



Letter of Authorization

The U.S Air Force, 96 Test Wing Squadron, Commander, 1001 Nomad Way, Bldg 1310, Suite 210 Eglin Air Force Base, Florida 32542, and persons operating under his authority (*i.e.*, USAF 96 TWS), are authorized to take marine mammals incidental to testing and training activities conducted in the Eglin Gulf Testing and Training Range (EGTTR) in the northern Gulf of Mexico, in accordance with 50 CFR Part 218, Subpart G — Taking of Marine Mammals Incidental to Testing and Training Activities Conducted at the Eglin Gulf Test and Training Range in the Gulf of Mexico (“the regulations”); subject to the provisions of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*; MMPA) and the following conditions:

1. This Authorization is valid for the period February 13, 2018, through February 12, 2023.
2. This Authorization is valid only for the unintentional taking of the species of marine mammals and manner of take identified in Section 5 and Section 6 of this Authorization incidental to the training activities specified in Section 4 of this Authorization and occurring within the EGTTR.
3. This Authorization is valid only if the Holder of the Authorization or any person(s) operating under his authority implements the mitigation, monitoring, and reporting required pursuant to 50 CFR §§ 218.64 & 218.65 and implements the Terms and Conditions of this Authorization.
4. This Authorization is valid for the following actions in the EGTTR: 1) 86th Fighter Weapons Squadron (86 FWS) Maritime Weapons System Evaluation Program (WSEP) test missions that involve the use of multiple types of live and inert munitions (bombs and missiles detonated above, at, or slightly below the water surface; 2) Advanced Systems Employment Project actions that involve deployment of a variety of pods, air-to-air missiles, bombs, and other munitions (all inert ordnances in relation to EGTTR); 3) Air Force Special Operations Command (AFSOC) training, including air-to-surface gunnery missions involving firing live gunnery rounds at targets on the water surface in EGTTR, small diameter bomb (SDB) and Griffin/Hellfire missile training involving the use of live missiles and SDBs in the EGTTR against small towed boats, and CV-22 tiltrotor aircraft training involving the firing of 0.50 caliber (cal.)/7.62 mm ammunition at flares floating on the EGTTR water surface; 4) 413th Flight Test Squadron (FLTS) Precision Strike Program (PSP) activities involving firing munitions at flare targets on the EGTTR water surface and Stand-Off Precision Guided Munitions (SOPGM) testing involving captive-carry, store separation, and weapon employment tests; 5) 780th Test Squadron (TS) activities involving precision strike weapon (PSW) test missions (launch of munitions against targets in the EGTTR) and Longbow Littoral Testing (data collection on tracking and impact ability of the Longbow missile on small boats); 6) 96th Test Wing Inert Missions (developmental testing and evaluation for wide variety of air-delivered weapons and other systems using inert bombs); and 7) 96 Operations Group



(OG) missions, which involve the support of air-to-surface missions for several user groups within EGTTR.

5. Mission categories covered under the LOA are provided in Table 1.
6. The incidental take of marine mammals, by Level A and B harassment, by species, allowed for under this Authorization is provided in § 218.60 and Table 2.
7. Mitigation - The Holder of this Authorization, and any individuals operating under his authority, must implement the following mitigation measures when conducting activities identified in Section 4 of this Authorization:
 - (a) If daytime weather and/or sea conditions preclude adequate pre- and post- mission monitoring for detecting marine mammals and other marine life, EGTTR operations must be delayed until adequate sea conditions exist for monitoring to be undertaken.
 - (b) Missions during daylight hours shall occur no earlier than two hours after sunrise and no later than two hours prior to sunset with the exception of AFSOC and the 413 FLTS gunnery missions. In those cases, aircrews will utilize aircraft instrumentation and sensors to monitor the area.
 - (c) Required delay of live ordnance mission activities shall occur if a protected species, large schools of fish or large flocks of birds feeding at the surface are observed within the ZOI. Mission activities cannot resume until one of the following conditions is met:
 - i. Protected species marine mammal(s) is confirmed to be outside of the ZOI on a heading away from the target area;
 - ii. Protected species marine mammal(s) is not seen again for 30 minutes and presumed to be outside the Level A harassment ZOI.
 - iii. Large groupings of fish or birds leading to required delay are confirmed outside of the ZOI.
 - (d) Gunnery operations shall require employment of the following mitigation measures.
 - i. Use of 105-mm training rounds (TR) during nighttime missions.
 - ii. Ramp-up procedures requiring the use of the lowest caliber munition and proceeding to the highest, which means the munitions would be fired in the order of 25 mm, 40 mm, and 105 mm.
 - iii. Any pause in live fire activities greater than 10 minutes shall require re-initiation of protected species surveys.

- iv. Missions shall be conducted within the 200-m isobaths to provide greater protection to several species.
 - (e) If one or more sperm or baleen whales are detected during pre-mission monitoring activities, mission activities shall be aborted/suspended for the remainder of the day.
8. Monitoring and Reporting – When conducting operations identified in Section 5, the Holder of the Authorization and any person(s) operating under his authority must implement the following monitoring and reporting measures. All reports should be submitted to the Director, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring MD 20910.
- (a) If the authorized activity identified in § 218.60(a) is thought to have resulted in the mortality or injury of any marine mammals or take of marine mammals not identified in § 218.60(b), then the Holder of the LOA must immediately notify the Director, Office of Protected Resources, NMFS, or designee, by telephone (301) 427-8401, and the Southeast Regional Office (727) 824-5301.
 - (b) Monitoring shall be conducted by personnel who have completed Eglin’s Marine Species Observer Training Course.
 - (c) The Holder of the LOA shall use mission reporting forms to track their use of the EGTR for testing and training missions and to track marine mammal observations.
 - (d) Depending on the mission category, visual aerial-based, vessel-based, or video-based marine mammal surveys shall be conducted before and after live ordnance mission activities each day as shown in Table 3.
 - (e) Vessel-based surveys shall begin approximately one and one-half hours prior to live weapon deployment and shall be completed 30 minutes prior to the start of mission.
 - (f) Surveys shall continue for approximately one hour or until the entire ZOI has been adequately surveyed, whichever comes first.
 - (g) Post-mission monitoring surveys shall commence once the mission has ended or as soon as the mission area is declared safe.
 - (h) Vessel-based post-mission surveys shall be conducted for 30 minutes after completion of live ordnance missions.
 - (i) Any marine mammals that are detected in the ZOI during post-mission surveys and for which takes are authorized shall be counted as Level B takes. Any marine mammals for which take is not authorized are observed in the ZOI shall be reported immediately to the Office of Protected Resources, NMFS.
 - (j) A minimum of two dedicated observers shall be stationed on each vessel.

- (k) The size of the survey area for each mission shall be determined according to the radius of impact for the given threshold of each munition/detonation scenario as shown in Table 4. These ranges shall be monitored during pre-mission surveys for each activity. For any mission involving live munitions (other than gunnery rounds) an area extending out to the PTS harassment range for the corresponding mission-day scenario will be completely cleared of marine mammals prior to release of the first live ordnance.
- (l) Any aerial-based pre-mission surveys shall be conducted by observers aboard non-mission aircraft or mission aircraft who have completed the Marine Species Observer Training.
- (m) Gunship standard procedures initiated prior to initiation of live-firing events shall require at least two complete orbits around the survey mission site at the appropriate airspeed and monitoring altitude and include the following:
 - i. Monitoring for marine mammals shall continue throughout the mission by mission crew.
 - ii. Where applicable, aircraft optical and electronic sensors shall be used for marine mammal observation.
 - iii. If any marine mammals are detected during pre-mission surveys or during the mission, activities shall be immediately halted until the ZOI area is clear of all marine mammals, or the mission shall be relocated to another target area. If the mission is relocated, the pre-mission survey procedures shall be repeated.
 - iv. If multiple firing missions are conducted within the same flight, standard clearance procedures shall precede each mission.
 - v. Gunship crews shall conduct a post-mission survey beginning at the operational altitude and proceeding through a spiraling descent to the designated monitoring altitude.
- (n) Video-based monitoring from the Gulf Range Armament Test Vessel (GRATV) shall be conducted via live high-definition video feed for live air-to-surface mission proponents as shown in Table 3.
- (o) Acoustic Monitoring:
 - i. Eglin AFB shall conduct two acoustic monitoring studies as described below, pending approval of funding.
 - 1) Eglin AFB shall collect data that measures energy and pressure levels from varying distances away from live weapons impact points.

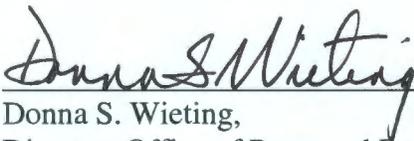
- 2) Eglin AFB shall conduct passive acoustic monitoring (PAM) for marine mammal vocalizations before, during, and after live missions in the EGTTTR.
- ii. The results of these studies shall be submitted to NMFS OPR as draft monitoring reports within 90 days of completion of each study.
- (p) The Holder of the LOA is required to:
- i. Submit an annual draft report to NMFS OPR on all monitoring conducted under the LOA within 90 days of the completion of annual marine mammal monitoring plans. This report must contain, at a minimum, the following information:
 - 1) Date and time of each EGTTTR mission;
 - 2) A complete description of the pre-mission and post-mission activities related to mitigating and monitoring the effects of EGTTTR missions on marine mammal populations;
 - 3) Results of the monitoring program, including numbers by species/stock of any marine mammals noted injured or killed as a result of the EGTTTR mission and number of marine mammals (by species if possible) that may have been harassed due to presence within the zone of influence; and
 - 4) If the funding for acoustic monitoring has not been procured, a brief description of the status of the process for securing funds.
- (q) The draft annual report shall be subject to review and comment by NMFS. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS. The draft report shall be considered the final report for this activity under the LOA if NMFS has not provided comments and recommendations within 30 days of receipt of the draft report.
- (r) General notification of injured or dead marine mammals:
- i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the LOA, such as serious injury or mortality, Eglin AFB shall immediately cease the specified activities and immediately report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Office. The report must include the following information:
 - 1) Time and date of the incident;

- 2) Description of the incident;
 - 3) Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
 - 4) Description of all marine mammal observations in the 24 hours preceding the incident;
 - 5) Species identification or description of the animal(s) involved;
 - 6) Fate of the animal(s);
 - 7) Photographs or video footage of the animal(s); and
 - 8) Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with Eglin AFB to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. Eglin AFB may not resume their activities until notified by NMFS.
- ii. In the event that Eglin AFB discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), Eglin AFB shall immediately report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Office, NMFS.
- 1) The report must include the same information identified in paragraph (p)(1) of this section. Activities may continue while NMFS reviews the circumstances of the incident. NMFS shall work with Eglin AFB to determine whether additional mitigation measures or modifications to the activities are appropriate.
- iii. In the event that Eglin AFB discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the activities authorized in the LOA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, scavenger damage), Eglin AFB shall report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Office, NMFS, within 24 hours of the discovery. Eglin AFB shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

9. Additional Considerations

- (a) A copy of the LOA must be in the possession of the safety officer on duty each day that EGTTTR missions are conducted.

- (b) The LOA may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals
10. Prohibitions - Notwithstanding takings contemplated in Section 6 of this Authorization and authorized by an LOA issued under §§ 216.106 and 218.66, no person in connection with the activities described in Section 4 of this Authorization may take any marine mammal specified in Section 6 of this Authorization other than by incidental take from activities specified in Section 4; take a marine mammal specified in Section 6 if such taking results in more than a negligible impact on the species or stocks of such marine mammal; or violate, or fail to comply with, the terms, conditions, and requirements of the regulations or a LOA issued under §§ 216.106 and 218.66.
11. A Letter of Authorization issued under §§ 216.106 and 218.66 of this chapter for the activity identified in § 218.60 shall be renewed or modified upon request of the applicant, provided that:
- (a) The proposed specified activity 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 of §218.67), and;
- (b) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA under the regulations were implemented.
- (c) For LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision of this chapter) 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 LOA in the *Federal Register*, including the associated analysis illustrating the change, and solicit public comment before issuing the LOA.



Donna S. Wieting,
Director, Office of Protected Resources,
National Marine Fisheries Service.

2/8/18
Date

Table 1. Munition Type and Amount, by Mission Year.

Mission Groups	Mission Category Day	Munition	NEW (lbs)	Detonation Type	Munitions per Day	Mission Days/Year	Total Munitions/Year
86 FWS Maritime WSEP	A	GBU-10/-24/-31	945	Subsurface*	1	2	2
		GBU-49	300	Surface	2		4
		AGM-158 (JASSM)	240	Surface	2		4
		GBU-12/-54 (LJDAM)/-38/-32 (JDAM)	192	Subsurface*	5		10
	B	AGM-65 (Maverick)	86	Surface	2	4	8
		GBU-39 (SDB)	37	Surface	1		4
		AGM-114 (Hellfire)	20	Subsurface*	5		20
	C	AGM-176 (Griffin)	13	Surface	5	2	10
		2.75 rockets	12	Surface	50		100
		AIM-9X	7.9	Surface	1		2
	PGU-12 HEI 30 mm	0.1	Surface	500	1,000		
AFSOC Air-to-Surface Gunnery	D	105 mm HE (FU)	4.7	Surface	30	25	750
		40 mm HE	0.87	Surface	64		1,600
		30 mm HE	0.1	Surface	500		12,500
		25 mm HE	0.067	Surface	560		14,000
	E	105 mm HE (TR)	0.35	Surface	30	45	1,350
		40 mm HE	0.87	Surface	64		2,880
		30 mm HE	0.1	Surface	500		22,500
		25 mm HE	0.067	Surface	560		25,200
413 FLTS PSP Gunnery	F	30 mm HE	0.1	Surface	33	3	99
	G	105 mm FU	4.7	Surface	15	4	60
	H	105 mm TR	0.35	Surface	15	4	60
413 FLTS SOPGM	I	AGM-176 (Griffin)	4.58	Surface	5	2	10
	J	AGM-114 (Hellfire)	20	Surface	5	2	10
	K	GBU-39 (SDB I)	36	Surface	3	2	6
	L	GBU-39 (LSDB)	36	Surface	5	2	10
780 TS Precision Strike Weapon	M	AGM-158 (JASSM)	240	Surface	2	1	2
	N	GBU-39 (SDB I)	37	Surface	2	1	2
		GBU-39 (SDB I) Double Shot*	74	Surface	2		2
	O	GBU-53 (SDB II)	22.84	Surface	2	1	2
780 TS	P	Joint Air-Ground Missile	27.41	Surface	1	1	1

Other Tests	Q	LSDB and SDB II (live fuse only)	0.4	Surface	2	4	8
96 OG Future Missions	R	GBU-10/-24	945	Subsurface*	1	1	1
		AGM-158 (JASSM)	240	Surface	1		1
		GBU-12 or GBU-54	192	Subsurface*	1		1
	S	AGM-65 (Maverick)	86	Surface	1	2	2
		GBU-39 (SDB I or LSDB)	37	Subsurface*	2		4
		AGM-114 (Hellfire)	29	Subsurface*	10		20
	T	105 mm HE (FU)	4.7	Surface	13	10	130
		40 mm HE	0.9	Surface	60		60
		Live fuse	0.4	Surface	20		200
		30 mm HE	0.1	Surface	500		5,000

Table 2. Annual Authorized Take Numbers by Species.

Species	Level A Harassment		Level B Harassment	
	Slight Lung Injury	PTS (SEL)	TTS (SEL)	Behavioral
Bottlenose dolphin	2	7	220	315
Atlantic spotted dolphin	0	2	85	120
Total	2	9	305	435

Table 3. Monitoring Options Available for Live Air-to-Surface Mission Proponents Operating in the EGTR.

Mission	Monitoring Platform		
	Vessel	Aerial	Video
86 FWS Maritime Weapons System Evaluation Program (WSEP)	•		•
USAF Special Operations Command (AFSOC) Training			
Air-to-Surface Gunnery		•	
Small Diameter Bomb/Griffin Missile Training		•	
CV-22 Training		•	
413th Flight Test Squadron (FLTS)			
AC-130J Precision Strike Package Testing		•	•
AC-130J Stand-Off Precision Guided Munitions Testing		•	•
780th Test Squadron			
Precision Strike Weapon	•	•	•
Longbow Littoral Testing	•		•

Table 4. Distances (meters) to NMFS Harassment Thresholds, by Species.

Mission-Day Category	Mortality	Level A Harassment				Level B Harassment		
	Modified Goertner Model 1	Slight Lung Injury	GI Tract Injury	PTS		TTS		Behavioral
		Modified Goertner Model 2	237 dB SPL	185 dB SEL	230 dB Peak SPL	170 dB SEL	224 dB Peak SPL	165 dB SEL
Bottlenose Dolphin								
A	0.427	0.768	0.348	1.039	0.705	5.001	1.302	8.155
B	0.107	0.225	0.156	0.43	0.317	2.245	0.585	3.959
C	0.037	0.085	0.083	0.32	0.169	1.128	0.312	1.863
D	0.024	0.055	0.059	0.254	0.12	0.982	0.222	1.413
E	0.01	0.024	0.034	0.232	0.069	0.878	0.126	1.252
F	0.003	0.007	0.019	0.096	0.033	0.218	0.062	0.373
G	0.024	0.055	0.059	0.167	0.12	0.552	0.222	0.809
H	0.006	0.015	0.025	0.097	0.051	0.229	0.093	0.432
I	0.023	0.054	0.059	0.125	0.119	0.328	0.22	0.572
J	0.045	0.101	0.096	0.167	0.195	0.555	0.36	0.812
K	0.057	0.128	0.117	0.164	0.237	0.541	0.438	0.795
L	0.057	0.128	0.117	0.2	0.237	0.654	0.438	0.953
M	0.12	0.249	0.22	0.211	0.447	0.761	0.825	1.123
N	0.076	0.168	0.149	0.202	0.302	0.671	0.557	0.982
O	0.047	0.107	0.101	0.136	0.204	0.432	0.376	0.64
P	0.051	0.115	0.107	0.116	0.217	0.271	0.4	0.527
Q	0.007	0.016	0.026	0.073	0.053	0.149	0.098	0.207
R	0.427	0.768	0.348	0.811	0.705	4.316	1.302	6.883
S	0.142	0.286	0.156	0.692	0.317	3.941	0.585	5.132
T	0.024	0.055	0.059	0.224	0.12	0.837	0.222	1.209
Atlantic Spotted Dolphin								
A	0.504	0.886	0.348	1.039	0.705	5.001	1.302	8.155
B	0.133	0.266	0.156	0.43	0.317	2.245	0.585	3.959
C	0.047	0.104	0.083	0.32	0.169	1.128	0.312	1.863
D	0.03	0.067	0.059	0.254	0.12	0.982	0.222	1.413
E	0.013	0.03	0.034	0.232	0.069	0.878	0.126	1.252
F	0.004	0.009	0.019	0.096	0.033	0.218	0.062	0.373
G	0.03	0.067	0.059	0.167	0.12	0.552	0.222	0.809
H	0.008	0.018	0.025	0.097	0.051	0.229	0.093	0.432
I	0.03	0.067	0.059	0.125	0.119	0.328	0.22	0.572
J	0.057	0.124	0.096	0.167	0.195	0.555	0.36	0.812
K	0.072	0.157	0.117	0.164	0.237	0.541	0.428	0.795
L	0.072	0.157	0.117	0.2	0.237	0.654	0.438	0.953
M	0.15	0.29	0.22	0.211	0.447	0.761	0.825	1.123
N	0.096	0.201	0.149	0.202	0.302	0.671	0.557	0.982
O	0.06	0.131	0.101	0.136	0.204	0.432	0.376	0.64
P	0.065	0.141	0.107	0.116	0.217	0.271	0.4	0.527
Q	0.009	0.02	0.026	0.073	0.053	0.149	0.098	0.207
R	0.504	0.886	0.348	0.811	0.705	4.316	1.302	6.883
S	0.172	0.336	0.156	0.692	0.317	3.941	0.585	5.132
T	0.03	0.067	0.059	0.224	0.12	0.837	0.222	1.209