	
Wassille	Myers	President	Pilot Station Traditional Village	
Arthur S.	Hecman	Chairperson	Pilot Station, Incorporated	
Leona	Williams	Chairperson	Proleville Rancheria	
Jessica	Jim	Chairperson	PIR River Tribe	
Harvey	Orcutt	NAGPRA Contact	Pikax's Point Native Corporation	
Willie	Francis	Chairperson	Platinum Traditional Village Council	
Henry S.	Williams	President	Porch Band of Creek Indians	
Fred L.	McGhee	Chairperson	Porch Band of Creek Indians	
Gale	Thrower	NAGPRA Contact	Porch Band of Creek Indians	

Name_First	Name_Last	Job_Title	Organization	Department
Stephanie	Rollin	NAGPRA Contact	Porch Band of Creek Indians of Alabama	
Charlie	Kinneveauk	President	Point Hope Native Village (IRA)	
Leo	Ferreira III	Village Coordinator	Point Lay Native Village (IRA)	
Fecdoria	Pennington	President	Point Possession, Inc.	
John A.	Miller	Chairperson	Pokagon Band of Potawatomi Indians	
Ronald G.	Charles	Chairperson	Port Gamble S'Kallam Tribe	
Lloyd	Stassny	President	Port Graham Corporation	
Patrick	Norman	President	Port Graham Village Council	
Ivan	Lulin	President	Port Lions Traditional Tribal Council	
Marjanne	Johnson	President	Portage Creek Village Council	
Salvador	Rosales	Spokesperson	Potter Valley Rancheria	
Rey	Kitchumme	NAGPRA Contact	Prairie Band of Potawatomi Nation	
Trayce	Stanhoff	Chairperson	Prairie Band of Potawatomi Nation	
Audrey	Bennett	President	Prairie Island Indian Community	
Hector	Vargas	President	Puerto Rico Planning Board	
Norman	Dillon Sr.	Chairperson	Puyallup Tribal Council	
Dorothy	McCallum	Chairperson	Pyramid Lake Paiute Tribal Council	
George W.	Pleasant	Chairperson	Qagan Tayagunghin Tribe, Sand Point Village	
Moses	Margaret	President	Qanirtuq Incorporated	
Terry	Alford	NAGPRA Contact	Qawalangin Tribe of Unalaska	
Ronald	Lincoln	Chairperson	Qemiralek Coast Corporation	
Mike	Jackson Sr.	President	Quartz Valley Indian Reservation	
Russell	Woodruff Sr.	Chairperson	Quartz Valley Indian Reservation	
Guy	Capoeman	NAGPRA Contact	Quechan Tribal Council	
Pearl	Capoeman-Baker	President	Quileute Tribal Council	
Harold	Charles Jr.	NAGPRA Contact	Quinault Indian Nation	Quinault Business Committee
Lelani	Jones	NAGPRA Contact	Quinault Indian Nation	
Kathleen	Law	NAGPRA Contact	Quinault Indian Nation	
Manuel	Hamilton	Chairperson	Quinault Indian Nation	
Tom	Wiehl	President	Ramona Band of Chulilla Indians	
Patricia R.	DePerry	Chairperson	Rampart Village	
Liz	Montano	NAGPRA Contact	Red Cliff Band of Lake Superior Chippewa	Lake Superior Chippewa Indians
Mary	Willis	President	Red Cliff Band of Lake Superior Chippewa	
Kathryn	Beaulieu	NAGPRA Contact	Red Devil Village	Tribal Information Center
Floyd	Jordain	Chairperson	Red Lake National Library and Archives	
Barbara	Murphy	Chairperson	Red Lake Tribal Council	Red Lake Band of Chippewa Indians of MN
Elizabeth	Hansen	Chairperson	Redding Rancheria	
Adrian D.	Melendez	Chairperson	Redwood Valley Rancheria	
Rick	Dowd	Chairperson	Reeno-Speaks Indian Colony	
Jeffrey	Willis	Deputy Director	Reiginin Rancheria, California	
W. Michael	Sullivan	Director	Rhode Island Coastal Resources Mgmt Council	
Frederick C.	Williamson	State Historic Preservation Officer	Rhode Island Dept. of Environmental Commission	
John	Currier	Chairperson	RI Historic Preservation & Heritage Commission	
Clara	Wilson	Chairperson	Rincon Band of Mission Indians	
Meypo	Marrufo	NAGPRA Contact	Robinson Rancheria Citizens Business Council	
Shannon	Barney	President	Robinson Rancheria Environmental Dept.	

Name_First	Name_Last	Job_Title	Organization	Department
Donald Marshall	Homes Jr.	First Chief	Ruby Tribal Council	
Patrick	McKay	Chairperson	Rumsey Rancheria	
	Houser	President	Russian Mission Native Corporation	
		Director	S.C. Dept of Health and Environmental Control	Office of Environmental Quality Control
Deanne Sandra Russell Edmore Sandra Kaye Kay	Bahr Gillian Green Keo	NAGPRA Contact Chairperson NAGPRA Contact Chairperson NAGPRA Contact	Sac and Fox Nation Sac and Fox Nation of Missouri Sac and Fox Nation of Missouri Sac and Fox Nation of Missouri	
	Massey	NAGPRA Contact	Sac and Fox Nation of Oklahoma	
	Rhoads	Principal Chief	Sac and Fox Nation of Oklahoma	
Homer	Bear Jr.	Chairperson	Sac and Fox Tribe of the Mississippi	
Johnathan	Buffalo	NAGPRA Contact	Sac and Fox Tribe of the Mississippi	
Joseph L. James	Clark Segura	President President	Saguyak Incorporated Salamatorff Native Association, Inc.	
Scott Janiece Tom Will	Cooper Evans Wooten Travis	NAGPRA Contact Chairperson Executive Director	Samish Indian Nation Samish Indian Tribe San Francisco Bay	Conservation & Development Commission
Deron	Marquez	Chairperson	San Manuel Band of Mission Indians	
Fred Allen E. Dorothy George Clarence John Vincent June Patrick	Herrera Lawson Jr. Tawil Gundersen Atwell Jr.	NAGPRA Contact Spokesperson NAGPRA Contact President	San Pasqual Band of Indians San Pasqual Band of Indians San Pasqual Band of Indians	
		Chairperson	Snak Corporation	
		Chairperson	Santa Rosa Band of Mission Indians	
		Vice-Chairperson	Santa Rosa Band of Mission Indians	
		Chairperson	Santa Rosa Rancheria	
		NAGPRA Contact	Santa Ysabel Band of Diegueno Indians	
		NAGPRA Contact	Santa Ysabel Band of Diegueno Indians	
Johnny Roger Trudell Gloria Y. Paul Milton Morgan Donald Myron Chris	Hernandez Jr. Trudell Green Rook Noongwook Simon Arnold Nareg McNeil Jr.	Spokesperson Chairperson Chairperson President President Chairperson Chairperson President	Santa Ysabel Band of Mission Indians Santee Sioux Nation Sauk-Suiattle Tribal Council Savoonga Native Corporation Savoonga Native Village (IRA) Scammon Bay Traditional Council Scotts Valley Rancheria Sea Lion Corp. Sealaska Corporation	
		Entity Designated to deal with NAGPRA Issues	Sealaska Heritage Institute	
Kathy Clyde	Miller Remoth Sr.	NAGPRA Contact President	Sealaska Heritage Institute Selawik IRA Council	
		President	Seldovia Native Association, Inc.	
Don Billy L. Mitchell Alan D.	Kashewaroff Cypress Cypress Emarthle	President NAGPRA Contact Chairperson Tribal Historic Preservation Officer	Seldovia Village Tribe (IRA) Seminole Indian Tribe of Florida Seminole Indian Tribe of Florida Seminole Nation of Oklahoma	At Tha Ki Museum Mokusuey Mission

Name_First	Name_Last	Job_Title	Organization	Department
Enoch Kelly Ted Barry E. Richard Leona Charles Keith Stanley R. Eugene Gabriel Ron Robert Edward J. Michael Nicholas H. Percy Tom Tony Charlene Gordon Terry Arlene Lois James "Jim" Lawrence A. Robert Aaron Amber Gordon Pete Kara L. Bill Victoria Sandra Rose Ann Cynthia Rodger E. Jean Donald F. Richard Myra Greg James L. Wanda David Ilidor Christopher Lawrence F. Thomas James W. Loran Morris Nora Randy Shawn E. Sherry	Haney Underwood Snyder Frank Casey Workman Crooks Asidsik Takak Sparlman Loiselle Adams Sr. Fitzgerald Foyesco Navokpuk Anderson Johnson Nelson White Glison Gundersen Stover Crawford Widmark Jr. Fagerstrom Iworligan Matthews James Mellick Miller Sweet Salgado Sr. Arres Rachal Timbers Gray Stroup Ricard Nielsen Pfaff Pearson Abrahamson Peters McFaggen Merrill Philenonof Merculief Wile Chumek Ransom Thompson Nathoanok Sr. Tom Yarity White	Principal Chief NAGPRA Contact President President President Chief Chairperson President President Chairperson President NAGPRA Contact NAGPRA Contact Manager Chairperson President President Chairperson President President NAGPRA Contact Spokesperson NAGPRA Contact Chairperson President State Historic Preservation Officer NEPA SPOC President Coordinator, Regional Review Vice-Chairperson Chairperson Chairperson NAGPRA Contact President President President Chairperson President President Chairperson Chief NAGPRA Contact President President First Chief Chairperson NAGPRA Contact	Seminole Nation of Oklahoma Seminole Nation of Oklahoma Seneca Nation of Indians Seth-de-ya-ha Corporation Shaan Seet, Incorporated Shageluk Native Village Shakopee Midewakanton Sioux Community Shaktoolik Native Corporation Shaktoolik Native Village (IRA) Shawnee Tribe Shee Atika, Incorporated Sheldon Port Native Village Sherwood Valley Rancheria Shingle Springs Rancheria Shishnaad Native Corporation Shoalwater Bay Indian Tribe Shoalwater Bay Tribal Council Shoreland & Environmental Assistance Program Shoshone Palute Tribes of Duck Valley Shumagin Corporation Shuyak, Inc. Sisseton-Wahpeton Oyate Sitka Tribe of Alaska (IRA) Sitka Tribe of Alaska (IRA) Sitka Tribe of Alaska (IRA) Skagway Village Skokomish Tribal Council Sleemute Village Smith River Rancheria Snoqualmie Tribal Organization Soboba Band of Luiseno Indians Soboba Band of Mission Indians Sokaogon Chippewa (Mole Lake) Solomon Native Corporation Solomon Traditional Council South Carolina Dept of Archives & History South Carolina State Clearinghouse South Naknek Village Southeast Michigan Council of Governments Spirit Lake Tribal Council Spokane Business Council Squaxin Island Tribal Council St. Croix Chippewa Indians of Wisconsin St. Croix Chippewa Indians of Wisconsin St. George Tsnag Corporation St. George Traditional Council St. Mary's Native Corporation St. Michael Native Corporation St. Regis Band of Mohawk Indians St. Regis Mohawk Tribe Stebbins Community Association Stebbins Native Corporation Stevens Native Village (IRA) Stillaguamish Board of Directors Stockbridge Munsee Tribe	Business & Corporate Regulatory Comm.

Name_First	Name_Last	Job_Title	Organization	Department
Robert	Chicks	President	Stockbridge-Munsee Community	
Peter	Christopher Sr.	President	Stuyahok, Ltd.	
Polasky	General Manager		Sun-Iq Tribe of Kodiak	
Robert	Chairperson		Squamish Tribal Council	
Leonard	Forsman	Chairperson	Susanville Indian Rancheria	
Stacy	Dixon	Chairperson	Swan Lake Corporation	
Willard	Raphael	Chairperson	Swinomish Indian Tribal Community	
M. Brian	Gladsooby	Chairperson	Sycuan Band of Diegueño Mission Indians	
George	Prietto	NAGPRA Contact	Sycuan Band of the Kumeeyay Nation	Sycuan Business Committee
Daniel	Tucker	Spokesperson	Table Mountain Rancheria	Takoma Tribal Council
Leanne	Walker-Grant	Chairperson	Takoma Village	
Vera Lynn	Goods	Chief	Tanacross Native Village (IRA)	
Jerry	Isaac	President	Tanadross, Inc.	
Bob	Bran	President	Tanadross Corporation	
Anthony	Philemonoff	Chairperson	Tanadross, Inc.	
Sativa	Quinn	President	Tanadross, Inc.	
Lois	Huntington	President	Tanadross, Inc.	
Carol	Kompkoff	President	Tanadross, Inc.	
Garry	Kompkoff	President	Tanadross, Inc.	
Julie A.	Bator	President	Tanadross, Inc.	
Steven	Nisibai	President	Tanadross, Inc.	
Willis	Kugzrak	President	Tanadross, Inc.	
Jenny M.	Lee	President	Tanadross, Inc.	
Hugh	Stevens	Chairperson	Tanadross, Inc.	
Larry	Kibby	NAGPRA Contact	Tanadross, Inc.	Western Shoshone Historic Preservation Soc.
Donald	Joe	President	Tanadross, Inc.	
Donald	Adams	President	Tanadross, Inc.	
Buddy	Garcia	Chairman	Tanadross, Inc.	
F. Lawrence	Oaks	State Historic Preservation Officer	Tanadross, Inc.	
Eric	Brenner	Senior Advisor for Regulatory Affairs	Tanadross, Inc.	
Norm	Ream	President	Tanadross, Inc.	
Jack	Schaefer	President	Tanadross, Inc.	
Eddie	James	President	Tanadross, Inc.	
Mich	Demienteff	President	Tanadross, Inc.	
Poen	Alaie	President	Tanadross, Inc.	
Kenneth	Jonathan	President	Tanadross, Inc.	
Emerson	Podry	President	Tanadross, Inc.	
Raymond	Webster	Chief	Tanadross, Inc.	
Dennis	Torres	Chairperson	Tanadross, Inc.	
Moses	Michel	President	Tanadross, Inc.	
Stanley G.	Kritz	President	Tanadross, Inc.	
Nail	Jones	Chairperson	Tanadross, Inc.	
Golga	Peron	Chairperson	Tanadross, Inc.	
Willy	Napoleon	Chairperson	Tanadross, Inc.	
Earl	Phillips	President	Tanadross, Inc.	
Joseph C.	Berby Sr.	Chairperson	Tanadross, Inc.	
Nick	Angalak	Chairperson	Tanadross, Inc.	
Fritz	Frank	Chairperson	Tanadross, Inc.	
George B.	Charles	President	Tanadross, Inc.	
Kevin	Hooper Sr.	Chairperson	Tanadross, Inc.	
Kenneth	Day	Chairperson	Tanadross, Inc.	
Kade	Davis	Chairperson	Tanadross, Inc.	
Ferris	Ferris	NAGPRA Contact	Tanadross, Inc.	

Name_First	Name_Last	Job_Title	Organization	Department
Leo R.	Henry	Chief	Tuscarora Nation	
Dean	Mile	Spokesperson	Twenty Nine Palms Band of Mission Indians	
Arthur	Sharp	President	Twin Hills Native Corporation	
George	Pleasant Sr.	President	Twin Hills Village Council	
Ted	Krcio	President	Tyonek Native Corporation	
Peter	Merriman	President	Tyonek Native Village (IRA)	
A. Forester	Einansen	NEPA Coordinator	U.S. Army Corps of Engineers	Office of Environmental Policy (CECW-A&E)
Zante	Capuno	Natural Resources Program Manager	U.S. Coast Guard Headquarters	Office of Environmental Management, CG-47
Kelby	Kelley	NEPA/Cultural Resources Program Manager	U.S. Coast Guard Headquarters	Office of Environmental Management (CG-47)
Kenneth	McDaniel	Director, Underwater Security	U.S. Coast Guard Headquarters	
Joe	Carbone	Assistant Director, NEPA	U.S. Department of Agriculture	Forest Services, Ecosystem Mgmt Coordination
Andree	DuVarney	National Environmental Coordinator	U.S. Department of Agriculture	Natural Resources Conservation Service
Willie	Taylor, Ph.D		U.S. Department of the Interior	Office of Environmental Policy and Compliance
Bill	Arguto	Environmental Review Coordinator	U.S. Environmental Protection Agency	
Nova	Blazej	Regional Environmental Review Coordinator	U.S. Environmental Protection Agency	Region 3 (DE, DC, MD, PA, VA, WV)
Cathy	Gilmore	Regional Environmental Review Coordinator	U.S. Environmental Protection Agency	Region 9 (AZ, CA, HI, NV, AS, GU)
Elisabeth	Higgins	Regional Environmental Review Coordinator	U.S. Environmental Protection Agency	Region 6 (AK, LA, NM, OK, TX)
Heinz	Mueller	Chief, Office of Environmental Assessment	U.S. Environmental Protection Agency	Region 1 (CT, ME, NH, RI, VT)
Grace	Musunied	Environmental Review Coordinator	U.S. Environmental Protection Agency	Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)
Christine	Reichgott	Environmental Review Coordinator	U.S. Environmental Protection Agency	Region 2 (NJ, NY, PR, VI)
Ken	Westlake	Director	U.S. Environmental Protection Agency	Region 10 (AK, ID, OR, WA)
John	Fay	National Section 7 Coordinator	U.S. Environmental Protection Agency	Region 5 (IL, IN, MI, MN, OH, WI)
Robyn	Thorsen	Regional Director	U.S. Fish and Wildlife Service (Region 1)	Pacific Regional Office
Benjamin	Tuggle	Regional Director	U.S. Fish and Wildlife Service (Region 2)	Southwest Regional Office
Tom	Mellus	Regional Director	U.S. Fish and Wildlife Service (Region 3)	Midwest Regional Office
Sam	Hamilton	Regional Director	U.S. Fish and Wildlife Service (Region 4)	Southeast Regional Office
Marvin	Moriarty	Regional Director	U.S. Fish and Wildlife Service (Region 5)	Northeast Regional Office
Geoffroy	Haskett	Regional Director	U.S. Fish and Wildlife Service (Region 7)	Alaska Regional Office
Ren	Lobcfeener	Regional Director	U.S. Fish and Wildlife Service (Region 8)	California and Nevada Region Office
Leslie	Cleveland	President	Ugashik Traditional Village Council	Tribal Administrator Office
Jay	Dul Jr.	President	Unikmuut Native Village	
Chuck	Degnan	President	Unalakleet Native Corporation	
Bjorne	Lee	President	Unga Corporation	
John A.	Foster	President	Unga Tribal Council	
Jessica	Tavares	President	United Auburn Indian Community	

Name_First	Name_Last	Job_Title	Organization	Department
Kevin	Jensvold	Chairperson	Upper Sioux Community of Minnesota	
Marilyn	Scott	Chairperson	Upper Skagit Tribal Council	
Robert	Varney	Regional Administrator	USEPA Region 1	
Elin D	Miller	Regional Administrator	USEPA Region 10	
Alan J	Steinberg	Regional Administrator	USEPA Region 2	
Donald S	Walsh	Regional Administrator	USEPA Region 3	
J.I.	Palmer, Jr	Regional Administrator	USEPA Region 4	
Lynn	Buhl	Regional Administrator	USEPA Region 5	
Richard	Greene	Regional Administrator	USEPA Region 6	
Wayne	Nastri	Regional Administrator	USEPA Region 9	
Joseph	Saulque	Chairperson	Utu Utu Gwaith Palute Tribe of Benton	
Gabriel	McKilly Jr.	First Chief	Uyak, Inc.	
Edward	Frank	Chairperson	Venetie Village Council	
Anthony	Pico	President	Viejae Band of Mission Indians	
Anthony	Agayer	President	Village of Alaknuk	
Bass	Gordon	President	Village of Anaktuvuk Pass	
Wayne	Morgan	President	Village of Aniak	
Emmanuel	Keyes	President	Village of Bill Moore's Slough	
Ben	Synn	President	Village of Chefeornak	
Harry	Wassly Sr.	President	Village of Clarks Point	
Julia	Dorris	President	Village of Kalslag	
AI	Catty Jr.	President	Village of Old Harbor	
Penny	Carty	President	Village of Salamattoff	Salamattoff Tribal Council
Thomas E.	Willis	President	Village of Solomon	Bering Straits Foundation
Laura	McKay	Program Manager	Village of Stony River	
Ellie L.	Irons	Environmental Impact Review Manager	Virginia Coastal Management Program	Department of Environmental Quality
David K.	Paylor	Director	Virginia Department of Environmental Quality	
Kathleen	Kilpatrick	State Historic Preservation Officer	Virginia Department of Historic Resources	
Allyson	Brooks	State Historic Preservation Officer	WA Office of Archaeology & Historic Preservation	
John	Hopson Sr.	President	Wainwright Village	
Walter	Weyapak	President	Wales Native Corporation	
Luther C.	Komonaseak	President	Wales Native Village (IRA)	
Genia	Williams	Chairperson	Walker River Palute Tribal Council	
		Entity Designated to deal with NAGPRA Issues	Wamparvoag Repatriation Confederation	
Donald	Widdiss	Chairperson	Wamparvoag Tribe Gay Head (Aquimath)	
Jay	Manning	Director	Washington Department of Ecology	
A. Brian	Wallace	Chairperson	Washoe Tribal Council	
William	Dancing Feather	NAGPRA Contact	Washoe Tribe of Nevada and California	
Gary	Oblesli	Coastal Resources Program Manager	Water Planning Office	Department of Environmental Protection
Erma	Vianor	Chairperson	White Earth Reservation Business Comm.	
Thomas	McCauley	Tribal Historic Preservation Officer	White Earth Reservation Tribal Council	

Name_First	Name_Last	Job_Title	Organization	Department
Ramon	Riley	NAGPRA Contact	White Mountain Apache Cultural Center	
Dallas	Massey Sr.	Chairperson	White Mountain Apache Tribal Council	
Roy	Ashenleiter	President	White Mountain Native Corporation	
John	Blackhawk	Chairperson	Winnebago Tribal Council	
David Lee	Smith	NAGPRA Contact	Winnebago Tribe of Nebraska	Little Priest Tribal College
Kate	Angel	Program Manager	Wisconsin Coastal Management Program	Department of Administration
John	Marx	Administrator, Division of Energy	Wisconsin Department of Administration	
John	Marx	Administrator, Division of Energy	Wisconsin Department of Administration	
Michael	Stevens	State Historic Preservation Officer	Wisconsin Historical Society	
Cheryl A.	Sedner	Chairperson	Wiyot Tribe, California	Table Bluff Reservation
Wilma	Stokes	President	Wyandell Cooperative Association (IRA)	
Sherri	Clemons	NAGPRA Contact	Wyandotte Tribe of Oklahoma	
Leiford	Bearskin	Chief	Wyandotte Nation	
Jerry	Mennick	Acting Chairperson	Yakama Nation	
Sheri	Jensen	President	Yakutat Tingit Tribe	
Bert	Adams Sr.	President	Yakutat Tingit Tribe	
Lena	Farkas	NAGPRA Contact	Yavapai-Apache Community Council	
Jamie	Fullmer	Chairperson	Yavapai-Apache Community Council	
Wayne M.	Garcia	Chairperson	Yerington Paiute Tribe	
Marlin	Thompson	NAGPRA Contact	Yerington Paiute Tribe	
Arturo	Sencclair	Governor	Ysleta del Sur Pueblo	
Howard	McConnell	Chairperson	Yurok Tribe	
Buffy	McQuillen	NAGPRA Contact	Yurok Tribe	
James	Dementi	Vice-President	Zho-Tse, Inc.	

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG-2009-0166]

Nationwide Use of High Frequency and Ultra High Frequency
Active SONAR Technology; Draft Programmatic Environmental
Assessment and Draft Finding of No Significant Impact

AGENCY: Coast Guard, DHS.

ACTION: Notice of availability and request for comments.

SUMMARY: The U.S. Coast Guard (USCG) announces the availability of the Draft Programmatic Environmental Assessment (PEA) for the Nationwide Use of High Frequency (HF) and Ultra High Frequency (UHF) Sound Navigation and Ranging (SONAR) Technology and Draft Finding of No Significant Impact (FONSI). The USCG is proposing the nationwide use of active SONAR technologies that operate at frequencies of 50 kilohertz (kHz) and greater from mobile platforms. Active SONAR technology would be used in support of USCG missions to locate, image, and classify submerged/underwater targets of interest (TOI). The PEA is a program-level document that will provide the USCG with management-level analysis of the potential impacts of each alternative on the human and natural environments.

DATES: Comments and related material must either be submitted to our online docket via <http://www.regulations.gov> on or before January 31, 2011, or reach the Docket Management Facility by that date.

ADDRESSES: The Draft PEA and Draft FONSI have been published and can be downloaded at <http://www.regulations.gov>, docket number USCG-2009-0166. You may submit comments identified by docket number USCG-2009-0166 using any one of the following methods:

- (1) Federal eRulemaking Portal: <http://www.regulations.gov>.
- (2) Fax: 202-493-2251.
- (3) Mail: Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- (4) Hand delivery: Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

To avoid duplication, please use only one of these four methods. See the "Public Participation and Request for Comments" portion of the SUPPLEMENTARY INFORMATION section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: Mr. Kenneth McDaniel (CG-532), Deputy Division Chief, Maritime Security (Counterterrorism), Coast Guard, by telephone 202-372-2119 or email Kenneth.L.McDaniel@uscg.mil for questions regarding the Proposed Action; or Ms. Kebby Kelley (CG-47), Program Manager, USCG National Environmental Policy Act (NEPA)/Historic Resources, by telephone 202-475-5690 or email Kebby.Kelley@uscg.mil regarding NEPA or to request a paper copy. If you have questions on viewing or submitting material to the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202-366-9826.

SUPPLEMENTARY INFORMATION:

Public Participation and Request for Comments

We encourage you to submit comments and related materials on the draft PEA and draft FONSI. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

Submitting comments: If you submit a comment, please include the docket number for this notice (USCG-2009-0166) and provide a reason for each suggestion or recommendation. You may submit your comments and material online, or by fax, mail or hand delivery, but please use only one of these means. We recommend that you include your name and a

mailing address, an e-mail address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov>, click on the "submit a comment" box, which will then become highlighted in blue. In the "Document Type" drop down menu select "Notices" and insert "USCG-2010-1104" in the "Keyword" box. Click "Search" then click on the balloon shape in the "Actions" column. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period.

Viewing the comments: To view the comments, go to <http://www.regulations.gov>, click on the "read comments" box, which will then become highlighted in blue. In the "Keyword" box insert "USCG-2009-0166" and click "Search." Click the "Open Docket Folder" in the "Actions" column. If you do not have access to the internet, you may view the docket online by visiting the Docket Management Facility in Room W12-140 on the ground floor of the Department of

Transportation West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. We have an agreement with the Department of Transportation to use the Docket Management Facility.

Privacy Act: Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act, system of records notice regarding our public dockets in the January 17, 2008, issue of the Federal Register (73 FR 3316).

Background and Purpose

Purpose of Proposed Action

The purpose of the Proposed Action is to broaden the USCG's capability to locate and classify underwater threats and other TOIs, and to more safely and effectively accomplish the USCG's missions. TOIs could include combat swimmers/divers; explosives or other offensive devices that could be delivered to underwater hulls, piers, or other shore structures; and objects that have become submerged as a result of a natural or man-made disaster and have the potential to interrupt maritime transportation, trade,

commerce, recreational boating, or other maritime activities. The use of HF (50 to 999 kHz) and UHF (1,000 kHz and higher) active SONAR technology would provide USCG operational commanders with the ability to locate, image, and classify underwater threats and other TOIs. HF and UHF SONAR technology could be used in response to events such as: the attacks of September 11, 2001; natural disasters such as Hurricanes Katrina and Rita of 2005; established security areas around high-value vessels, infrastructure, and special security events; and maritime environmental response and search-and-rescue activities.

The USCG needs to broaden its capability to locate, image, and classify submerged/underwater TOIs to safely and efficiently accomplish mission activities. The USCG needs to detect targets in ranges of less than 2 kilometers and needs to operate in harbor, anchorage, channel, and wharf environments, including fresh, brackish, and salt waters, day or night regardless of visibility and in air and water temperatures and thermoclines normal for port/harbor and offshore environments throughout the United States. The USCG's current research of commercially available and reliable technology indicates that the nationwide employment of various HF and UHF active SONAR technology systems would provide the needed capability.

Proposed Use

HF and UHF SONAR use would fall into one of three general categories: (1) operational missions, (2) training and exercises, and (3) research and development. All SONAR use would be of relatively short-term duration (typically less than a week, unless otherwise required for an emergency or disaster). Regardless of the category, such use would only be for the amount of time necessary to complete the mission objectives. In no case is the USCG proposing long-term deployments of SONAR equipment in fixed positions (unless required by an emergency or disaster).

In general, the duration of SONAR use would be from minutes to as long as several days. Typically, the duration of most deployments would be less than a week; however, for environmental disasters such as the Deepwater Horizon oil spill, SONAR equipment could be used on-site until the emergency has ended. An example of a high-priority nonemergency operational mission is the anti-swimmer SONAR system that would provide security zone protection during a two-day special event. Once the event has concluded, the system would be shut down and removed.

The USCG proposes to use HF and UHF SONAR technology from mobile platforms nationwide. Mobile platforms include ships, boats, remotely operated vehicles (ROVs), and

autonomous underwater vehicles (AUVs). Additionally, SONAR could be towed by a boat (i.e., a torpedo-shaped "towfish"), lowered from a boat on a pole, or temporarily fixed to a pier or a pile. Impacts on the seafloor from ROV and AUV operations would not be significant. ROVs would be used pierside or at a location appropriate for conducting vessel inspections. An appropriate location for inspection would be at a water depth that would preclude seafloor disturbance. As such, ROVs and AUVs would usually be suspended in the water column and would rarely contact the seafloor. Typically, ROVs and AUVs would be used in open, navigable waterways or safe anchorages. However, an ROV or AUV might contact the seafloor if there is a suspected threat on the seafloor that needs to be investigated; such contact would be short-term and transient in nature.

Although selected HF and UHF SONAR systems could be employed by any USCG unit to accomplish a mission, the USCG does not intend to permanently equip or outfit every USCG unit with SONAR capability. The HF and UHF SONAR systems selected could be powered using existing USCG power supplies such as public electrical distribution grids, shipboard electrical power, or portable generators (e.g., Honda 1,000-watt generator).

Scope of the Programmatic Environmental Assessment

The scope of the PEA focuses on potential impacts associated with the anticipated use of the HF and UHF SONAR systems to accomplish USCG mission activities. The PEA addresses potential impacts on living marine resources based on these operating criteria. Supplemental, follow-on NEPA documentation or additional consultations with appropriate resource authorities would be required if site-specific, non-mobile operating scenarios or newly developed technologies fall outside of the scope of this assessment. The scope of the PEA encompasses geographic locations where the systems are expected to operate.

The SONAR technology systems would be available for use by the USCG within all areas under USCG jurisdiction along the U.S. continental coastline, the Great Lakes, Hawaii, Alaska, United States territories, and inland operating areas. The inland operating areas would include existing harbor infrastructure and adjacent inland waters, including the St. Lawrence Seaway, the Great Lakes, and western and inland river systems. The offshore operating areas would include areas up to 12 nautical miles offshore and most areas shoreward. Normal locations for deployments would include the ports and waterways of the nation's top tiered militarily and economically significant ports.

Emergency use of HF and UHF SONAR technology during times of extreme weather, such as hurricanes, could be required for onshore areas that become inundated by floodwater.

Public input is important to the preparation of the Final PEA. Your concerns and comments regarding the nationwide use of HF and UHF active SONAR technology and

the possible environmental impacts are important to the USCG, and we encourage you to share them with us.

Authority

This notice is issued under authority of 42 U.S.C. 4321, et seq., and 40 CFR 1508.22.

Dated: 12/14/2010



Michael Mohn,
Captain, U.S. Coast Guard,
Chief, Office of Terrorism and Defense Operations

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APPENDIX C

PAST, ONGOING, AND FORESEEABLE USCG PROGRAMS

APPENDIX C

Proposed, Existing, or Reasonably Foreseeable Actions Evaluated for Potential Cumulative Impacts

Proposed, Existing, or Reasonably Foreseeable Action	Description
Response Boat Acquisitions	The Response Boat Acquisitions involves the United States Coast Guard (USCG) acquiring and operating 880 response boats-small and response boats-medium to add to or replace aging and inefficient assets with standard, more reliable, and more environmentally sound assets. These boats would be located at the 44 Groups/Activities Offices, 186 multimission stations, and 24 Marine Safety Offices that currently operate nonstandard vessels or 41-foot Utility Boats. The project scope includes all USCG facilities along the coastal United States (U.S.), the Great Lakes states, Hawaii, Alaska, Guam, Puerto Rico, and the U.S. Virgin Islands. The project area includes the coastal zone areas where the 41-foot utility boats and nonstandard boats currently operate. The National Environmental Policy Act (NEPA) documentation for this project (<i>Final Programmatic Environmental Assessment [PEA] of the USCG Response Boat Acquisitions</i>) is complete. A Finding Of No Significant Impact (FONSI) statement was signed for this Final PEA.
Stand-up and Operation of Maritime Safety Security Teams (MSSTs)	The stand-up of the MSSTs includes the stationing of active-duty personnel and reservists and the addition of six new response boats, four tow vehicles, and two 15-passenger vans, at various ports. The MSSTs will improve the security of the existing port infrastructure and the Intercoastal Waterway on an ongoing basis. Minor adverse impacts on biological resources could be a result of the operation of the MSST boats. The MSST boats could increase the existing ambient noise levels of the areas where they operate. The MSST boats are equipped with four-stroke engines, which are not expected to significantly increase ambient noise levels or disturb biological resources. The MSST boats are highly maneuverable and would operate at transit speeds of up to 15 knots in highly trafficked, busy port areas (under normal operations). Impacts on marine mammals, sea turtles, or other protected species are expected to be minor. The NEPA documentation for the MSSTs that were stood up from 2002 to 2004 is complete. FONSI statements have been issued for all the complete MSST Environmental Assessments (EAs).
Establishment and Operation of the Mark 11 Static Barrier Running Gear Entanglement System (MK 11 Static Barrier RGES)	The USCG is proposing to establish and operate a MK 11 Static Barrier RGES as part of a layered defense strategy within Security and Safety Zones at various U.S. ports throughout the U.S. Maritime Domain, when necessary. The MK 11 Static Barrier RGES would be used to establish a “line of demarcation” within a Security or Safety Zone, providing a barrier around a high-value

Proposed, Existing, or Reasonably Foreseeable Action	Description
	asset, and allowing security forces sufficient time to react and counter a threat. The MK 11 Static Barrier RGES would improve the USCG's capabilities to intercept and interdict, if necessary, small boats or watercraft by using an entanglement device that would foul the propellers of unauthorized vessels attempting to approach a restricted area. The MK 11 Static Barrier RGES would not duplicate existing protective measures, but would provide complementary, nonredundant capabilities for port security. Establishment and operation of the MK 11 Static Barrier RGES with mitigation measures would not be expected to result in significant adverse impacts on biological resources. The operation of the MK 11 Static Barrier RGES would increase the risk of entanglement of marine species, including those protected under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). The mitigation measures are designed to avoid these impacts, when possible. When not possible, the mitigation measures are designed to minimize impacts on marine protected species. For example, personnel tending the MK 11 Static Barrier RGES would have the on-scene capabilities of freeing an entangled animal, in the unlikely event an entanglement should occur, reducing the risk of injury. Additional minor adverse impacts, such as effects of anchors on seagrass, sediments, and other sensitive benthic habitats, could occur. Beneficial impacts on public safety could occur from establishment and operation of the MK 11 Static Barrier RGES. No adverse impacts on Native American treaty fishing rights are expected. The MK 11 Static Barrier RGES would be deployed within a Safety and Security Zone and would not exclude Native American tribes from their fishing areas or restrict them from any additional areas beyond the Safety and Security Zone. Entry into Safety and Security Zones is prohibited unless specifically authorized by the USCG Sector Commander.
Integrated Deepwater System (IDS) Program	The USCG initiated the IDS Program in 1996 to continue to meet America's 21st-century maritime threats and challenges. The IDS Program is a long-term acquisition program to upgrade existing USCG assets by renovating, modernizing, or replacing current assets. The IDS Program is the largest and most innovative acquisition in the USCG's history and is expected to be completed in approximately 20 years. The IDS is not just "new ships and aircraft," but an integrated approach to upgrading existing assets while transitioning to newer, more capable platforms with improved systems for command, control, communications, computers, intelligence, surveillance, and reconnaissance; and innovative logistics support. This new system will significantly contribute to the USCG's maritime domain awareness, as well as improve the ability to intercept,

Proposed, Existing, or Reasonably Foreseeable Action	Description
	engage, and deter those activities that pose a direct challenge to U.S. sovereignty and security. The IDS Program will provide the USCG the means to extend layered maritime defenses from U.S. ports and coastal areas to hundreds of miles offshore. The NEPA documentation for this project is complete.
Establishment of Safety and Security Zones	As part of the Diplomatic Security and Antiterrorism Act of 1986 (Public Law [P.L.] 99-399), Congress amended Section 7 of the Port and Waterways Safety Act of 1972 (33 United States Code [U.S.C.] 1226) to allow the USCG to take actions, including the establishment of Safety and Security Zones, to prevent or respond to acts of terrorism against individuals, vessels, or public or commercial structures (implementing regulations in 33 Code of Federal Regulations [CFR] Part 165). The USCG also has authority to establish Security Zones pursuant to the Magnuson-Stevens Act (MSA) (50 U.S.C. 191 et seq.) (implementing regulations in 33 CFR 6.01 and 6.04). A Safety Zone is defined as a water area, shore area, or water and shore area in which access is limited to authorized persons, vehicles, or vessels for safety or environmental purposes. A Security Zone is an area of land, water, or land and water which is designated by the USCG Sector Commander or District Commander to protect any vessel, harbor, port, or waterfront facility (in the U.S. and all territory and water, continental or insular, that is subject to the jurisdiction of the U.S.) from damage, destruction, or injury caused by sabotage or other subversive acts, accidents, or other causes of a similar nature. A Security Zone might be stationary and described by fixed limits or a zone around a vessel in motion. Except in situations that involve extraordinary circumstance, the USCG has determined that the establishment of Safety and Security Zones have been categorically excluded from NEPA analysis.
Proposed Licensing of Approximately 40 Nearshore Liquefied Natural Gas (LNG) Terminals.	The Federal Energy Regulatory Commission (FERC) is responsible for authorizing the siting and construction of onshore LNG terminals (including LNG terminals within state waters). The USCG is responsible for authorizing the siting and construction of LNG deepwater ports. Therefore, FERC and the USCG are required to complete environmental reviews of these projects. The environmental reviews are usually documented in the form of an Environmental Impact Statement (EIS).
Installation and Operation of the Integrated Anti-swimmer System (IAS)	The USCG is proposing to establish and operate the IAS at various USCG MSST locations. The purpose of establishment of the IAS is to improve the USCG's capabilities to detect, track, classify, and alert security forces of potential underwater threats to designated high-value vessels or critical port infrastructure. The IAS uses five primary components: a land-based sonar, a portable sonar, a data

Proposed, Existing, or Reasonably Foreseeable Action	Description
	processor, a vehicle guidance system, and an underwater loud hailer. The land-based sonar has a source level of 206 decibels (dB) at 90 kilohertz (kHz). The portable sonar has a frequency of 1.0 megahertz (mHz) and 1.8 mHz. The underwater loud hailer would have a source level of 180 dB at 1 kHz and would be used only if a potential threat was detected. The land-based, data processor, and components of the vehicle guidance system would be based onshore. The portable sonar, underwater loud hailer, and remaining components of the vehicle guidance system are designed for use on an MSST Defender Class boat operating in direct coordination with the onshore IAS components. The use of zinc anodes for the IAS would have minor adverse impacts on water and sediment quality. The IAS would result in minor adverse impacts on existing ambient waterborne noise levels. The IAS could have temporary minor adverse impacts on marine organisms at a location where the IAS is operating. Beneficial impacts on public safety could occur from the installation and operation of the IAS. The NEPA process for this project complete and a FONSI statement was issued for this action.
Nationwide Automatic Identification System (NAIS) Project	The USCG is preparing a Programmatic Environmental Impact Statement (PEIS) for the NAIS project. The NAIS project involves installing Automatic Identification System (AIS) equipment and related support systems on and around communications towers or other structures along 95,000 miles of coastline and inland rivers. The NAIS would facilitate ship-to-ship, ship-to-shore, and shore-to-ship communication, including vessel position, speed, course, destination, and other data of critical interest for maritime safety and security. The information provided by this system will support national maritime interests—from the safety of ports through collision avoidance, to the safety of the nation through detection and classification of vessels when they are still thousands of miles offshore. The NAIS would not be a source of underwater noise and would likely provide beneficial impacts on marine transportation and public safety. The USCG was given rulemaking authority to implement AIS requirements under the Maritime Transportation Security Act of 2002. The NAIS Final EIS was published in October 2006, and the Record of Decision (ROD) was published on November 6, 2006.
PEIS on the Future of the USCG Long Range Aids to Navigation (LORAN-C) Program	The USCG is preparing a PEIS to assess the potential environmental impacts of a range of options associated with the future of the USCG LORAN-C Program. LORAN-C is a radionavigation system first developed during World War II and operated by the USCG. The current system (LORAN-C) is a low-frequency hyperbolic radionavigation system approved for use in the U.S. Coastal Confluence Zone and as a supplemental air navigation aid. The LORAN-C signal can be used for navigation,

Proposed, Existing, or Reasonably Foreseeable Action	Description
	location, and timing services for civilian and military air, land, and marine users. LORAN-C is approved as an en route supplemental air navigation system for both Instrument Flight Rule and Visual Flight Rule operations. The USCG North American LORAN-C signal is transmitted and monitored from 18 LORAN-C stations and 17 monitoring sites in the Continental U.S. and six LORAN-C stations and seven monitoring sites in Alaska. Since 1997, the official policy of the U.S. Government has been to “operate the LORAN-C system in the short term while evaluating the long-term need for the system” (Department of Defense <i>et al.</i> 2005). In April 2003, the USCG, Department of Transportation (DOT), and the Federal Aviation Administration (FAA) entered into a Memorandum of Agreement that the USCG would disestablish the system by the end of Fiscal Year (FY) 2008 if a national policy requiring LORAN-C as a multi-modal backup to the Global Positioning System (GPS) was not established. More recently, there has been a determination that an enhanced Long Range Aids to Navigation (eLORAN) system would be well-suited to provide a complementary means of positioning, navigation, and timing (PNT) for critical infrastructure reliant upon GPS to mitigate the effects of a GPS outage. While LORAN-C is no longer needed for maritime navigation, the system, with modifications, is well suited to field eLORAN. Therefore, upon enacting the FY 2007 and 2008 Appropriations Acts for the U.S. Department of Homeland Security (DHS) and USCG, Congress has assumed continuation of LORAN-C until a coordinated agreement on the future of the program is reached by the Executive Branch.
EIS for USCG Pacific Area Operations: Districts 11 and 13	The is preparing an EIS for to develop and implement enhanced protective measures, as necessary, for marine protected species (MPS) and marine protected areas (MPAs) that occur in the Districts 11 and 13 (D11 and D13) areas of responsibility (AORs). The USCG proposes this action to aid in the fulfillment of its missions, including protection of the environment, while fulfilling USCG obligations to protect living marine resources. In accordance with NEPA, this EIS evaluates the impacts of specific USCG operations on the marine environment (maritime and coastal) within D11 and D13. The EIS analyzes the potential environmental impacts of specific USCG vessel and aircraft operations on MPS and MPAs when engaged in the following missions and activities: law enforcement, national security, search and rescue (SAR), aids to navigation (ATON), and oil pollution and vessel grounding response.

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APPENDIX D

APPLICABLE LAWS, REGULATIONS, AND EXECUTIVE ORDERS

APPENDIX D

Applicable Laws and Executive Orders ¹

Note: ¹ This table only reflects those laws and EOs that might reasonably be expected to apply to the Proposed Action and alternatives.

Other laws and EOs that are relevant include, but are not limited to:

- Abandoned Shipwreck Act, 43 U.S.C. 2102, *et seq.*
- American Indian Religious Freedom Act, 42 U.S.C. 1996, *et seq.*
- Antiquities Act, 16 U.S.C. 433, *et seq.*; Archeological Resources Protection Act, 16 U.S.C. 470 aa-ll, *et seq.*
- Architectural Barriers Act, 42 U.S.C. 4151, *et seq.*
- Community Environmental Response Facilitation Act, 42 U.S.C. 9620, *et seq.*
- Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11001–11050, *et seq.*
- Environmental Quality Improvement Act, P.L. 98-581, 42 U.S.C. 4371, *et seq.*
- Federal Records Act, 44 U.S.C. 2101–3324, *et seq.*
- Fish and Wildlife Act of 1956, P.L. 85-888, 16 U.S.C. 742, *et seq.*
- Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001, *et seq.*
- Pollution Prevention Act of 1990, 42 U.S.C. 13101-13109, *et seq.*
- Safe Drinking Water Act, P.L. 93-523, 42, U.S.C. 201, *et seq.*
- Toxic Substances Control Act, 7 U.S.C. 136, *et seq.*
- Wild and Scenic Rivers Act, P.L. 90-542, 16 U.S.C. 1271, *et seq.*
- EO 12088, *Federal Compliance with Pollution Control Standards*, 43 FR 47707, October 13, 1978, as amended by EO 12580, January 23, 1987, and revoked (in part) by EO 13148, April 21, 2000
- EO 13132, *Federalism*, August 4, 1999, 64 FR 43255
- EO 13007, *Historic Sites Act*, May 24, 1996, 16 U.S.C. 46, *et seq.*; Indian Sacred Sites, 61 FR 26771
- EO 13158, *Marine Protected Areas*, May 26, 2000, 65 FR 2490
- EO 11514, *Protection and Enhancement of Environmental Quality*, March 5, 1970, 35 FR 4247, as amended by EO 11541, July 1, 1970, 35 FR 10737 and EO 11991, May 24, 1977, 42 FR 26967
- EO 12962, *Recreational Fisheries*, June 7, 1995, 60 FR 307695

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APPENDIX E

UNDERWATER ACOUSTIC CALCULATIONS

APPENDIX E

Underwater Acoustics

Because there are too many variables to adequately assess the propagation of sound associated with all operational scenarios, site specific analyses are beyond the scope of the Programmatic Environmental Assessment (PEA). General calculations of received level of sound at a particular distance were made based on transmission loss due to spherical spreading and absorption based on frequency and temperature. The calculations were made for the maximum source levels expected for 50 kiloHertz (kHz), 70 kHz, 100 kHz, and 200 kHz (based on Table 2-1 of the PEA). Transmission loss was calculated for the various scenarios presented in **Table E-1** and the assumptions are explained in greater detail below. The results of all calculations are also presented in **Table E-1**.

Table E-1. Assumptions and Summarized Results for Received Levels Calculations

Frequency (dB)	Source Level (dB re 1μPa)	Basis for α	α (db/km)	Distance to 180 dB (m)	Distance to 160 dB (m)
50	221	Salinity = 0, T = 0	1	200	1,100
50	221	Salinity = 0, T = 20	0.5	200	1,200
50	221	Salinity = 30 ppt, Temp = -1.8 °C	11.7	200	600
50	221	Salinity = 30, Temp = 30 °C	8.39	200	700
70	221*	Salinity = 0, Temp = 0	2	200	1,000
70	221*	Salinity = 0, Temp = 20	1	200	1,200
70	221*	Salinity = 30, Temp = -1.8 °C	15.2	100	500
70	221	Salinity = 30, Temp = 30 °C	15.6	100	500
100	234	Salinity = 0, Temp = 0	5	500	1,900
100	234	Salinity = 0, Temp = 20	2	500	2,800
100	234	Salinity = 30, Temp = -1.8 °C	19.6	300	900
100	234	Salinity = 30, Temp = 30 °C	29.1	200	700
200	227	Salinity = 0, Temp = 0	20	200	600
200	227	Salinity = 0, Temp = 20	8	200	1,000
200	227	Salinity = 30, Temp = -1.8 °C	37.4	200	500
200	227	Salinity = 30, Temp = 30 °C	79.3	100	300

Note: * The source levels of 221 dB re 1μPa at 1m is not an actual value but a hypothetical upper limit.

The equation that relates transmission to distance from the source for spherical spreading is

$$TL = 20 \log R$$

Equation 1

Where TL = transmission loss and R = range or distance.

Absorption is caused when acoustic energy is converted into heat or other forms of energy reduction and represents a loss of acoustic energy to the medium through which sound travels. The absorption coefficient (α) is sound energy loss in dB/km and is based on the work of Francois and Garrison (Francois and Garrison 1982). In Francois and Garrison 1982, Table IV reports that at 30 ppt at -1.8 °C and 30 °C for 50 kHz, 70 kHz, 100 kHz, and 200 kHz and Figure 8 for pure water extrapolated that at 30 ppt at 0 °C and 20 °C for 50 kHz, 70 kHz, 100 kHz, and 200 kHz. Both Table IV and Figure 8 assume a depth of 0. The variation with depth of absorption for the Regions of Influence (ROIs) will not be a significant factor. As stated above, absorption is related to salinity, temperature, and depth. There are too many potential operational scenarios to analyze. It is assumed that operations could occur throughout the full range of salinities, bottom types, temperatures, and depths that occur in each ROI.

The received level is the sound level at the listener's position which is more distant than the source level (source level is the intensity 1 meter from the source). Underwater loudness decreases rapidly with increasing distance from the source to the receiver. This decrease is primarily dependent on transmission loss and absorption can be calculated using the following equations (Richardson et al. 1995):

For spherical spreading

$$RL = SL - 20\log R - \alpha R - 60$$

Equation 2

where RL is the received level at range R (km) in dB re μ Pa, SL is the source level in dB re μ Pa, α is the absorption coefficient in dB/m multiplied by the range, and -60 is a conversion factor related to the change in range units from SL at 1 m to RL at R km; it represents spherical spreading (in dB between 1m and 1 km) (Richardson et al. 1995).

References

Richardson et al. 1995	Richardson, W.J., C.R. Greene, C.I. Malme, and H.H. Thomson. 1995. <i>Marine Mammals and Noise</i> . New York, NY: Academic Press.
Francois and Garrison 1982	R.E. Francois and G.R. Garrison. 1982. Sound absorption based on ocean measurements. Part II: Boric acid contribution and equation for total absorption. <i>Journal of Acoustical Society of America</i> 72(6): 1879-1890.

APPENDIX F

BIOLOGICAL RESOURCES TABLES

Table F-1. Marine Protected Areas in the Northeast ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Carl N. Shuster, Jr. Horseshoe Crab Reserve	Federal	2001	UML	YP	NHSP	ResAll
Blue Crab Sanctuary	State	1994	UML	YP	SP	UnRstr
Tuckahoe Wildlife Management Area	State	1993	UML	YP	NHSP	ProCom
Cape May Wetlands Wildlife Management Area	State	1956	UML	YP	NHSP	ResRec
Chincoteague Bay Submerged Aquatic Vegetation Sanctuary	State	1998	UML	SP	NH	UnRstr
Oyster Management Areas	State	1993	UML	YP	SP	UnRstr
Mad Horse Creek Wildlife Management Area	State	1957	UML	YP	NHSP	ResRec
Egg Island Wildlife Management Area	State	1947	UML	YP	SP	ResRec
Dennis Creek Wildlife Management Area	State	1957	UML	YP	NHSP	ResRec
Heislerville Wildlife Management Area	State	1956	UML	YP	NHSP	ResRec
Great Bay Boulevard Wildlife Management Area	State	1974	ZML	YP	NHSP	ResRec
Absecon Wildlife Management Area	State	1966	UML	YP	SP	ProCom
Cape May wetlands State Natural Area	State	1978	UML	YP	NH	ProCom
Hampton Flats Hard Clam Harvest Area	State	2001	ZML	YP	SP	NoRstr
Mockhorn Island Wildlife Management Area	State	1959	ZML	YP	SP	NoRstr
New Sweden Wildlife Management Area	State	1986	UML	YP	SP	ResRec
Nantuxent Wildlife Management Area	State	1963	UML	YP	NHSP	ResRec
Fortescue Wildlife Management Area	State	1965	UML	YP	NHSP	ResRec
North Brigantine State Natural Area	State	1978	UML	YP	NH	ProCom
Hog Island Wildlife Management Area	State	1950	ZML	YP	SP	ProAll
Saxis (and Guard Shore) Wildlife Management Area	State	1957	UML	YP	SP	NoRstr
Pork Island Wildlife Management Area	State	1991	UML	YP	SP	ProCom
Sedge Islands Wildlife Management Area	State	1979	UML	YP	SP	ProCom
Swan Point State Natural Area	State	1978	UML	YP	NH	ProCom
Corson's Inlet State Park	State	1970	ZML	YP	NH	ProCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Princess Anne (and Guard Shore) Wildlife Management Area	State	1963	UML	SP	SP	ResAll
Wreck Island Natural Area Preserve	State	1991	UML	YP	NH	ProCom
Ragged Island Wildlife Management Area	State	1977	UML	YP	SP	ProAll
North Landing River Natural Area Preserve	State	1990	UML	YP	NH	ProCom
Parkers Marsh Natural Area Preserve	State	1999	ZML	YP	NH	ProCom
Malibu Beach Wildlife Management Area	State	1993	UML	YP	SP	ResRec
Dameron Marsh Natural Area Preserve	State	1998	UML	YP	NH	NoRstr
Upper Barnegat Bay Wildlife Management Area	State	1995	UML	YP	SP	ProCom
New Point Comfort Natural Area Preserve	State	1997	UML	YP	NH	NoRstr
Hughlett Point Natural Area Preserve	State	1997	UML	YP	NH	NoRstr
Cape Charles Coastal Habitat Natural Area Preserve	Partnership	1997	NTL	YP	NH	ProCom
Savage Neck Dunes Natural Area Preserve	State	1999	ZML	YP	NH	ResCom
Susquehanna National Wildlife Refuge	Federal	1939	UML	YP	NH	ProAll
William B. Trower Bayshore Natural Area Preserve	State	1996	UML	YP	NH	ProCom
Jacques Cousteau National Estuarine Research Reserve	Partnership	1998	UML	YP	NH	ResAll
Dix Wildlife Management Area	State	1962	UML	YP	NHSP	ResRec
Assateague Island National Seashore	Federal	1965	ZML	YP	NHCH	ResAll
Barnegat Lighthouse State Park	State	1957	UML	YP	NH	ProCom
Higbee Beach Wildlife Management Area	State	1978	UML	YP	NH	ResRec
Island Beach State Park	State	1953	ZML	YP	NH	ProCom
Albemarle Sound Herring Management Area	State	2000	UML	SP	NHSP	ResCom
Northwest River Marsh Game Land	State	1971	UML	YP	NHSP	NoRstr
Mid-Atlantic Coastal Waters Area	Federal	1997	UML	SP	NHSP	ResCom
Southern Mid-Atlantic Waters Closure Area	Federal	1999	UML	SP	NHSP	ResCom
Currituck National Wildlife Refuge	Federal	1984	UML	YP	NHSP	ProAll
Delaware National Estuarine Research Reserve	Partnership	1993	UML	YP	NH	UnRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Chesapeake Bay National Estuarine Research Reserve Virginia	Partnership	1991	ZML	YP	NH	UnRstr
Back Bay National Wildlife Refuge	Federal	1938	ZML	YP	NHSP	ProCom
Cape May National Wildlife Refuge	Federal	1989	UML	YP	NHSP	ProCom
Chincoteague National Wildlife Refuge	Federal	1943	ZML	YP	NHSP	ProCom
Blackwater National Wildlife Refuge	Federal	1933	UML	YP	NH	ResCom
Bombay Hook National Wildlife Refuge	Federal	1937	UML	YP	NHSP	ResCom
Edwin B. Forsythe National Wildlife Refuge	Federal	1939	ZNL	YP	NHSP	ProCom
Eastern Neck National Wildlife Refuge	Federal	1962	UML	YP	NH	ProCom
Eastern Shore of Virginia National Wildlife Refuge	Federal	1984	UML	YP	NHCHSP	ProAll
Fisherman Island National Wildlife Refuge	Federal	1969	UML	YP	NH	ProAll
Martin National Wildlife Refuge	Federal	1995	UML	YP	NH	ProAll
Plum Tree Island National Wildlife Refuge	Federal	1972	ZNL	YP	NHSP	ProAll
Prime Hook National Wildlife Refuge	Federal	1963	UML	YP	NHSP	ResAll
Supawna Meadows National Wildlife Refuge	Federal	1934	UML	YP	NH	ResCom
Wallops Island National Wildlife Refuge	Federal	1971	UML	YP	NH	ProAll
Assawoman Wildlife Area	State	1943	ZML	YP	NHSP	NoRstr
Augustine Wildlife Area	State	1964	ZML	YP	NHSP	NoRstr
Cedar Swamp Wildlife Area	State	1981	ZML	YP	NHSP	NoRstr
Little Creek Wildlife Area	State	1957	ZML	YP	NHSP	NoRstr
Ted Harvey Conservation Area (Wildlife Area)	State	1979	ZML	YP	NHSP	NoRstr
Woodland Beach Wildlife Area	State	1953	ZML	YP	NHSP	NoRstr
Cape Henlopen State Park	State	1964	ZML	YP	NHSP	ResRec
Oyster Bay National Wildlife Refuge	Federal	1968	UML	YP	NHSP	ProCom
Liberty State Park	State	1976	ZML	YP	NHCH	ProCom
Gateway National Recreation Area	Federal	1972	ZML	YP	NHCH	ResAll
Fire Island National Seashore	Federal	1964	ZML	YP	NHCH	ResAll
GOM Rolling Closure Area I	Federal	1998	UML	RP	SP	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Georges Bank Seasonal Closure Area	Federal	2000	UML	SP	SP	ResCom
Mid-Coast Closure Area	Federal	1998	UML	SP	NHSP	ResCom
Cape Cod South Closure Area	Federal	1998	UML	SP	NHSP	ResCom
Northeast Closure Area	Federal	1999	UML	SP	NHSP	ResCom
Stellwagen Bank/Jeffreys Ledge Restricted Area	Federal	1997	UML	YP	NHSP	ResCom
SAM West	Federal	2002	UML	SP	NHSP	ResCom
Nantucket Lightship Habitat Closure Area	Federal	2004	UML	YP	NHSP	ResCom
Western Gulf of Maine Closure Area	Federal	1998	UML	YP	SP	ResAll
Cape and Islands Ocean Sanctuary	State	1971	UML	YP	NH	NoRstr
Massachusetts Bay Closure Area	Federal	1998	UML	SP	NHSP	ResCom
Western Gulf of Maine Habitat Closure Area	Federal	2004	UML	YP	NHSP	ResCom
Gerry E. Studds/Stellwagen Bank National Marine Sanctuary	Federal	1992	UML	YP	NHCH	NoRstr
Right Whale Critical Habitat and Adjacent Waters Restricted Gear Area	State	2003	UML	SP	NH	ResCom
Cape Cod Bay Year-Round Fish Pot Trawl Floating Ground Line Prohibition Area	State	2000	UML	SP	NH	ResCom
Cape Cod Bay Restricted Area	Federal	1997	ZML	YP	NHSP	ResCom
Cape Cod Bay Ocean Sanctuary	State	1971	UML	SP	NH	NoRstr
Winter Flounder Spawning Closure Area	State	1985	UML	SP	SP	ResAll
North Shore Groundfish Closure Area	State	0	UML	SP	SP	ResCom
Jeffrey's Bank Habitat Closure Area	Federal	2004	UML	YP	NHSP	ResCom
Cape Cod Ocean Sanctuary	State	1970	UML	SP	NH	NoRstr
North Shore Ocean Sanctuary	State	1972	UML	SP	NH	NoRstr
South Essex Ocean Sanctuary	State	1976	UML	SP	NH	NoRstr
Parker River/Essex Bay Area of Critical Environmental Concern	State	1979	UML	YP	NH	NoRstr
Upper Narragansett Bay	State	2003	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Sandy Neck/Barnstable Harbor Area of Critical Environmental Concern	State	1978	UML	YP	NH	NoRstr
Wellfleet Harbor Area of Critical Environmental Concern	State	1989	UML	YP	NH	NoRstr
Monomoy National Wildlife Refuge	Federal	1944	ZML	YP	NHSP	ResCom
Sakonnet River	State	1995	UML	YP	SP	ResAll
Pleasant Bay Area of Critical Environmental Concern	State	1987	UML	YP	NH	NoRstr
Greenwich Bay	State	1987	UML	YP	SP	ResAll
Rumney Marshes Area of Critical Environmental Concern	State	1988	UML	YP	NH	NoRstr
Inner Cape Cod Bay Area of Critical Environmental Concern	State	1985	UML	YP	NH	NoRstr
West Bay Seed Mussel Conservation Area	State	1982	UML	YP	SP	ResAll
Waquoit Bay Area of Critical Environmental Concern	State	1979	UML	YP	NH	NoRstr
Weir River Area of Critical Environmental Concern	State	1986	UML	YP	NH	NoRstr
Potowomut River	State	1995	UML	YP	SP	ResAll
Harrington River Seed Mussel Conservation Area	State	1982	UML	YP	SP	ResAll
Narraguagus Bay Seed Mussel Conservation Area	State	1982	UML	YP	SP	ResAll
High Banks	State	1998	UML	YP	SP	ResAll
Hammonasset Beach State Park	State	1920	ZML	YP	NH	ResRec
Great Island Wildlife Area/Roger Tory Peterson Natural Area Preserve	State	1931	UML	YP	NH	ResRec
Horseneck Beach State Reservation	State	1957	UML	SP	NH	ResRec
Neponset River Estuary Area of Critical Environmental Concern	State	1995	UML	YP	NH	NoRstr
Barn Island Wildlife Management Area	State	1944	UML	YP	NHSP	NoRstr
Jordan River Seed Mussel Conservation Area	State	1982	UML	YP	SP	ResAll
Harkness Memorial State Park/William A Niering Natural Area Preserve	State	1952	UML	YP	NHCH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Boume Back River Area of Critical Environmental Concern	State	1989	UML	YP	NH	NoRstr
Silver Sands State Park/Charles Island Natural Area Preserve	State	1955	ZML	YP	NH	ResRec
Bissel Cove/Fox Island	State	1972	UML	YP	SP	ResAll
Ragged Rock Creek Marsh Wildlife Area	State	1942	UML	YP	NHSP	NoRstr
Bristol Harbor Shellfish Transplant Area	State	1979	UML	SP	SP	ResAll
Ellisville Harbor Area of Critical Environmental Concern	State	1980	UML	YP	NH	NoRstr
Bluff Point State Park/Natural Area Preserve	State	1963	ZML	YP	NH	ResRec
Hammonasset Natural Area Preserve	State	1920	UML	YP	NH	NoRstr
Six Penny Island Wildlife Area	State	0	UML	YP	NHSP	NoRstr
Milk Island (Knight) State Wildlife Sanctuary	State	1925	UML	SP	NH	NoRstr
Jenny's Creek	State	2001	UML	YP	SP	ResAll
Demarest Lloyd State Park	State	1953	UML	SP	NH	ResRec
Duck Island Wildlife Management Area/Natural Area Preserve (Westbrook)	State	1973	UML	YP	NH	NoRstr
Egg Rock (Henry Cabot Lodge) State Wildlife Sanctuary	State	1925	UML	SP	NH	NoRstr
Northern Nearshore Lobster Waters Area	Federal	1997	UML	YP	NHSP	ResCom
Wells National Estuarine Research Reserve	Partnership	1986	UML	YP	NH	ResCom
Waquoit Bay National Estuarine Research Reserve	Partnership	1988	UML	YP	NH	ResAll
Narragansett Bay National Estuarine Research Reserve	Partnership	1980	UML	YP	NH	UnRstr
Block Island National Wildlife Refuge	Federal	1973	UML	YP	NHSP	ProCom
Cross Island National Wildlife Refuge	Federal	1980	NTL	YP	NH	ResCom
Mashpee National Wildlife Refuge	Federal	1995	NAL	YP	NH	ProAll
Ninigret National Wildlife Refuge	Federal	1970	UML	YP	NHSP	ProCom
Nomans Land Island National Wildlife Refuge	Federal	1970	NAL	YP	NH	ProAll
Parker River National Wildlife Refuge	Federal	1941	UML	YP	NHSP	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Pond Island National Wildlife Refuge	Federal	1973	UML	YP	NHSP	ResCom
Rachel Carson National Wildlife Refuge	Federal	1966	UML	YP	NHSP	ProAll
Sachuest Point National Wildlife Refuge	Federal	1970	UML	YP	NHSP	ProAll
Seatuck National Wildlife Refuge	Federal	1968	NAL	YP	NH	ProCom
Stewart B. McKinney National Wildlife Refuge	Federal	1985	UML	YP	NH	ProAll
Target Rock National Wildlife Refuge	Federal	1967	UML	YP	NHSP	ProCom
Wertheim National Wildlife Refuge	Federal	1947	UML	YP	NHSP	ProCom
Albert Gallatin Exempt Site	State	1985	UML	YP	CH	NoRstr
Alice M. Colburn Exempt Site	State	1985	UML	YP	CH	NoRstr
Barge and Crane Exempt Site	State	1985	UML	YP	CH	NoRstr
Ardandau Exempt Site	State	1985	UML	YP	CH	NoRstr
California Exempt Site	State	1985	UML	YP	CH	NoRstr
Charles S. Haight Exempt Site	State	1985	UML	YP	CH	NoRstr
Chelsea Exempt Site	State	1985	UML	YP	CH	NoRstr
Chester A. Poling Exempt Site	State	1985	UML	YP	CH	NoRstr
City of Salisbury Exempt Site	State	1985	UML	YP	CH	NoRstr
Corvan Exempt Site	State	1985	UML	YP	CH	NoRstr
Dixie Sword Exempt Site	State	1985	UML	YP	CH	NoRstr
Edwin Rich Exempt Site	State	1985	UML	YP	CH	NoRstr
Van Gilder Exempt Site	State	1985	UML	YP	CH	NoRstr
U.S.S. Grouse Exempt Site	State	1985	UML	YP	CH	NoRstr
Herbert Exempt Site	State	1985	UML	YP	CH	NoRstr
Henry Endicott Exempt Site	State	1985	UML	YP	CH	NoRstr
Herman Winter Exempt Site	State	1985	UML	YP	CH	NoRstr
Hilda Garston Exempt Site	State	1985	UML	YP	CH	NoRstr
James S. Longstreet Exempt Site	State	1985	UML	YP	CH	NoRstr
John Dwight Exempt Site	State	1985	UML	YP	CH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Kershaw Exempt Site	State	1985	UML	YP	CH	NoRstr
Kiowa Exempt Site	State	1985	UML	YP	CH	NoRstr
Lackawana Exempt Site	State	1985	UML	YP	CH	NoRstr
Mars Exempt Site	State	1985	UML	YP	CH	NoRstr
Pemberton Exempt Site	State	1985	UML	YP	CH	NoRstr
Pendelton Exempt Site	State	1985	UML	YP	CH	NoRstr
Pinthis Exempt Site	State	1985	UML	YP	CH	NoRstr
Port Hunter Exempt Site	State	1985	UML	YP	CH	NoRstr
Pottstown Exempt Site	State	1985	UML	YP	CH	NoRstr
Romance Exempt Site	State	1985	UML	YP	CH	NoRstr
Seaconnet Exempt Site	State	1985	UML	YP	CH	NoRstr
H.M.C.S. Saint Clair Exempt Site	State	1985	UML	YP	CH	NoRstr
Trojan Exempt Site	State	1985	UML	YP	CH	NoRstr
U.S.S. New Hampshire Exempt Site	State	1985	UML	YP	CH	NoRstr
U.S.S. Triana Exempt Site	State	1985	UML	YP	CH	NoRstr
U.S.S. Yankee Exempt Site	State	1985	UML	YP	CH	NoRstr
U.S.S. YSD Exempt Site	State	1985	UML	YP	CH	NoRstr
Vineyard Sound Lightship Exempt Site	State	1985	UML	YP	CH	NoRstr
Acadia National Park	Federal	1916	UML	YP	NHCH	ResAll
Cape Cod National Seashore	Federal	1961	UML	YP	NHCH	ResAll
Governor Alfred E. Smith/Sunken Meadow State Park	State	1928	UML	YP	NH	NoRstr
Bayswater Point State Park	State	1988	UML	YP	NH	NoRstr
Camp Hero State Park	State	2002	UML	YP	NH	NoRstr
Captree State Park	State	1954	UML	YP	NH	NoRstr
Caumsett State Historic Park	State	1961	UML	YP	NH	NoRstr
Gilgo State Park	State	0	UML	YP	NH	NoRstr
Heckscher State Park	State	0	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Hiher Hills State Park	State	0	UML	YP	NH	NoRstr
Jones Beach State Park	State	1929	UML	YP	NH	NoRstr
Montauk Point State Park	State	0	UML	YP	NH	NoRstr
Napeague State Park	State	1986	UML	YP	NH	NoRstr
Orient Beach State Park	State	0	UML	YP	NH	NoRstr
Robert Moses State Park - Long Island	State	0	UML	YP	NH	NoRstr
Shadmoor State Park	State	1991	UML	YP	NH	NoRstr
Wildwood State Park	State	0	UML	YP	NH	NoRstr
Salt Pond Region	State	1984	UML	YP	NH	ResAll
Mid-Atlantic Coastal Waters Area	Federal	1997	UML	SP	NHSP	ResCom
Waters off New Jersey Closure	Federal	1999	UML	SP	NHSP	ResCom
Mudhole Closure	Federal	1999	UML	SP	NHSP	ResCom
Southern Nearshore Lobster Waters	Federal	1997	UML	YP	NHSP	ResCom
Offshore Lobster Waters	Federal	1997	UML	YP	NHSP	ResCom
Other Northeast Gillnet Waters Area	Federal	1997	UML	YP	NH	ResCom
Northern Inshore State Lobster Waters Area	Federal	1997	UML	YP	NHSP	ResCom

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commerical Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Table F-2. Marine Protected Areas in the Southeast ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Padre Island National Seashore	Federal	1962	ZNL	YP	NHCH	ProCom
Boca Chica State Park	State	1994	UML	YP	NH	ResRec
Mustang Island State Park	State	1974	UML	YP	NHCHSP	NoRstr
Bahia Honda State Park	State	1961	UML	YP	NHSP	ResAll
Curry Hammock State Park	State	1991	UML	YP	NHSP	ResAll
Fort Zachary Taylor State Historic Site	State	1976	UML	YP	NHCHSP	ResAll
Indian Key State Historic Site	State	1970	UML	YP	NHCHSP	ResAll
Lignumvitae Key Botanical State Park	State	1971	UML	YP	NHCHSP	ResAll
Long Key State Recreation Area	State	1961	UML	YP	NHSP	ResAll
Bahia Honda State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Coupon Bight Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Coupon Bight Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Curry Hammock Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Fort Zachary Taylor State Historic Site Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Indian Key State Historic Site Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Key West National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Lignumvitae Key Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Looe Key National Marine Sanctuary Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Lignumvitae Key Botanical State Park Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
San Pedro State Underwater Archaeological Preserve State Park Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Coupon Bight Aquatic Preserve	State	1969	ZML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Lignumvitae Key Aquatic Preserve	State	1969	ZML	YP	NH	NoRstr
San Pedro Underwater Archaeological Preserve State Park	State	1989	NTL	YP	NHCHSP	ProAll
Great White Heron National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
National Key Deer Refuge	Federal	1954	NTL	YP	NH	ProAll
Great White Heron National Wildlife Refuge	Federal	1938	UML	YP	NHSP	ProAll
Key West National Wildlife Refuge	Federal	1908	UML	YP	NHSP	ProAll
Florida Keys Wildlife and Environmental Area	State	1969	UML	YP	NHSP	NoRstr
National Key Deer National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Long Key State Recreation Area Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Rookery Bay National Estuarine Research Reserve	Partnership	1978	UML	YP	NH	NoRstr
Fakahatchee Strand State Preserve	State	1974	UML	YP	NHSP	ResAll
Rookery Bay Aquatic Preserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Rookery Bay Aquatic Preserve	State	1975	UML	YP	NH	NoRstr
Cape Romano - Ten Thousand Islands Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
Cape Romano- Ten Thousand Islands Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Ten Thousand Islands National Wildlife Refuge	Federal	1996	UML	YP	NHSP	ProCom
Estero Bay Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Maximum 30 MPH in Channel/Slow Speed or 20 MPH Outside Channel Manatee Protection Zones	State	1991	UML	SP	NH	ResCom
Rookery Bay Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Estero Bay Preserve State Park	State	1987	UML	YP	NH	ResAll
Estero Bay Aquatic Preserve	State	1966	UML	YP	NH	NoRstr
Estero Bay Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Maximum 30 MPH Manatee Protection Zones	State	1991	UML	YP	NH	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
J.N. Ding Darling National Wildlife Refuge	Federal	1945	UML	YP	NHSP	ProCom
Estero Bay Tributaries Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Collier-Seminole State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Collier-Seminole State Park	State	1944	UML	YP	NHSP	ResAll
J.N. Ding Darling National Wildlife Refuge/Sanibel Conservation Zone	State	1993	UML	YP	NH	ResAll
J.N. Ding Darling National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Wiggins Pass Estuarine Area and Cocohatchee River System Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Lovers Key State Recreation Area	State	1983	UML	YP	NHSP	ResAll
Lovers Key State Recreation Area Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Delnor-Wiggins Pass State Recreation Area	State	1970	UML	YP	NHSP	ResAll
Delnor-Wiggins Pass State Recreation Area Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Barefoot Beach Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Mound Key Archaeological State Park	State	1961	UML	YP	NHSP	ResAll
Matlacha Pass National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Bill Baggs Cape Florida State Park	State	1966	UML	YP	NHSP	ResAll
Hugh Taylor Birch State Recreation Area	State	1941	UML	YP	NHSP	ResAll
John U. Lloyd Beach State Park	State	1973	UML	YP	NHSP	ResAll
Key Largo Hammock State Botanical Site	State	1982	UML	YP	NHSP	ResAll
Oleta River State Park	State	1980	UML	YP	NHSP	ResAll
The Barnacle Historic State Park	State	1973	UML	YP	NHSP	ResAll
Bill Baggs Cape Florida State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Hugh Taylor Birch State Recreation Area Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
North Key Largo Hammock Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Oleta River State Park Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Biscayne Bay Aquatic Preserve	State	1974	ZNL	YP	NH	NoRstr
Crocodile Lake National Wildlife Refuge Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Biscayne National Park	Federal	1968	ZML	YP	NHCH	ResAll
Biscayne Bay Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Biscayne National Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
John U. Lloyd Beach State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Biscayne National Park, Sponge Harvest Prohibited Area	State	1991	UML	YP	NH	ResCom
Crocodile Lake National Wildlife Refuge	Federal	1980	NAL	YP	NH	ProAll
Rookery Bay National Estuarine Research Reserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Cocohatchee River System Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Gasparilla Sound - Charlotte Harbor Aquatic Preserve	State	1979	UML	YP	NH	NoRstr
Gasparilla Sound-Charlotte Harbor Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Sarasota Bay Estuarine System Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Terra Ceia Aquatic Preserve	State	1983	UML	YP	NH	NoRstr
Terra Ceia Aquatic Preserve Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Boca Ciega Bay Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Boca Ciega Bay Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
Cape Haze Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Cape Haze Aquatic Preserve	State	1975	UML	YP	NH	NoRstr
Lemon Bay Estuarine System Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Little Manatee River Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Lemon Bay Aquatic Preserve	State	1986	ZML	YP	NH	NoRstr
Lemon Bay Aquatic Preserve Outstanding Florida Water	State	1988	UML	YP	NH	NoRstr
Cockroach Bay Aquatic Preserve	State	1976	UML	YP	NH	NoRstr
Cockroach Bay Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Terra Ceia Preserve State Park	State	1998	UML	YP	NHSP	ResAll
Weedon Island State Preserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Cockroach Bay Preserve State Park	State	1997	UML	YP	NHSP	ResAll
Pinellas National Wildlife Refuge	Federal	1951	NAL	YP	NH	ProCom
Pinellas National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Pine Island National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Stump Pass Beach State Park	State	1971	UML	YP	NHSP	ResAll
Idle Speed (Fall to Spring) Manatee Protection Zones	State	1991	UML	SP	NH	ResCom
Port Charlotte Beach State Recreation Area Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Don Pedro Island State Park	State	1985	UML	YP	NHSP	ResAll
Don Pedro Island State Park Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Gasparilla Island State Park Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Gasparilla Island State Park	State	1983	UML	YP	NHSP	ResAll
Island Bay National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Island Bay National Wildlife Refuge	Federal	1908	UML	YP	NHSP	ProAll
Caloosahatchee National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Slow Speed (Fall to Spring, Variable Regulations) Manatee Protection Zones	State	1991	UML	SP	NH	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Charlotte Harbor State Reserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Avalon State Park	State	1985	ZML	YP	NHSP	ResAll
Fort Pierce Inlet State Recreation Area	State	1963	UML	YP	NHSP	ResAll
John D. MacArthur Beach State Park	State	1981	UML	YP	NHSP	ResAll
Avalon State Park Outstanding Florida Water	State	1988	UML	YP	NH	NoRstr
Fort Pierce Inlet State Recreation Area Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Hobe Sound National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Jensen Beach to Jupiter Inlet Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
John D. MacArthur Beach State Park Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Pelican Island National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Sebastian Inlet State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Lucie Inlet Preserve State Park Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Indian River - Vero Beach to Ft. Pierce Aquatic Preserve	State	1969	UML	YP	NHSP	NoRstr
Jensen Beach to Jupiter Inlet Aquatic Preserve	State	1969	ZML	YP	NHSP	NoRstr
Indian River North Beach Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Martin County Tracts Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Pelican Island National Wildlife Refuge	Federal	1903	UML	YP	NHSP	ProCom
Indian River Lagoon Preserve State Park	State	2000	UML	YP	NH	ResAll
Indian River - Vero Beach to Ft. Pierce Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Sebastian Inlet State Park	State	1966	UML	YP	NHSP	ResAll
St. Lucie Inlet Preserve State Park	State	1965	UML	YP	NHSP	ResAll
Southeast U.S. Monitoring Area	Federal	1997	UML	SP	NHSP	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Egmont Key National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Passage Key National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Emerson Point Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Atchafalaya Delta Wildlife Management Area and Game Preserve	State	1977	UML	YP	NH	ResAll
Anahuac National Wildlife Refuge	Federal	1963	UML	YP	NHSP	ProCom
Brazoria National Wildlife Refuge	Federal	1966	UML	YP	NHSP	ProCom
Peach Point WMA	State	1985	UML	YP	NH	UnRstr
Rockefeller Wildlife Management Area and Game Preserve	State	1920	UML	YP	NHSP	ProCom
Aransas National Wildlife Refuge	Federal	1937	UML	YP	NH	ProCom
Marsh Island Wildlife Management Area and Game Preserve	State	1920	UML	YP	NHSP	ProCom
Sea Rim State Park	State	1973	UML	YP	NH	UnRstr
San Bernard National Wildlife Refuge	Federal	1968	ZNL	YP	NHSP	ProCom
State Wildlife Management Area and Game Preserve	State	1911	UML	YP	NHSP	ProCom
Galveston Island State Park	State	1969	UML	YP	NHCHSP	UnRstr
Isles Dernieres Barrier Islands Refuge	State	1997	UML	YP	NHSP	ProCom
Goose Island State Park	State	1931	UML	YP	NHCHSP	UnRstr
Candy Abshier Wildlife Management Area	State	1990	NLT	YP	NH	UnRstr
Altamaha Wildlife Management Area	State	1955	UML	YP	NHSP	ProCom
Egg Island Bar Natural Area	State	1998	NAL	YP	NH	ProAll
Little Tybee Island/Cabbage Island Natural Area	State	1992	UML	YP	NH	ProCom
Ossabaw Island Wildlife Management Area	State	1978	UML	YP	NHCH	UnRstr
Pelican Spit Natural Area	State	1998	NAL	YP	NH	UnRstr
Sapelo Island Wildlife Management Area	State	1969	UML	YP	NHSP	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Satilla River Marsh Island Natural Area	State	1998	NAL	YP	NH	ProAll
St. Catherine's Bar Natural Area	State	1998	NAL	YP	NH	ProAll
Big Bend Seagrasses Aquatic Preserve	State	1985	UML	YP	NH	NoRstr
Big Bend Seagrasses Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Apalachicola National Estuarine Research Reserve	Partnership	1979	UML	YP	NH	ResAll
Apalachicola River Outstanding Florida Water	State	1984	UML	YP	NH	NoRstr
Gulf Islands National Seashore	Federal	1971	UML	YP	NHCH	ResAll
Pass a Loutre Wildlife Management Area	State	1921	UML	YP	NHSP	ResAll
Apalachicola Bay Aquatic Preserve Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Apalachicola Bay Aquatic Preserve	State	1969	ZML	YP	NH	NoRstr
Big Bend Coastal Tract Outstanding Florida Water	State	1988	UML	YP	NH	NoRstr
Lower Suwannee National Wildlife Refuge	Federal	1979	UML	YP	NHSP	ProCom
Suwannee River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Big Bend Wildlife Management Area	State	1987	UML	YP	SP	ResCom
St. Marks National Wildlife Refuge	Federal	1931	UML	YP	NHSP	ProCom
St. Joseph Bay Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Joseph Bay Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
St. Marks National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Apalachicola River Wildlife and Environmental Area	State	1974	UML	YP	NH	NoRstr
Chassahowitzka National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Ochlocknee River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Delta National Wildlife Refuge	Federal	1935	UML	YP	NHSP	ProCom
Apalachicola National Estuarine Research Reserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Lower Suwannee River National Wildlife Refuge Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Chassahowitzka National Wildlife Refuge	Federal	1943	UML	YP	NHSP	ProCom
Point Washington Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Martins Marsh Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Martins Marsh Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
Fort Pickens State Park Aquatic Preserve	State	1970	ZML	YP	NH	NoRstr
Fort Pickens State Park Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Crystal River Preserve State Park	State	1974	UML	YP	NHSP	ResAll
St. Martins River Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Crystal River, including Kings Bay Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Crystal River National Wildlife Refuge Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
St. Andrews State Park Aquatic Preserve	State	1972	ZML	YP	NH	NoRstr
St. Andrews State Park Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Hancock County Marsh Coastal Preserve	State	1992	UML	YP	NH	ResAll
Pascagoula River Marsh Coastal Preserve	State	1992	UML	YP	NH	ResAll
Grand Bay National Estuarine Research Reserve	Partnership	1999	UML	YP	NH	ResAll
Grand Bay National Wildlife Refuge	Federal	1992	UML	YP	NHSP	ProAll
Breton National Wildlife Refuge	Federal	1904	UML	YP	NHSP	ProCom
Yellow River Marsh Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Yellow River Marsh Aquatic Preserve	State	1970	ZML	YP	NH	NoRstr
Alligator Harbor Aquatic Preserve	State	1969	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Alligator Harbor Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Choctawhatchee River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Vincent (including Pig Island Unit) National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
St. Vincent National Wildlife Refuge	Federal	1968	UML	YP	NHSP	ProCom
Gulf Islands National Seashore Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Grand Bay Savannah Coastal Preserve	State	1992	UML	YP	NH	ResAll
Perdido River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Chassahowitzka River and Tributaries Outstanding Florida Water	State	1993	UML	YP	NH	NoRstr
Crystal River National Wildlife Refuge	Federal	1983	UML	YP	NHSP	ProAll
Bon Secour National Wildlife Refuge	Federal	1980	UML	YP	NHSP	ProCom
Weeks Bay National Estuarine Research Reserve	Partnership	1986	UML	YP	NH	NoRstr
Homosassa River and Tributaries Outstanding Florida Water	State	1993	UML	YP	NH	NoRstr
Jourdan River Coastal Preserve	State	1992	UML	YP	NH	ResAll
Waccasassa Bay State Preserve	State	1971	UML	YP	NHSP	ResAll
Waccasassa Bay State Preserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
St. Joseph Bay State Buffer Preserve	State	1995	NTL	YP	NH	NoRstr
St. Marks River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Cedar Key Scrub Wildlife Management Area	State	1978	UML	YP	SP	NoRstr
Cedar Key Scrub State Reserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Cedar Key Scrub State Reserve	State	1978	UML	YP	NHSP	ResAll
Econfina River Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Econfina River State Park	State	1987	UML	YP	NHSP	ResAll
Werner-Boyce Salt Springs State Park	State	1992	UML	YP	NH	ResAll
Wolf River Marsh Coastal Preserve	State	1992	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Wetstone/Berkovitz Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Honeymoon Island State Recreation Area	State	1974	UML	YP	NHSP	ResAll
Honeymoon Island State Recreation Area Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
T.H. Stone Memorial St. Joseph Peninsula State Park	State	1964	ZML	YP	NHSP	ResAll
T.H. Stone Memorial St. Joseph Peninsula State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Stoney-Lane Outstanding Florida Water	State	1990	UML	YP	NH	NoRstr
Cape St. George State Reserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Graveline Bay Coastal Preserve	State	1992	UML	YP	NH	ResAll
Grayton Beach State Park	State	1964	UML	YP	NHSP	ResAll
Davis Bayou Coastal Preserve	State	1992	UML	YP	NH	ResAll
Dr. Julian G. Bruce State George Island State Park Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Dr. Julian G. Bruce St. George Island State Park	State	1963	UML	YP	NHSP	ResAll
Deer Lake State Park	State	1996	UML	YP	NHSP	ResAll
Bald Point State Park	State	1999	UML	YP	NHSP	ResAll
Topsail Hill Preserve State Park	State	1992	UML	YP	NHSP	ResAll
Old Fort Bayou Coastal Preserve	State	1992	UML	YP	NH	ResAll
Bellefontaine Marsh Coastal Preserve	State	1992	UML	YP	NH	ResAll
St. Andrews State Recreation Area	State	1946	UML	YP	NHSP	ResAll
St. Andrews State Recreation Area Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Bayou Portage Coastal Preserve	State	1992	UML	YP	NH	ResAll
Tarklin Bayou State Preserve	State	1997	UML	YP	NHSP	ResAll
Withlacoochee Riverine & Lake System Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Cedar Keys National Wildlife Refuge	Federal	1929	UML	YP	NHSP	ProCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Yellow River Marsh Preserve State Park	State	1970	UML	YP	NHSP	ResAll
Cedar Keys National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Grand Bayou Coastal Preserve	State	1992	UML	YP	NH	ResAll
Deer Island Coastal Preserve	State	1992	UML	YP	NH	ResAll
Anclote Key State Preserve Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Aucilla River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Anclote Key State Park	State	1960	UML	YP	NHSP	ResAll
Perdido Key State Recreation Area Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Perdido Key State Recreation Area	State	1978	UML	YP	NHSP	ResAll
Camp Helen State Park	State	1996	UML	YP	NHSP	ResAll
Navarre Beach State Recreation Area	State	1999	UML	YP	NHSP	ResAll
Gills Tract Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Round Island Coastal Preserve	State	1992	UML	YP	NH	ResAll
Amelia Island State Recreation Area	State	1983	UML	YP	NH	ResAll
Big Talbot Island State Park	State	1982	UML	YP	NHSP	ResAll
Fort Clinch State Park	State	1935	UML	YP	NHSP	ResAll
Little Talbot Island State Park	State	1950	UML	YP	NHSP	ResAll
North Peninsula State Recreation Area	State	1984	UML	YP	NHSP	ResAll
Amelia Island State Recreation Area Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Banana River Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Big Talbot Island State Park Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Fort Clinch State Park Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Guana River Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Guana River Marsh Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Little Talbot Island State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Nassau River-St. Johns River Marshes Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
North Peninsula State Recreation Area Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Timucuan Ecological and Historic Preserve Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Washington Oaks State Gardens Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Banana River Aquatic Preserve	State	1970	UML	YP	NH	NoRstr
Fort Clinch State Park Aquatic Preserve	State	1970	UML	YP	NHCH	NoRstr
Guana River Marsh Aquatic Preserve	State	1984	ZML	YP	NHCHSP	NoRstr
Nassau River - St. Johns River Marshes Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
Crab Bank Seabird Sanctuary	State	1999	UML	YP	NH	ResRec
Tybee National Wildlife Refuge	Federal	1938	NAL	YP	NH	ProAll
Pinckney Island National Wildlife Refuge	Federal	1975	UML	YP	NHSP	ProCom
Wassaw National Wildlife Refuge	Federal	1969	UML	YP	NHSP	UnRstr
North Inlet-Winyah Bay National Estuarine Research Reserve	Partnership	1992	UML	YP	NH	NoRstr
Guana Tolomato Matanzas National Estuarine Research Reserve	Partnership	1999	UML	YP	NHCHSP	ProCom
Ashepoo-Combahee-Edisto (ACE) Basin National Estuarine Research Reserve	Partnership	1992	UML	YP	NH	ResAll
Bald Head Island State Natural Area	State	0	NLT	YP	NH	ProAll
Fort Fisher State Recreation Area	State	0	UML	YP	NHCH	ProCom
Bird Key Stono Heritage Preserve	State	1982	UML	YP	NH	ResRec
Turtle Island Wildlife Management Area	State	1975	UML	YP	NHSP	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Santee Coastal Reserve	State	1974	UML	YP	NHSP	NoRstr
Tom Yawkee Wildlife Center	State	1977	UML	YP	NH	NoRstr
Slow Speed (Spring to Fall, Variable Regulations) Manatee Protection Zones	State	1991	UML	SP	NH	ResCom
Idle Speed (Fall to Spring) Manatee Protection Zones	State	1991	UML	SP	NH	ResCom
Anastasia State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Canaveral National Seashore Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Fort Clinch State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Gamble Rogers Memorial State Recreation Area at Flagler Beach Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Merritt Island National Wildlife Refuge Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Anastasia State Park	State	1949	UML	YP	NHSP	ResAll
Zekes Island Estuarine Reserve Dedicated Nature Preserve	State	1987	UML	YP	NH	NoRstr
Sapelo Island National Estuarine Research Reserve	Partnership	1976	UML	YP	NH	ResAll
Cumberland Island National Seashore	Federal	1972	UML	YP	NHCH	ResAll
Timucuan Ecological & Historic Preserve	Partnership	1988	UML	YP	NHCH	ResRec
Fort Sumter National Monument	Federal	1948	UML	YP	NHCH	ResAll
Canaveral National Seashore	Federal	1975	UML	YP	NHCH	ResAll
Blackbeard Island National Wildlife Refuge	Federal	1924	UML	YP	NHSP	UnRstr
Cape Romain National Wildlife Refuge	Federal	1930	UML	YP	NHSP	ProCom
Merritt Island National Wildlife Refuge	Federal	1963	ZNL	YP	NHSP	ProCom
St. Helena Sound	State	1991	UML	YP	NHCH	NoRstr
Apalachicola River and Bay SWIM Area	State	1988	UML	YP	NH	NoRstr
St. Andrew Bay Watershed SWIM Area	State	1988	UML	YP	NH	NoRstr
Choctawatchee Bay SWIM Area	State	1988	UML	YP	NH	NoRstr
St. Marks River SWIM Area	State	1988	UML	YP	NH	NoRstr
Pensacola Bay SWIM Area	State	1988	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Mashes Sands Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Escambia Bay Bluffs Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Pea Island National Wildlife Refuge	Federal	1937	UML	YP	NHSP	ProCom
Swanquarter National Wildlife Refuge	Federal	1932	UML	YP	NHSP	ProAll
Cedar Island National Wildlife Refuge	Federal	1964	UML	YP	NHSP	ProAll
Cape Hatteras National Seashore	Federal	1937	UML	YP	NHCH	ResAll
Alligator River National Wildlife Refuge	Federal	1984	UML	YP	NHSP	ProCom
Albemarle Sound Herring Management Area	State	2000	UML	SP	NHSP	ResCom
Trawl Nets Prohibited Areas	State	1976	UML	YP	NHSP	ResAll
Pamlico Sound Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NH	ResAll
Croatan Game Land	State	1971	UML	YP	NHSP	ResAll
Core Sound Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Alligator River Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Onslow County Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Pamlico Sound/Juniper Bay/Northeast Swanquarter Bay Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Emily and Richardson Preyer Buckridge Coastal Reserve	State	2000	UML	YP	NH	NoRstr
Gull Rock Game Land	State	1971	UML	YP	NHSP	ResAll
Bogue Sound Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
North River Game Land	State	1971	UML	YP	NHSP	NoRstr
Buckridge Game Land	State	0	UML	YP	NHSP	UnRstr
Buckridge Coastal Reserve Dedicated Nature Preserve	State	2000	UML	YP	NH	UnRstr
Bogue Sound Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Back Sound Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Ocracoke Inlet Crab Spawning Sanctuary	State	1976	UML	SP	NHSP	ResAll
North River Game Land Dedicated Nature Preserve	State	1999	UML	YP	NH	NoRstr
North River Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Newport River Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Goose Creek Game Land	State	1997	UML	YP	NHSP	ResAll
White Oak River Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Oregon Inlet Crab Spawning Sanctuary	State	1976	UML	SP	NH	ResAll
Sea Turtle Sanctuary	State	1980	UML	SP	NH	ResAll
Bear Island Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Masonboro Island Estuarine Reserve Dedicated Nature Preserve	State	1987	UML	YP	NH	NoRstr
Topsail Sound and Middle Sound Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Alligator River Game Land	State	0	UML	YP	NHSP	UnRstr
Drum Inlet Crab Spawning Sanctuary	State	1976	UML	SP	NHSP	ResAll
Bardens Inlet Crab Spawning Sanctuary	State	1976	UML	SP	NHSP	ResAll
Hatteras Inlet Crab Spawning Sanctuary	State	1976	UML	SP	NHSP	ResAll
Northwest River Marsh Game Land	State	1971	UML	YP	NHSP	NoRstr
The Straits Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Buxton Woods Coastal Reserve Dedicated Nature Preserve	State	1992	UML	YP	NH	UnRstr
Masonboro Sound Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Roanoke Island Marshes Dedicated Nature Preserve	State	1994	UML	YP	NH	NoRstr
Rachel Carson Estuarine Reserve Dedicated Nature Preserve	State	1987	UML	YP	NH	NoRstr
Goose Creek State Park	State	1974	UML	YP	NH	ProCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Back Bay Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
North Bay Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
Theodore Roosevelt Natural Area Swamp Outstanding Resource Water	State	1988	UML	YP	NH	NoRstr
Pungo River Game Land	State	1985	UML	YP	NHSP	UnRstr
Theodore Roosevelt State Natural Area	State	0	N TL	YP	NH	ProAll
Theodore Roosevelt State Natural Area Dedicated Nature Preserve	State	2000	UML	YP	NH	NoRstr
Currituck Banks Game Land	State	0	UML	YP	NHSP	UnRstr
White Oak River Impoundment Game Land	State	1987	UML	YP	NHSP	ResAll
Run Hill State Natural Area Dedicated Nature Preserve	State	1998	UML	YP	NH	UnRstr
Permuda Island Coastal Reserve	State	1987	UML	YP	NHCH	NoRstr
Stump Sound Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Back Sound Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Neuse-Southeast Pamlico Sound Area Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Core Sound, Neuse River Basin Outstanding Resource Water	State	1990	UML	YP	NH	NoRstr
Core Sound, White Oak River Basin Outstanding Resource Water	State	1990	UML	YP	NH	ResRec
Fort Macon State Park	State	1924	UML	YP	NHCH	ProCom
Fort Macon State Park Dedicated Nature Preserve	State	2000	UML	YP	NH	NoRstr
Kitty Hawk Woods Dedicated Nature Preserve	State	1992	UML	YP	NH	UnRstr
Currituck Banks Estuarine Reserve Dedicated Nature Preserve	State	1987	UML	YP	NH	UnRstr
Currituck Outer Banks Preserve Dedicated Nature Preserve	State	1995	UML	YP	NH	UnRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Kitty Hawk Woods Coastal Reserve Dedicated Nature Preserve	State	1997	UML	YP	NH	UnRstr
Nags Head Woods Preserve Dedicated Nature Preserve	State	1986	UML	YP	NH	UnRstr
Run Hill State Natural Area	State	0	UML	YP	NH	UnRstr
Hammocks Beach State Park	State	1961	UML	YP	NHCH	ProCom
Cape Lookout National Seashore	Federal	1966	UML	YP	NHCH	ResAll
Mackay Island National Wildlife Refuge	Federal	1960	UML	YP	NHSP	ProCom
Currituck National Wildlife Refuge	Federal	1984	UML	YP	NHSP	ProAll
Kitty Hawk Woods Coastal Reserve	State	1992	UML	YP	NH	UnRstr
Reef Fish Longline and Buoy Gear Restricted Area	Federal	1990	UML	YP	SP	ResAll
Reef Fish Stressed Area	Federal	1990	UML	YP	SP	ResAll
Mission-Aransas National Estuarine Research Reserve	Partnership	2006	UML	YP	NH	UnRstr
Everglades National Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Everglades National Park	Federal	1934	ZNL	YP	NHCH	ProCom
John Pennekamp Coral Reef State Park	State	1959	UML	YP	NHCH	ResAll
John Pennekamp Coral Reef State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Florida Keys National Marine Sanctuary	Partnership	1990	ZNL	YP	NHCH	ResAll
East Florida Coast Closed Area	Federal	2000	UML	YP	NHSP	ResCom
John Pennekamp Coral Reef State Park Spiny and Slipper Lobster Harvest Prohibited Area	State	1994	UML	YP	NH	ResAll
Florida Keys Outstanding Florida Water	State	1985	UML	YP	NH	NoRstr
John Pennekamp Coral Reef State Park, Harvest Prohibited or Restricted Area	State	1989	UML	YP	NH	ResAll
Slow Speed Manatee Protection Zones	State	1991	UML	YP	NH	ResCom
Pine Island Sound Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Pine Island Sound Aquatic Preserve	State	1970	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Charlotte Harbor Preserve State Park	State	1970	UML	YP	NH	ResAll
Matlacha Pass Aquatic Preserve	State	1972	UML	YP	NH	NoRstr
Matlacha Pass Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Maximum 25 MPH Manatee Protection Zones	State	1991	UML	YP	NH	ResAll
Slow Speed (Spring to Fall, Variable Regulations) Manatee Protection Zones	State	1991	UML	SP	NH	ResCom
Idle Speed Manatee Protection Zones	State	1991	UML	YP	NH	ResCom
Cayo Costa State Park Outstanding Florida Water	State	1982	UML	YP	NH	NoRstr
Cayo Costa State Park	State	1976	UML	YP	NHSP	ResAll
Matlacha Pass National Wildlife Refuge	Federal	1908	UML	YP	NHSP	ProAll
Pine Island National Wildlife Refuge	Federal	1908	UML	YP	NHSP	ProAll
Pinellas County Aquatic Preserve	State	1972	UML	YP	NH	NoRstr
Pinellas County Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Caladesi Island State Park Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Caladesi Island State Park	State	1966	UML	YP	NHSP	ResAll
Indian River - Malabar to Vero Beach Aquatic Preserve Outstanding Florida Water	State	1979	UML	YP	NH	NoRstr
Indian River - Malabar to Vero Beach Aquatic Preserve	State	1969	UML	YP	NH	NoRstr
Slow Speed Manatee Protection Zones	State	1991	UML	YP	NH	ResCom
Maximum 25 MPH Manatee Protection Zones	State	1991	UML	YP	NH	ResAll
Idle Speed Manatee Protection Zones	State	1991	UML	YP	NH	ResCom
Archie Carr National Wildlife Refuge Outstanding Florida Water	State	1994	UML	YP	NH	NoRstr
Southeast U.S. Restricted Area	Federal	1997	UML	SP	NHSP	ResCom
Bower Tract Outstanding Florida Water	State	1986	UML	YP	NH	NoRstr
Flynet Closure	Federal	1997	UML	YP	SP	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Charleston Bump Closed Area	Federal	2000	UML	SP	SP	ResCom
Primary Nursery Areas	State	1977	UML	YP	SP	ResAll
Special Secondary Nursery Areas	State	1986	UML	YP	SP	ResRec
South of Onslow County Mechanical Harvesting of Oysters Prohibited Area	State	1976	UML	YP	NHSP	ResAll
North Carolina National Estuarine Research Reserve	Partnership	1985	UML	YP	NH	ResAll
Mid-Atlantic Coastal Waters Area	Federal	1997	UML	SP	NHSP	ResCom
Southern Mid-Atlantic Waters Closure Area	Federal	1999	UML	SP	NHSP	ResCom
Mid-Atlantic Coastal Waters Area	Federal	1997	UML	SP	NHSP	ResCom
Secondary Nursery Areas	State	1986	UML	YP	SP	ResAll
Offshore Lobster Waters	Federal	1997	UML	YP	NHSP	ResCom
Southern Nearshore Lobster Waters	Federal	1997	UML	YP	NHSP	ResCom

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commercial Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Table F-3. Marine Protected Areas in the Southeast-Caribbean ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Isla de Mona Natural Reserve	Territorial	1972	UML	YP	NH	ResAll
Arrecifes de la Cordillera Natural Reserve	Territorial	1985	UML	YP	NH	ResCom
Arrecifes de Tourmaline Natural Reserve	Territorial	1998	ZNL	YP	NH	ResCom
Hind Bank Marine Conservation District	Federal	1989	NTL	YP	NHSP	ProAll
Virgin Islands Coral Reef National Monument	Federal	2001	ZML	YP	NHCH	ResAll
Bosque Estatal de Guánica Natural Reserve	Territorial	1985	UML	YP	NH	ResCom
Red Hind Spawning Aggregation Areas West of Puerto Rico - Bajo de Cico	Federal	1996	NTL	SP	SP	ResAll
Red Hind Spawning Aggregation Areas West of Puerto Rico - Tourmaline Bank	Federal	1993	NTL	SP	SP	ResAll
Red Hind Spawning Aggregation Areas West of Puerto Rico - Abirri La Sierra Bank	Federal	1996	NTL	SP	SP	ResAll
Virgin Islands National Park	Federal	1956	ZNL	YP	NHCH	ResAll
Caño Tiburones Natural Reserve	Territorial	1998	UML	YP	NH	ProCom
Hacienda La Esperanza Natural Reserve	Partnership	1987	UML	YP	NHCH	NoRstr
Bosque Estatal de Pterocarpus y Lagunas Mandry y Santa Teresa Natural Reserve	Territorial	1918	UML	YP	NH	ResCom
El Pantano, Bosque de Pterocarpus y Lagunas Mandry y Santa Teresa Natural Reserve	Territorial	1984	NTL	YP	NH	ProCom
Jobos Bay National Estuarine Research Reserve	Partnership	1981	UML	YP	NH	ResAll
St. James Marine Reserve and Wildlife Sanctuary	Territorial	1994	UML	YP	NHSP	ProCom
Canal Luis Peña Natural Reserve	Territorial	1999	NTL	YP	NH	ProAll
Isla de Desecheo Marine Reserve	Territorial	2000	NTL	YP	NH	ProAll
Bahías Bioluminiscentes de Vieques Natural Reserve	Territorial	1989	UML	YP	NH	NoRstr
Rio Espiritu Santo Natural Reserve	Territorial	2001	UML	YP	NH	ResCom
Bosque Natural de Boquerón Natural Reserve	Territorial	1998	UML	YP	NHSP	ResCom
Arrecifes de Guayama Natural Reserve	Territorial	1980	UML	YP	NH	NoRstr
Bosque Estatal de Aguirre	Territorial	1983	UML	YP	NH	ProAll
La Parguera Natural Reserve	Territorial	1979	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Salt River Bay National Historic Park and Ecological Preserve	Federal	1992	UML	YP	NHCH	ResAll
Buck Island Reef National Monument	Federal	1961	NTL	YP	NHCH	ProAll
Cas Cay-Mangrove Lagoon Marine Reserve & Wildlife Sanctuary	Territorial	1994	UML	YP	NH	ProAll
Pantano Cibuco Natural Reserve	Territorial	1993	UML	YP	NH	ResCom
Bosque Estatal de Ceiba Natural Reserve	Territorial	1979	NTL	YP	NH	ResCom
Laguna Joyuda Natural Reserve	Territorial	1980	NTL	YP	NH	ResCom
Punta Guaniquilla Natural Reserve	Territorial	1976	UML	YP	NH	UnRstr
Punta Petrona Natural Reserve	Partnership	1985	UML	SP	NH	NoRstr
Punta Yeguas Natural Reserve	Partnership	1975	UML	YP	NH	NoRstr
Tres Palmas de Rincón Marine Reserve	Territorial	2004	UML	YP	NH	ProAll
Cabezas de San Juan Natural Reserve	Partnership	1975	UML	YP	NH	ResCom
Caja de Muertos Natural Reserve	Territorial	1981	ZML	YP	NH	UnRstr
Cueva del Indio Natural Reserve	Territorial	1992	UML	YP	NHCH	ProCom
Red Hind Spawning Aggregation Area East of St. Croix	Federal	1993	NTL	SP	SP	ResAll
Mutton Snapper Spawning Aggregation Area	Federal	1993	NTL	SP	SP	ResAll

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commercial Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Table F-4. Marine Protected Areas in the Southwest ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Monterey Bay National Marine Sanctuary	Federal	1992	ZML	YP	NHCH	NoRstr
Big Sur/Port San Luis Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Gulf of the Farallones National Marine Sanctuary	Federal	1981	ZML	YP	NHCH	NoRstr
Monterey Bay/Canyon Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Cordell Bank National Marine Sanctuary	Federal	1989	ZML	YP	NHCH	NoRstr
California Sea Otter Game Refuge	State	1959	UML	YP	NH	NoRstr
Cordell Bank/Biogenic Area Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Point Arena South Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Half Moon Bay Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Point Arena North Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Tolo Bank Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Ano Nuevo ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Point Reyes National Seashore	Federal	1962	UML	YP	NHCH	ResAll
Delgada Canyon Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Golden Gate National Recreation Area	Federal	1972	UML	YP	NHCH	ResAll
San Pablo Bay National Wildlife Refuge	Federal	1974	UML	YP	NHSP	ProCom
Don Edwards San Francisco Bay National Wildlife Refuge	Federal	1972	UML	YP	NHSP	ResRec
Manchester and Arena Rock State Marine Conservation Area	State	1987	UML	YP	NH	ResAll
Bair Island State Marine Park	State	1986	UML	YP	NHCH	ProCom
Julia Pfeiffer Burns ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Julia Pfeiffer Burns State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Carmel Bay ASBS State Water Quality Protection Area	State	1975	UML	YP	NH	NoRstr
Salmon Creek Coast ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Special Closure: Ano Nuevo Invertebrate Area	State	2005	ZML	YP	NHSP	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Point Reyes Headlands ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Salt Point State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Pacific Grove State Marine Conservation Area	State	1984	UML	YP	NH	ResAll
Duxbury Reef ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Redwood Shores State Marine Park	State	1976	UML	YP	NHCH	ProCom
Saunders Reef ASBS State Water Quality Protection Area	State	1974	UML	YP	NHCH	NoRstr
Point Lobos ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Sonoma Coast State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Estero de Limantour State Marine Conservation Area	State	1971	UML	YP	NH	ProRec
James V. Fitzgerald ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Point Reyes Headlands State Marine Conservation Area	State	1972	UML	YP	NH	ProRec
Marin Islands State Marine Park	State	1993	UML	YP	NHCH	ProCom
James V. Fitzgerald State Marine Park	State	1969	UML	YP	NHCH	ProCom
MacKerricher State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Pacific Grove ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Marin Islands National Wildlife Refuge	Federal	1992	NAL	YP	NH	ProAll
Duxbury Reef State Marine Conservation Area	State	1971	UML	YP	NH	ResAll
Tomaes Bay State Marine Park	State	1973	UML	YP	NHCH	ProCom
Corte Madera Marsh State Marine Park	State	1976	UML	YP	NHCH	ProCom
San Francisco Bay National Estuarine Research Reserve	Partnership	2003	UML	YP	NH	NoRstr
Jughandle Cove ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Bodega State Marine Reserve	State	1965	NTL	YP	NH	ProAll
Albany Mudflats State Marine Park	State	1986	UML	YP	NHCH	ProCom
Bodega ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Point Cabrillo State Marine Conservation Area	State	1975	UML	YP	NH	ProRec
Bird Rock ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Hopkins State Marine Reserve	State	1984	NTL	YP	NH	ProAll
Double Point ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Fort Ross State Marine Conservation Area	State	1970	UML	YP	CH	ResAll
Del Mar Landing State Marine Park	State	1972	UML	YP	NHCH	ProCom
Russian Gulch State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Del Mar Landing ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Van Damme State Marine Conservation Area	State	1970	UML	YP	NH	ResAll
Gerstle Cove ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Robert W. Crown State Marine Conservation Area	State	1980	UML	YP	NH	ResAll
Gerstle Cove State Marine Conservation Area	State	1971	UML	YP	NH	ProRec
Lovers Point State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Piedras Blancas State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Carmel Pinnacles State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Natural Bridges State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Piedras Blancas State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Big Creek State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Edward F. Ricketts State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Carmel Bay State Marine Conservation Area	State	1976	UML	YP	NH	ResAll
Point Lobos State Marine Reserve	State	1973	NTL	YP	NH	ProAll
Pacific Grove Marine Gardens State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Asilomar State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Soquel Canyon State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Portuguese Ledge State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Cambria State Marine Conservation Area	State	2007	UML	YP	NH	ProCom
Greyhound Rock State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Point Lobos State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Point Sur State Marine Conservation Area	State	2007	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Ano Nuevo State Marine Conservation Area	State	2007	UML	YP	NH	ProRec
Point Sur State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Big Creek State Marine Reserve	State	1994	NTL	YP	NH	ProAll
White Rock (Cambria) State Marine Conservation Area	State	2007	UML	YP	NH	ResCom
Western and Eastern Cowcod Conservation Areas	Federal	2001	ZML	YP	SP	ResAll
Catalina Island Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
San Miguel, Santa Rosa, and Santa Cruz Islands ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Channel Islands National Park	Federal	1938	UML	YP	NHCH	ResAll
San Nicolas Island and Begg Rock ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
San Clemente Island ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Richardson Rock Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Santa Barbara and Anacapa Islands ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Harris Point Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Gull Island Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Footprint Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Northwest Santa Catalina Island ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Scorpion Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Laguna Point to Latigo Point ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Anacapa Island Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
South Point State Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Pismo-Oceano State Marine Conservation Area	State	1985	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Carrington Point Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Carrington Point (Santa Rosa Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Anacapa Island Marine Conservation Area / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Judith Rock Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Judith Rock (San Miguel Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Southeast Santa Catalina Island ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Western Santa Catalina Island ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Big Sycamore Canyon State Marine Reserve	State	1994	NTL	YP	NH	ProAll
Crystal Cove State Marine Conservation Area	State	1982	UML	YP	NH	ResAll
Painted Cave Marine Conservation Area / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Painted Cave (Santa Cruz Island) Marine Conservation Area	Partnership	2003	UML	YP	NH	ProCom
Farnsworth Bank State Marine Conservation Area	State	1972	UML	YP	NH	ResAll
Irvine Coast ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Skunk Point (Santa Rosa Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Skunk Point Marine Reserve / Bottom Contact Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Cardiff and San Elijo State Marine Conservation Area	State	1989	UML	YP	NH	ResRec
Refugio State Marine Conservation Area	State	1998	UML	YP	NH	ResAll
San Miguel Island Special Closure A-1	State	2005	NAL	YP	NHSP	NoRstr
La Jolla State Marine Conservation Area	State	1971	UML	YP	NH	ProRec
La Jolla ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Special Closure: Arrow Pt. to Lions Head Pt. Invertebrate Area	State	2005	UML	YP	NHSP	ResRec
Laguna Beach State Marine Conservation Area	State	1968	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Upper Newport Bay State Marine Park	State	1975	UML	YP	NHCH	ProCom
Niguel State Marine Park	State	1971	UML	YP	NHCH	ResAll
Irvine Coast State Marine Conservation Area	State	1971	UML	YP	NH	ResAll
Goleta Slough State Marine Park	State	1981	UML	YP	NH	ProCom
Robert E. Badham ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Doheny Beach State Marine Conservation Area	State	1969	UML	YP	NH	ResAll
Batiquitos Lagoon State Marine Park	State	1978	UML	YP	NHCH	ProCom
Tijuana Slough National Wildlife Refuge	Federal	1980	UML	YP	NH	UnRstr
Tijuana River National Estuarine Research Reserve	Partnership	1982	UML	YP	NH	ResAll
Bolsa Chica State Marine Park	State	1973	UML	YP	NHCH	ProCom
Dana Point State Marine Park	State	1969	UML	YP	NHCH	ProCom
Seal Beach National Wildlife Refuge	Federal	1974	NTL	YP	NH	ProAll
Doheny State Marine Conservation Area	State	1970	UML	YP	NH	ResRec
Scripps Coastal Reserve	State	1965	UML	YP	NH	NoRstr
San Diego-Scripps ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Encinitas State Marine Conservation Area	State	1989	UML	YP	NH	ResAll
San Diego-Scripps State Marine Conservation Area	State	1957	UML	YP	NH	ResAll
Abalone Cove State Marine Park	State	1977	UML	YP	NHCH	ProCom
Pismo State Marine Conservation Area	State	1977	UML	YP	NH	ResAll
Point Fermin State Marine Park	State	1969	UML	YP	NHCH	ProCom
Farnsworth Bank ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Catalina Marine Science Center State Marine Reserve	State	1988	NTL	YP	NH	ProAll
South Laguna Beach State Marine Conservation Area	State	1968	UML	YP	NH	ResAll
Heisler Park ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Heisler Park State Marine Reserve	State	1973	NTL	YP	NH	ProAll
Robert E. Badham State Marine Conservation Area	State	1968	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Mia J. Tegner State Marine Conservation Area	State	1978	UML	YP	NH	ResAll
Lover's Cove (Catalina Island) State Marine Conservation Area	State	1974	UML	YP	NH	ProRec
Sweetwater Marsh National Wildlife Refuge	Federal	1988	NTL	YP	NH	ProAll
Cabrillo National Monument	Federal	1913	ZNL	YP	NHCH	ResRec
Agua Hedionda Lagoon State Marine Reserve	State	2002	NTL	YP	NH	ProAll
Morro Bay State Marine Recreational Management Area	State	2007	ZML	YP	NH	ResAll
Morro Bay State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Point Buchon State Marine Reserve	State	2007	NTL	YP	NH	ProAll
Vandenberg State Marine Reserve	State	1994	NTL	YP	NH	ProAll
Anacapa Special Closure (A)	State	2005	UML	YP	NH	ResCom
Anacapa Island Special Closure (B)	State	2005	NAL	SP	NHSP	ProAll
Richardson Rock (San Miguel Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Harris Point (San Miguel Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Scorpion (Santa Cruz Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Anacapa Island Marine Conservation Area	Partnership	2003	UML	YP	NH	ResAll
Anacapa Island Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Footprint Marine Reserve	Partnership	2007	NTL	YP	NH	ProAll
Gull Island (Santa Cruz Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
South Point (Santa Rosa Island) Marine Reserve	Partnership	2003	NTL	YP	NH	ProAll
Channel Islands National Marine Sanctuary	Federal	1980	ZNL	YP	NHCH	ResCom
San Miguel Special Closure A-2	State	2005	NAL	SP	NHSP	NoRstr
Eel River Canyon Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Klamath River Salmon Conservation Zone	Federal	1992	UML	YP	NHSP	ResAll
Redwood National Park ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Blunt's Reef Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Redwood National Park	Partnership	1968	UML	YP	NHCH	ResAll
Punta Gorda State Marine Reserve	State	1994	NTL	YP	NH	ProAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Trinidad Head ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Brookings Research Reserve	State	1997	UML	YP	NH	ResAll
Harris Beach Marine Garden	State	1997	UML	YP	NH	ResAll
Mendocino Ridge Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Kings Range ASBS State Water Quality Protection Area	State	1974	UML	YP	NH	NoRstr
Morro Beach State Marine Conservation Area	State	1985	UML	YP	NH	ResAll
Atascadero Beach State Marine Conservation Area	State	1985	UML	YP	NH	ResAll
Point Buchon State Marine Conservation Area	State	2007	UML	YP	NH	ResAll
Seaward of the 700 fm to 1094 fm Bottom Trawl Closed Area (1280m to 3500 m depth contour)	Federal	2006	UML	YP	NHSP	ResCom
Point Conception Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commercial Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Table F-5. Marine Protected Areas in the Northwest ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Olympic Coast National Marine Sanctuary	Federal	1994	ZML	YP	NHCH	ResAll
San Juan County/Cypress Island Marine Biological Preserve	State	1923	UML	YP	NH	ResAll
Olympic 2 Bottom Trawl Closed Area	Federal	2006	UML	YP	NHSP	ResCom
Lewis and Clark National Wildlife Refuge	Federal	1972	UML	YP	NHSP	NoRstr
Haro Strait Special Management Fishery Area	State	1972	UML	YP	SP	ResCom
Padilla Bay National Estuarine Research Reserve	Partnership	1980	UML	YP	NH	NoRstr
Columbia River Salmon Conservation Zone	Federal	1992	UML	YP	SP	ResAll
San Juan Channel and Upright Channel Special Management Fishery Area	State	1972	UML	YP	NHSP	ResCom
Cypress Island Aquatic Reserve	State	2000	UML	YP	NH	NoRstr
Maury Island Aquatic Reserve	State	2000	UML	YP	NH	NoRstr
Willapa National Wildlife Refuge	Federal	1936	UML	YP	NHSP	NoRstr
Cherry Point Aquatic Reserve	State	2000	UML	YP	NH	NoRstr
Nisqually National Wildlife Refuge	Federal	1974	UML	YP	NHSP	NoRstr
Grays Harbor National Wildlife Refuge	Federal	1990	NTL	YP	NH	ProAll
Olympic National Park	Federal	1909	UML	YP	NHCH	ResAll
Siletz Bay National Wildlife Refuge	Federal	1991	NAL	YP	NH	ProAll
Dungeness National Wildlife Refuge	Federal	1915	UML	YP	NH	ResAll
Fidalgo Bay Aquatic Reserve	State	2000	UML	YP	NH	NoRstr
Fort Casey Underwater Park	State	1970	UML	YP	NH	ResRec
Kopachuck Underwater Park	State	1971	UML	YP	NH	ResRec
Nestucca Bay National Wildlife Refuge	Federal	1991	NAL	YP	NH	ProAll
Shaw Island San Juan Islands Marine Preserve	State	1990	UML	YP	NH	ResAll
Friday Harbor San Juan Islands Marine Preserve	State	1990	UML	YP	NH	ResAll
North Bay Natural Area Preserve	State	1988	NAL	YP	NH	ProAll
Protection Island National Wildlife Refuge	Federal	1982	NAL	YP	NH	ProAll
False Bay San Juan Islands Marine Preserve	State	1990	UML	YP	NH	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Cape Arago Research Reserve	State	1997	UML	YP	NH	ResAll
Yellow and Low Islands San Juan Islands Marine Preserve	State	1990	UML	YP	NH	ResAll
Woodard Bay Natural Resources Conservation Area	State	1987	UML	YP	NH	ResRec
Elk River Natural Resources Conservation Area	State	0	UML	YP	NH	ResAll
Fort Ward Underwater Park	State	1970	UML	YP	NH	ResRec
Netarts Bay Shellfish Preserve	State	1960	UML	YP	NH	ResAll
Brookings Research Reserve	State	1997	UML	YP	NH	ResAll
Waketickeh Creek Conservation Area	State	2000	NTL	YP	NH	ProAll
Blake Island Underwater Park	State	1970	UML	YP	NH	ResRec
Kennedy Creek Natural Area Preserve	State	1990	NAL	YP	NH	ProAll
Deception Pass Underwater Park	State	1970	UML	YP	NH	ResRec
Orchard Rocks Conservation Area	State	1998	NTL	YP	NHSP	ProAll
Admiralty Head Marine Preserve	State	2002	UML	YP	NHSP	ResAll
Haystack Rock Marine Garden	State	1990	UML	YP	NH	ResAll
Yaquina Head Marine Garden	Partnership	1988	UML	YP	NH	ResAll
Sund Rock Conservation Area	State	1994	NTL	YP	NHSP	ProAll
Gregory Point Research Reserve	State	1996	UML	YP	NH	ResAll
Zee's Reef Marine Preserve	State	2002	UML	YP	NHSP	ProCom
Neptune State Park Research Reserve	State	1997	UML	YP	NH	ResAll
Otter Rock Marine Garden	State	1962	UML	YP	NH	ResAll
Boiler Bay Research Reserve	State	1997	UML	YP	NH	ResAll
Brackett's Landing Shoreline Sanctuary Conservation Area	Partnership	1970	NTL	YP	NH	ProAll
Titlow Beach Marine Preserve	Partnership	1994	UML	YP	NHSP	ResAll
Cape Perpetua Marine Garden	State	1977	UML	YP	NH	ResAll
Saltwater Underwater Park	State	1970	UML	YP	NH	ResRec
Whale Cove Habitat Refuge	State	1978	NTL	YP	NH	ProAll
Tolmie Underwater Park	State	1971	UML	YP	NH	ResRec
Octopus Hole Conservation Area	State	1998	NTL	YP	NHSP	ProAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Tongue Point Marine Life Sanctuary	Local	1989	UML	YP	NH	NoRstr
Bone River Natural Area Preserve	State	1987	NAL	YP	NH	ProAll
Dabob Bay Natural Area Preserve	State	1987	NAL	YP	NH	ProAll
Harris Beach Marine Garden	State	1997	UML	YP	NH	ResAll
Yachats Marine Garden	State	1997	UML	YP	NH	ResAll
Argyle Lagoon San Juan Islands Marine Preserve	State	1990	UML	YP	NH	ProRec
Cape Kiwanda Marine Garden	State	1997	UML	YP	NH	ResAll
Keystone Conservation Area	State	2002	NTL	YP	NH	ProAll
Fort Worden Underwater Park	State	1977	UML	YP	NH	ResRec
City of Des Moines Park Conservation Area	Partnership	1998	NTL	YP	NHSP	ProAll
Pirate Cove Research Reserve	State	1996	UML	YP	NH	ResAll
Zella M. Schultz/Protection Island Seabird Sanctuary	Partnership	1975	NAL	YP	NH	ProAll
South 239th Street Park Conservation Area	Partnership	1998	NTL	YP	NHSP	ProAll
Salter's Point Beach Conservation Area	Partnership	2000	NTL	YP	NH	ProAll
Colvos Passage Marine Preserve	State	2000	UML	YP	NHSP	ProCom
Yaquina Bay Shellfish Preserve	State	1970	UML	YP	NH	ResAll

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commerical Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Table F-6. Marine Protected Areas in the Pacific Area Islands ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Hawaiian Islands Humpback Whale National Marine Sanctuary	Federal	1992	UML	YP	NHCH	UnRstr
Kona Coast Fishery Management Area	State	1991	ZML	YP	NHSP	ProCom
Kalaupapa National Historical Park	Partnership	1980	ZNL	YP	NHCH	ResAll
Hilo Bay, Wailoa River, Wailuku River Fishery Management Area	State	1970	UML	SP	SP	ProCom
Ahihi-Kinai Natural Area Reserve	State	1973	NIL	YP	NH	ProAll
Kealakekua Bay Marine Life Conservation District	State	1969	ZNL	YP	NH	ResAll
Manele-Hulopoe Marine Life Conservation District	State	1976	ZML	YP	NH	ProCom
Old Kona Airport Marine Life Conservation District	State	1992	UML	YP	NH	ResAll
Waikiki-Diamond Head Fishery Management Area	State	1978	ZML	SP	SP	ResAll
Puako Bay, Puako Reef Fishery Management Area	State	1985	UML	YP	NHSP	ProCom
Pupukea Marine Life Conservation District	State	1983	ZNL	YP	NH	ProCom
Lapakahi Marine Life Conservation District	State	1979	ZNL	YP	NHCH	ProCom
Pearl Harbor National Wildlife Refuge	Federal	1972	UML	YP	NH	UnRstr
Kailua Bay Fishery Management Area	State	1984	ZML	YP	NHSP	ResAll
Hanauma Bay Marine Life Conservation District	Partnership	1967	NIL	YP	NHCH	ProAll
Hanamaulu Bay, Ahukini Recreational Pier Fishery Management Area	State	1978	ZML	YP	SP	ProCom
Molokini Shoal Marine Life Conservation District	State	1977	ZNL	YP	NH	ResAll
Puukohola Heiau National Historic Site	Federal	1972	UML	YP	NHCH	ResAll
Waikiki Marine Life Conservation District	State	1988	NIL	YP	SP	ProAll
Moku-o-loe Island (Coconut Island) Marine Laboratory Refuge	State	1953	NAL	YP	SP	ProAll
Kaloko-Honokohau National Historical Park	Federal	1978	NIL	YP	NHCH	ProAll
Honolua-Mokuleia Bay Marine Life Conservation District	State	1978	NIL	YP	NH	ProAll
Waialea Bay Marine Life Conservation District	State	1985	UML	YP	NHSP	ProCom
Paiko Lagoon Wildlife Sanctuary	State	1981	NAL	YP	NH	ProAll
Port Allen Fishery Management Area	State	2002	ZML	YP	SP	ProCom
Kahului Harbor Fishery Management Area	State	1984	UML	YP	NHSP	ResAll

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Waimea Bay, Waimea Recreational Pier Fishery Management Area	State	1978	UML	YP	NH	ProCom
Ka Lae (South Point) Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Lele'iwi Point Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Upolu Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Mokumana - Umalei Point Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Penguin Bank Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Moku Ho'oniki, Moloka'i - Lipoa Point., Maui Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Kaluapapa Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Makapu'u Point Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Ka'ena Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Ka'ula Rock Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Makahu'ena Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Niihau Bottomfish Restricted Fishing Area	State	1998	UML	YP	SP	ResAll
Waipae Tidepools Marine Life Conservation District	State	2003	NTL	YP	NH	ProAll
Kahoolawe Island Reserve	Partnership	1993	ZML	YP	CH	ProCom

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commercial Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Table F-7. Marine Protected Areas in the Alaska ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Steller Sea Lion Protection Areas, Gulf of Alaska - Atka Mackerel Closure	Federal	2002	UML	YP	NHSP	ResCom
Steller Sea Lion Protection Areas, Aleutian Islands Subarea - Groundfish, Pollock, Pacific Cod, and Atka Mackerel Closures	Federal	1990	ZML	YP	NHSP	ResCom
Steller Sea Lion Protection Areas, Gulf of Alaska - Groundfish, Pollock, and Pacific Cod Closures	Federal	2000	ZML	YP	NHSP	ResAll
Nearshore Bristol Bay Trawl Closure	Federal	1997	ZML	YP	SP	ResAll
Steller Sea Lion Protection Areas, Bering Sea Subarea - Bogoslof Area	Federal	1992	ZML	YP	NHSP	ResCom
Cook Inlet	Federal	2002	UML	YP	SP	ResAll
Zone 1 (512) Closure to Trawl Gear	Federal	1986	UML	YP	SP	ResCom
Alaska Maritime National Wildlife Refuge	Federal	1980	UML	YP	NHCHSP	ResAll
Steller Sea Lion Protection Areas, Bering Sea Subarea - Groundfish, Pollock, Pacific Cod, and Atka Mackerel Closures	Federal	1990	ZML	YP	NHSP	ResCom
Pribilof Island Area Habitat Conservation Zone	Federal	1995	UML	YP	NHSP	ResCom
Chum Salmon Saving Area	Federal	1994	UML	SP	SP	ResCom
Zone 1 (516) Closure to Trawl Gear	Federal	1989	UML	SP	SP	ResCom
Katmai National Park and Preserve	Federal	1918	UML	YP	NHCH	ResAll
Red King Crab Savings Area	Federal	1995	ZML	YP	SP	ResAll
Glacier Bay National Park & Preserve	Federal	1925	UML	YP	NHCH	ResAll
Steller Sea Lion Protection Areas, Aleutian Islands Subarea - Seguam Foraging Area	Federal	2001	UML	YP	NHSP	ResCom
Kodiak Island, Trawls Other Than Pelagic Trawls - Type I Closures	Federal	1987	UML	YP	SP	ResCom
Steller Sea Lion Protection Areas, Bering Sea Subarea - Pollock Restriction Area	Federal	1990	UML	SP	NHSP	ResCom
Kodiak Island, Trawls Other Than Pelagic Trawls - Type II Closures	Federal	1987	UML	SP	SP	ResCom
Kachemak Bay National Estuarine Research Reserve	Partnership	1999	UML	YP	NH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Sitka Pinnacles Marine Reserve	Federal	2000	UML	YP	NHSP	ResAll
Sitka National Historical Park	Federal	1910	ZML	YP	NHCH	ResAll
Gulf of Alaska Slope Habitat Conservation Areas	Federal	2006	UML	YP	NHSP	ResAll
Aleutian Islands Habitat Conservation Area	Federal	2006	UML	YP	NHSP	ResAll
Aleutian Islands Coral Habitat Protected Area	Federal	2006	UML	YP	NHSP	ResAll
Non-Pelagic Trawl Gear Restriction Area - Central Gulf of Alaska	State	1986	UML	YP	SP	ResCom
Scallop Closed Areas - Eastern Bering Sea	State	1981	UML	YP	SP	ResCom
Scallop Commercial Fishery Closed Areas - Yakutat Bay	State	1991	UML	YP	SP	ResCom
Scallop Closed Areas - Kodiak Island to Cape Kumlik	State	1981	UML	YP	SP	ResCom
King Crab Closed Areas - St. Matthews, Hall and Pinnacles Islands	State	1981	UML	YP	SP	ResCom
Scallop Closed Areas - Western Bering Sea / Aleutian Islands	State	1981	UML	YP	SP	ResCom
Scallop Closed Areas - Eastern Aleutian Islands	State	1981	UML	YP	SP	ResCom
Scallop Closed Areas - Cook Inlet Districts	State	1985	UML	YP	SP	ResCom
Scallop Closed Areas - Westward Gulf, South Alaska Peninsula	State	1981	UML	YP	SP	ResCom
Scallop Closed Areas - Cook Inlet Southern & Outer Districts	State	1985	UML	YP	SP	ResCom
Scallop Closed Areas - Prince William Sound Vicinity	State	1994	UML	YP	SP	ResCom
Pollock Trawl Gear Restricted Area - Prince William Sound	State	1997	UML	SP	SP	ResCom
Groundfish Pot Fishing Closed Area - Kachemak and Kamishak Bay	State	1993	UML	YP	SP	ResCom
Groundfish Pot Fishing Closed Area - Prince William Sound	State	1997	UML	YP	SP	ResCom
Rockfish, Genus Sebastes, Closed Area - Monashka Bay	State	1989	UML	YP	SP	ResCom
Walrus Closures	State	1989	UML	YP	SP	ResCom
Groundfish Closed Area - Edgcombe Pinnacles Marine Reserve	State	1997	UML	YP	SP	ResCom

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Groundfish Closed Waters - St. Matthew, Hall, & Pinnacle Islands	State	2001	UML	YP	SP	ResCom
Trawl Gear Restricted Areas - Prince William Sound	State	1985	UML	YP	SP	ResCom
Trawl Gear Restricted Area - Bristol Bay	State	2001	UML	YP	SP	ResCom
Demersal Shelf Rockfish Closed Area - Southeast Alaska	State	1997	UML	YP	SP	ResCom
Shrimp Pot Fishery Closure - Prince William Sound	State	1981	UML	YP	SP	ResCom
Non-Pelagic Trawl Gear Restriction Area - Eastern Aleutian Islands	State	1986	UML	YP	SP	ResCom
Resurrection Bay Lingcod Closure	State	1993	UML	YP	SP	ResCom
Sitka Sound Lingcod Closure	State	1997	UML	YP	SP	ResCom
Southeast Alaska Dive Fishery Research Areas	State	1991	UML	YP	SP	ResCom
Black Rockfish Closure Areas	State	1997	UML	YP	SP	ResCom
Shrimp Fishery Closure, All gear types - Cook Inlet, Kenai Peninsula	State	1997	UML	YP	SP	ResCom
Southeast Alaska Trawl Closure	Federal	1998	UML	YP	NHSP	ResCom
Yukon Delta National Wildlife Refuge	Federal	1980	UML	YP	NHCHSP	UnRstr
Arctic National Wildlife Refuge	Federal	1960	UML	YP	NHCHSP	ResAll

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commerical Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Table F-8. Marine Protected Areas in the Great Lakes ROI

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Huron National Wildlife Refuge	Federal	1905	UML	YP	NH	UnRstr
Apostle Islands National Lakeshore	Federal	1970	UML	YP	NHCH	ResAll
Isle Royale National Park	Federal	1931	UML	YP	NHCH	ResAll
Pictured Rocks National Lakeshore	Federal	1966	UML	YP	NHCH	ResAll
Sleeping Bear Dunes National Lakeshore	Federal	1970	ZML	YP	NHCH	ResAll
Butterworth Cliffs SNA	State	1990	NIL	YP	NH	ProAll
Minnesota Point Pine Forest SNA	State	1996	NIL	YP	NH	ProAll
Thunder Bay National Marine Sanctuary and Underwater Preserve	Partnership	2000	ZML	YP	CH	ResCom
Whitefish Point Great Lakes State Bottomland Preserve	State	1987	UML	YP	CH	NoRstr
Thumb Area Great Lakes State Bottomland Preserve	State	1985	UML	YP	CH	NoRstr
Straits of Mackinac Great Lakes State Bottomland Preserve	State	1983	UML	YP	CH	NoRstr
Southwest Michigan Great Lakes State Bottomland Preserve	State	1999	UML	YP	CH	NoRstr
Sanilac Shores Great Lakes State Underwater Preserve	State	1988	UML	YP	CH	NoRstr
Marquette Great Lakes State Bottomland Preserve	State	1991	UML	YP	CH	NoRstr
Manitou Passage Great Lakes State Bottomland Preserve	State	1989	UML	YP	CH	NoRstr
Keweenaw Great Lakes State Bottomland Preserve	State	1991	UML	YP	CH	NoRstr
Detour Passage Great Lakes State Bottomland Preserve	State	1999	UML	YP	CH	NoRstr
Alger Great Lakes State Bottomland Preserve	State	1981	UML	YP	CH	NoRstr
Forest Shipwreck (1857)	State	1992	NIL	YP	CH	NoRstr
A.P. Nichols Shipwreck (1861).	State	1992	NIL	YP	CH	UnRstr
Francis Hinton Shipwreck (1889)	State	1987	NIL	YP	CH	NoRstr

Marine Protected Area	Government Level	Year Established	Protection Level	Constancy	Conservation Focus	Fishing Restrictions
Lucerne Shipwreck (1873)	State	1996	NIL	YP	CH	NoRstr
Niagara Shipwreck (1846)	State	1996	NIL	YP	CH	NoRstr
Ottawa Shipwreck (1881)	State	1992	NIL	YP	CH	NoRstr
Rosinco Shipwreck (1916)	State	2001	NIL	YP	CH	NoRstr
Sevona Shipwreck (1890)	State	1993	NIL	YP	CH	NoRstr
Frank O'Connor Shipwreck (1892)	State	1994	NIL	YP	CH	NoRstr
Christina Nilsson Shipwreck (1871)	State	2003	NIL	YP	CH	UnRstr
Meridian Shipwreck (1848)	State	1987	NIL	YP	CH	NoRstr
North Dunes Nature Preserve	State	1988	NAL	YP	NH	ProRec
Illinois Beach Nature Preserve	State	1964	NAL	YP	NH	ProRec

Notes:

Protection Level:

NAL: No access MPAs
 NIL: No Impact MPAs
 NTL: No Take MPAs
 UML: Uniform Multiple Use MPAs
 ZML: Zoned Multiple Use MPAs
 ZNL: Zoned Multiple-Use With No-Take Area(s)

Conservation Focus:

CH: Cultural Heritage MPA
 NH: Natural Heritage MPA
 SP: Sustainable Production MPA
 NHCH: Natural Heritage and Cultural Heritage
 NHSP: Natural Heritage and Sustainable Production

Fishing Restrictions:

NoRstr: No Restrictions to Fishing
 ProAll: All Fishing Prohibited
 ProCom: Commercial Fishing Prohibited
 ProRec: Recreational Fishing Prohibited
 ResAll: All Fishing Restricted
 ResCom: Commerical Fishing Restricted
 ResRec: Recreational Fishing Restricted
 UnRstr: Fishing Restrictions Unknown

Constancy of Protection:

YP: Year Round Protection
 RP: Rotational Protection
 SP: Seasonal Protection

Table F-9. Fish Species with EFH within the ROIs

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Alaska Salmon	Chinook salmon	<i>Oncorhynchus tshawytscha</i>	AK	NPFMC
Alaska Salmon	Coho Salmom Assemblage	<i>Oncorhynchus kisutch</i>	AK	NPFMC
Alaska Scallops	Alaskan weathervane scallops	<i>Patinopecten caurinus</i>	AK	NPFMC
Alaska Scallops	Alaskan pink scallops	<i>Chlamys rubida</i>	AK	NPFMC
Alaska Scallops	Alaskan spiny scallops	<i>Chlamys hastata</i>	AK	NPFMC
Alaska Scallops	Alaskan rock scallops	<i>Crassadoma gigantea</i>	AK	NPFMC
Atlantic Billfish	Blue marlin	<i>Makaira nigricans</i>	SE-USC	HMS
Atlantic Herring	Atlantic herring	<i>Clupea harengus</i>	NE	NEFMC
Atlantic Salmon	Atlantic Salmon	<i>Salmo salar</i>	NE	NEFMC
Atlantic sea scallops	Atlantic sea scallops	<i>Placopecten magellanicus</i>	NE	NEFMC
Atlantic Tunas, Swordfish, and Sharks	Atlantic bluefin tuna	<i>Thunnus thynnus</i>	NE	HMS
Atlantic Tunas, Swordfish, and Sharks	Great hammerhead	<i>Sphyrna mokarran</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Scalloped hammerhead	<i>Sphyrna lewini</i>	NE, SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Nurse shark	<i>Ginglymostoma cirratum</i>	SE-SEA, GOM, USC	HMS
Atlantic Tunas, Swordfish, and Sharks	Blacktip shark	<i>Carcharhinus limbatus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bull shark	<i>Carcharhinus leucas</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Caribbean reef shark	<i>Carcharhinus perezi</i>	SE-SEA	HMS
Atlantic Tunas, Swordfish, and Sharks	Dusky shark	<i>Carcharhinus obscurus</i>	NE, SE-SEA	HMS
Atlantic Tunas, Swordfish, and Sharks	Lemon shark	<i>Negaprion brevirostris</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Sandbar shark	<i>Carcharhinus plumbeus</i>	NE, SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Spinner shark	<i>Carcharhinus brevipinna</i>	NE, SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Tiger shark	<i>Galeocerdo cuvieri</i>	NE, SE-SEA, GOM, USC	HMS
Atlantic Tunas, Swordfish, and Sharks	Sand tiger shark	<i>Carcharias taurus</i>	NE, SE-SEA	HMS
Atlantic Tunas, Swordfish, and Sharks	Atlantic angel shark	<i>Squatina dumeril</i>	NE	HMS
Atlantic Tunas, Swordfish, and Sharks	Bonnethead	<i>Sphyrna tiburo</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Atlantic sharpnose shark	<i>Rhizoprionodon terraenovae</i>	NE, SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Blacknose shark	<i>Carcharhinus acronotus</i>	SE-SEA, GOM	HMS

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Atlantic Tunas, Swordfish, and Sharks	Finetooth shark	<i>Carcharhinus isodon</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Albacore Tuna - North Atlantic	<i>Thunnus albacres</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bigeye Tuna - Atlantic	<i>Thunnus obesus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Skipjack Tuna - West Atlantic	<i>Katsuwonus pelamis</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Swordfish - North Atlantic	<i>Xiphias gladius</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	White Marlin - Atlantic	<i>Kajikia albida</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Sailfish - West Atlantic	<i>Istiophorus platypterus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Longbill Spearfish - West Atlantic	<i>Tetrapturus pfluegeri</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Basking Shark	<i>Cetorhinus maximus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Smooth Hammerhead	<i>Sphyrna zygaena</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	White Shark	<i>Carcharodon carcharias</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bignose Shark	<i>Carcharhinus altimus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Narrowtooth Shark	<i>Carcharhinus brachyurus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Night Shark	<i>Carcharhinus signatu</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Silky Shark	<i>Carcharhinus falciformis</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bigeye Sand Tiger Shark	<i>Carcharias taurus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Whale Shark	<i>Rhincodon typus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Caribbean Sharpnose Shark	<i>Rhizoprionodon porosus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Smalltail Shark	<i>Carcharhinus porosus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bigeye Sixgill Shark	<i>Hexanchus nakamurai</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Sevengill Shark	<i>Notorynchus cepedianus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Longfin Mako Shark	<i>Isurus paucus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Porbeagle Shark	<i>Lamna nasus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Shortfin Mako Shark	<i>Isurus oxyrinchus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Blue Shark	<i>Prionace glauca</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Oceanic Whitetip Shark	<i>Carcharhinus longimanus</i>	SE-SEA, GOM	HMS
Atlantic Tunas, Swordfish, and Sharks	Bigeye Thresher Shark	<i>Alopias vulpinus</i>	SE-SEA, GOM	HMS

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Atlantic Tunas, Swordfish, and Sharks	Thresher Shark	<i>Alopias vulpinus</i>	SE-SEA, GOM	HMS
BSAI Groundfish	Walleye Pollock	<i>Theragra chalcogramma</i>	AK	NPFMC
BSAI Groundfish	Pacific Cod	<i>Gadus macrocephalus</i>	AK	NPFMC
BSAI Groundfish	Yellowfin Sole	<i>Limanda aspera</i>	AK	NPFMC
BSAI Groundfish	Greenland Turbot	<i>Reinhardtius hippoglossoides</i>	AK	NPFMC
BSAI Groundfish	Arrowtooth flounder	<i>Atheresthes stomias</i>	AK	NPFMC
BSAI Groundfish	Rock sole	<i>Lepidopsetta bilineata</i>	AK	NPFMC
BSAI Groundfish	Alaska plaice	<i>Pleuronectes quadrituberculatus</i>	AK	NPFMC
BSAI Groundfish	Flathead sole	<i>Hippoglossoides elassodon</i>	AK	NPFMC
BSAI Groundfish	Sablefish	<i>Anoplopoma fimbria</i>	AK	NPFMC
BSAI Groundfish	Pacific Ocean perch	<i>Sebastes alutus</i>	AK	NPFMC
BSAI Groundfish	Shortraker and Rougheye rockfish	<i>Sebastes borealis and Sebastes aleutianus</i>	AK	NPFMC
BSAI Groundfish	Northern rockfish	<i>Sebastes polyspinis</i>	AK	NPFMC
BSAI Groundfish	Dusky rockfish	<i>Sebastes ciliatus</i>	AK	NPFMC
BSAI Groundfish	Atka mackerel	<i>Pleurogrammus monopterygius</i>	AK	NPFMC
BSAI Groundfish	Sculpins	<i>Scorpaeniformes</i>	AK	NPFMC
BSAI Groundfish	Sharks	<i>Chondrichthyes</i>	AK	NPFMC
BSAI Groundfish	Eulachon	<i>Thaleichthys pacificus</i>	AK	NPFMC
BSAI Groundfish	Capelin	<i>Mallotus villosus</i>	AK	NPFMC
BSAI Groundfish	Sand lance	<i>Ammodytes hexapterus</i>	AK	NPFMC
BSAI Groundfish	Sand fish	<i>Various species</i>	AK	NPFMC
BSAI Groundfish		<i>Euphausiids</i>	AK	NPFMC
BSAI Groundfish		<i>Pholids and Stichaeids</i>	AK	NPFMC
BSAI Groundfish	Thornyhead rockfish	<i>Sebastolobus</i> spp.	AK	NPFMC
BSAI Groundfish	Yelloweye rockfish	<i>Sebastes ruberrimus</i>	AK	NPFMC
BSAI Groundfish	Sharks	<i>Chondrichthyes</i>	AK	NPFMC
Bluefish	Bluefish	<i>Pomatomus saltatrix</i>	NE, SE-SEA	MAFMC
BSAI King and Tanner Crab	Red King crab	<i>Paralithodes camtschaticus</i>	AK	NPFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
BSAI King and Tanner Crab	Blue King crab	<i>Paralithodes platypus</i>	AK	NPFMC
BSAI King and Tanner Crab	Golden King crab	<i>Lithodes aequispina</i>	AK	NPFMC
BSAI King and Tanner Crab	Scarlet King crab	<i>Lithodes couesi</i>	AK	NPFMC
BSAI King and Tanner Crab	Southern Tanner crab	<i>Chionoecetes bairdi</i>	AK	NPFMC
BSAI King and Tanner Crab	Snow crab	<i>Chionoecetes opilio</i>	AK	NPFMC
BSAI King and Tanner Crab	Grooved Tanner crab	<i>Chionoecetes tanneri</i>	AK	NPFMC
BSAI King and Tanner Crab	Triangle Tanner crab	<i>Chionoecetes angulatus</i>	AK	NPFMC
Coastal Migratory Pelagics	King mackerel	<i>Scomberomorus cavalla</i>	NE, SE-SEA	SAFMC
Coastal Migratory Pelagics	Spanish mackerel	<i>Scomberomorus maculatus</i>	NE, SE-SEA	SAFMC
Coastal Migratory Pelagics	Cobia	<i>Rachycentron canadum</i>	NE, SE-SEA	SAFMC
Coastal Pelagics	King mackerel	<i>Scomberomorus cavalla</i>	SE-GOM	GMFMC
Coastal Pelagics	Spanish mackerel	<i>Scomberomorus maculatus</i>	SE-GOM	GMFMC
Coastal Pelagics	Cobia	<i>Rachycentron canadum</i>	NE, SE-GOM	GMFMC
Coastal Pelagics	Dolphin	<i>Coryphaena hippurus</i>	NE, SE-GOM	GMFMC
Coastal Pelagics	Little Tunny	<i>Euthynnus alletteratus</i>	NE, SE-GOM	GMFMC
Coastal Pelagics	Cero Mackerel	<i>Scomberomorus regalis</i>	NE, SE-GOM	GMFMC
South Atlantic Snapper-Grouper	Goliath Grouper	<i>Epinephelus itajara</i>	NE, SE-GOM	GMFMC
South Atlantic Snapper-Grouper	Yellowtail Snapper	<i>Ocyurus chrysurus</i>	NE, SE-GOM	GMFMC
Spiny Lobster	Spiny Lobster	<i>Pontophilus spinosus</i>	NE, SE-GOM	GMFMC
Spiny Lobster	Slipper Lobster	Various species	NE, SE-GOM	GMFMC
Coastal Pelagics	Pacific sardine	<i>Sardinops sagax</i>	SW, NW	PFMC
Coastal Pelagics	Pacific mackerel (chub)	<i>Scomber japonicus</i>	SW, NW	PFMC
Coastal Pelagics	Northern anchovy	<i>Engraulis mordax</i>	SW, NW	PFMC
Coastal Pelagics	Jack mackerel	<i>Trachurus symmetricus</i>	SW, NW	PFMC
Coastal Pelagics	Market squid	Various species	SW, NW	PFMC
GOA Groundfish	Walleye Pollock	<i>Theragra chalcogramma</i>	AK	NPFMC
GOA Groundfish	Pacific cod	<i>Gadus macrocephalus</i>	AK	NPFMC
GOA Groundfish	Dover sole	<i>Microstomus pacificus</i>	AK	NPFMC
GOA Groundfish	Yellowfin sole	<i>Limanda aspera</i>	AK	NPFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
GOA Groundfish	Rock sole	<i>Lepidopsetta bilineata</i>	AK	NPFMC
GOA Groundfish	Flathead sole	<i>Hippoglossoides elassodon</i>	AK	NPFMC
GOA Groundfish	Arrowtooth flounder	<i>Atheresthes stomias</i>	AK	NPFMC
GOA Groundfish	Sablefish	<i>Anoplopoma fimbria</i>	AK	NPFMC
GOA Groundfish	Pacific Ocean Perch	<i>Sebastes alutus</i>	AK	NPFMC
GOA Groundfish	Shortraker and Rougheye rockfish	<i>Sebastes borealis and Sebastes aleutianus</i>	AK	NPFMC
GOA Groundfish	Dusky rockfish	<i>Sebastes ciliatus</i>	AK	NPFMC
GOA Groundfish	Yelloweye rockfish	<i>Sebastes ruberrimus</i>	AK	NPFMC
GOA Groundfish	Atka mackerel	Various species	AK	NPFMC
GOA Groundfish	Sculpins	Various species	AK	NPFMC
GOA Groundfish	Eulachon	<i>Thaleichthys pacificus</i>	AK	NPFMC
GOA Groundfish	Capelin	<i>Mallotus villosus</i>	AK	NPFMC
GOA Groundfish	Sand lance	<i>Ammodytes hexapterus</i>	AK	NPFMC
GOA Groundfish	Sand fish	Various species	AK	NPFMC
GOA Groundfish		Pholids and Stichaeids	AK	NPFMC
GOA Groundfish	Rex Sole	<i>Glyptocephalus zachirus</i>	AK	NPFMC
GOA Groundfish	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	AK	NPFMC
GOA Groundfish	Squid	Various species	AK	NPFMC
GOA Groundfish	Sharks	Various species	AK	NPFMC
GOA Groundfish	Octopus	Various species	AK	NPFMC
GOA Groundfish	Forage Fish Complex	Various Species	AK	NPFMC
GOA Groundfish	Other Slope Rockfish Complex	Various species	AK	NPMFC
GOA Groundfish	Shallow Water Flatfish complex	Various species	AK	NPMFC
GOA Groundfish	Big Skate	<i>Raja binoculata</i>	AK	NPMFC
GOA Groundfish	Longnose Skate	<i>Raja rhina</i>	AK	NPMFC
Goa Groundfish	Other skate complex	Various species	AK	NPMFC
Groundfish	Red hake	<i>Urophycis chuss</i>	NE	NEFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Groundfish	Winter flounder	<i>Pleuronectes americanus</i>	NE	NEFMC
Groundfish	Windowpane flounder	<i>Scophthalmus aquosus</i>	NE	NEFMC
Groundfish	Haddock	<i>Melanogrammus aeglefinus</i>	NE	NEFMC
Groundfish	Pollock	<i>Pollachius virens</i>	NE	NEFMC
Groundfish	White hake	<i>Urophycis tenuis</i>	NE	NEFMC
Groundfish	Whiting	<i>Merluccius bilinearis</i>	NE	NEFMC
Groundfish	Yellowtail flounder	<i>Limanda ferruginea</i>	NE	NEFMC
Groundfish	American plaice	<i>Hippoglossoides platessoides</i>	NE	NEFMC
Groundfish	Red Fish	<i>Sebastes marinus</i>	NE	NEFMC
Groundfish	White Hake	<i>Urophycis tenuis</i>	NE	NEFMC
Groundfish	Ocean Pout	<i>Zoarces americanus</i>	NE	NEFMC
Groundfish	Atlantic Halibut	<i>Hippoglossus hippoglossus</i>	NE	NEFMC
Groundfish	Silver Hake	<i>Merluccius bilinearis</i>	NE	NEFMC
Groundfish	Offshore Hake	<i>Merluccius albidus</i>	NE	NEFMC
Groundfish	Atlantic cod	<i>Gadus morhua</i>	NE	NEFMC
Groundfish	Pacific Ocean Perch	<i>Sebastes alutus</i>	SW, NW	PFMC
Groundfish	Bocaccio	<i>Sebastes paucispinis</i>	SW, NW	PFMC
Groundfish	Canary Rockfish	<i>Sebastes pinniger</i>	SW, NW	PFMC
Groundfish	Darkblotched Rockfish	<i>Sebastes crameri</i>	SW, NW	PFMC
Groundfish	Cowcod	<i>Sebastes levis</i>	SW, NW	PFMC
Groundfish	Yelloweye Rockfish	<i>Sebastes ruberrimus</i>	SW, NW	PFMC
Groundfish	Lingcod	<i>Ophiodon elongates</i>	SW, NW	PFMC
Groundfish	Widow Rockfish	<i>Sebastes entomelas</i>	SW, NW	PFMC
Groundfish	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	SW, NW	PFMC
Groundfish	Black Rockfish - North	<i>Sebastes melanops</i>	SW, NW	PFMC
Groundfish	Pacific Whiting	<i>Merluccius productus</i>	SW, NW	PFMC
Groundfish	Bank Rockfish	<i>Sebastes rufus</i>	SW, NW	PFMC
Groundfish	Longspine Thornyhead	<i>Sebastolobus altivelis</i>	SW, NW	PFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Groundfish	Yellowtail Rockfish	<i>Sebastes flavidus</i>	SW, NW	PFMC
Groundfish	Sablefish	<i>Anoplopoma fimbria</i>	SW, NW	PFMC
Groundfish	Dover Sole	<i>Solea vulgaris</i>	SW, NW	PFMC
Groundfish	English Sole	<i>Parophrys vetulus</i>	SW, NW	PFMC
Groundfish	Petrale Sole	<i>Eopsetta jordani</i>	SW, NW	PFMC
Groundfish	Chilipepper Rockfish	<i>Sebastes goodei</i>	SW, NW	PFMC
Groundfish	Arrowtooth Flounder	<i>Reinhardtius stomias</i>	SW, NW	PFMC
Groundfish	Cabezon - South	<i>Scorpaenichthys marmoratus</i>	SW, NW	PFMC
Groundfish	Pacific Cod	<i>Gadus macrocephalus</i>	SW, NW	PFMC
Groundfish	Rex Sole	<i>Glyptocephalus zachirus</i>	SW, NW	PFMC
Groundfish	Sand Sole	<i>Psettichthys melanostictus</i>	SW, NW	PFMC
Groundfish	Starry Flounder	<i>Platichthys stellatus</i>	SW, NW	PFMC
Groundfish	Blackgill Rockfish	<i>Sebastes melanostomus</i>	SW, NW	PFMC
Groundfish	Blue Rockfish	<i>Sebastes mystinus</i>	SW, NW	PFMC
Groundfish	Brown Rockfish	<i>Sebastes auriculatus</i>	SW, NW	PFMC
Groundfish	Gopher Rockfish	<i>Sebastes carnatus</i>	SW, NW	PFMC
Groundfish	Splitnose Rockfish	<i>Sebastes diploproa</i>	SW, NW	PFMC
Groundfish	Vermilion Rockfish	<i>Sebastes miniatus</i>	SW, NW	PFMC
Groundfish	Spiny Dogfish	<i>Squalus acanthias</i>	SW, NW	PFMC
Groundfish	California Scorpionfish	<i>Scorpaena guttata</i>	SW, NW	PFMC
Groundfish	Kelp Greenling - Oregon	<i>Hexagrammos decagrammus</i>	SW, NW	PFMC
Groundfish	Longnose Skate	<i>Raja rhina</i>	SW, NW	PFMC
Groundfish	Pacific Rattail	<i>Coryphaenoides acrolepis</i>	SW, NW	PFMC
Groundfish	Pacific Sanddab	<i>Citharichthys sordidus</i>	SW, NW	PFMC
Groundfish	Rougheye Rockfish	<i>Sebastes aleutianus</i>	SW, NW	PFMC
Groundfish	Silvergrey Rockfish	<i>Sebastes</i>	SW, NW	PFMC
Groundfish	Butter Sole	<i>Isopsetta isolepis</i>	SW, NW	PFMC
Groundfish	Curlfin Sole	<i>Pleuronichthys decurrens</i>	SW, NW	PFMC
Groundfish	Flathead Sole	<i>Hippoglossoides elassodon</i>	SW, NW	PFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Groundfish	Rock Sole	<i>Lepidopsetta bilineata</i>	SW, NW	PFMC
Groundfish	Aurora Rockfish	<i>Sebastes aurora</i>	SW, NW	PFMC
Groundfish	Black-And-Yellow Rockfish	<i>Sebastes chrysomelas</i>	SW, NW	PFMC
Groundfish	Bronzespotted Rockfish	<i>Sebastes gilli</i>	SW, NW	PFMC
Groundfish	Calico Rockfish	<i>Sebastes dallii</i>	SW, NW	PFMC
Groundfish	Chameleon Rockfish	<i>Sebastes phillipsi</i>	SW, NW	PFMC
Groundfish	China Rockfish	<i>Sebastes nebulosus</i>	SW, NW	PFMC
Groundfish	Copper Rockfish	<i>Sebastes caurinus</i>	SW, NW	PFMC
Groundfish	Dusky Rockfish	<i>Sebastes ciliatus</i>	SW, NW	PFMC
Groundfish	Dwarf-Red Rockfish	<i>Sebastes rufinanus</i>	SW, NW	PFMC
Groundfish	Flag Rockfish	<i>Sebastes rubrivinctus</i>	SW, NW	PFMC
Groundfish	Freckled Rockfish	<i>Sebastes lentiginosus</i>	SW, NW	PFMC
Groundfish	Grass Rockfish	<i>Sebastes rastrelliger</i>	SW, NW	PFMC
Groundfish	Greenblotched Rockfish	<i>Sebastes rosenblatti</i>	SW, NW	PFMC
Groundfish	Greenspotted Rockfish	<i>Sebastes chlorostictus</i>	SW, NW	PFMC
Groundfish	Greenstriped Rockfish	<i>Sebastes elongatus</i>	SW, NW	PFMC
Groundfish	Halfbanded Rockfish	<i>Sebastes semicinctus</i>	SW, NW	PFMC
Groundfish	Harlequin Rockfish	<i>Sebastes variegatus</i>	SW, NW	PFMC
Groundfish	Honeycomb Rockfish	<i>Sebastes umbrosus</i>	SW, NW	PFMC
Groundfish	Kelp Rockfish	<i>Sebastes atrovirens</i>	SW, NW	PFMC
Groundfish	Mexican Rockfish	<i>Sebastes macdonaldi</i>	SW, NW	PFMC
Groundfish	Olive Rockfish	<i>Sebastes serranoides</i>	SW, NW	PFMC
Groundfish	Pink Rockfish	<i>Sebastes eos</i>	SW, NW	PFMC
Groundfish	Pinkrose Rockfish	<i>Sebastes simulator</i>	SW, NW	PFMC
Groundfish	Pygmy Rockfish	<i>Sebastes wilsoni</i>	SW, NW	PFMC
Groundfish	Quillback Rockfish	<i>Sebastes maliger</i>	SW, NW	PFMC
Groundfish	Redbanded Rockfish	<i>Sebastes babcocki</i>	SW, NW	PFMC
Groundfish	Redstripe Rockfish	<i>Sebastes proriger</i>	SW, NW	PFMC
Groundfish	Rosethorn Rockfish	<i>Sebastes helvomaculatus</i>	SW, NW	PFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Groundfish	Rosy Rockfish	<i>Sebastes rosaceus</i>	SW, NW	PFMC
Groundfish	Sharpchin Rockfish	<i>Sebastes zacentrus</i>	SW, NW	PFMC
Groundfish	Shortraker Rockfish	<i>Sebastes borealis</i>	SW, NW	PFMC
Groundfish	Speckled Rockfish	<i>Sebastes ovalis</i>	SW, NW	PFMC
Groundfish	Squarespot Rockfish	<i>Sebastes hopkinsi</i>	SW, NW	PFMC
Groundfish	Starry Rockfish	<i>Sebastes constellatus</i>	SW, NW	PFMC
Groundfish	Stripetail Rockfish	<i>Sebastes saxicola</i>	SW, NW	PFMC
Groundfish	Swordspine Rockfish	<i>Sebastes ensifer</i>	SW, NW	PFMC
Groundfish	Tiger Rockfish	<i>Sebastes nigrocinctus</i>	SW, NW	PFMC
Groundfish	Yellowmouth Rockfish	<i>Sebastes reedi</i>	SW, NW	PFMC
Groundfish	Leopard Shark	<i>Triakis semifasciata</i>	SW, NW	PFMC
Groundfish	Soupin Shark	<i>Galeorhinus zyopterus</i>	SW, NW	PFMC
Groundfish	Big Skate	<i>Raja binoculata</i>	SW, NW	PFMC
Groundfish	California Skate	<i>Raja inornata</i>	SW, NW	PFMC
Groundfish	Ratfish	<i>Hydrolagus colliei</i>	SW, NW	PFMC
Groundfish	Finescale Codling	<i>Antimora microlepis</i>	SW, NW	PFMC
Groundfish	Treefish	<i>Sebastes serriceps</i>	SW, NW	PFMC
Groundfish	Shortbelly Rockfish	<i>Sebastes jordani</i>	SW, NW	PFMC
HMS	Skipjack Tuna - Eastern Pacific	<i>Katsuwonus pelamis</i>	PC	PFMC
HMS	Yellowfin Tuna - Eastern Pacific	<i>Thunnus albacares</i>	PC	PFMC
HMS	Striped Marlin - Eastern Pacific	<i>Kajikia audax</i>	PC	PFMC
HMS	Bigeye Tuna - Pacific	<i>Thunnus obesus</i>	PC	PFMC
HMS	Bluefin Tuna - Pacific	<i>Thunnus obesus</i>	PC	PFMC
HMS	Albacore - North Pacific	<i>Thunnus alalunga</i>	PC	PFMC
HMS	Swordfish - North Pacific	<i>Xiphias gladius</i>	PC	PFMC
HMS	Mahimahi	<i>Coryphaena hippurus</i>	PC	PFMC
HMS	Blue Shark - North Pacific	<i>Prionace glauca</i>	PC	PFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
HMS	Common Thresher Shark - North Pacific	<i>Alopias vulpinus</i>	PC	PPMC
HMS	Pelagic Thresher Shark - North Pacific	<i>Alopias pelagicus</i>	PC	PPMC
HMS	Pelagic Thresher Shark - North Pacific	<i>Alopias pelagicus</i>	PC	PPMC
HMS	Big eye Thresher shark	<i>Alopias vulpinus</i>	PC	PPMC
Monkfish	Monkfish	Various species	North	NEPMC
Monkfish	Monkfish	Various species	South	NEPMC
New England Skate Complex	Cleannose skate	<i>Raja eglanteria</i>	NE	NEPMC
New England Skate Complex	Little skate	<i>Raja erinacea</i>	NE	NEPMC
New England Skate Complex	Thorny skate	<i>Amblyraja radiata</i>	NE	NEPMC
New England Skate Complex	Winter skate	<i>Raja ocellata</i>	NE	NEPMC
New England Skate Complex	Barndoor Skate	<i>Dipturus laevis</i>	NE	NEPMC
New England Skate Complex	Cleannose Skate	<i>Raja eglanteria</i>	NE	NEPMC
New England Skate Complex	Rosette Skate	<i>Leucoraja garmani</i>	NE	NEPMC
New England Skate Complex	Smooth Skate	<i>Malacoraja senta</i>	NE	NEPMC
Pacific Herring	Pacific herring	<i>Clupea pallasii</i>	AK	NPPMC
Queen Conch	Queen conch	<i>Strombus gigas</i>	SE-USC	CFMC
Red Drum	Red Drum	<i>Sciaenops ocellatus</i>	NE, SE-SEA	SAFMC
Red Crab	Deep-Sea Red Crab	<i>Pleuroncodes planipes</i>	NE	NEPMC
Reef Fish	Coney	<i>Epinephelus fulvus</i>	SE-USC	CFMC
Reef Fish	Red hind	<i>Epinephelus guttatus</i>	SE-USC	CFMC
Reef Fish	Nassau grouper	<i>Epinephelus striatus</i>	SE-USC	CFMC
Reef Fish	Mutton snapper	<i>Lutjanus analis</i>	SE-USC	CFMC
Reef Fish	Schoolmaster	<i>Lutjanus apodus</i>	SE-USC	CFMC
Reef Fish	Gray snapper	<i>Lutjanus griseus</i>	SE-USC	CFMC
Reef Fish	Silk snapper	<i>Lutjanus vivanus</i>	SE-USC	CFMC
Reef Fish	Yellowtail snapper	<i>Ocyurus chrysurus</i>	SE-USC	CFMC
Reef Fish	White grunt	<i>Haemulon plumieri</i>	SE-USC	CFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Reef Fish	Butterflyfish	<i>Chaetodon striatus</i>	SE-USC	CFMC
Reef Fish	Queen triggerfish	<i>Balistes vetula</i>	SE-USC	CFMC
Reef Fish	Squirrelfish	<i>Holocentrus ascensionis</i>	SE-USC	CFMC
Reef Fish	Sand tile fish	<i>Malacanthus plumieri</i>	SE-USC	CFMC
Reef Fish	Redtail parrotfish	<i>Sparisoma chrysopterygum</i>	SE-USC	CFMC
Reef Fish	Trunkfish	<i>Lactophrys quadricornis</i>	SE-USC	CFMC
Reef Fish	Grunts	Haemulidae spp.	SE-USC	CFMC
Reef Fish	Goatfishes	Mullidae spp.	SE-USC	CFMC
Reef Fish	Porgies	Lethrinidae spp.	SE-USC	CFMC
Reef Fish	Squirrelfishes	Olocentridae spp.	SE-USC	CFMC
Reef Fish	Tilefishes	Malacanthidae spp.	SE-USC	CFMC
Reef Fish	Jacks	Carangidae spp.	SE-USC	CFMC
Reef Fish	Parrotfishes	Scaridae spp.	SE-USC	CFMC
Reef Fish	Surgeonfishes	Acanthuridae spp.	SE-USC	CFMC
Reef Fish	Triggerfishes and Filefishes	Balistidae spp.	SE-USC	CFMC
Reef Fish	Boxfishes	Ostraciidae spp.	SE-USC	CFMC
Reef Fish	Wrasses	Labridae spp.	SE-USC	CFMC
Reef Fish	Angelfish	<i>Holacanthus</i> spp.	SE-USC	CFMC
Salmon	Chinook salmon	<i>Oncorhynchus tshawytscha</i>	SW	PFMC
Salmon	Coho salmon	<i>Oncorhynchus kisutch</i>	NW	PFMC
Salmon	Pink	<i>Oncorhynchus gorbuscha</i>	NW	PFMC
Shrimp	Brown shrimp	<i>Penaeus aztecus</i>	SE-GOM	GMFMC
Shrimp	White shrimp	<i>Penaeus setiferus</i>	SE-GOM	GMFMC
Shrimp	Pink shrimp	<i>Penaeus duorarum</i>	NE, SE-GOM	GMFMC
Snapper-Grouper	Red grouper	<i>Epinephelus morio</i>	SE-GOM	GMFMC
Snapper-Grouper	Gag	<i>Mycteroperca microlepis</i>	SE-GOM	GMFMC
Snapper-Grouper	Gray snapper	<i>Lutjanus griseus</i>	SE-GOM	GMFMC
Snapper-Grouper	Yellowtail snapper	<i>Ocyurus chrysurus</i>	SE-GOM	GMFMC
Snapper-Grouper	Red Snapper	<i>Lutjanus campechanus</i>	SE-GOM	GMFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Snapper-Grouper	Greater Amberjack	<i>Seriola dumerili</i>	SE-GOM	GMFMC
Snapper-Grouper	Vermilion Snapper	<i>Rhomboplites aurorubens</i>	SE-GOM	GMFMC
Snapper-Grouper	Gray Triggerfish	<i>Balistes capricus</i>	SE-GOM	GMFMC
Snapper-Grouper	Yellowedge Grouper	<i>Epinephelus flavolimbatus</i>	SE-GOM	GMFMC
Snapper-Grouper	Snowy Grouper	<i>Epinephelus niveatus</i>	SE-GOM	GMFMC
Snapper-Grouper	Black Grouper	<i>Mycteroperca bonac</i>	SE-GOM	GMFMC
Snapper-Grouper	Hogfish	<i>Lachnolaimus maximus</i>	SE-GOM	GMFMC
Snapper-Grouper	Mutton Snapper	<i>Lutjanus analis</i>	SE-GOM	GMFMC
Snapper-Grouper	Gray (Mangrove) Snapper	<i>Lutjanus griseus</i>	SE-GOM	GMFMC
Snapper-Grouper	Lane Snapper	<i>Lutjanus synagris</i>	SE-GOM	GMFMC
Snapper-Grouper	Scamp	<i>Mycteroperca phenax</i>	SE-GOM	GMFMC
Snapper-Grouper	Lesser Amberjack	<i>Seriola fasciata</i>	SE-GOM	GMFMC
Snapper-Grouper	Almaco Jack	<i>Seriola rivoliana</i>	SE-GOM	GMFMC
Snapper-Grouper	Banded Rudderfish	<i>Seriola zonata</i>	SE-GOM	GMFMC
Snapper-Grouper	Queen Snapper	<i>Etelis oculatus</i>	SE-GOM	GMFMC
Snapper-Grouper	Schoolmaster	<i>Lutjanus apodus</i>	SE-GOM	GMFMC
Snapper-Grouper	Blackfin Snapper	<i>Lutjanus buccanella</i>	SE-GOM	GMFMC
Snapper-Grouper	Cubera Snapper	<i>Lutjanus cyanopterus</i>	SE-GOM	GMFMC
Snapper-Grouper	Dog Snapper	<i>Lutjanus novemfasciatus</i>	SE-GOM	GMFMC
Snapper-Grouper	Mahogany Snapper	<i>Lutjanus mahogoni</i>	SE-GOM	GMFMC
Snapper-Grouper	Silk Snapper	<i>Lutjanus vivanus</i>	SE-GOM	GMFMC
Snapper-Grouper	Wenchman	<i>Pristipomoides aquilonaris</i>	SE-GOM	GMFMC
Snapper-Grouper	Goldface Tilefish	<i>Caulolatilus chrysops</i>	SE-GOM	GMFMC
Snapper-Grouper	Blackline Tilefish	<i>Caulolatilus cyanops</i>	SE-GOM	GMFMC
Snapper-Grouper	Anchor Tilefish	<i>Caulolatilus intermedius</i>	SE-GOM	GMFMC
Snapper-Grouper	Blueline Tilefish	<i>Caulolatilus microps</i>	SE-GOM	GMFMC
Snapper-Grouper	Tilefish	<i>Lopholatilus spp.</i>	SE-GOM	GMFMC
Snapper-Grouper	Rock Hind	<i>Epinephelus adscensionis</i>	SE-GOM	GMFMC
Snapper-Grouper	Speckled Hind	<i>Epinephelus drummondhayi</i>	SE-GOM	GMFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Snapper-Grouper	Red Hind	<i>Epinephelus guttatus</i>	SE-GOM	GMFMC
Snapper-Grouper	Misty Grouper	<i>Epinephelus mystacinus</i>	SE-GOM	GMFMC
Snapper-Grouper	Warsaw Grouper	<i>Epinephelus nigritus</i>	SE-GOM	GMFMC
Snapper-Grouper	Yellowmouth Grouper	<i>Mycteroperca interstitialis</i>	SE-GOM	GMFMC
Snapper-Grouper	Yellowfin Grouper	<i>Mycteroperca venenosa</i>	SE-GOM	GMFMC
Snapper-Grouper	Dwarf Sand Perch	<i>Diplectrum bivittatum</i>	SE-GOM	GMFMC
Snapper-Grouper	Sand Perch	<i>Diplectrum formosum</i>	SE-GOM	GMFMC
Snapper-Grouper	Nassau Grouper	<i>Epinephelus striatus</i>	SE-GOM	GMFMC
Red Drum	Red drum	<i>Sciaenops ocellatus</i>	SE, GOM	GMFMC
Spiny Dogfish	Spiny dogfish	<i>Squalus acanthias</i>	NE	MAFMC
Spiny Lobster	Spiny lobster	<i>Panulirus argus</i>	SE-USC	CFMC
Squid, Mackerel, Butterfish	Butterfish	<i>Peprilus triacanthus</i>	NE	MAFMC
Squid, Mackerel, Butterfish	Atlantic mackerel	<i>Scomber scombrus</i>	NE	MAFMC
Squid, Mackerel, Butterfish	Squid, Illex	<i>Cephalopoda spp.</i>	NE	MAFMC
Squid, Mackerel, Butterfish	Squid, Loligo	<i>Cephalopoda spp.</i>	NE	MAFMC
Stone Crab	Stone crab	<i>Menippe mercenaria</i>	SE-GOM	GMFMC
Summer Flounder, Scup, Black Sea Bass	Summer flounder	<i>Paralichthys dentatus</i>	NE, SE-SEA	MAFMC
Summer Flounder, Scup, Black Sea Bass	Scup	<i>Stenotomus chrysops</i>	NE	MAFMC
Tilefish	Tilefish	<i>Hoplostethus spp.</i>	NE, SE-SEA	MAFMC
Atlantic Surfclam and Ocean Quahog	Atlantic Surfclam	<i>Spisula solidissima</i>	NE	MAFMC
Atlantic Surfclam and Ocean Quahog	Ocean Quahog	<i>Arctica islandica</i>	NE	MAFMC
Summer Flounder, Scup, Black Sea Bass	Black sea bass	<i>Centropristis striata</i>	NE	MAFMC
Bottomfish and Seamount Fisheries	Bottomfish adults	Various species	PTW	WPFMC
Pelagic Fisheries	Pelagic species all life stages	Various species	PTW	WPFMC
Pelagic Fisheries	Skipjack Tuna - Central Western Pacific	<i>Katsuwonus pelamis</i>	PTW	WPFMC
Pelagic Fisheries	Yellowfin Tuna - Central Western Pacific	<i>Thunnus albacares</i>	PTW	WPFMC
Pelagic Fisheries	Striped Marlin - Central Western Pacific	<i>Kajikia audax</i>	PTW	WPFMC

Fishery Management Plan	Common Name	Scientific name	Region of Influence	Management Authority
Pelagic Fisheries	Albacore - South Pacific	<i>Thunnus alalunga</i>	PTW	WPFMC
Pelagic Fisheries	Indo-Pacific Blue Marlin - Pacific	<i>Makaira nigricans</i>	PTW	WPFMC
Pelagic Fisheries	Shortbill Spearfish - Pacific	<i>Tetrapturus angustirostris</i>	PTW	WPFMC
Pelagic Fisheries	Wahoo - Pacific	<i>Acanthocybium solandri</i>	PTW	WPFMC
Pelagic Fisheries	Moonfish (Opah) - Pacific	Lampridae spp.	PTW	WPFMC
Pelagic Fisheries	Black Marlin - Pacific	<i>Stiompa indica</i>	PTW	WPFMC
Pelagic Fisheries	Pomfrets - Pacific	Bramidae spp.	PTW	WPFMC
Pelagic Fisheries	Sailfish - Pacific	Istiophoridae spp.	PTW	WPFMC
Pelagic Fisheries	Longfin Mako Shark - North Pacific	<i>Isurus paucus</i>	PTW	WPFMC
Pelagic Fisheries	Silky Shark - Tropical Pacific	<i>Carcharhinus falciformis</i>	PTW	WPFMC
Pelagic Fisheries	Oceanic Whitetip Shark - Tropical Pacific	<i>Carcharhinus longimanus</i>	PTW	WPFMC
Pelagic Fisheries	Salmon Shark - North Pacific	<i>Lamna ditropis</i>	PTW	WPFMC
Pelagic Fisheries	Other Tuna Relatives - Tropical Pacific	<i>Thunnus</i> spp.	PTW	WPFMC
Pelagic Fisheries	Oilfish Family - Pacific	<i>Comephoridae</i>	PTW	WPFMC
Pelagic Fisheries	Kawakawa - Tropical Pacific	<i>Euthynnus affinis</i>	PTW	WPFMC
Crustacean Fisheries	Larvae, juveniles, adults	Various species	PTW	WPFMC

Notes:

SE-USC = Southeastern Waters ROI-United States Caribbean

HMS = Highly Migratory Species

NE = Northeastern ROI

SE-SEA = Southeast ROI-Southeast Atlantic

SE - GOM = Southeast ROI-Gulf of Mexico

SE-USC = Southeast ROI-United States Caribbean

NEFMC = Northeast Fishery Management Council

MAFMC = Mid-Atlantic Fishery Management Council

SAFMC = South Atlantic Fishery Management Council

CFMC = Caribbean Fishery Management Council

AK = Alaska Waters ROI

NPFMC = North Pacific Fishery Management Council

GMFMC = Gulf of Mexico Fishery Management Council

PfMC = Pacific Fishery Management Council

SW = Southwest ROI

NW = Northwest ROI

BSAI = Bering Sea – Aleutian Islands

GOA = Gulf of Alaska

PAI = Pacific Area Islands ROI

WPFMC = Western Pacific Fishery Management Council

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APPENDIX G

AIR QUALITY EMISSIONS CALCULATIONS

Generator Emission Calculation Spreadsheet

Generator Information

Model: Honda Generator Model EU1000iA, Engine GXH50
Power: 1,000 Watts
 1.34 Horsepower
Displacement: 50 cc
Fuel Consumption: 0.16 gal/hr at 100% load
PTE Hours/Year: 8,760

Number of Generators: 20

Criteria Air Pollutants	AP-42 Emission Factors ¹ (lb/MMBtu)	Fuel Use ² (gal/hr)	Heating Value (HV) ³ (Btu/gal)	Hourly Emissions ⁴ (lb/hr)	PTE ⁵ (ton/yr)
Carbon Monoxide	62.70	0.16	113,680	1.1254	98.5878
Carbon Dioxide	154	0.16	113,680	2.7642	242.1456
Nitrogen Oxides	1.63	0.16	113,680	0.0293	2.5630
Particulate Matter ⁶	0.10	0.16	113,680	0.0018	0.1572
Particulate Matter <10µm	0.10	0.16	113,680	0.0018	0.1572
Particulate Matter <2.5µm ⁷	0.10	0.16	113,680	0.0018	0.1572
Sulfur Oxides	0.084	0.16	113,680	0.0015	0.1321
Volatile Organic Compounds ⁸	3.03	0.16	113,680	0.0544	4.7643

¹ Emission factors from EPA AP-42 Section 3.3 *Gasoline and Diesel Industrial Engines*, Table 3.3-1 (October 1996).
 (<http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf>).

² Hourly fuel use was obtained from Honda Generator Model EU1000iA, Engine GXH50 generator specifications. The following equation was used to calculate hourly fuel use:
 Hourly fuel use = Fuel Tank Capacity/Run time per tankful (0.6 gal/3.8 hours) = 0.16 gal/hr

³ The heating value (HV) of gasoline is given in EPA AP-42 Section 3.3 *Gasoline and Diesel Industrial Engines*, Table 3.3-1 (October 1996). A typical parameter of gasoline fuel is 20,300 Btu/lb. The density of gasoline is given in AP-42 Chapter 7.1, Table 7.1-2, *Properties of Selected Petroleum Products* (November 2006) as 5.6 lb/gal.

The following equation was used to calculate HV:

$$HV \text{ (Btu/gal)} = 20,300 \text{ Btu/lb} * 5.6 \text{ lb/gal} = 113,680 \text{ Btu/gal}$$

⁴ The following equation was used to calculate hourly emissions for each pollutant:

$$\text{Hourly emissions (lb/hr)} = EF \text{ (lb/MM Btu)} * \text{fuel use (gal/hr)} * HV \text{ (Btu/gal)} / 1,000,000$$
 where: EF = Emission Factor
 HV = Heating Value

⁵ Potential to Emit (PTE) was calculated based on the number of hours in a year (8,760 hours per year).
 The following equation was used to calculate PTE:

$$PTE \text{ (ton/yr)} = \text{Hourly emissions (lb/hr)} * 8,760 \text{ (hrs/yr)} * \text{Number of Generators} / 2,000 \text{ (lb/ton)}$$

⁶ No emission factor data for Particulate Matter (PM) is included in AP-42, assume PM emission factors are equal to Particulate Matter <10µm.

⁷ Assume Particulate Matter <2.5µm equals Particulate Matter <10µm.

⁸ Volatile Organic Compounds assumed to be the sum of exhaust, evaporative, crankcase, and refueling portion of Total Organic Compounds (TOC).

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MSST	Maritime Safety and Security Team	PM ₁₀	particulates equal or less than 10 microns in diameter
MTS	U.S. Marine Transportation System	PM _{2.5}	particulates equal or less than 2.5 microns in diameter
NAAQS	National Ambient Air Quality Standards	ppm	parts per million
NAIS	Nationwide Automatic Identification System	ppt	parts per thousand
NEFMC	New England Fishery Management Council	PSD	Federal Prevention of Significant Deterioration
NEP	National Estuary Program	PTE	Potential to Emit
NEPA	National Environmental Policy Act	PTS	permanent threshold shift
NEPCCR	National Estuary Program Coastal Condition Report	RADAR	Radio Detection and Ranging
NHPA	National Historic Preservation Act	ROI	Region of Influence
NM	nautical miles	ROV	Remotely Operated Vehicle
NMFS	National Marine Fisheries Service	SAFMC	South Atlantic Fishery Management Council
NMS	National Marine Sanctuary	SCB	Southern California Bight
NMSA	National Marine Sanctuaries Act	SHPO	State Historic Preservation Office
NO ₂	nitrogen dioxide	SIP	State Implementation Plan
NOAA	National Oceanic and Atmospheric Administration	SMA	Seasonal Management Area
NPFMC	North Pacific Fishery Management Council	SO ₂	sulfur dioxide
NRHP	National Register of Historic Places	SONAR	Sound Navigation and Ranging
O ₃	ozone	SPL	Sound Pressure Level
OSHA	Occupational Safety and Health Administration	SURTASS-LFA	Surveillance Towed Array Sensor System – Low Frequency Active system
P.L.	Public Law	TCP	Traditional Cultural Property
Pb	lead	TED	Turtle Excluder Device
PEA	Programmatic Environmental Assessment	TM	tympanic membrane
PFMC	Pacific Fishery Management Council	TOI	Targets of Interest
		tpy	tons per year
		TTS	temporary threshold shift
		U.S.C.	United States Code
		UHF	ultra high frequency
		USCG	U.S. Coast Guard
		USFWS	U.S. Fish and Wildlife Service
		USN	U.S. Navy
		WPFMC	Western Pacific Fishery Management Council

