



Letter of Authorization Hawaii-California Training and Testing Study Area Navy Training and Testing

The Department of the Navy (Attn: The Commander, U.S. Pacific Fleet Code N465 250 Makalapa Drive, Pearl Harbor, HI 96860-3131), and persons operating under the Department of the Navy authorities (*i.e.*, Navy and Marine Corps), are authorized to take marine mammals incidental to Department of the Navy (Navy) training and testing activities, respectively, conducted in the Hawaii-California Training and Testing (HCTT) Study Area (Figure 1), subject to the provisions of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*; MMPA) of 1972, as amended, and the applicable regulations (see 50 CFR §§ 218.80 – 218.89 (“the regulations”)), provided they are in compliance with all terms, conditions, and requirements described herein.

A copy of this Letter of Authorization (LOA) or a document containing the equivalent requirements specified in this Authorization and the regulations, must be in the possession of the holder of this LOA, or his/her designee, in order to take marine mammals under the authority of this LOA while conducting the specified activities.

1. Effective Dates

This LOA is effective for the period of December 21, 2025, through December 20, 2032.

2. Geographic Region

The geographic region is the HCTT Study Area (Figure 1). The HCTT Study Area includes areas in the north-central Pacific Ocean, from California west to Hawaii and the International Date Line, and including the Hawaii Range Complex (HRC) and Temporary Operating Area (TOA), Southern California (SOCAL) Range Complex, Point Mugu Sea Range (PMSR), Silver Strand Training Complex, areas along the Southern California coastline from approximately Dana Point to Port Hueneme, and the Northern California (NOCAL) Range Complex. Also included in the HCTT Study Area are Navy pierside locations in Hawaii and Southern California, Pearl Harbor, San Diego Bay, and the transit corridor on the high seas where training and testing may occur.

3. Specified Activities

This Authorization is valid for the military readiness activities including training, testing, and range modernization and sustainment identified in Tables 1-8 and 1-11 through 1-14 of the September 16, 2024 HCTT Training and Testing LOA application that include sonar and other transducers, explosives, air guns, pile driving/extraction activities, and vessel use in the HCTT Study Area. These activities fall under the following areas:

- (a) Amphibious warfare;
- (b) Anti-submarine warfare;
- (c) Expeditionary warfare;



- (d) Mine warfare;
- (e) Surface warfare;
- (f) Vessel evaluation;
- (g) Unmanned systems;
- (h) Acoustic and oceanographic science and technology;
- (i) Vessel movement;
- (j) Land-based launches; and
- (k) Other training and testing activities.

4. Permissible Methods of Taking

Navy may incidentally, but not intentionally, take marine mammals within the geographic region in the course of conducting the specified activities described above and in 50 CFR § 218.70(c), provided Navy is in complete compliance with all terms, conditions, and requirements described herein. The incidental take of marine mammals is limited to the species and stocks listed in this condition (see below) by the indicated method of take and number of takes.

- (a) Incidental take by Level A and Level B harassment from testing activities is limited to the species and stocks, indicated method, and number of takes shown in Table 1.

Table 1. Authorized Incidental Take by Level A and Level B Harassment, by Species and Stock, from All Testing Activities.

Species	Stock	Maximum annual Level B harassment	Maximum annual Level A harassment	7-year total Level B harassment	7-year total Level A harassment
Gray Whale	Eastern North Pacific	11,777	69	54,745	365
Gray Whale	Western North Pacific	120	1	545	3
Blue Whale	Central North Pacific	24	1	134	2
Blue Whale	Eastern North Pacific	1,836	10	10,002	66
Bryde's Whale	Eastern Tropical Pacific	142	3	828	9
Bryde's Whale	Hawaii	99	1	531	1
Fin Whale	Hawaii	25	1	145	1
Fin Whale	CA/OR/WA	6,030	27	30,497	156
Humpback Whale	Central America/Southern Mexico - CA/OR/WA	839	5	4,492	28
Humpback Whale	Mainland Mexico - CA/OR/WA	2,033	10	10,859	49
Humpback Whale	Hawaii	779	6	4,627	38
Minke Whale	Hawaii	64	1	351	1

Minke Whale	CA/OR/WA	1,300	8	7,088	49
Sei Whale	Hawaii	52	1	287	3
Sei Whale	Eastern North Pacific	106	2	579	2
Sperm Whale	Hawaii	346	0	1,745	0
Sperm Whale	CA/OR/WA	966	1	4,963	1
Dwarf Sperm Whale	Hawaii	8,443	399	43,341	1,941
Dwarf Sperm Whale	CA/OR/WA	1,283	43	7,101	245
Pygmy Sperm Whale	Hawaii	8,603	402	44,150	1,966
Pygmy Sperm Whale	CA/OR/WA	1,325	41	7,289	238
Baird's Beaked Whale	CA/OR/WA	2,830	0	16,079	0
Blainville's Beaked Whale	Hawaii	1,704	0	8,917	0
Goose-Beaked Whale	Hawaii	6,956	0	36,245	0
Goose-Beaked Whale	CA/OR/WA	55,310	1	296,069	2
Longman's Beaked Whale	Hawaii	4,118	0	21,544	0
Mesoplodont Beaked Whale	CA/OR/WA	27,768	1	146,662	4
False Killer Whale	Main Hawaiian Islands Insular	43	0	230	0
False Killer Whale	Northwest Hawaiian Islands	38	0	197	0
False Killer Whale	Hawaii Pelagic	287	1	1,489	1
False Killer Whale	Baja California Peninsula Mexico	393	0	2,226	0
Killer Whale	Hawaii	22	0	113	0
Killer Whale	Eastern North Pacific Offshore	477	1	2,772	2
Killer Whale	West Coast Transient	8	0	52	0
Melon-Headed Whale	Hawaiian Islands	5,110	3	26,599	14

Melon-Headed Whale	Kohala Resident (Hawaii)	31	0	195	0
Pygmy Killer Whale	Hawaii	1,410	1	7,152	1
Pygmy Killer Whale	California - Baja California Peninsula Mexico	315	0	1,635	0
Short-Finned Pilot Whale	Hawaii	3,367	2	18,188	5
Short-Finned Pilot Whale	CA/OR/WA	2,274	2	12,896	2
Bottlenose Dolphin	Maui Nui	137	0	850	0
Bottlenose Dolphin	Hawaii Island	3	0	19	0
Bottlenose Dolphin	Hawaii Pelagic	5,731	6	34,450	39
Bottlenose Dolphin	Kaua'i/Ni'ihau	281	0	1,586	0
Bottlenose Dolphin	O'ahu	443	1	2,965	1
Bottlenose Dolphin	California Coastal	832	0	5,228	0
Bottlenose Dolphin	CA/OR/WA Offshore	10,999	2	62,160	9
Fraser's Dolphin	Hawaii	5,086	1	26,111	2
Long-Beaked Common Dolphin	California	193,599	39	1,215,256	230
Northern Right Whale Dolphin	CA/OR/WA	9,950	6	51,898	32
Pacific White-Sided Dolphin	CA/OR/WA	27,035	9	149,417	54
Pantropical Spotted Dolphin	Maui Nui	1,542	2	9,642	8
Pantropical Spotted Dolphin	Hawaii Island	1,026	2	5,919	2
Pantropical Spotted Dolphin	Hawaii Pelagic	7,862	4	41,161	12
Pantropical Spotted Dolphin	O'ahu	807	1	5,142	2
Pantropical Spotted Dolphin	Baja California Peninsula Mexico	14,695	4	83,941	15

Risso's Dolphin	Hawaii	1,143	2	5,746	3
Risso's Dolphin	CA/OR/WA	18,560	6	99,161	27
Rough-Toothed Dolphin	Hawaii	16,289	7	87,872	37
Short-Beaked Common Dolphin	CA/OR/WA	731,713	182	3,869,698	1,037
Spinner Dolphin	Hawaii Pelagic	739	1	3,791	1
Spinner Dolphin	Hawaii Island	13	0	82	0
Spinner Dolphin	Kaua'i/Ni'ihau	918	1	5,187	1
Spinner Dolphin	O'ahu/4 Islands Region	210	0	1,283	0
Striped Dolphin	Hawaii Pelagic	6,270	2	31,482	7
Striped Dolphin	CA/OR/WA	21,982	7	118,342	38
Dall's Porpoise	CA/OR/WA	15,363	528	84,387	3,056
Harbor Porpoise	Monterey Bay	865	0	5,307	0
Harbor Porpoise	Morro Bay	490	77	3,265	519
Harbor Porpoise	Northern California/Southern Oregon	124	0	763	0
Harbor Porpoise	San Francisco/Russian River	3,038	2	18,641	5
California Sea Lion	U.S.	108,758	191	5,526,070	1,166
Guadalupe Fur Seal	Mexico	48,392	17	275,065	106
Northern Fur Seal	Eastern Pacific	3,311	9	20,183	45
Northern Fur Seal	California	1,894	7	11,495	38
Steller Sea Lion	Eastern	471	0	2,854	0
Harbor Seal	California	54,660	18	291,218	106
Hawaiian Monk Seal	Hawaii	219 ^a	2	1,362	7
Northern Elephant Seal	California Breeding	48,092	61	262,609	360

^a Of the 3 total artillery events and 20 total missile events evaluated in promulgation of the regulations, Navy will conduct 1 artillery event and 4 missile events. As such, of the 360 takes by Level B harassment of Hawaiian monk seal authorized annually for missile and artillery events among all Action Proponents (Navy, U.S. Coast Guard, and U.S. Army, as defined in 50 CFR §§ 218.70), 80 takes are authorized to the Navy.

(b) Incidental take by Level A and Level B harassment from training activities is limited to the species and stocks, indicated method, and number of takes shown in Table 2.

Table 2. Authorized Incidental Take by Level A and Level B Harassment, by Species and Stock, from All Training Activities.

Species	Stock	Maximum annual Level B harassment	Maximum annual Level A harassment	7-year total Level B harassment	7-year total Level A harassment
Gray Whale	Eastern North Pacific	4,918	98	32,444	645
Gray Whale	Western North Pacific	48	1	305	2
Blue Whale	Central North Pacific	67	0	389	0
Blue Whale	Eastern North Pacific	2,716	17	14,681	84
Bryde's Whale	Eastern Tropical Pacific	179	2	1,041	5
Bryde's Whale	Hawaii	306	2	1,809	10
Fin Whale	Hawaii	59	0	334	0
Fin Whale	CA/OR/WA	7,409	28	37,629	144
Humpback Whale	Central America/Southern Mexico - CA/OR/WA	1,042	14	5,361	68
Humpback Whale	Mainland Mexico - CA/OR/WA	2,401	34	12,414	171
Humpback Whale	Hawaii	2,244	18	14,250	113
Minke Whale	Hawaii	229	2	1,330	12
Minke Whale	CA/OR/WA	1,686	24	8,980	144
Sei Whale	Hawaii	200	1	1,146	2
Sei Whale	Eastern North Pacific	195	1	1,028	7
Sperm Whale	Hawaii	1,296	1	7,829	1
Sperm Whale	CA/OR/WA	2,897	2	15,447	4
Dwarf Sperm Whale	Hawaii	36,298	501	215,688	3,065
Dwarf Sperm Whale	CA/OR/WA	4,329	50	22,647	271
Pygmy Sperm Whale	Hawaii	36,722	518	217,948	3,153
Pygmy Sperm Whale	CA/OR/WA	4,240	66	22,246	371
Baird's Beaked Whale	CA/OR/WA	7,290	0	39,692	0

Blainville's Beaked Whale	Hawaii	5,812	0	36,916	0
Goose-Beaked Whale	Hawaii	23,258	0	147,787	0
Goose-Beaked Whale	CA/OR/WA	110,853	1	638,374	2
Longman's Beaked Whale	Hawaii	14,051	1	89,592	4
Mesoplodont Beaked Whale	CA/OR/WA	64,655	1	371,374	2
False Killer Whale	Main Hawaiian Islands Insular	122	0	752	0
False Killer Whale	Northwest Hawaiian Islands	151	0	959	0
False Killer Whale	Hawaii Pelagic	1,371	0	8,293	0
False Killer Whale	Baja California Peninsula Mexico	2,127	1	11,552	1
Killer Whale	Hawaii	103	0	610	0
Killer Whale	Eastern North Pacific Offshore	545	3	3,310	21
Killer Whale	West Coast Transient	46	0	204	0
Melon-Headed Whale	Hawaiian Islands	26,120	9	155,607	53
Melon-Headed Whale	Kohala Resident (Hawaii)	23	0	130	0
Pygmy Killer Whale	Hawaii	7,428	2	44,514	7
Pygmy Killer Whale	California - Baja California Peninsula Mexico	477	0	2,705	0
Short-Finned Pilot Whale	Hawaii	13,851	3	85,991	18
Short-Finned Pilot Whale	CA/OR/WA	1,995	9	11,567	54
Bottlenose Dolphin	Maui Nui	189	0	1,301	0
Bottlenose Dolphin	Hawaii Island	6	0	25	0
Bottlenose Dolphin	Hawaii Pelagic	37,546	18	252,429	123

Bottlenose Dolphin	Kaua‘i/Ni‘ihau	1,179	0	7,728	0
Bottlenose Dolphin	O‘ahu	6,789	5	47,410	29
Bottlenose Dolphin	California Coastal	516	7	3,521	42
Bottlenose Dolphin	CA/OR/WA Offshore	16,938	13	94,638	74
Fraser’s Dolphin	Hawaii	30,371	5	184,274	26
Long-Beaked Common Dolphin	California	102,352	113	583,062	722
Northern Right Whale Dolphin	CA/OR/WA	35,313	15	170,387	64
Pacific White-Sided Dolphin	CA/OR/WA	41,928	33	209,903	188
Pantropical Spotted Dolphin	Maui Nui	830	2	5,549	10
Pantropical Spotted Dolphin	Hawaii Island	4,974	5	29,501	23
Pantropical Spotted Dolphin	Hawaii Pelagic	36,298	13	219,400	67
Pantropical Spotted Dolphin	O‘ahu	5,618	5	39,051	21
Pantropical Spotted Dolphin	Baja California Peninsula Mexico	82,440	43	448,311	224
Risso’s Dolphin	Hawaii	5,380	1	32,054	1
Risso’s Dolphin	CA/OR/WA	25,085	15	140,377	98
Rough-Toothed Dolphin	Hawaii	80,173	27	497,078	157
Short-Beaked Common Dolphin	CA/OR/WA	1,428,183	694	7,867,127	4,036
Spinner Dolphin	Hawaii Pelagic	3,781	1	22,583	3
Spinner Dolphin	Hawaii Island	97	1	562	1
Spinner Dolphin	Kaua‘i/Ni‘ihau	3,528	1	23,147	5
Spinner Dolphin	O‘ahu/4 Islands Region	991	1	6,922	2
Striped Dolphin	Hawaii Pelagic	31,260	8	186,357	43
Striped Dolphin	CA/OR/WA	110,641	37	600,412	193
Dall’s Porpoise	CA/OR/WA	43,844	708	218,178	3,727

Harbor Porpoise	Monterey Bay	1,314	0	5,627	0
Harbor Porpoise	Morro Bay	3,883	11	23,051	71
Harbor Porpoise	Northern California/Southern Oregon	357	0	1,576	0
Harbor Porpoise	San Francisco/Russian River	6,920	24	30,248	164
California Sea Lion	U.S.	876,054	532	4,997,524	3,406
Guadalupe Fur Seal	Mexico	295,304	37	1,598,780	194
Northern Fur Seal	Eastern Pacific	29,250	3	134,187	10
Northern Fur Seal	California	19,649	3	90,918	9
Steller Sea Lion	Eastern	524	3	2,470	13
Harbor Seal	California	16,662	243	98,994	1,536
Hawaiian Monk Seal	Hawaii	893	4	6,080	18
Northern Elephant Seal	California Breeding	68,627	49	351,382	284

(c) Incidental take by serious injury or mortality from explosives during testing activities is limited to the species and stocks and the number of takes shown in Table 3.

Table 3. Authorized Serious Injury or Mortality, by Species and Stock, from Explosives During Testing Activities (includes Small Ship Shock Trials).

Species	Stock	Maximum annual mortality	Maximum 7-year mortality
Long-Beaked Common Dolphin	California	0.29	2
Northern Right Whale Dolphin	CA/OR/WA	0.14	1
Pacific White-Sided Dolphin	CA/OR/WA	0.14	1
Pantropical Spotted Dolphin	Baja California Peninsula Mexico*	0.14	1
Rough-Toothed Dolphin	Hawaii	0.14	1
Short-Beaked Common Dolphin	CA/OR/WA	2.29	16
California Sea Lion	U.S.	0.71	5

(d) Incidental take by serious injury or mortality from explosives during training activities is limited to the species and stocks and the number of takes shown in Table 2.

Table 4. Authorized Serious Injury or Mortality, by Species and Stock, from Explosives During Training Activities.

Species	Stock	Maximum annual mortality	Maximum 7-year mortality
Short-Finned Pilot Whale	CA/OR/WA	0.57	4
Bottlenose Dolphin	Hawaii Pelagic	0.29	2
Bottlenose Dolphin	O‘ahu	0.14	1
Long-Beaked Common Dolphin	California	2.14	15
Pacific White-Sided Dolphin	CA/OR/WA	0.14	1
Pantropical Spotted Dolphin	Baja California Peninsula Mexico	0.14	1
Rough-Toothed Dolphin	Hawaii	0.14	1
Short-Beaked Common Dolphin	CA/OR/WA	13	91
Striped Dolphin	CA/OR/WA	0.14	1
California Sea Lion	U.S.	3.14	22
Guadalupe Fur Seal	Mexico	0.14	1
Harbor Seal	California	1	7

(e) Incidental take by serious injury or mortality from vessel strike is limited to a total of seven large whales over the total 7-year period during Navy training and testing activities combined from the species listed in Table 5. Of the seven total takes, no more than one, two, or five whales can be taken by vessel strike from each species and stock, as indicated in Table 5.

Table 5. Authorized Serious Injury or Mortality, by Species and Stock, from Vessel Strike Incidental to Navy Training and Testing Activities Combined.

Species	Stock	Annual Authorized Serious Injury or Mortality	7-year Authorized Serious Injury or Mortality (no more than seven large whales over the 7-year period during Navy training and testing activities combined)
Blue Whale	Eastern North Pacific	0.14	1
Fin whale	CA/OR/WA	0.86	5
Humpback whale	Mainland Mexico – CA/OR/WA	0.29	1
Humpback whale	Central America/Southern Mexico – CA/OR/WA	0.14	1
Gray whale	Eastern North Pacific	0.29	2
Sei whale	Eastern North Pacific	0.14	1

Sperm whale	Hawaii	0.14	1
Humpback whale	Hawaii	0.29	2

5. Prohibitions

Except for incidental take described under section 4 (Permissible Methods of Taking), it is unlawful for any person to do the following in connection with the activities described herein:

- (a) Violate, or fail to comply with, the terms, conditions, and requirements of this LOA or the regulations;
- (b) Take any marine mammal not specified in Table 1 through Table 5;
- (c) Take any marine mammal specified in Table 1 through Table 5 in any manner other than as specified in section 4 (Permissible Methods of Taking) or number greater than those specified in Table 1 through Table 5; or
- (d) Take a marine mammal specified in Table 1 through Table 5 after NMFS determines such taking results in more than a negligible impact on the species or stock.

6. Mitigation Requirements

When conducting the specified training and testing activities in the geographic region, Navy must implement the following mitigation measures:

- (a) Environmental awareness and education

Navy personnel (including civilian personnel) involved in mitigation and training or testing activity reporting under the specified activities will complete one or more modules of the U.S. Navy Afloat Environmental Compliance Training Series, as identified in their career path training plan. Modules include: Introduction to the U.S. Navy Afloat Environmental Compliance Training Series, Marine Species Awareness Training; U.S. Navy Protective Measures Assessment Protocol; and U.S. Navy Sonar Positional Reporting System and Marine Mammal Incident Reporting.

- (b) Activity-Based Mitigation

Activity-based mitigation is mitigation that the Navy must implement whenever and wherever an applicable military readiness activity takes place within the HCTT Study Area.

- i. Activity-Based Mitigation for Active Acoustic Stressors

Table 6 through Table 9 describe required activity-based mitigation for acoustic stressors. This mitigation does not apply to:

- Sources not operated under positive control (*e.g.*, moored oceanographic sources);
- Sources used for safety of navigation (*e.g.*, fathometers);
- Sources used or deployed by aircraft operating at high altitudes (*e.g.*, sonobuoys deployed from high altitude (since personnel cannot effectively observe the surface of the water));

- Sources used, deployed, or towed by unmanned platforms except when escort vessels are already participating in the event and have positive control over the source;
- Sources used by submerged submarines (*e.g.*, sonar (since personnel cannot conduct visual observation));
- De minimis sources (*e.g.*, those >200 kHz);
- Unattended sources, including those used for acoustic and oceanographic research; and
- Vessel-based, unmanned vehicle-based, or towed in-water sources when marine mammals (*e.g.*, dolphins) are determined to be intentionally swimming at the bow or alongside or directly behind the vessel, vehicle, or device (*e.g.*, to bow-ride or wake-ride).

Table 6. Mitigation for Active Acoustic Sources with Powerdown and Shutdown Capabilities

Stressor	<ul style="list-style-type: none"> ● Low-frequency active sonar ≥ 200 dB ● Mid-frequency active sonar sources that are hull mounted on a surface ship (including surfaced submarines) ● Broadband and other active acoustic sources >200 dB
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Within 1,000 yd (914.4 m) from a marine mammal, Navy personnel must power down active acoustic sources by 6 decibels (dB) total. ● Within 500 yd (457.2 m) from a marine mammal, Navy personnel must power down active acoustic sources by 10 dB total. ● Within 200 yd (182.9 m) from a marine mammal, Navy personnel must shut down active acoustic sources.
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout in or on one of the following: aircraft; pierside, moored, or anchored vessel; underway vessel with space/crew restrictions (including small boats); or underway vessel already participating in the event that is escorting (and has positive control over sources used, deployed, or towed by) an unmanned platform. ● Two Lookouts on an underway vessel without space or crew restrictions. ● Lookouts must use information from passive acoustic detections to inform visual observations when passive acoustic devices are already being used in the event.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of using active acoustic sources (<i>e.g.</i>, while maneuvering on station). ● Navy personnel must observe the applicable mitigation zone for marine mammals during use of active acoustic sources.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing or powering up active sonar transmission).

	<ul style="list-style-type: none"> • The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft).
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Table 7. Mitigation for Active Acoustic Sources with Shutdown (but not power down) Capabilities.

Stressor	<ul style="list-style-type: none"> • Low-frequency active sonar <200 dB • Mid-frequency active sonar sources that are not hull mounted on a surface ship (e.g., dipping sonar, towed arrays) • High-frequency active sonar • Air guns • Broadband and other active acoustic sources <200 dB
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • At 200 yd (182.9 m) from a marine mammal, Navy personnel must shut down active acoustic sources.
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout in or on one of the following: aircraft; pier-side, moored, or anchored vessel; underway vessel with space/crew restrictions (including small boats); or underway vessel already participating in the event that is escorting (and has positive control over sources used, deployed, or towed by) an unmanned platform. • Two Lookouts on an underway vessel without space or crew restrictions. • Lookouts must use information from passive acoustic detections to inform visual observations when passive acoustic devices are already being used in the event.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of using active acoustic sources (e.g., while maneuvering on station). • Navy personnel must observe the applicable mitigation zone for marine mammals during use of active acoustic sources.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing or powering up active sonar transmission). • The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft).

Table 8. Mitigation for Pile Driving and Extraction.

Stressor	<ul style="list-style-type: none"> • Vibratory and impact pile driving and extraction
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease pile driving or extraction if a marine mammal is sighted within 5 yd (4.6 m) of a pile being driven or extracted.
Lookout	<ul style="list-style-type: none"> • One Lookout in or on one of the following: shore, pier, or small boat.

Requirements	
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals and floating vegetation for 15 minutes prior to the initial start of pile driving or pile extraction. ● Navy personnel must use soft start techniques when impact pile driving. Soft start requires the Navy to conduct three sets of strikes (three strikes per set) at reduced hammer energy with a 30-second waiting period between each set. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer. ● Navy personnel must observe the mitigation zone for marine mammals during pile driving or extraction.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing vibratory or impact pile driving or extraction). The wait period for this activity is 15 minutes.

Table 9. Mitigation for Weapons Firing Noise.

Stressor	<ul style="list-style-type: none"> ● Explosive and non-explosive large-caliber (57-millimeter (mm) and larger) gunnery firing noise (surface-to-surface and surface-to-air)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Navy personnel must cease weapons firing if a marine mammal is sighted within 30 degrees on either side of the firing line out to 70 yd (64 m) from the gun muzzle (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout on a vessel.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of large-caliber gun firing (e.g., during target deployment). ● Navy personnel must observe the mitigation zone for marine mammals during large-caliber gun firing.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing explosive and non-explosive large-caliber gunnery firing noise (surface-to-surface and surface-to-air)). The wait period for this activity is 30 minutes.

ii. Activity-Based Mitigation for Explosive Stressors

Table 10 through Table 19 describe required activity-based mitigation for explosive stressors. This mitigation does not apply to explosives:

- Deployed by aircraft operating at high altitudes (*i.e.*, altitudes at which marine mammals on the surface cannot be distinguished);
- Deployed by submerged submarines, except for explosive torpedoes;

- Deployed against aerial targets;
- During vessel-launched or shore-launched missile or rocket events;
- Used at or below the *de minimis* threshold (≤ 0.1 lb (0.05 kg) net explosive weight (NEW)); and
- Deployed by unmanned platforms except when escort vessels are already participating in the event and have positive control over the explosive.

Table 10. Mitigation for Explosive Bombs.

Activity or Stressor	<ul style="list-style-type: none"> • Explosives (any NEW)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease explosive bomb use if a marine mammal is sighted within 2,500 yd (2,286 m) from the intended target.
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout in an aircraft.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of bomb delivery (e.g., when arriving on station). • Navy personnel must observe the applicable mitigation zone for marine mammals during bomb delivery. • If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. • After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of explosive bombs of any NEW). The wait period for this activity is 10 minutes.

Table 11. Mitigation for Explosive Gunnery.

Activity or Stressor	<ul style="list-style-type: none"> • Air-to-surface medium-caliber, surface-to-surface medium-caliber, surface-to-surface large-caliber ordnance
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease air-to-surface medium-caliber use if a marine mammal is sighted within 200 yd (182.9 m) of the intended impact location. • Navy personnel must cease surface-to-surface medium-caliber use if a marine mammal is sighted within 600 yd (548.6 m) of the intended impact location. • Navy personnel must cease surface-to-surface large-caliber use if a marine mammal is sighted within 1,000 yd (914.4 m) of the intended impact location.
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout on a vessel or in an aircraft.

Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of gun firing (e.g., while maneuvering on station). • Navy personnel must observe the applicable mitigation zone for marine mammals during gunnery fire. • If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. • After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing air-to-surface medium-caliber, surface-to-surface medium-caliber, surface-to-surface large-caliber explosive gunnery). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

Table 12. Mitigation for Explosive Underwater Demolition Multiple Charge – Mat Weave and Obstacle Loading.

Activity or Stressor	<ul style="list-style-type: none"> • Explosives (any NEW)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease explosive underwater demolition multiple charge- mat weave and obstacle loading if a marine mammal is sighted within 700 yd (640 m) of the detonation site.
Lookout Requirements	<ul style="list-style-type: none"> • Two Lookouts, one on a small boat and one on shore from an elevated platform.
Mitigation Zone Observation	<ul style="list-style-type: none"> • The Lookout positioned on a small boat must observe the mitigation zone for marine mammals and floating vegetation for 30 minutes prior to the first detonation. • The Lookout positioned on shore must use binoculars to observe for marine mammals for 10 minutes prior to the first detonation. • Navy personnel must observe the mitigation zone for marine mammals during detonations. • If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. • After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any

	injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of explosive underwater demolition multiple charge – mat weave and obstacle loading of any NEW). The wait period for this activity is 10 minutes (determined by the Lookout on shore).

Table 13. Mitigation for Explosive Mine Countermeasure and Neutralization (No Divers).

Activity or Stressor	<ul style="list-style-type: none"> • 0.1-5 lb (0.05-2.3 kg) NEW, >5 lb (2.3 kg) NEW
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease 0.1-5 lb (0.05-2.3 kg) NEW use if a marine mammal is sighted within 600 yd (548.6 m) from the detonation site. • Navy personnel must cease >5 lb (2.3 kg) NEW use if a marine mammal is sighted within 2,100 yd (1,920.2 m) from the detonation site.
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout on a vessel or in an aircraft during 0.1-5 lb (0.05-2.3 kg) NEW use. • Two Lookouts, one on a small boat and one in an aircraft during >5 lb (2.3 kg) NEW use.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of detonations (e.g., while maneuvering on station; typically, 10 or 30 minutes depending on fuel constraints). • Navy personnel must observe the applicable mitigation zone for marine mammals, concentrations of seabirds, and individual foraging seabirds (in the water and not on shore) during detonations or fuse initiation. • If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. • After the event, when practical, Navy personnel must observe the detonation vicinity for 10 or 30 minutes (depending on fuel constraints) for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing explosive mine countermeasure and neutralization using 0.1-5 pound (lb) (0.05-2.3 kilogram (kg)) NEW and >5 lb (2.3 kg) NEW). The wait period for this activity is

	30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).
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Table 14. Mitigation for Explosive Mine Neutralization (With Divers).

Activity or Stressor	<ul style="list-style-type: none"> ● 0.1-20 lb (0.05-9.1 kg) NEW (positive control), 0.1-20 lb (0.05-9.1 kg) NEW (time-delay), >20-60 lb (9.1-27.2 kg) NEW (positive control)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Navy personnel must cease 0.1-20 lb (0.05-9.1 kg) NEW (positive control) use if a marine mammal is sighted within 500 yd (457.2 m) of the detonation site (cease fire). ● Navy personnel must cease 0.1-20 lb (0.05-9.1 kg) NEW (time-delay) and >20-60 lb (9.1-27.2 kg) NEW (positive control) use if a marine mammal is sighted within 1,000 yd (914.4 m) of the detonation site (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> ● Two Lookouts in two small boats (one Lookout per boat) or one small boat and one rotary-wing aircraft (with one Lookout each), and one Lookout on shore for shallow-water events during 0.1-20 lb (0.05-9.1 kg) NEW (positive control) use. ● Four Lookouts in two small boats (two Lookouts per boat) and one additional Lookout in an aircraft if used in the event during use of 0.1-20 lb (0.05-9.1 kg) NEW (time-delay) and >20-60 lb (9.1-27.2 kg) NEW (positive control).
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Time-delay devices must be set not to exceed 10 minutes. ● Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of detonations or fuse initiation for positive control events (e.g., while maneuvering on station) or for 30 minutes prior for time-delay events. ● Navy personnel must observe the applicable mitigation zone for marine mammals during detonations or fuse initiation. ● When practical based on mission, safety, and environmental conditions: <ul style="list-style-type: none"> ○ Boats must observe from the mitigation zone radius mid-point. ○ When two boats are used, boats must observe from opposite sides of the mine location. ○ Platforms must travel a circular pattern around the mine location. ○ Boats must have one Lookout observe inward toward the mine location and one Lookout observe outward toward the mitigation zone perimeter. ○ Divers must be part of the Lookout Team. ● If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed.

	<ul style="list-style-type: none"> • After the event, when practical, Navy personnel must observe the detonation vicinity for 30 minutes for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing explosive mine neutralization (with divers) using 0.1-20 lb (0.05-9.1 kg) NEW (positive control), 0.1-20 lb (0.05-9.1 kg) NEW (time-delay), and >20-60 lb (9.1-27.2 kg) NEW (positive control)). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

Table 15. Mitigation for Explosive Missiles and Rockets.

Activity or Stressor	<ul style="list-style-type: none"> • 0.6–20 lb (0.3-9.1 kg) NEW (air-to-surface), >20–500 lb (9.1-226.8 kg) NEW (air-to-surface)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease 0.6-20 lb (0.3-9.1 kg) NEW (air-to-surface) use if a marine mammal is sighted within 900 yd (823 m) of the intended impact location (cease fire). • Navy personnel must cease >20-500 lb (9.1-226.8 kg) NEW (air-to-surface) use if a marine mammal is sighted within 2,000 yd (1,828.8 m) of the intended impact location (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout in an aircraft.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the applicable mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of missile or rocket delivery (e.g., during a fly-over of the mitigation zone). • Navy personnel must observe the applicable mitigation zone for marine mammals during missile or rocket delivery. • If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. • After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of explosive missiles and rockets using 0.6-20 lb (0.3-9.1 kg) NEW (air-to-surface) and >20-

	500 lb (9.1-226.8 kg) NEW (air-to-surface)). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).
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Table 16. Mitigation for Explosive Sonobuoys and Research-Based Sub-Surface Explosives.

Activity or Stressor	<ul style="list-style-type: none"> Any NEW of sonobuoys and 0.1-5 lb (0.05-2.3 kg) NEW for other types of sub-surface explosives used in research applications
Mitigation Zones and Requirements	<ul style="list-style-type: none"> Navy personnel must cease use of any NEW of sonobuoys and 0.1-5 lb (0.05-2.3 kg) NEW for other types of sub-surface explosives used in research applications if a marine mammal is sighted within 600 yd (548.6 m) of the device or detonation sites (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> One Lookout on a small boat or in an aircraft. Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations.
Mitigation Zone Observation	<ul style="list-style-type: none"> Navy personnel must observe the mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of detonations (e.g., during sonobuoy deployment, which typically lasts 20-30 minutes). Navy personnel must observe the mitigation zone for marine mammals during detonations. If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommendment Conditions	<ul style="list-style-type: none"> Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of any NEW of explosive sonobuoys and 0.1-5 lb (0.05-2.3 kg) NEW for other types of sub-surface explosives used in research applications). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

Table 17. Mitigation for Explosive Torpedoes.

Activity or Stressor	<ul style="list-style-type: none"> Explosives (any NEW)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> Navy personnel must cease use of explosive torpedoes of any NEW if a marine mammal is sighted within 2,100 yd (1,920.2 m) of the

	intended impact location.
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout in an aircraft. ● Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals, floating vegetation, and jellyfish aggregations immediately prior to the initial start of detonations (e.g., during target deployment). ● Navy personnel must observe the mitigation zone for marine mammals and jellyfish aggregations during torpedo launches. ● If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. ● After the event, when practical, Navy personnel must observe the detonation vicinity for injured or dead marine mammals. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of explosive torpedoes of any NEW). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

Table 18. Mitigation for Ship Shock Trials.

Activity or Stressor	<ul style="list-style-type: none"> ● Explosives (any NEW)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Navy personnel must cease ship shock trials of any NEW if a marine mammal is sighted within 3.5 nmi (6.5 km) of the target ship hull (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> ● On the day of the event, 10 observers (Lookouts and third-party observers combined), spread between aircraft or multiple vessels as specified in the event-specific mitigation plan.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must develop a detailed, event-specific monitoring and mitigation plan in the year prior to the event and provide it to NMFS for review. ● Beginning at first light on days of detonation until the moment of detonation (as allowed by safety measures), Navy personnel must observe the mitigation zone for marine mammals, floating vegetation, jellyfish aggregations, large schools of fish, and flocks of seabirds. ● If any injured or dead marine mammals are observed after an individual detonation, Navy personnel must follow established

	<p>incident reporting procedures and halt any remaining detonations until Navy personnel consult with NMFS and review or adapt the event-specific mitigation plan, if necessary.</p> <ul style="list-style-type: none"> ● During the 2 days following the event (minimum) and up to 7 days following the event (maximum), and as specified in the event-specific mitigation plan, Navy personnel must observe the detonation vicinity for injured or dead marine mammals.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing ship shock trials). The wait period for this activity is 30 minutes.

Table 19. Mitigation for Sinking Exercises (SINKEX).

Activity or Stressor	<ul style="list-style-type: none"> ● Explosives (any NEW)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Navy personnel must cease SINKEX of any NEW if a marine mammal is sighted within 2.5 nmi (4.6 km) of the target ship hull (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> ● Two Lookouts, one on a vessel and one in an aircraft. ● Conduct passive acoustic monitoring for marine mammals; use information from detections to assist visual observations.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● During aerial observations for 90 minutes prior to the initial start of weapon firing, Navy personnel must observe the mitigation zone for marine mammals, floating vegetation, and jellyfish aggregations. ● From the vessel during weapon firing, and from the aircraft and vessel immediately after planned or unplanned breaks in weapon firing of more than 2 hours, Navy personnel must observe the mitigation zone for marine mammals. ● If a marine mammal is visibly injured or killed as a result of detonation, use of explosives in the event shall be suspended immediately and established incident reporting procedures shall be followed. ● Navy personnel must observe the detonation vicinity for injured or dead marine mammals for 2 hours after sinking the vessel or until sunset, whichever comes first. If any injured or dead marine mammals are observed, Navy personnel must follow established incident reporting procedures.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing SINKEX). The wait period for this activity is 30 minutes.

iii. Activity-Based Mitigation for Non-Explosive Ordnance

Table 20 through Table 22 describe required activity-based mitigation for non-explosive ordnance. This mitigation does not apply to non-explosive ordnance deployed:

- By aircraft operating at high altitudes (*i.e.*, altitudes at which marine mammals on the surface cannot be distinguished);
- Against aerial targets and land-based targets;
- During vessel- or shore-launched missile or rocket events; and
- By unmanned platforms except when escort vessels are already participating in the event and have positive control over ordnance deployment.

Table 20. Mitigation for Non-Explosive Aerial-Deployed Mines and Bombs.

Activity or Stressor	<ul style="list-style-type: none"> • Non-explosive aerial-deployed mines and non-explosive bombs
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease using non-explosive aerial-deployed mines and non-explosive bombs if a marine mammal is sighted within 1,000 yd (914.4 m) of the intended target (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout in an aircraft.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the mitigation zone for marine mammals and floating vegetation immediately prior to the initial start of mine or bomb delivery (e.g., when arriving on station). • Navy personnel must observe the mitigation zone for marine mammals during mine or bomb delivery.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> • Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of non-explosive aerial-deployed mines and non-explosive bombs). The wait period for this activity is 10 minutes.

Table 21. Mitigation for Non-Explosive Gunnery.

Activity or Stressor	<ul style="list-style-type: none"> • Non-explosive surface-to-surface large-caliber ordnance, non-explosive surface-to-surface and air-to-surface medium-caliber ordnance, non-explosive surface-to-surface and air-to-surface small-caliber ordnance
Mitigation Zones and Requirements	<ul style="list-style-type: none"> • Navy personnel must cease non-explosive surface-to-surface large-caliber ordnance, non-explosive surface-to-surface and air-to-surface medium-caliber ordnance, and non-explosive surface-to-surface and air-to-surface small-caliber ordnance use if a marine mammal is sighted within 200 yd (182.9 m) of the intended impact location (cease fire).
Lookout Requirements	<ul style="list-style-type: none"> • One Lookout on a vessel or in an aircraft.
Mitigation Zone Observation	<ul style="list-style-type: none"> • Navy personnel must observe the mitigation zone for marine mammals and floating vegetation immediately prior to the start of gun firing (e.g., while maneuvering on station).

	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals during gunnery firing.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of non-explosive surface-to-surface large-caliber ordnance, non-explosive surface-to-surface and air-to-surface medium-caliber ordnance, and non-explosive surface-to-surface and air-to-surface small-caliber ordnance). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

Table 22. Mitigation for Non-Explosive Missiles and Rockets.

Activity or Stressor	<ul style="list-style-type: none"> ● Non-explosives (air-to-surface)
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Navy personnel must cease non-explosive missile and rocket (air-to-surface) use if a marine mammal is sighted within 900 yd (823 m) of the intended impact location.
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout in an aircraft.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals and floating vegetation immediately prior to the start of missile or rocket delivery (e.g., during a fly-over of the mitigation zone). ● Navy personnel must observe the mitigation zone for marine mammals during missile or rocket delivery.
Commencement/Recommencement Conditions	<ul style="list-style-type: none"> ● Navy personnel must ensure one of the commencement or recommencement conditions in measure 6(b)(v) of this LOA is met prior to the initial start of the activity (by delaying the start) or during the activity (by not recommencing use of non-explosive missiles and rockets (air-to-surface)). The wait period for this activity is 30 minutes for activities conducted from vessels and for activities conducted by aircraft that are not fuel constrained and 10 minutes for activities involving aircraft that are fuel constrained (e.g., rotary-wing aircraft, fighter aircraft).

iv. Activity-Based Mitigation for Physical Disturbance and Strike Stressors

Table 23 through Table 25 describe required activity-based mitigation for physical disturbance and strike stressors. Activity-based mitigation for physical disturbance and strike stressors will not be implemented:

- By submerged submarines;

- By unmanned vehicles except when escort vessels are already participating in the event and have positive control over the unmanned vehicle movements;
- When marine mammals (e.g., dolphins) are determined to be intentionally swimming at the bow, alongside the vessel or vehicle, or directly behind the vessel or vehicle (e.g., to bow-ride or wake-ride);
- When pinnipeds are hauled out on man-made navigational structures, port structures, and vessels;
- By manned surface vessels and towed in-water devices actively participating in cable laying during Modernization & Sustainment of Ranges activities; and
- When impractical based on mission requirements (e.g., during certain aspects of amphibious exercises).

Table 23. Mitigation for Manned Surface Vessels.

Activity or Stressor	● Manned surface vessels, including surfaced submarines
Mitigation Zones and Requirements	● Underway manned surface vessels must maneuver themselves (which may include reducing speed) to maintain the following distances as mission and circumstances allow: <ul style="list-style-type: none"> ○ 500 yd (457.2 m) from whales. ○ 200 yd (182.9 m) from other marine mammals.
Lookout Requirements	● One or more Lookouts on manned underway surface vessels in accordance with the most recent navigation safety instruction.
Mitigation Zone Observation	● Navy personnel must observe the mitigation zone for marine mammals immediately prior to manned surface vessels getting underway and while underway.

Table 24. Mitigation for Unmanned Vehicles.

Activity or Stressor	● Unmanned Surface Vehicles and Unmanned Underwater Vehicles already being escorted (and operated under positive control) by a manned surface support vessel
Mitigation Zones and Requirements	● A surface support vessel that is already participating in the event, and has positive control over the unmanned vehicle, must maneuver the unmanned vehicle (which may include reducing its speed) to ensure it maintains the following distances as mission and circumstances allow: <ul style="list-style-type: none"> ○ 500 yd (457.2 m) from whales. ○ 200 yd (182.9 m) from other marine mammals.
Lookout Requirements	● One Lookout on a surface support vessel that is already participating in the event, and has positive control over the unmanned vehicle.
Mitigation Zone Observation	● Navy personnel must observe the mitigation zone for marine mammals immediately prior to unmanned vehicles getting underway and while underway.

Table 25. Mitigation for Towed In-water Devices.

Activity or Stressor	● In-water devices towed by an aircraft, a manned surface vessel, or an Unmanned Surface Vehicle or Unmanned Underwater Vehicle already being escorted (and operated under positive control) by a manned surface vessel
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Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● Manned towing platforms, or surface support vessels already participating in the event that have positive control over an unmanned vehicle that is towing an in-water device, must maneuver itself or the unmanned vehicle (which may include reducing speed) to ensure towed in-water devices maintain the following distances as mission and circumstances allow: <ul style="list-style-type: none"> ○ 250 yd (228.6 m) from marine mammals.
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout on the manned towing vessel or aircraft, or on a surface support vessel that is already participating in the event and has positive control over an unmanned vehicle that is towing an in-water device.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals immediately prior to and while in-water devices are being towed.

Table 26. Mitigation for Net Deployment.

Activity or Stressor	<ul style="list-style-type: none"> ● Net deployment for testing of an Unmanned Underwater Vehicle
Mitigation Zones and Requirements	<ul style="list-style-type: none"> ● If a marine mammal is sighted within 500 yd (457.2 m) of the deployment location, the support vessel will: <ul style="list-style-type: none"> ○ Delay deployment of nets until the mitigation zone has been clear for 15 minutes. ○ Recover nets if they are deployed.
Lookout Requirements	<ul style="list-style-type: none"> ● One Lookout on the support vessel.
Mitigation Zone Observation	<ul style="list-style-type: none"> ● Navy personnel must observe the mitigation zone for marine mammals for 15 minutes prior to the deployment of nets and while nets are deployed. ● Nets must be deployed during daylight hours only.

v. Commencement or Recommencement Conditions

Navy must not commence or recommence an activity after a marine mammal is observed within a relevant mitigation zone until one of the following conditions has been met:

- A Lookout observes the animal exiting the mitigation zone;
- A Lookout concludes that the animal has exited the mitigation zone based on its observed course, speed, and movement relative to the mitigation zone;
- A Lookout affirms the mitigation zone has been clear from additional sightings for the activity-specific wait period; or
- For mobile events, the stressor has transited a distance equal to double the mitigation zone size beyond the location of the last sighting.

(c) Geographic Mitigation Areas

Geographic mitigation is mitigation that the Navy must implement whenever an applicable military readiness activity takes place within the designated areas in Figure 2 or Figure 3.

Should national security require the Navy to exceed a requirement(s) in measure (6)(c)(i) through measure (6)(c)(x), Navy personnel must provide NMFS with advance notification and include the information (*e.g.*, sonar hours, explosives usage, or restricted area use) in its annual activity reports submitted to NMFS.

i. Hawaii Island Marine Mammal Mitigation Area

- A. The Navy must not use more than 300 combined hours of MF1 (regular duty cycle) and MF1C (continuous duty cycle) surface ship hull-mounted mid-frequency active sonar or 20 hours of helicopter dipping sonar (a mid-frequency active sonar source) annually within the mitigation area.
- B. The Navy must not detonate in-water explosives (including underwater explosives and explosives deployed against surface targets) within the mitigation area.

ii. Hawaii 4-Islands Marine Mammal Mitigation Area

- A. From November 15-April 15, the Navy must not use MF1 or MF1C surface ship hull-mounted mid-frequency active sonar within the mitigation area.
- B. The Navy must not detonate in-water explosives (including underwater explosives and explosives deployed against surface targets) within the mitigation area (year-round).

iii. Hawaii Humpback Whale Special Reporting Mitigation Area

- A. The Navy must report the total hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar used from November 1 through May 31 in the mitigation area in their training and testing activity reports submitted to NMFS.

iv. Hawaii Humpback Whale Awareness Notification Mitigation Area

- A. The Navy must broadcast awareness messages to alert applicable assets (and their Lookouts) transiting and training or testing in the Hawaii Range Complex to the possible presence of concentrations of humpback whales from November 1 through May 31.
- B. Lookouts must use that knowledge to help inform their visual observations during military readiness activities that involve vessel movements, active sonar, in-water explosives (including underwater explosives and explosives deployed against surface targets), or the deployment of non-explosive ordnance against surface targets in the mitigation area.

v. Northern California Large Whale Mitigation Area

From June 1-October 31, the Navy must not use more than 300 combined hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar (excluding normal maintenance and systems checks) total during training and testing within the combination of this mitigation area, the Central California Large Whale Mitigation Area, and the Southern California Blue Whale Mitigation Area.

- vi. Central California Large Whale Mitigation Area
 - A. From June 1-October 31, the Navy must not use more than 300 combined hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar (excluding normal maintenance and systems checks) total during training and testing within the combination of this mitigation area, the Northern California Large Whale Mitigation Area, and the Southern California Blue Whale Mitigation Area.
- vii. Southern California Blue Whale Mitigation Area
 - A. From June 1-October 31, the Navy must not use more than 300 combined hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar (excluding normal maintenance and systems checks) total during training and testing within the combination of this mitigation area, the Northern California Large Whale Mitigation Area, and the Central California Large Whale Mitigation Area.
 - B. From June 1-October 31, the Navy must not detonate in-water explosives (including underwater explosives and explosives deployed against surface targets) during large-caliber gunnery, torpedo, bombing, and missile (including 2.75-inch rockets) training and testing.
- viii. California large Whale Awareness Messages
 - A. The Navy must broadcast awareness messages to alert applicable assets (and their Lookouts) transiting and training or testing off the U.S. West Coast to the possible presence of concentrations of large whales, including gray whales (November-June), fin whales (November-May), and mixed concentrations of blue, humpback, and fin whales that may occur based on predicted oceanographic conditions for a given year (*e.g.*, May-November, April-November).
- ix. California Large Whale Real-Time Notification Mitigation Area
 - A. For each instance an aggregation of large whales (three or more whales within 1 nmi (1.9 km)) is sighted in the area between 32-33 degrees North and 117.2-119.5 degrees West, Navy surface vessels must report the sightings to other Navy and U.S. Coast Guard vessels in the vicinity. Reported sightings will be made as soon as operationally and safely feasible.
- x. San Nicolas Island Pinniped Haulout Mitigation Area
 - A. Navy personnel must not enter pinniped haulout or rookery areas. Personnel may be adjacent to pinniped haulouts and rookery prior to and following a launch for monitoring purposes.
 - B. Missiles and targets must not cross over pinniped haulout areas at altitudes less than 305 m (1,000 ft), except in emergencies or for real-time security incidents. For unmanned aircraft systems (UAS), the following minimum altitudes will be maintained over pinniped haulout areas and rookeries: Class 0-2 UAS will maintain a minimum altitude of 300 ft (92 m); Class 3 UAS will maintain a

minimum altitude of 500 ft (153 m); Class 4 or 5 UAS will not be flown below 1,000 ft (305 m).

- C. The Navy may not conduct more than 40 launch events annually and 10 launch events at night annually.
- D. Launch events must be scheduled to avoid the peak pinniped pupping seasons (from January through July) to the maximum extent practicable.
- E. The Navy must implement a monitoring plan using video and acoustic monitoring of up to three pinniped haulout areas and rookeries during launch events that include missiles or targets that have not been previously monitored for at least three launch events.
- F. The Navy must review the launch procedure and monitoring methods, in cooperation with NMFS, if any incidents of injury or mortality of a pinniped are discovered during post-launch surveys, or if surveys indicate possible effects to the distribution, size, or productivity of the affected pinniped populations as a result of the specified activities. If necessary, appropriate changes will be made through modification to the LOA prior to conducting the next launch of the same vehicle.

(d) Cetacean live stranding

In the event of a cetacean live stranding (or near-shore atypical milling) event within the HCTT Study Area or within 50 km (27 nmi) of the boundary of the HCTT Study Area, where the NMFS Stranding Network is engaged in herding or other interventions to return animals to the water, NMFS Office of Protected Resources will advise the Navy of the need to implement shutdown procedures for all active acoustic sources or explosive devices within 50 km of the stranding. Following this initial shutdown, NMFS will communicate with the Navy to determine whether circumstances support modification of the shutdown zone. The Navy may decline to implement all or part of the shutdown if the holder of the LOA, or his/her designee, determines that it is necessary for national security.

Shutdown procedures for live stranding or milling cetaceans include the following:

- i. If at any time, the marine mammal(s) die or are euthanized, or if herding/intervention efforts are stopped, NMFS will immediately advise that the shutdown around the animals' location is no longer needed;
- ii. Otherwise, shutdown procedures will remain in effect until NMFS determines and advises that all live animals involved have left the area (either of their own volition or following an intervention); and
- iii. If further observations of the marine mammals indicate the potential for re-stranding, additional coordination will be required to determine what measures are necessary to minimize that likelihood (*e.g.*, extending the shutdown or moving operations farther away) and to implement those measures as appropriate.

7. Monitoring and Reporting

When conducting the specified activities, Navy must implement the following monitoring and reporting requirements.

All reports must be submitted to the Director, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring MD 20910 via email to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.davis@noaa.gov*.

(a) Notification of Take

If the Navy reasonably believes that the specified activities resulted in the mortality or serious injury of any marine mammals, or in any Level A harassment or Level B harassment of marine mammals not identified Table 1 through Table 5, then Navy shall notify NMFS immediately or as soon as operational security considerations allow.

(b) Monitoring and reporting under the LOAs

The Navy must conduct all monitoring and reporting required under the LOAs, including abiding by the HCTT Study Area monitoring program. Details on program goals, objectives, project selection process, and current projects are available at www.navy.marin-species-monitoring.us.

(c) Notification of injured, live stranded, or dead marine mammals

The Navy must abide by the Notification and Reporting Plan, attached, which sets out notification, reporting, and other requirements when dead, injured, or live stranded marine mammals are detected.

(d) Changes in Lookout Policies

The Navy must report changes in its policies regarding the number of required Lookouts to NMFS as soon as practicable after a change is made.

(e) Annual HCTT Study Area marine species monitoring report

The Navy, on behalf of all the HCTT Action Proponents (Navy, U.S. Coast Guard, and U.S. Army, as defined in 50 CFR §§ 218.70) must submit an annual HCTT Study Area marine species monitoring report describing the implementation and results from the previous calendar year. Data collection methods will be standardized across range complexes and the HCTT Study Area to allow for comparison in different geographic locations. The draft report must be submitted to the Director, Office of Protected Resources, NMFS, annually. NMFS will submit comments or questions on the report, if any, within 3 months of receipt. The report will be considered final after the Action Proponents have addressed NMFS' comments, or 3 months after submittal of the draft if NMFS does not provide comments on the draft report. The report must describe progress of knowledge made with respect to intermediate scientific objectives within the HCTT Study Area associated with the Integrated Comprehensive Monitoring Program (ICMP). Similar study questions must be treated together so that progress on each topic can be summarized across all Navy ranges. The report need not include analyses and content that do not provide direct assessment of cumulative progress on the monitoring plan study questions.

(f) Quick look reports

In the event that the sound levels analyzed in promulgation of the regulations were exceeded within a given reporting year, the Navy must submit a preliminary report detailing the exceedance within 21 days after the anniversary date of issuance of this LOA.

(g) Annual HCTT Training and Testing Report

Regardless of whether analyzed sound levels were exceeded, the Navy must submit a detailed report (HCTT Annual Training Exercise Report and Testing Activity Report) to the Director, Office of Protected Resources, NMFS annually within 3 months of the one-year anniversary of the date of the issuance of the LOA. NMFS will submit comments or questions on the report, if any, within 1 month of receipt. The report will be considered final after the Navy has addressed NMFS' comments, or 1 month after submittal of the drafts if NMFS does not provide comments on the draft report. The annual report must contain a summary of all sound sources used (total hours or quantity (per the LOAs) of each bin of sonar or other non-impulsive source; total annual number of each type of explosive exercises; and total annual expended/detonated rounds (missiles, bombs, sonobuoys, *etc.*) for each explosive bin). The annual report must also contain cumulative sonar and explosive use quantity from previous years' reports through the current year. Additionally, if there were any changes to the sound source amount analyzed in the reporting year, or cumulatively, the report would include a discussion of why the change was made and include analysis to support how the change did or did not affect the analysis in the 2025 HCTT EIS/OEIS and MMPA final rule. The annual report must also include the details regarding specific requirements associated with the mitigation areas listed in measure (7)(g)(iv) of this LOA. The analysis in the detailed report must be based on the accumulation of data from the current year's report and data collected from previous annual reports. The final annual/close-out report at the conclusion of the authorization period (year 7) will also serve as the comprehensive close-out report and provide the annual totals for each sound source bin with a comparison to the annual amount analyzed and the 7-year total for each sound source bin with a comparison to the 7-year amount analyzed. The HCTT Annual Training and Testing Report must include the specific information described herein.

i. Major Training Exercises (MTEs)

This section of the Annual HCTT Training and Testing Reports must contain the following information for MTEs completed that year in the HCTT Study Area.

A. Exercise Information (for each MTE).

1. Exercise designator.
2. Date that exercise began and ended.
3. Location.
4. Number and types of active sonar sources used in the exercise.
5. Number and types of passive acoustic sources used in exercise.
6. Number and types of vessels, aircraft, and other platforms participating in each exercise.
7. Total hours of all active sonar source operation.
8. Total hours of each active sonar source bin.

9. Wave height (high, low, and average) during exercise.

B. Individual marine mammal sighting information for each sighting in each exercise where mitigation was implemented.

1. Date, time, location of sighting.
2. Species (if not possible, indication of whale/dolphin/pinniped).
3. Number of individuals.
4. Initial Detection Sensor (*e.g.*, sonar, Lookout).
5. Indication of specific type of platform observation was made from (including, for example, what type of surface vessel or testing platform).
6. Length of time observers maintained visual contact with marine mammal.
7. Sea state.
8. Visibility.
9. Sound source in use at the time of sighting.
10. Indication of whether animal was less than 200 yd, 200 to 500 yd, 500 to 1,000 yd, 1,000 to 2,000 yd, or greater than 2,000 yd from sonar source.
11. Whether operation of sonar sensor was delayed, or sonar was powered or shut down, and the length of delay.
12. If source in use was hull-mounted, true bearing of animal from the vessel, true direction of vessel's travel, and estimation of animal's motion relative to vessel (opening, closing, parallel).
13. Lookouts must report the observed behavior of the animal(s) in plain language and without trying to categorize in any way (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming, *etc.*) and if any calves were present.

C. An evaluation (based on data gathered during all of the MTEs) of the effectiveness of mitigation measures designed to minimize the received level to which marine mammals may be exposed. This evaluation must identify the specific observations that support any conclusions the Navy reaches about the effectiveness of the mitigation.

ii. Sinking Exercises (SINKEX)

This section of the report must include the following information for each SINKEX completed that year.

A. Exercise information (gathered for each SINKEX).

1. Location.
2. Date and time exercise began and ended.
3. Total hours of observation by Lookouts before, during, and after exercise.
4. Total number and types of explosive source bins detonated.
5. Number and types of passive acoustic sources used in exercise.
6. Total hours of passive acoustic search time.
7. Number and types of vessels, aircraft, and other platforms participating in exercise.

8. Wave height in feet (high, low, and average) during exercise.
9. Narrative description of sensors and platforms utilized for marine mammal detection and timeline illustrating how marine mammal detection was conducted.

B. Individual marine mammal observation (by Navy Lookouts) information for each sighting where mitigation was implemented.

1. Date/Time/Location of sighting.
2. Species (if not possible, indicate whale, dolphin, or pinniped).
3. Number of individuals.
4. Initial detection sensor (*e.g.*, sonar or Lookout).
5. Length of time observers maintained visual contact with marine mammal.
6. Sea state.
7. Visibility.
8. Whether sighting was before, during, or after detonations/exercise, and how many minutes before or after.
9. Distance of marine mammal from actual detonations (or target spot if not yet detonated): Less than 200 yd, 200 to 500 yd, 500 to 1,000 yd, 1,000 to 2,000 yd, or greater than 2,000 yd.
10. Lookouts must report the observed behavior of the animal(s), in plain language and without trying to categorize in any way (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming *etc.*), including speed and direction and if any calves were present.
11. The report must indicate whether explosive detonations were delayed, ceased, modified, or not modified due to marine mammal presence and for how long. If observation occurred while explosives were detonating in the water, indicate munition type in use at time of marine mammal detection.

iii. Summary of sources used

This section of the report must include the following information summarized from the analyzed sound sources used in all training and testing events:

- A. Total annual hours or quantity of each bin of sonar or other acoustic sources (*e.g.*, pile driving and air gun activities); and
- B. Total annual expended/detonated ordnance (missiles, bombs, sonobuoys, *etc.*) for each explosive bin.

iv. San Nicolas Island

- A. The report must summarize activities and observations of the San Nicolas Island target and missile launch activities for the monitoring period.

v. Special reporting for geographic mitigation areas

This section of the report must contain the following information for activities conducted in geographic mitigation areas in the HCTT Study Area:

A. Hawaii Humpback Whale Special Reporting Mitigation Area.

The Navy must report the total hours of MF1 and MF1C surface ship hull-mounted mid-frequency active sonar used from November 1 through May 31 in the mitigation area.

B. California Large Whale Real-Time Notification Mitigation Area

The Navy must report the date, time and general location of the whales when an aggregation is first sighted and the total number of whales in the aggregation. If the whales are identified by species, the Navy must report that information as well.

C. National security requirement

If Navy evokes the national security requirement described in measure (6)(c) of this LOA, the Navy personnel must include information about the event in its Annual HCTT Training and Testing Report.

vi. Foreign military sonar and explosives

Navy personnel must confirm that foreign military use of sonar and explosives, when such militaries are participating in a U.S. Navy-led exercise or event, combined with the U.S. Navy's use of sonar and explosives, would not cause exceedance of the analyzed levels within each Navy Acoustic Effects Model modeled sonar and explosive bin used for estimating predicted impacts.

vii. MTE sonar exercise notification

The Navy must submit to NMFS (Director, Office of Protected Resources) an electronic report within 15 calendar days after the completion of any MTE indicating:

- A. Location of the exercise;
- B. Beginning and end dates of the exercise; and
- C. Type of exercise.

(h) Communication plan

The Navy and NMFS shall develop a communication plan that will include all of the communication protocols (phone trees, etc.) and associated contact information required for NMFS and the Navy to carry out the necessary expeditious communication required in the event of a stranding or vessel strike.

8. Modifications to Letter of Authorization

(a) This LOA shall be modified, upon request by Navy, provided that:

- i. The specified activities and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for the regulations (excluding changes made pursuant to the adaptive management provision in measure (8)(c)), and
- ii. NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA were implemented.

(b) For LOA modification requests by Navy that include changes to the activity or the mitigation, monitoring, or reporting measures (excluding changes made pursuant to the adaptive management provision in measure (8)(c)) that do not change the findings made for the regulations or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed modified LOA in the *Federal Register*, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) Adaptive management

After consulting with the Navy regarding the practicability of the modifications, NMFS may modify (including adding or removing measures) the existing mitigation, monitoring, or reporting measures if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring.

- i. Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA include:
 - A. Results from the Navy's monitoring from the previous year(s);
 - B. Results from other marine mammal and/or sound research or studies; or
 - C. Any information that reveals marine mammals may have been taken in a manner, extent, or number not authorized by the regulations and this LOA.
- ii. If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS will publish a notice of planned LOA in the *Federal Register* and solicit public comment.

(d) Emergencies

If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in section 4 (Permissible Methods of Taking), an LOA may be modified without prior notification or opportunity for public comment. Notification would be published in the *Federal Register* within 30 days of the action.

Kimberly Damon-Randall,
Director, Office of Protected Resources,
National Marine Fisheries Service

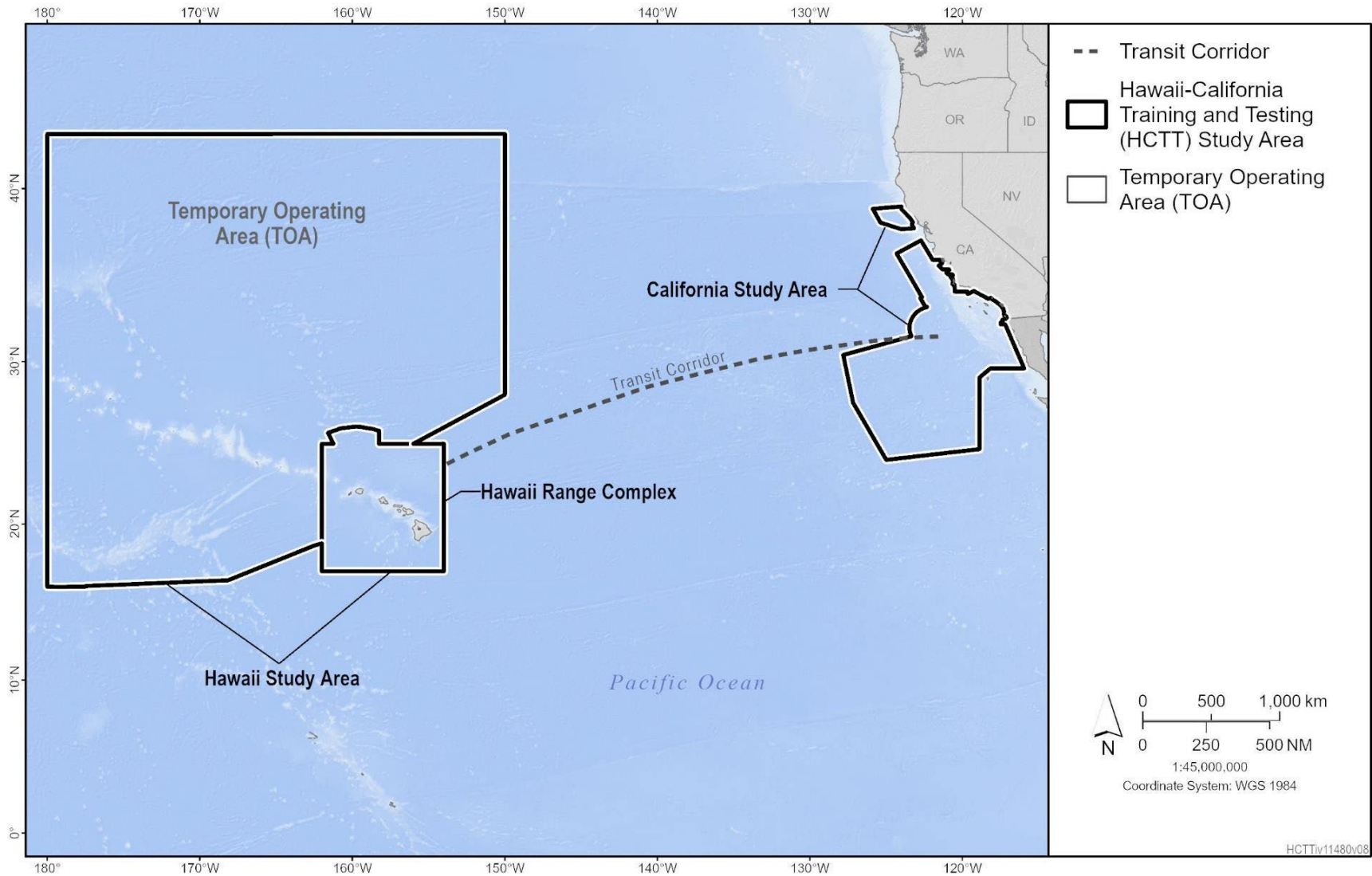


Figure 1. HCTT Study Area.

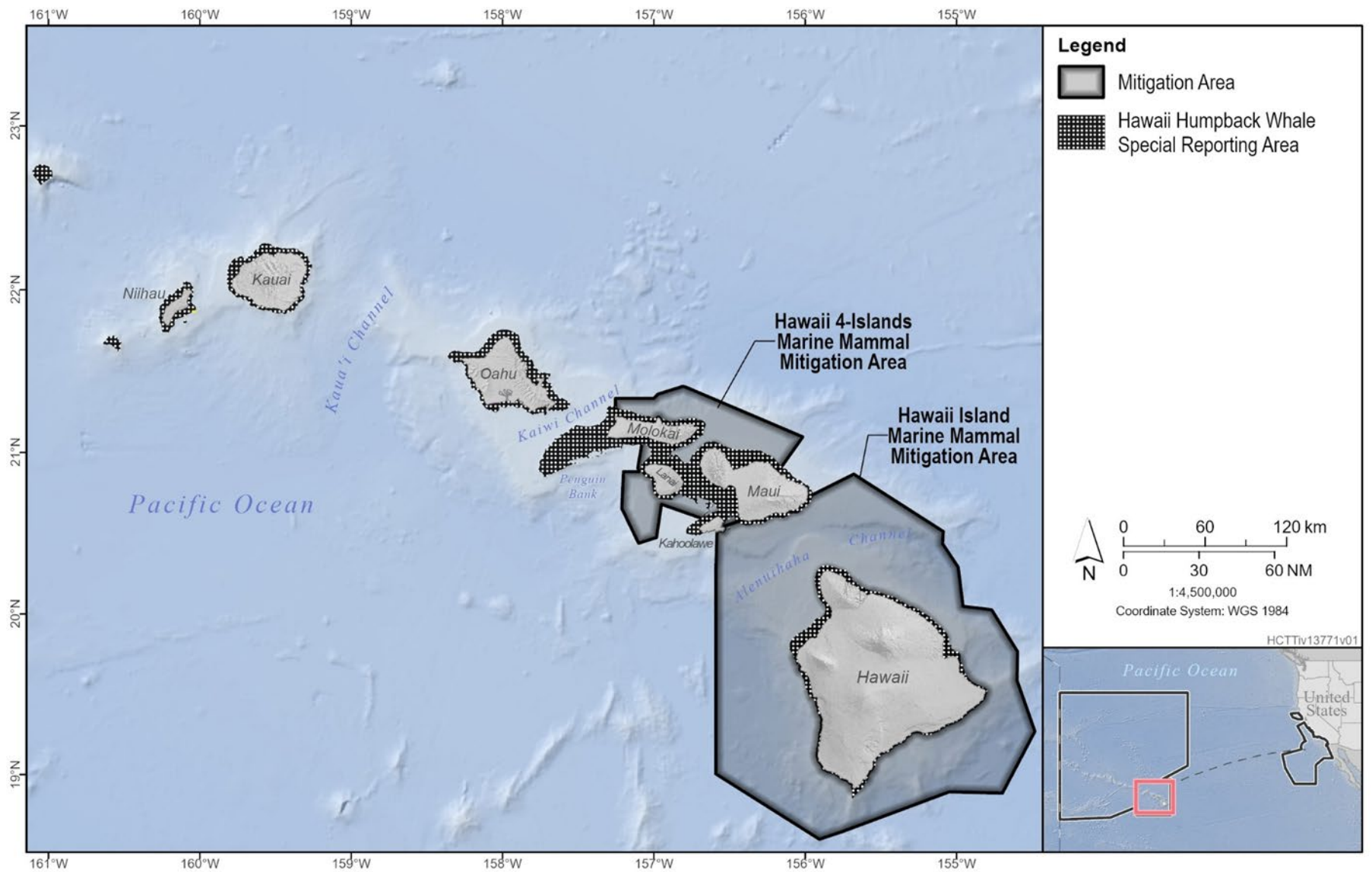


Figure 2. Geographic Mitigation Areas for Marine Mammals in the Hawaii Study Area.

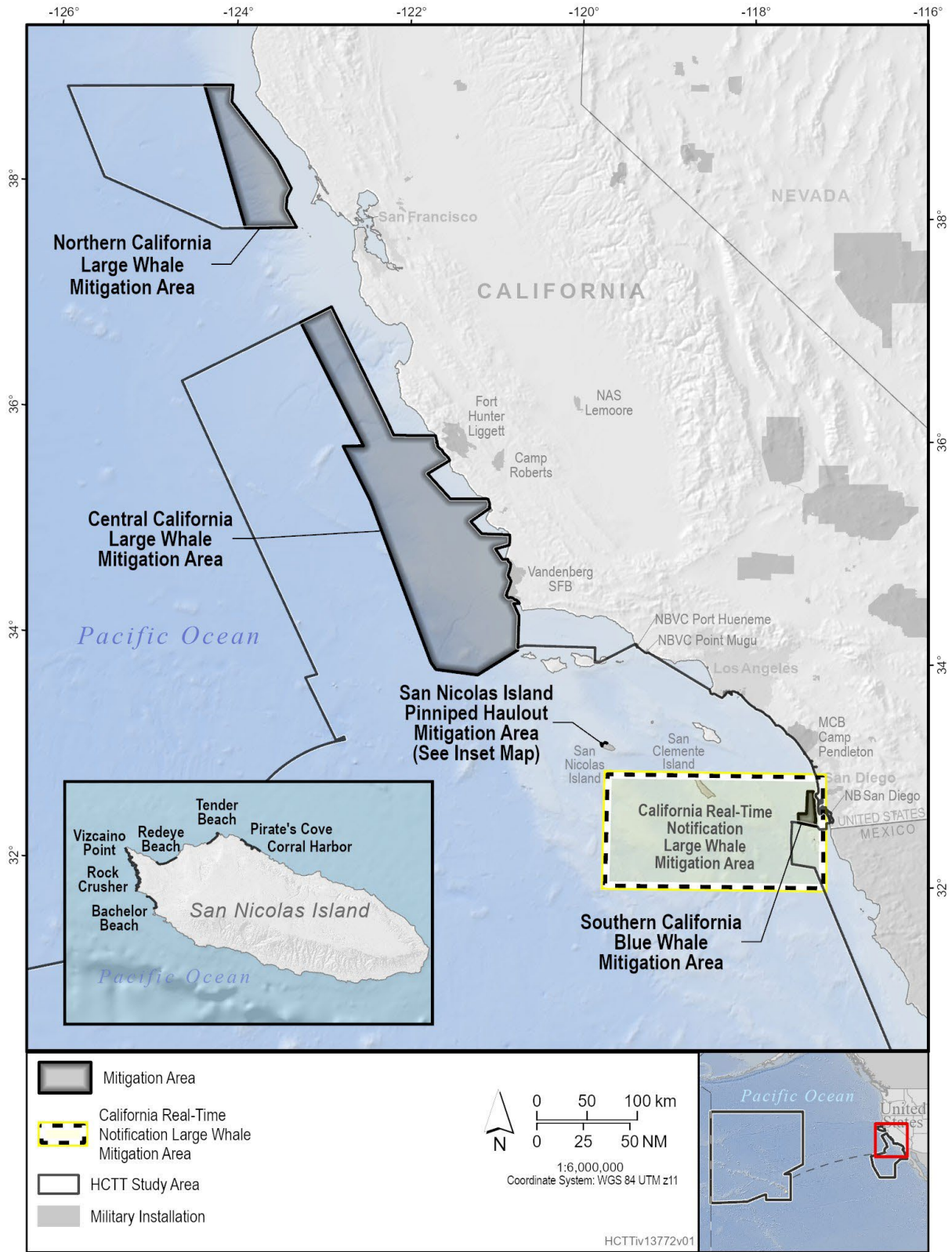


Figure 3. Geographic Mitigation Areas for Marine Mammals in the California Study Area.

NOTIFICATION AND REPORTING PLAN

PHASE IV MILITARY READINESS ACTIVITIES

BACKGROUND

Marine Mammal Protection Act (MMPA) Letters of Authorization (LOAs) indicate the conditions under which the holder (referred to herein as the Action Proponent) is authorized to take marine mammals pursuant to military readiness activities involving sonar, explosive detonations, or vessel movements, conducted in the waters of the Study Area.

This Notification and Reporting Plan is specifically intended to outline the applicable requirements the authorization is conditioned upon in the event that a marine mammal stranding (or near-shore atypical milling) event is reported in or immediately adjacent to (within 50 kilometer (km) (27 nautical miles (nmi) of)) the Study Area (or as specified in the specific regional Communication Plan). Since the National Marine Fisheries Service (NMFS) considers all plausible causes when investigating any injury, death, or stranding, any reporting provided pursuant to this plan does not, in any way, imply that any injuries, deaths, strandings, or milling events are related to, or caused by, Action Proponent training or testing activities. All data provided will undergo appropriate security clearance procedures by the Action Proponent prior to release to NMFS.

COMMUNICATION PLAN

Effective communication is critical to the successful implementation of this Notification and Reporting Plan in the Study Area. The Communication Plan is a study-area specific plan that contains very specific communication protocols. These protocols include identification of the Action Proponent personnel authorized to implement a shutdown and the NMFS personnel authorized to advise the Action Proponent of the need to implement shutdown procedures within each NMFS region. The communication protocols in the Communication Plan are organized as a flow chart and have been finalized for the Study Area prior to issuance of the LOA(s). The communication protocols for each Study Area will be updated annually (or more frequently, as appropriate, given changes in personnel).

REQUIREMENTS

1. Notification of the Discovery of a Stranded Marine Mammal¹

a. Floating at Sea

In the event that Action Proponent personnel (uniformed military, civilian, or contractors while conducting Action Proponent work) discover a dead floating marine mammal within the Study Area

¹ As defined in Title IV of the MMPA, a "stranding" is defined as "an event in the wild in which (A) a marine mammal is dead and is (i) on a 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 need of apparent medical attention; or (iii) in the waters under the jurisdiction of the United States (including any navigable waters), but is unable to return to its natural habitat under its own power or without assistance."

the Action Proponent shall report the incident to the NMFS Regional Stranding Coordinator as soon as feasible.

b. On Land

In the event that Action Proponent personnel (uniformed military, civilian, or contractors while conducting Action Proponent work) discover a live or dead stranded marine mammal within the Study Area or on Action Proponent property overlapping or adjacent to the Study Area the Action Proponent shall report the incident to the local stranding network as soon as feasible. Reports of stranded pinnipeds on rookeries are exempt from this provision.

In the event that the stranding is a cetacean or ESA-listed pinniped, the Action Proponent shall also report the incident to NMFS Regional Stranding Coordinator and Office of Protected Resources Marine Mammal Health and Stranding Response Program staff (see Communication Protocols section of this Notification and Reporting Plan) as well as the local stranding network response organization. For non ESA-listed pinnipeds, the Action Proponent shall report to the local stranding network response organization only.

c. Reporting Elements (Floating at Sea and On Land)

For all reports of discovery of a stranded marine mammal, the Action Proponent will provide NMFS/local stranding network organization with the information needed to evaluate a response and/or capture basic data on a Level A data sheet. This information is:

- Date, time, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- Photographs or video footage of the animal(s), if available; and
- General circumstances under which the animal was discovered (*e.g.*, during an explosive event, found on Action Proponent property, or found by transiting vessel).

2. Vessel Strike

If a marine mammal is struck by an Action Proponent vessel within the Study Area, whether such vessel strike was authorized by the LOA(s) or not, the incident must be reported to NMFS immediately or as soon as security clearance procedures and safety conditions allow. The report should include the information outlined above in Section 1.

As soon as feasible, but no later than seven (7) business days, the Action Proponent shall additionally report to NMFS, the:

- Vessel's speed during and leading up to the incident;

- Vessel's course/heading and what training or testing activity was being conducted (if applicable);
- Status of all sound sources in use (*e.g.*, active sonar, explosives);
- Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike;
- Environmental conditions immediately preceding the strike (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, visibility);
- Estimated size and length of animal that was struck;
- Description of the behavior of the marine mammal immediately preceding and following the strike;
- Description of the presence and behavior of any other marine mammals immediately preceding the strike, if available;
- Estimated fate of the animal (*e.g.*, dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared, etc.);
- Photographs or video footage of the animal(s) to the extent practicable; and
- Relevant information discovered during Action Proponent's investigation of a vessel strike, including but not limited to other Action Proponent in-water platforms in use within a mile immediately preceding the strike, as available.

3. Additional Information Requests

If NMFS personnel determine that the circumstances of any marine mammal stranding found within the Study Area or within 50 km (27 nmi) of the Study Area's boundary warrant investigating a potential association with the Action Proponent's activities (examples noted below), and an investigation into the stranding is underway, NMFS personnel will submit a written request to the Action Proponent. This request will ask the Action Proponent to provide the initial available information specified below as soon as possible, but no later than seven (7) business days after the request.

- Status of all permitted sound source and/or explosive use in the 48 hours (hrs) preceding and within 50 km (27 nmi) of the discovery/notification of the stranding by NMFS, or estimated time of stranding; and
- Description of the behavior of any marine mammal(s) sightings preceding (48 hrs and 50 km (27 nmi)) and immediately after the discovery of the stranding (if available).

Examples of circumstances that could trigger the additional information request include, but are not limited to, the following:

- Atypical nearshore milling events of live cetaceans;
- Mass strandings of cetaceans (two or more individuals, not including cow/calf pairs);
- Beaked whale strandings;

- Necropsied animals with findings from gross or histopathology that are unusual for the species or area; and
- Stranded animals with findings consistent with blast trauma.

In the event that the investigation is still inconclusive, the investigation of the association of Action Proponent activities is still warranted, and the investigation is still being pursued, NMFS may have additional information requests.

If the previously mentioned factors are present (*i.e.*, investigation is still inconclusive, *etc.*), the Action Proponent would be required to answer additional questions regarding their activities within 148 km (80 nmi) and 72 hr prior, provided appropriate security clearance procedures are followed.

4. Actions to Minimize Additional Harm to Live-Stranded (or Near-shore Atypical Milling) Marine Mammals

In the event of a live stranding or near-shore atypical milling event within the Study Area or within 50 km (27 nmi) of the boundary of the Study Area, where the stranding network is engaged in herding or other interventions to return animals to the water, NMFS (individuals specifically identified in the study area-specific Communication Plan, NMFS Office of Protected Resources (OPR) – HQ senior administrators) will advise the Action Proponent of the need to implement shutdown procedures for all permitted active acoustic sources or explosive devices within 50 km (27 nmi) of the stranding or near-shore atypical milling event. Following this initial shutdown, NMFS will communicate with the Action Proponent to determine if circumstances support any modification of the shutdown zone. The Action Proponent may decline to implement all or part of the shutdown if the holder of the LOA, or his/her designee, determines that continuation of the military readiness activities are necessary for national security. Shutdown procedures for live stranding or milling marine mammals include the following:

- If at any time, the marine mammal(s) die or are euthanized, or if herding/intervention efforts are stopped, NMFS (individuals specifically identified in the relevant Stranding Communication Protocol) will immediately advise the Action Proponent that the shutdown around the location of the animal(s) is no longer needed.
- Otherwise, shutdown procedures will remain in effect until NMFS (individuals specifically identified in the relevant Stranding Communication Protocol) determines and advises the Action Proponent that all live animals involved have left the area (either of their own volition or following an intervention).
- If further observations of the marine mammals indicate the potential for restranding or milling, additional coordination with the Action Proponent will be required to determine what measures are necessary to minimize that likelihood (*e.g.*, extending the shutdown or moving operations farther away) and to implement those measures as appropriate.

Shutdown procedures are not related to the investigation of the cause of the stranding or milling event, and their implementation is not intended to imply that Action Proponent activity is the cause of the stranding. Rather, shutdown procedures are intended to protect marine mammals exhibiting indicators of distress by minimizing their exposure to possible additional stressors, regardless of the factors that contributed to the stranding or milling event.