# Appendix F: Training and Testing Activities Matrices

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

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# Appendix F Training and Testing Activities Matrices

This appendix contains three matrices. The first two matrices (Table F-1 and Table F-2) in this appendix list the training and testing activities that occur in the Mariana Islands Training and Testing Study Area and their associated stressors. The third matrix (Table F-3) lists the resources analyzed in this Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement and the stressors they are potentially affected by.

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## Table F-1: Stressors by Training Activity

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| Legend | | | | | | | | | | | | | | | | | | | | | | = Decrease in number of events from 2015 Final MITT EIS/OEIS | | | | | | | = Increase in number of events from 2015 Final MITT EIS/OEIS | | | | | |
| **Major Training Exercises** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Joint Expeditionary Exercise | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Joint Multi-Strike Group Exercise (decrease for Alt 1 only) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Air Warfare (AW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Combat Maneuver (ACM) | | | ✓ | | | | ✓ | | | | ✓ | | | | | | | | | | ✓ | | ✓ | | | | | | ✓ | ✓ | | | |
| Air Defense Exercise (ADEX) | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | | | | | | ✓ | | | | | | ✓ | | ✓ | ✓ | | | ✓ |
| Air Intercept Control (AIC) | | | ✓ | | | | | | | | ✓ | | | | | | | | | | ✓ | | | | | | | | ✓ | ✓ | | | |
| Gunnery Exercise (Air-to-Air) Medium-Caliber GUNEX A-A | | | ✓ | ✓ | | | ✓ | | | | ✓ | ✓ | | | | | | | ✓ | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Gunnery Exercise (Surface-to-Air) Large-Caliber GUNEX S-A | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Gunnery Exercise (Surface-to-Air) Medium-Caliber GUNEX S-A | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Missile Exercise (Air-to-Air) MISSILEX A-A | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Missile Exercise (Surface-to-Air) MISSILEX S-A | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| **Amphibious Warfare (AW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amphibious Rehearsal, No Landing | | ✓ | | | | | | | | ✓ | | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| Marine Air Ground Task Force Exercise (Amphibious) – Battalion | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**Table F-1: Stressors by Training Activity (continued)**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Amphibious Warfare (AW) (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amphibious Assault | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| Amphibious Raid | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| Humanitarian Assistance/Disaster Relief Operations | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| Naval Surface Fire Support Exercise – Land-based target (Land) (increase Alt 2 only) | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | ✓ | | | | | | | ✓ | ✓ | | | | ✓ |
| Noncombatant Evacuation Operation | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | | | | | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | ✓ |
| Special Purpose Marine Air Ground Task Force Exercise | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Unmanned Aerial Vehicle – Intelligence, Surveillance, and Reconnaissance | | | ✓ | | | | | | | | ✓ | | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| **Anti-Submarine Warfare (ASW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Torpedo Exercise (TORPEX) – Helicopter (increase Alt 2 only) | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Torpedo Exercise (TORPEX) – Maritime Patrol Aircraft (increase Alt 2 only) | ✓ | | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Torpedo Exercise (TORPEX) – Submarine | ✓ | ✓ | | | | | | | | ✓ | | ✓ | | | | | ✓ | | | ✓ | | | | ✓ | | | | ✓ | | | ✓ | ✓ | | ✓ |
| Torpedo Exercise (TORPEX) – Surface | ✓ | ✓ | | | | | ✓ | | | ✓ | | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Tracking Exercise (TRACKEX) – Helicopter | ✓ | | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |

**Table F-1: Stressors by Training Activity (continued)**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Anti-Submarine Warfare (ASW) (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tracking Exercise (TRACKEX) – Maritime Patrol Aircraft | ✓ | | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Tracking Exercise (TRACKEX)– Submarine | ✓ | ✓ | | | | | | | | ✓ | | ✓ | | | | | ✓ | | | | | | ✓ | | | | ✓ | | | ✓ | ✓ | | ✓ |
| Tracking Exercise (TRACKEX) – Surface | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | | ✓ | | | | | ✓ | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Small Joint Coordinated ASW Exercise (Multi-Sail/GUAMEX) | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Electronic Warfare (EW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Counter Targeting Chaff Exercise – Aircraft | | | ✓ | | | | | | | | ✓ | ✓ | | | | | | | | ✓ | ✓ | | | | ✓ | | | | ✓ | | | | ✓ |
| Counter Targeting Chaff Exercise – Ship | | ✓ | | | | | | | | ✓ | | ✓ | | | | | | | | ✓ | ✓ | | | | ✓ | | | ✓ | | | | | ✓ |
| Counter Targeting Flare Exercise – Aircraft | | | ✓ | | | | ✓ | | | | ✓ | ✓ | | | | | | | | ✓ | ✓ | | ✓ | | ✓ | | | | ✓ | | | | ✓ |
| Electronic Warfare Operations | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | | | ✓ |
| **Expeditionary Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parachute Insertion | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | ✓ | | | | | | | ✓ | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Personnel Insertion/Extraction | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | ✓ | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| **Mine Warfare (MIW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Civilian Port Defense | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Limpet Mine Neutralization System | | ✓ | | | | ✓ | | | | ✓ | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |

**Table F-1: Stressors by Training Activity (continued)**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Mine Warfare (MIW) (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mine Neutralization – Remotely Operated Vehicle Sonar (ASQ-235 [AQS-20], SLQ-48) | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Mine Countermeasure Exercise – Surface Ship Sonar (SQQ-32, MCM) | ✓ | ✓ | | | | | ✓ | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | | ✓ | | | ✓ | | ✓ |
| Mine Countermeasure – Towed Mine Neutralization | | ✓ | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Airborne Mine Countermeasure – Towed Mine Detection | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mine Countermeasure Exercise – Towed Sonar (AQS-20, LCS) | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | | | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Mine Laying | | ✓ | ✓ | | | | | | | | ✓ | ✓ | ✓ | | | | | | | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Mine Neutralization – Explosive Ordnance Disposal | | ✓ | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Submarine Mine Exercise | ✓ | | | | | | | | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | ✓ | | ✓ |
| Surface Ship Object Detection | ✓ | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Underwater Demolition Qualification/Certification | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| **Strike Warfare (STW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bombing Exercise (Air-to-Ground) | | | ✓ | | | | | | | | ✓ | ✓ | | | | | | | | | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | | | |
| Gunnery Exercise (Air-to-Ground) | | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | ✓ | | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | | | |
| Missile Exercise (MISSILEX) | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | | | |

**Table F-1: Stressors by Training Activity (continued)**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Surface Warfare (SUW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bombing Exercise (Air-to-Surface) | | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gunnery Exercise (Air-to-Surface) – Medium-Caliber | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Gunnery Exercise (Air-to-Surface) – Small-Caliber | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Gunnery Exercise (Surface-to-Surface) Boat – Small- and Medium-Caliber | | ✓ | | ✓ | ✓ | | | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Gunnery Exercise (Surface-to-Surface) Ship – Large-Caliber | | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gunnery Exercise (Surface-to-Surface) Ship – Small- and Medium-Caliber | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Laser Targeting (at sea) | | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | ✓ | | | | | | | ✓ | | ✓ | | ✓ | ✓ |
| Maritime Security Operations | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | | | | ✓ | | | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Missile Exercise (Air-to-Surface) MISSILEX | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Missile Exercise (Air-to-Surface) Rocket | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Missile Exercise (Surface-to-Surface) | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sinking Exercise | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Other Training Activities** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Direct Action (Tactical Air Control Party) | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | ✓ | | | | | | | | | | | | |

**Table F-1: Stressors by Training Activity (continued)**

| Mariana Islands Training Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In-Air Explosions | In-Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Other Training Activities (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intelligence, Surveillance, Reconnaissance | | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | ✓ | ✓ | | ✓ | | | | | | | | | ✓ | ✓ | ✓ | | ✓ |
| Precision Anchoring | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | ✓ |
| Search and Rescue at Sea | | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Small Boat Attack (increase for Alt 2 only) | | ✓ | | | | | | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Submarine Navigation | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Submarine Sonar Maintenance | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | ✓ | | ✓ | | |
| Surface Ship Sonar Maintenance | ✓ | ✓ | | | | | ✓ | | | ✓ | | | | | | | | | | | ✓ | | | | | | | | | | ✓ | | |
| Underwater Survey | | ✓ | | | | | | | | ✓ | | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | | | | ✓ |
| Unmanned Aerial Vehicle Training and Certification | | ✓ | | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ | | | | | | | | ✓ | | | | |
| Unmanned Underwater Vehicle Training | ✓ | ✓ | | | | | | | | ✓ | | ✓ | ✓ | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**Legend** = Decrease in number of events from 2015 Final MITT EIS/OEIS; = Increase in number of events from 2015 Final MITT EIS/OEIS

[1] Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects
[2] Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)
[3] Vibration and shock waves from underwater explosions
[4] Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, pile driving, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles).
[5] Availability of access on the ocean and in the air
[6] Loud noises from weapons firing, in-air explosions, and sonic booms
[7] Active sonar, underwater explosions, air guns, vessel movements, mine warfare training devices, and unmanned underwater systems
[8] Sources of electromagnetic energy and lasers
[9] Interaction of Navy or Marine Corps aircraft, vessels, and equipment with general public
Note: A check indicates training and/or testing event that trigger the stressor as it applies to the specific resource.

## Table F-2: Stressors by Testing Activity

| Mariana Islands Testing Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In Air Explosions | In Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| Legend | | | | | | | | | | | | | | | | | | | | | = Decrease in number of events from 2015 Final MITT EIS/OEIS | | | | | | | | = Increase in number of events from 2015 Final MITT EIS/OEIS | | | | | |
| **NAVAL AIR SYSTEMS COMMAND** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Anti-Submarine Warfare (ASW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anti-Submarine Warfare Torpedo Test | ✓ | | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Anti-Submarine Warfare Tracking Test – Maritime Patrol Aircraft (Sonobuoys) | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| **Electronic Warfare (EW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intelligence, Surveillance, Reconnaissance ISR/EW Electronic Warfare Testing (previously named Broad Area Maritime Surveillance Testing – MQ-4C) | | | | | | | ✓ | | | | ✓ | | | | | | | | | | ✓ | | | | | | | | ✓ | | | | ✓ |
| **Surface Warfare (SUW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air-to-Surface Missile Test | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| **NAVAL SEA SYSTEMS COMMAND** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Anti-Submarine Warfare (ASW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anti-Submarine Warfare Mission Package Testing | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| At-Sea Sonar Testing | ✓ | | | | | | ✓ | ✓ | | | | ✓ | | | | | ✓ | | | | ✓ | | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Torpedo (Explosive) Testing | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Torpedo (Non-explosive) Testing | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

## Table F-2: Stressors by Testing Activity (continued)

| Mariana Islands Testing Activity | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In Air Explosions | In Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| **Electronic Warfare (EW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radar and Other System Testing | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Mine Warfare (MIW)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mine Countermeasure and Neutralization Testing | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Surface Warfare** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kinetic Energy Weapon Testing | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Vessel Evaluation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Undersea Warfare Testing | ✓ | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Other Testing Activities** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Simulant Testing | | ✓ | ✓ | | | | ✓ | | | ✓ | ✓ | | | | | | | | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | ✓ |
| **OFFICE OF NAVAL RESEARCH** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acoustic and Oceanographic Research | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**Legend** = Decrease in number of events from 2015 Final MITT EIS/OEIS; = Increase in number of events from 2015 Final MITT EIS/OEIS

[1] Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects
[2] Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)
[3] Vibration and shock waves from underwater explosions.
[4] Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, pile driving, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles).
[5] Availability of access on the ocean and in the air
[6] Loud noises from weapons firing, in-air explosions, and sonic booms
[7] Active sonar, underwater explosions, air guns, vessel movements, mine warfare training devices, and unmanned underwater systems
[8] Sources of electromagnetic energy and lasers
[9] Interaction of Navy or Marine Corps aircraft, vessels, and equipment with general public
Note: A check indicates training and/or testing events that trigger the stressor as it applies to the specific resource.

## Table F-3: Stressors by Resource

| Stressors vs. Resource | | Biological Resources | | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In Air Explosions | In Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | In-Water Energy[7] | In-Air Energy[8] | Physical Interactions[9] |
| Physical Resources | Sediments and Water Quality | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Air Quality | | | | | ✓ | | | | | | | | | | | | | | | | ✓ | | | | | | | | | | | | |
| Biological Resources | Marine Habitats | | | | | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | |
| | Marine Mammals | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Sea Turtles | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Marine Birds | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | | | |
| | Marine Vegetation | | | | | | ✓ | | | | ✓ | | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Marine Invertebrates | ✓ | | | | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Fish | ✓ | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Terrestrial | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | | | ✓ | ✓ | | | | | | | | | | | | | | | | | |
| Human Resources | Cultural Resources | | | ✓ | | | ✓ | | | | | | ✓ | ✓ | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| | Socioeconomic Resources | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | |
| | Public Health and Safety | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ |

## Table F-3: Stressors by Resource (continued)

| Stressors vs. Resource | Biological Resources | | | | | | | | | | | | | | | | | | | Physical Resources | | | | | Human Resources[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acoustic Stressors | | | | Explosives | | Energy Stressors | | | Physical Disturbance and Strike Stressors | | | | | | | Entanglement Stressors | | Ingestion Stressors | | Air Quality Stressor | Sediments and Water Quality Stressors | | | | Cultural Resource Stressors | | Socioeconomic Stressors | | | Public Health & Safety Stressors | | |
| | Sonar & Other Transducers | Vessel Noise | Aircraft Noise | Weapons Noise | In Air Explosions | In Water Explosions | In-Air Electromagnetic Devices | In-Water Electromagnetic Devices | High Energy Lasers | Vessels & In-water Devices | Aircraft & Aerial Targets | Military Expended Material | Seafloor Devices | Personnel Disturbance | Ground Disturbance | Wildfires | Wires & Cables | Decelerators/Parachutes | Military Expended Materials – Munitions | Military Expended Materials – Other than Munitions | Criteria Air Pollutants | Explosives | Metals | Chemicals | Other Materials[1] | Explosives[3] | Physical Disturbance & Strike[4] | Accessibility[5] | Airborne Acoustics[6] | Physical Disturbance & Strike[4] | Underwater Energy[7] | In-Air Energy[8] | Physical Interactions[9] |

[1] Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects
[2] Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)
[3] Vibration and shock waves from underwater explosions.
[4] Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, pile driving, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles).
[5] Availability of access on the ocean and in the air
[6] Loud noises from weapons firing, in-air explosions, and sonic booms
[7] Active sonar, underwater explosions, air guns, vessel movements, mine warfare training devices, and unmanned underwater systems
[8] Sources of electromagnetic energy and lasers
[9] Interaction of Navy or Marine Corps aircraft, vessels, and equipment with general public
Note: A check indicates training and/or testing events that trigger the stressor as it applies to the specific resource.