
Appendix B Activity Stressor Matrices

**Supplemental Environmental Impact Statement/
Overseas Environmental Impact Statement
Mariana Islands Training and Testing**

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APPENDIX B ACTIVITY STRESSOR MATRICES

This appendix contains four matrices. The first two matrices in this appendix list the Training and Testing activities that occur in the Mariana Islands Training and Testing (MITT) Study Area and their associated stressors. The third matrix shows the stressors associated with the Range Modernization and Sustainment activity. The fourth matrix lists the resources analyzed in the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS) and the stressors they are potentially affected by.

Activities and their associated stressors that have been introduced in this SEIS/OEIS are listed in blue.

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Mariana Islands Training Activity	Biological Resources														Physical Resources				Human Resources																	
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors		Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors			Cultural Resource Stressors ¹	Socioeconomic Resource Stressors		Public Health & Safety Stressors											
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	Explosions in Water	Explosions in Air	In-Water Electromagnetic Devices	In-Air Electromagnetic Devices	High-Energy Lasers	Vessels & In-Water Device Strike	Aircraft & Aerial Target Strike	Military Expended Material	Seafloor Device	Personnel Disturbance	Wires & Cables	Decelerators/Parachutes	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Hazardous Air Pollutants	Explosives and explosive by-products	Metals	Chemicals other than explosives	Other Materials	Explosives	Physical Disturbance and Strike	Accessibility	Airborne Acoustics	Physical Disturbance and Strike	In-Water Energy	In-Air Energy	Physical Interactions				
Limpet Mine Neutralization System					✓		✓		✓		✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mine Countermeasures – Mine Detection		✓					✓		✓	✓	✓	✓		✓		✓		✓		✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mine Countermeasures – Towed Mine Neutralization		✓	✓				✓	✓	✓	✓								✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mine Neutralization – Explosive Ordnance Disposal		✓			✓		✓		✓		✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Surface Ship Object Detection	✓	✓					✓		✓									✓							✓	✓		✓	✓		✓	✓		✓		
Underwater Demolition Qualification and Certification		✓			✓		✓		✓			✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓		
Underwater Mine Countermeasure – Raise, Tow, Beach, and Exploitation Operations		✓	✓				✓		✓	✓	✓	✓		✓		✓		✓		✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Strike Warfare																																				
Bombing Exercise Air-to-Ground			✓		✓		✓			✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Gunnery exercise Air-to-Ground			✓	✓	✓		✓			✓	✓					✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Missile Exercise Air-to-Ground			✓	✓	✓		✓			✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Surface Warfare																																				
Bombing Exercise		✓	✓		✓		✓		✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓													
Fast Attack Craft and Fast Inshore Attack Craft		✓		✓	✓		✓		✓		✓					✓		✓		✓	✓	✓														
Gunnery Exercise Air-to-Surface Medium-Caliber		✓	✓	✓	✓		✓		✓	✓	✓					✓	✓	✓	✓	✓	✓	✓														
Gunnery Exercise Air-to-Surface Small-Caliber		✓	✓	✓			✓		✓	✓	✓					✓	✓	✓	✓	✓	✓	✓														
Gunnery Exercise Surface-to-Surface Boat Medium-Caliber		✓		✓	✓				✓		✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Gunnery Exercise Surface-to-Surface Boat Small-Caliber		✓		✓					✓		✓					✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Gunnery Exercise Surface-to-Surface Ship Large-Caliber		✓		✓	✓		✓		✓		✓					✓		✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Gunnery Exercise Surface-to-Surface Ship Medium-Caliber		✓		✓	✓		✓		✓		✓					✓	✓	✓	✓	✓	✓	✓	✓													
Gunnery Exercise Surface-to-Surface Ship Small-Caliber		✓		✓			✓		✓		✓					✓		✓		✓	✓	✓	✓													
Laser Targeting – Aircraft			✓				✓			✓	✓					✓	✓	✓	✓	✓	✓	✓														
Laser Targeting – Ship		✓	✓					✓	✓	✓								✓																		
Maritime Security Operations		✓	✓	✓	✓		✓		✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Missile Exercise – Surface-to-Surface		✓		✓	✓		✓		✓		✓					✓	✓	✓	✓	✓	✓	✓	✓													

Table B-3: Stressors by Range Modernization and Sustainment Activity

Mariana Islands Training Activity	Biological Resources														Physical Resources				Human Resources																	
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors		Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors			Cultural Resource Stressors		Socioeconomic Resource Stressors		Public Health & Safety Stressors										
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	Explosions in Water	Explosions in Air	In-Water Electromagnetic Devices	In-Air Electromagnetic Devices	High-Energy Lasers	Vessels & In-Water Device Strike	Aircraft & Aerial Target Strike	Military Expended Material	Seafloor Device	Personnel Disturbance	Wires & Cables	Decelerators/Parachutes	Military Expended Materials - Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives and explosive by-products	Metals	Chemicals other than explosives	Other Materials	Explosives	Physical Disturbance and Strike	Accessibility	Airborne Acoustics	Physical Disturbance and Strike	In-Water Energy	In-Air Energy	Physical Interactions					
Range Modernization and Sustainment																																				
Installation and Maintenance of Subsurface Targets and Instrumentation		✓					✓		✓		✓	✓		✓		✓		✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Cultural Resources include the following Sub-Stressors: Accessibility, Cables & Wires, Pile Driving, Seafloor Devices, and Personnel Disturbance.

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