

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

Letter of Authorization

The Commander, U.S. Pacific Fleet, 250 Makalapa Drive, Pearl Harbor, HI 96860-7000, and persons operating under his authority (i.e., Navy), are authorized to take marine mammals incidental to Navy exercises conducted in the Southern California (SOCAL) Range Complex in accordance with 50 CFR Part 216, Subpart X--Taking Marine Mammals Incidental to U.S. Navy Training in the SOCAL Range Complex 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 § 216.272(c) and Condition (5) of this Authorization incidental to the activities specified in 50 CFR § 216.270(c) and Condition (4)(a) of this Authorization and occurring within the SOCAL Range Complex, (as depicted in Figure ES-1 in the Navy's Final Environmental Impact Statement for the SOCAL Range Complex), which extends southwest from southern California in an approximately 700 by 200 nm rectangle with the seaward corners at 27°30'00" N. lat.; 127°10'04" W. long. and 24°00'01" N. lat.; 125°00'03" W. long.
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 §§ 216.274 & 216.275 and implements the Terms and Conditions of this Authorization.
4. (a) This Authorization is valid for the activities and designated amounts of use listed below:
 - (1) The use of the following mid-frequency active sonar (MFAS) and high frequency active sonar (HFAS) sources for U.S. Navy anti-submarine warfare (ASW) training, maintenance, and research, development, testing and evaluation (RDT&E) in the amounts indicated below (+/- 10 percent):
 - (i) AN/SQS-53 (hull-mounted sonar) – 1977 hours
 - (ii) AN/SQS-56 (hull-mounted sonar) – 494 hours
 - (iii) AN/BQQ-10 (submarine mounted sonar) – 815 hours
 - (iv) AN/BQQ-15 (submarine navigational sonar) – 122 hours
 - (v) AN/AQS-22 (helicopter dipping sonar) – 2719 dips
 - (vi) SSQ-62 (sonobuoys) – 4256 sonobuoys
 - (vii) SSQ-125 (AEER sonobuoy) – 54 sonobuoys
 - (viii) MK-48 (heavyweight torpedoes) – 87 torpedo events
 - (ix) MK-46 (lightweight torpedoes) – 84 torpedo events

(x) AN/SLQ-25A (NIXIE) – 227 hours

(2) The detonation of the underwater explosives indicated in (i) conducted as part of the training exercises indicated in (ii):

(i) Underwater Explosives (Net Explosive Weight):

- (A) 5" Naval Gunfire (9.5 lbs)
- (B) 76 mm rounds (1.6 lbs)
- (C) Maverick (78.5 lbs)
- (D) Harpoon (448 lbs)
- (E) MK-82 (238 lbs)
- (F) MK-83 (574 lbs)
- (G) MK-84 (945 lbs)
- (H) MK-48 (851 lbs)
- (I) Demolition Charges (20 lbs.)
- (I) AN/SSQ-110A (EER/IEER explosive sonobuoy - 5 lbs)

(ii) Training Events:

- (A) Surface-to-surface Gunnery Exercises - 402 exercises
- (B) Air-to-surface Missile Exercises - 50 exercises
- (C) Bombing Exercises - 40 exercises
- (D) Sinking Exercises - 2 exercises
- (E) Extended Echo Ranging and Improved Extended Echo Ranging Systems – 3 exercises, total, of EER/IEER and AEER combined (54 sonobuoy deployments).

(b) If the number of sonar hours, dips, and sonobuoys, and exercises indicated in Condition 4(a)(1) are exceeded by more than 10 percent, subsequent LOAs issued under the SOCAL Range Complex final rule will ensure that the total over five years does not exceed the amount indicated in 50 CFR 216.270(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) Humpback whale (Megaptera novaeangliae) – 1
- (B) Fin whale (Balaenoptera physalus) – 38
- (C) Blue whale (Balaenoptera musculus) – 106
- (D) Minke whale (Balaenoptera acutorostrata) – 133
- (E) Gray whale (Eschrichtius robustus) – 5468

(ii) Odontocetes:

- (A) Sperm whales (Physeter macrocephalus) – 30
- (B) Pygmy sperm whales (Kogia breviceps) – 166
- (C) Dwarf sperm whale (Kogia sima) – 100 (an average of 20 annually)
- (D) Mesoplodont beaked whales (Blainville's, Hubb's, Perrin's, pygmy, and ginkgo-toothed) (Mesoplodon densirostris, M. carlhubbsi, M. perrini, M. peruvianus, M. ginkgodens) – 138
- (E) Cuvier's beaked whales (Ziphius cavirostris) – 435
- (F) Baird's beaked whales (Berardius bairdii) – 20
- (G) Unidentified beaked whales – 104
- (H) Rough-toothed dolphin (Steno bredanensis) – 20
- (I) Bottlenose dolphin (Tursiops truncatus) – 1516
- (J) Pan-tropical spotted dolphin (Stenella attenuata) – 20
- (K) Spinner dolphin (Stenella longirostris) – 20
- (L) Striped dolphin (Stenella coeruleoalba) – 1838
- (M) Long-beaked common dolphin (Delphinus capensis) – 4629
- (N) Risso's dolphin (Grampus griseus) – 3599
- (O) Northern right whale dolphin (Lissodelphis borealis) – 1547
- (P) Pacific white-sided dolphin (Lagenorhynchus obliquidens) – 1404
- (Q) Short-beaked common dolphin (Delphinus delphis) – 39470
- (R) Melon-headed whale (Peponocephala electra) – 20
- (S) Pygmy killer whale (Feresa attenuata) – 20
- (T) False killer whale (Pseudorca crassidens) – 20
- (U) Killer whale (Orcinus orca) – 14
- (V) Short-finned pilot whale (Globicephala macrorhynchus) – 52
- (W) Dall's porpoise (Phocoenoides dalli) – 629

(ii) Pinnipeds:

- (A) Northern elephant seal (Mirounga angustirostris) – 959
- (B) Pacific harbor seal (Phoca vitulina) – 5676
- (C) California sea lion (Zalophus californianus) – 55506
- (D) Northern fur seal (Callorhinus ursinus) – 1237
- (E) Guadalupe fur seal (Arctocephalus townsendi) – 874

(b) Level A Harassment and/or mortality of no more than 10 beaked whales (total), of any of the species listed in § 216.272(c)(1)(ii)(D-G) 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 X so as to ensure that the total taking over 5 years does not exceed the amounts indicated in Condition 5(b) and 50 CFR § 216.272(c).

6. Mitigation - The Holder of this Authorization, and any individuals operating under his authority, must implement the following mitigation measures when conducting activities identified in 50 CFR § 216.270(c) and Condition 4(a) of this Authorization:

(1) Navy's General SOCAL Maritime Measures for All Training at Sea:

(i) Personnel Training (for all Training Types)

(A) All commanding officers (COs), executive officers (XOs), lookouts, Officers of the Deck (OODs), junior OODs (JOODs), maritime patrol aircraft aircrews, and Anti-submarine Warfare (ASW)/Mine Warfare (MIW) helicopter crews shall complete the NMFS-approved Marine Species Awareness Training (MSAT) by viewing the U.S. Navy MSAT digital versatile disk (DVD). All bridge lookouts shall complete both parts one and two of the MSAT; part two is optional for other personnel.

(B) Navy lookouts shall undertake extensive training in order to qualify as a watchstander in accordance with the Lookout Training Handbook (Naval Education and Training Command [NAVEDTRA] 12968-D).

(C) Lookout training shall include on-the-job instruction under the supervision of a qualified, experienced lookout. 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). Personnel being trained as lookouts can be counted among required lookouts as long as supervisors monitor their progress and performance.

(D) 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 species are spotted.

(ii) Operating Procedures and Collision Avoidance

(A) Prior to major exercises, a Letter of Instruction, Mitigation Measures Message or Environmental Annex to the Operational Order shall be issued to further disseminate the personnel training requirement and general marine species mitigation measures.

(B) COs shall make use of marine species detection cues and information to limit interaction with marine species to the maximum extent possible consistent with safety of the ship.

(C) While underway, surface vessels shall have at least two lookouts with binoculars; surfaced submarines shall have at least one lookout with binoculars. Lookouts already posted for safety of navigation and man-overboard precautions may be used to fill this requirement. As part of their regular duties, lookouts will watch for and report to the OOD the presence of marine mammals.

(D) On surface vessels equipped with a mid-frequency active sensor, pedestal mounted "Big Eye" (20x110) binoculars shall be properly installed and in good working order to assist in the detection of marine mammals in the vicinity of the vessel.

(E) Personnel on lookout shall employ visual search procedures employing a scanning methodology in accordance with the Lookout Training Handbook (NAVEDTRA 12968-D).

(F) After sunset and prior to sunrise, lookouts shall employ Night Lookout Techniques in accordance with the Lookout Training Handbook. (NAVEDTRA 12968-D).

(G) While in transit, naval vessels shall be alert at all times, use extreme caution, and proceed at a "safe speed" so that the vessel can take proper and effective action to avoid a collision with any marine animal and can be stopped within a distance appropriate to the prevailing circumstances and conditions.

(H) When marine mammals have been sighted in the area, Navy vessels shall increase vigilance and take reasonable and practicable actions to avoid collisions and activities that might result in close interaction of naval assets and marine mammals. Actions may include changing speed and/or direction and are dictated by environmental and other conditions (e.g., safety, weather).

(I) Floating weeds and kelp, algal mats, clusters of seabirds, and jellyfish are good indicators of marine mammal presence. Therefore, where these circumstances exist, the Navy shall exercise increased vigilance in watching for marine mammals.

(J) 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. Marine mammal detections shall be immediately reported to assigned Aircraft Control Unit for further dissemination to ships in the vicinity of the marine species as appropriate when it is reasonable to conclude that the course of the ship will likely result in a closing of the distance to the detected marine mammal.

(K) All vessels shall maintain logs and records documenting training operations should they be required for event reconstruction purposes. Logs and records will be kept for a period of 30 days following completion of a major training exercise.

(2) Navy's Measures for MFAS Operations

(i) Personnel Training (for MFAS Operations):

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

(B) All COs, XOs, and officers standing watch on the bridge shall have reviewed the Marine Species Awareness Training material prior to a training event employing the use of mid-frequency active sonar.

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

(D) 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). This does not forbid personnel being trained as lookouts from being counted as those listed in previous measures so long as supervisors monitor their progress and performance.

(E) 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 species are spotted.

(ii) Lookout and Watchstander Responsibilities:

(A) 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.

(B) All surface ships participating in ASW training events 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 marine mammal lookouts.

(C) 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.

(D) On surface vessels equipped with mid-frequency active sonar, pedestal mounted "Big Eye" (20x110) binoculars shall be present and in good working order to assist in the detection of marine mammals in the vicinity of the vessel.

(E) Personnel on lookout shall employ visual search procedures employing a scanning methodology in accordance with the Lookout Training Handbook (NAVEDTRA 12968-D).

(F) After sunset and prior to sunrise, lookouts shall employ Night Lookouts Techniques in accordance with the Lookout Training Handbook.

(G) Personnel on lookout shall be responsible for reporting all objects or anomalies sighted in the water (regardless of the distance from the vessel) to the Officer of the

Deck, 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.

(iii) Operating Procedures:

(A) Navy will distribute final mitigation measures contained in the LOA and the Incidental take statement of NMFS' biological opinion to the Fleet.

(B) COs shall make use of marine species detection cues and information to limit interaction with marine species to the maximum extent possible consistent with safety of the ship.

(C) 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.

(D) During mid-frequency active sonar operations, personnel shall utilize all available sensor and optical systems (such as night vision goggles) to aid in the detection of marine mammals.

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

(F) Aircraft with deployed sonobuoys shall use only the passive capability of sonobuoys when marine mammals are detected within 200 yds (183 m) of the sonobuoy.

(G) Marine mammal detections shall be reported immediately to assigned Aircraft Control Unit for further dissemination to ships in the vicinity of the marine species as appropriate where it is reasonable to conclude that the course of the ship will likely result in a closing of the distance to the detected marine mammal.

(H) Safety Zones—When marine mammals are detected by any means (aircraft, shipboard lookout, or acoustically) within or closing to inside 1,000 yds (914 m) of the sonar dome (the bow), the ship or submarine shall limit active transmission levels to at least 6 decibels (dB) below normal operating levels.

(I) Ships and submarines shall continue to limit maximum transmission levels by this 6-dB factor until the animal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yds (1829 m) beyond the location of the last detection.

(2) Should a marine mammal be detected within or closing to inside 500 yds (457 m) 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 animal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yds (457 m) beyond the location of the last detection.

(3) Should the marine mammal be detected within or closing to inside 200 yds (183 m) of the sonar dome, active sonar transmissions shall cease. Sonar shall not resume until the animal has been seen to leave the area, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yds (457 m) beyond the location of the last detection.

(4) Special conditions applicable for dolphins and porpoises only: If, after conducting an initial maneuver to avoid close quarters with dolphins or porpoises, the OOD concludes that dolphins or porpoises are deliberately closing to ride the vessel's bow wave, no further mitigation actions are necessary while the dolphins or porpoises continue to exhibit bow wave riding behavior.

(5) If the need for power-down should arise as detailed in "Safety Zones" above, the Navy shall follow the requirements as though they were operating at 235 dB—the normal operating level (i.e., the first power-down will be to 229 dB, regardless of what level above 235 dB active sonar was being operated).

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

(J) Active sonar levels (generally)—Navy shall operate active sonar at the lowest practicable level, not to exceed 235 dB, except as required to meet tactical training objectives.

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

(L) Helicopters shall not dip their active sonar within 200 yds (183 m) of a marine mammal and shall cease pinging if a marine mammal closes within 200 yds of the sound source (183 m) after pinging has begun.

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

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

(3) Navy's Measures for Underwater Detonations

(i) Surface-to-Surface Gunnery (explosive rounds)

(A) Lookouts shall visually survey for floating weeds and kelp. Intended impact (i.e., where the Navy is aiming) shall not be within 600 yds (585 m) of known or observed floating weeds and kelp, and algal mats.

(B) For exercises using targets towed by a vessel or aircraft, target-towing vessels/aircraft shall maintain a trained lookout for marine mammals, if applicable. If a marine mammal is sighted in the vicinity, the tow aircraft/vessel shall immediately notify the firing vessel, which shall suspend the exercise until the area is clear.

(C) A 600-yard radius buffer zone shall be established around the intended target.

(D) From the intended firing position, trained lookouts shall survey the buffer zone for marine mammals prior to commencement and during the exercise as long as practicable.

(E) The exercise shall be conducted only when the buffer zone is visible and marine mammals are not detected within it.

(ii) Surface-to-Surface Gunnery (non-explosive rounds)

(A) Lookouts shall visually survey for floating weeds and kelp, and algal mats. Intended impact will not be within 200 yds (183 m) of known or observed floating weeds and kelp, and algal mats.

(B) A 200-yd (183 m) radius buffer zone shall be established around the intended target.

(C) From the intended firing position, trained lookouts shall survey the buffer zone for marine mammals prior to commencement and during the exercise as long as practicable.

(D) If applicable, target towing vessels shall maintain a lookout. If a marine mammal is sighted in the vicinity of the exercise, the tow vessel shall immediately notify the firing vessel in order to secure gunnery firing until the area is clear.

(E) The exercise shall be conducted only when the buffer zone is visible and marine mammals are not detected within the target area and the buffer zone.

(iii) Surface-to-Air Gunnery (explosive and non-explosive rounds)

(A) Vessels shall orient the geometry of gunnery exercises in order to prevent debris from falling in the area of sighted marine mammals.

(B) Vessels will expedite the recovery of any parachute deploying aerial targets to reduce the potential for entanglement of marine mammals.

(C) Target towing aircraft shall maintain a lookout, if applicable. If a marine mammal is sighted in the vicinity of the exercise, the tow aircraft shall immediately notify the firing vessel in order to secure gunnery firing until the area is clear.

(iv) Air-to-Surface Gunnery (explosive and non-explosive rounds)

(A) If surface vessels are involved, lookouts will visually survey for floating kelp in the target area. Impact shall not occur within 200 yds (183 m) of known or observed floating weeds and kelp or algal mats.

(B) A 200 yd (183 m) radius buffer zone shall be established around the intended target.

(C) If surface vessels are involved, lookout(s) shall visually survey the buffer zone for marine mammals prior to and during the exercise.

(D) Aerial surveillance of the buffer zone for marine mammals shall be conducted prior to commencement of the exercise. Aircraft crew/pilot shall maintain visual watch during exercises. Release of ordnance through cloud cover is prohibited: aircraft must be able to actually see ordnance impact areas.

(E) The exercise shall be conducted only if marine mammals are not visible within the buffer zone.

(v) Small Arms Training - (grenades, explosive and non-explosive rounds) - Lookouts will visually survey for floating weeds or kelp, algal mats, and marine mammals. Weapons shall not be fired in the direction of known or observed floating weeds or kelp, algal mats, or marine mammals.

(vi) Air-to-Surface At-sea Bombing Exercises (explosive and non-explosive):

(A) If surface vessels are involved, trained lookouts shall survey for floating kelp and marine mammals. Ordnance shall not be targeted to impact within 1,000 yds (914 m) of known or observed floating kelp or marine mammals.

(B) A 1,000 yd (914 m) radius buffer zone shall be established around the intended target.

(C) Aircraft shall visually survey the target and buffer zone for marine mammals prior to and during the exercise. The survey of the impact area shall be made by flying at 1,500 ft (457 m) or lower, if safe to do so, and at the slowest safe speed. Release of ordnance through cloud cover is prohibited: aircraft must be able to actually see ordnance impact areas. Survey aircraft should employ most effective search tactics and capabilities.

(D) The exercise will be conducted only if marine mammals are not visible within the buffer zone.

(vii) Air-to-Surface Missile Exercises (explosive and non-explosive):

(A) Ordnance shall not be targeted to impact within 1,800 yds (1646 m) of known or observed floating kelp.

(B) Aircraft shall visually survey the target area for marine mammals. Visual inspection of the target area shall be made by flying at 1,500 (457 m) feet or lower, if safe to do so, and at slowest safe speed. Firing or range clearance aircraft must be able to actually see ordnance impact areas. Explosive ordnance shall not be targeted to impact within 1,800 yds (1646 m) of sighted marine mammals.

(viii) Demolitions, Mine Warfare, and Mine Countermeasures (up to a 20-lb NEW charge):

(A) Exclusion Zones – All Demolitions, Mine Warfare and Mine Countermeasures Operations involving the use of explosive charges must include exclusion zones for marine mammals to prevent physical and/or acoustic effects to those species. These exclusion zones shall extend in a 700-yard arc radius around the detonation site.

(B) Pre-Exercise Surveys - For Demolition and Ship Mine Countermeasures Operations, pre-exercise survey shall be conducted within 30 minutes prior to the commencement of the scheduled explosive event. The survey may be conducted from the surface, by divers, and/or from the air, and personnel shall be alert to the presence of any marine mammal. Should a marine mammal be present within the survey area, the exercise shall be paused until the animal voluntarily leaves the area. The Navy shall suspend detonation exercises and ensure the area is clear for a full 30 minutes prior to detonation. Personnel shall record any marine mammal observations during the exercise.

(C) Post-Exercise Surveys - Surveys within the same radius shall also be conducted within 30 minutes after the completion of the explosive event.

(D) Reporting - If there is evidence that a marine mammal may have been stranded, injured or killed by the action, Navy activities shall be immediately suspended and the situation immediately reported by the participating unit to the Officer in Charge of the Exercise (OCE), who will follow Navy procedures for reporting the incident to Commander, Pacific Fleet, Commander, Third Fleet, Commander, Navy Region Southwest, Environmental Director, and the chain-of-command. The situation shall also be reported to NMFS (see Stranding Plan for details).

(ix) Mining Operations - Initial target points shall be briefly surveyed prior to inert ordnance (no live ordnance used) release from an aircraft to ensure the intended drop area is

clear of marine mammals. To the extent feasible, the Navy shall retrieve inert mine shapes dropped during Mining Operations.

(x) Sink Exercise:

(A) All weapons firing shall be conducted during the period 1 hour after official sunrise to 30 minutes before official sunset.

(B) An exclusion zone with a radius of 1.5 nm shall be established around each target. This 1.5 nm zone includes a buffer of 0.5 nm to account for errors, target drift, and animal movement. In addition to the 1.5 nm exclusion zone, a further safety zone, which extends from the exclusion zone at 1.5 nm out an additional 0.5 nm, shall be surveyed. Together, the zones (exclusion and safety) extend out 2 nm from the target.

(C) A series of surveillance over-flights shall be conducted within the exclusion and the safety zones, prior to and during the exercise, when feasible. Survey protocol shall be as follows:

(1) Overflights within the exclusion zone shall be conducted in a manner that optimizes the surface area of the water observed. This may be accomplished through the use of the Navy's Search and Rescue Tactical Aid, which provides the best search altitude, ground speed, and track spacing for the discovery of small, possibly dark objects in the water based on the environmental conditions of the day. These environmental conditions include the angle of sun inclination, amount of daylight, cloud cover, visibility, and sea state.

(2) All visual surveillance activities shall be conducted by Navy personnel trained in visual surveillance. At least one member of the mitigation team shall have completed the Navy's marine mammal training program for lookouts.

(3) In addition to the overflights, the exclusion zone shall be monitored by passive acoustic means, when assets are available. This passive acoustic monitoring would be maintained throughout the exercise. Potential assets include sonobuoys, which can be utilized to detect any vocalizing marine mammals (particularly sperm whales) in the vicinity of the exercise. The sonobuoys shall be re-seeded as necessary throughout the exercise. Additionally, passive sonar onboard submarines may be utilized to detect any vocalizing marine mammals in the area. The OCE would be informed of any aural detection of marine mammals and would include this information in the determination of when it is safe to commence the exercise.

(4) On each day of the exercise, aerial surveillance of the exclusion and safety zones shall commence 2 hours prior to the first firing.

(5) The results of all visual, aerial, and acoustic searches shall be reported immediately to the OCE. No weapons launches or firing may commence until the OCE declares the safety and exclusion zones free of marine mammals.

(6) If a protected species observed within the exclusion zone is diving, firing shall be delayed until the animal is re-sighted outside the exclusion zone, or 30 minutes have elapsed. After 30 minutes, if the animal has not been re-sighted it would be assumed to have left the exclusion zone.

(7) During breaks in the exercise of 30 minutes or more, the exclusion zone shall again be surveyed for any protected species. If marine mammals are sighted within the exclusion zone, the OCE shall be notified, and the procedure described above would be followed.

(8) Upon sinking of the vessel, a final surveillance of the exclusion zone shall be monitored for 2 hours, or until sunset, to verify that no marine mammals were harmed.

(D) Aerial surveillance shall be conducted using helicopters or other aircraft based on necessity and availability. The Navy has several types of aircraft capable of performing this task; however, not all types are available for every exercise. For each exercise, the available asset best suited for identifying objects on and near the surface of the ocean would be used. These aircraft would be capable of flying at the slow safe speeds necessary to enable viewing of marine vertebrates with unobstructed, or minimally obstructed, downward and outward visibility. The exclusion and safety zone surveys may be cancelled in the event that a mechanical problem, emergency search and rescue, or other similar and unexpected event preempts the use of one of the aircraft onsite for the exercise.

(E) Where practicable, the Navy shall conduct the exercise in sea states that are ideal for marine mammal sighting, i.e., Beaufort Sea State 3 or less. In the event of a 4 or above, survey efforts shall be increased within the zones. This shall be accomplished through the use of an additional aircraft, if available, and conducting tight search patterns.

(F) The exercise shall not be conducted unless the exclusion zone can be adequately monitored visually.

(G) In the event that any marine mammals are observed to be harmed in the area, a detailed description of the animal shall be taken, the location noted, and if possible, photos taken. This information shall be provided to NMFS via the Navy's regional environmental coordinator for purposes of identification (see the Stranding Plan for detail).

(H) An after action report detailing the exercise's time line, the time the surveys commenced and terminated, amount, and types of all ordnance expended, and the results of survey efforts for each event shall be submitted to NMFS.

(xi) Extended Echo Ranging/Improved Extended Echo Ranging (EER/IEER/AEER):

(A) Crews shall conduct visual reconnaissance of the drop area prior to laying their intended sonobuoy pattern. This search shall be conducted at an altitude below 457 m (500

yd) at a slow speed, if operationally feasible and weather conditions permit. In dual aircraft operations, crews are allowed to conduct coordinated area clearances.

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

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

(D) When able, 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 RF range of these sensors.

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

(F) Visual Detection - If marine mammals are visually detected within 914 m (1,000 yd) of the explosive source sonobuoy (AN/SSQ-110A) intended for use, then that payload shall not be detonated. 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 914 m (1,000 yd) safety buffer. Aircrews may shift their multi-static active search to another post, where marine mammals are outside the 914 m (1,000 yd) safety buffer.

(G) For IEER (AN/SSQ-110A), 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 will ensure that a 914 m (1,000 yd) safety buffer, visually clear of marine mammals, is maintained around each post as is done during active search operations.

(H) 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.

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

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

(4) The Navy shall abide by the letter of the "Stranding Response Plan for Major Navy Training Exercises in the SOCAL Range Complex" (attached here), to include the following measures:

(i) Shutdown Procedures – When an Uncommon Stranding Event (USE – as defined in 50 CFR § 216.271 and Attachment A) occurs during a Major Training Exercise (MTE) (Sustainment, SHAREM, IAC2, JTFEX, or COMPTUEX) in the SOCAL Range Complex, the Navy shall implement the procedures described below.

(A) The Navy shall implement a Shutdown (as defined 50 CFR § 218.291) when advised by a NMFS Office of Protected Resources Headquarters Senior Official designated in the SOCAL Range Complex 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.

(B) 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).

(C) If the Navy finds an injured or dead marine mammal 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.

(D) 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 shall coordinate (including an investigation of other potential anthropogenic stressors in the area) to determine if the proximity of MFAS/HFAS activities or explosive detonations, though farther than 14 nm 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.

(ii) Within 72 hours of NMFS notifying the Navy of the presence of a USE, the Navy shall provide available information to NMFS (per the SOCAL Range Complex 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.

(iii) 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)

7. Monitoring and Reporting – When conducting operations identified in 50 CFR § 216.270(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 a copy provided to the Assistant Regional Administrator for Protected Resources, Southwest Regional Office, National Marine Fisheries Service, 501 West Ocean Blvd., Long Beach, CA 90802-4213 .

(a) As outlined in the SOCAL Range Complex Stranding Communication Plan, the Navy must notify NMFS immediately (or as soon as clearance procedures allow) if the specified activity identified in 50 CFR § 216.270(c) and Condition 4 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 § 216.272(c) and Condition 5.

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

(c) The Navy shall complete an Integrated Comprehensive Monitoring Plan (ICMP) 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 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 SOCAL Range Complex 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 SOCAL Range Complex 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 SOCAL Range Complex Monitoring Plan shall, at a minimum, provide the same marine mammal observation data required in the data required in 50 CFR § 216.275(f)(1). The SOCAL Range Complex Monitoring Plan Report may be provided to NMFS within a larger report that includes the required Monitoring Plan Reports from multiple Range Complexes.

(f) Annual SOCAL Range Complex Exercise Report - The Navy shall submit an Annual SOCAL Range Complex 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 § 216.275(f)(1) through (5).

(1) MFAS/HFAS Major Training Exercises - This section shall contain the following information for Integrated, Coordinated, and Major Training Exercises (MTEs), which include Ship ASW Readiness and Evaluation Measuring (SHAREM), Sustainment Exercises, Integrated ASW Course Phase II (IAC2), Composite Training Unit Exercises (COMPTUEX), and Joint Task Force Exercises (JTFEX) conducted in the SOCAL Range Complex:

(i) Exercise Information (for each MTE):

- (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 MTE)

- (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 <200yd, 200-500yd, 500-1000yd, 1000-2000yd, or >2000yd from sonar source in 4(a)(1) above.
- (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 (J) 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 MTEs) of the effectiveness of mitigation measures designed to avoid exposing marine mammals to mid-frequency sonar. 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 MTEs and non-major training exercises (unit-level exercises, such as TRACKEXs):

(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 MTEs) 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 SOCAL Range Complex. The Navy shall include (in the SOCAL Range Complex 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) SINKEXs - This section shall include the following information for each SINKEX completed that year:

(i) Exercise information (gathered for each SINKEX):

- (A) Location
- (B) Date and time exercise began and ended
- (C) Total hours of observation by watchstanders before, during, and after exercise
- (D) Total number and types of rounds expended / explosives detonated
- (E) Number and types of passive acoustic sources used in exercise
- (F) Total hours of passive acoustic search time
- (G) Number and types of vessels, aircraft, etc., participating in exercise
- (H) Wave height in feet (high, low and average during exercise)
- (I) Narrative description of sensors and platforms utilized for marine mammal detection and timeline illustrating how marine mammal detection was conducted

(ii) Individual marine mammal observation (by Navy lookouts) information (gathered for each marine mammal sighting)

- (A) Location of sighting
- (B) Species (if not possible, indicate whale, dolphin or pinniped)
- (C) Number of individuals
- (D) Whether calves were observed
- (E) Initial detection sensor
- (F) Length of time observers maintained visual contact with marine mammal
- (G) Wave height
- (H) Visibility
- (I) Whether sighting was before, during, or after detonations/exercise, and how many minutes before or after
- (J) Distance of marine mammal from actual detonations (or target spot if not yet detonated) – use four categories to define distance: 1) the modeled injury threshold radius for the largest explosive used in that exercise type in that OPAREA (738 m for SINKEX in the SOCAL Range Complex); 2) the required exclusion zone (1 nm for SINKEX in the SOCAL Range Complex); (3) the required observation distance (if different than the exclusion zone (2 nm for SINKEX in the SOCAL Range Complex); and (4) greater than the required observed distance. For example, in this case, the observer would indicate if < 738 m, from 738 m – 1 nm, from 1 nm – 2 nm, and > 2 nm.
- (K) Observed behavior – Watchstanders will report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s) (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming etc.), including speed and direction.
- (L) Resulting mitigation implementation – Indicate whether explosive detonations were delayed, ceased, modified, or not modified due to marine mammal presence and for how long.

(M) If observation of a marine mammal occurs while explosives are detonating in the water, indicate munition type in use at time of marine mammal detection.

(4) IEER Summary - This section shall include an annual summary of the following IEER information:

- (i) Total number of IEER events conducted in the SOCAL Range Complex
- (ii) Total expended/detonated rounds (buoys)
- (iii) Total number of self-scuttled IEER rounds

(5) Explosives Summary - To the extent practicable, the Navy will provide the information described below for all of their explosive exercises. Until the Navy is able to report in full the information below, they will provide an annual update on the Navy's explosive tracking methods, including improvements from the previous year.

(i) Total annual number of each type of explosive exercises (of those identified as part of the "specified activity" in this final rule) conducted in the SOCAL Range Complex.

(ii) Total annual expended/detonated rounds (missiles, bombs, etc.) for each explosive type.

(g) Sonar Exercise Notification - The Navy shall submit to the NMFS Office of Protected Resources (specific contact information to be provided in LOA) either an electronic (preferably) or verbal report within fifteen calendar days after the completion of any MTE (Sustainment, IAC2, SHAREM, COMPTUEX, or JTFEX) indicating:

- (1) Location of the exercise
- (2) Beginning and end dates of the exercise
- (3) Type of exercise (e.g., SHAREM, JTFEX, etc.)

(h) SOCAL Range Complex 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 and explosive exercises for which annual reports are required (Annual SOCAL Range Complex Exercise Reports and SOCAL Range Complex 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 the SOCAL Range Complex, the Atlantic Fleet Active Sonar Training, 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 SOCAL Range Complex Comprehensive Report, the Comprehensive National ASW report, the Annual SOCAL Range Complex Exercise Report, or the Annual SOCAL Range Complex 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.

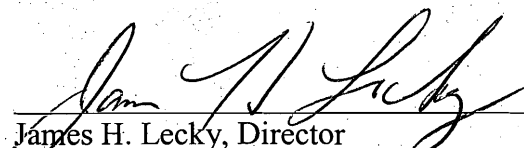
(k) In 2011, the Navy shall convene a Monitoring Workshop in which the Monitoring Workshop participants will be asked to review the Navy's Monitoring Plans and monitoring results and make individual recommendations (to the Navy and NMFS) of ways of improving the Monitoring Plans. The recommendations 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 contemplated in § 216.272 and authorized by a Letter of Authorization issued under §§ 216.106 and 216.277, no person in connection with the activities described in § 216.270 may violate, or fail to comply with, the terms, conditions, and requirements of these regulations or a Letter of Authorization issued under §§ 216.106 and 216.277.

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 X of the regulations, or or a document containing the equivalent requirements specified in this Authorization or 50 CFR Subpart X, 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 the Southern California Range Complex (SOCAL) *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 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 behavioral 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 SOCAL Range Complex final rule 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 Navy training activities, involving MFAS or explosive detonations conducted off the coast of Southern California. 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 Southern California Coast during an intermediate, coordinated, or *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 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 HRC were a cause of 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 Southern California Coast 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. 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 Southern California Coast, as NMFS’ response relates specifically to the Navy requirements described here. The NMFS Marine Mammal Health and Stranding Response Program (MMHSRP) and the participating Southwest 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 Southern California Coast 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 (i.e., not just in southern California and not just during the activities covered under NMFS' regulations), 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 SOCAL 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 Southern California Range Complex (SOCAL) LOA if a USE is reported to the Navy off the Southern California Coast coincident to, or within 72 hours of, an MTE. This Stranding Response Plan will include an associated SOCAL 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 reports of stranded marine mammals in areas where there is geographic coverage by the stranding network, when feasible. All cetaceans that are responded to 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 other qualified individual) will initiate a *Phase 1 Investigation*. NMFS will immediately contact appropriate NMFS and Navy personnel (pursuant to the SOCAL 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 SOCAL 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 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 miles (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.

b) If the Navy finds an injured (or entangled) or dead cetacean floating at sea during an MTE, the Navy shall notify NMFS (pursuant to SOCAL 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 (i.e. a shutdown other than those described here, based on specific information available at the time) is appropriate on a case-by-case basis.

c) 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 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.

d) 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).

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 the 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 available information to NMFS (per the HRC Stranding Communication Protocol) 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 variability of available resources across stranding network agencies in the Southwest region, 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) are 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 Southern California Coast 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 “SOCAL Stranding Communication Protocols”) are currently in usable draft form and will be finalized for the HRC by March 2009 and updated yearly (or more frequently, as appropriate).

The Stranding Response Plan is dependent upon advance notice to NMFS (HQ and Southwest Regional Office) 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 desiccated.

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

- Joint Task Force Exercise (JTFFEX.) – 3-4 events annually, 10 days per event
- Composite Training Unit Exercise (Comptuex) – 3-4 events annually, 21 days per event
- Ship ASW Readiness and Evaluation Measuring (SHAREM) – 1 event annually, two weeks or less per event
- Sustainment Exercise – 1-2 events annually, 14 days or less
- Integrated ASW Course (IAC) Phase II – 4 events per year, 2-day event

Note: 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. 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 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 SOCAL 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 of any live, in the water animal involved in the USE. This distance (14 nm) is the distance at which sound from the sonar source is anticipated to attenuate to approximately 140-145 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 10 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., short-finned pilot 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

SOCAL 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 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 SOCAL – 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 the procedures implemented for conducting the 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 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.