

DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

Letter of Authorization

The Commander, U.S. Fleet Forces Command, 1562 Mitscher Ave., Ste 250, Norfolk, VA 23551-2457 and persons operating under his authority (i.e., Navy), are authorized to take marine mammals incidental to Navy activities conducted as part of the Atlantic Fleet Active Sonar Training (AFAST) in the Atlantic Ocean and Gulf of Mexico in accordance with 50 CFR Part 216, Subpart V-- Taking and Importing Marine Mammals; U.S. Navy's Atlantic Fleet Active Sonar Training (AFAST) subject to the provisions of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*; MMPA) and the following conditions:

1. This Authorization is valid for the period January 22, 2009, through January 21, 2010.
2. This Authorization is valid only for the unintentional taking of the species of marine mammals and methods of take identified in 50 CFR § 216.242(c) and Condition (5) of this Authorization incidental to the activities specified in 50 CFR § 216.240(c) and Condition (4)(a) of this Authorization and occurring within the AFAST Study Area, (as depicted in Figure 1-2 in the Navy's AFAST Final Environmental Impact Statement, which extends east from the Atlantic Coast of the U.S. to 45 degrees W. long. and south from the Atlantic and Gulf of Mexico Coasts to approximately 23 degrees N. lat., excluding the Bahamas).
3. This Authorization is valid only if the Holder of the Authorization or any person(s) operating under his authority implements the mitigation, monitoring, and reporting required pursuant to 50 CFR §§ 216.244 & 216.245 and implements the Terms and Conditions of this Authorization.
4. (a) The taking of marine mammals by the Navy is only authorized if it occurs incidental to the use of the following mid-frequency active sonar (MFAS) sources, high frequency active sonar (HFAS) sources, or explosive sonobuoys for U.S. Navy anti-submarine warfare (ASW), mine warfare (MIW) training, maintenance, or research, development, testing, and evaluation (RDT&E) in the amounts indicated below (+/- 10 percent):
 - (i) AN/SQS-53 (hull-mounted sonar) – 3214 hours
 - (ii) AN/SQS-56 (hull-mounted sonar) – 1684 hours
 - (iii) AN/SQS-56 or 53 (hull mounted sonar in object detection mode) – 216 hours
 - (iv) AN/BQQ-10 or 5 (submarine sonar) – 9976 pings
 - (v) AN/AQS-22 or 13 (helicopter dipping sonar) – 2952 dips

(vi) SSQ-62 (Directional Command Activated Sonobuoy System (DICASS) sonobuoys) – 5853

(vii) MK-48 (heavyweight torpedoes) – 32 torpedoes

(viii) MK-46 or 54 (lightweight torpedoes) – 24 torpedoes

(ix) AN/SSQ-110A (IEER explosive sonobuoy) and AN/SSQ-125 (AEER sonar sonobuoy) – 872 sonobuoys between these 2 sources

(x) AN/SQQ-32 (over the side mine-hunting sonar) – 4474 hours

(xi) AN/SLQ-25 (NIXIE – towed countermeasure) – 332 hours

(xii) AN/BQS-15 (submarine navigation) – 450 hours

(xiii) MK-1 or 2 or 3 or 4 (Submarine-fired Acoustic Device Countermeasure (ADC)) - 225 ADCs

(xiv) Noise Acoustic Emitters (NAE – Sub-fired countermeasure) - 127 NAEs

(b) If the number of sonar hours, dops, torpedoes, and sonobuoys indicated in Condition 4(a) are exceeded by more than 10 percent, subsequent LOAs issued under the AFAST final rule will ensure that the total over five years does not exceed the amount indicated in 50 CFR 216.240(c).

5. This authorization is valid only for the incidental take of the following marine mammal species, and only by the indicated method and amount of take:

(a) Level B Harassment (+/-10 percent of the number of takes indicated below):

(i) Mysticetes:

(A) North Atlantic right whale (Eubalaena glacialis) – 666

(B) Humpback whale (Megaptera novaeangliae) – 4202

(C) Minke whale (Balaenoptera acutorostrata) – 415

(D) Sei whale (Balaenoptera borealis) – 1057

(E) Fin whale (Balaenoptera physalus) – 882

(F) Bryde's whale (Balaenoptera edeni) – 36

(G) Blue whale (Balaenoptera musculus) – 801

(ii) Odontocetes:

(A) Sperm whales (Physeter macrocephalus) – 9758

(B) Pygmy or dwarf sperm whales (Kogia breviceps or Kogia sima) – 4384

(C) Beaked Whales (Cuvier's, True's, Gervais', Sowerby's, Blainville's, Northern bottlenose whale) (Ziphius cavirostris, Mesoplodon mirus, M. europaeus, M. bidens, M. densirostris, Hyperoodon ampullatus) – 4907

(D) Rough-toothed dolphin (Steno bredanensis) – 2708

(E) Bottlenose dolphin (Tursiops truncatus) – 606802

(F) Pan-tropical dolphin (Stenella attenuata) – 139306

(G) Atlantic spotted dolphin (Stenella frontalis) – 376361

(H) Spinner dolphin (Stenella longirostris) – 21155

(I) Clymene dolphin (Stenella clymene) – 46438

(J) Striped dolphin (Stenella coeruleoalba) – 174274

(K) Common dolphin (Delphinus spp.) – 96460

(L) Fraser's dolphin (Lagenodelphis hosei) – 346

(M) Risso's dolphin (Grampus griseus) – 94075

(N) Atlantic white-sided dolphin (Lagenorhynchus acutus) – 20651

(O) White-beaked dophin (Lagenorhynchus albirostris) – 3450

(P) Melon-headed whale (Peponocephala electra) – 1654

(Q) Pygmy killer whale (Feresa attenuata) – 280

(R) False killer whale (Pseudorca crassidens) – 538

(S) Killer whale (Orcinus orca) – 503

(T) Pilot whales (Short-finned pilot or long-finned) (Globicephala macrorynchus or G. melas) – 127393

(U) Harbor porpoise (Phocoena phocoena) – 153481

(ii) Pinnipeds:

(A) Gray seal (Halichoerus grypus) – 7859

(B) Harbor seal (Phoca vitulina) – 12659

(C) Hooded seal (Cystophora cristata) – 15718

(D) Harp seal (Pagophilus groenlandica) – 11002

(b) Level A Harassment and/or mortality of no more than 10 beaked whales (total), of any of the species listed in § 216.242(c)(1)(ii)(C) over the course of the 5-year regulations.

(c) If any of the take in Condition (5)(b) occurs, it will be deducted from the take to be authorized in subsequent LOAs under 50 CFR Subpart V so as to ensure that the total taking over 5 years does not exceed the amounts indicated in Condition 5(b) and 50 CFR § 216.242(c)(2).

6. Mitigation - The Holder of this Authorization, and any person(s) operating under his authority, must implement the following mitigation measures when conducting activities identified in 50 CFR § 216.240(c) and Condition 4(a) of this Authorization:

(a) Mitigation Measures for ASW and MIW training:

(i) All lookouts onboard platforms involved in ASW training events shall review the NMFS-approved Marine Species Awareness Training (MSAT) material prior to use of mid-frequency active sonar.

(ii) All Commanding Officers, Executive Officers, and officers standing watch on the Bridge shall review the MSAT material prior to a training event employing the use of mid- or high-frequency active sonar.

(iii) Navy lookouts shall undertake extensive training in order to qualify as a watchstander in accordance with the Lookout Training Handbook (NAVEDTRA, 12968-D).

(iv) Lookout training shall include on-the-job instruction under the supervision of a qualified, experienced watchstander. Following successful completion of this supervised training period, Lookouts shall complete the Personal Qualification Standard program, certifying that they have demonstrated the necessary skills (such as detection and reporting of partially submerged objects).

(v) Lookouts shall be trained in the most effective means to ensure quick and effective communication within the command structure in order to facilitate implementation of mitigation measures if marine mammals are spotted.

(vi) On the bridge of surface ships, there shall always be at least three people on watch whose duties include observing the water surface around the vessel.

(vii) All surface ships participating in ASW exercises shall, in addition to the three personnel on watch noted previously, have at all times during the exercise at least two additional personnel on watch as lookouts.

(viii) Personnel on lookout and officers on watch on the bridge shall have at least one set of binoculars available for each person to aid in the detection of marine mammals.

(ix) On surface vessels equipped with MFAS, pedestal mounted "Big Eye" (20x110) binoculars shall be present and in good working order.

(x) Personnel on lookout shall employ visual search procedures employing a scanning methodology in accordance with the Lookout Training Handbook (NAVEDTRA 12968-D). Surface lookouts should scan the water from the ship to the horizon and be responsible for all contacts in their sector. In searching the assigned sector, the lookout should always start at the forward part of the sector and search aft (toward the back). To search and scan, the lookout should hold the binoculars steady so the horizon is in the top third of the field of vision and direct the eyes just below the horizon. The lookout should scan for approximately five seconds in as many small steps as possible across the field seen through the binoculars. They should search the entire sector in approximately five-degree steps, pausing between steps for approximately five seconds to scan the field of view. At the end of the sector search, the glasses

should be lowered to allow the eyes to rest for a few seconds, and then the lookout should search back across the sector with the naked eye.

(xi) After sunset and prior to sunrise, lookouts shall employ Night Lookouts Techniques in accordance with the Lookout Training Handbook. At night, lookouts should not sweep the horizon with their eyes because this method is not effective when the vessel is moving. Lookouts should scan the horizon in a series of movements that should allow their eyes to come to periodic rests as they scan the sector. When visually searching at night, they should look a little to one side and out of the corners of their eyes, paying attention to the things on the outer edges of their field of vision.

(xii) Personnel on lookout shall be responsible for informing the Officer of the Deck of all objects or anomalies sighted in the water (regardless of the distance from the vessel), since any object or disturbance (e.g., trash, periscope, surface disturbance, discoloration) in the water may be indicative of a threat to the vessel and its crew or indicative of a marine species that may need to be avoided as warranted.

(xiii) Commanding Officers shall make use of marine mammal detection cues and information to limit interaction with marine mammals to the maximum extent possible consistent with safety of the ship.

(xiv) All personnel engaged in passive acoustic sonar operation (including aircraft, surface ships, or submarines) shall monitor for marine mammal vocalizations and report the detection of any marine mammal to the appropriate watch station for dissemination and appropriate action.

(xv) Units shall use training lookouts to survey for marine mammals prior to commencement and during the use of active sonar.

(xvi) During operations involving sonar, personnel shall utilize all available sensor and optical systems (such as Night Vision Goggles) to aid in the detection of marine mammals.

(xvii) Navy aircraft participating in exercises at sea shall conduct and maintain, when operationally feasible and safe, surveillance for marine mammals as long as it does not violate safety constraints or interfere with the accomplishment of primary operational duties.

(xviii) Aircraft with deployed sonobuoys shall use only the passive capability of sonobuoys when marine mammals are detected within 200 yards (182 m) of the sonobuoy.

(xix) Marine mammal detections shall be reported immediately to assigned Aircraft Control Unit (if participating) for further dissemination to ships in the vicinity of the marine mammals. This action shall occur when it is reasonable to conclude that the course of the ship will likely close the distance between the ship and the detected marine mammal.

(xx) Safety Zones - When marine mammals are detected by any means (aircraft, shipboard lookout, or acoustically) the Navy shall ensure that sonar transmission levels are limited to at least 6 dB below normal operating levels if any detected marine mammals are within 1000 yards (914 m) of the sonar dome (the bow).

(A) Ships and submarines shall continue to limit maximum transmission levels by this 6-dB factor until the marine mammal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yards (1828 m) beyond the location of the last detection.

(B) Should a marine mammal be detected within or closing to inside 457 m (500 yd) of the sonar dome, active sonar transmissions shall be limited to at least 10 dB below the equipment's normal operating level. Ships and submarines shall continue to limit maximum ping levels by this 10-dB factor until the marine mammal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2000 yards (1828 m) beyond the location of the last detection.

(C) Should the marine mammal be detected within or closing to inside 183 m (200 yd) of the sonar dome, active sonar transmissions shall cease. Sonar shall not resume until the marine mammal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yards (1828 m) beyond the location of the last detection.

(D) If the need for power-down should arise as detailed in "Safety Zones" in paragraph (a)(1)(xx) of this section, Navy shall follow the requirements as though they were operating at 235 dB – the normal operating level (i.e., the first power-down shall be to 229 dB, regardless of at what level above 235 sonar was being operated).

(xxi) Prior to start up or restart of active sonar, operators shall check that the Safety Zone radius around the sound source is clear of marine mammals.

(xxii) Sonar levels (generally) – The Navy shall operate sonar at the lowest practicable level, not to exceed 235 dB, except as required to meet tactical training objectives.

(xxiii) Helicopters shall observe/survey the vicinity of an ASW Operation for 10 minutes before the first deployment of active (dipping) sonar in the water.

(xxiv) Helicopters shall not dip their sonar within 200 yards (183 m) of a marine mammal and shall cease pinging if a marine mammal closes within 200 yards (183 m) of the helicopter after pinging has begun.

(xxv) Submarine sonar operators shall review detection indicators of close-aboard marine mammals prior to the commencement of ASW training activities involving active sonar.

(xxvi) Night vision devices shall be available to all ships and air crews, for use as appropriate.

(xxvii) Dolphin bowriding - if, after conducting an initial maneuver to avoid close quarters with dolphins, the ship concludes that dolphins are deliberately closing in on the ship to ride the vessel's bow wave, no further mitigation actions would be necessary because dolphins are out of the main transmission axis of the active sonar while in the shallow-wave area of the vessel bow.

(xxviii) TORPEXs conducted in the northeast North Atlantic right whale critical habitat (as designated in 50 CFR Part 226) shall implement the following measures.

(A) All torpedo-firing operations shall take place during daylight hours.

(B) During the conduct of each test, visual surveys of the test area shall be conducted by all vessels and aircraft involved in the exercise to detect the presence of marine mammals. Additionally, trained observers shall be placed on the submarine, spotter aircraft, and the surface support vessel. All participants shall report sightings of any marine mammals, including negative reports, prior to torpedo firings. Reporting requirements shall be outlined in the test plans and procedures written for each individual exercise, and shall be emphasized as part of pre-exercise briefings conducted with all participants.

(C) Observers shall receive NMFS-approved training in field identification, distribution, and relevant behaviors of marine mammals of the western north Atlantic. Observers shall fill out Standard Sighting Forms and the data shall be housed at the Naval Undersea Warfare Center Division Newport (NUWCDIVNPT). Any sightings of North Atlantic right whales shall be immediately communicated to the Sighting Advisory System (SAS). All platforms shall have onboard a copy of:

(1) The Guide to Marine Mammals and Turtles of the US Atlantic and Gulf of Mexico (Wynne and Schwartz 1999)

(2) The NMFS Critical Sightings Program placard

(3) Right Whales, Guidelines to Mariners placard

(D) In addition to the visual surveillance discussed above, dedicated aerial surveys shall be conducted utilizing a fixed-wing aircraft. An aircraft with an overhead wing (i.e., Cessna Skymaster or similar) shall be used to facilitate a clear view of the test area. Two trained observers, in addition to the pilot, shall be embarked on the aircraft. Surveys shall be conducted at an approximate altitude of 1000 ft (305 m) flying parallel track lines at a separation of 1 nmi (1.85 km), or as necessary to facilitate good visual coverage of the sea surface. While conducting surveillance, the aircraft shall maintain an approximate speed of 100 knots (185 km/hr). Since factors that affect visibility are highly

dependent on the specific time of day of the survey, the flight operator will have the flexibility to adjust the flight pattern to reduce glare and improve visibility. The entire test site shall be surveyed initially, but once preparations are being made for an actual test launch, survey effort shall be concentrated over the vicinity of the individual test location. Further, for approximately ten minutes immediately prior to launch, the aircraft shall racetrack back and forth between the launch vessel and the target vessel.

(E) Commencement of an individual torpedo test scenario shall not occur until observers from all vessels and aircraft involved in the exercise have reported to the Officer in Tactical Command (OTC) and the OTC has declared that the range is clear of marine mammals. Should marine mammals be present within or seen moving toward the test area, the test shall be either delayed or moved as required to avoid interference with the animals.

(F) The TORPEX shall be suspended if the Beaufort Sea State exceeds 3 or if visibility precludes safe operations.

(G) Vessel speeds:

(1) During transit through the northeastern North Atlantic right whale critical habitat, surface vessels and submarines shall maintain a speed of no more than 10 knots (19 km/hr) while not actively engaged in the exercise procedures.

(2) During TORPEX operations, a firing vessel should, where feasible, not exceed 10 knots. When a submarine is used as a target, vessel speeds should, where feasible, not exceed 18 knots. However, on occasion, when surface vessels are used as targets, the vessel may exceed 18 kts in order to fully test the functionality of the torpedoes. This increased speed would occur for a short period of time (e.g., 10-15 minutes) to evade the torpedo when fired upon.

(H) In the event of an animal strike, or if an animal is discovered that appears to be in distress, the Navy shall immediately report the discovery through the appropriate Navy chain of Command.

(xxviii) The Navy shall abide by the following additional measures:

(A) The Navy shall avoid planning major exercises in the specified planning awareness areas (PAAs - see Figure 2 in 50 CFR 216 Subpart V) where feasible. Should national security require the conduct of more than four major exercises (C2X, JTFEX, SEASWITI, or similar scale event) in these areas (meaning all or a portion of the exercise) per year the Navy shall provide NMFS with prior notification and include the information in any associated after-action or monitoring reports.

(B) The Navy shall conduct no more than one of the four above-mentioned major exercises (COMPTUEX, JTFEX, SEASWITI or similar scale event) per year in the Gulf

of Mexico to the extent operationally feasible. If national security needs require more than one major exercise to be conducted in the Gulf of Mexico PAAs, the Navy shall provide NMFS with prior notification and include the information in any associated after-action or monitoring reports.

(C) The Navy shall include the PAAs in the Navy's Protective Measures Assessment Protocol (PMAP) (implemented by the Navy for use in the protection of the marine environment) for unit level situational awareness (i.e., exercises other than COMPTUEX, JTFEX, SEASWITI) and planning purposes.

(D) Helicopter Dipping Sonar - Unless otherwise dictated by national security needs, the Navy shall minimize helicopter dipping sonar activities within the southeastern areas of North Atlantic right whale critical habitat (as designated in 50 CFR Part 226) from November 15 – April 15.

(E) Object Detection Exercises – The Navy shall implement the following measures regarding object detection activities in the southeastern areas of the North Atlantic right whale critical habitat:

(1) The Navy shall reduce the time spent conducting object detection exercises in the NARW critical habitat;

(2) Prior to conducting surface ship object detection exercises in the southeastern areas of the North Atlantic right whale critical habitat during the time of November 15 – April 15, ships shall contact FACS FACJAX to obtain the latest North Atlantic right whale sighting information. FACS FACJAX shall advise ships of all reported whale sightings in the vicinity of the critical habitat and associated areas of concern (which extend 9 km (5 NM) seaward of the designated critical habitat boundaries). To the extent operationally feasible, ships shall avoid conducting training in the vicinity of recently sighted North Atlantic right whales. Ships shall maneuver to maintain at least 500 yards separation from any observed whale, consistent with the safety of the ship.

(xxix) The Navy shall abide by the letter of the “Stranding Response Plan for Major Navy Training Exercises in the AFAST Study Area” (attached), to include the following measures:

(A) Shutdown Procedures – When an Uncommon Stranding Event (USE – defined in 50 CFR § 216.241) occurs during a Major Training Exercise (MTE, including SEASWITI, IAC, Group Sails, JTFEX, or COMPTUEX) in the AFAST Study Area, the Navy shall implement the procedures described below.

(1) The Navy shall implement a Shutdown (as defined 50 CFR § 216.241) when advised by a NMFS Office of Protected Resources Headquarters Senior Official designated in the AFAST Stranding Communication Protocol that a USE involving live

animals has been identified and that at least one live animal is located in the water. NMFS and Navy shall communicate, as needed, regarding the identification of the USE and the potential need to implement shutdown procedures.

(2) Any shutdown in a given area shall remain in effect in that area until NMFS advises the Navy that the subject(s) of the USE at that area die or are euthanized, or that all live animals involved in the USE at that area have left the area (either of their own volition or herded).

(3) If the Navy finds an injured or dead animal of any species other than North Atlantic right whale floating at sea during an MTE, the Navy shall notify NMFS immediately or as soon as operational security considerations allow. The Navy shall provide NMFS with species or description of the animal (s), the condition of the animal (s) including carcass condition if the animal(s) is/are dead, location, time of first discovery, observed behaviors (if alive), and photo or video (if available). Based on the information provided, NMFS shall determine if, and advise the Navy whether a modified shutdown is appropriate on a case-by-case basis.

(4) If the Navy finds an injured (or entangled) North Atlantic right whale floating at sea during an MTE, the Navy shall implement shutdown procedures (14 nm off Atlantic coast or 17 nm in Gulf of Mexico, as defined below) around the animal immediately (without waiting for notification from NMFS). The Navy shall then notify NMFS (pursuant to the AFAST Communication Protocol) immediately or as soon as operational security considerations allow. The Navy shall provide NMFS with species or description of the animal (s), the condition of the animal (s) including location, time of first discovery, observed behaviors (if alive), and photo or video (if available). Subsequent to the discovery of the injured whale, any Navy platforms in the area shall report any North Atlantic right whale sightings to NMFS (or to a contact that can alert NMFS as soon as possible). Based on the information provided, NMFS may initiate/organize an aerial survey (by requesting the Navy's assistance pursuant to the memorandum of agreement (MOA) (see (xxix)(C) below) or by other available means) to see if other North Atlantic right whales are in the vicinity. Based on the information provided by the Navy and, if necessary, the outcome of the aerial surveys, NMFS shall determine whether a continued shutdown is appropriate on a case-by-case basis. Though it will be determined on a case-by-case basis after Navy/NMFS discussion of the situation, NMFS anticipates that the shutdown will continue within 14 or 17 nm of a live, injured/entangled North Atlantic right whale until the animal dies or has not been seen for at least 3 hours (either by NMFS staff attending the injured animal or Navy personnel monitoring the area around where the animal was last sighted).

(5) If the Navy finds a dead North Atlantic right whale floating at sea during an MTE, the Navy shall notify NMFS (pursuant to AFAST Stranding Communication Protocol) immediately or as soon as operational security considerations allow. The Navy shall provide NMFS with species or description of the animal (s), the condition of the animal (s) including carcass condition if the animal(s) is/are dead,

location, time of first discovery, observed behaviors (if alive), and photo or video (if available). Subsequent to the discovery of the dead whale, if the Navy is operating sonar in the area they shall use increased vigilance (in looking for North Atlantic right whales) and all platforms in the area shall report sightings of North Atlantic right whales to NMFS as soon as possible. Based on the information provided, NMFS may initiate/organize an aerial survey (by requesting the Navy's assistance pursuant to the MOA (see (C), below) or by other available means) to see if other North Atlantic right whales are in the vicinity. Based on the information provided by the Navy and, if necessary, the outcome of the aerial surveys, NMFS will determine whether any additional mitigation measures are necessary on a case-by-case basis.

(6) In the event, following a USE, that: a) qualified individuals are attempting to herd animals back out to the open ocean and animals are not willing to leave, or b) animals are seen repeatedly heading for the open ocean but turning back to shore, NMFS and the Navy should coordinate (including an investigation of other potential anthropogenic stressors in the area) to determine if the proximity of MFAS/HFAS training activities or explosive detonations, though farther than 14 nm (off Atlantic coast) or 17 nm (in Gulf of Mexico) from the distressed animal(s), is likely decreasing the likelihood that the animals return to the open water. If so, NMFS and the Navy shall further coordinate to determine what measures are necessary to further minimize that likelihood and implement those measures as appropriate.

(B) Within 72 hours of NMFS notifying the Navy of the presence of a USE, the Navy shall provide available information to NMFS (per the AFAST Communication Protocol) regarding the location, number and types of acoustic/explosive sources, direction and speed of units using MFAS/HFAS, and marine mammal sightings information associated with training activities occurring within 80 nm (148 km) and 72 hours prior to the USE event. Information not initially available regarding the 80 nm (148 km), 72 hours period prior to the event shall be provided as soon as it becomes available. The Navy shall provide NMFS investigative teams with additional relevant unclassified information as requested, if available.

(C) Memorandum of Agreement (MOA) – The Navy and NMFS shall develop a MOA, or other mechanism consistent with federal fiscal law requirements (and all other applicable laws), that will establish a framework whereby the Navy can (and provide the Navy examples of how they can best) assist NMFS with stranding investigations in certain circumstances. This document shall be finalized in 2009 (unless NMFS notifies the Navy that a delay is needed).

(b) Mitigation for IEER/AEER - The following mitigation measures shall be used with Extended Echo Ranging/Improved Extended Echo Ranging (EER/IEER) and Advanced Extended Echo Ranging given an explosive source generates the acoustic wave used in this sonobuoy.

(i) Navy crews shall conduct visual reconnaissance of the drop area prior to laying their intended sonobuoy pattern. This search should be conducted below 500 yards (457 m) at a slow speed, if operationally feasible and weather conditions permit. In dual aircraft training activities, crews are allowed to conduct coordinated area clearances.

(ii) For IEER (AN/SSQ-110A), Navy crews shall conduct a minimum of 30 minutes of visual and acoustic monitoring of the search area prior to commanding the first post (source/receiver sonobuoy pair) detonation. This 30-minute observation period may include pattern deployment time.

(iii) For any part of the briefed pattern where a post (source/receiver sonobuoy pair) will be deployed within 1,000 yards (914 m) of observed marine mammal activity, deploy the receiver ONLY and monitor while conducting a visual search. When marine mammals are no longer detected within 1,000 yards (914 m) of the intended post position, co-locate the explosive source sonobuoy (AN/SSQ-110A) (source) with the receiver.

(iv) When operationally feasible, Navy crews shall conduct continuous visual and aural monitoring of marine mammal activity. This is to include monitoring of own-aircraft sensors from first sensor placement to checking off station and out of communication range of these sensors.

(v) Aural Detection: If the presence of marine mammals is detected aurally, then that should cue the aircrew to increase the diligence of their visual surveillance. Subsequently, if no marine mammals are visually detected, then the Navy crew may continue multi-static active search.

(vi) Visual Detection:

(A) If marine mammals are visually detected within 1,000 yards (914 m) of the explosive source sonobuoy (AN/SSQ-110A) intended for use, then that payload shall not be detonated.

(B) Navy Aircrews may utilize this post once the marine mammals have not been re-sighted for 30 minutes, or are observed to have moved outside the 1,000 yards (914 m) safety buffer.

(C) Navy Aircrews may shift their multi-static active search to another post, where marine mammals are outside the 1,000 yards (914 m) safety buffer.

(vii) For IEER (AN/SSQ-110A), Navy Aircrews shall make every attempt to manually detonate the unexploded charges at each post in the pattern prior to departing the operations area by using the "Payload 1 Release" command followed by the "Payload 2 Release" command. Aircrews shall refrain from using the "Scuttle" command when two payloads remain at a given post. Aircrews shall ensure that a 1,000 yard (914 m) safety buffer, visually clear of marine mammals, is maintained around each post as is done during active search operations.

(viii) Navy Aircrews shall only leave posts with unexploded charges in the event of a sonobuoy malfunction, an aircraft system malfunction, or when an aircraft must immediately depart the area due to issues such as fuel constraints, inclement weather, and in-flight emergencies. In these cases, the sonobuoy will self-scuttle using the secondary or tertiary method.

(ix) The Navy shall ensure all payloads are accounted for. Explosive source sonobuoys (AN/SSQ-110A) that cannot be scuttled shall be reported as unexploded ordnance via voice communications while airborne, then upon landing via naval message.

(x) Marine mammal monitoring shall continue until out of own-aircraft sensor range.

(c) Mitigation Measures related to Vessel Transit and North Atlantic Right Whales

(i) Mid-Atlantic, Offshore of the Eastern United States

(A) All Navy vessels are required to use extreme caution and operate at a slow, safe speed consistent with mission and safety during the months indicated below and within a 37 km (20 nm) arc (except as noted) of the specified associated reference points:

(1) South and East of Block Island (37 km (20 NM) seaward of line between 41-4.49° N. lat. 071-51.15° W. long. and 41-18.58° N. lat. 070-50.23° W. long.): Sept-Oct and Mar-Apr

(2) New York / New Jersey (40-30.64° N. lat. 073-57.76° W. long.): Sep-Oct and Feb-Apr.

(3) Delaware Bay (Philadelphia) (38-52.13° N. lat. 075-1.93° W. long.): Oct-Dec and Feb-Mar.

(4) Chesapeake Bay (Hampton Roads and Baltimore) (37-1.11° lat. 075-57.56° W. long.): Nov-Dec and Feb-Apr.

(5) North Carolina (34-41.54° N. lat. 076-40.20° W. long.): Dec-Apr

(6) South Carolina (33-11.84° N. lat. 079-8.99° W. long. and 32-43.39° N. lat. 079-48.72° W. long.): Oct-Apr

(B) During the months indicated in paragraph (c)(i)(A), above, Navy vessels shall practice increased vigilance with respect to avoidance of vessel-whale interactions along the mid-Atlantic coast, including transits to and from any mid-Atlantic ports not specifically identified in paragraph (c)(i)(A), above.

(C) All surface units transiting within 56 km (30 NM) of the coast in the mid-Atlantic shall ensure at least two watchstanders are posted, including at least one lookout who has completed required MSAT training.

(D) Navy vessels shall not knowingly approach any whale head on and shall maneuver to keep at least 457 m (1,500 ft) away from any observed whale, consistent with vessel safety.

(ii) Southeast Atlantic, Offshore of the Eastern United States – for the purposes of the measures below (within (ii)), the “southeast” encompasses sea space from Charleston, South Carolina, southward to Sebastian Inlet, Florida, and from the coast seaward to 148 km (80 NM) from shore. North Atlantic right whale critical habitat is the area from 31-15° N. lat. to 30-15° N. lat. extending from the coast out to 28 km (15 NM), and the area from 28-00° N. lat. to 30-15° N. lat. from the coast out to 9 km (5 NM). All mitigation measures described here that apply to the critical habitat apply from November 15 – April 15 and also apply to an associated area of concern which extends 9 km (5 NM) seaward of the designated critical habitat boundaries.

(A) Prior to transiting or training in the critical habitat or associated area of concern, ships shall contact Fleet Area Control and Surveillance Facility, Jacksonville, to obtain latest whale sighting and other information needed to make informed decisions regarding safe speed and path of intended movement. Subs shall contact Commander, Submarine Group Ten for similar information.

(B) The following specific mitigation measures apply to activities occurring within the critical habitat and an associated area of concern which extends 9 km (5 NM) seaward of the designated critical habitat boundaries:

(1) When transiting within the critical habitat or associated area of concern, vessels shall exercise extreme caution and proceed at a slow safe speed. The speed shall be the slowest safe speed that is consistent with mission, training and operations.

(2) Speed reductions (adjustments) are required when a whale is sighted by a vessel or when the vessel is within 9 km (5 NM) of a reported new sighting less than 12 hours old. Circumstances could arise where, in order to avoid North Atlantic right whale(s), speed reductions could mean vessel must reduce speed to a minimum at which it can safely keep on course or vessels could come to an all stop.

(3) Vessels shall avoid head-on approaches to North Atlantic right whale(s) and shall maneuver to maintain at least 457 m (500 yd) of separation from any observed whale if deemed safe to do so. These requirements do not apply if a vessel’s safety is threatened, such as when a change of course would create an imminent and serious threat to a person, vessel, or aircraft, and to the extent vessels are restricted in their ability to maneuver.

(4) Ships shall not transit through the critical habitat or associated area of concern in a North-South direction.

(5) Ships, surfaced subs, and aircraft shall report any whale sightings to Fleet Area Control and Surveillance Facility, Jacksonville, by the quickest and most practicable means. The sighting report shall include the time, latitude/longitude, direction of movement and number and description of whale (i.e., adult/calf).

(iii) Northeast Atlantic, Offshore of the Eastern United States

(A) Prior to transiting the Great South Channel or Cape Cod Bay critical habitat areas, ships shall obtain the latest North Atlantic right whale sightings and other information needed to make informed decisions regarding safe speed. The Great South Channel critical habitat is defined by the following coordinates: 41-00° N. lat., 69-05° W. long.; 41-45° N. lat., 69-45° W. long.; 42-10° N. lat., 68-31° W. long.; 41-38° N. lat., 68-13° W. long.. The Cape Cod Bay critical habitat is defined by the following coordinates: 42-04.8° N. lat., 70-10° W. long.; 42-12° N. lat., 70-15° W. long.; 42-12° N. lat., 70-30° W. long.; 41-46.8 N. lat., 70-30° W. long.

(B) Ships, surfaced subs, and aircraft shall report any North Atlantic right whale sightings (if the whale is identifiable as a right whale) off the northeastern U.S. to Patrol and Reconnaissance Wing (COMPATRECONWING). The report shall include the time of sighting, lat/long, direction of movement (if apparent) and number and description of the whale(s).

(C) Vessels or aircraft that observe whale carcasses shall record the location and time of the sighting and report this information as soon as possible to the cognizant regional environmental coordinator. All whale strikes must be reported. This report shall include the date, time, and location of the strike; vessel course and speed; operations being conducted by the vessel; weather conditions, visibility, and sea state; description of the whale; narrative of incident; and indication of whether photos/videos were taken. Navy personnel are encouraged to take photos whenever possible.

(D) Specific mitigation measures related to activities occurring within the critical habitat include the following:

(1) Vessels shall avoid head-on approaches to North Atlantic right whale(s) and shall maneuver to maintain at least 457 m (500 yd) of separation from any observed whale if deemed safe to do so. These requirements do not apply if a vessel's safety is threatened, such as when change of course would create an imminent and serious threat to person, vessel, or aircraft, and to the extent vessels are restricted in the ability to maneuver.

(2) When transiting within the critical habitat or associated area of concern, vessels shall use extreme caution and operate at a safe speed so as to be able to avoid collisions with North Atlantic right whales and other marine mammals, and stop within a distance appropriate to the circumstances and conditions.

(3) Speed reductions (adjustments) are required when a whale is sighted by a vessel or when the vessel is within 9 km (5 NM) of a reported new sighting less than one week old.

(4) Ships transiting in the Cape Cod Bay and Great South Channel critical habitats shall obtain information on recent whale sightings in the vicinity of the critical habitat. Any vessel operating in the vicinity of a North Atlantic right whale shall consider additional speed reductions per Rule 6 of International Navigational Rules.

7. Monitoring and Reporting – When conducting operations identified in 50 CFR § 216.240(c) and Condition 4(a), the Holder of the Authorization and any person(s) operating under his authority must implement the following monitoring and reporting measures. All reports should be submitted to the Director, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring MD 20910 and copies provided to the Assistant Regional Administrator for Protected Resources, Southeast Regional Office, National Marine Fisheries Service, 263 13th Avenue South, Saint Petersburg, Florida, 33701 and to the Assistant Regional Administrator for Protected Resources, Northeast Regional Office, 55 great Republic Drive, Gloucester, Massachusetts, 09130-2298.

(a) As outlined in the AFAST Stranding Communication Plan, the Navy must notify NMFS immediately (or as soon as clearance procedures allow) if the specified activity identified in 50 CFR § 216.240(c) is thought to have resulted in the mortality or injury of any marine mammals, or in any take of marine mammals not identified in § 50 CFR 216.242(c).

(b) The Navy must conduct all monitoring and required reporting under the Letter of Authorization, including abiding by the AFAST Monitoring Plan.

(c) The Navy shall complete an Integrated Comprehensive Monitoring Program (ICMP) Plan in 2009. This planning and adaptive management tool shall include:

(1) A method for prioritizing monitoring projects that clearly describes the characteristics of a proposal that factor into its priority.

(2) A method for annually reviewing, with NMFS, monitoring results, Navy R&D, and current science to use for potential modification of mitigation or monitoring methods.

(3) A detailed description of the Monitoring Workshop to be convened in 2011 and how and when Navy/NMFS will subsequently utilize the findings of the Monitoring Workshop to potentially modify subsequent monitoring and mitigation.

(4) An adaptive management plan

(5) A method for standardizing data collection for AFAST and across Range Complexes

(d) General Notification of Injured or Dead Marine Mammals - Navy personnel shall ensure that NMFS (regional stranding coordinator) is notified immediately (or as soon as clearance procedures allow) if an injured or dead marine mammal is found during or shortly after, and in the vicinity of, any Navy training exercise utilizing MFAS, HFAS, or underwater explosive detonations. The Navy shall provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available). The Navy shall consult the Stranding Response Plan to obtain more specific reporting requirements for specific circumstances.

(e) Annual AFAST Monitoring Plan Report - The Navy shall submit a report annually on October 1 describing the implementation and results (through August 1 of the same year) of the AFAST Monitoring Plan. Data collection methods will be standardized across range complexes to allow for comparison in different geographic locations. Although additional information will also be gathered, the marine mammal observers (MMOs) collecting marine mammal data pursuant to the AFAST Monitoring Plan shall, at a minimum, provide the same marine mammal observation data required in the data required in 50 CFR § 216.245(f)(1). The AFAST Monitoring Plan Report may be provided to NMFS within a larger report that includes the required Monitoring Plan Reports from AFAST and multiple Range Complexes.

(f) Annual AFAST Exercise Report - The Navy shall submit an Annual AFAST Exercise Report on October 1 of every year (covering data gathered through August 1 of the same year). This report shall contain information identified in 50 CFR §§ 216.245(f)(1) – (f)(3).

(1) MFAS/HFAS Major Training Exercises - This section shall contain the following information for the major training exercises for reporting (MTERs), which include the Southeastern ASW Integrated Training Initiative (SEASWITI), Integrated ASW Course (IAC), Composite Training Unit Exercises (COMPTUEX), and Joint Task Force Exercises (JTFEX) conducted in the AFAST Study Area:

(i) Exercise Information (for each MTER):

- (A) Exercise designator
- (B) Date that exercise began and ended
- (C) Location
- (D) Number and types of active sources used in the exercise
- (E) Number and types of passive acoustic sources used in exercise

- (F) Number and types of vessels, aircraft, etc., participating in exercise
- (G) Total hours of observation by watchstanders
- (H) Total hours of all active sonar source operation
- (I) Total hours of each active sonar source (along with explanation of how hours are calculated for sources typically quantified in alternate way (buoys, torpedoes, etc.)).
- (J) Wave height (high, low, and average during exercise)

(ii) Individual marine mammal sighting info (for each sighting in each MTER)

- (A) Location of sighting
- (B) Species (if not possible – indication of whale/dolphin/pinniped)
- (C) Number of individuals
- (D) Calves observed (y/n)
- (E) Initial Detection Sensor
- (F) Indication of specific type of platform observation made from (including, for example, what type of surface vessel, i.e., FFG, DDG, or CG)
- (G) Length of time observers maintained visual contact with marine mammal
- (H) Wave height (in feet)
- (I) Visibility
- (J) Sonar source in use (y/n).
- (K) Indication of whether animal is < 200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or > 2000 yd from sonar source in paragraph (f)(1)(ii)(J) of this section.
- (L) Mitigation Implementation – Whether operation of sonar sensor was delayed, or sonar was powered or shut down, and how long the delay was.
- (M) If source in use (i.e., in paragraph (f)(1)(ii)(J) of this section) is hull-mounted, true bearing of animal from ship, true direction of ship's travel, and estimation of animal's motion relative to ship (opening, closing, parallel)
- (N) Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animals (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming, etc.)

(iii) An evaluation (based on data gathered during all of the MTERs) of the effectiveness of mitigation measures designed to avoid exposing marine mammals to MFAS. This evaluation shall identify the specific observations that support any conclusions the Navy reaches about the effectiveness of the mitigation.

(2) ASW Summary - This section shall include the following information as summarized from both MTERs and non-major training exercises:

(i) Total annual hours of each type of sonar source (along with explanation of how hours are calculated for sources typically quantified in alternate way (buoys, torpedoes, etc.))

(ii) Cumulative Impact Report - To the extent practicable, the Navy, in coordination with NMFS, shall develop and implement a method of annually reporting non-major (i.e., other than MTERs) training exercises utilizing hull-mounted sonar. The report shall present an annual (and seasonal, where practicable) depiction of non-major training exercises geographically across the AFAST Study Area. To the extent practicable, this report will also include the total number of sonar hours (from helicopter dipping sonar and object detection exercises) conducted within the southern NARW critical habitat plus 5 nm buffer area). The Navy shall include (in the AFAST annual report) a brief annual progress update on the status of the development of an effective and unclassified method to report this information until an agreed-upon (with NMFS) method has been developed and implemented.

(3) IEER/AEER Summary - This section shall include an annual summary of the following IEER and AEER information:

(i) Total number of IEER and AEER events conducted in the AFAST Study Area

(ii) Total expended/detonated rounds (buoys)

(iii) Total number of self-scuttled IEER rounds

(g) Sonar Exercise Notification - The Navy shall submit to the NMFS HQ Office of Protected Resources (Chiefs, Endangered Species Divisions and Division of Permits, Conservation and Education) either an electronic (preferably) or verbal report within fifteen calendar days after the completion of any MTER indicating:

(1) Location of the exercise

(2) Beginning and end dates of the exercise

(3) Type of exercise (e.g, COMPTUEX or SEASWITI)

(h) AFAST 5-yr Comprehensive Report - The Navy shall submit to NMFS a draft report that analyzes and summarizes all of the multi-year marine mammal information gathered during ASW, MIW and IEER/AEER exercises for which annual reports are required (Annual AFAST Exercise Reports and AFAST Monitoring Plan Reports). This report will be submitted at the end of the fourth year of the rule (November 2012), covering activities that have occurred through June 1, 2012.

(i) Comprehensive National ASW Report - By June, 2014, the Navy shall submit a draft National Report that analyzes, compares, and summarizes the active sonar data gathered (through January 1, 2014) from the watchstanders and pursuant to the implementation of the Monitoring

Plans for AFAST, SOCAL, the HRC, the Marianas Range Complex, the Northwest Training Range, the Gulf of Alaska, and the East Coast Undersea Warfare Training Range.

(j) The Navy shall respond to NMFS comments and requests for additional information or clarification on the AFAST Comprehensive Report, the Comprehensive National ASW report, the Annual AFAST Exercise Report, or the Annual AFAST Monitoring Plan Report (or the multi-Range Complex Annual Monitoring Plan Report, if that is how the Navy chooses to submit the information) if submitted within 3 months of receipt. These reports will be considered final after the Navy has addressed NMFS' comments or provided the requested information, or three months after the submittal of the draft if NMFS does not comment by then.

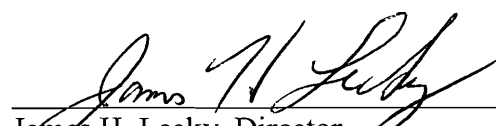
(k) In 2011, the Navy shall convene a Monitoring Workshop in which the Monitoring Workshop participants will be asked to review the Navy's Monitoring Plans and monitoring results and make individual recommendations (to the Navy and NMFS) of ways of improving the Monitoring Plans. The recommendations shall be reviewed by the Navy, in consultation with NMFS, and modifications to the Monitoring Plan shall be made, as appropriate.

8. Prohibitions - Notwithstanding takings identified in 50 CFR § 216.242 and authorized in Condition 5 of this Letter of Authorization, no person in connection with the activities described in 50 CFR § 216.240 and Condition 4(a) may violate, or fail to comply with, the terms, conditions, and requirements of 50 CFR Subpart V or this Letter of Authorization.

9. This Authorization may be modified, suspended or withdrawn (pursuant to 50 CFR § 216.106(e)(1 or 2)) if the Holder or any person operating under his authority fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

10. A copy of this Authorization (including Attachment A) and the attached Subpart V of the regulations, or a document containing the equivalent requirements specified in this Authorization or 50 CFR Subpart V, must be in the possession of the on-site Commanding Officer in order to take marine mammals under the authority of this Letter of Authorization while conducting the specified activity(ies).

11. The Holder of this Authorization and any person operating under his authority is required to comply with the Terms and Conditions of the Incidental Take Statement corresponding to NMFS' Biological Opinion as they pertain to listed marine mammals.



James H. Lecky, Director
Office of Protected Resources
National Marine Fisheries Service

JAN 22 2009
Date

Stranding Response Plan for Atlantic Fleet Active Sonar Training (AFASST)
January 2009

Strandings

Strandings, as defined by the Marine Mammal Protection Act (MMPA), have occurred throughout recorded history, although U.S. stranding programs have only been keeping consistent records in some cases as long as the last three decades, but more commonly the last decade. Strandings may result from many different causes, including, for example, infectious agents, biotoxins, starvation, fishery interaction, ship strike, unusual oceanographic or weather events, sound exposure, or combinations of these stressors sustained concurrently or in series. In many cases, a cause of stranding or death cannot be unequivocally determined for a number of reasons. Approximately five marine mammal strandings in the Mediterranean Sea, Caribbean Sea, and Eastern Atlantic Ocean and involving beaked whale species have been associated with mid-frequency active sonar (MFAS), however, scientific uncertainty remains regarding the exact combination of behavior and physiological responses that link MFAS exposure to strandings (though several mechanisms have been theorized). Available evidence suggests that in some cases it may be the presence of additional specific environmental or physical conditions working in confluence with the exposure of marine mammals to MFAS that can potentially result in a stranding. The National Marine Mammal Stranding Network (created under the Marine Mammal Health and Stranding Response Program Act (MMHSRPA)) consists of over 100 organizations partnered with the National Marine Fisheries Service (NMFS) to investigate marine mammal strandings in U.S. waters. NMFS is currently developing (with help anticipated from the Navy, the petroleum industry, and other agencies and entities) a series of studies to correlate long-term stranding patterns and pathologies with all known anthropogenic stressors, such as sound and including seismic surveys and active military sonar. Among other things, the plan discussed below is intended to contribute to the better understanding of why strandings occur.

Introduction to the Stranding Plan

Pursuant to 50 CFR Section 216.105, the plan outlined below will be included by reference and summarized in the regulations and included fully as part of (attached to) the Navy's MMPA Letter of Authorization (LOA), which indicates the conditions under which the Navy is authorized to take marine mammals pursuant to Atlantic Fleet Active Sonar Training (AFASST) activities involving MFAS off the Atlantic Coast of the U.S. or in the Gulf of Mexico. This Stranding Response plan is specifically intended to outline the applicable requirements the authorization is conditioned upon in the event that a marine mammal stranding is reported off the Atlantic Coast of the U.S. or in the Gulf of Mexico during a *major training exercise* (MTE) (see glossary below). As mentioned above, NMFS considers all plausible causes within the course of a stranding investigation and this plan in no way presumes that any strandings in the AFASST Study Area are related to, or caused by, Navy training activities, absent a determination made in a Phase 2 Investigation as outlined in Paragraph 7 of this plan, indicating that MFAS or explosive detonation in the AFASST Study Area were a cause and/or contributed to the stranding. This plan is designed to address the following three issues:

- **Mitigation** – When marine mammals are in a situation that can be defined as a *stranding* (see glossary below), they are experiencing physiological stress. When animals are stranded, and alive, NMFS believes that exposing these compromised animals to additional known stressors would likely exacerbate the animal’s distress and could potentially cause its death. Regardless of the factor(s) that may have initially contributed to the stranding, it is NMFS' goal to avoid exposing these animals to further stressors. Therefore, when live stranded cetaceans are in the water and engaged in what is classified as an *Uncommon Stranding Event* (USE) (see glossary below), the shutdown component of this plan is intended to minimize the exposure of those animals to mid-frequency active sonar (MFAS) and explosive detonations, regardless of whether or not these activities may have initially played a role in the event.
- **Monitoring** – This plan will enhance the understanding of how MFAS (as well as other environmental conditions) may, or may not, be associated with marine mammal injury or strandings. Additionally, information gained from the investigations associated with this plan may be used in the adaptive management of mitigation or monitoring measures in subsequent LOAs, if appropriate. We note that detections of stranded marine mammals off the Atlantic Coast of the U.S. or in the Gulf of Mexico are typically accomplished using passive surveillance, i.e. individuals conducting their normal activities happen to see an animal and report it to the stranding network. There are many strandings reported on the East coast annually and if surveys or expanded active detection efforts are specifically used during Navy training exercises, we expect that the number of strandings detected during training may be higher relative to other times because of the increased targeted effort.
- **Compliance** – The information gathered pursuant to this protocol will inform NMFS’ decisions regarding compliance with Sections 101(a) (5) (B and C) of the MMPA.

In addition to outlining the necessary procedural steps for the Navy to undertake in the event of a USE during an MTE (as required by the LOA), this document describes NMFS’ planned participation in stranding responses off the Atlantic Coast of the U.S. or in the Gulf of Mexico, as NMFS’ response relates specifically to the Navy requirements described here. The NMFS Marine Mammal Health and Stranding Response Program (MMHSRP) and the participating Northeast and Southeast Regional Stranding Networks have specific responsibilities regarding unusual marine mammal mortality events (UMEs) pursuant to Title IV of the MMPA. This document does not serve to replace or preclude any of the procedures currently in place for NMFS’ response to UMEs or to any normal operations of the stranding network. NMFS will pursue any activities to fulfill obligations relative to UMEs any time that a trigger is reached as determined by the Working Group on Marine Mammal Unusual Mortality Events. This document highlights (or adds to) applicable existing (and in development) protocols and procedures to be used with the specific circumstances and specific subset of strandings addressed here, namely a USE off the Atlantic Coast of the U.S. or in the Gulf of Mexico during the MTE. This document has been reviewed and approved by the NMFS staff responsible for conducting and overseeing the referenced activities and this plan will be implemented by NMFS to the degree that resources are available and logistics are feasible.

General Notification Provision

If, at any time or place, Navy personnel find a *stranded* marine mammal (see glossary below) either on the shore, near shore, or floating at sea, NMFS requests the Navy contact NMFS immediately (or as soon as clearance procedures allow) as described in the AFAST Stranding Communication Protocol (currently under development, but subject to incorporation into this plan upon mutual agency approval). NMFS requests the Navy provide NMFS with species or description of animal (s), the condition of the animal (including carcass condition if the animal is dead – see glossary for condition codes), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

In addition, NMFS requests that in the event of a ship strike by any Navy vessel, at any time or place, the Navy do the following:

- Navy immediately report to NMFS the species identification (if known), location (lat/long) of the animal (or the strike if the animal has disappeared), and whether the animal is alive or dead (or unknown)
- as soon as feasible report to NMFS, the size and length of animal, an estimate of the injury status (ex., dead, injured but alive, injured and moving, unknown, etc.), vessel class/type and operational status.
- report to NMFS the vessel length, speed, and heading as soon as feasible.
- Provide NMFS a photo or video, if possible

Operational Response Plan

This section describes the specific actions the Navy must take in order to comply with the AFAST LOA if a USE is reported to the Navy off the Atlantic Coast of the U.S. or in the Gulf of Mexico coincident to, or within 72 hours of, an MTE. This Stranding Response Plan will include an associated AFAST Stranding Communication Protocol (currently under development, but subject to incorporation into this plan upon mutual agency approval), which will indicate, among other things, the specific individuals (NMFS Office of Protected Resources - HQ senior administrators) authorized to advise the Navy that certain actions are prescribed by the Stranding Response Plan. A glossary is included at the end of this document. Words included in the glossary are italicized in this section the first time they are used.

1. Initial Stranding Response - The NMFS regional stranding network will respond to all reports of stranded marine mammals in areas where there is geographic coverage by the stranding network, when feasible. All marine mammals will receive examination appropriate to the condition code of the animal and the feasibility of the logistics. If a *qualified* individual determines that the stranding is a *USE*, NMFS staff (or qualified individual) will initiate a *Phase I Investigation*. NMFS will immediately contact appropriate NMFS and Navy personnel (pursuant to the AFAST Stranding Communication Protocol). NMFS and Navy will maintain a

dialogue, as needed, regarding the identification of the USE and the potential need to implement shutdown procedures .

2. **Shutdown Procedures** – Shutdown procedures are not related to the investigation of the cause of the stranding and their implementation is in no way intended to imply that MFAS is the cause of the stranding. Rather, as noted above, shutdown procedures are intended to protect cetaceans *exhibiting indicators of distress* and involved in a USE by minimizing their exposure to possible additional stressors (MFAS or explosive detonations), regardless of the factors that initially contributed to the USE. Only individuals specifically identified in the AFAST Stranding Communication Protocol (NMFS Protected Resources – HQ senior administrators) will be authorized to advise the Navy of the need to implement shutdown procedures (pursuant to the Stranding Response Plan/LOA).

a) If no live (*Condition Code 1*) or freshly dead (*Condition Code 2*) cetaceans are involved in the USE, NMFS will advise the Navy that shutdown procedures need not be implemented. Aerial surveys will be conducted if feasible (see second bullet under b, below).

b) If live or freshly dead cetaceans are involved in the USE, the Navy will implement the following procedures:

- If live cetaceans involved in the USE are in the water (i.e., could be exposed to sonar), NMFS will advise the Navy of the need to implement shutdown procedures defined in the glossary (pursuant to the Stranding Response Plan/LOA).
- NMFS will coordinate internally, with the Navy, and with other agencies and entities with the intent of obtaining aerial survey arrangements. If an aircraft is available, a survey will be conducted within 14 (Atlantic) or 17 (Gulf of Mexico) nm (on the shore and in the water near the coast) of the stranding to look for additional animals that meet the USE criteria. NMFS will request that the Navy assist with aerial surveys, as resources are available.
 - If no additional animals that meet the USE criteria are found (including if no aircraft were available to conduct a survey), and the originally detected animals are not in the water, and will not be put back in the water for rehabilitation or release purposes, or are dead, NMFS will advise the Navy that shutdown procedures need not be implemented at any additional locations.
 - If additional cetacean(s) meeting the USE criteria are detected by surveys, the shutdown procedures will be followed for the newly detected animal(s) beginning at 2(a) above.
- If a qualified individual determines that it is appropriate to put live animals that were initially on the beach back in the water for rehabilitation or release purposes,

NMFS will advise the Navy of the need to implement shutdown procedures pursuant to the Stranding Response Plan/LOA.

c) If the Navy finds an injured (or entangled) right whale floating at sea during an MTE, the Navy should implement shutdown procedures (14 or 17 nm, as defined below) around the animal immediately (without waiting for notification from NMFS). The Navy shall then notify NMFS (pursuant to the AFAST Communication Protocol) immediately or as soon as operational security considerations allow. The Navy should provide NMFS with the information outlined in the general notification provision above, as available. Subsequent to the discovery of the injured whale, any Navy platforms in the area will report any right whale sightings to NMFS (or to a contact that can alert NMFS as soon as possible). Based on the information provided, NMFS may initiate/organize an aerial survey (by requesting the Navy's assistance pursuant to the MOA (see # 6) or by other available means) to see if other right whales are in the vicinity. Based on the information provided by the Navy and, if necessary, the outcome of the aerial surveys, NMFS will determine whether a continued shutdown is appropriate on a case-by-case basis. Though it will be determined on a case-by-case basis after Navy/NMFS discussion of situation, NMFS anticipates that the shutdown will continue within 14 nm (or 17 nm in Gulf of Mexico) of a live, injured/entangled right whale until the animal dies or has not been seen for at least 3 hours (either by NMFS staff attending the injured animal or Navy personnel monitoring the area around where the animal was last sighted).

d) If the Navy finds a dead right whale floating at sea during an MTE, the Navy shall notify NMFS (pursuant to AFAST Stranding Communication Protocol) immediately or as soon as operational security considerations allow. The Navy should provide NMFS with the information outlined in the general notification provision above, as available. Subsequent to the discovery of the dead whale, if the Navy is operating sonar in the area they will use increased vigilance (in looking for right whales) and all platforms in the area will report sightings of right whales to NMFS as soon as possible. Based on the information provided, NMFS may initiate/organize an aerial survey (by requesting the Navy's assistance pursuant to the MOA (see # 6) or by other available means) to see if other right whales are in the vicinity. Based on the information provided by the Navy and, if necessary, the outcome of the aerial surveys, NMFS will determine whether any additional protective measures are necessary on a case-by-case basis.

e) If the Navy finds an injured (or entangled) or dead marine mammal (other than a right whale) floating at sea during an MTE, the Navy shall notify NMFS (pursuant to AFAST Stranding Communication Protocol) immediately or as soon as operational security considerations allow. The Navy should provide NMFS with the information outlined in the general notification provision above, as available. Based on the information provided, NMFS will determine if a modified shutdown is appropriate on a case-by-case basis.

f) In the event, following a USE, that: a) qualified individuals are attempting to herd animals back out to the open ocean and animals are not willing to leave, or b) animals are seen repeatedly heading for the open ocean but turning back to shore, NMFS and the

Navy will coordinate (including an investigation of other potential anthropogenic stressors in the area) to determine if the proximity of MFAS operations or explosive detonations, though farther than 14 nm (or 17 nm in Gulf of Mexico) from the distressed animal(s), is likely decreasing the likelihood that the animals return to the open water. If so, NMFS and the Navy will further coordinate to determine what measures are necessary to further minimize that likelihood and implement those measures as appropriate. Navy and NMFS will maintain a dialogue regarding the plan to return the animal(s) to the water.

3. **Restart Procedures**

- If at any time, the subject(s) of the USE die or are euthanized, NMFS will immediately advise the Navy that the shutdown around that animal(s)' location is no longer needed,
- Shutdown procedures will remain in effect until NMFS determines that, and advises the Navy that, all live animals involved in the USE have left the area (either of their own volition or herded). Leading up to restart, NMFS will coordinate internally, with the Navy, and with other federal and state agencies with the intent of securing arrangements to track the movement of the animals (via aircraft, vessel, tags, etc.) following the dispersal of the USE. If the Navy has restarted operations in the vicinity of the animals, NMFS and the Navy will further coordinate to determine (based on location and behavior of tracked animals and location/nature of Navy activities) if the proximity of MFAS operations is likely increasing the likelihood that the animals re-strand. If so, NMFS and the Navy will further coordinate to determine what measures are necessary to minimize that likelihood and implement those measures as appropriate.

4. **Information** - Within 72 hours of the notification of the USE the Navy will inform NMFS where and when they were operating MFAS or conducting explosive detonations (within 80 nm and 72 hours prior to event). Within 7 days of the completion of any exercises that were being conducted within 80 nm or 72 hours prior to the event, the Navy will further provide information to NMFS (per the AFAST Stranding Communication Protocol), *as available*, regarding the number and types of acoustic/explosive sources, direction and speed of units using MFAS, and marine mammal sightings information associated with those training activities. Information not initially available regarding the 80 nm, 72 hours, period prior to the event will be provided as soon as it becomes available. The Navy will provide NMFS investigative teams with additional relevant unclassified information as requested (or classified information to designated NMFS staff), if available.

5. **Phase 1 Investigation** – Because of the number of strandings off the Atlantic coast and in the Gulf of Mexico and the variability of available resources across stranding network agencies in the Northeast and Southeast regions, NMFS cannot currently commit, in advance, to the specific degree of investigation that will be conducted for any given stranding. NMFS stranding coordinators are currently assessing available resources with the goal of setting forth a plan that realistically outlines the possible responses in a given area. Meanwhile, the ideal responses (Phase 1 and 2 Investigations) area described in the Biomonitoring Protocols and are referred to

below (here and in # 7), and NMFS will respond in the indicated manner when resources are available and it is logistically feasible:

Within 4 weeks of a USE (when feasible), NMFS will conduct and complete the Phase 1 Investigation (list of procedures typically included in Phase 1 investigation are included in the Glossary of this document, description of actual procedures are contained in the Biomonitoring Protocols) for all USEs that occur along the U.S. Atlantic Coast and Gulf of Mexico coincident with MTEs. Results from the Phase 1 Investigation will be categorized in one of the two ways discussed below and trigger the indicated action:

- If the results of the Phase 1 Investigation indicate that the USE was likely caused by something (such as entanglement or ship strike) other than MFAS or explosive detonations authorized by the Navy's LOA, then the USE investigation will be considered complete as related to the MMPA authorization.
- If NMFS cannot conclude that the stranding was likely caused by something other than MFAS or explosive detonations authorized by the Navy LOA, rather, the results of the Phase 1 Investigation range from completely inconclusive to including potential early indicators that acoustic exposure could have played a role, then a Phase 2 Investigation will be conducted by qualified individuals, under the direction of NMFS staff, and an individual case report will be prepared for each animal (list of procedures typically included in Phase 2 investigation are included in the Glossary of this document, description of actual procedures are contained in the Biomonitoring Protocols).

6. **Memorandum of Agreement (MOA)** - The Navy and NMFS will develop an MOA, or other mechanism consistent with federal fiscal law requirements (and all other applicable laws), that allows the Navy to assist NMFS with the Phase 1 and 2 Investigations of USEs through the provision of in-kind services, such as (but not limited to) the use of plane/boat/truck for transport of stranding responders or animals, use of Navy property for necropsies or burial, or assistance with aerial surveys to discern the extent of a USE. The Navy may assist NMFS with the Investigations by providing one or more of the in-kind services outlined in the MOA, when available and logistically feasible and which do not negatively affect Fleet operational commitments.

7. **Phase 2 Investigation** – Please see # 5, above. Results from the Phase 2 Investigation (procedures outlined in the Biomonitoring Protocols) will be categorized in one of the three ways discussed below and trigger the indicated action:

- If the results indicate that the USE was likely caused by something (such as entanglement or blunt force trauma) other than MFAS or explosive detonations authorized by the Navy's LOA, then the *USE* investigation will be considered complete as related to the MMPA authorization.
- If the results are inconclusive which, historically, is the most likely result (i.e. NMFS can neither conclude that the USE was likely caused by something other than acoustic trauma nor conclude that there is a high likelihood that exposure to MFAS or explosive

detonations were a cause of the USE), then the USE investigation will be considered complete as related to the MMPA authorization.

- If the results of a comprehensive and detailed scientific investigation into all possible causes of the stranding event indicate that there is a high likelihood that MFAS was a cause of the USE, one of the following will occur:
 - If the total mortalities determined to be caused by MFAS or explosive detonation do not exceed the number analyzed for the 5-yr period in the regulations (10 and 0, respectively), they will be recorded (to add on to if there is another stranding) and NMFS will take no further action beyond that indicated in 8, below.
 - If the total mortalities determined to be caused by MFAS exceed the number analyzed for the 5-yr period in the regulations, NMFS will begin the process of determining whether or not suspension or withdrawal of the authorization is appropriate.

The Navy will be provided at least ten working days to review and provide comments on NMFS' summary and characterization of the factors involved in the USE. NMFS will consider the Navy's comments prior to finalizing any conclusions and/or deciding to take any action involving any take authorization

8. **USE Response Debrief and Evaluation** – Within 2 months after a USE, NMFS and Navy staff will meet to discuss the implementation of the USE response and recommend modifications or clarifications to improve the Stranding Response Plan. These recommendations will feed into the adaptive management strategy discussed below.

9. **Adaptive Management** - The regulations under which the Navy's LOA (and this Stranding Response Plan) are issued will contain an adaptive management component. This gives NMFS the ability to consider the results of the previous years' monitoring, research, and/or the results of stranding investigations when prescribing mitigation or monitoring requirements in subsequent years. In the event that NMFS concludes that there is a high likelihood that MFAS or explosive detonations were a cause of a USE, NMFS will review the analysis of the environmental and operational circumstances surrounding the USE. In subsequent LOAs, based on this review and through the adaptive management component of the regulations, NMFS may require the mitigation measures or Stranding Response Plan be modified or supplemented if the new data suggest that modifications would either have a reasonable likelihood of reducing the chance of future USEs resulting from a similar confluence of events or would increase the effectiveness of the stranding investigations. Further based on this review and the adaptive management component of the regulations, NMFS may modify or add to the existing monitoring requirements if the data suggest that the addition of a particular measure would likely fill a specifically important data or management gap. Additionally, the USE Debrief and Evaluation discussed above (in combination with adaptive management) will allow NMFS and the Navy to further refine the Stranding Response Plan for maximum effectiveness.

Communication

Effective communication is critical to the successful implementation of this Stranding Response Plan. Very specific protocols for communication, including identification of the Navy personnel authorized to implement a shutdown and the NMFS personnel authorized to advise the Navy of the need to implement shutdown procedures (NMFS Protected Resources HQ – senior administrators) and the associated phone trees, etc. (to be included in the document entitled “AFAST Stranding Communication Protocols”) are currently in development and will be refined and finalized for the AFAST Study Area by March 2009 and updated yearly (or more frequently, as appropriate).

The Stranding Response Plan is dependent upon advance notice to NMFS of the planned upcoming MTE. NMFS and the Navy will develop a mechanism (that conforms with operational security requirements) wherein the Navy can provide NMFS with necessary advance notification of MTEs.

NMFS will keep information about planned MTE’s in a confidential manner and will transmit information to NMFS personnel responding to USE’s to the minimum necessary to accomplish the NMFS mission under this plan.

Glossary:

Condition Code – a method for evaluating the stage of decomposition of a stranded animal or carcass. Codes range from live animals (Code 1) to skeletal remains (Code 5) (modified from Marine Mammals Ashore: A Field Guide for Strandings by J.R. Geraci and V.J. Lounsbury).

- Code 1: Live animals
- Code 2: Freshly dead. The carcass is in good condition (fresh/edible), as if it has just died.
- Code 3a: The carcass is in fair condition, with only slight decomposition or scavenger damage. There may be slight bloating and a minimal smell.
- Code 3b: The carcass is moderately decomposed with obvious bloating, some sunburn (blackening and cracking of the skin), sloughing or missing skin, and scavenger damage.
- Code 4: The carcass is in an advanced state of decomposition with a strong odor, skin may be entirely missing, and there is likely extensive scavenger damage.
- Code 5: Mummified or skeletal remains. Skin may be draped over skeletal remains and any remaining tissues are dessicated.

Major training exercise (MTE) – An MTE, within the context of this document, means

- Southeastern Integrated Training Initiative (SEASWITI) - 4 events annually, 5 to 7 days per entire event
- Integrated ASW Course (IAC) - 5 events annually, 2 to 5 days per entire event
- Group Sails - 20 events annually, 2 to 3 days per entire event
- Composite Training Unit Exercise (COMPTUEX) - 5 events annually, 21 days per entire event
- Joint Task Force Exercise (JTFEX.) - 2 events annually, 10 days per entire event

It should be noted that sonar is typically not in use throughout an entire event.

Exhibiting Indicators of Distress – Animals exhibiting an uncommon combination of behavioral and physiological indicators typically associated with distressed or stranded animals. This situation would be identified by a qualified individual and typically includes, but is not limited to, some combination of the following characteristics:

- Marine mammals continually circling or moving haphazardly in a tightly packed group – with or without a member occasionally breaking away and swimming towards the beach.
- Abnormal respirations including increased or decreased rate or volume of breathing, abnormal content or odor
- Presence of an individual or group of a species that has not historically been seen in a particular habitat, for example a pelagic species in a shallow bay when historic records indicate that it is a rare event.
- Abnormal behavior for that species, such as abnormal surfacing or swimming pattern, listing, and abnormal appearance

Phase 1 Investigation – A Phase 1 Investigation, for the purposes of this document, will typically include the following tests and procedures (which are described in NMFS' Biomonitoring Protocols):

- Demographics of the stranding
- Environmental parameters
- Behavioral assessment of group
- Live animal
 - physical examination
 - blood work
 - diagnostics such as AEP or ultrasound
 - assessment or treatment
- Dead animal
 - External examination and external human interaction evaluation
 - Morphometrics
 - Photographs
 - Diagnostic imaging including CT/MRI scans or ultrasound as appropriate and feasible
 - Necropsy with internal examination, descriptions, photographs and sample collection

Note that several factors will dictate whether all or a subset of these procedures are conducted, including:

- The condition of a carcass
- For live cetaceans - the time it would take necessary personnel and equipment to arrive at the site
- Availability (both in time and space) of resources and feasibility of implementation

Phase 2 Investigation – A Phase 2 Investigation, for the purposes of this document, will typically include the following tests and procedures (which are described in NMFS' Biomonitoring Protocols):

- Analyses and review of diagnostic imaging obtained in Phase I

- Histopathology
- Special stains
- Ancillary diagnostics (e.g., PCR for infections, gas emboli)
- CT of ears
- Additional diagnostic imaging as needed
- Histology of ears
- Case summaries
- Review

Note that several factors will dictate whether all or a subset of these procedures are conducted, including:

- The condition of a carcass
- Logistics for transport
- Available resources
- Validated diagnostic techniques

Qualified – NMFS has a rigorous set of standards and training in place to qualify stranding responders, however, since the stranding network is a largely volunteer network, there is significant variability from one area to another. Additionally, AFAST activities span a very long stretch of coastline and some areas do not have regular coverage of stranding responders. In the Biomonitoring Protocol, NMFS will identify the minimum qualifications necessary for individuals to make the determinations necessary to carry out this plan. These qualifications are currently in development and will be refined and finalized in the Biomonitoring Protocols. Not all qualified individuals (veterinarians, technicians, etc.) will be NMFS employees. However, only specific individuals (NMFS Protected Resources, HQ – senior administrators) indicated in the AFAST Stranding Communication Protocol will be empowered to advise the Navy of the need to implement shutdown procedures.

Stranding – an event in the wild in which:

- (a) a marine mammal is dead and is –
 - (i) on the beach or shore of the United States; or
 - (ii) in waters under the jurisdiction of the United States (including any navigable waters); or
- (b) a marine mammal is alive and is –
 - (i) on a beach or shore of the United States and unable to return to the water;
 - (ii) on a beach or shore of the United States and, although able to return to the water, is in apparent need of medical attention; or
 - (iii) in the waters under the jurisdiction of the United States (including navigable waters), but is unable to return to its natural habitat under its own power or without assistance.

Shutdown Procedures – The act of the Navy ceasing operation of sonar or explosive detonations within a designated area for a designated time. The time is designated by the Restart Procedures (# 3, above). The designated area, for the purposes of this document, is an area

within 14 nm (if on Atlantic Coast) or an area within 17 nm (if on Gulf of Mexico Coast) of any live, in the water animal involved in the USE. These distances (14 or 17 nm) are the distances at which sound from the sonar source is anticipated to attenuate to approximately 145 dB (SPL). The risk function predicts that less than 1% of the animals exposed to sonar at this level (mysticete or odontocete) would respond in a manner that NMFS considers Level B Harassment. As indicated above in 2(d), if this distance appears too short (i.e, the proximity of sonar use may likely be deterring the animals from returning to the open water), NMFS and the Navy will further coordinate to determine what measures are necessary to further minimize that likelihood and implement those measures as appropriate.

Uncommon Stranding Event (USE) – A stranding event that takes place during an MTE and involves any one of the following:

- Two or more individuals of any cetacean species (i.e., could be two different species, but not including mother/calf pairs, unless of species of concern listed in next bullet) found dead or live on shore within a two day period and within 30 miles of one another.
- A single individual or mother/calf pair of any of the following marine mammals of concern: beaked whale of any species, kogia sp., melon-headed whale, short-finned and long-finned pilot whales, right whales, humpback whales, sperm whales, blue whales, fin whales, or sei whales
- A group of 2 or more cetaceans of any species exhibiting indicators of distress.

Supplemental Documents in Development

AFAST Stranding Communication Protocol – This document, which is currently in development, will include all of the communication protocols (phone trees, etc.) and associated contact information required for NMFS and the Navy to carry out the actions outlined in this Stranding Response Plan. This document is currently in usable draft form and will be finalized by March 2009 and updated yearly (or more frequently, as appropriate).

Biomonitoring Protocols for AFAST – This document (which is currently in a usable draft form, but will be finalized in 2009) will contain protocols for the procedures that are necessary for NMFS staff to implement this Stranding Plan including:

- Qualifications necessary for individuals to implement certain parts of the Stranding Plan, such as: identifying a USE, identifying a Code 2 animal, or conducting a Phase 1 or 2 Investigation
- A protocol for the stranding responders that outlines the actions to take in the event of a USE during MTEs
- Protocols for the investigators that describe in detail procedures implemented for Phase 1 and Phase 2 Investigations

Memorandum of Agreement – This document (or other mechanism consistent with federal fiscal law requirements and all other applicable laws), which will be finalized in 2009, will establish a framework whereby the Navy can assist with stranding investigations when feasible. This document will include a comprehensive list of the specific ways the Navy could provide this assistance.

LOA Stranding Plans in Other Geographic Regions

The frequency and nature of strandings (naturally occurring or otherwise), the nature of military operations, and the NMFS resources and qualified staff available for stranding response, can be highly variable in different geographic regions, and sub-regions within those regions. Measures and procedures developed for and implemented in this Stranding Response Plan may not be appropriate, or even possible, in other geographic regions. As the need arises, NMFS and the Navy will work together to develop appropriate Stranding Response Plans for other geographic regions based on available information and resources. This Stranding Response Plan is not intended to serve as a template for other geographic regions, and, in fact, Stranding Plans for other areas may be significantly different.