



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

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

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 TW), are authorized to take marine mammals incidental to testing and training activities conducted in the Eglin Gulf Test 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 April 13, 2023, through April 13, 2030.
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. Figure 1 shows the boundary of the EGTTR. Figure 2 shows the boundaries both the existing and new East Live Impact Areas (LIAs) 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 and 218.65 and implements the Terms and Conditions of this Authorization.
4. This Authorization is valid for the following actions in the EGTTR: 1) 53rd Weapons Evaluation Group (53 WEG) test missions which involve the use of multiple types of live and inert munitions (bombs and missiles detonated above, at, or slightly below the water surface) against small target boats and which involve live air-to-air missile testing and firing of inert gun ammunition; 2) Air Force Special Operations Command (AFSOC) training, including air-to-surface gunnery, bomb, and missile exercises; 3) 96th Operations Group (96 OG) which involves gunnery testing from AC-130 aircraft, air-to-surface testing of missiles and precision-guided bombs, air-to-surface, air-to-air, and surface-to-air testing operations, and use of inert bombs and inert munitions; and, the Naval School



Explosive Ordnance Disposal (NAVSCOLEOD) which involves Mine Countermeasures (MCM) exercises.

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 § 218.62 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) Procedural Mitigation – Procedural mitigation is mitigation that the USAF must implement whenever and wherever an applicable training or testing activity takes place within the EGTTR for each mission-day category.
 1. Pre-mission Survey
 - a. All missions must occur during daylight hours with the exception of gunnery training, mission-day category K, and other missions that can have nighttime monitoring capabilities comparable to the nighttime monitoring capabilities of gunnery aircraft.
 - b. USAF range-clearing vessels and protected species survey vessels must be onsite 90 minutes before mission to clear prescribed human safety zone and survey the mitigation zone for the given mission-day category.
 - c. For all live missions except gunnery missions, USAF Protected Species Observers (PSOs) must monitor the mitigation zones as defined in Table 3 for the given mission-day category for a minimum of 30 minutes or until the entirety of the mitigation zone has been surveyed, whichever takes longer.
 - i. The mitigation zone for live munitions must be defined by the mission-day category that most closely corresponds to the actual planned mission based on the predicted net explosive weight at impact (NEWi) to be released, as shown in Table 1.
 - ii. The mitigation zone for inert munitions must be defined by the energy class that most closely corresponds to the actual planned mission, as shown in Table 4.
 - iii. The energy of the actual mission must be less than the energy of the identified mission-day category in terms of total NEWi as well as the largest single munition NEWi.

- iv. For any inert mission other than gunnery missions PSOs must at a minimum monitor out to the mitigation zone distances shown in Table 4 that applies for the corresponding energy class.
 - v. Missions falling under mission-day categories A, B, C, and J, and all other missions when practicable must allot time to provide PSOs to vacate the human safety zone. While exiting, PSOs must observe the entirety of the mitigation zone for the corresponding mission-day category as shown in Table 3.
- d. Missions involving air-to-surface gunnery operations must conduct aerial monitoring of the mitigation zones, as described in the Table 5.
2. Mission postponement, relocation, or cancellation.
- a. If marine mammals other than the two authorized dolphin species for which take is authorized are observed in either the mitigation zone or monitoring zone by PSOs, then mission activities must be cancelled for the remainder of the day.
 - b. The mission must be postponed, relocated or cancelled if either of the two authorized dolphin species are visually detected in the mitigation zone during the pre-mission survey. Postponement must continue until the animals are confirmed to be outside of the mitigation zone and observed by a PSO to be heading away from the mitigation zone or until the animals are not seen again for 30 minutes.
 - c. The mission must be postponed if marine mammal indicators (*i.e.*, large schools of fish or large flocks of birds) are observed feeding at the surface within the mitigation zone. Postponement must continue until these potential indicators are confirmed to be outside the mitigation zone
 - d. If either of the two authorized dolphin species are observed in the monitoring zone by PSOs when observation vessels are exiting the human safety zone, and if PSOs determine the marine mammals are heading toward the mitigation zone, then missions must either be postponed, relocated, or cancelled based on mission-specific test and environmental parameters. Postponement must continue until the animals are confirmed by a PSO to be heading away from the mitigation zone or until the animals are not seen again for 30 minutes.
 - e. Aerial-based PSOs must look for potential indicators of marine mammal presence, such as large schools of fish and large, active groups of birds.
 - f. If marine mammals or potential indicators are detected in the mitigation zone during pre-mission surveys or during the mission by aerial-based or video-based PSOs, operations must be immediately halted until the mitigation zone is clear of all marine mammals, or the mission must be relocated to another target area.

3. Vessel strike avoidance measures

- a. When a marine mammal is sighted, vessels must attempt to maintain a distance of at least 150 ft (46 m) away from marine mammals and 300 ft (92 m) away from whales. Vessels must reduce speed and avoid abrupt changes in direction until the animal(s) has left the area.
- b. If a whale is sighted in a vessel's path or within 300 feet (92 m) from the vessel, the vessel speed must be reduced and the vessel's engine must be shifted to neutral. The engines must not be engaged until the animals are clear of the area.
- c. If a whale is sighted farther than 300 feet (92 m) from the vessel, the vessel must maintain a distance of 300 feet or greater between the whale and the vessel's speed must be reduced to 10 knots or less.
- d. Vessels are required to stay 500 m away from the Rice's whale. If a baleen whale cannot be positively identified to species level then it must be assumed to be a Rice's whale and the 500 m separation distance must be maintained.
- e. Vessels must avoid transit in the Core Distribution Area (CDA) and within the 100 - 400 m isobath zone outside the CDA. If transit in these areas is unavoidable, vessels must not exceed 10 knots and transit at night is prohibited.
- f. An exception to any vessel strike avoidance measure is for instances required for human safety, such as when members of the public need to be intercepted to secure the human safety zone, or when the safety of a vessel operations crew could be compromised.

4. Gunnery-specific Mitigation

- a. 105-mm training rounds (TR) must be used during nighttime gunnery missions.
- b. Ramp-up procedures. Within a mission, firing must start with use of the lowest caliber munition and proceed to increasingly larger rounds.
- c. Any pause in live fire activities greater than 10 minutes must be followed by the re-initiation of protected species surveys.

(b) Geographic Mitigation Measures

1. Use of live munitions for surface or subsurface detonations is restricted in the western part of the existing LIA and East LIA such that activities may not occur seaward of the setbacks from the 100 m-isobath shown in Table 6.

2. All gunnery missions must be conducted at least 500 meters landward of the 100-m isobath.
3. Use of live munitions for surface or subsurface detonations must be restricted to the LIA and East LIA and is prohibited from the area between the 100-m and 400-m isobaths.
4. Use of inert munitions is prohibited between the 100-m and 400-m isobaths throughout the EGTTTR.
5. Live munitions associated with Mission-day category K must be fired into the EGTTTR inside of the LIAs and outside of the area between 100-m to 400-m isobaths
6. Mission-day category K munitions must have a setback of 1.338 km from the 100-m isobath.
7. Inert munitions of the type of mission-day category K may be fired into portions of the EGTTTR outside the LIAs but must be outside the area between the 100-m and 400-m isobaths.

(c) Environmental mitigation.

1. Sea state conditions - Missions must be postponed or rescheduled if conditions exceed Beaufort sea state 4, which is defined as moderate breeze, breaking crests, numerous white caps, wind speed of 11 to 16 knots, and wave height of 3.3 to 6 feet.
 2. Daylight Restrictions - All live missions except for nighttime gunnery and mission-day category K will occur no earlier than 2 hours after sunrise and no later than 2 hours before sunset.
8. Monitoring and Reporting. When conducting activities identified in Condition 4 of this Authorization and § 218.150(c) of the regulations, the Holder of the Authorization and any person(s) operating under his or her 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) PSO Training. Procedural Mitigation – Procedural mitigation is mitigation that the USAF must implement whenever and wherever an applicable training or testing activity takes place within the EGTTTR for each mission-day category.
1. Any person who will serve as a PSO for a particular mission must have completed the training within a year prior to the mission.

2. For missions that require multiple survey platforms to cover a large area, a Lead Biologist must be designated to lead the monitoring and coordinate sighting information with the Test Director or Safety Officer.

(b) Vessel-based Monitoring.

1. Survey vessels must run predetermined line transects, or survey routes that will provide coverage of the survey area as shown in Table 3 and Table 4.
2. Monitoring must be conducted from the highest point feasible on the vessels.
3. There must be at least two PSOs on each survey vessel.
4. For missions that require multiple vessels to cover a large survey area, a Lead Biologist must be designated.
 - a. The Lead Biologist must coordinate all survey efforts.
 - b. The Lead Biologist must compile sightings information from other vessels.
 - c. The Lead Biologist must inform Tower Control if the mitigation and monitoring zones are clear or not clear of marine mammals.
 - d. If the area is not clear, the Lead Biologist must provide recommendations on whether the mission should be postponed or canceled.
 - e. Tower Control must relay the Lead Biologist's recommendation to the Safety Officer. The Safety Officer and Test Director must collaborate regarding range conditions based on the information provided.
 - f. The Safety Officer must have the final authority on decisions regarding postponements and cancellations of missions.

(c) Aerial-based monitoring.

1. All mission-day categories require aerial-based monitoring, assuming assets are available and when such monitoring does not interfere with testing and training parameters required by mission proponents.
2. Gunnery mission aircraft must also serve as aerial-based monitoring platforms.
3. Aerial survey teams must consist of Eglin Natural Resources Office personnel or their designees aboard a non-mission aircraft or the mission aircrew.

4. All aircraft personnel on non-mission and mission aircraft who are acting in the role of a PSO must have completed Eglin AFB's Protected Marine Species Observer Training course.
 5. One trained PSO in the aircraft must record data and relay information on species sightings, including the species (if possible), location, direction of movement, and number of animals, to the Lead Biologist.
 6. For gunnery missions, after arriving at the mission site and before initiating gun firing, the aircraft must fly at least two complete orbits around the target area out to the applicable monitoring zone at a minimum safe airspeed and the appropriate monitoring altitude as shown in Table 5.
 7. Aerial monitoring by aircraft must maintain a minimum ceiling of 305 m (1,000 feet) and visibility of 5.6 km (3 nmi) for effective monitoring efforts and flight safety as shown in Table 5.
 8. Pre-mission aerial surveys conducted by gunnery aircrews in AC-130s must extend out 5 nmi (9,260 m) from the target location while aerial surveys in CV-22 aircraft must extend out from the target location to a range of 3 nmi (5,556 m) as shown in Table 5.
 9. If the mission is relocated, the pre-mission survey procedures must be repeated in the new area.
 10. If multiple gunnery missions are conducted during the same flight, marine mammal monitoring must be conducted separately for each mission;
 11. During nighttime missions, night-vision goggles must be used.
 12. During nighttime missions, low-light electro-optical and infrared sensor systems on board the aircraft must be used for marine mammal monitoring.
 13. Mission-day category K tests and any other missions that are conducted at nighttime must be supported by AC-130 aircraft with night-vision instrumentation or other platforms with comparable nighttime monitoring capabilities.
 14. For mission-day category K missions, the pre-mission survey area must extend out to 0.89 km. For mission-day category L missions, the pre-mission survey area must extend out to 0.78 km.
- (d) Video-based monitoring.
1. All mission-day categories require video-based monitoring when practicable with the exception of gunnery missions.

2. A trained PSO (the video camera PSO) must monitor the live video feeds from the Gulf Range Armament Test Vessel (GRATV) transmitted to the Central Control Facility (CCF) or to another designated control facility.
3. The video camera PSO must report any protected marine species sightings to the Safety Officer, who will also be at the CCF or at another designated control facility.
4. The video camera PSO must have open lines of communication with the PSOs on vessels to facilitate real-time reporting of protected marine species sightings.
5. Direct radio communication must be maintained between vessels, GRATV personnel, and Tower Control throughout the mission.
6. If a marine mammal is detected on the live video by a PSO prior to weapon release, the mission must be stopped immediately by the Safety Officer.
7. Supplemental video monitoring by additional aerial assets must be used when practicable (*e.g.* balloons, unmanned aerial vehicles).

(e) Post-mission monitoring.

1. All marine mammal sightings must be documented on report forms that are submitted to the Eglin Natural Resources Office after the mission.
2. For gunnery missions, following each mission, aircrews must conduct a post-mission survey beginning at the operational altitude and continuing through an orbiting descent to the designated monitoring altitude. The post-mission survey area will be the area covered in 30 minutes of observation in a direction down-current from the impact site or the actual pre-mission survey area, whichever is reached first.
3. During post-mission monitoring, PSOs must survey the mission site for any dead or injured marine mammals. The post-mission survey area will be the area covered in 30 minutes of observation in a direction down-current from the impact site or the actual pre-mission survey area, whichever is reached first.

(f) Acoustic Monitoring

1. The USAF must conduct a single PAM study to investigate marine mammal vocalizations before, during and after live missions in the EGTTTR involving underwater detonations.
2. The USAF must conduct a study to further investigate ways to supplement its mitigation measures with the use of real-time PAM devices (*i.e.*, sonobuoys or hydrophones).

3. Studies described in 8(f)1 and 8(f)2 are contingent upon the availability of funding.
 4. Studies described in 8(f)1 and 8(f)2 must be approved by NMFS.
- (g) The USAF must submit an annual draft monitoring report to NMFS within 90 working days of the completion of each year's activities authorized by the LOA as well as a comprehensive summary report at the end of the project. The annual reports and final comprehensive report must be prepared and submitted within 30 days following resolution of any NMFS comments on the draft report. If no comments are received from NMFS within 30 days of receipt of the draft report, the report will be considered final. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments. The annual reports must contain the informational elements described below, at a minimum. The comprehensive 7-year report must include a summary of the monitoring information collected over the 7-year period (including summary tables), along with a discussion of the practicability and effectiveness of the mitigation and monitoring and any other important observations or discoveries.
1. Dates and times (begin and end) of each EGTR mission;
 2. Complete description of mission activities;
 3. Complete description of pre-and post-monitoring activities occurring during each mission;
 4. Environmental conditions during monitoring periods including Beaufort sea state and any other relevant weather conditions such as cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance;
 5. Upon observation of a marine mammal, the following information should be collected:
 - a. Observer who sighted the animal and observer location and activity at time of sighting;
 - b. Time of sighting;
 - c. Identification of the animal (*e.g.*, genus/species, lowest possible taxonomic level, or unidentified), observer confidence in identification, and the composition of the group if there is a mix of species;
 - d. Distances and bearings of each marine mammal observed in relation to the target site;

- e. Estimated number of animals including the minimum number, maximum number, and best estimate);
 - f. Estimated number of animals by cohort (e.g., adults, juveniles, neonates, group composition etc.);
 - g. Estimated time that the animal(s) spent within the mitigation and monitoring zones;
 - h. Description of any marine mammal behavioral observations (e.g., observed behaviors such as feeding or traveling);
 - i. Detailed information about implementation of any mitigation (e.g., postponements, relocations and cancellations), and
 - j. All PSO datasheets and/or raw sightings data.
- (h) The final comprehensive report must include a summary of data collected as part of the annual reports.
- (i) In the event that personnel involved in the monitoring activities discover an injured or dead marine mammal, the USAF must report the incident to NMFS Office of Protected Resources (OPR), and to the NMFS Southeast Region Marine Mammal Stranding Network Coordinator, as soon as feasible. If the death or injury was likely caused by the USAF's activity, the USAF must immediately cease the specified activities until NMFS OPR is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of this rule and the LOA issued under § 216.106 of this subchapter and § 218.66.
1. The USAF will not resume their activities until notified by NMFS.
 2. The report must include the following information:
 - a. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
 - b. Species identification (if known) or description of the animal(s) involved;
 - c. Condition of the animal(s) (including carcass condition if the animal is dead);
 - d. Observed behaviors of the animal(s), if alive;
 - e. If available, photographs or video footage of the animal(s); and
 - f. General circumstances under which the animal was discovered.

9. This Authorization is valid only for the unintentional taking of the species of marine mammal species identified in Table 2. Notwithstanding incidental takings identified in Condition 5 of this Authorization and authorized under this Authorization and in 50 CFR Part 218, Subpart G, no person in connection with the activities described in Condition 4 of this Authorization may take any marine mammal specified in Condition 5 of this Authorization other than by incidental take and in the course of conducting the activities specified in Condition 4; take any marine mammal other than species identified in Condition 5; take a marine mammal specified in Condition 5 if such taking results in more than a negligible impact on the species or stock of such marine mammal; or violate, or fail to comply with the terms, conditions, and requirements of the regulations or this Authorization.

10. Renewals and modifications of Letters of Authorization.

(a) An LOA issued under 50 CFR §§ 216.60 for the activities identified in Condition 4 of this Authorization and 50 CFR § 218.150(c) may be renewed or modified upon request by the applicant, provided that:

1. The planned 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 in paragraph (c)(1) of this condition); and
2. NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA were implemented.

(b) For LOA modification or renewal requests by the applicant that include changes to the activity or to the mitigation, monitoring, or reporting measures (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this condition) 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 stock or years), NMFS may publish a notice of the proposed changes to the LOA in the Federal Register, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) An LOA issued under 50 CFR §§ 216.60 may be modified by NMFS under the following circumstances:

1. Adaptive Management. After consulting with the Air Force 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.

- a. Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA include:
 - i. Results from the Air Force’s monitoring from the previous year(s);
 - ii. Results from other marine mammal and/or sound research or studies; or
 - iii. Any information that reveals marine mammals may have been taken in a manner, extent, or number not authorized by the regulations or this Authorization.
 - b. If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are more than minor, NMFS will publish a notice of the proposed changes to the LOA in the Federal Register and solicit public comment.
2. 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 the regulations and this Authorization, an LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the Federal Register within 30 days of the action.
11. A copy of this Authorization or a document containing the equivalent requirements specified in this Authorization and the 50 CFR Part 218, Subpart G regulations, must be in the possession of the on-site Commanding Officer in order to take marine mammals under the authority of this Authorization while conducting the specified activities.
12. The Holder of this Authorization and any person operating under their authority is required to comply with the Terms and Conditions of the Incidental Take Statement corresponding to NMFS’ Biological Opinion for the activities identified in Condition 4 as they pertain to Endangered Species Act listed marine mammals.

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4/12/2023

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

Date

Table 1 -- Munition-Day Categories and Next Explosive Weights (NEW) per Mission Year

User Group	Mission-Day Category	Category	NEWi (lb)/kg	Detonation Scenario	Munitions per Day	Mission Days per Year	Annual Quantity	NEWi per Mission Day (lb)/(kg)
53 WEG	A	Missile	241.36 (109.4)	Surface	4	1	4	2,413.6 (1,095.9)
		Missile	241.36 (109.4)	Surface	3	1	3	
		Missile	241.36 (109.4)	Surface	3	1	3	
	B	Bomb	192.3 (87.2)	Surface	4	1	4	2,029.9 (920.5)
		Bomb	192.3 (87.2)	Surface	4	1	4	
		Missile	98.3 (44.6)	Surface	5	1	5	
	C	Missile	98.3 (44.6)	Surface	5	1	5	1,376.2 (624.1)
		Missile	98.3 (44.6)	Surface	5	1	5	
		Missile	98.3 (44.6)	Surface	4	1	4	
	D	Missile	98.3 (44.6)	Surface	5	1	5	836.22 (379.2)
		Missile	36.18 (16.4)	Surface	4	1	4	
		Missile	20 (9.1)	Surface	10	1	10	
	E	Missile	13.08 (5.9)	Surface	4	1	4	997.62 (452.4)
		Missile	13.08 (5.9)	Surface	4	1	4	
		Missile	13.08 (5.9)	Surface	4	1	4	
		Missile	13.08 (5.9)	Surface	4	1	4	
		Missile	13.08 (5.9)	Surface	4	1	4	
		Missile	13.08 (5.9)	Surface	4	1	4	
		Rocket	3.8 (1.7)	Surface	12	1	12	
		Missile	13.08 (5.9)	Surface	4	1	4	
Gun Ammunition		4.72 (2.1)	Surface	100	1	100		
Bomb		36.1 (13.3)	Surface	2	1	2		
Bomb		36.1 (16.3)	Surface	4	1	4		
Missile w/FTS		0 ^a	Surface	2	1	2		
Missile w/FTS		0 ^a	Surface	2	1	2		
Missile w/FTS		0 ^a	Surface	2	1	2		
Missile w/FTS	0 ^a	Surface	2	1	2			

		Bomb	0.49 (0.2)	Surface	4	1	4	
		Bomb	0.44 (0.2)	Surface	8	1	8	
AFSOC	F	Bomb	192.3 (87.2)	Surface	2	15	30	584.6 (263.1)
		Bomb	100 (45.3)	Surface	2	15	30	
AFSOC	G	Gun Ammunition	4.72 (2.1)	Surface	30	25 (daytime)	750	191.6 (86.8)
		Gun Ammunition	0.1 (0.01)	Surface	500		12,500	
	H	Gun Ammunition	0.37 (0.2)	Surface	30	45 (night time)	1,350	61.1 (27.7)
		Gun Ammunition	0.1 (0.01)	Surface	500		22,500	
	I	Rocket	3.8 (1.7)	Surface	8	50	400	30.4 (13.8)
96 OG	J	Bomb	946.8 (429.4)	Subsurface	1	10 ^b	10 ^b	946.8 (429.4)
	K	Missile	350 (158.7)	Surface	1	2	2	350 (158.7)
	L	Missile	241.36 (109.4)	Surface	2	1	2	627.12 (284.3)
		Bomb ^c	72.2 (32.7)	Surface	2	1	2	
	M	Bomb	36.1 13.3)	Surface	4	2	8	324.9 (147.3)
		Bomb	36.1 (16.3)	Surface	5	2	10	
	N	Bomb	36.1 (16.3)	Surface	2	1	2	238.08 (107.9)
		Missile	40 (18.1)	Surface	3	1	3	
		Bomb	22.94 (10.4)	Surface	2	1	2	
	O	Missile	13.08 (5.9)	Surface	8	4	36	104.6 (47.5)
	P	Missile	13.08 (5.9)	Surface	5	2	10	130.8 (59.3)
		Missile	13.08 (5.9)	Surface	5	2	10	
	Q	Gun Ammunition	4.72 (2.1)	Surface	20	3	60	94.4 (42.8)
R	Bomb	0.49 (0.2)	Surface	4	1	4	35.82 (16.2)	
	Bomb	0.44 (0.2)	Surface	4	1	4		
	Gun Ammunition	0.37 (0.2)	Surface	60	1	60		
	Gun Ammunition	0.1 (0.01)	Surface	99	1	99		

NAVSCOLE OD	S	Charge	20(9.07) ^d	Subsurface	4	8	32	130 (58.9)
		Charge	5 (2.3) ^d	Surface	10	8	80	

^a Warhead replaced by Flight Termination System (FTS)/telemetry (TM)

^b Includes 2 SINKEX exercises.

^c NEW is doubled for simultaneous launch.

^d Estimated

Table 2 -- Annual Authorized Take Numbers by Species.

Common Name	Stock/DPS	Authorized Annual Take			Authorized 7-Year Total Take		
		Level A	Level B		Level A	Level B	
		PTS	TTS	Behavioral Disturbance	PTS	TTS	Behavioral Disturbance
Common bottlenose dolphin	Northern Gulf of Mexico Continental Shelf	9	319	817	63	2,233	5,719
Atlantic spotted dolphin	Northern Gulf of Mexico	1	39	100	7	273	700
Rice's whale*	NSD	0	2	4	0	14	28

*ESA-listed species

Note: NSD = No stock designation

Table 3 -- Pre-mission Mitigation and Monitoring Zones (in m) for Live Missions Impact Area

Mission-day Category	Mitigation Zone	Monitoring Zone ^{5,6}
A	1,130	TBD
B	1,170	TBD
C	1,090	TBD
D	950	TBD
E	960	TBD
F	710	TBD
G	9,260 ¹	550
H	9,260 ²	450
I	280	TBD
J	1,360	TBD
K	890	TBD
L	780	TBD
M	580	TBD
N	500	TBD
O	370	TBD
P	410	TBD
Q	9,260 ³	500
R	280 and 9,260 ⁴	TBD
S	860	TBD

¹ For G, double the Level A harassment threshold distance (PTS) is 0.548 km, but G is AC-130 gunnery mission with an inherent mitigation zone of 9.260 km/5 nmi.

² For H, double the Level A harassment threshold distance (PTS) is 0.450 km, but H is AC-130 gunnery mission with an inherent mitigation zone of 9.260 km/5 nmi

³ For Q, double the Level A harassment threshold distance (PTS) is 0.494 km, but Q is AC-130 gunnery mission with an inherent mitigation zone of 9.260 km/5nmi

⁴ R has components of both gunnery and inert small diameter bomb. Double the Level A harassment threshold distance (PTS) is 0.278 km, however, for gunnery component the inherent mitigation zone would be 9.260 km

⁵ The Monitoring Zone for non-gunnery missions is the area between the Mitigation Zone and the Human Safety Zone and is not standardized, as the Human Safety Zone is not standardized. The Human Safety Zone is determined per each mission by the Test Wing Safety Office based on the munition and parameters of its release (to include altitude, pitch, heading, and airspeed)

⁶ Based on the operational altitudes of gunnery firing, and the only monitoring during mission coming from onboard the aircraft conducting the firing, the Monitoring Zone for gunnery missions will be a smaller area than the Mitigation Zone and be based on the field of view from the aircraft. These observable areas will at least be double the Level A harassment threshold distance (PTS) for the mission-day categories G, H, and Q (gunnery-only mission-day categories).

Table 4 -- Pre-mission Mitigation and Monitoring Zones (in m) for Inert Missions Impact Area

Inert Impact Class (lb TNTeq)	Mitigation Zone	Monitoring Zone ¹
2	160	TBD
1	126	TBD
0.5	100	TBD
0.15	68	TBD

¹ The Monitoring Zone for non-gunnery missions is the area between the Mitigation Zone and the Human Safety Zone and is not standardized, as the Human Safety Zone is not standardized. HSZ is determined per each mission by the Test Wing Safety Office based on the munition and parameters of its release (to include altitude, pitch, heading, and airspeed)

Table 5 -- Aerial Monitoring Requirements for Air-to-Surface Gunnery Operations

Aircraft	Gunnery Round	Mitigation Zone	Monitoring Altitude	Operational Altitude
AC-30 Gunship	30 mm; 105 mm (FU and TR)	5 nmi (9,260 m)	6,000 ft (1,828 m)	15,000 ft (4,572 m) to 20,000 ft (6,096 m)
CV-22 Osprey	.50 caliber	3 nmi (5,556 m)	1,000 ft (3,280 m)	1,000 ft (3,280 m)

FU = Full Up ; TR = Training Round

Table 6 -- Setback Distances to Prevent Permanent Threshold Shift Impacts to the Rice's Whale

User Group	Mission-Day Category	NEWi (lb)	Setback from 100-Meter Isobath (km)
53 WEG	A	2,413.6	7.323
	B	2,029.9	6.659
	C	1,376.2	5.277
	D	836.22	3.557
	E	934.9	3.192
AFSOC	F	584.6	3.169
	I	29.6	0.394
96 OG	J	946.8	5.188
	K	350	1.338
	L	627.1	3.315
	M	324.9	2.017
	N	238.1	1.815
	O	104.6	0.734
	P	130.8	0.787
	Q	94.4	0.667
	R	37.1	0.368
NAVSCOLEOD	S	130	1.042

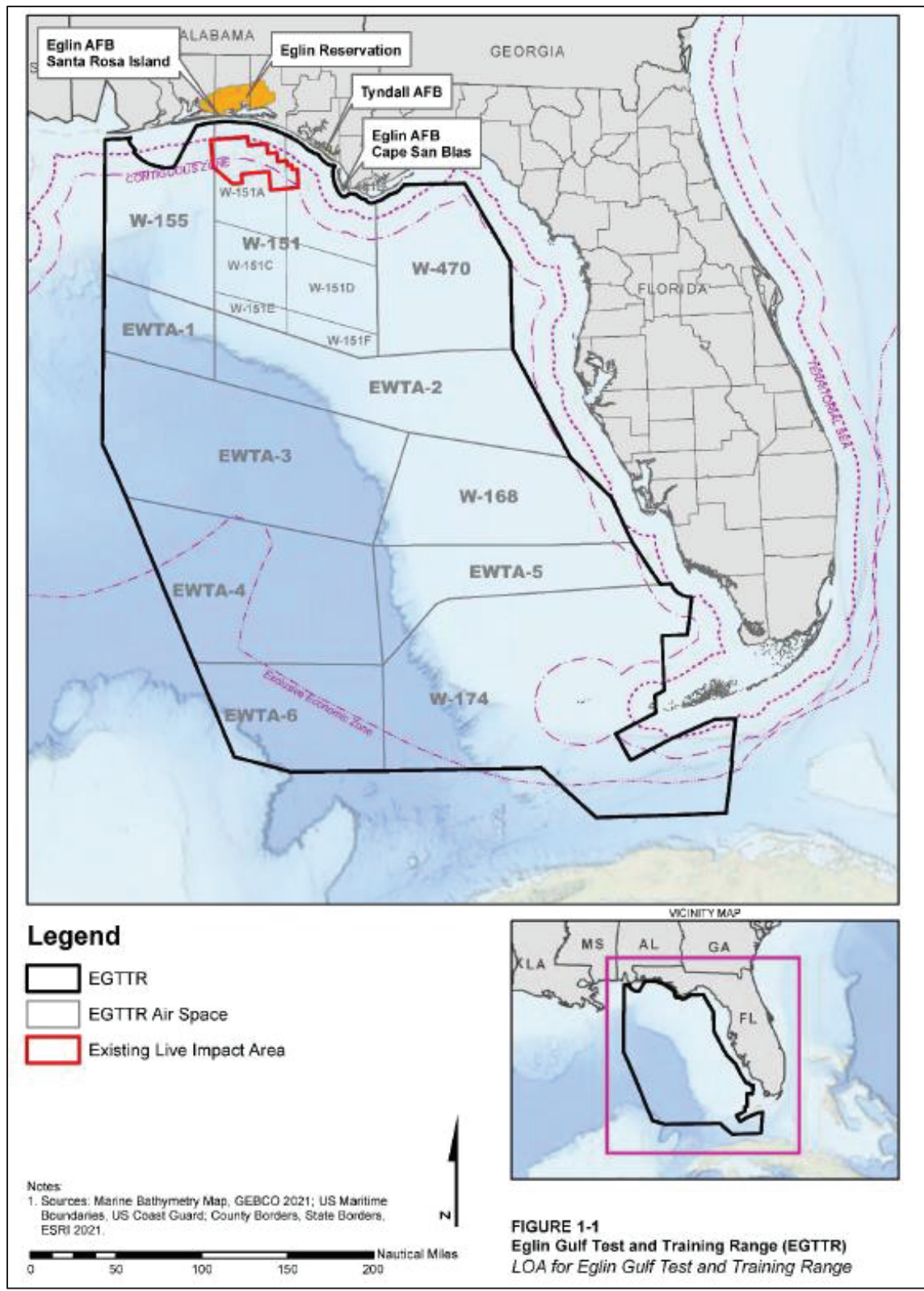


Figure 1. Map of EGTTR

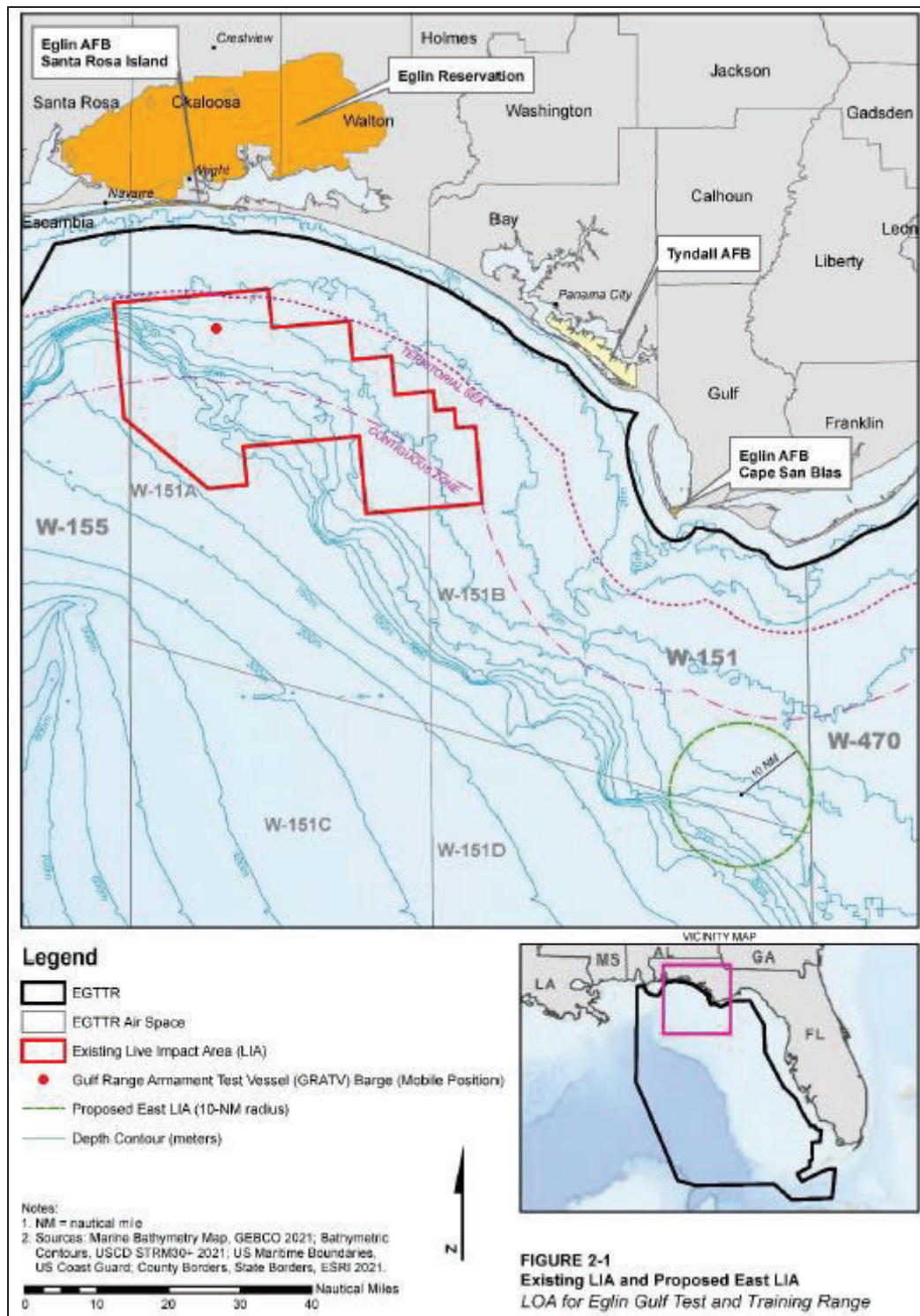


Figure 2. Existing Live Impact Area and East Live Impact Area