2 PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and alternatives evaluated in this Revised Draft EIS, including the No Action Alternative.

2.1 Proposed Action

The Proposed Action is to conduct joint military distributed operations training within the Military Lease Area on Tinian, in order to support the ongoing and evolving expeditionary requirements of U.S. Armed Forces forward-deployed to the Western Pacific, and U.S. allies and partners. Distributed operations training relies on the use of small, agile, and highly capable dispersed land, sea, air, space, and cyber detachments conducting stealthy, coordinated, independent actions from minimally developed and advanced island positions within the arc of an opponent's long-range weapons. To support the proposed distributed operations training within the Military Lease Area, the USMC would use modern technology to create a realistic virtual and physical training environment on Tinian. A communications system to support training would be established through the reuse of existing communications towers located on Tinian and Saipan, with portable sensors and emitters in the Military Lease Area. Non-live-fire offensive and defensive training actions would continue to be conducted in the Military Lease Area with an increase in existing land-based training events, including both ground and aviation training, which are the same or similar to those currently being conducted on Tinian. All training would occur within the lands leased by the military on Tinian, and in accordance with any required coordination, or new or modified agreements.

Live-fire training would be limited to two ranges that would be developed within the Military Lease Area, remote from the residential and commercial areas of Tinian (i.e., village of San Jose) (Figure 2.1-1):

- Multi-Purpose Maneuver Range – A live-fire range occupying approximately 200 acres at the northern tip of Tinian that would support movement and maneuver training and include two surface radar facilities.
- Explosives Training Range – A live-fire range on approximately 2.5 acres in the central part of the Military Lease Area for the employment of demolitions and military explosives in support of offensive and defensive training events.

Figure 2.1-1 Military Lease Area with Proposed Action Features

The following are also included in the Proposed Action to support training events (Figure 2.1-1):

- Establishment of two large (1,200 feet by 1,200 feet) and eleven small (600 feet by 600 feet) Landing Zones with associated access roads. The Landing Zones would also be used to provide staging, camping, gathering, and rendezvous areas.
- Two ammunition holding areas for temporary ammunition storage.
- Ground and aviation improvements at North Field, including establishment of a Drop Zone and the placement of an AM2 matting surface over runway Baker.
- Construction and operation of a Base Camp.
- Clearance and improvements of roads required to support military training in the Military Lease Area.
- Biosecurity facilities at the Port of Tinian and an aircraft shelter within the U.S. Air Force Divert lease area on TNI, subject to development of appropriate agreements with the Commonwealth Ports Authority.

An on-island Range Control would be established under the Proposed Action. Range Control would be responsible for scheduling training, managing range safety and emergency response, publishing announcements and notices about proposed training, coordinating communications and data requirements, range maintenance, and ensuring regulatory compliance.

During some training events, public access may be limited in order to ensure the safety of the public and service members participating in the training. However, when possible, public access to recreational beaches, tourism areas, and the Tinian Landing Beaches, Ushi Point and North Field, and Tinian North Field Historic Landmark (North Field Historic Landmark) would continue to be available to the local community and tourists even when training may be occurring. Additionally, the USMC would work with the CNMI government to identify holidays, festivals, or other important days for which public access to the Military Lease Area is needed.

2.1.1 Distributed Operations Training in a Live-Virtual-Constructive Environment

Integral to the proposed distributed operations training within the Military Lease Area would be the creation of a virtual and physical training environment on Tinian. Some of the training would occur in the virtual/physical environment and some training would only occur in the physical environment.

Distributed operations training under the Proposed Action would occur mostly in a Live-Virtual-Constructive environment where signature management (i.e., avoiding detection by radar or any other electronic systems) and stealth in the field is essential to reducing the chances of U.S. Armed Forces being detected when operating in proximity to a military opponent. Live-Virtual-Constructive training capabilities can be defined as follows:

- **Live** training involves people physically training on foot or in vehicles or aircraft using weapons systems. Visuals, opposing forces, and communications are "real" (i.e., no virtual components). In a live environment, human participants have the capacity to take information that is occurring in real-life (such as location, sight, sound, etc.) and connect it to real-life situations and conduct problem-solving. Example: Service members physically conduct reconnaissance and surveillance operations on a range with other service members who are physically present in the environment.

- **Virtual** training involves people training with simulated (virtual) systems in part or in whole. In a virtual environment, human participants make decisions that drive or control one, several, or all aspects of the simulation, but visuals and communications are computer-generated. Example: Service members physically conduct reconnaissance and surveillance operations on a range but react or respond to computer-generated data inputs and/or data received from emplaced sensors and emitters in the environment that simulate opposing forces, or report activity or effects that do not actually occur in the physical environment.
- **Constructive** training incorporates both live and virtual elements where human participants in training are presented with computer-simulated scenarios and must react to them using live and virtual input. Example: Service members conduct reconnaissance and surveillance operations on a range against a computer-controlled scenario being operated by the unit training officer.

A Live-Virtual-Constructive environment would allow training units of various sizes to work together under increasing levels of simulation to respond to threats generated by a combination of live activities, sensors and emitters, and actions by the training unit's operations command or exercise command. Engaging in electronic warfare training is a key part of the Live-Virtual-Constructive environment, where training units experience the types of electronic warfare threats that an opposing force may employ during real-world operations. Units would train to identify and disrupt the opposing force via electronic signals and learn to conceal their own electronic signatures to remain undetected. This type of electronic warfare training is best performed in locations like the CNMI that are within the territory of the U.S., allowing U.S. Armed Forces to fully control oversight and visibility of these training events.

2.1.2 Military Lease Area Training and Proposed Training Events

The entirety of the Military Lease Area would be designated as a USMC Range Complex under the Proposed Action. For scheduling purposes, the Military Lease Area would be subdivided into eight smaller training areas forming a comprehensive range complex (Figure 2.1-2). Range Control would schedule training in one or multiple discrete training areas based on training requirements. This approach to scheduling would allow the USMC to efficiently and effectively balance safe public access within the Military Lease Area when restrictions are not necessary to conduct military training.

Military training events would be consistent with existing uses. Within the Military Lease Area, certain portions would be designated as no training areas (Figure 2.1-3). These no training areas include the former Tinian Mortar range, and specific areas to protect natural and cultural resources. Areas to protect natural and cultural resources are discussed further in Section 4.4 Biological Resources and Section 4.5 Cultural Resources. The CNMI's proposed site for the Atgidon landfill is located at the intersection of Riverside Drive and 86th Street in the southwestern portion of the Military Lease Area. While not depicted in Figure 2.1-3 as a proposed restricted area, once operational, this landfill could be designated a no training area. Additionally, the military would not train in areas currently fenced and actively occupied by grazing cattle.

Figure 2.1-2 Military Lease Area Range Complex and Training Areas

Figure 2.1-3 Existing and Proposed No Training Areas within the Military Lease Area

Within the Military Lease Area, training units would conduct a variety of non-live-fire mission-specific training to include reconnaissance and surveillance, seizing an airfield, establishing an expeditionary airfield, non-combatant evacuation, humanitarian assistance/disaster relief, assault, and raids. As previously identified, many of these training events are the same or similar to those currently authorized for Tinian under prior environmental analyses. The Proposed Action would expand on that baseline, adding enhanced expeditionary airfield operations and the establishment of Landing Zones in the Military Lease Area. Except for the continued approved use of installing and utilizing bullet traps in existing structures and the development of two proposed live-fire ranges, no live-fire activities are proposed to occur elsewhere in the Military Lease Area. Visitors to the Military Lease Area may see service members in vehicles or on foot equipped with weapons to be used in non-live-fire training activities anywhere in the Military Lease Area.[4]

Prior to military units arriving for training on Tinian, all equipment, vehicles, and gear would undergo a pre-departure biosecurity cleanliness inspection. Upon the arrival of the training units to the island, an arrival biosecurity inspection would be conducted. After completion of training, each unit would be responsible for cleaning all vehicles and gear in accordance with biosecurity requirements in designated areas as discussed in Section 2.1.9.2, and ensuring the training area and ranges are in "left as found" condition. Personnel and equipment would arrive and depart for training through three possible locations: (1) Francisco Manglona Borja / Tinian International Airport (TNI), (2) Honorable Jose Pangelinan San Nicolas Commercial Port of Tinian (Port of Tinian), or (3) North Field.

Training events would vary in duration and size and could range from hours within a day involving a small squad or unit (e.g., approximately 15 to 40 personnel) to a large-scale joint exercise with multiple U.S. Armed Forces participating over a longer period (e.g., up to four weeks). Table 2.1-1 presents the small, medium, and large training event categories with the anticipated number of personnel, duration, and frequency. Training schedules are highly variable as they are dependent on individual and collective unit readiness requirements, deployment cycles, and resource availability. Small, medium, and large training events may overlap, with up to 1,000 service members participating in training on Tinian at any one time. Because training units need opportunities to operate in darkness and low-light conditions, training events could extend over a 24-hour period. Some activities may start and stop or move throughout different training areas in the Military Lease Area and may not be continuous for the entire duration listed in the table below.

[4] Live-fire training means ammunition and/or military explosives (e.g., demolition charges) would be used that could present a hazard to both participating and non-participating personnel and thus require safety boundaries to be established around them called surface danger zones. These zones may be monitored using spotters and supported by additional physical controls such as gates, fencing, warning signs, and surface radar to ensure that non-participating personnel are warned and restricted from entering these zones when events are occurring.

Table 2.1-1 Training Event Size Categories

Size of Training Event	*Approximate Number of Personnel*	*Approximate Training Duration*[1]	*Approximate Training Frequency*[2]
Small	Up to 100 personnel	1-2 weeks	Routinely occurring throughout the year
Medium	Up to 250 personnel	1-2 weeks	Once per quarter
Large	Up to 1,000 personnel	2-4 weeks	2-4 times per year

Notes: [1] Includes time before and after training events for logistics (e.g., set up and turnover activities).
[2] Small, medium, and large training events could overlap, but the number of personnel on Tinian for training at any one time would be up to 1,000.

Large training events involving up to 1,000 personnel on Tinian could include, but not be limited to, units such as a Marine Littoral Regiment, a Marine Expeditionary Unit, a U.S. Army Multi-Domain Task Force, or a battalion-size unit with or without allied forces or partner nations. An example of a large training event that has occurred on Tinian previously would be a Valiant Shield exercise. Medium training events could involve a company or multiple smaller units with up to 250 personnel. The portion of the Cope North exercises that have previously occurred in the CNMI is an example of a medium training event. If a large or medium event includes planning, execution, and military training activities across multiple domains (i.e., air, sea, and land), the at-sea portions of these events may include naval operations, carrier-based flight activities, and maritime warfare scenarios, as addressed in and covered by the *Mariana Island Range Complex EIS/OEIS* (DON 2010a) and MITT EIS/OEISs (DON 2015a, 2020). However, the land-based portion of the event that would occur on Tinian is analyzed in this Revised Draft EIS and may, for example, include such activities as helicopter operations launching to or from North Field or Landing Zones, aircraft providing maritime patrol, strike fighter aircraft arriving or departing from North Field, or the use of various unmanned aerial systems to support expeditionary and amphibious warfare objectives.

Small training events could involve a platoon or a detachment of aircraft consisting of up to 100 personnel, and some small events may include a single squadron with approximately 10 service members. An example of small training events that have previously occurred on Tinian would be a Construction Battalion (i.e., Seabees) conducting road repairs, or a platoon of Navy Sea, Air, and Land Team (i.e., SEALs) conducting training.

The on-island USMC authority for training area and range operations, referred to as Range Control, would be located within the Base Camp. Range Control would oversee and coordinate training area and range operations, ensuring operational compliance with safety protocols and USMC range policies and regulations. Additional details on the functions that would be performed by Range Control are provided in Section 2.1.8.

2.1.3 Ground Training

Ground training events on Tinian would be conducted throughout the Military Lease Area including the two new live-fire training ranges, at North Field, and along roads or other previously disturbed access paths. Portions of the ground training would be accomplished in a Live-Virtual-Constructive environment. Proposed training activities would include ground-based surveillance and reconnaissance, force-on-force, electronic warfare, military operations in urban terrain, evacuation operations, command and control, logistics, camping, land navigation, ground and

maneuver convoy training, non-combatant evacuation operations, and other non-live-fire activities. Force-on-force training would use training simulators, pyrotechnics (e.g., smoke grenade or pop-up flare), signaling devices, blanks, or Special Effects Small Arms Marking System ammunition, which is a non-lethal training ammunition that provides marking during force-on-force training. Pyrotechnics would be used only when conditions would allow safe use as identified in a Wildland Fire Management Plan for the Military Lease Area, which would be developed with the establishment of Range Control.

Vehicles used in ground training would be used on paved and unpaved roads or Landing Zones/cleared areas within the Military Lease Area. Proposed training events would also involve vehicle-mounted weapons systems involved in non-live-fire training events, including machine guns and missile rocket systems. For example, units could conduct notional (non-live-fire) training using rocket and missile systems such as the High Mobility Artillery Rocket System anywhere in the Military Lease Area training area, but the ordnance for the system would not be brought to Tinian and the actual weapon would not be fired. Training with simulated fire or blank munitions, electronic equipment, listening devices, lasers, unmanned aerial systems, and robotic equipment would occur at designated areas. Foot patrols and foot maneuvers would also occur in the Military Lease Area, except for designated no training areas or in areas that are currently fenced and actively occupied by grazing cattle.

As previously identified, live-fire training would be conducted on the two proposed ranges to be constructed within the Military Lease Area. On the Multi-Purpose Maneuver Range, training units would use live-fire to engage fixed, portable, and robotic targets spread out across four engagement or objective areas with the purpose of training in offensive and defensive operations. These objective areas would contain objects of military value such as a simulated opposing force target to be captured or neutralized by the training unit. In addition, training for explosive breaching of an obstacle would also be conducted on the Multi-Purpose Maneuver Range.

On the Explosives Training Range, explosive ordnance disposal and combat engineer personnel would conduct sustainment training that meets DoD service specifications for use and employment of explosives in various applications such as unexploded ordnance disposal, breaching operations that include explosive hazards, mine/countermine operations, and the employment of demolitions and military explosives in support of offensive and defensive operations. The construction and layout of the live-fire ranges are described in Section 2.1.6.

2.1.4 Aviation Training

As described in Section 1.3 and Section 2.1.2, at-sea effects from aviation operations, including overflights around Tinian's coastal waters extending from the high water mark seaward from Tinian, are addressed in and covered under the MITT EIS/OEISs (DON 2010a, 2015a, 2020). Aviation training operations would follow applicable procedures specified in those environmental or permitting documents. Effects from aviation training occurring over land (i.e., those that occur inland on Tinian from the mean high water mark on the beach) are evaluated in this Revised Draft EIS.

Aviation training on Tinian would focus on expeditionary airfield training operations such as combat search and rescue, insertions and extractions, and training to establish, secure, maintain, and operate an expeditionary airfield. These types of operations are austere and temporary,

occurring near combat operations to provide support functions (i.e., aircraft can be refueled, rearmed, and serviced) that allow the aircraft to return to action as fast as possible and as many times as possible in a given length of time. Such operations are a scalable event: large-scale operations would consist of one or two aircraft providing fuel and ammunition to up to four receiving aircraft, while small-scale operations would consist of a single aircraft refueling ground forces.

Aviation training would also involve landings and take-offs of aircraft at North Field and Landing Zones throughout the Military Lease Area using helicopters, fixed-wing aircraft, tilt-rotor aircraft, and unmanned aerial systems. Aircraft operations would occur in the airspace over the Military Lease Area and include conducting air assault missions, search and rescue, intelligence, surveillance, and reconnaissance, and simulated close air support. Aviation training would occasionally occur at night.

Operations at North Field would include take-offs and landings by fixed-wing transport/tanker (e.g., KC-130) and jet aircraft (e.g., F/A-18 and F-35B/C), rotary-wing aircraft (e.g., CH-53E; CH-53K), tilt-rotor aircraft (e.g., MV-22), and unmanned aircraft systems (e.g., "UASs" or drones). Proposed tilt-rotor and jet operations would include short take off and vertical landing operations. Landing operations could also periodically include the use of mobile aircraft arresting gear installed in the North Field area. This gear is a tactical cable-system used to quickly slow down and stop tailhook-equipped aircraft, similar to the system used on an aircraft carrier. Other aviation training that could occur on North Field would include parachute drops of personnel, cargo, or equipment, aviation command and control, and electronic warfare training. Fuel and supplies would be transported to North Field via aircraft (e.g., KC-130s, helicopters, or tilt-rotor aircraft) or by truck from the Base Camp. During expeditionary aviation operations, temporary fuel containment systems with an approved spill containment plan would be used. At least two fuel connection points using fuel bladders (ranging in size from 20,000 to 50,000 gallons) would be in place, with a pop-up secondary containment for spill control. Operations at Landing Zones would also include take-offs and landings by rotary-wing aircraft and tilt-rotor aircraft.

As part of expeditionary aviation training on Tinian, the USMC would use a portable metal surface known as AM2 matting (Figure 2.1-4) to support airfield operations. This system is designed for use in austere environments where permanent runways are not available. AM2 matting provides a stable surface necessary for the safe operation of certain fixed-wing and tilt-rotor aircraft that require a prepared landing area. It also enables Marines to train in the rapid deployment, maintenance, and breakdown of temporary airfields, which is a critical skill for expeditionary operations. The system supports a range of aviation operations—from small-scale refueling missions to larger-scale logistical support—while minimizing long-term environmental disturbance due to its temporary and reusable nature. The use of AM2 matting aligns with the USMC's expeditionary mission and supports the development of critical operational capabilities.

AM2 Matting

AM2 matting is aluminum plank coated with a non-skid epoxy coating and can be assembled in a brickwork pattern to form runways, taxiways, aircraft aprons, or other areas for aircraft operations and maintenance. Minimal site preparations are required prior to installation of AM2 matting planks, which may be laid over grass, pebbles, or asphalt. Water can infiltrate to the surface below the AM2 matting, and it is normally installed in the smallest area required to safely conduct training.

Installation is by hand, with each plank locking to another. Stakes would be used to secure the locked planks to the ground surface and keep them from shifting. The stakes are 5 inches in diameter and 5 feet 10 inches in length. Once installed, the matting can be safely used by heavy transport aircraft or jet aircraft.

Figure 2.1-4 AM2 Matting

AM2 matting would be used at two locations on Tinian: North Field (Figure 2.1-5) and Landing Zone 9 (refer to Figure 2.1-1 for the location of Landing Zone 9). At North Field, training units would install AM2 matting to create a temporary runway approximately 8,000 feet long and 96 feet wide on runway Baker. The matting would be secured using stakes within a 200-foot by 200-foot section at each end, and clear zones would extend approximately 500 feet from both runway ends, with vegetation maintained at a height between 7 and 14 inches. The AM2 matting would remain in place between training events and would be subject to periodic inspection and maintenance to ensure continued operational safety. At Landing Zone 9 (1,200 feet x 1,200 feet), AM2 matting would be provided as a capability for training exercises and would be installed within the cleared Landing Zone footprint (cleared of vegetation to 6-8 inches) using stakes within a 200-foot by 200-foot section at each end and would be removed based on specific training objectives.

Figure 2.1-5 Location for AM2 Matting at North Field

Additionally, a Live-Virtual-Constructive training environment would be employed to simulate real-world threats, using systems similar to other existing military and civilian radar. This would involve radars, sensors, and tracking systems such as the Navy Marine Expeditionary Ship Interdiction System, Marine Air Defense Integrated System, Light Marine Air Defense Integrated System, and Ground/Air Task Oriented Radar. Forces would analyze the gathered data to detect and classify virtual airborne threats and simulate ground-based air defense counteractions.

2.1.5 Training Infrastructure

The Proposed Action would include the construction of two live-fire ranges and the establishment of two large and eleven smaller Landing Zones in the Military Lease Area. This training infrastructure would integrate with the virtual training environment to support proposed distributed operations training and enhance particular skills or techniques. Table 2.1-2 lists representative types of weapons and ammunition that may be used on the two live-fire training ranges, the Multi-Purpose Maneuver Range and Explosives Training Range, which are further described in the following sections.

Table 2.1-2 Representative Weapons and Ammunition Proposed for Live-Fire Ranges

Weapon Type	*Details (e.g., Model, Ammunition)*
Small Arms	0.338 Norma Magnum and below, 40-millimeter training practice ammunition
Machine Guns	0.50 caliber and below, 40-millimeter training practice ammunition
Mortars	60- and 81-millimeter training practice ammunition
Rockets	84 millimeters and below training practice ammunition
Demolition	Grenades, Anti-Personnel Obstacle Breaching System, Field Expedient Bangalore, Claymore
Weapons-mounted lasers	Class 3b and Class 4
Other	Tracer rounds, battlefield illumination

2.1.5.1 Multi-Purpose Maneuver Range

The Multi-Purpose Maneuver Range would be constructed for conducting offensive and defensive training to include live-fire and non-live-fire training. The proposed range would include two surface radar towers, an ammunition holding area, and range targets and other training equipment that would be set up when the range is active and stored when not in use. The following criteria were used to identify potential alternative locations for the proposed Multi-Purpose Maneuver Range:

- Site within the Military Lease Area approximately 200 acres in size, in order to support platoon-size fire and maneuver training and accommodate the use of small arms (0.50 caliber and below).
- Away from, or minimally affected by, commercial air routes that disrupt training.
- Minimizes noise and other impacts of military operations on the local residential populations of Tinian and Saipan.
- Minimizes potential impacts to ecologically or culturally sensitive areas including the North Field National Historic Landmark.
- Maximizes the use of previously disturbed areas bounded by existing roadways to help provide clear boundaries for the proposed range.

Applying these criteria, the USMC determined the proposed Multi-Purpose Maneuver Range could only be located north of the North Field National Historic Landmark on the northern tip of Tinian (Figure 2.1-6). This location would place the Multi-Purpose Maneuver Range as far as possible from the village of San Jose to minimize potential impacts from training events on residents. It is also situated away from commercial air routes, ensuring that training activities do not interfere with civilian air traffic**.** This proposed configuration for the Multi-Purpose Maneuver Range would take advantage of the location of the 1940s mapped roads in this area and conform to the shape of the north tip of Tinian, with the northern proposed range boundary following the edge of the natural terrain. The range is designed to allow for firing from within the range boundary toward targets positioned within the range. Proposed weapons authorized for use in the Multi-Purpose Maneuver Range would include small arms, training rounds, and practice rounds. The Multi-Purpose Maneuver Range would also be certified with appropriate danger zones for use of Class 3b and Class 4 lasers. All firing activities would be conducted in accordance with the established surface danger zones (described further in Section 2.1.6 Live-Fire Range Safety Areas). Firing positions for indirect weapons, such as mortars firing inert ammunition, would be constructed on or adjacent to the Multi-Purpose Maneuver Range.

The proposed range would include four objective areas where objects of military value could be placed (e.g., fixed, portable, or robotic targets to be captured or neutralized by the training units), ranging in size from 5 to 15 acres. When not in use, targets may be stored at the Base Camp or in a storage container, similar to a shipping container or "CONEX" box at the Multi-Purpose Maneuver Range. The vegetation within each objective area would be cut and maintained at approximately six inches in height as would the vegetation around designated firing positions. Firing lanes would be cut and maintained to ensure that line-of-sight is maintained along their entirety. A cleared, unimproved road would be constructed down the center of the Multi-Purpose Maneuver Range to allow access by safety and emergency services. A cleared, unimproved emergency access road would also be established around the perimeter of the Multi-Purpose Maneuver Range, which would serve as a fire break. In addition, vegetation along Ushi Point Road and Boston Post Road near the Multi-Purpose Maneuver Range would also be cleared to establish an interim fire break. The remainder of the vegetation on the Multi-Purpose Maneuver Range would not be cleared.

One ammunition holding area is proposed for the southeast area of the Multi-Purpose Maneuver Range, to provide a secure location for holding small quantities of munitions. This ammunition holding area would be used only when training is occurring (i.e., its use is temporary). All ammunition would be brought into and removed by the training unit after each training event. The ammunition holding area would meet all requirements to be in place while ammunition is present (refer to Section 2.1.7 Ammunition Holding Areas). A Landing Zone would be established southeast of the Multi-Purpose Maneuver Range to facilitate troop insertions or other associated training activities. Water infrastructure for firefighting purposes is proposed to be installed at North Field, just south of the Multi-Purpose Maneuver Range. The system would be designed for non-potable use and include up to two new or rehabilitated groundwater wells, two 100,000-gallon aboveground water tanks, a booster pump station, and a 1,200 square foot pump house.

Figure 2.1-6 Multi-Purpose Maneuver Range and Explosive Training Range Locations

The USMC's preference is to place extensive signage around the perimeter of the Multi-Purpose Maneuver Range in lieu of fencing. Gate(s) and/or road guard(s) would be utilized to ensure public awareness of the boundaries of the surface danger zone (refer to Section 2.1.6 Live-Fire Range Safety Areas for more detail) when live-fire training is being conducted at the range. Additional physical indicators (e.g., red flag or red warning light) may be utilized to indicate the range is in use. Additional safety features would include two surface radar towers proposed for sites along the shoreline to survey the ocean surface to detect and provide an early warning should a boat, or a member of the public or other non-participant, approach the range area from offshore. These towers would directly connect with Range Control, and should an unplanned encroachment occur, all training would cease until the non-participant is out of the area. Before the surface radar towers are constructed, and to supplement their use when necessary, the USMC may also employ spotters to monitor the surface danger zone and the overlying airspace.

The sites for the proposed surface radar towers would be at Ushi Point and south of Unai Babui (Figure 2.1-7). There would be a dedicated access road for each site. Each tower would be approximately 45-feet-tall and equipped with radar, video, and/or thermal imaging equipment supported by underground power and communication utilities, along with a generator for emergency backup power. The area around each tower would be enclosed with fencing to provide security and restrict unauthorized access. A red light mounted at the top of each tower would indicate to non-participants when live-fire training is in progress.

2.1.5.2 Explosives Training Range

An Explosives Training Range would be constructed on Tinian to conduct explosives training such as unexploded ordnance disposal, breaching operations that include explosive hazards, mine/countermine operations, and the employment of demolitions and military explosives in support of offensive and defensive training.

The following criteria were used to identify potential alternative locations for the proposed Explosives Training Range:

- A 2.5-acre (1-hectare) (minimum) site within the Military Lease Area that could contain both fragmentation and non-fragmentation detonations when using explosives and munitions with a maximum net explosive weight of 40 pounds.
- Minimize potential noise impacts to the Mariana fruit bat.
- Minimize potential impacts to culturally sensitive areas, including the North Field National Historic Landmark.
- Isolated from other areas in the Military Lease Area where simultaneous training events may occur.
- Isolated from local residences to reduce potential noise and other related impacts.

Applying these criteria to the land area available in the Military Lease Area, the USMC initially identified two potential sites. Further analysis of environmental and operational factors determined that the site shown on Figure 2.1-6 is the preferred location for this range due to suitability for training and minimized impacts on the surrounding areas.

Figure 2.1-7 Surface Radar Sites

The location is also isolated from other training activities to reduce the risk of interference and ensure safe separation between concurrent operations. The proposed site is located south of the North Field National Historic Landmark, placing the Explosives Training Range away from the village of San Jose and in an area that minimizes potential impacts from training events on residents and natural resources. This includes minimizing potential noise disturbances to sensitive species such as the Mariana fruit bat. The following would be located within the 2.5-acre site: two concrete pads for staging explosives (to be used only when active live-fire training is occurring) separated by a cleared, unimproved road, a cleared area where training would be conducted and that could serve as a fire break, and an observation area.

The Explosives Training Range boundary would not be fenced but a gate would be installed on the access road to the range, which would be closed during demolition training. A road guard and the gate would be used to restrict access to the Explosives Training Range while live-fire training is occurring. Other visual indicators such as a red flag and/or warning light could also be employed to warn approaching persons that the range is in use. Range Control would control access to ensure safe operations within the surface danger zone established around the proposed Explosives Training Range (refer to Section 2.1.6 Live-Fire Range Safety Areas for more detail). Spotters would be used during training events. Should spotters observe a non-participating vehicle or person approaching the surface danger zone or an aircraft in the overlying airspace, all training in the Explosives Training Range would cease until the non-participant is out of the area. The surface danger zone and associated access restrictions would be in effect only when range operations are underway.

2.1.5.3 Landing Zones and North Field Drop Zone

The Proposed Action would establish 13 Landing Zones—2 large and 11 small—in the Military Lease Area. The Landing Zones would allow for the insertion or extraction of personnel and equipment from two to four aircraft, provide staging, field headquarters, camping, and gathering and rendezvous areas in support of distributed operations and logistics training. Aviation operations consisting of take-offs and landings would be limited to specific Landing Zones.

The following criteria were used to identify proposed alternative Landing Zone sites:

- Level ground (i.e., less than 5 percent slope).
- 1,200 feet by 1,200 feet (approximately) for large Landing Zones (to accommodate up to four tilt-rotor aircraft or helicopters).
- 600 feet by 600 feet (approximately) for small Landing Zones (to accommodate up to two tilt-rotor aircraft or helicopters).
- Capable of being cleared with minimal effort and maintained with 6 to 8 inches of grass to allow replication of reduced visibility landings.
- Accommodate east to west prevailing winds.
- Avoid wetlands and limestone forests with attendant altitude restrictions (typically must remain 1,000 feet above ground level).
- Provide proximity and clearance requirements for vertical obstructions (e.g., existing power poles).
- Minimize potential impacts to ecologically or culturally sensitive areas, including the North Field National Historic Landmark.

Additionally, an area between runways Able and Charlie would be cleared of vegetation for use as a Drop Zone. The drop zone would provide a designated area for conducting aerial delivery training operations, such as parachute or cargo drops, in support of military training objectives. It would be situated to allow for safe aircraft approaches, avoid conflicts with other training activities, and meet required size and clearance specifications. Like the Landing Zones, the drop zone would be selected and maintained to avoid ecologically or culturally sensitive areas and ensure minimal disturbance to the surrounding environment.

The following criteria were used to identify the proposed drop zone site:

- Level ground (i.e., less than 3 percent slope).
- 4,000 feet by 3,000 feet (approximately) for the drop zone, to support personnel or container delivery system drops from rotary- or fixed-wing aircraft, consistent with U.S. military aerial delivery standards.
- Capable of being cleared with minimal effort and maintained with 6 to 8 inches of grass to allow replication of reduced visibility parachute operations.
- Provide proximity and clearance requirements for vertical obstructions (e.g., existing power poles).
- Minimize potential impacts to ecologically or culturally sensitive areas, including the North Field National Historic Landmark.

Figure 2.1-8 shows the potential locations identified for large and small Landing Zones and the drop zone. Locations were selected to avoid existing agricultural use areas. Each Landing Zone would be cleared and maintained of vegetation to 6 to 8 inches. AM2 matting may be installed on Landing Zone 9 in support of aviation training objectives (refer to Section 2.1.4 Aviation Training).

2.1.6 Live-Fire Range Safety Areas

As mentioned previously and described in the following subsections, special safety areas would be designated over land and water and in airspace to safely separate non-participants from training events.

2.1.6.1 Surface Danger Zones

The USMC would establish surface danger zones to provide for safe separation of non-participating personnel and the public from live-fire training at the Multi-Purpose Maneuver Range and Explosives Training Range. Surface danger zones are three-dimensional areas consisting of the ground and airspace within which a potential ricochet or fragmentation associated with live-fire activities, to include explosives and demolitions, would be contained or to contain laser energy when lasers would be used.

These surface danger zones and associated controlled access areas would be active only during live-fire and explosive detonation training. As defined in MCO 3570.1C, *Range Safety*, danger zones represent minimum safety requirements for every weapon system and its associated ammunition/explosives. The surface danger zones that would be established at Tinian's proposed live-fire ranges are shown in Figure 2.1-9. Information and analysis on how public access would be managed when the surface danger zones are active can be found in Section 3.1 and 4.1 of this Revised Draft EIS.

Figure 2.1-8 Proposed Landing Zones and Drop Zone Location

2.1.6.2 Sea Space Safety

The USMC is proposing to obtain U.S. Army Corps of Engineers designation of a danger zone for the portion of the surface danger zone that is over coastal waters in accordance with Section 7 of the Rivers and Harbors Act of 1917, 33 C.F.R. Part 209.200 to provide for safe separation of non-participating personnel and the public who may be offshore during live-fire training at the proposed Multi-Purpose Maneuver Range. A danger zone would be plotted on nautical charts and the Notice to Mariners, published weekly by the U.S. Coast Guard, would identify when the danger zone would be active.

In addition to the publication of Notice to Mariners by the U.S. Coast Guard, the USMC in conjunction with government of the CNMI would explore forms of communication such as social media, print, and broadcast media to advise mariners, including those transiting the Saipan Channel, to avoid the over-water danger zone when live-fire activities are underway. The sea space would be open to the public when no live-fire training is occurring on the range. The surface radars and/or spotters would maintain sea space safety, allowing the Officer in Charge or Range Safety Officer to immediately cease training should a non-participating entity enter a danger zone and only continue training after the entity is outside the safety area.

2.1.6.3 Airspace Safety Protocol

The proposed action is designed to minimize impacts on air travel associated with the use of live-fire ranges. Air travel and commercial aircraft operations at Tinian and Saipan Airports would not be restricted. The USMC plans to use spotters for early detection of any approaching non-participating aircraft, ensuring the safety of civilian aircraft operating in the airspace above the ranges during live-fire training. If a non-participating aircraft is detected near or approaching the airspace over either the Multi-Purpose Maneuver Range or the Explosives Training Range during training, the Officer in Charge and Range Safety Officer would be immediately notified. All training activities would then cease until the aircraft has cleared the area.

The USMC intends to discuss its proposed airspace safety protocol for the Multi-Purpose Maneuver Range and Explosives Training Range with the FAA, which is a cooperating agency for this Proposed Action. The FAA would advise USMC whether there is a need to establish a controlled firing area airspace designation over either or both proposed ranges. A controlled firing area is airspace designated by the FAA to contain activities that, if not conducted in a controlled environment, could be hazardous to non-participating aircraft (FAA Joint Order 7400.2N, Chapter 27, June 17, 2021). Regardless of whether the FAA requires the formal designation of a controlled firing area, the USMC would immediately suspend training if any non-participating aircraft approaches the area of operations. Additionally, Range Control would coordinate with the appropriate CNMI point of contact regarding the flight schedules for the Tinian and Saipan airports in an attempt to avoid firing and explosions at live-fire ranges during these times.

Figure 2.1-9 Surface Danger Zones for Multi-Purpose Maneuver Range and Explosives Training Range

2.1.7 Ammunition Holding Areas

There would be no permanent or established areas for receipt, storage, segregation, and issuance of munitions at the Multi-Purpose Maneuver Range or the Explosives Training Range. However, there are two proposed ammunition holding areas where ammunition or other explosive material would be temporarily staged during training events, one located southeast of the Multi-Purpose Maneuver Range (AHA 1), and one located at the Base Camp (AHA 2). Explosive materials for use during training would arrive on Tinian with the units participating in each training event. The ammunition would be staged at either of the ammunition holding areas for the duration of the training exercise, in accordance with Naval Sea Systems Command Ordnance Publication 5 Volume I. During a training event, while explosive materials are present, access would be controlled through the posting of sentries, temporary fencing, or signage in affected areas. If temporary fencing is used, it would typically consist of triple-strand concertina wire, a security barrier made up of three layers of razor wire arranged in either a pyramid or stacked formation. The wire is secured in place using metal stakes driven into the ground. Temporary fencing would be installed by training units when ammunition is staged at the holding area and then removed at the end of each training event.

The USMC would establish explosive safety quantity distance arcs around each ammunition holding area. These arcs would be active on a temporary basis during training events, when ammunition is present. These safety arcs represent the prescribed minimum safe distance between sites storing or handling the explosive material and the people that could be in the area, either military participants or the public. The required separation distance is determined based on the types and amounts of explosive material that would be present and additionally considers the types of activities or uses that could occur in the area. Figure 2.1-10 depicts two separate arcs, shown as circles around each ammunition holding area, where access to the area would be controlled while explosive materials are present.

- The inner circle, called the "Public Transportation Route" arc, defines the area where access would be temporarily restricted during training events when ammunition is present.
- The larger circle, known as the "Inhabited Building Distance" arc, marks the area where people should not remain for extended periods (e.g., homes or businesses) while ammunition is present.
- There are no regularly inhabited buildings located within either of these safety zones.
- People may pass through the area between the two circles but are not allowed to stop or remain in the area while ammunition is present.
- Range Control will notify the public of these temporary restrictions during training events.

These restrictions would be communicated to the public along with other notices by Range Control.

Figure 2.1-10 Ammunition Holding Area Explosive Safety Quantity Distance Arcs

2.1.8 Range Control: Scheduling, Environmental Management, and Public Access

The primary duties of Range Control are summarized in Table 2.1-3. Direct supervision of range safety, sustainment, and management would be the responsibility of the Commanding Officer, Marine Corps Base, Camp Blaz.

Table 2.1-3 Summary of Range Control Duties and Activities

Category	*Description*
Range Safety	Coordinates range and training area safety, including the facilitation of public access to the Military Lease Area consistent with safety protocols, coordinates emergency response, coordinates explosive ordnance disposal response, conducts required inspections and investigations, provides personnel briefs, enforces occupational health and industrial hygiene regulations, certifies and recertifies ranges, develops and publishes range and training area regulations, develops and publishes the Range Control facility manual, promotes environmental sustainability, and ensures compliance with cultural and natural resource management requirements, including the development and implementation of a Wildland Fire Management Plan for the Military Lease Area.
Range Scheduling and Communications	Schedules training and internally coordinates communication and data requirements. Informs the public of live-fire times in accordance with U.S. Coast Guard and FAA regulations. Coordinates with appropriate CNMI agency points of contact regarding the flight schedules for the Tinian and Saipan airports. Provides information and responds to questions from the public on training-related noise.
Range Maintenance	Coordinates operational range clearance, unexploded ordnance clearance, maintenance of fire breaks, signage, gates, fences, cameras, communication systems, etc.
Governmental Coordination	Coordinates with CNMI government agency officials and local officials, the public, Port of Tinian and TNI, and federal regulatory agencies before, during, and after scheduled training events. This would include announcements and notices concerning the training schedule and working with local officials to avoid scheduling training events during holidays, festivals, or other special days on Tinian, and to review any lessons learned from training events, which could be used to adapt, update, and provide coordination and training processes and procedures to better assimilate training on Tinian.
Adherence to Range SOPs (Regulatory Compliance)	Manages and enforces compliance with best management practices, rules, regulations and agreements for environmental compliance, biosecurity cleanliness procedures, pollution prevention, and conservation for all training. Trained staff would ensure all training units understand and comply with applicable laws, rules, regulations, and policies that govern protection of natural and cultural resources, air emissions, drinking water, wastewater, solid waste, munitions, hazardous materials, hazardous wastes, emergency planning, and right-to-know provisions.

Legend: CNMI = Commonwealth of the Northern Mariana Islands; FAA = Federal Aviation Administration; Port of Tinian = Honorable Jose Pangelinan San Nicolas Commercial Port of Tinian; SOP = standard operating procedure; TNI = Franscisco Manglona Borja / Tinian International Airport; U.S. = United States.

2.1.8.1 Scheduling and Logistics for Use of the Military Lease Area Training Areas and Ranges

The USMC is committed to developing an approach for community access that balances the need for military readiness with safe public access to the Military Lease Area. Through Range Control, the USMC would coordinate with the CNMI and Municipality of Tinian to ensure transparent

scheduling of training events and ongoing communication about temporary access restrictions within the Military Lease Area. The scheduling process would be designed to minimize restrictions, maximizing the areas that could remain open when safety permits. The USMC would utilize adaptive management to review how well the Range Control process is working and adjust as needed.

Training units would make scheduling requests for training area and live-fire range use with Range Control using the USMC scheduling tool (Range Facility Management Support System), identifying the type of training requirements to be met and land areas within the Military Lease Area that would be needed. The subdivision of the Military Lease Area into smaller training areas would help safely separate civilian access to the Military Lease Area from active training events.

After a training unit has been scheduled for use of the Military Lease Area, Range Control would review the requested training plan and inform the training unit of the safety protocols and any environmental requirements to be followed, such as:

- Gates or guards to secure access roads where non-participants must be restricted from a training area to ensure their safety and the safety of training units.
- Logistical requirements for entering and departing the training area and ranges, including but not limited to, biosecurity measures, allowed uses, and movement of materials and equipment from the Port of Tinian and TNI to the Military Lease Area.
- Any "no training" areas that protect cultural or natural resources within the training area.

Before a unit arrives on Tinian for training, Range Control would coordinate with the training unit regarding placement of training support devices (i.e., emplacement of sensors, emitters, and other portable/mobile communications equipment and targets) throughout the Military Lease Area. This equipment is critical to the creation of a Live-Virtual-Constructive environment for the training unit since the equipment would mimic the sensors and signals of a potential enemy and provide input from friendly forces.

2.1.8.2 Monitoring of Training Events and Range Turnover

Range Control would monitor exercise activities to ensure safety regulations are followed, cultural and natural resources are protected, and wildland fire measures are observed. Each training unit would designate individuals responsible for coordinating with Range Control, specifically the Officer in Charge and the Range Safety Officer, whose responsibilities would focus solely on exercise safety. Should a medical emergency or wildland fire occur during training exercises, Range Control would notify and coordinate an appropriate response by authorized agencies.

To protect participants and the public, Range Control would ensure that everyone within a training unit understands which training areas or ranges have been scheduled for their exercise including any associated danger zones, in the event training involves live-fire activities. Access to training areas would be restricted based on ensuring the safety of non-participating military personnel or civilians. Events posing a public risk (e.g., live-fire activities) would result in limited access to specific training areas of the Military Lease Area and coastal areas within the boundaries of surface danger zones.

During live fire training, Range Control would restrict access within surface danger zones and monitor the airspace and coastal waters for safety. If an aircraft approaches the range's airspace or

boaters approach the boundaries of the surface danger zones along the northern coast of Tinian, the unit would be notified, and all live-fire activities would cease immediately. Surface radar, communications with Tinian and Saipan international airports, and range spotters would be methods used by Range Control and training units to provide early detection for approaching aircraft and boats.

Range Control would monitor the airspace and inform military aircrews about commercial or civilian aircraft in the vicinity on an ongoing basis.

Upon completion of training, Range Control would inspect the training areas of the Military Lease Area scheduled by the training unit to verify compliance with exercise plans, agreements, and environmental requirements outlined in the appropriate range control guidance documentation. The training unit would be responsible for ensuring that all military equipment maintained on Tinian for training purposes is accounted for and returned to Range Control, and that all wastes and recyclables are properly disposed of or transported off the island in accordance with established requirements.

Range Control would implement the MCO 3550.12A, *Operational Range Clearance Program*, to ensure the long-term safety and sustainability of the live-fire ranges (i.e., the Multi-Purpose Maneuver Range and Explosives Training Range) within the Military Lease Area Range Complex. This program periodically conducts thorough clearances of any remaining ammunition, dunnage, and other debris resulting from military activities on the live-fire ranges. Additionally, a Range Environmental Vulnerability Assessment would be conducted one year after each live-fire range begin operations and reassessed every five years. This program serves as a proactive and comprehensive approach to ensure the environmental sustainability of USMC operational ranges. It aims to mitigate environmental impacts from active ranges and complies with the requirements outlined in DoD Instruction 4715.14, *Operational Range Assessments*.

2.1.8.3 Public Access and Use

When scheduling training, Range Control would consider where civilian access to the Military Lease Area could be safely accommodated during training events. As described in Section 2.1.2 (Figure 2.1-2), the subdivision of the Military Lease Area into smaller training areas would allow Range Control to restrict access to discrete areas where training is occurring to maintain safety. The training schedule would be made available to the public on an ongoing basis and via multiple methods (e.g., using social media/print and broadcast media, and posting at the Tinian Mayor's Office or signage at key locations). Notices would provide information such as training areas in the Military Lease Area that would be in use, where and for what period of time access may be restricted, and any additional applicable information (e.g., may hear small arms fire or see military aircraft).

Through Range Control, the USMC would coordinate with the CNMI and Municipality of Tinian to ensure transparent scheduling of training events and ongoing communication about temporary access restrictions. The scheduling process is designed to minimize restrictions, allowing certain areas to remain open when safety permits. In some cases, the entire Military Lease Area may be accessible during training events.

The goal is to create a structured and user-friendly process for Range Control to provide advance notice of the training schedule to non-participating civilians (tourists, recreational users, those who use the Military Lease Area for subsistence and foraging, etc.) and foster a safe and well-managed environment during training events occurring within the Military Lease Area. The USMC would utilize adaptive management to review how well the Range Control process is working and would adjust as needed.

2.1.8.4 Environmental Management of the Military Lease Area

Joint Region Marianas currently manages the training area and ranges in the region, including the Military Lease Area on Tinian, consistent with the U.S. Navy's foundational pillars of environmental compliance and stewardship, including proactive management of natural and cultural resources. Adherence to these foundational pillars would ensure that environmental considerations are integrated early into decision-making to minimize the impacts of training on the people and resources of Tinian, and to preserve the use of the Military Lease Area into the future, enhance operational readiness, protect public health, and maintain and improve environmental quality within the Military Lease Area. Range Control would ensure units scheduled for training on Tinian comply with requirements that will be established in the future Record of Decision, Biological Opinion, and Programmatic Agreement.

Joint Region Marianas has developed an Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan for Tinian. These plans would be updated as needed with additional management tools developed in coordination with the U.S. Fish and Wildlife Service, National Marine Fisheries Services, CNMI Department of Land and Natural Resources, Bureau of Environmental and Coastal Quality, CNMI Historic Preservation Officer, and other federal and CNMI management agencies. The USMC will continue to support initiatives by Joint Region Marianas to reduce or eliminate pollution. Example programs include Recycling Programs for spent brass, aluminum cans, cardboard, etc., and substitution of bioremediation fluids for parts washers in lieu of solvents. Upon the conclusion of any training event in the Military Lease Area, units are required to remove all trash, debris, and ammunition dunnage (including bullet casings, packaging, etc.), restoring the land to its original state to the maximum extent possible. Range Control would be responsible for ensuring unit compliance with the standard operating procedures for cleanup and recycling of trash from training areas.

Finally, a Wildland Fire Management Plan would be developed for the Military Lease Area Range Complex. The Wildland Fire Management Plan would identify a comprehensive approach to reduce the frequency of wildland fires and lay out specific guidance, procedures, and protocols in the prevention and suppression of wildland fires. The goal of the plan would be to convey the methods and protocols necessary to avoid fires, and minimize wildland fire frequency, severity, and size.

2.1.9 Base Camp and Related Support Facilities

The current training conducted on Tinian is logistically supported by a combination of field camping, use of the Camp Tinian facilities, and rented commercial lodging. USMC proposes to provide infrastructure to include a Base Camp, an aircraft shelter, communications facilities, utilities, biosecurity facilities, and an ammunition holding area to support the expanded training that would occur on Tinian under the Proposed Action.

2.1.9.1 Base Camp and Utilities

The proposed Base Camp on Tinian would be designed to support up to 500 personnel in expeditionary field conditions during large-scale training events. While the Base Camp would serve as the primary hub for logistics, command, and sustainment functions, exercises may involve up to 1,000 personnel at one time. The additional personnel would be staged and bivouacked in other designated areas within the Military Lease Area. Outside of major training events, the Base Camp would support approximately 30 to 50 full-time personnel year-round. The following criteria were used to identify potential alternative locations for the Base Camp:

- Approximately 100 acres on relatively level ground (slope less than 5 percent). The Base Camp would only need approximately 20 acres of space for buildings, circulation or other hardscape, and storage/laydown areas. Since the layout of these Base Camp features would be determined in a future design, the disturbance of the 20 acres could occur anywhere within the 100-acre site, to allow for adjustments during design.
- Accessible by existing roads in order to facilitate the transport of personnel and equipment for training to and from TNI and the Port of Tinian.
- Close to utility connections with existing Commonwealth Utility Corporation systems.
- Outside of recognized hazard areas (e.g., existing natural hazards and proposed surface danger zones).
- Minimize potential impacts to ecologically or culturally sensitive areas.

The Base Camp would consist of up to three main buildings:

- Administration Building for operational personnel and Range Control.
- Training Support Building for training unit communication and classrooms.
- Warehouse for equipment storage.

Other facilities and services at the Base Camp would include tent pads that could accommodate 500 personnel during training events, restroom facilities, and an ammunition holding area to be used while training is occurring (AHA 2, as described in Section 2.1.7), biosecurity facilities, utilities (electrical power, potable water, wastewater, sewage treatment), and fuel storage. The Base Camp would accommodate up to 30 commercial vehicles (cars and trucks) for use by Range Control, and temporary storage and use of tactical vehicles during training events.

Two support areas are proposed to be constructed outside of the Military Lease Area, after negotiation of appropriate agreements or authorizations with the Commonwealth Ports Authority: an aircraft shelter within the U.S. Air Force Divert lease area on TNI and a biosecurity area at the Port of Tinian (Figure 2.1-1). The shelter would be sized and constructed to provide protection for aircraft from inclement weather including typhoon winds. The shelter could also be used for performing emergent minor aircraft repairs or maintenance, equipment staging, training unit mustering, or similar purposes. The biosecurity area is described below in Section 2.1.9.2.

Utilities that would be installed to support the day-to-day operations of the Base Camp include:

- A new potable water system supplied by up to four new or rehabilitated groundwater wells with a storage tank within the Military Lease Area. This proposed new water system would be owned and operated by the USMC and would be sized to meet a peak demand of a large training event of 1,000 personnel. No connection to the Commonwealth Utilities Corporation water system is proposed.
- New septic tanks, leach fields, and sanitary sewer collection pipelines. This new wastewater infrastructure would be owned and operated by the USMC and would be sized to meet the peak demand of 1,000 personnel during a large training event. Wastewater generated in other areas of the Military Lease Area would be collected in portable toilets and deposited into the Base Camp septic system.
- Electrical and communications infrastructure to support the Base Camp (including communications infrastructure), and locations for surface radar towers. The USMC would connect to the existing Commonwealth Utilities Corporation infrastructure and construct new underground utility lines.

Applying these criteria and requirements to the land area within the Military Lease Area, two sites were initially identified as capable of accommodating a Base Camp. Both sites were adjacent to and north of TNI. As the USMC was evaluating these sites, the USAGM announced the closure of its transmitting stations on Tinian and Saipan in August 2024. As described in Chapter 1, the USAGM site on Tinian is situated in the Military Lease Area on the northwest coast of the island. Used under an agreement with the DoD, the property is approximately 834 acres, with 300 acres surrounded by three strand barbed wire fences and government property signs. Approximately 110 acres are cleared and maintained for administration, warehouse buildings, and transmitting antennae. The fenced 300 acres are currently designated as a "No Training" area due to the existing use by USAGM. However, upon closure, the Tinian facility and property would revert to the DoD. Upon learning of the availability of the USAGM site and evaluation using those criteria provided above, the USMC found this site to be suitable for the Base Camp. When compared to the initial two Base Camp locations north of TNI, the USAGM site presents some significant advantages. First and foremost, the site offered the USMC the unique opportunity to reuse existing buildings, utilities, and communication towers, and a large area of cleared and maintained land to the greatest extent possible, thereby minimizing the cost and associated environmental impacts of new construction.

While the two Base Camp locations north of TNI were considered, they were not pursued due to the need for all new construction and the requirement for significant cut and fill to regrade the terrain. Additionally, these two sites overlie Tinian's Class I Aquifer Recharge Area/Groundwater Protection Zone (Northern Mariana Islands Administrative Code sections 65-130-115 and 65-140-2015). In contrast, the USAGM site is not within either a Class I or II Aquifer Recharge Area/Groundwater Protection Zone on Tinian. As a result, the USMC has identified the USAGM site, as shown on Figure 2.1-11, as the preferred location for the Base Camp, a determination with which the CNMI Bureau of Environmental Quality has concurred (B. Bearden, Bureau of Environmental and Coastal Quality, March 13, 2025).

A brief summary of the facilities, utilities, and other infrastructure that would be reused or modified to support the Base Camp at the USAGM site is presented below, with additional detail provided in Appendix C. As envisioned, Administration, Range Control, and Training Support functions would use the existing operation and administration building, and warehouse requirements would be partially met with the existing warehouse building. Other previously disturbed, cleared areas within the site would accommodate other proposed Base Camp new construction needs, including tactical vehicle parking, tent pads that could accommodate 500 personnel during training events, an open space marshaling/camping area, additional restroom facilities, an ammunition holding area (AHA 2) used while training is occurring, utilities (potable water, additional wastewater and sewage treatment), and additional fuel storage.

The ability to reuse some of the existing communication towers on the Tinian and Saipan USAGM sites eliminates the need to construct any additional communication towers within the Military Lease Area. Therefore, the proposed communication system would retain three of the existing towers on Tinian and up to four of the existing towers on Saipan. Repurposing the towers on Saipan would require the DoD to establish a new lease with the CNMI for the former USAGM Saipan site. Any facilities or infrastructure not retained for use by the USMC has been or would be removed by USAGM as part of their closure activities. Potential cumulative effects related to the demolition and closure activities to be undertaken by the USAGM are analyzed in Section 4.15 Cumulative Impacts of this Revised Draft EIS.

2.1.9.2 Biosecurity Protocols

The USMC is committed to complying with existing biosecurity protocols and expanding biosecurity facilities on Tinian to prevent the introduction and reduce the spread of invasive species. The USMC is proposing to construct a vehicle and equipment wash rack facility and brown tree snake quarantine barrier at the Port of Tinian to support the volume of equipment and vehicles arriving by vessel. Additionally, the USMC proposes utilizing a portable wash rack for equipment and vehicles arriving/departing Tinian at North Field and/or TNI. Materials and equipment to be used for construction or during training events would arrive on-island through three possible entry points: TNI, North Field, and the Port of Tinian.

At the Port of Tinian, both a wash rack and brown tree snake barrier would be constructed after obtaining an appropriate agreement or authorization from the Commonwealth Ports Authority. The site would comprise approximately 26,000 square feet of paved and fenced area with brown tree snake traps and be located within close proximity to the Port for conducting visual and canine inspections of all cargo arriving via vessel to Tinian. Permanent brown tree snake barriers on asphalt or other hardscape would be constructed and brown tree snake traps would be set up and maintained. The biosecurity facility would include a wash rack (requiring approximately 5,400 square feet of space) with an oil-water separator and water storage tanks. Connections to existing Commonwealth Utility Corporation sources for water and power at the Port of Tinian would be established to operate the wash rack. No wastewater facilities or connections would be established at the biosecurity facility. Material collected in the oil water separator would be tested prior to determining appropriate disposition. Wash water would be filtered and recycled through the wash rack system. When required to be flushed or replaced, wash water from the storage tanks would be discarded at the Base Camp septic system in accordance with all applicable laws, regulations, and permits.

Figure 2.1-11 Proposed Base Camp

A portable wash rack would be stored at the Base Camp and made available for use at either TNI or North Field in the event cargo/material arrives that does not meet cleanliness standards and for cargo/equipment departing from TNI or North Field. A water truck would supply water to the water bladder attached to the portable wash rack. The portable wash rack would be designed with an oil-water separator. Wash water from the portable wash rack would be discarded at the Base Camp septic system in accordance with all applicable laws, regulations and permits. Material collected in the oil water separator would be tested prior to determining the appropriate disposition.

Pre-departure biosecurity cleanliness inspections will be required. These inspections will occur for all military and contractor cargo (palletized cargo, containers, rolling stock, and breakbulk) before departing place of origin outside the Mariana Islands by military and contractor personnel to ensure compliance with the Armed Forces Pest Management Board Technical Guide No. 31 cleanliness standards. Redundant arrival inspections would be conducted on Tinian by qualified biosecurity staff. Pre-departure brown tree snake canine inspections and redundant arrival canine inspections would be required for all cargo/equipment departing Guam.

2.1.10 Emergency Services

Initially, USMC medical and emergency services (e.g., firefighting) personnel and equipment would be provided by the training unit and made available within the Base Camp. These assets would rotate in with the unit and integrate into the overall training support team. Over time, Joint Region Marianas and the USMC would work toward establishing agreements with the CNMI and/or Municipality of Tinian for the provision of fire and security services. Security related to the Base Camp would meet all requirements of MCO 5530.15A, *USMC Physical Security Program Manual*, to include a combination of rotational federal civilian employees, federal security services, and support by the local police department. For firefighting, non-potable water infrastructure is proposed to be constructed at North Field, as described in Section 2.1.5.1 Multi-Purpose Maneuver Range. Additionally, water trucks would be located at the Base Camp (and, when necessary, pre-staged in the Military Lease Area) and at the live-fire ranges to supply water to extinguish fires.

2.1.11 Phased Implementation of Construction and Training

Construction is expected to start soon after the Record of Decision and would involve military construction projects phased over approximately 10 to 15 years. The first 5 to 7 years of construction would include trimming and clearing of vegetation for fire breaks, establishing utility connections, instituting Range Control functions, clearing vegetation for Landing Zones, North Field improvements, developing biosecurity facilities at the Port of Tinian, and establishing the Multi-Purpose Maneuver Range including associated surface radar towers and ammunition holding areas. The remaining years would include construction of Base Camp elements (e.g., tent pads), aircraft shelter at TNI, and Explosives Training Range. The number of construction workers required would fluctuate depending upon which facilities are constructed in any given year, with the largest number of construction workers anticipated at any one time being approximately 50.

The USMC intends to continue training within the Military Lease Area before and during the construction of the Base Camp and supporting infrastructure. During this interim period, training events would include activities that are similar to those that currently occur on land under existing NEPA documents (DON 2010a, 2015b) and in accordance with associated consultations, and

authorizations. Standard operating procedures and measures that are currently used for existing training on Tinian would continue to be followed, such as biosecurity protocols, procedures for fueling military vehicles used during training, and others specified in the natural and cultural resources consultation documentation.

Training may be phased in accordance with infrastructure availability and resource allocation following the Record of Decision. This approach would allow selected activities to be initiated as facilities and supporting capabilities become available, ensuring that operational requirements for the U.S. Armed Forces are maintained throughout the development period. For example, following the Record of Decision and prior to the completion of construction projects, the USMC intends to establish Range Control functions and conduct limited live-fire training on the Multi-Purpose Maneuver Range. This interim training activity would incorporate wildland fire prevention measures and engineering controls to minimize risks and ensure safety. A range of activities within the Military Lease Area, including but not limited to the following, could be conducted:

- **Non-Live-Fire Training.** Distributed operations training activities, including ground maneuver, tactical coordination, and insertion/extraction operations, could be conducted using existing cleared areas, paved and unpaved roadways, or Landing Zones.
- **Limited Live-Fire Training.** Live-fire activities could be conducted at the Multi-Purpose Maneuver Range in a reduced capacity, provided that initial site preparations, range safety measures, and surface danger zones are established. Live-fire training would be restricted in scale, type of munitions, and frequency until range certification is achieved, once the Multi-Purpose Maneuver Ranger is fully developed. In the absence of a fully operational surface radar system, trained spotters positioned on land would monitor surface danger zones to ensure public safety during live-fire activities.
- **Aviation Training.** North Field would be available to support a range of aviation training operations, including helicopter and tilt-rotor landings, establishment of the drop zone, and logistical support activities associated with expeditionary airfield operations. Military aircraft would be able to land during training events at North Field in advance of AM2 matting being installed on runway Baker but following completion of the U.S. Air Force's planned improvements under the Agile Combat Employment program. Designated Landing Zones could also be utilized to support rotary-wing and tilt-rotor aircraft operations. Landing Zones 8 and 13 (refer to Figure 2.1-8) would be cleared first and could serve as medical evacuation landing areas. Use of these aviation facilities would be condition-based and dependent on site-specific improvements to ensure safe operations.

In addition to the activities described above, initial operating capability for infrastructure development could be supported through the use of military labor assets. Engineering units could conduct field exercises involving the clearing and grading of Landing Zones, improvement of existing roads, limited site preparation of designated portions of the Multi-Purpose Maneuver Range, and improvement of operational areas at North Field. During this period, Range Control would ensure any training scheduled complies with all environmental requirements including those resulting from consultations, formal U.S. Army Corps of Engineers rulemaking to establish the surface danger zones for the Multi-Purpose Maneuver Range (refer to Section 2.1.6.1), the installation of appropriate stormwater controls at live-fire ranges, and the provision of adequate medical support and fire protection.

2.2 Alternatives Considered and Evaluated

Two action alternatives were considered and evaluated; Alternative 1, Enhanced Training and Range Infrastructure, and Alternative 2, Training and Range Infrastructure. The No Action Alternative is also considered and evaluated. As described in Chapter 1, military readiness and training have occurred in the CNMI and on Tinian for decades, with the tempo and types of training and testing events fluctuating over time. A number of factors can influence the amount and types of training that are scheduled within any given year (e.g., new technologies, international events, advances in warfighting, doctrine and procedures, and military force structure changes).

Alternative 1 would represent an approximate 15 percent increase over existing analyzed land-based training (No Action Alternative), with proposed adjustments to the training tempo to allow for additional training capacity to address future training requirements. Alternative 2 would represent an approximate 5 percent increase over existing analyzed land-based training (No Action Alternative) and consists of the same types of activities that would occur under Alternative 1. The proposed training tempo would allow for current and planned training requirements.

Training under both Alternative 1 and Alternative 2 would focus on distributed operations in a secure and instrumented Live-Virtual-Constructive environment that would be created on Tinian. Facilities and infrastructure would be the same in both alternatives, along with the establishment of the Range Control function to provide centralized, on-island scheduling and communication for training. Table 2.2-1 describes the training activities that would occur on Tinian under the Proposed Action. Additional detail on current and proposed training is provided in Appendix C.

Table 2.2-1 Land-Based Training Activities Currently Occurring or Proposed on Tinian

Training Activity	*Description*
Expeditionary Airfield Operations at North Field	Expeditionary airfield operation training exercises are designed to enhance rapid deployment and air combat capability in austere environments. These operations establish and utilize an airfield to support rotary- and fixed-wing aircraft in forward-deployed locations.
Assault	An amphibious assault is a coordinated military operation where forces move from ships at sea to conduct an attack on a land-based objective. This type of operation is designed to secure a landing site, allowing follow-on forces to move inland and achieve strategic objectives. The land-based portion that would be covered under this Revised Draft EIS includes activities such as troop landings, vehicle deployment, maneuver operations, and securing objectives onshore. The at-sea portion of amphibious assault training falls under the MITT EIS/OEISs, and may include naval operations, ship-to-shore movements, and maritime support.

Training Activity	*Description*
Raid	A raid training exercise is a military operation designed to train forces in executing rapid, small-scale, and precision attacks on a land-based objective before withdrawing to the sea. Unlike a full-scale amphibious assault, a raid focuses on speed, surprise, and minimal engagement duration to achieve objectives such as intelligence gathering, infrastructure disruption, or enemy force neutralization. Small unit forces move swiftly for a specific short-term mission. These are quick operations with raids sized to the mission requirement and no larger. This activity may employ small unit non-live-fire operations. The land-based portion that would be covered under this Revised Draft EIS includes troop insertion, target engagement, and coordinated withdrawal. The at-sea portions of raid training would fall under the MITT EIS/OEISs and may include naval operations, ship-to-shore movements, and maritime support elements.
Anti-Terrorism/Force Protection	An Anti-Terrorism/Force Protection training event is designed to enhance the ability of military personnel to detect, deter, and respond to potential threats, ensuring the security of personnel, facilities, and assets. This training prepares forces to handle asymmetrical threats, including terrorist attacks, unauthorized intrusions, and security breaches. The land-based portion would be covered under this Revised Draft EIS and includes perimeter defense, access control procedures, active threat response, and security patrols. Training may involve simulated attacks, surveillance detection, and defensive tactics to enhance force readiness. The at-sea portions of this training would fall under the MITT EIS/OEISs, and may include maritime security operations, vessel defense drills, and threat response scenarios at sea.
Combat Search and Rescue	A Combat Search and Rescue training event prepares military forces to locate, recover, and provide medical assistance to isolated or downed personnel in hostile environments. The land-based portion would be covered under this Revised Draft EIS and includes insertion and extraction of recovery teams, tactical evasion techniques, simulated medical treatment, and engagement with potential threats. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include overwater search operations, helicopter hoist rescues, and maritime extraction procedures.
Direct Action (Combat Close Quarters and Breaching)	A Direct Action training event focuses on combat close quarters and breaching involves high-intensity operations designed to neutralize threats in confined spaces and penetrate fortified structures. The land-based portion would be covered under this Revised Draft EIS and includes close-quarters combat drills, breaching techniques, room-clearing operations, and small-unit coordination. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval operations and tactical exercises such as shipboard breach scenarios or maritime infiltration.
Embassy Reinforcement	An Embassy Reinforcement training event involves military personnel practicing the procedures for securing and defending a U.S. embassy in the event of a security threat or crisis. The land-based portion would be covered under this Revised Draft EIS and includes securing embassy perimeters, defending critical infrastructure, and coordinating evacuation operations. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval operations related to transportation and rapid deployment of security forces to the embassy location, including possible evacuation routes or maritime defense measures.

Training Activity	*Description*
Field Training Exercise	A Field Training Exercise is a comprehensive, hands-on training event that simulates real-world military operations in an outdoor environment. The exercise includes ground-based tactical drills, movement exercises, logistics operations, field combat scenarios, and force protection drills. Units may engage in terrain navigation, command and control operations, and emergency medical response training.
Humanitarian Assistance/ Disaster Relief Operations	Humanitarian Assistance/Disaster Relief operations are designed to provide immediate aid and support in the aftermath of natural or man-made disasters, focusing on the rapid delivery of essential supplies, medical care, and infrastructure repair to affected populations. These operations may include search and rescue missions, medical assistance, food and water distribution, and the restoration of critical infrastructure such as roads and utilities. The land-based portion would be covered under this Revised Draft EIS and includes establishing emergency response zones, setting up field hospitals, medical triage, and logistical hubs, and coordinating the delivery of supplies and restoration of essential services. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval deployment and the use of amphibious assault ships, aircraft carriers, and transport ships to deliver aid and provide support.
Intelligence, Surveillance, and Reconnaissance	Intelligence, Surveillance, and Reconnaissance operations are designed to gather critical information to support military decision-making and operational effectiveness. These operations involve the collection of intelligence through aerial, ground, and maritime assets, enabling real-time surveillance and reconnaissance of enemy forces, terrain, and infrastructure. The land-based portion would be covered under this Revised Draft EIS and includes ground-based reconnaissance, signal interception, visual and thermal imagery, and the deployment of various platforms such as drones, manned aircraft, and sensors. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval surveillance, maritime reconnaissance missions, and the use of unmanned aerial systems, satellite imagery, and radar systems for intelligence collection.
Land Demolitions (UXO, IED Discovery/Disposal)	Land demolitions training is designed to prepare military personnel for safely identifying and neutralizing explosive threats in the field, focusing on the discovery and disposal of unexploded ordinance and improvised explosive devices.
Marine Air Ground Task Force Exercise – Battalion	A Marine Air Ground Task Force Battalion Exercise is a large-scale training event that involves integrating various elements of the Marine Corps, including ground combat units, aviation assets, and logistics support, to conduct coordinated military operations. The exercise typically lasts 10 days and simulates real-world combat scenarios where units work together to perform missions such as offensive operations, defense, and force projection. The land-based portion would be covered under this Revised Draft EIS and includes ground maneuver operations, live-fire exercises, command and control coordination, and combat support and logistics operations. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval support for aviation and ground operations, including amphibious landings and maritime combat training.

Training Activity	*Description*
Non-combatant Evacuation Operations	Non-combatant Evacuation Operations are designed to facilitate the safe evacuation of civilians—including U.S. citizens, foreign nationals, and diplomatic personnel—from areas experiencing conflict, natural disasters, or instability. The land-based portion that would be covered under this Revised Draft EIS includes security operations at evacuation points, transportation coordination, escort missions, and managing evacuation logistics to ensure the orderly movement of civilians. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include maritime evacuation capabilities, such as the use of naval ships, helicopters, and landing craft to transport evacuees from shore to safe locations.
Parachute Insertion	Parachute operations involve training exercises designed to deploy personnel via aircraft into designated Landing Zones for tactical missions. The land-based portions, covered under this Revised Draft EIS, include drop zone preparation, parachute Landing Zone security, and ground recovery operations. The at-sea portions of parachute operations fall under the MITT EIS/OEISs, which may involve aircraft launch and retrieval for airborne personnel, and integration with naval support for logistical airlift and recovery operations.
Personnel Insertion/Extraction	Personnel insertion and extraction operations are training exercises focused on the rapid deployment and retrieval of personnel in challenging or hostile environments. The land-based portions, covered under this Revised Draft EIS, include ground-based insertion techniques, such as airborne drops, vehicle convoys, or helicopter landings. Extraction can also involve helicopter extractions and vehicles to retrieve personnel. The at-sea portions of these operations fall under the MITT EIS/OEISs, involving naval assets, such as landing craft, helicopters, and maritime support vessels, to insert and extract personnel in coastal or amphibious environments.
Marine Expeditionary Unit Exercise[1]	Typically a 10-day at-sea and ashore exercise similar to the Marine Air Ground Task Force Battalion Exercise described above. A Marine Expeditionary Unit Exercise is a training event focused on enhancing the readiness and coordination of a self-contained, rapid-response Marine Corps unit capable of deploying to crisis areas worldwide. The Marine Expeditionary Unit consists of ground, air, and logistics components, and the exercise typically includes amphibious assaults, humanitarian missions, combat operations, and force protection in diverse environments. The land-based portion that would be covered under this Revised Draft EIS includes ground maneuver operations, combat training, medical response drills, and force protection exercises. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval support and amphibious operations, such as ship-to-shore landings, helicopter insertions, and logistics supply operations. This may also involve naval reconnaissance and the use of aerial platforms to support intelligence collection.
Seize Airfield	A seize airfield exercise involves military personnel and assets conducting operations to capture and secure an airfield in a contested or hostile environment. The land-based portion covered under this Revised Draft EIS includes ground combat operations, including assault tactics, defensive perimeter establishment, and force protection after the airfield is secured. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval assets to support amphibious landings and aerial operations that help establish air superiority and logistics support for the seizure operation.

Training Activity	*Description*
UAS Operation (including Intelligence, Surveillance, and Reconnaissance, and Training and Certification)	UAS operations, including Intelligence, Surveillance, and Reconnaissance, and training and certification, involve the deployment of unmanned aircraft to perform surveillance, gather intelligence, and support military missions. The land-based portion that would be covered under this Revised Draft EIS includes target tracking, battlefield reconnaissance, and environmental monitoring. Training and certification exercises focus on launch, recovery, and operation of UAS platforms, and data collection, analysis, and reporting for intelligence purposes. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval surveillance, reconnaissance, and combat support using unmanned aerial platforms such as drones or sensor-equipped aircraft.
Urban Warfare Training/Exercise	Urban warfare training/exercises are designed to prepare military forces for operations in dense, built-up environments, such as cities or towns, where they must contend with complex terrain, civilian populations, and diverse threats. This training focuses on tactics for close-quarters combat, building clearance, hostage rescue, and crowd control in urban settings. The land-based portion that would be covered under this Revised Draft EIS includes clearing of urban training sites, and simulated combat operations in buildings, streets, and other urban structures within the Military Lease Area. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include amphibious landings or naval support operations to establish a foothold in urban areas near coastal zones, providing support for forces conducting urban operations.
Water Purification	Water purification operations are training exercises that prepare military forces to obtain and treat water in austere or combat environments where clean water is not readily available. These operations involve the use of portable or established water purification systems to convert contaminated or saline water into safe, drinkable water for military personnel and supporting operations. The land-based portion that would be covered under this Revised Draft EIS includes field water purification, where military personnel deploy mobile purification units or set up water filtration systems in training areas. The at-sea portions of this training would fall under the MITT EIS/OEISs and may include naval assets that use desalination units, reverse osmosis systems, and other technologies on ships or mobile platforms to produce potable water in maritime environments.

Legend: CJMT = CNMI Joint Military Training; IED = Improvised Explosive Device; TNI = Franscisco Manglona Borja / Tinian International Airport; U.S. = United States; UAS = Unmanned Aerial System; USMC = U.S. Marine Corps; UXO = Unexploded Ordnance.

Notes: [1] Special Purpose Marine Air Ground Task Force Exercise renamed Marine Expeditionary Unit Exercise.

2.2.1 No Action Alternative

No action means the proposed additional training and construction of associated facilities on Tinian would not take place. Analysis of the No Action Alternative is a requirement of NEPA and provides a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the Proposed Action to the anticipated impacts if the action were not implemented. Should the No Action Alternative be selected, land-based military training on Tinian would continue at the current tempo and intensity and all other actions in the CNMI that were independently evaluated in other NEPA documents and associated consultations and authorizations would still be implemented. Those independent actions include the 2010 *Mariana Islands Range Complex EIS/OEIS*, which was then updated in 2015 with the *MITT EIS/OEIS* (DON 2010a, 2010b, 2015a, 2015b), and the 2016 *Divert Activities and Exercises Final EIS* and

2020 *Tinian Divert Infrastructure Improvements Supplemental EIS* (U.S. Air Force 2016a, 2016b, 2020, 2022). Under the No Action Alternative, a Live-Virtual-Constructive environment would not be created.

Pursuant to the 2016 *Divert Activities and Exercises Final EIS*, the U.S. Air Force is constructing facilities and infrastructure at the TNI to support cargo, tanker, and similar aircraft for U.S. Air Force Divert operations, periodic exercises, and humanitarian assistance and disaster relief. Pursuant to the 2020 *Divert Infrastructure Improvements Supplemental EIS*, the U.S. Air Force is constructing a fuel pipeline and associated infrastructure at the seaport to transport fuel from the seaport to the airport. The U.S. Air Force would also improve existing roads between the seaport and airport to support U.S. Air Force Divert activities. Additionally, projects under the U.S. Air Force's Agile Combat Employment program would also continue, which would include the clearance of vegetation and restoration of the runways and other engineered surfaces at North Field. These projects would result in the North Field runways and surrounding area having the appearance of a working airfield, allowing easier ground and aircraft access to better maintained surfaces with less dense jungle vegetation in and around the immediate runway areas.

Military training within the Military Lease Area currently includes non-live-fire ground-based reconnaissance, urban terrain operations, evacuation operations, command and control, logistics, camping, land navigation, convoy training, non-combatant evacuations, amphibious landings, sniper shots into bullet traps, and expeditionary airfield operations training on North Field. In addition, some logistical aviation activities and training (take-offs, landings, refueling) are conducted at TNI (CNMI 1993 and 1999 lease amendments).

Under the No Action Alternative, an on-island Range Control does not exist. Currently, Joint Region Marianas staff on Guam schedule training events and travel to Tinian to monitor, track, and report on training events. The practice of conducting training on Tinian without centralized, on-island scheduling, and communication entity would continue.

While the No Action Alternative would meet a portion of the non-live-fire training requirements of the U.S. Armed Forces, it would not meet the purpose of and need for the Proposed Action. Specifically, this alternative would not support additional, needed training in the Western Pacific, including training in distributed operations. Consequently, forward-deployed U.S. Armed Forces would not be able to exercise evolving tactics, training, and procedures that would enable them to deter adversary aggression and respond to a threat to national security.

2.2.2 Alternative 1 – Enhanced Training and Range Infrastructure

Alternative 1 is designed to meet DoD's current and foreseeable training requirements. It would support distributed operations training in a secure and instrumented Live-Virtual-Constructive environment on U.S. soil. Under Alternative 1, land-based training events and events approved in the previous NEPA documents (DON 2010a, 2015b; U.S. Air Force 2016a, 2020) and associated consultations and authorizations would continue. Some, but not all, of these existing activities would increase under Alternative 1. In total, the training tempo under Alternative 1 would increase by approximately 15 percent over training already approved to occur on Tinian. Descriptions of training activities currently occurring or proposed on Tinian are presented in Table 2.2-1, with additional detail in Appendix C, *Training and Construction Assumptions*.

The proposed training activities described in Table 2.2-1 could be conducted during a large, medium, or small training event. Training events of various sizes may be conducted simultaneously and/or sequentially, with up to 1,000 service members total on Tinian. Alternative 1 would include aviation training at North Field and at the newly established Landing Zones throughout the Military Lease Area with new aircraft types such as the F-35 and unmanned aerial systems. Many of the training events would involve both ground and aviation components. The frequency (how often), intensity (how many personnel, aircraft, and equipment), and duration (how long) of training events would vary each year based on a number of factors including availability of aircraft and personnel, training requirements, weather, and Range Control scheduling around on-island events.

The entire Military Lease Area would be used for non-live-fire training. Two live-fire ranges and their associated infrastructure would be constructed and operated within the boundaries of the Military Lease Area, as described in Sections 2.1.5.1 Multi-Purpose Maneuver Range and 2.1.5.2 Explosives Training Range. Alternative 1 would provide enhanced expeditionary airfield and logistics training and operations at North Field and would include clearing between runways Able and Charlie for drop zone training, along with the installation of an AM2 matting to provide an expeditionary airfield surface on runway Baker. The AM2 matting on runway Baker would integrate with the existing paved airfield and be used by fixed-wing transport and jet aircraft, helicopters, and tilt-rotor aircraft to conduct expeditionary and short take off and vertical landing operations.

In addition, under Alternative 1, two large and eleven small Landing Zones are proposed for the Military Lease Area (Section 2.1.5.3). Expeditionary airfield training at Landing Zone 9 would include the installation of AM2 matting, to train on how to construct, maintain, and remove expeditionary airfield surfaces. All training events would be supported by the construction and operation of a Base Camp, as described in Section 2.1.9, with associated utilities and infrastructure. Biosecurity facilities would be used to support training, as described in Section 2.1.9.2. Alternative 1 would both clear and improve existing and historical roads. Road improvements would be conducted in accordance with current leases for the Military Lease Area, including any required coordination and agreements. The USMC would continue to operate at the airfield at TNI primarily for logistics support of training within the Military Lease Area, using cargo and transport aircraft. Aircraft requiring use of the maintenance shelter would also land and take off at TNI.

2.2.3 Alternative 2 – Training and Range Infrastructure

Alternative 2 would include all the currently authorized training events identified under the No Action Alternative and infrastructure described in Alternative 1. However, the training tempo under Alternative 2 would increase by approximately 5 percent from the baseline (No Action Alternative) land-based training already approved to occur on Tinian. The difference in training tempo is the only difference between Alternative 1 and Alternative 2.

2.2.4 Preferred Alternative

The preferred alternative has been identified as Alternative 1. Both Alternative 1 and Alternative 2 meet the purpose and need to support the ongoing and evolving training requirements of U.S. Armed Forces and U.S. allies for distributed operations training on Tinian. Alternative 1 was selected as the preferred alternative because it allows a greater tempo of training to maintain

readiness, when considering potential changes in the national security environment, fluctuations in training and deployment schedules, and anticipated in-theater demands. The increased training tempo under Alternative 1 encompasses the greatest flexibility given potential budget increases, and future training and testing requirements, while having similar environmental impacts as Alternative 2.

2.3 Management Measures

As described in Section 1.4.2 Revised Draft EIS, following the 2015 release of the Draft EIS/OEIS and in consideration of the comments received from CNMI government and agencies and the public, the USMC re-evaluated the Proposed Action to ensure the way U.S. Armed Forces prepare for future conflicts in the emerging international security environment are met, while prioritizing avoiding, minimizing, or reducing potential impacts on the community and environment. The USMC collaborated extensively with the CNMI during this time to develop the Proposed Action evaluated in this Revised Draft EIS, which is substantially smaller in impact than the original 2015 CJMT Draft EIS/OEIS. The potential management measures detailed in Table 2.3-1 are those that have been developed to address the impacts anticipated from the Proposed Action and are also based on consultations with federal and CNMI agencies responsible for ensuring compliance with resource-specific regulations; examples include, Section 106 consultation with CNMI Historic Preservation Officer and Section 7 consultations with U.S. Fish and Wildlife Service. Best management practices, standard operating procedures, or minimization measures that are inherent to the training and construction under this Proposed Action are summarized in Appendix D.

Table 2.3-1 Potential Management Measures

Resource Area	*Potential Management Measure*
Socioeconomics (Public Services) and Public Health and Safety	The DoD, through coordination with the USMC and CNMI and Tinian Leadership, would, where possible, develop agreements with key local agencies to enhance and build local fire and security capacity and infrastructure to support the DoD mission.
Utilities (Solid Waste)	The USMC would develop a solid waste management plan for military operations on Tinian within the Military Lease Area Range Complex and only dispose of waste from military operations in compliant landfills authorized to accept DoD waste.
Groundwater (Water Quality), Public Health and Safety	The USMC would install up to four (4) groundwater monitoring wells at each of the two live-fire ranges and would establish a monitoring plan in collaboration with CNMI Bureau of Environmental and Coastal Quality.
Utilities (Potable Water), Groundwater (Water Availability and Water Quality)	The USMC would fund a one-time hydrogeological study to establish baseline data that could be used to support monitoring of Tinian's aquifer.
Transportation	The DoD would maintain roadways within the Military Lease Area and key transportation routes used by the military from the Port of Tinian to the Military Lease Area.
Biological Resources (Biosecurity)	The DoD would collaborate with the CNMI and other federal regulatory partners on biosecurity and implementation of biosecurity measures.
Public Access, Socioeconomics, Public Health and Safety	The DoD would provide a variety of informational outreach methods to update the public on upcoming training events, including signage in San Jose.
Biological Resources	The DoD would implement, avoidance and minimization measures, as well as BMPs to reduce impacts to biological resources. The DoD will commit to mitigation for unavoidable impacts, as outlined in Endangered Species Act Section 7 consultations.
Utilities (Potable Water), Socioeconomics	The USMC would provide access to water for ranching needs at its tank dispensing sites.
Socioeconomics, Public Access	The DoD would work with the Marianas Visitors Authority or appropriate CNMI agency to promote vacation and/or travel opportunities for permanently stationed service members living in Guam and Japan.
Cultural Resources	The DoD would perform cultural resource mitigation as defined in the National Historic Preservation Act Section 106 Programmatic Agreement for this project.

Legend: CNMI = Commonwealth of the Northern Mariana Islands; DoD = Department of Defense; USMC = U.S. Marine Corps.

2.4 Alternatives Considered but not Carried Forward for Analysis

A number of alternatives were considered and eliminated from detailed analysis in this Revised Draft EIS because they did not meet the purpose and need for the Proposed Action. These alternatives include conducting simulated training exclusively and potential training locations within the Western Pacific but outside the CNMI. Some of these alternatives were identified based on the comments and suggestions submitted by elected officials and government agencies of the CNMI, federal agencies, and the public on the 2015 Draft EIS/OEIS. For each alternative identified below, an explanation is provided for why it was eliminated from further consideration.

2.4.1 Simulated Training Exclusively

The U.S Armed Forces continue to research new ways to provide training using simulation, but there are limits to the realism that current technology can provide. Unlike live training, computer-based training does not provide the requisite level of realism necessary to attain combat readiness. Simulation cannot replicate the inherent high-stress environment and complexity of coordination needed to combine multiple military assets and personnel into a single fighting unit. Most notably, simulation cannot mimic dynamic environments involving numerous forces or the impact of real-world physical conditions such as weather. As such, live training as part of Live-Virtual-Constructive training would still be required within the Military Use Area. Using simulation exclusively as an alternative to completely replace live training in the field would result in an unacceptable and significant decrement to training capability and ongoing readiness and does not meet the purpose of and need for the Proposed Action.

2.4.2 Other DoD Training Locations within the CNMI

The DoD currently uses another CNMI island, Farallon de Medinilla, for training. Farallon de Medinilla is a wholly DoD-controlled area and is currently used for live-fire naval and U.S. Air Force surface fire training. Access to Farallon de Medinilla is restricted to specially trained explosive ordnance personnel. The training conducted on Farallon de Medinilla would not be compatible with the training proposed under the Proposed Action due to its small size, inaccessibility, and inconsistency with aerial live-fire training. Therefore, this alternative was not carried forward for analysis.

2.4.3 Training Locations Outside of the CNMI

The USMC considered several alternatives to conduct training events in whole or in part at other areas outside of the CNMI, including foreign training ranges and ranges on the Continental U.S. The following sections discuss the evaluation of other locations.

2.4.3.1 Foreign Training Ranges in Japan and Korea

U.S. Armed Forces currently train at Allied nation ranges in the Western Pacific, specifically ranges located in Japan and Korea. These Allied nation ranges have some, but not all, of the capabilities necessary to meet the Proposed Action military training requirements. Moreover, access to these foreign-operated ranges is not assured for U.S. Armed Forces, as host nation forces have priority on their ranges.

The U.S. does not have the authority to expand and/or improve the capabilities to the ranges in these nations. Also, spectrum availability and management present challenges for U.S. Armed Forces training on these foreign-operated ranges. For example, Japan's restrictions on electronic emissions directly affect the U.S. Armed Forces ability to train to mission requirements in Strike Warfare, Electronic Combat, Anti-Air Warfare, and Anti-Surface Warfare mission areas.

Another factor affecting the training capacity and capabilities of foreign ranges is urban development. Population increases occurring in the areas surrounding the foreign-operated ranges in Japan and Korea are causing noise, light, and traffic impacts that limit the ability to conduct realistic training. In addition, foreign-operated ranges do not provide the necessary level of security U.S. Armed Forces require when training in advanced tactics and with advanced weapons systems.

These alternatives would not meet the purpose of or need for the Proposed Action and were therefore not carried forward for further analysis.

2.4.3.2 Training Ranges in Australia

The U.S. currently forward deploys a rotational force of U.S. Marines to Australia. These forces train at ranges within the Northern Territory of Australia with the Australian military. These ranges have some, but not all, of the capabilities necessary to meet the military training requirements that are included in the Proposed Action. As with Korea and Japan, access to Australian-operated ranges is not assured for U.S. Armed Forces nor do these ranges provide the necessary level of security U.S. Armed Forces require when training in advanced tactics and with advanced weapons systems. This alternative would not meet the purpose of or need for the Proposed Action and it was not carried forward for analysis.

2.4.3.3 Training Ranges in Other Western Pacific Island Nations

U.S. Armed Forces have conducted sustainment training at island nations in the Western Pacific other than the CNMI, including the Philippines and Palau. In the Philippines, joint exercises with the Filipino military are conducted under the 1998 Philippines-United States Visiting Forces Agreement. U.S. Armed Forces also conduct training in Palau, a nation with which the U.S. signed a Compact of Free Association in 1982, under which the U.S. is responsible for Palau's defense until 2044. The training conducted in these nations involves amphibious landings, close quarters tactics, demolitions, raids, parachute insertions and some live-fire missile exercises. As with other foreign nations, the continued ability of U.S. Armed Forces to conduct training in these island nations is not assured and training in advanced tactics and with advanced weapons systems is constrained by the fact that the training occurs on foreign soil. Consequently, this alternative would not meet the purpose of or need for the Proposed Action and it was not carried forward for analysis.

2.4.3.4 Training Ranges on Guam

Unlike training ranges in Japan, Australia, and other nations, Guam offers training within the U.S., resolving concerns about assured access and foreign surveillance. Forces permanently based in Guam and transiting elements, currently train on Guam at live-fire ranges, which support individual level and common skills live-fire training, and non-live-fire ranges that support company-level patrolling, jungle training, land navigation, and air ground operations. Guam does not support collective live-fire maneuver training. Convoy operations, Military Operations in Urban Terrain (MOUT)-related maneuver training and general maneuver and air ground operations also occur at Andersen South. Locating the realistic Live-Virtual-Constructive training of this Proposed Action on Guam was considered but not carried forward for further analysis for several reasons. First, locating this training on Guam would require additional land to support the proposal, which is inconsistent with the Navy's commitment that the DON would not acquire any additional lands on Guam (known as the "Four Pillars Agreement"). Second, even if the acquisition of additional land on Guam was possible, training on Tinian offers the opportunity to train in a comparatively more austere environment than offered on Guam. Developing additional ranges on Guam that would closely replicate the existing conditions on Tinian is not an efficient use of DoD resources or the limited land available on Guam. Third, this would focus DoD training ranges in one central location on Guam. This is inconsistent with the DoD desire for more dispersed

operations throughout the Western Pacific region. Therefore, this alternative would not meet the purpose of and need for the Proposed Action.

2.4.3.5 Training Ranges in Hawaii

While training areas in Hawaii would meet U.S. security requirements, four issues render this alternative infeasible. First, Hawaii is not "forward" presence when considering force employment against a near-peer threat in the Western Pacific and therefore investing in extensive ranges on Hawaii would not meet the purpose of and need for the Proposed Action. Second, the existing ranges on Hawaii do not have sufficient availability to schedule the amount of training required by the forward-deployed forces to maintain their mission-essential ground and aviation warfighting skills. Finally, land use in Hawaii is highly constrained. Acquiring additional land to develop new ranges on Hawaii would be infeasible. As such, this alternative was not carried forward for analysis.

2.4.3.6 Training Areas in Southern California

Like the situation described for Hawaii, the USMC ranges in Southern California, including USMC Air Ground Combat Center Twenty-Nine Palms and USMC Base Camp Pendleton, or the U.S. Navy's San Clemente Island Complex or Silver Strand Training Complex, are not "forward" presence for operations in the Western Pacific. This alternative would not meet the purpose of or need for the Proposed Action and it was not carried forward for analysis.

2.4.4 2015 Draft EIS/OEIS Alternatives

As discussed in Chapter 1 of this Revised Draft EIS, the alternatives identified and analyzed in the 2015 Draft EIS/OEIS received considerable adverse comments and much concern from local communities, government officials, and regulators. Since the publication of the 2015 Draft EIS/OEIS, U.S. Armed Forces capabilities and force structure have evolved and changed and the joint training deficiencies that informed the initial CJMT proposal no longer remain relevant to the emerging international security environment. Consequently, the original alternatives from the 2015 Draft EIS/OEIS were not carried forward for analysis.