REQUEST FOR LETTER OF AUTHORIZATION RENEWAL UNDER SECTION 101(A) (5) (A) OF THE MARINE MAMMAL PROTECTION ACT INCIDENTAL TO ATLANTIC FLEET ACTIVE SONAR TRAINING ACTIVITIES

Submitted To
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Springs, Maryland 20910-3226

Submitted By
Commander, U.S. Fleet Forces Command
1562 Mitscher Avenue, Suite 250
Norfolk, Virginia 23551-2487

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(U) 1. DESCRIPTION OF ACTIVITES

(U) Under the provisions of the Marine Mammal Protection Act of 1972 (MMPA), this document is the annual renewal Application to the National Marine Fisheries Service (NMFS) for a Letter of Authorization (LOA) [1] for incidental harassment of marine mammals from U.S. Navy (Navy) Atlantic Fleet Active Sonar (AFAST) training and research [2] activities.

(U) This LOA renewal is being sought to cover the annual period from January 2010 to January 2011 to cover the taking of marine mammals, as described by the MMPA, incidental to training and research[2] within AFAST study area. The LOA will not address activities designated for armed conflict or direct combat support operations, nor during periods of heightened national threat conditions, as determined by the President and Secretary of Defense or their duly designated alternatives or successors, as assisted by the Chairman of the Joint Chiefs of Staff.

(U) The table below shows the MMPA permit documentation applicable to AFAST and NMFS's authorization (**Table 1**). Information contained in these references provide a complete description of the background for the Navy's request, overview of AFAST, and description of the specified activities, description of marine mammals in the area, discussion of potential effects or lack of effects of specified activities on marine mammal, mitigation, marine mammal monitoring, and associated reporting. The descriptions contained in these references have not changed, except as where noted in this application renewal.

(U) Table 1. Timeline of key AFAST MMPA documents

Timeline Date	From	Event	Reference
1 February 08	Navy	Letter Of Authorization Application (request for Incidental Harassment For AFAST activities) submitted to NMFS Office of Protected Resources	DoN 2008
14 Oct 08	NMFS	Taking and Importing Marine Mammals U.S Navy's Atlantic Fleet Active Sonar Training (AFAST); Proposed Rule published in Federal Register (73 FR 60754)	NMFS 2008
12 Dec 08	Navy	Atlantic Fleet Active Sonar Training Environmental Impact Statement\Overseas Environmental Impact Statement- Final December 2008	DoN 2008a
22 Jan 09	NMFS	Letter of Authorization take marine mammals incidental to U.S Navy's Atlantic Fleet Active Sonar Training (AFAST) issued.	NMFS 2009a
27 Jan 09	NMFS	Taking and Importing Marine Mammals; U.S Navy's Atlantic Fleet Active Sonar Training (AFAST); Final Rule published in Federal Register (74 FR 4843)	NMFS 2009

(U) A. Change from Previous: EER\IEER Sonobuoys (Impulsive)

(U) Within AFAST, the Navy estimates an increase in the use of Extended Echo Ranging (EER)\Improved Extended Echo Ranging (IEER) SSQ-110A sonobuoys. The EER and IEER each use a paired active and passive sonobuoy arrangement. The only difference between the EER and IEER is the type of passive buoy used. Both the EER and IEER systems use the same active source described below.

[1] under Section 101 (a)(5)(A) of the MMPA

(U) EER\IEERs are sonobuoys typically deployed from fixed-wing maritime patrol aircraft (turboprop P-3 Orion and future 737-airframe P-8 Poseidon) to conduct large area searches for submarines as part of anti-submarine warfare training. There are two sonobuoys deployed in pairs as part of an overall larger pattern of active and passive sonobuoys. Of the pair comprising the EER\IEER system, one sonobuoy (AN/SSQ-110A) uses a small (<5-lb) explosive source to generate a sound equivalent to a "ping". The other sonobuoy in the IEER pair is passive only, and receives any return echoes from a potential underwater target. Both sonobuoys are expendable and sink when done. The AN/SSQ-110A is command activated, meaning the aircraft issues a radio-frequency command for the explosive payload to deploy from the bottom of the surface floating sonobuoy to a designated operating depth that must be greater than 75 feet. A second manual command is necessary in order to detonate the deployed charges.

(U) IEER AN/SSQ-110A Authorization Change Request

(U) In January 2009, NMFS authorized AN/SSQ-110A IEER sonobuoys for AFAST based on the Navy's preliminary estimate of 872 IEERs (in combination with AEER) at the time of original Request for Letter of Authorizations submission (NMFS 2009, 2009a). To accommodate an increased need for EER\IEER training based on changes to anti-submarine warfare training requirements, the Navy requests a revised authorization of 1,725 EER\IEER AN/SSQ-110A sonobuoys as listed in **Table 2**. The amount of additional potential exposures from an increase in EER\IEER use is discussed in Chapter 6.

(U) B. Change from Previous: AEER Sonobuoys (tonal)

(U) The Navy has updated its planned future deployment of the successor to the EER\IEER for AFAST. This information was not available at the time of the Navy's original February 2008 Request for Letter of Authorization (DoN 2008) since the final decision on purchase and distribution to the Fleet had not been determined. The new system, designated the Advance Extended Echo Ranging (AEER) system, uses the same passive sonobuoy in the active-passive arrangement, but replaces the impulsive source AN/SSQ-110A with a new tonal source sonobuoy, designated the AN/SSQ-125 sonobuoy. The AN/SSQ-125 has an internal battery to power generation of a tonal signal with similar waveforms as the previous AN/SSQ-110A. The exact specification of the signal waveforms and parameters is classified.

(U) In addition to planned use in 2013 for training, from 2010 through 2013 lot acceptance quality assurance testing for the AEER will also need to be conducted based on RDT&E testing requirements (the same reasons as stated previously for the EER\IEER).

(U) AEER AN/SSQ-125 Authorization Change Request

(U) In January 2009, NMFS granted final authorization for 872 AN/SSQ-125 per year (in combination with IEER) for AFAST based on the preliminary estimate available at the time of original Navy submission (NMFS 2009, 2009a). Given new information on the planned Fleet introduction of the AN/SSQ-125 sonobuoy that was not previously available, the Navy requests a revised authorization of 1,550 AEER AN/SSQ-125 sonobuoys as listed in **Table 2**. The amount of additional potential marine mammal exposures from an increase in AEER use is discussed in Chapter 6.

(U) C. Change from Previous: NIXIE Countermeasures

Within AFAST, the Navy estimates an increase in the use of AN/SLQ-25 NIXIE towed countermeasure. Recently, there has been an increased emphasis on enhancing NIXIE training resulting in a need to employ NIXIE more often during anti-submarine training events. This information was not available at the time of the Navy's original February 2008 Request for Letter of Authorization (DoN 2008). NIXIE countermeasures are devices which are towed and act as decoys to avert torpedo attacks.

(U) NIXIE AN/SLQ-25 Authorization Change Request

(U) In January 2009, NMFS authorized 332 hours for AN/SLQ-25 per year for AFAST based on the preliminary estimate available at the time of original Navy submission (NMFS 2009, 2009a). As of 1 August 2009, Fleet discovered that Navy exceeded the number of hours authorized by a **CLASSFIED amount and took immediate action to limit NIXIE use for the remainder of this year until an updated renewal request is authorized. This action negatively impacts anti-submarine training. Given new information on the planned Fleet utilization of NIXIE that was not previously available, the Navy requests a revised authorization of 2,500 hours for AN/SLQ-25 as listed in **Table 2**. The amount of additional potential marine mammal exposures from an increase in NIXIE use is discussed in Chapter 6.

(U) D. Change from Previous: SQQ-32 Mine Hunting Sonar

(U) Within AFAST, the Navy estimates a reduction in use of the SQQ-32 over the side mine hunting sonar. As of 1 August 2009, the Navy plans on ceasing the use of the SQQ-32 with in the AFAST Area of Responsibility (AOR). This information was not available at the time of the Navy's original February 2008 Request for Letter of Authorization (DoN 2008). The SQQ-32 is a variable depth mine detection and classification high-frequency active sonar system.

(U) AN/SQQ-32Authorization Change Request

(U) In January 2009, NMFS authorized 4474 hours for AN/SQQ-32 per year for AFAST based on the preliminary estimate available at the time of original Navy submission (NMFS 2009, 2009a). As of 1 August 2009, the Navy has no plans to use the AN/SQQ-32 within the AFAST AOR. Given new information on the planned Fleet utilization of AN/SQQ-32 that was not previously available, the Navy requests a revised authorization for AN/SQQ-32 as listed in **Table 2**. The amount of reduction in potential marine mammal exposures from a decrease in AN/SQQ-32 use is discussed in Chapter 6.

(U) Table 2. EER\IEER, AEER, NIXIE, SQQ-32 forecast use for AFAST 2010-2013.

	SSQ-110A IEER Sonobuoy	SSQ-125 AEER Sonobuoy	AN/SLQ-25 NIXIE Countermeasure	SQQ-32 Mine Hunting Sonar
Original Authorization	872*	872*	332	4474
2009	**	**	2500	**
2010	1725	1550	2500	0
2011	1775	2165	2500	0
2012	1900	1830	2500	0
2013	1925	2180	2500	0

*Original authorization was for a total of 872 IEER/AEER sonobuoys combined
** Actual usage amounts are classified and are provided in the classified version of this document.

(U) E. Mitigation

(U) Marine mammal mitigation measures for use of EER\IEER during Atlantic Fleet Active Sonar Training are described in NMFS Final Rule for AFAST[2] (NMFS 2009) and repeated in Chapter 11 of this renewal application.

[2] 50 Code of Federal Regulations (CFR) § 216.244, 74 FR 4843, 4878, January 27, 2009.

(U) 2. DURATION AND LOCATION OF ACTIVITIES

(U) There are no changes to Chapter 2 as described under the Navy's original April 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009), except where noted below.

(U) Training using EER\IEER and AEER would occur at locations for AFAST where other sonobuoys would typically be used. These locations are the same anti-submarine warfare training areas described in the Navy's April 2008 Request, and subsequent NMFS October 2008 Proposed Rule, and January 2009 Final Rule (DoN 2008, NMFS 2008, NMFS 2009).

(U) Training using NIXIE would occur at locations for AFAST where other NIXIE use would typically occur. These locations are the same anti-submarine warfare training areas described in the Navy's April 2008 Request, and subsequent NMFS October 2008 Proposed Rule, and January 2009 Final Rule (DoN 2008, NMFS 2008, NMFS 2009).

(U) As of 1 August 2009, AFAST will cease the use of the SQQ-32 mine hunting sonar, with no future planned use within the AFAST AOR. Training using the SQQ-32 occurred since the inception of the Letter of Authorization to 1 August 2009, at the same anti-submarine warfare training areas described in the Navy's April 2008 Request, and subsequent NMFS October 2008 Proposed Rule, and January 2009 Final Rule (DoN 2008, NMFS 2008, NMFS 2009).

(U) 3. MARINE MAMMAL SPECIES AND NUMBERS

(U) There are no changes to Chapter 3 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 4. AFFECTED SPECIES STATUS AND DISTRIBUTION

(U) There are no changes to Chapter 4 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 5. TYPE OF INCIDENTAL TAKE REQUESTED

(U) There are no changes to Chapter 5 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 6. ANNUAL NUMBERS AND SPECIES EXPOSED

(U) There are no changes to Chapter 6 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009), except as where noted below.

(U) The use of additional IEER and AEER sonobuoys and NIXIE from AFAST results in small changes to the Navy's exposure estimates as presented in the NMFS's Final Rule (NMFS 2009).

(U) For the IEER change from 872 combined IEER/AEER buoys to 1725 IEER buoys authorized annually, additions to the AFAST annual explosive exposure summary (Table 1 in NMFS 27 January 2009 Final Rule[3]) include (**Table 3)**:

- 61 Additional Level B exposures;

(U) For the AEER change from 872 combined IEER/AEER buoys to 1550 AEER buoys authorized annually, additions to the AFAST annual sonar exposure summary (Table 1 in NMFS 27 January 2009 Final Rule[4]) include (**Table 4**):

- 661 Additional Level B exposures;

(U) As of 1 August 2009, the Navy used ** buoys for combined IEER/AEER in AFAST AOR.

(U) For the NIXIE change from 332 hours to 2500 hours authorized annually including the remainder of 2009, additions to the AFAST annual sonar exposure summary (Table 1 in NMFS 27 January 2009 Final Rule[5]) include (**Table 5**):

- 1561 Additional Level B exposures;

(U) As of 1 August 2009, the Navy used ** hours for NIXIE in AFAST AOR.

(U) For the SQQ-32 change from 4474 hours to ** hours authorized annually, reductions to the AFAST annual sonar exposure summary (Table 1 in NMFS 27 January 2009 Final Rule[6]) include (**Table 6**):

- A reduction of 10,264 Level B exposures;

(U) As of 1 August 2009, the Navy used ** hours of SQQ-32, with no further planned use for the remainder of 2009. There is no planned future use of the SQQ-32 in the AFAST AOR from 2010 to 2013.

(U) A summary table (**Table 7**) of the requested changes for CY 2009 includes only changes to NIXIE and the reduction in SQQ-32 use, depicting a net change in the number of takes requested for CY 2009 as compared to the original authorization.

(U) A separate summary table (**Table 8**) depicts the requested changes for CY 2010 and includes the IEER, AEER, NIXIE, and the reduction to no further use of the SQQ-32. This table shows the net change in the number of takes requested For CY 2010 as compared to the original authorization.

** Actual usage amounts are classified and are provided in the classified version of this document.

[3] See 74 FR 4843 page 4846 (NMFS 2009)

[4] See 74 FR 4843 page 4846 (NMFS 2009)

[5] See 74 FR 4843 page 4846 (NMFS 2009)

[6] See 74 FR 4843 page 4846 (NMFS 2009)

(U) Table 3. LOA renewal application change in potential exposures from increased IEERs applicable to those marine mammal species previous modeled to be impacted from IEER.

Species	Atlantic Fleet Active Sonar Training (SSQ-110A IEER Only)	
	Original Authorization 2009†	Requested For 2010‡
	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0
Humpback whale*	0	0
Minke whale	0	0
Bryde's whale	0	0
Sei whale*	0	0
Fin whale*	0	0
Sperm whale*	0	1
Kogia spp.	0	0
Beaked whale	0	0
Rough-toothed dolphin	0	0
Bottlenose dolphin	15	30
Pantropical spotted dolphin	4	9
Atlantic spotted dolphin	19	37
Spinner dolphin	1	2
Clymene dolphin	1	2
Striped dolphin	9	19
Common dolphin	4	7
Fraser's dolphin	0	0
Risso's dolphin	3	5
Atlantic white-sided dolphin	0	1
Melon-headed whale	0	0
Pygmy killer whale	0	0
False killer whale	0	0
Killer whale	0	0
Pilot whales	3	7
Short-finned pilot whale	0	0
Harbor porpoise	0	0
Gray Seal	0	0
Harbor Seal	0	0

*** Threatened and endangered species**

† Based on 872 SSQ-110A IEER sonobuoys as per described in original authorization.

‡ Projected number of total takes based on 1725 SSQ-110A IEER sonobuoys for 2010.

(U) Table 4. LOA renewal application change in potential exposures from increased AEERs applicable to those marine mammal species previous modeled to be impacted from AEER.

Species	Atlantic Fleet Active Sonar Training (SSQ-125 AEER Only)	
	Original Authorization 2009†	Requested For 2010‡
	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0
Humpback whale*	3	5
Minke whale	0	1
Bryde's whale	0	0
Sei whale*	2	4
Fin whale*	1	1
Sperm whale*	4	8
Kogia spp.	1	2
Beaked whale	1	2
Rough-toothed dolphin	3	6
Bottlenose dolphin	194	345
Pantropical spotted dolphin	52	92
Atlantic spotted dolphin	291	517
Spinner dolphin	7	13
Clymene dolphin	13	22
Striped dolphin	141	251
Common dolphin	52	92
Fraser's dolphin	0	0
Risso's dolphin	33	59
Atlantic white-sided dolphin	5	8
Melon-headed whale	0	1
Pygmy killer whale	0	0
False killer whale	0	0
Killer whale	0	0
Pilot whales	44	78
Short-finned pilot whale	0	1
Harbor porpoise	0	0
Gray Seal	0	0
Harbor Seal	0	0

*** Threatened and endangered species**

† Based on 872 SSQ-125 AEER sonobuoys as per described in original authorization.

‡ Projected number of total takes based on 1550 SSQ-125 AEER sonobuoys for 2010.

(U) Table 5. LOA renewal application change in potential exposures from increased NIXIE hours applicable to those marine mammal species previous modeled to be impacted from NIXIE.

Species	Atlantic Fleet Active Sonar Training (AN/SLQ-25 NIXIE Only)		
	Original Authorization 2009†	Projected Total Requested For 2009‡	Requested For 2010‡‡
	Level B/Harassment	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0	0
Humpback whale*	1	4	4
Minke whale	0	0	0
Bryde's whale	0	0	0
Sei whale*	0	0	0
Fin whale*	0	0	0
Sperm whale*	1	9	9
Kogia spp.	1	5	5
Beaked whale	1	5	5
Rough-toothed dolphin	0	2	2
Bottlenose dolphin	92	692	692
Pantropical spotted dolphin	14	108	108
Atlantic spotted dolphin	59	441	441
Spinner dolphin	0	0	0
Clymene dolphin	7	52	52
Striped dolphin	20	148	148
Common dolphin	12	92	92
Fraser's dolphin	0	0	0
Risso's dolphin	13	99	99
Atlantic white-sided dolphin	0	0	0
Melon-headed whale	0	0	0
Pygmy killer whale	0	0	0
False killer whale	0	0	0
Killer whale	0	0	0
Pilot whales	19	144	144
Short-finned pilot whale	0	0	0
Harbor porpoise	0	0	0
Gray Seal	0	0	0
Harbor Seal	0	0	0

*** Threatened and endangered species**

† Based on 332 hours of AN/SLQ-25 NIXIE use as per described in original authorization.

‡ Projected number of total takes based on 2500 hours of AN/SLQ-25 NIXIE use. As of 1 August 2009, used a total of ** hours.

‡‡ Projected number of total takes based on 2500 hours of AN/SLQ-25 NIXIE use for 2010.

** Actual usage amounts are classified and are provided in the classified version of this document.

(U) Table 6. LOA renewal application change in potential exposures from reduced SQQ-32 hours applicable to those marine mammal species previous modeled to be impacted from SQQ-32.

Species	Atlantic Fleet Active Sonar Training (SQQ-32 Only)		
	Original Authorization 2009†	Total Used For 2009 With No Additional Requested For Remainder of the Year‡	Requested For 2010‡‡
	Level B/Harassment	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0	0
Humpback whale*	0	0	0
Minke whale	0	0	0
Bryde's whale	0	0	0
Sei whale*	0	0	0
Fin whale*	0	0	0
Sperm whale*	1	0	0
Kogia spp.	1	0	0
Beaked whale	0	0	0
Rough-toothed dolphin	229	44	0
Bottlenose dolphin	6182	1200	0
Pantropical spotted dolphin	32	6	0
Atlantic spotted dolphin	3628	704	0
Spinner dolphin	104	20	0
Clymene dolphin	45	9	0
Striped dolphin	12	2	0
Common dolphin	0	0	0
Fraser's dolphin	2	0	0
Risso's dolphin	9	2	0
Atlantic white-sided dolphin	0	0	0
Melon-headed whale	9	2	0
Pygmy killer whale	1	0	0
False killer whale	3	1	0
Killer whale	0	0	0
Pilot whales	0	0	0
Short-finned pilot whale	6	1	0
Harbor porpoise	0	0	0
Gray Seal	0	0	0
Harbor Seal	0	0	0

*** Threatened and endangered species**

† Based on 4474 hours of SQQ-32 use as per described in original authorization.

‡ Total number of total takes based on ** hours of SQQ-32 use. No additional SQQ-32 use for the remainder of 2009.

‡‡ Projected number of total takes based on ** hours of SQQ-32 use for 2010.

** Actual usage amounts are classified and are provided in the classified version of this document.

(U) Table 7. Change in potential exposures to marine mammal species from change in NIXIE and SQQ-32 authorization for CY 2009.

Species	Atlantic Fleet Active Sonar Training (Total Requested Changes For Remaining 2009)		
	Original Authorization 2009†	Projected Total Requested For 2009‡	Change Between 2009 Original Authorization and Projected Total 2009
	Level B/Harassment	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0	0
Humpback whale*	1	4	3
Minke whale	0	0	0
Bryde's whale	0	0	0
Sei whale*	0	0	0
Fin whale*	0	0	0
Sperm whale*	2	9	7
Kogia spp.	2	5	3
Beaked whale	1	5	4
Rough-toothed dolphin	229	46	-183
Bottlenose dolphin	6274	1892	-4382
Pantropical spotted dolphin	46	114	68
Atlantic spotted dolphin	3687	1145	-2542
Spinner dolphin	104	20	-84
Clymene dolphin	52	61	9
Striped dolphin	32	150	118
Common dolphin	12	92	80
Fraser's dolphin	2	0	-2
Risso's dolphin	22	101	79
Atlantic white-sided dolphin	0	0	0
Melon-headed whale	9	2	-7
Pygmy killer whale	1	0	-1
False killer whale	3	1	-2
Killer whale	0	0	0
Pilot whales	19	144	125
Short-finned pilot whale	6	1	-5
Harbor porpoise	0	0	0
Gray Seal	0	0	0
Harbor Seal	0	0	0

*** Threatened and endangered species**

† Based on 332 hours of AN/SLQ-25 NIXIE and 4474 hours of SQQ-32 use as per described in original authorization.

‡ Total estimated takes for NIXIE (2500 hours) and SQQ-32 (hours) only during 2009.**

** Actual usage amounts are classified and are provided in the classified version of this document.

(U) **Table 8. Change in potential exposures to marine mammal species from change in IEER, AEER, NIXIE, and SQQ-32 authorization for CY 2010.**

Species	Atlantic Fleet Active Sonar Training (Total Requested Changes For 2010)		
	Original Authorization 2009†	Total Requested Takes For 2010‡	Change Between 2009 Original Authorization and 2010 Requested Takes
	Level B/Harassment	Level B/Harassment	Level B/Harassment
North Atlantic right whale*	0	0	0
Humpback whale*	4	9	5
Minke whale	0	1	1
Bryde's whale	0	0	0
Sei whale*	2	4	2
Fin whale*	1	1	0
Sperm whale*	6	18	12
Kogia spp.	3	7	4
Beaked whale	2	7	5
Rough-toothed dolphin	232	8	-224
Bottlenose dolphin	6483	1067	-5416
Pantropical spotted dolphin	102	209	107
Atlantic spotted dolphin	3997	995	-3002
Spinner dolphin	112	15	-97
Clymene dolphin	66	76	10
Striped dolphin	182	418	236
Common dolphin	68	191	123
Fraser's dolphin	2	0	-2
Risso's dolphin	58	163	105
Atlantic white-sided dolphin	5	9	4
Melon-headed whale	9	1	-8
Pygmy killer whale	1	0	-1
False killer whale	3	0	-3
Killer whale	0	0	0
Pilot whales	66	229	163
Short-finned pilot whale	6	1	-5
Harbor porpoise	0	0	0
Gray Seal	0	0	0
Harbor Seal	0	0	0

*** Threatened and endangered species**
† Based on 872 IEER, 872 AEER, 332 hours of NIXIE and 4474 hours of SQQ-32 use as per described in original authorization.
‡ Total estimated takes for IEER (1725 buoys), AEER (1550 buoys), NIXIE (2500 hours), and SQQ-32 (Zero hours) only during 2010.

(U) 7. EFFECTS TO MARINE MAMMAL SPECIES OR STOCKS

(U) There are no changes to Chapter 7 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 8. MINIMIZATION OF ADVERSE EFFECTS ON SUBSISTENCE USE

(U) There are no changes to Chapter 8 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 9. EFFECTS TO THE MARINE MAMMAL HABITAT AND THE LIKELIHOOD OF RESTORATION

(U) There are no changes to Chapter 9 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 10. EFFECTS TO MARINE MAMMALS FROM LOSS OR MODIFICATION OF HABITAT

(U) There are no changes to Chapter 10 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 11. MEANS OF EFFECTING THE LEAST PRACTICABLE ADVERSE IMPACTS – MITIGATION MEASURES

(U) Marine mammal mitigation measures for use of EER\IEER during Atlantic Fleet Active Sonar Training are described in NMFS' Final Rule for AFAST (NMFS 2009)[7] and repeated here.

(U) Navy's Protective Measures for IEER

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

(U) (b) Crews shall conduct a minimum of 30 minutes of visual and acoustic monitoring of the search area prior to commanding the first post (source/receiver sonobuoy pair) detonation. This 30-minute observation period may include pattern deployment time.

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

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

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

(U) (f) Visual Detection: If marine mammals are visually detected within 1,000 yards (914 m) of the explosive source sonobuoy (AN/SSQ–110A) intended for use, then that payload shall not be detonated. Navy aircrews may utilize this post once the marine mammals have not been re-sighted for 30 minutes, or are observed to have moved outside the 1,000 yards (914 m) safety buffer. Navy aircrews may shift their multi-static active search to another post, where marine mammals are outside the 1,000 yards (914 m) safety buffer.

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

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

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[7] 50 CFR §216.244, 74 FR 4843,4881 (NMFS 2009)

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

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

(U) 12. MONITORING AND REPORTING

(U) There are no changes to Chapter 12 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009), except as where noted below.

(U) In view of lessons learned during implementation of the FY09 AFAST Monitoring Plan, and as part of the Navy's adaptive management review for AFAST, a modification of the FY09 Plan is shown in **Table 9**. The modifications do not include a change in overall effort, rather they are meant to provide for better tracking and management of monitoring efforts. For example, with regards to monitoring in conjunction with Navy training events, it is very difficult to logistically estimate exactly how many hours of survey effort will be possible (due to weather, operational changes, fuel, etc.). Therefore, the Navy is proposing to monitor during a specified number of events. Likewise, surveys that occur in Onslow Bay and Jacksonville are contracted and funded on a per day of effort basis, and therefore the Navy is proposing to conduct monitoring a specified number of days. The vessel and aerial survey days in Onslow Bay and Jacksonville are now combined and applied across both sites to allow for flexibility in conducting the surveys; however, the total number of survey days remains the same. Adding flexibility will allow for the level of survey effort to be commensurate with the level of training at each of these sites. For example, if a higher level of training occurs in the Jacksonville site compared to the Onslow Bay site, a greater number of survey days may be allocated to Jacksonville compared to Onslow Bay. **Table 10** shows a clean copy of the revised proposed AFAST monitoring plan for 2010.

(U) Table 9. Navy's adaptive management review for AFAST showing edits to FY09 monitoring and proposed 2010 monitoring (strike through are deletions and red font are additions).

STUDY 1 and 3 (exposures and behavioral responses)		
Aerial Surveys During Training Events	- ~~30 hours of active sonar during~~ 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	Adaptive Management Review for FY10 (AMR)
Marine Mammal Observers (MMO)	- ~~60 hours during~~ 2 events in conjunction with SEASWITI or ULT exercises.	
Vessel surveys During Training Events (study 3 only)	- ~~100 hours during~~ 2 events in conjunction with SEASWITI, shallow COMPTUEX, or ULT exercises.	
Passive Acoustics	- 2 deployments of pop-up buoys in conjunction with SEASWITI, shallow COMPTUEX, or ULT exercises.	
STUDY 2 (geographic redistribution)		
Aerial Surveys Before And After Training Events	- ~~40 hours during~~ 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	AMR
Aerial Surveys Onslow Bay/ Jacksonville	- ~~100 hours~~ 48 days	
Vessel Surveys Onslow Bay/ Jacksonville	- ~~125 hours~~ 48 days	
~~**Aerial Surveys Jacksonville**~~	- ~~100 hours~~	
~~**Vessel Surveys Jacksonville**~~	- ~~125 hours~~	
Passive Acoustics	FY 09: Installation of a total of 4 HARPs and use of pop-up buoys for exercise monitoring. Begin recording and data analysis. FY10: Continue recording and data analysis for the 4 HARPS.	
STUDY 4 (mitigation effectiveness)		
MMO/ Lookout Comparison	- 40 hours ~~during SEASWITI, shallow COMPTUEX, or ULT exercises.~~	AMR
Aerial Surveys Before And After Training Events	- ~~40 hours during~~ 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	

(U) Table 10. Navy's final proposed 2010 monitoring plan for AFAST.

STUDY 1 and 3 (exposures and behavioral responses)		
Aerial Surveys During Training Events	- 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	Adaptive Management Review for 2011 (AMR)
Marine Mammal Observers (MMO)	- 2 events in conjunction with SEASWITI or ULT exercises.	
Vessel surveys (study 3 only)	- 2 events in conjunction with SEASWITI, shallow COMPTUEX, or ULT exercises.	
Passive Acoustics	- 2 deployments of pop-up buoys in conjunction with SEASWITI, shallow COMPTUEX, or ULT exercises.	
STUDY 2 (geographic redistribution)		
Aerial Surveys Before And After Training Events	- 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	AMR
Aerial Surveys Onslow Bay/ Jacksonville	- 48 days	
Vessel Surveys Onslow Bay/ Jacksonville	- 48 days	
Passive Acoustics	Continue recording and data analysis for the 4 HARPS.	
STUDY 4 (mitigation effectiveness)		
MMO/ Lookout Comparison	- 40 hours	AMR
Aerial Surveys Before And After Training Events	- 1 event in conjunction with a SEASWITI, shallow COMPTUEX, or ULT exercise.	

(U) 13. RESEARCH

(U) There are no changes to Chapter 13 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 14. LIST OF PREPARERS

(U) There are no changes to Chapter 14 as described under the Navy's original February 2008 Request for Letter of Authorization, and subsequent NMFS' October 2008 Proposed Rule (NMFS 2008) and January 2009 Final Rule (NMFS 2009).

(U) 15. LITERATURE CITED

(U) DoN. 2008. Letter of Authorization Application (request for incidental Harassment for AFAST activities) submitted to NMFS Office of Protected Resources.

(U) DoN. 2008a. Final Atlantic Fleet Active Sonar Training Environmental Impact Statement\Overseas Environmental Impact Statement-December 2008. Department of the Navy.

(U) NMFS. 2008. Taking and Importing Marine Mammals; U.S. Navy's Atlantic Fleet Active Sonar Training (AFAST); Proposed Rule. October 14 2008. 73 FR 60754

(U) NMFS. 2009. Taking and Importing Marine Mammals; U.S. Navy's Atlantic Fleet Active Sonar Training (AFAST); Final Rule. January 27, 2009. 74 FR 4843

(U) NMFS. 2009a. Letter of Authorization take marine mammals incidental to U.S. Navy's Atlantic Fleet Active Sonar Training (AFAST) issued. January 22 2009