

SINGLE ENVIRONMENTAL IMPACT REPORT

Multi-Purpose Machine Gun (MPMG) Range at the Known Distance (KD) Range

**Camp Edwards
Joint Base Cape Cod
Sandwich, Barnstable County, Massachusetts**

EOEEA #5834

Prepared For:

**Massachusetts Army National Guard
Joint Force Headquarters
Hanscom Air Force Base, MA 01731**



1 June 2020



DEPARTMENTS OF THE ARMY AND THE AIR FORCE
JOINT FORCE HEADQUARTERS
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1 June 2020

Ms. Tori Kim, MEPA Director
Executive Office of Energy and Environmental Affairs
MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Single Environmental Impact Report - EOEEA #5834
Multi-Purpose Machine Gun (MPMG) Range
Camp Edwards, Joint Base Cape Cod, Sandwich, Massachusetts

Dear Ms. Kim:

The Massachusetts Army National Guard (MAARNG) is pleased to present one original and one copy of a Single Environmental Impact Report (Single EIR) for the Massachusetts Military Reservation Final Area-Wide Environmental Impact Report (EIR) of the Small Arms Range Improvement Project (SAR-IP). This Single EIR is being submitted for construction of the proposed Multi-Purpose Machine Gun (MPMG) Range which will allow the MAARNG to efficiently attain required training and weapons qualifications requirements within Massachusetts and provide Soldiers and units the necessary modernized training capabilities to be effective in contemporary and future operating environments.

The Notice of Project Change (NPC) submitted to MEPA on 31 January 2020 was prepared in accordance with the Secretary's Certificate dated 16 July 2001. Certain projects and activities at Camp Edwards are subject to a Special Review Procedure (SRP) created and jointly executed by Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) and the MAARNG so that the process under MEPA could be used more efficiently for the long-term use of Camp Edwards. The NPC Certificate was issued on 19 March 2020 allowing for the preparing of the Single EIR.

Given the importance of the MPMG Range to the future operation and viability of the base, the MAARNG has taken its responsibilities under Massachusetts regulations extremely seriously. Therefore, the MAARNG has been working in close cooperation over the past two years with the Massachusetts Natural Heritage and Endangered Species Program (NHESP) to determine mitigation of rare species habitat impacts as a result of the MPMG Range project. In addition, MAARNG has been in communication with the Massachusetts Department of Environmental Protection (MassDEP), Environmental Management Commission (EMC), and United States Environmental Protection Agency (USEPA) relative to this project.

The MAARNG has established a mutually respectful relationships with these agencies and the four towns in which Camp Edwards resides (Bourne, Falmouth, Mashpee, Sandwich). The MAARNG meets regularly with the EMC and its two supporting councils, the Science Advisory Council (SAC) and the Community Advisory Council (CAC) including pre-application meetings, development of presentations, public meeting facilitation, outreach, and informal and formal consultations.

The MAARNG is proposing to construct and operate a MPMG Range (the Project) to be constructed at the existing 600-yard Known Distance (KD) Range that was previously used for training activities. The proposed Project change consists of design plans for the MPMG Range. This single EIR is being submitted to satisfy the requirements of MEPA review to document a material change to a project. The MAARNG asserts that the MPMG Range project does not represent a significant change. As greater than 50 acres will be altered for this project, an EIR is required.

The Single will be filed with MEPA on 1 June 2020 in paper and electronic formats. The Single EIR will be circulated to all parties who commented on the NPC, to all State agencies from which a permit or approval is required, and to any party specified in 301 CMR 11.16 of the MEPA regulations. The Single EIR will be made available for public review as well as mailed to an extensive circulation list including local stakeholders and agencies.

Due to COVID-19 restrictions, the Single EIR will be sent electronically to those on the circulation list wherever possible and those on the list may request a paper copy if preferred. The Single EIR will be made available for public review at Bourne, Falmouth, Mashpee, and Sandwich public libraries (once re-opened from the temporary COVID-19 shutdown).

The Single EIR will also be available on line on the MAARNG Environmental and Readiness Center (E&RC) publications page at <https://www.massnationalguard.org/ERC/publications.htm> and copies will be on file at the Bourne, Sandwich, Falmouth, and Mashpee public libraries. Additional copies of the Single EIR can be obtained by emailing Ms. Kathryn Barnicle of AECOM at Kathryn.barnicle@aecom.com or by calling Katie at 508-833-6953.

Sincerely,



Keith J. Driscoll
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Acronyms

ABC	Asphalt, Brick and Concrete	IAGWSP	Impact Area Groundwater Study Program
ACM	Asbestos Containing Material	IMT	Individual Movement Technologies
AFCEC	Air Force Civil Engineer Center	INRMP	Integrated Natural Resources Management Plan
ANF	Asbestos Notification Form	ITAM	Integrated Training Area Management
ANG	Air National Guard	IWFMP	Integrated Wildland Fire Management Plan
ANGB	Air National Guard Base	JBCC	Joint Base Cape Cod
AR	Army Regulation	KD	Known Distance
ARNG	Army National Guard	LSD	Low sulfur diesel
C&D	Construction and Demolition	MA ANG	Massachusetts Air National Guard
CAA	Clean Air Act	MAARNG	Massachusetts Army National Guard
CAC	Community Advisory Council	MADFW	Massachusetts Division of Fisheries and Wildlife
CACI	Clean Air Construction Initiative	MassDEP	Massachusetts Department of Environmental Protection
Camp Edwards	Camp Edwards Training Area	MassWildlife	Massachusetts Division of Fisheries and Wildlife
CEQ	Council on Environmental Quality	MCP	Massachusetts Contingency Plan
CFR	Code of Federal Regulations	MEC	Munitions and Explosives of Concern
CMP	Conservation and Management Permit	MEPA	Massachusetts Environmental Policy Act
CMR	Code of Massachusetts Regulations	MESA	Massachusetts Endangered Species Act
DoD	Department of Defense	MG	Managed Grassland
DPF	Diesel particulate filters	MGL	Massachusetts General Laws
DTA	Double Target Arms	MILCON	Military Construction
E&RC	Environmental & Readiness Center	MIT	Moving Infantry Target
EA	Environmental Assessment	MMR	Massachusetts Military Reservation
EIR	Environmental Impact Report	MPMG	Multi-Purpose Machine Gun
EMC	Environmental Management Commission	NEPA	National Environmental Policy Act
EOEEA	Executive Office of Energy and Environmental Affairs	NGB	National Guard Bureau
EPS	Environmental Performance Standards	NGVD	National Geodetic Vertical Datum
ESA	Federal Endangered Species Act		
FCRA	Forest Canopy Reserve Areas		
FNSI	Finding of No Significant Impact		
FY	Fiscal Year		
GHG	Greenhouse Gas		
GW	Groundwater		

NHESP.....	Natural Heritage and Endangered Species Program	SONMP	Statewide Operational Noise Management Plan
NPC.....	Notice of Project Change	SOS.....	Scrub Oak Shrubland
NPDES.....	National Pollution Discharge Elimination System	SPCC	Spill Prevention Control and Countermeasure Plan
OHM	Oil and Hazardous Material	SRP	Special Review Procedure
OMMP	Operations, Maintenance, and Monitoring Plan	STEP.....	Status Tools for Environmental Program
PPOF.....	Pitch Pine Oak Forest	SVL.....	Solider Validation Lane
PPSO.....	Pitch Pine Scrub Oak	SWPPP.....	Storm Water Pollution Prevention Plan
RCRA.....	Resource Conservation and Recovery Act	TBD	To Be Determined
ROCA	Range Operations Control Area	The Reserve	Upper Cape Water Supply Reserve
RTLA.....	Range and Training Land Assessment	UAS	Unmanned Aircraft Systems
SAC.....	Science Advisory Council	ULSD.....	Ultra Low Sulphur Diesel
SAIA	Sikes Act Improvement Act	USAF	US Air Force
SAR.....	Small Arms Range	USAPHC	US Army Public Health Center
SAR-IP.....	Small Arms Range- Improvement Plan	USC	US Code
SAT	Stationary Armor Target	USCG	US Coast Guard
SDWA.....	Safe Water Drinking Act	USEPA.....	US Environmental Protection Agency
SDZs	Surface Danger Zones	USFWS.....	US. Fish and Wildlife Service
SIP.....	State Implementation Plan	UXO	Unexploded Ordnance
SIT	Stationary Infantry Target	WSIT	Widening Stationary Infantry Target
SMRC	Special Military Reservation Commission		

Summary Table and Definitions

Terms	Acres	Description
Joint Base Cape Cod (JBCC)	20,554	Full scale, joint-use base home to five military commands training for missions at home and overseas, conducting airborne search and rescue missions, and intelligence command and control.
Camp Edwards	19,410	Camp Edwards makes up the majority of JBCC and includes multiple training areas most of which is located within the Upper Cape Water Supply Reserve.
Camp Edwards Northern Training Area	14,410	Major training area for National Guard Soldiers in the northeast where they practice maneuvering exercises, bivouacking, and use the small arms ranges.
Upper Cape Water Supply Reserve	13,352	Established by Chapter 47 of the Acts of 2002 as public conservation land dedicated to: water supply and wildlife habitat protection; the development and construction of public water supply systems, and, use and training of military forces of the Commonwealth; provided that, military use and training is compatible with natural resource purposes of water supply and wildlife habitat protection..
Cantonment Area	5,000	The southern developed area of the JBCC with roads, utilities, office and classroom buildings, training support areas, and housing. Numerous Federal, State, and county entities are located here as well as the airfield.
Impact Area	2,200	Formal off-limits designation due to unexploded ordnance safety regulations. Area surrounds the Central Impact Area (below). An additional 1,600 acres are off-limits due to ordnance hazard, but not officially designated Impact Area.
Central Impact Area	330	This areas is located within the Impact Area and was the primary target area for artillery, mortar, and other firing activities from the early 1900s to 1997.
KD Range	38.5	Existing inactive range where the MPMG Range is proposed comprised of 36.0 acres of Managed Grasslands (previous mitigation for rare species impacts from another project) and 2.5 acres of ROCA.
MPMG Range Footprint	199.0	MPMG Range including 800 meter and 1,500 meter lanes and the ROCA.
MPMG Range-Specific Firebreak Footprint	10.0	Firebreaks to be constructed associated with the MPMG Range; including new roads and expansion of existing roads.
Project Footprint	209.0	MPMG Range Footprint plus MPMG Range-Specific Firebreak Footprint
Range Operations Control Area (ROCA)	2.5	Contains the Range Control Tower, Ammunition Storage Building, Covered Bleachers, and other support features (included in MPMG Range Footprint).
MPMG Range Rare Species Take Footprint	206.5	Project Footprint minus the ROCA acreage <ul style="list-style-type: none"> • 36.0 acres (existing) Managed Grassland at KD Range • 170.5 acres of Pine Barrens to be cleared (includes firebreaks)
Acres of Trees to be Cleared	170.5	Includes pine barrens and firebreaks.

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March 19, 2020

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME : Final Area-Wide Environmental Impact Report for
Massachusetts National Guard Properties at the
Massachusetts Military Reservation (MMR) – MPMG
Range
PROJECT MUNICIPALITY : Sandwich
PROJECT WATERSHED : Cape Cod
EEA NUMBER : 5834
PROJECT PROPONENT : Massachusetts Army National Guard (MA ARNG)
DATE NOTICED IN MONITOR : February 10, 2020

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) and hereby determine that this project **requires** the preparation of a Supplemental Environmental Impact Report (EIR). The Massachusetts Army National Guard (MA ARNG; Proponent) submitted an Expanded NPC which described the construction and operation of a Multi-Purpose Machine Gun (MPMG) Range at Camp Edwards and included a request that I allow a Single Supplemental EIR to be prepared in lieu of a Draft and Final Supplemental EIR. Based on review of the Expanded NPC, the Proponent may submit a Single EIR in accordance with the limited Scope included in this Certificate.

Project Background and MEPA History

The Massachusetts Military Reservation (MMR)¹ Master Plan was designated as a “major and complicated” project and a Special Review Procedure (SRP) was established as further detailed in the Certificate on the Notice of Project Change and the Major and Complicated Procedure (issued July 10, 1997). A Certificate on the Draft Area-Wide EIR was issued on October 22, 1999 and a Certificate on the Final Area-Wide EIR for the MMR Master Plan was issued on July 16, 2001. Several NPCs were subsequently filed and Certificates were

¹ The MMR was renamed the Joint Base Cape Cod (JBCC) in 2013.

issued for NPCs on: proposed upgrades at Bravo, Echo and Sierra Ranges (March 24, 2006); a return to the use of lead-bullet ammunition at MMR (November 9, 2006); changes in the Small Arms Range Improvement Project (SAR-IP) (August 10, 2007); installation of an eXportable Combat Training Capability (XCTC) system (January 22, 2010); Soldier Validation Lane (SVL) training activities (May 6, 2011), and construction of a Unit Training Equipment Site (UTES) facility (February 22, 2013). The November 9, 2006 Certificate on the NPC required a Supplemental EIR which was submitted in August 2012. A Certificate on the Supplemental EIR was issued on September 29, 2012 which found the Supplemental EIR was adequate. The remaining NPCs did not require further MEPA review.

The MMR Master Plan divided the property into two separate sections referred to as the Cantonment Area and Camp Edwards Training Area. The 5,000-acre Cantonment Area (referred to as the southern 5,000 acres in the Final EIR) was identified for new military and civilian development projects. Administrative buildings, barracks, vehicle and equipment maintenance shops, housing, and runways are located in this area. The Camp Edwards Training Area (referred to as the northern 15,000 acres in the Final EIR) was set aside for permanent protection of water supplies, wildlife habitat, and open space, while allowing compatible military training, including a small arms range. The Camp Edwards Training Area is coterminous with the Upper Cape Water Supply Reserve Area (described below). The Final EIR proposed a set of Environmental Performance Standards (EPS) which guide both military and civilian users in the protection of natural, cultural, and groundwater resources within the Camp Edwards Training Area. The Certificate on the Final EIR required MEPA review for future projects within the Camp Edwards Training Area that exceed certain thresholds, including “lowered thresholds” for activities involving any new impervious area, vegetative clearing or other land alteration (as detailed in the Informational Supplement to the FEIR, dated August 15, 2001).

Project Change

The proposed project change, as described in the current NPC, includes the construction of an eight lane MPMG Range at the site of the existing Known Distance (KD) small arms range. The MPMG will have six lanes (each 800 meters long) that are 25 meters (m) wide at the firing line and extend to 100 m wide at a distance of 800 m. The middle two lanes will extend an additional 700 meters to a total length of 1,500 meters to accommodate 0.50 caliber rifles. The range has been designed and will be designated as a copper ammunition-only range. The project also includes construction of a series of structures collectively referred to as Range Operations and Control Areas (ROCA); including: range control tower (657 sf), range operations and storage facility (800 sf), ammunition breakdown building (185 sf), bleacher enclosure (726 sf), range classroom building (800 sf), and covered mess shelter (800 sf). The project also includes installation of strategic firebreaks along the exterior of the MPMG range to reduce the risk of a large wildfire and assist in managing the fighting of fires. Installation of the firebreaks will require 10 acres of new gravel road (approximately 4.5 miles) and 77 acres of mowed firebreak edge.

The purpose of the project is to construct a mission required MPMG Range to allow the MA ARNG to efficiently attain required training and weapons qualifications requirements within the state of Massachusetts. Currently, the three closest MPMG ranges are located at Camp Ethan Allen in Vermont (over 270 miles away), Fort Dix in New Jersey (over 300 miles away), and Fort Drum in New York (over 370 miles away). The project will support higher quality, mission-

essential training activities at Camp Edwards, while limiting the need for travel to out-of-state training sites and the attendant loss of critical training time and resources.

Project Site

The project is proposed at Camp Edwards, which encompasses approximately 15,000 acres of the 20,554-acre Joint Base Cape Cod (JBCC; formerly known as the MMR). Camp Edwards is located within Bourne and Sandwich. The land that comprises Camp Edwards is owned by the Commonwealth of Massachusetts and is in custody of the Massachusetts Division of Fish and Game (DFG)'s Division of Fisheries and Wildlife (DFW), which has leased the property to the Department of the U.S. Army. The Army, in turn, licensed the land to the MA ARNG for training. The current lease held by the Army expires in 2051. The MPMG Range therefore will be constructed on state-owned land that is leased to the Federal government. The MPMG Range is proposed at the site of the existing 600-yard KD Range which has a footprint of 38.5 acres (36 acres of managed grasslands and 2.5 acres of supporting range control area). The footprint of the MPMG Range is comprised of the existing KD Range and immature pitch pine, scrub oak, shrubland, pitch pine oak forest, and pitch pine scrub oak. The project site (and 98% of Camp Edwards) is located within Priority and/or Estimated Habitat as mapped by DFW's Natural Heritage and Endangered Species Program (NHESP).

Permits and Jurisdiction

The MPMG Range is undergoing MEPA review and requires a NPC because it consists of a material change to the project prior to the taking of all Agency Actions. The project change exceeds the mandatory EIR threshold at 301 CMR 11.03(1)(a) because it will result in the direct alteration of 50 or more acres of land (209 total acres). The project also exceeds ENF thresholds for land and state-listed rare species as specified in Sections 11.03(1)(b)(1) and 11.03(2)(b)(2) of the MEPA regulations. The project as proposed, while consistent with the uses envisioned in the Final EIR Master Plan, exceeds the "lowered thresholds" related to the clearing of two or more acres of vegetation and construction of new buildings and structures of more than 500 sf.

The project requires review by the Environmental Management Commission (EMC), which was established by Massachusetts Law (Chapter 47 of the Acts of 2002). It also requires a Conservation and Management Permit (CMP) from the Natural Heritage and Endangered Species Program (NHESP).

The project is being implemented by the MA ARNG as part of its training activities at MMR-Camp Edwards. Because this project is being undertaken by a State Agency, MEPA jurisdiction is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Environmental Impacts and Mitigation

The project will alter 209 total acres of land, of which approximately 38.5 acres has been previously altered (KD Range), and will result in a "Take" of several state-listed rare species. The project will reduce impervious area by 0.8 acres. Measures to avoid, minimize, and mitigate environmental impacts include: construction-period best management practices (BMPs), permanent preservation of 310 acres of forest, implementation of species-specific protection and

monitoring plans, active habitat management activities, and construction of firebreaks and prescribed burnings to reduce the risk of wildfires.

Single EIR Request

The Expanded NPC includes a request to file a Single Supplemental EIR and was subject to an extended comment period. Consistent with the criteria for granting a Single EIR, the Expanded NPC provided a detailed project description, a baseline for evaluating environmental impacts and a comprehensive alternatives analysis. The Expanded NPC identified how the project is designed to achieve consistency with regulatory standards and how measures will be taken to avoid, minimize and mitigate project impacts.

Comments from State and Regional Agencies do not identify any significant impacts that were not reviewed in the Expanded NPC, note deficiencies in the alternatives analysis, or identify additional alternatives for further review.

Review of the Expanded NPC

The Expanded NPC included a description of the site's history, the project change, and potential environmental impacts, provided associated project plans, and identified measures to avoid, minimize, and mitigate project impacts. It included a draft Conservation and Management Permit application (Appendix B), Noise Assessment (Appendix D), and a Greenhouse Gas (GHG) analysis (Appendix H). The Expanded NPC identified agency coordination that has occurred since 2015 regarding the project, including meetings with the Environmental Management Commission (EMC) and its advisory councils (the Community Advisory Council and the Science Advisory Council) and NHESP. Comments from the EMC acknowledge the Proponent's ongoing consultation and indicate that the project design has incorporated all comments they provided during this time. Prior to submitting the expanded NPC, letters soliciting feedback were also sent to adjacent municipalities, state and federal agencies, and Native American tribes as part of the Federal National Environmental Policy Act (NEPA) process. The Expanded NPC indicated that three comment letters were received (from the EMC, US EPA, and DCR) as part of the NEPA process and were used to assist in the preparation of the document.

The Expanded NPC described the orders, acts, and regulations that govern activities at Camp Edwards, including but not limited to: MA Executive Order (EO) 414: *Establishing the Upper Cape Water Supply Reserve and Commission*; MA EO 433: *Establishing the Environmental Management Commission (EMC) of the MMR*; Chapter 352 of the Acts of 2000 which created the Upper Cape Regional Water Supply Cooperative; Chapter 47 of the Acts of 2002 which created the Upper Cape Water Supply Reserve Area; and the Memorandum of Agreement (MOA) between the Commonwealth and the U.S. Army and National Guard Bureau which established a long-term management structure for the Camp Edwards Training Area.

Consistency with Chapter 47 of the Acts of 2002

The project is located within the Upper Cape Water Supply Reserve (The Reserve), created by Chapter 47 of the Acts of 2002. The Reserve is coterminous with the Camp Edwards Training Area. The Reserve is public conservation land dedicated to the natural resource

purposes of water supply and wildlife habitat protection and the development and construction of public water supply systems, and the use and training of the military forces of the Commonwealth; provided that, such military use and training are compatible with the natural resource purpose of water supply and wildlife habitat protection. The MPMG Range, if properly managed, appears to be consistent with the intent of Chapter 47 and the type of use originally envisioned in the 2001 FEIR. In addition, the MA ARNG's operations and management of the MPMG Range, associated fire breaks, and rare species mitigation program (described below) are essential to ensure ongoing compatibility with natural resource protection in the Reserve.

The Expanded NPC included a discussion of the Environmental Performance Standards (EPS), which were identified during MEPA review of the FEIR and formally established in 2001 under EO 443 and Chapter 47 of the Acts of 2002. The EPS restrict certain activities and provide standards for performance that guide both military and civilian users in the protection of natural, cultural, and groundwater resources within the Camp Edwards Training Area. The Expanded NPC included a discussion of the project's compliance with the EPS and described the Operations, Maintenance, and Monitoring Plan (OMMP) which will be implemented at the MPMG Range. The OMMP will address requirements for periodic soil and groundwater sampling and analysis, maintenance of soil berms and other engineered designs for projectile capture, recycling of harvested projectiles from the range and other maintenance and operations issues as required under the EPS. Sampling results and information from management and mitigation actions, training utilization, and coordination with other projects and environmental programs within the MMR will be reported and compared against the EPS in the annual "State of the Reservation Reports" required by the Certificate on the Final EIR for the MMR Master Plan and by Chapter 47 of the Acts of 2002.

Alternatives Analysis

The Expanded NPC evaluated the following: No-Build Alternative, alternative locations, and alternative configurations of the MPMG Range. The following thirteen criteria were used to screen and evaluate project alternatives: 1) sufficient land area, 2) reduce travel, 3) minimize conflicts with other existing ranges, 4) maximize co-location within existing Impact Area, 5) proximity to utilities, 6) proximity to roads, 7) minimize environmental concerns, 8) minimize new ground disturbance, 9) central location to minimize off-site impacts, 10) meet mandated training requirements, 11) meet Army Range Requirement Model (ARRM) requirements, 12) comply with applicable regulations and planning documents, and 13) ensure no net loss of training capacity.

According to the Expanded NPC, application of the first two screening criteria eliminated all off-site locations. The remaining 11 screening criteria were applied to the following alternative locations within Camp Edwards: New Undisturbed Range Alternative, Different Existing Range Alternative (site of existing Alpha or Sierra Ranges), and KD Range Alternative. Locating the MPMG Range on an undisturbed portion of Camp Edwards was dismissed as it would increase habitat fragmentation and impacts to rare species and did not meet screening criteria #7-8. Locating the MPMG Range at the Alpha Range was dismissed as its adjacency to surrounding ranges would require the use of a restraint bar on fire arms to prevent the soldier from firing high, low, and from left to right. If restraint bars were not used, the associated

Surface Danger Zone² would preclude the use of surrounding ranges. The Sierra Range location was dismissed as a substantial investment in this site was made in 2012 to upgrade the range to a Modified Record Fire (MRF) Range and constructing the MPMP Range at this location would require dismantling and relocating the MRF Range. According to the ExNPC, this alternative would not meet screening criteria #3, #7, and #12. The ExNPC indicated that the KD Range was selected as the location for the MPMG Range because it is located within an existing MA ARNG facility, eliminates the need for out-of-state travel to meet mission and training requirements, provides adequate space for the required facilities, utilizes previously disturbed land, and is located near existing infrastructure and utility connections.

Once the KD Range was selected as the preferred location, the following layouts were evaluated: Full Build, Reduced Scale, and Preferred Alternative (as described herein). According to the ExNPC, the No Build Alternative was dismissed as it would limit the capability of the MA ARNG to carry out its assigned mission to provide adequate training facilities and would not meet the project purpose or need. The Full Build Alternative consists of a range that is built fully in accordance with the standard design contained in the Army Training Range Design Guide (TC 25-8). This alternative would consist of a ten-lane range with four extended 1,500 meter lanes, which would increase the training capabilities of the range for guns and rifles which utilize 0.50 caliber ammunition. This alternative was dismissed as it would increase noise and rare species impacts and would require clearing an additional 97 acres of land (306 total acres) compared to the Preferred Alternative. According to the ExNPC, this alternative would not meet screening criteria #3, #7, #8, and #12. The Reduced Scale Alternative is substantially similar to the Preferred Alternative; however, all lanes would be 800-meters long (i.e. this alternative eliminates the two 1,500-meter long lanes). This alternative would reduce the amount of land clearing by 71 acres (138 total acres) compared to the Preferred Alternative. The ExNPC indicated this alternative was dismissed as the elimination of the 1,500-m lanes would not allow use of M2 machine guns and M82 sniper rifles which utilize 0.50 caliber ammunition, thus reducing training capabilities of the range. According to the ExNPC, the Preferred Alternative (as described herein) was selected as it fulfills the project purpose and need while reducing environmental impacts. The design represents minimization from the standard design contained in the TC 25-8 guidance document (through providing two extended lanes instead of 10), while still reaping the benefits of 1,500 meter long lanes for training purposes. Additionally, based on the results of a Noise Assessment, the impacts of the Preferred Alternative were further reduced through shifting the location of the MPMG Range slightly north to reduce noise impacts to abutters.

Land Alteration

The MMR contains one of the largest remaining pine barrens habitats in the northeastern United States and is the largest intact area of relatively unfragmented interior forest remaining on Cape Cod. The project will alter 209 total acres of land; including 199 acres for the MPMG Range (38.5 of which have already been cleared and altered for construction of the KD Range)

² A SDZ is a mathematically-predicted area that a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired and weapon system used. The SDZ has specific dimensions for the expected caliber or the weapon being fired, so that all projectile fragments are contained in this area. The SDZ for a range must be contained within the controlled boundaries of a training site for the range to be considered buildable and usable without a special waiver from regulations.

and 10 acres associated with firebreaks. The project will decrease impervious area by 34,848 sf (4,356 total sf) through demolition of existing structures at the KD Range. As explained below, the mitigation for these and other rare species impacts associated with various projects planned by the MA ARNG is being addressed through combination of land transfers to DFW and active habitat management or conversion within mitigation bank focal areas. To mitigate impacts associated with land alteration for this particular project, MA ARNG has agreed to permanently protect approximately 310 acres of forest within Camp Edwards and the MA ARNG will actively manage approximately 832 acres of on-site forest through mechanical forestry. These activities are described below in greater detail and are being planned and designed in consultation with NHESP to preserve or enhance habitat for state-listed species.

Rare Species

Within the MPMG Range footprint, the work will result in the disturbance of approximately 170.5 acres of pine barrens habitat that includes Pitch Pine Oak Forest (PPOF), Pitch Pine Scrub Oak (PPO), and Scrub Oak Shrubland (SOS) natural communities as well as approximately 36 acres of existing Managed Grassland (MG) habitat within the KD Range footprint. NHESP has determined that, as a result of the construction and operation of the MPMG Range, there will be a “take” of several State-listed lepidopterans (moths and butterfly) species and there may be a “take” of Eastern Box Turtle (*Terrapene Carolina*), Eastern Whip-poor-will (*Caprimulgus vociferous*), and sandplain grassland bird species. Projects resulting in a “take” of state-listed species may only be permitted if they meet the performance standards for a Conservation and Management Permit (CMP) pursuant to 321 CMR 10.23. According to the Expanded NPC, and as confirmed by comments from NHESP, the MA ARNG has initiated consultation with NHESP to identify means to avoid, minimize, and mitigate impacts to these species.

The Expanded NPC described a combination of mitigation strategies that require MA ARNG to establish a mitigation bank and an overall strategy to facilitate long-term planning efforts for the JBCC, thereby maximizing positive impacts. Specifically, the MA ARNG proposes a combination of land transfers to DFW and active habitat management or conversion within mitigation bank focal areas comprised of approximately 3,400 acres for pine barrens habitat, approximately 1,180 acres for forest cover retention, 150 acres of intensive management, and a reserve of approximately 250 acres for potential sandplain grassland creation. The Expanded NPC indicates that a portion of the requisite land transfers to DFW occurred in 2019, and the remainder has been accepted by DFW but is in the process of completion through the receipt of all required approvals. This Camp Edwards-wide approach to mitigation is intended to be used for future projects, in addition to the MPMG Range.

Mitigation specific to the MPMG Range intended to meet the performance standards of a CMP include the following combination of land transfers to DFW, land preservation, and land management:

- Preservation of 133 acres within Camp Edwards in perpetuity as open space through transfer of the land to DFW.³ The land is identified as the 133-acre Tract 5 located within

³ The Expanded NPC indicated that this Land Transfer occurred in 2019 and that DFW has agreed to provide credit for the land.

the Towns of Falmouth, Bourne, and Sandwich along the JBCC southern boundary and abuts the Crane Wildlife Management Area;

- Preservation of 177 acres of land with management of vegetation for rare species, identified as a Forest Canopy Reserve Area within Camp Edwards;
- Preservation of 36 acres for grassland management for rare species, identified as a Grassland Mitigation Focal Area located in the Cantonment Area to optimize conditions for grassland species;
- Active management (mechanical forestry and prescribed burns) of 832 acres of pine barren natural community, identified as Pine Barrens Mitigation Focal Areas;
- Implementation of turtle sweeps before, during, and after the construction period to remove Eastern Box Turtles from the construction areas;
- Implementation of a NHESP-approved plan to protect state-listed turtle species during the construction phase of the project;
- Post-construction monitoring of Eastern Box Turtles and other species to assess the effectiveness of mitigation measures;
- Implementation of a long-term monitoring and management plan to maintain habitat quality within the pine barrens; and
- Provision of funds for monitoring and research activities through 2025.

The land to be preserved and/or actively managed for rare species will remain under control of the MA ARNG. It is anticipated that conditions in the CMP and the MA ARNG Integrated Natural Resource Management Plan (INRMP) will provide the mechanism to enforce the commitments to preserve and maintain the land in perpetuity. The INRMP is a requirement established by the Sikes Act Improvement Act (SAIA) of 1997, 16 USC §670a *et seq.* The INRMP integrates all aspects of natural resources management within the rest of MA ARNG's mission, and is the primary tool for managing the ecosystems and habitats at Camp Edwards while ensuring the successful accomplishment of the military mission at the highest possible levels of efficiency. The existing INRMP process requires annual meetings between all Sikes Act partners, including DFW, MA ARNG and the US Fish and Wildlife Service. This annual meeting amongst other things will review the compliance and progress of the objectives established in the CMP. The Expanded NPC indicated the most recent INRMP (2009) is currently being updated and confirmed that the Camp Edwards-wide mitigation strategy described above will be incorporated into the INRMP.

The mitigation measures identified above are intended to provide a long-term net benefit to the conservation of state-listed species that may be impacted from the construction and operation of the MPMG Range. In addition, these measures will combine with ongoing site-wide management activities detailed in the INRMP and will result in a net benefit across Cape Edwards. Comments from NHESP acknowledge the Proponent has been actively engaged with the NHESP and anticipates that the project should be able to meet the necessary performance standards of a CMP.

Water Resources

There are no wetlands, surface waters, or floodplains located in or near the project site. Portions of the project site are located within multiple Zone II Wellhead Protection Areas and Cape Cod is a federally designated sole source aquifer. The groundwater beneath the proposed MPMG Range is being managed in accordance with the Impact Area Groundwater Study Program (IAGWSP) which began in 1997 following an Administrative Order from the US EPA to clean up groundwater contamination at Camp Edwards, including the removal of potential contamination sources and unexploded ordinance (UXO). The MA ARNG will coordinate with the IAGWSP to ensure the proposed MPMG Range construction and operations do not interfere with ongoing site investigations, remediation, and monitoring activities. I refer the Proponent to comments from MassDEP which request the installation of down gradient groundwater monitoring wells to determine baseline groundwater conditions.

Greenhouse Gas (GHG) Emissions

The project is subject to the GHG Policy because it exceeds thresholds for a mandatory EIR. The Policy requires Proponents to quantify carbon dioxide (CO₂) emissions and identify measures to avoid, minimize or mitigate such emissions. Projects that alter over 50 acres of land are also required to analyze the carbon associated with removal of trees and soil disturbance during the construction period and loss of carbon sequestration. The Expanded NPC included a GHG analysis that compared the No Build to the Preferred Alternative. The analysis accounted for the following sources of GHG emissions: transportation (travel for out-of-state training, travel of work crews, travel to MPMG Range once constructed), land clearing (biomass removal- both above and below ground), construction-period (land clearing, range construction, Range Operations and Control Areas (ROCA) demolition and construction), and range operations (firing of weapons, ROCA structures). A summary of the GHG analysis is provided in the table below.

Activity	Base Case (US tons)	Preferred Alternative (US tons)
Transportation	724	60
Construction	0	897
Range Operations	0.3	1.3
Land Clearing (Biomass Removal)	0	39,649
TOTAL CO₂ Emissions	724.3	40,607.3

The analysis used data from the US EPA and 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines to estimate carbon sequestration and atmospheric CO₂ releases. Transportation related emissions were calculated using emission factors from IPCC guidelines and applying them to vehicle type (including weight, fuel type, and fuel use), and total vehicle miles travelled (VMT). The CO₂ emissions associated with range operations were calculated based on a three-year (2017-2019) average of actual rounds used at Camp Edwards as adjusted to reflect the increase of training activities. To mitigate for this impact, the project includes the preservation of 310 acres of forest and active management of 832 of forest. While these forested areas currently exist (i.e., the Proponent is not creating new forestland), the mitigation package offers the benefit of preserving these resources in perpetuity. The annual GHG sequestration and lifetime sequestration from these measures is summarized in the table below.

Management Action	Acreage	Annual Sequestration (US tons)		Lifetime Sequestration (US tons)	
Land Preservation	310	0.85 tons/acre/year	263.5	230 tons/acre/year	71,300
Forestry Management	832		707.2		162,012
Total MPMG Range Mitigation	1,142	-	970.7	-	233,312
Total Forest at Camp Edwards	13,500	-	11,475	-	3,105,000

As noted above, the project will not create new forest land or plant additional trees, rather the mitigation measures offer the benefit of preserving existing resources in perpetuity. The Expanded NPC indicated construction of the MPMG Range would represent 1.3% of the carbon sequestered in the total forests at Camp Edwards. The release of CO₂ from the project will be mitigated in 3.5 years based on just the annual GHG sequestration provided by the total forested land at Camp Edwards. The lifetime sequestration provided by the land preservation and forestry management MPMG-specific mitigation activities will mitigate the project's GHG emissions and the one-time loss of carbon associated with land clearing.

Air Quality / Noise

As noted in the Expanded NPC and confirmed in comments from MassDEP, operation of the MPMG Range falls under an exemption in MassDEP's noise regulations (310 CMR 7.10) for civil and national defense activities. Comments from MassDEP also clarify that noise resulting from construction of the MPMG Range is not exempt and should comply with the noise regulations. As described in the Expanded NPC, the United States Army Public Health Center (USAPHC) performed a Noise Assessment for the proposed MPMG Range in 2015 and in May of 2019. The May 2019 Noise Assessment was provided as Appendix D. The studies concluded that there would be noise impacts to the community during range use. Based on these results, the location of the MPMG Range was shifted to the north to reduce noise within adjacent residential areas. A new noise study will be performed once the MPMG Range becomes operational to determine if additional mitigation measures are necessary. A noise complaint management program will also be implemented.

Solid/Hazardous Waste

The project site is regulated under M.G.L. c.21E and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). Comments from MassDEP indicate the site has been assigned Release Tracking Number (RTN) 4-0015031 and note that there may be oil and hazardous materials (OHM) and/or munitions items in on-site soils. The Proponent, in consultation with MassDEP and the IAGWSP, should develop and implement a plan for the management of OHM, including contaminated soil and munitions items that may be found during construction. I refer the Proponent to comments from MassDEP for additional guidance on this issue.

Construction Period

The NPC identifies the construction period impacts of the project, including truck traffic, air quality (dust), noise, and construction waste. Mitigation measures to address these impacts include: erosion and sedimentation control, dust suppression, noise mitigation measures, and implementation of Best Management Practices (BMPs). The Expanded NPC indicated the Proponent will evaluate participation in MassDEP's Clean Air Construction Initiative (CACI) and the MassDEP Diesel Retrofit Program to mitigate the construction-period impacts of diesel emissions to the maximum extent feasible. If oil and/or hazardous materials and/or unexploded ordinance (UXO) are found during construction, the Proponent should notify MassDEP in accordance with the Massachusetts Contingency Plan (310 CMR 40.00). The Proponent should coordinate with MassDEP and the EMC to protect or relocate any existing groundwater quality monitoring wells currently located within the project site.

Conclusion

Based on review of the Expanded NPC, consultation with State Agencies and review of comment letters, I have determined that the Proponent may submit a Single Supplemental EIR. The Single EIR should be prepared in accordance with the following Scope.

SCOPE

General

The Single EIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. Additional recommendations provided in this Certificate may result in a modified design that enhances the project's ability to avoid, minimize, and mitigate Damage to the Environment. The Single EIR should discuss the steps the Proponent has taken to further reduce the impacts since the filing of the Expanded NPC, or, if certain measures are infeasible, the Single EIR should discuss why these measures will not be adopted.

Project Description and Permitting

The Single EIR should include an updated description of the proposed project and describe any changes to the project since the filing of the Expanded NPC. The Single EIR should identify, describe, and assess the environmental impacts of any changes in the project that have occurred between the preparation of the Expanded NPC and Single EIR. The Single EIR should include updated site plans for existing and post-development conditions at a legible scale. The Single EIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and describe how the project will meet those standards. It should include a list of required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions.

The Single EIR should elaborate on how the project (specifically the extension of the two 1,500-m lanes) will facilitate management of the scrub oak shrublands located north of the KD Range. It should also describe how construction of the 1,500-m lanes and associated grading and access roads will occur to minimize and/or reduce impacts to scrub oak shrubland. The Single

EIR should report on the timeframe for updating the INRMP and should describe the specific mechanisms by which the commitments to preserve and manage forest and grasslands, which are separate from outright land transfers to DFW, will be enforced over time and ensured in perpetuity. It should provide an update to the GHG analysis showing any additional mitigation measures that will be implemented to reduce construction-period GHG emissions. The MA ARNG should continue to consult with MassDEP and the EMC to develop a plan for measuring and mitigating (if necessary) noise produced by construction and operation of the MPMG Range. The Single EIR should include an update on this consultation and should identify mitigation measures that could be implemented if warranted by monitoring results.

The Single EIR should identify any existing groundwater quality monitoring wells within the project site that may need to be relocated. It should address how groundwater will be monitored to determine whether operation of the MPMG Range will adversely impact the aquifer, and what remediation measures will be taken if warranted by monitoring results. The Single EIR should address whether the project requires review by the EPA pursuant to the Sole Source Aquifer program. I refer the Proponent to MassDEP's comment letter for additional guidance on these issues.

Construction Period

Construction period impacts and mitigation measures should be described in the Single EIR, including impacts associated with noise, dust and traffic. Measures that will be taken to minimize and mitigate construction period impacts should be detailed. This should include specific mitigation measures that will be implemented to ensure compliance with MassDEP's Noise Regulations at 310 CMR 7.10. The Single EIR should describe how construction activities will comply with M.G.L. c. 21E, including any applicable land use controls. The Single EIR should confirm that the Proponent will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). All construction should be undertaken in compliance with the conditions of all applicable State and local permits.

Response to Comments

The Single EIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the Single EIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended, and shall not be construed, to enlarge the scope of the Single EIR beyond what has been expressly identified in this certificate.

Mitigation/Draft Section 61 Findings

The Single EIR should include a separate chapter summarizing proposed mitigation measures. This should incorporate any additional measures that have been adopted since the Expanded NPC was filed. The Expanded NPC included draft Section 61 Findings for NHESP. It did not provide them for other Agencies which will take Agency Action on the project, including the EMC and MA ARNG. The Single EIR should include revised draft Section 61 Findings for each anticipated Agency Action by NHESP, EMC, and MA ARNG. The Single EIR should

contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and a schedule for implementation.

In order to ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed, I require proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. Specifically, I will require, as a condition of my Certificate on the Single EIR, that following completion of construction the Proponent provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the Single EIR have been incorporated into the project. Alternatively, the Proponent may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the Single EIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the Single EIR.

Circulation

The Proponent should circulate the Single Supplemental EIR to those parties who commented on the Expanded NPC, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. A copy of the Single EIR should be made available for public review at Bourne, Falmouth, Mashpee, and Sandwich public libraries.

March 19, 2020

Date

K. Theoharides

Kathleen A. Theoharides

Comments received:

03/10/2020	Division of Marine Fisheries (DMF)
03/12/2020	Environmental Management Commission (EMC)
03/12/2020	Department of Environmental Protection (MassDEP)
03/12/2020	Natural Heritage and Endangered Species Program (NHESP)
03/12/2020	Cape Cod Commission (CCC)

KAT/PRC /prc

1.0 Project Summary

1.1 Project Information

Project Name: Multi-Purpose Machine Gun Range

EOEEA File No. 5834

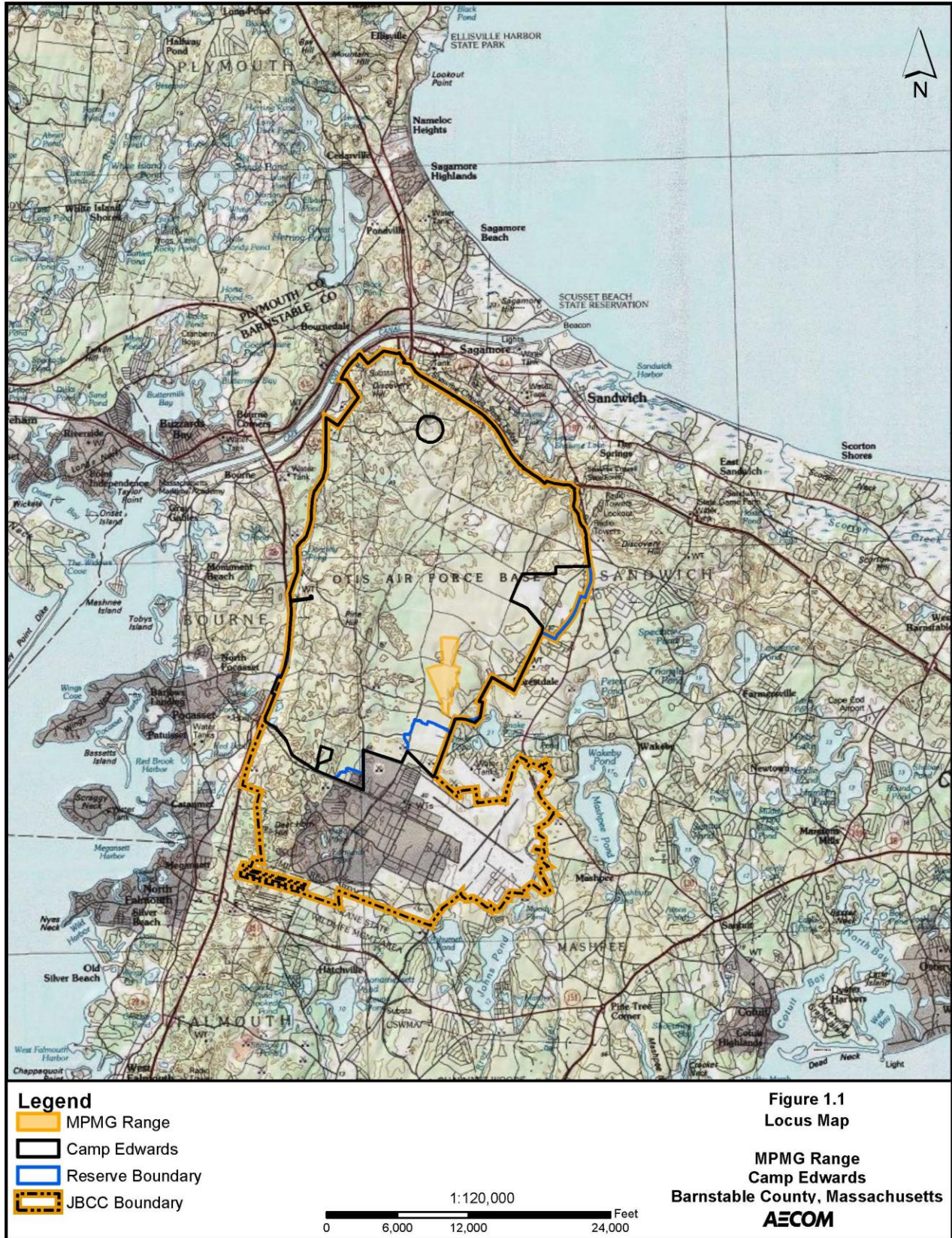
Project Location: Existing KD Range, Camp Edwards, Joint Base Cape Cod, Sandwich, Massachusetts

Project Proponent: Massachusetts Army National Guard

This document serves as the Single Environmental Impact Report (Single EIR) under the Massachusetts Environmental Policy Act (MEPA) for the construction of a Multi-Purpose Machine Gun (MPMG) Range Project proposed by the Massachusetts Army National Guard (MAARNG) at Camp Edwards, Joint Base Cape Cod (JBCC), Sandwich, Massachusetts (see **Figure 1.1**). Certain projects and activities at Camp Edwards are subject to a Special Review Procedure (SRP) created and jointly executed by Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) and the MAARNG so that the process under MEPA could be used more efficiently for the long-term use of Camp Edwards.

In accordance with the MEPA regulations, a Notice of Project Change (NPC) was filed on 31 January 2020 for the construction of the MPMG Range. A Certificate of the Secretary of EOEEA was issued for the NPC on 19 March 2020 included in the front part of this document. Pursuant to the MEPA and the SRP, a mandatory EIR is required for this Project. The Secretary's Certificate allowed for the submission of a limited scope Single EIR which follows the scope of the NPC Certificate including the following:

- Changes since the filing of the NPC (**Section 1.3**)
- Alternatives Analysis (**Section 1.8**)
- Statutory and Regulatory Standards and Requirements Update (**Section 2.0**)
- Consistency with Chapter 47 of the Acts of 2002 (**Section 2.2**)
- Rare Species Impacts and Mitigation (**Section 3.0**)
- Land Alteration (**Section 4.1**)
- Water Resources (Groundwater) (**Section 4.2**)
- Air Quality (**Section 4.3**)
- Greenhouse Gas (**Section 4.4**)
- Noise (**Section 4.5**)
- Biological Resources (**Section 4.6**)
- Oil and Hazardous Materials (**Section 4.7**)
- Solid Waste (**Section 4.8**)
- Construction Period Impacts (**Section 4.9**)
- Summary of Mitigation Measures (**Section 5.0**)
- Responses to comments letters received for the NPC (**Section 6.0, Appendix A**)
- Revised Section 61 Findings (**Section 7.0**)
- Conservation and Management Permit (CMP) Application dated 29 April 2020 (**Appendix B**)
- Updated plans (**Appendix C**)



1.2 Format of Single EIR

The Single EIR will follow 301 CMR 11.07 of the MEPA regulations for outline and content as modified by the Scope included in the NPC Certificate. Five comment letters were received relative to the NPC and are included in **Appendix A**. Responses to these comments are provided in **Section 7.0**.

The Single EIR will be circulated to all parties who commented on the NPC, to all State agencies from which a permit or approval is required, and to any party specified in 301 CMR 11.16 of the MEPA regulations. Due to COVID-19 restrictions, the Single EIR will be sent electronically to those on the circulation list wherever possible and those on the list may request a paper copy if preferred. The Single EIR will be made available for public review at Bourne, Falmouth, Mashpee, and Sandwich public libraries (if re-opened from the temporary COVID-19 shutdown). The Single EIR will also be posted on the MAARNG Environmental and Readiness Center Website.¹

The Section 61 Findings have been updated and findings for the Massachusetts Natural Heritage and Endangered Species Program (NHESP), Environmental Management Commission (EMC), and MAARNG are provided in **Section 7.0**. The MAARNG has provided updated Section 61 Findings based on the original to reflect updated proposed mitigation measures, an estimate of individual costs of each measure, the responsible party, and a schedule for implementation of the mitigation measures.

1.3 Changes since the Filing of the NPC

The scope of the MPMG Range has not changed since the initial filing of the NPC which consists of the proposed construction of an eight 800 meter lane MPMG Range. At a later date the two middle lanes are proposed to be extended to 1,500 meters. At the time of the NPC submittal the MPMG design stood at 60% and has now advanced to 95%. Design changes include minor reconfiguration of select target locations. These target location changes do not affect the project environmental impacts and associated mitigation. As the design progressed EMC consultation continued to ensure compliance with the Environmental Performance Standards (EPSs). Updated site plans are provided in **Appendix C**.

Since the filing of the NPC the MAARNG has taken further steps to reduce overall environmental impacts. One change relative to the construction phase is the dramatic reduction of the amount of emissions generated from construction dump trucks and subsequent reduction of Greenhouse Gas (GHG). The MAARNG will utilize clean/suitable soil from a local Eversource construction project. Eversource is building a new transfer station on their easement on Camp Edwards which calls for the leveling of a parcel of land. The leveling will result in approximately 24,000 cubic yards (CY) of soil that was originally planned to be shipped off-site for reuse or disposal. The MAARNG is planning on using the soil for the construction of the MPMG Range. The soil has been tested for contamination (clean) and is suitable for structural construction. The re-use of the soil will reduce the need to import soil from offsite which subsequently will See **Section 4.4** for more on GHG emission reduction.

The most significant change includes the mitigation plan proposed in the Conservation and Management Permit (CMP) Application which has been refined and revised based on negotiations with the NHESP. The CMP Application was submitted to NHESP on 2 April 2020. The result is that the MAARNG will provide

¹ <https://www.massnationalguard.org/ERC/publications.htm>

a robust mitigation program with double the required acreage ratio of impact to mitigation as required by the Massachusetts Endangered Species Act (MESA) regulations including a significant commitment by MAARNG for management of the mitigation areas in perpetuity. Please see **Section 3.0** for a more thorough discussion on rare species and mitigation measures proposed.

A new state-listed species of bee, Walsh's anthophora (*Anthophora walshii*) has been added to the list of rare species at Camp Edwards included in the CMP Application. This bee is State-listed as Endangered. Based on consultation with the NHESP, the MPMG Range project will not impact this species.

1.4 Project History

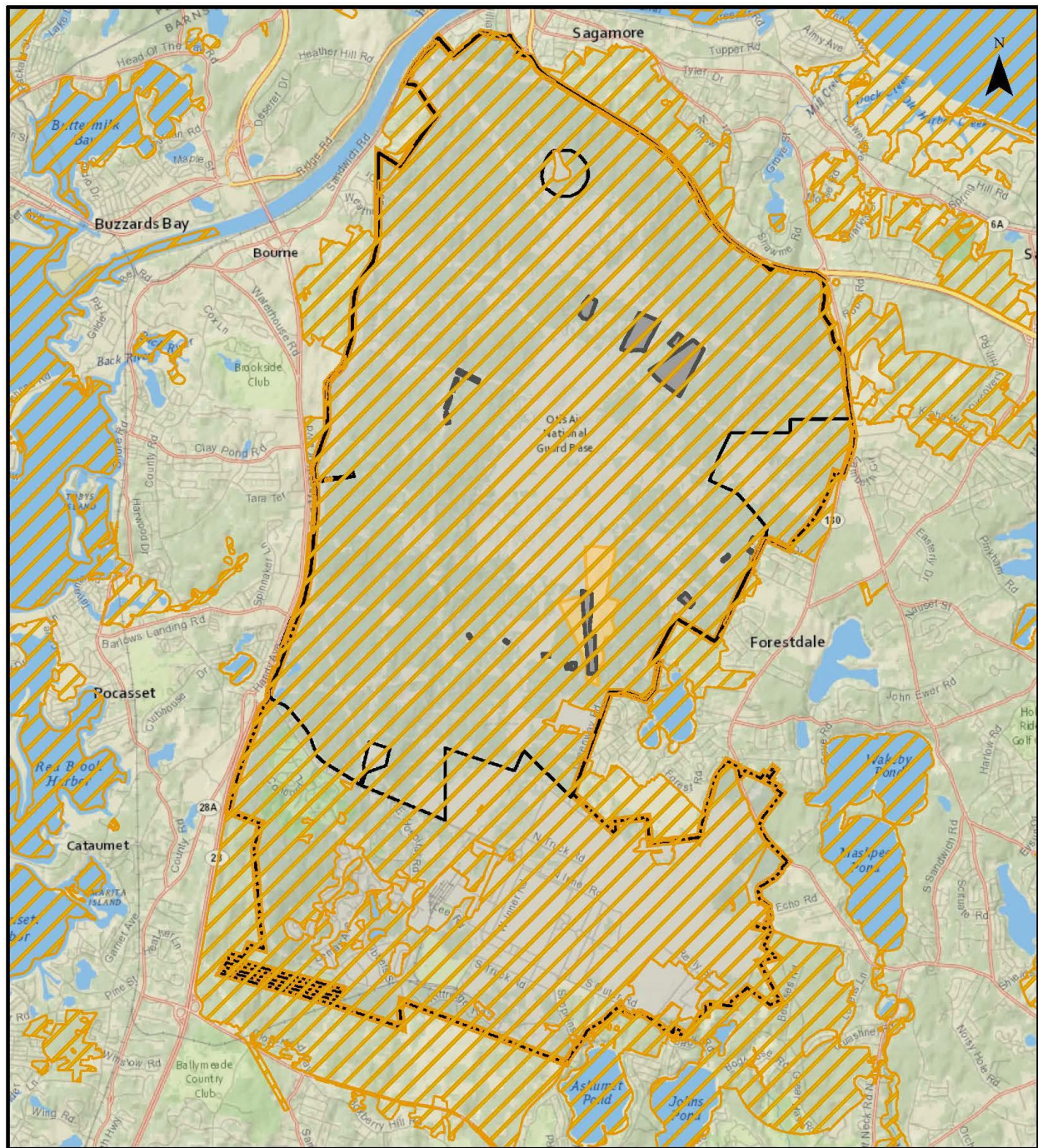
The MAARNG is proposing to construct and operate a MPMG Range (the Project) to be constructed at the existing 600-yard Known Distance (KD) Range that was previously used for training activities. The proposed Project change consists of design plans for the MPMG Range. Initial planning for improvements to the KD Range and the proposed MPMG Range can be traced back to the 1980s and the Project was included in the Massachusetts Military Reservation (MMR²) Master Plan Final Report dated 8 September 1998 and has been included in subsequent MEPA filings; most recently in the Supplemental EIR for the Small Arms Range Improvement Plan (SAR-IP) in 2012. The MPMG Range has been consistently included in MEPA filings as Phase III of the SAR-IP.

Given the importance of the MPMG Range to the future operation and viability of Camp Edwards, the MAARNG has taken its responsibilities under Massachusetts regulations extremely seriously. Therefore, the MAARNG has been working in close cooperation over the past two years with NHESP to determine mitigation of rare species habitat impacts as a result of the MPMG Range Project. Camp Edwards is home the largest continuous pine barrens ecosystem outside of the New Jersey pine barrens and as such is home to numerous rare species and habitats.






The KD Range was used from 1966 until 1997 when live (lead) ammunition and training activities at Camp Edwards were suspended by the US Environmental Protection Agency (USEPA) due to potential groundwater contamination concerns. Since 2006, the MAARNG has been actively planning and redeveloping various ranges at Camp Edwards for live-fire training exercises through the SAR-IP which incorporates Best Management Practices (BMPs) into any range development for pollution prevention and environmental protection. The existing KD Range is not presently used for live-fire training but is used for other training operations such as unmanned aircraft systems (UAS).

The entire Project Site is located in mapped Priority Habitat as shown on **Figure 1.2**. The MAARNG has been working in close cooperation over the past two years with NHESP to determine mitigation of rare species habitat impacts as a result of the MPMG Range Project. NHESP has determined that, as a result of the construction and operation of the MPMG Range, there will be a take of several State-listed lepidopterans (moths and butterfly) species identified on the Site, and that there could potentially be a take of Eastern Box Turtle (*Terrapene carolina*), Eastern Whip-poor-will (*Caprimulgus vociferus*), and sandplain grassland bird species.

² The MMR was renamed the JBCC in 2013.



Legend

-  NHESP Priority and Estimated Habitat for Rare Species
-  KD Range
-  MPMG Range
-  Camp Edwards
-  JBCC Boundary

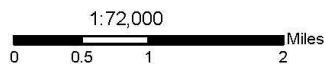


Figure 1.2
Rare Species Mapping

MPMG Range
Camp Edwards
Barnstable County, Massachusetts

AECOM

1.5 Purpose and Need

The purpose of the Project is to provide the MAARNG with a mission required MPMG Range to allow the MAARNG to efficiently attain required training and weapons qualifications requirements within Massachusetts. The MPMG Range will provide Soldiers and units the necessary modernized training capabilities to be effective in contemporary and future operating environments. A priority for the MAARNG at Camp Edwards is the continued use and development of live-fire ranges to meet the requirement that all Soldiers annually qualify with their primary weapon systems.

The three closest MPMG ranges include Camp Ethan Allen in Jericho, Vermont located over 270 miles away, Fort Dix in Ocean County, New Jersey located over 300 miles away, and Fort Drum located in Jefferson County, New York located over 370 miles away.

The Project is needed to address shortfalls, based on force structure, in required small arms training facilities and capabilities within Massachusetts for units to train in-State and to meet mission training objectives in accordance with Federal laws, regulations, policies, and training guidelines. The Project is needed to allow multiple units to attain required weapons qualification levels simultaneously and efficiently. The Project would ensure the MAARNG provides a complete, sustainable, and viable training facility for its Soldiers to attain and maintain a full readiness posture. Implementation of the Project would support higher quality, mission-essential training activities at Camp Edwards, while limiting the need for travel to out-of-state training sites that cause the loss of critical training time and resources.

Camp Edwards encompasses approximately 19,410 acres of the approximately 20,554-acre Joint Base Cape Cod (JBCC) (see **Figure 1.1**) formerly called the Massachusetts Military Reservation or MMR. Within the JBCC are five military commands including: the MAARNG at Camp Edwards; the Massachusetts Air National Guard (MA ANG) at Otis Air National Guard Base; the U.S. Air Force (USAF) at Cape Cod Air Force Station; and the U.S. Coast Guard (USCG) at Air Station Cape Cod. Although the JBCC is situated within four towns, Bourne, Sandwich, Falmouth, and Mashpee, Camp Edwards lies only within the boundaries of Bourne and Sandwich.

The land that currently comprises Camp Edwards is owned by the Commonwealth of Massachusetts and is in custody of Massachusetts Department of Fish and Game, Division of Fisheries and Wildlife (MassWildlife or MADFW), which has leased the property to the Department of the Army. In turn, the Army licensed the land to the MAARNG for training. The current lease held by the Army expires in the year 2051. The proposed MPMG Range will be constructed on State-owned land leased to the Federal government and licensed to the MAARNG.

JBCC is divided into two major sections. The southern section is comprised of approximately 5,000 acres of Cantonment Area, which is the developed portion of the JBCC where administrative buildings, barracks, aircraft, and equipment maintenance shops, housing, and runways are located. The northern training area encompasses approximately 14,410 acres and is a largely wooded area with rolling topography, trails, and paved roads and includes training areas and ranges where small arms firing and maneuver training occur. The Impact Area is a 2,200-acre area that has a formal off-limits designation due to unexploded ordnance (UXO) safety regulations. It includes the 330-acre Central Impact Area which was the primary target area for artillery, mortar, and other firing activities from the early 1900s to 1997.

In the northern portion of the Camp Edwards Training Area, 13,352 acres has been identified as the Upper Cape Water Supply Reserve (the Reserve) created by Chapter 47, Acts of 2002. Chapter 47 also transferred the care, custody, and control of the Reserve from the Special Military Reservation Commission (SMRC) to the Division of Fisheries and Wildlife. The Camp Edwards training ranges are co-located with and are within the Reserve.

1.6 Summary of Mitigation Measures

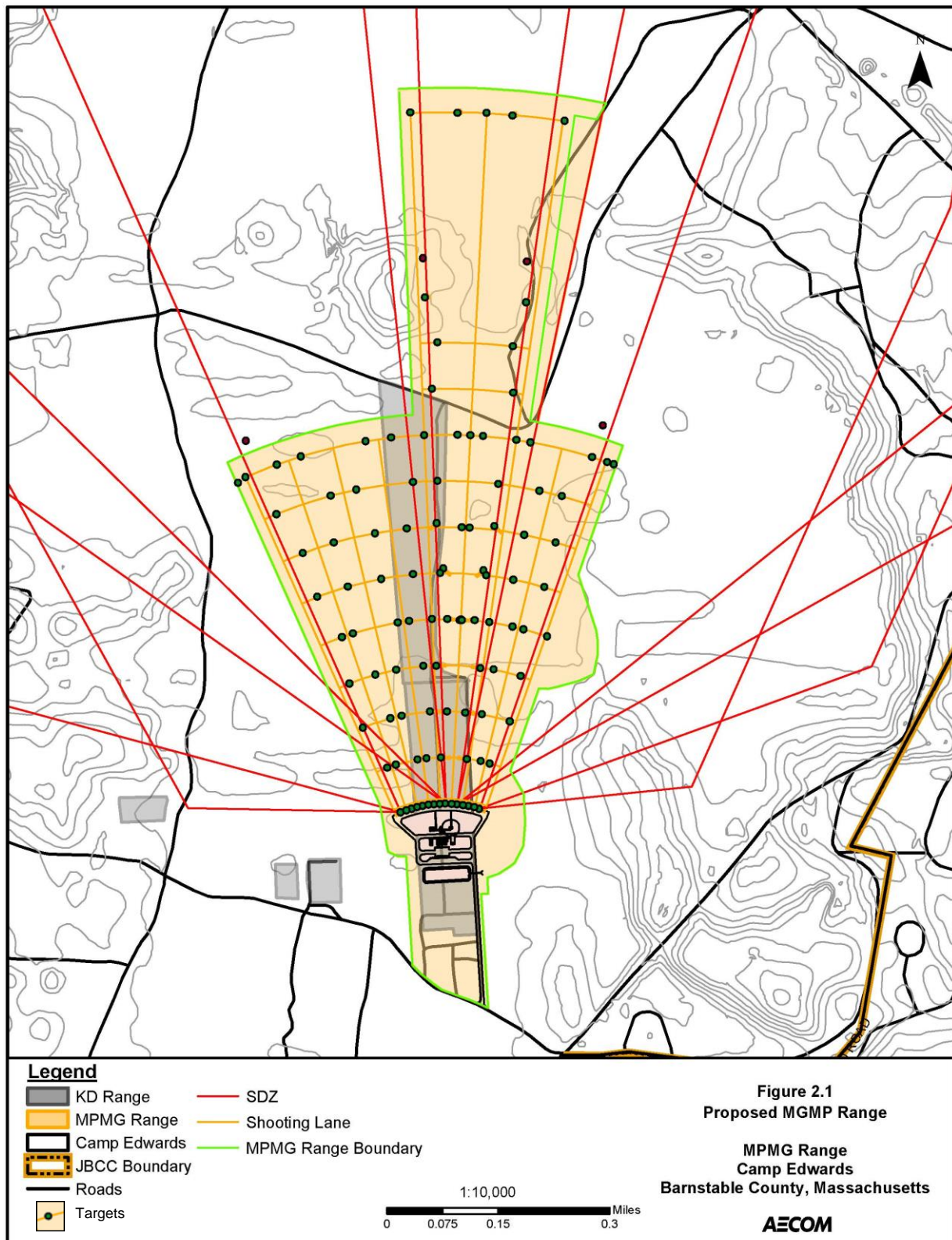
This Single EIR provides a comprehensive summary of mitigation measures in **Section 5.0**. Mitigation measures are proposed relative to soils, groundwater, air quality, greenhouse gases, noise, biological resources, and Endangered, Threatened, and Rare species. The mitigation measures are summarized in **Table 5.1** and includes schedule/phase, responsible parties, and estimated costs for each measure proposed.

The MAARNG will provide self-certification at the completion of the construction period signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR were incorporated. The commitment to provide this self-certification in the manner outlined in the NPC Certificate has been incorporated into the revised Section 61 Findings in **Section 7.0**. Proposed mitigation measures are being incorporated into the Camp Edwards Integrated Natural Resources Management Plan (INRMP) and Integrated Wild Fire Management Plan (IWFMP) as appropriate. The following bullets refer to those environmental resources/areas of impact where mitigation is proposed.

- Rare Species
- Land Alteration
- Water Resources (Groundwater)
- Air Quality
- Greenhouse Gas
- Noise
- Biological Resources
- Oil and Hazardous Materials
- Solid Waste
- Construction Period Impacts

1.7 Project Description

The Project involves the construction of an eight lane MPMG Range with eight lanes 800 meters long with a width of 25 meters at the firing line and a width of 100 meters at a distance of 800 meters. In the future, the MAARNG intends to extend the two middle lanes (Lanes 5 and 6) an additional 700 meters to a distance of 1,500 meters to accommodate .50 caliber rifles. The proposed MPMG Range is depicted on **Figure 2-1**. The footprint of the Project is 199.0 acres which includes improving the existing 600-yard KD Range comprised of approximately 38.5 acres (36.0 acres managed grasslands, 2.5 acres existing range control area) and approximately 170.5 acres of vegetation clearing for range construction and firebreaks. The range consists of four primary components: (1) the physical range footprint, consisting of the firing positions, targetry, (2) Range Operations Control Area (ROCA) support structures (i.e., as specified in TC 25-8); which includes a Range Control Tower, Ammunition Storage Building, Covered Bleachers, and other support features, (3) the Surface Danger Zones (SDZs), and (4) firebreaks. These Project elements were described in detail in the NPC.



Implementation of the Project would allow the MAARNG to fulfill their mission by meeting their weapons qualifications standards and training requirements using in-State facilities, and to maintain their readiness posture. Specifically, it would train and test Soldiers on the skills necessary to zero, detect, identify, engage, and defeat targets.

The firing line of the proposed Project has been designed approximately 100 meters north of the existing firing line. Stationary Infantry Targets (SITs) would be emplaced at approximately 100-meter intervals from the firing position at 100, 200, and 300 meters from the firing line. Moving Infantry Targets (MITs) would be emplaced in the center lanes between 100 and 600 meters. Widened Stationary Infantry Targets (WSITs) and Double Target Arms (DTAs) would be emplaced at between 400 and 800 meters. Individual Movement Techniques (IMTs) would be emplaced between 800 and 900 meters. Stationary Armor Targets (SATs) would be emplaced between 1,000 and 1,500 meters from the firing line within the two extended lanes. This range configuration is shown on **Figure 2.1**. Minor revisions to the design plans include the emplacement of targets but the footprint has not changed. Design plans are provided in **Appendix C**.

The Project will be constructed in two phases. Phase 1 will be the Reduced-Scale Alternative, that is, eight lanes constructed at 800 meters in length. Phase 2 will add the extension of two lanes to a length of 1,500 meters to accommodate .50 caliber training. The acreages and estimated rare species impacts are provided below by phase. The Project is being phased to correspond with Project funding.

Table 1-1: MPMG Range Phased Construction

Phase	Alternative	800 Meter Lanes	1,500 Meter Lanes	Total Acreage *	Rare Species Impacts
Phase 1	Reduced-Scale Alternative	8	0	133.0	94.5
Phase 2	Construction of 1,500 Meter Lanes	0	2	76.0	76.0
TOTAL	Preferred Alternative (Project)	8	2	209.0	170.5

* With approximately 5.0 acres of firebreaks included in each phase

Proposed mitigation includes a comprehensive and robust rare species mitigation plan which is explained in greater detail in the attached CMP Application in **Appendix B** and summarized in **Section 3.0**. A combination of mitigation strategies will allow MAARNG to establish a robust mitigation bank and overall strategy for success to facilitate the implementation of long-term planning efforts including modernization of the range complex and infrastructure, thereby maximizing positive impacts. The schedule for implementing mitigation efforts for the MPMG Range began in 2019 and will continue through to 2025 and beyond.

1.8 Alternatives Analysis

The MAARNG developed and applied 13 criteria to screen and evaluate possible alternatives for the Project as described in the NPC. The selection criteria were applied to available alternatives to determine which alternative(s) would fulfill the purpose and need for action including the No Action Alternative to assess any environmental consequences that may occur if the Project is not implemented.

- Preferred Alternative (Project)
- Reduced-Scale Alternative
- Full Build Alternative
- No Action Alternative

There have been no changes to the Alternatives Analysis provided in the NPC/

1.9 Construction Schedule

Table 1-2 provides an estimated timeline for construction of the MPMG Range and associated mitigation actions. Details of rare species mitigation actions are described in **Section 3.0**. A summary of all mitigation measures is provided in **Section 5.0**.

Table 1-2: MPMG Range Construction and Mitigation Schedule

Action Proposed	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Construction Phase										
Clear and construct primary range area (0-800 meters; ROCA)	x									
Clear UXO and mechanical removal of trees as needed	x	x	x	x	x	x				
Create shaded fuel breaks with mechanical forestry and UXO clearing			x	x	x					
Construct two lanes north from 800 to 1,500 meters			x	x	x	x				
Introduce fire into MPMG Zone				x						
Mitigation Phase										
Parcel H – Unit K Grassland improvement	x	x	x	x	x	x	x	x		
Frequent prescribed burns in MPMG Zone (2-3 year return interval)			x	x	x	x	x			
Maintenance burns on 3-year interval in MPMG Zone								x	x	x

UXO = unexploded ordinance

1.10 Construction Cost

The estimated cost of construction of the MPMG Range is approximately \$7 Million.

2.0 Statutory and Regulatory Standards and Requirements Update

This section provides an update to the various State and Federal environmental requirements for the MPMG Range. The Project is regulated by State and Federal agencies including the following: the EMC, the Massachusetts Department of Environmental Protection (MassDEP) under the Massachusetts Contingency Plan (MCP), the US Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA), and by the NHESP under MESA. A brief description and analysis of the applicable statutory and regulatory standards and requirements and how the Project will meet these requirements is provided below. A summary of the required State permits and other State approvals is provided in **Table 2-1**. The construction of the MPMG Range will be in compliance with State permits (i.e., CMP) and local permits (there are none). The MAARNG will continue to work closely with MassDEP, the EMC, and NHESP regarding rare species, noise, and other potential operational impacts.

Table 2-1: Required State Permits and Approvals

Action or Permit Name	Issuing Agency	Submittal Schedule and Status
Conservation and Management Permit	NHESP	CMP Application submitted 29 April 2020. Review pending completion of MEPA process.
Design and Operational Approval	EMC	Approval process will occur once design and Operations, Monitoring and Maintenance Plan are finalized.
EPS ¹ 15.3.3 Waiver	EMC	Prior to start of construction, waiver is needed to approve fuel containers greater than five gallons in accordance with a refueling plan specific to the MPMG Range.
Approval	EMC	Spill Prevention, Control and Countermeasure Plan
Design and Operational Approval	MAARNG	NEPA approval by National Guard Bureau
Self-Certifications	MAARNG	GHG Self-Certification following construction. Rare species Self-Certification annually in Annual Reports.
1,708	MassDEP	No permits or approvals required.

¹ Environmental Performance Standards

2.1 Massachusetts Endangered Species Act

State-listed rare species are protected under the MESA (MGL c. 131A) and implementing regulations (321 Code of Massachusetts Regulations [CMR] 10.00) which prevents a loss or take of State-listed rare species. The NHESP manages the State-listed species and implements the MESA regulations. As approximately 98% of Camp Edwards is located within mapped Priority Habitat (see **Figure 1.2**), all Projects need to be coordinated with the NHESP to ensure that there will be no take of any State-listed species.

Consultation with NHESP has been continuing since the submittal of the NPC. The CMP Application has been completed and was submitted to NHESP on 29 April 2020, a copy of which is included as **Appendix B**. Issuance of the CMP is anticipated to occur once the MEPA review process is completed. The CMP is required pursuant to MESA and addresses mitigation for State-listed rare species as a result of possible

impacts on pine barrens habitat by the MPMG Range and other future MAARNG projects (not the subject of this Single EIR).

The mitigation plan summarized in the NPC has been revised based on recent consultation with NHESP. The result is that the MAARNG will provide a robust mitigation program with double the required acreage ratio of impact to mitigation as required by the MESA regulations including a significant commitment by MAARNG for management of the mitigation areas in perpetuity. **Section 3.0** provides a more thorough discussion on rare species.

MAARNG has committed to a system of mitigation actions and strategies as outlined in **Section 3.0** which includes land preservation, management of rare species habitat, monitoring and research, and fire management. The mitigation strategies outlined in the CMP Application are not only for the MPMG Range but intended also as framework for mitigation to be used for other projects within Camp Edwards so as to manage the entirety of Camp Edwards for the net benefit of rare species.

2.2 Chapter 47 of the Acts of 2002

Chapter 47 of the Acts of 2002 created the Upper Cape Water Supply Reserve area as a public conservation land dedicated to the natural resource purposes of water supply and wildlife habitat protection and the development and construction of public water supply systems, and the use and training of the military forces of the Commonwealth; provided that, such military use and training is compatible with the natural resource purposes of water supply and wildlife habitat protection. The Camp Edwards training ranges are co-located with and are within the Reserve. This Act formally approved the EPS for Camp Edwards provided in the 2001 Final Area-Wide EIR. The EPS are based in large part on existing Federal, State, and Department of Defense (DoD) regulations. In some cases, the protections offered by the EPS are more stringent than those offered by other regulations. A summary of compliance with the EPS relative to the MPMG Range was provided in the NPC.

The MAARNG has presented information regarding the proposed MPMG Range location and design to the EMC and its advisory councils, the Science Advisory Council (SAC) and the Community Advisory Council (CAC). The CAC assists the EMC by providing advice on issues related to the protection of the water supply and wildlife habitat on the reserve; and the SAC assists the EMC by providing scientific and technical advice relating to the protection of the drinking water supply and wildlife habitat on the Reserve. The EMC executive officer has participated in meetings with the MAARNG and MassWildlife to establish a mitigation bank for rare species and overall strategy to facilitate implementation of long-term planning efforts including modernization of the Camp Edwards range complex and infrastructure. Design and operation approval by the EMC of the MPMG Range Project will be required.

The MAARNG has worked with the EMC, its Environmental Officer, and supporting councils (SAC, CAC) for design review and approval and most recently, the EMC executive officer was afforded the opportunity to comment on the 95% design of the MPMG Range. Following the issuance of the final Secretary's MEPA Certificate a request will be made to the EMC for design and operational approval of the MPMG as a copper only range.

The MAARNG will continue to work with EMC and its Environmental Officer, to ensure the proposed MPMG Range design and construction will comply with all EPSs under the statutory requirement Chapter 47 of the Acts of 2002.

All active Small Arms Ranges on Camp Edwards are required to have an Operational Monitoring and Maintenance Plan (OMMP) that outlines and establishes compliance with the EPS's. EPS compliance include periodic soil and groundwater sampling and analysis, maintenance of soil berms, recycling of harvested projectiles and other maintenance and operational requirements. All sampling results, data and learned information from management, mitigation actions, training utilization, coordination with other projects and environmental programs within the Reserve are reported in the annual "State of the Reservation" reports required by MEPA and by Chapter 47 of the Acts of 2002. The MAARNG has been working with the EMC Environmental Officer to finalize the OMMP for the MPMG Range.

Refueling and maintenance of construction vehicles will be conducted in accordance with a Project-specific refueling plan. EPS 15.3.3 states that no storage or movement of fuels supporting field activities, other than in vehicle fuel tanks is permitted except in approved containers no greater than five gallons in capacity. Prior to the start of construction the MAARNG will request a waiver from EPS 15.3.3 through the EMC for the duration of the construction period. The recommendations set forth in the EMC approved waiver will be incorporated into the Project plans and specifications. In addition, MAARNG will obtain prior written approval by the EMC of a site specific Spill Prevention, Control and Countermeasure Plan (SPCC).

2.3 Sikes Act Improvement Act

The Sikes Act Improvement Act (SAIA) of 1997, 16 USC §670a *et seq.*, as amended, requires Federal military installations and State-owned National Guard facilities with adequate wildlife habitat to develop a long-range INRMP and implement cooperative agreements with other agencies. The INRMP is the primary guidance document and tool for managing natural resources at Camp Edwards. This INRMP integrates all aspects of natural resources management with the rest of MAARNG's mission, and therefore becomes the primary tool for managing the ecosystems and habitats at Camp Edwards while ensuring the successful accomplishment of the military mission at the highest possible levels of efficiency. The INRMP is presently being updated.

The Camp Edwards INRMP is currently being updated through a contract with EA Engineering, Science, and Technology, Inc. Formal stakeholder meetings and comment periods have been completed and the draft final is nearing completion for review by Sikes Act partners. Agency reviews are proposed to be completed over the summer of 2020 and INRMP finalization by the end of the fiscal year.

The mechanism to enforce the commitments identified in the CMP Application to preserve and maintain mitigation areas in perpetuity will be a combination of compliance with the CMP and the INRMP process. The INRMP is a requirement established by the Sikes Act which the MAARNG must comply with. The existing INRMP process requires annual in person meetings between all Sikes Act partners including MADFW, MAARNG and the USFWS. The INRMP, Sikes Act, Army Regulation (AR) 200-1, and the EPS (Chapter 47, Acts of 2002) all require management for the net benefit and sustainability of State-listed species at Camp Edwards. This annual meeting amongst other things will review the compliance and progress of the objectives established in the CMP.

2.4 National Environmental Policy Act

MAARNG has developed an Environmental Assessment (EA) prepared under the provisions of, and in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC]

4321 et seq.), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 651 (Environmental Analysis of Army Actions, Final Rule, 29 March 2002). This EA will facilitate the decision-making process regarding the Project and its alternatives considered by the MAARNG through input from Federal agencies and the National Guard Bureau. This includes consultations with the USFWS for Federally-listed species.

The level of NEPA review required for the MPMG Range is an EA. The EA is currently under review by the National Guard Bureau (NGB). The MAARNG will address NGB comments and return the document for a final review and approval. Once NGB approves the EA for public release, the Final EA and Draft Finding of No Significant Impact (FNSI) will be released to the public for a 30-day public comment period. If substantive comments are received, they will be responded to and addressed in the Final FNSI. Once the Final FNSI is approved by NGB, the Army National Guard (ARNG) Environmental Chief will sign the approval.

2.5 Federal Clean Water Act

Although the Project construction activities are scheduled to disturb 209 acres of land, there are no waterways or waterbodies within the vicinity of the MPMG Range, therefore, there are no discharges to waters of the U.S. and the Project will not require a National Pollutant Discharge Elimination System (NPDES) Permit for construction activities.

2.6 Endangered Species Act

Consultation with the USFWS pursuant to Section 7 of the Federal ESA is presently occurring through the submittal of a Biological Assessment and request for concurrence. The MAARNG has been in communication with the USFWS on this Project and it is not anticipated that this Project will impact any know Federally-listed species.

2.7 Safe Drinking Water Act

The predominant source of groundwater in the Camp Edwards area is the Sagamore lens of the Cape Cod aquifer, designated as a sole-source aquifer (SSA) under the Safe Drinking Water Act (SDWA). The groundwater beneath Camp Edwards is also known as the Upper Cape Water Supply Reserve and provides up to three million gallons of clean drinking water daily to Camp Edwards and the towns of Sandwich, Bourne, Falmouth, and Mashpee. The entirety of Cape Cod has been designated as a SSA. Based on conversations with the USEPA, it is our understanding that this Project is excluded from review under the SSA program as it is located on a military base. We have requested clarification in writing from the USEPA and will submit to EOEEA when it is received.

3.0 Rare Species Impacts and Mitigation

The proposed MPMG Range Footprint is 199.0 which includes the 38.5 acres of the KD Range. In addition to the MPMG Range, an additional 10.0 acres of range specific firebreaks are proposed for a Project Footprint of 209.0 acres. Of the 209.0 acres, approximately 2.5 acres of the southern part of the KD Range the houses the previously existing ROCA is not considered as rare species habitat. Based on the presence of Pitch Pine Oak Forest (PPOF), Pitch Pine Scrub Oak (PPSO), Scrub Oak Shrubland (SOS), and Managed Grasslands (MG), it is presumed that all remaining acreage (206.5 acres) within the Project Footprint is considered as rare species habitat. This section of the Single EIR is a summary of information taken from the CMP Application provided in **Appendix B** where additional details can be found. The CMP Application was submitted to NHESP on 29 April 2020.

The entire Project Site is located in mapped Priority Habitat as shown on **Figure 1.2**. The MAARNG has been working in close cooperation over the past two years with NHESP to determine mitigation of rare species habitat impacts as a result of the MPMG Range Project. NHESP has determined that, as a result of the construction and operation of the MPMG Range, there will be a take of several State-listed lepidopterans (moths and butterfly) species identified on the Site, and that there could potentially be a take of Eastern Box Turtle (*Terrapene carolina*), Eastern Whip-poor-will (*Caprimulgus vociferus*), and sandplain grassland bird species.

3.1 Rare Species Impacts

The following section describes the Project impacts to State-listed species including rare moths and Eastern Box Turtle. Mitigation efforts are described in **Section 3.2**. **Table 3-1** provides proposed impacts by of the MPMG Range including MESA-required mitigation and proposed mitigation.

Table 3-1: MPMG Range Impacts by Guild

Guild Associations	Acres of Impact	Mitigation Ratio Required Per MESA	Mitigation Acreage Required per MESA	Mitigation Ratio Provided	Mitigation Acreage Proposed
Pine Barrens Guild	171	2:1 (Threatened)	342	4:1	684
Managed Grasslands	36	1:1 (previous mitigation)	36	1:1	36
Eastern Box Turtle	207 ¹	1.5:1 (Species of Special Concern)	310.5	1.5:1	310.5
Total	207		378²		720²

¹ Pine Barrens Guild + Managed Grasslands

² Mitigation acreage overlaps

Table 3-2 provides a summary of how impacts and mitigation acreages were calculated which have been refined and revised based on negotiations with the NHESP. The result is that the MAARNG will provide a robust mitigation program with double the required acreage ratio of impact to mitigation as required by the MESA regulations including a significant commitment by MAARNG for management of the mitigation areas in perpetuity as described in **Section 3.11**.

Table 3-2: MPMG Range Impacts and Mitigation

Impacts	
199.0	MPMG Range Footprint
<u>10.0</u>	<u>MPMG Range-Specific Firebreak Footprint</u>
209.0	Total Project Footprint
209.0	Total Project Footprint
<u>2.5</u>	<u>ROCA Footprint</u>
206.5	MPMG Range Take Footprint
206.5	MPMG Range Take Footprint
<u>36.0</u>	<u>MPMG Range Managed Grassland Take Footprint</u>
170.5	MPMG Range Pine Barrens Take Footprint
Mitigation <i>(numbers have been rounded to nearest whole number)</i>	
171	MPMG Range Pine Barrens Take Footprint
<u>4:1</u>	<u>4:1 mitigation ratio for Pine Barrens (as negotiated)</u>
684	Pine Barrens Mitigation Required
684	Pine Barrens Mitigation Required
<u>133</u>	<u>Land Preservation Tract 5</u>
551	Remaining Mitigation Acres Needed for Pine Barrens Management
165	30% of 551 (Standard #1 Mechanical Forestry)
<u>386</u>	<u>70% of 551 (Standard #2 Prescribed Burn)</u>
551	Acres to be managed (at 4:1 ratio)

3.2 Proposed Project Mitigation

Impacts from the MPMG Range will be mitigated through a combination of methods including land preservation by transfer, land preservation with management, Forest Canopy Reserve Areas (FCRA), and management of existing habitat within Mitigation Focal Areas. Mitigation also occurs through extensive monitoring and research of rare species at Camp Edwards. Mitigation for the MPMG Range has already occurred during 2019 and additional actions will occur in subsequent years. As shown in **Table 3-3**, 310 acres of land preservation will be set aside either through land transfer (Tract 5) or protection of FCRA units. Also, annual mitigation actions may have lower or higher acreage in a certain year due to unforeseen circumstances like weather but are expected to balance out. MAARNG will manage 551 acres of pine barrens in perpetuity with the full build of the MPMG Range.

Please note that mitigation numbers shown in these tables includes more mitigation than needed for the MPMG Range in order to properly analyze impacts to rare species at Camp Edwards for possible future projects proposed within the JBCC. The CMP Application is intended to proactively establish a framework to implement actions to achieve net benefit for State-listed species and streamline review processes for future work.

Table 3-3: MPMG Range Mitigation

Mitigation Standard	Location	2019	2020	2021	Other years	Acres of Mitigation	
						Target	Provided
Land Preservation	Tract 5	133				310	310
Land Preservation	Primary Forest Canopy Reserve Area - Northern Unit (for Eastern Box Turtle)	177					
Total Land Preservation		310				310	310
#1 Mechanical Forestry	Pine Barrens Mitigation Focal Areas - Western Unit	50				165 (30% of 551)	165
#1 Mechanical Forestry	Pine Barrens Mitigation Focal Areas - Western Unit		40				
#1 Mechanical Forestry	Pine Barrens Mitigation Focal Areas (TBD)			40	35		
#2 Prescribed Burn	Pine Barrens Mitigation Focal Areas - Northern Unit	47	35			386 (70% of 551)	386
#2 Prescribed Burn	Pine Barrens Mitigation Focal Areas - Western Unit (Total burn = 399, remainder 155 for other projects)	244	60				
Total Pine Barrens Management (#1, #2)		341	135	40	35	551⁴	551⁴
#3 Continued Management ¹	Pine Barrens Mitigation Focal Areas			80	80		
Total Pine Barrens Management (#3)				80	80	160	160
#4 Manage Grasslands	Grassland Mitigation Focal Area Parcel H – Unit K fire (Total burn = 42, remaining 6 for other projects)	36				36	36
#4 Manage Grasslands ³	Grassland Mitigation Focal Area Parcel H – Unit K mowing (Total mow = 80, remaining 44 for other projects)		36 ²				
Total Grasslands Management		36				36	36

Yellow cells are for completed actions, Green cells are future proposed actions

¹ General planning for meeting long-term management requirements within Pine Barrens Mitigation Focal Areas. Return intervals and management targets to be coordinated through annual meetings.

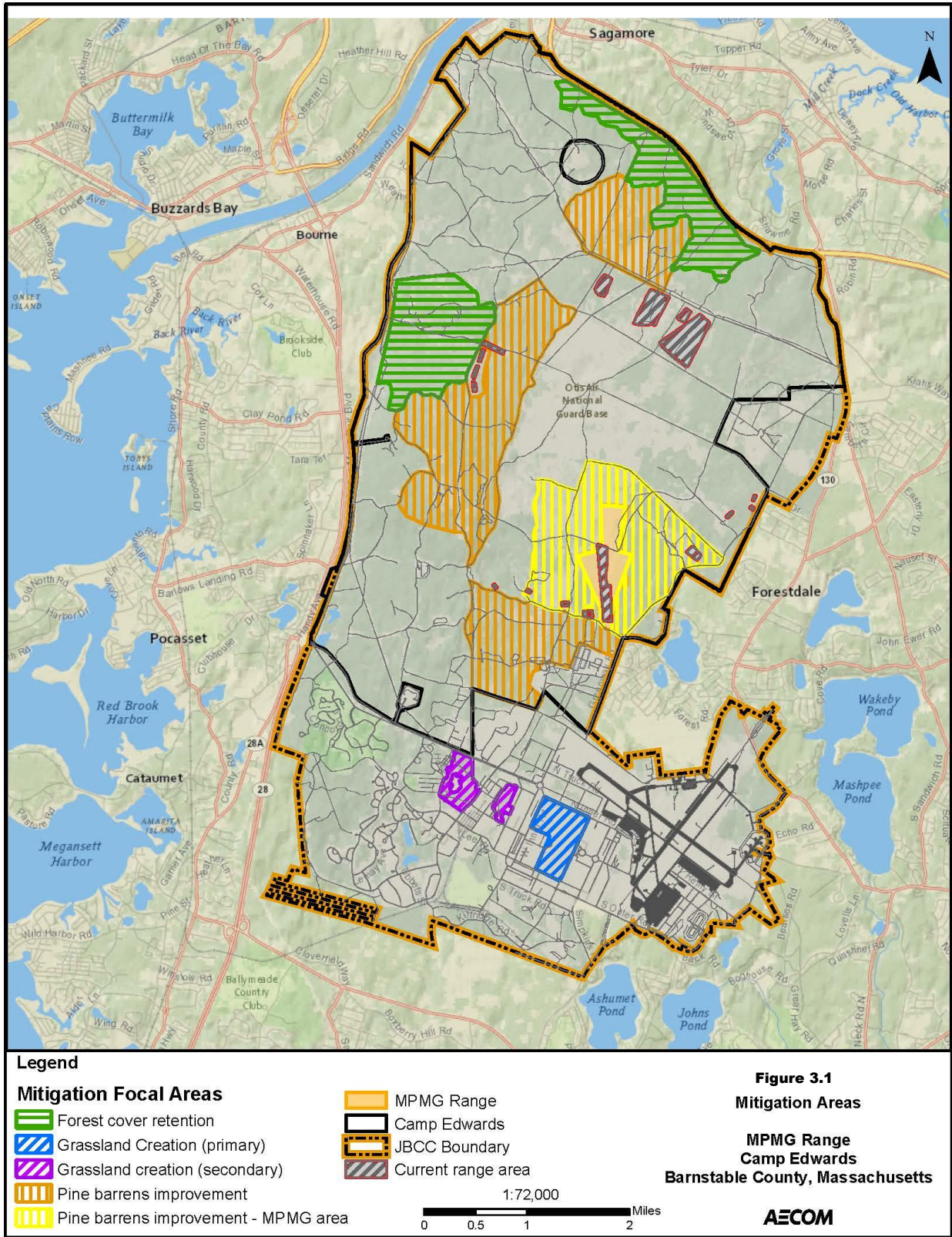
² 36 acres mowed in 2019 but included as FY2020

³ Parcel H – Unit K also managed for other projects

⁴ 684 acres – 133 acres (Land Preservation – Tract 5) = 551 acres

Figure 3.1 provides an overview map of JBCC including the location of land preservation parcels and mitigation focal areas. To date, the MAARNG has already performed actions which contribute to the net benefit of the rare species at Camp Edwards and JBCC including the following:

- Land Transfer of Tract 5 (133.0 acres) 2014, 2017 (PPSO)
- Land Transfer of Tracts 1-4 (128.0) 2019 (PPOF)
- Land Transfer of Parcel H of unit K (150.0 acres) (MG)



3.3 Conservation and Management Plan

In consultation with NHESP, MAARNG developed a CMP Plan to provide a long-term net benefit to the conservation of the State-listed species that may be impacted from the construction and operation of the MPMG Range. Implementation of the CMP in combination with on-going site-wide management through the INRMP, habitat improvement beyond MPMG mitigation will provide net benefit across a greater area of Camp Edwards. The mechanism to enforce the CMP commitments to preserve and maintain mitigation areas in perpetuity will be a combination of compliance with the CMP and the INRMP process. The CMP will be memorialized in the INRMP and in the required Annual State of the Reservation Reports.

The conversion, management, and protection of rare species habitat will be assigned to Mitigation Focal Areas. Benefits of using Mitigation Focal Areas include consolidating mitigation for maximum benefit while providing flexibility of management and ensuring sufficient acreage for the MPMG Range Project and other Projects. The following is a summary of the various types of land actions, units, and parcels discussed in the CMP for mitigation planning.

- Land Preservation
 - Land Preservation by Transfer of Parcels to MassWildlife
 - Land Preservation with Management (Parcel H – Unit K)
 - Pine Barrens Forest Canopy Reserve Areas
- Management of existing habitat within Mitigation Focal Areas
 - Pine Barrens Mitigation Focal Areas
 - Grasslands Mitigation Focal Areas
- Monitoring and research of rare species
- Avoidance and minimization
- Cost of management

These mitigation areas are explained in greater detail in the attached CMP Application in **Appendix B**. This combination of mitigation strategies will allow MAARNG to establish a robust mitigation bank and overall strategy for success to facilitate implementation of long-term planning efforts including modernization of the range complex and infrastructure, thereby maximizing positive impacts. The schedule for implementing mitigation efforts for the MPMG Range began in 2019 and will continue through to 2025 and beyond.

The MAARNG has developed the following mitigation standards or actions for management at Camp Edwards which can have been applied to the MPMG Range and can be applied to future proposed projects. **Table 3-3** provides a summary of how these standards are applied to the MPMG Range.

- Standard #1 Mechanical Forestry (Pine Barrens)
- Standard #2 Prescribed Burns (Pine Barrens)
- Standard #3 Continued Management and Management (Pine Barrens)
- Standard #4 Manage Grasslands
- Standard #5 Monitoring and Research

3.4 Alternatives Analysis, Avoidance, and Minimization

In consultation with NHESP, the MAARNG has developed a plan to avoid and minimize impacts to rare species. A variety of additional measures will be implemented to avoid and minimize impacts.

- **Site selection:** An alternatives analysis was performed for the MPMG Project to determine the best site selection relative to impacts and design.
- **Design minimization:** The Project has been designed with significant reductions compared to Army standards specifically to minimize habitat impacts. For example, the standard MPMG range has four 1,500 meter lanes and ten 800 meter lanes. The MPMG Range Project has reduced the footprint to two 1,500 meter lanes and eight 800 meter lanes to reduce impacts to the frost bottom (see **Section 3.7**) and pine barrens.
- **Restrict lighting:** Lighting used during operation of the range (and during construction) will be sodium lights or lights within the yellow/red range. Moths are attracted to lights in the blue range (i.e., mercury vapor lights) which should be avoided.

3.5 Construction Phase

Mitigation for temporary impacts to rare species focuses mostly on the Eastern Box Turtle during the construction phase. MAARNG and the contractor will follow the NHESP-approved Turtle Protection Plan (see Appendix D of the CMP Application included in this Single EIR as **Appendix B**) written specifically for the MPMG Range Project which includes, but is not limited to, the following BMPs and mitigation measures:

- Install turtle exclusion barriers prior to start of construction
- Perform pre-construction turtle surveys
- Perform turtle sweeps prior to each work day
- Review turtle exclusion barriers daily to ensure they are in good condition
- Identify location of individuals that have been outfitted with transmitters
- Outfit found turtles with transmitters if there are none
- Relocate individuals if found within the construction area, to a forested area outside work limits
- Provide contractor education to recognize turtles and relocate if necessary

3.6 Mitigation Schedule

Table 1-2 (see **Section 1.9**) provides an estimated timeline for construction of the MPMG Range and associated mitigation actions.

3.7 Reduction of Impacts to Frost Bottom

When the extension of the two middle lanes under Phase 2 is constructed, the MAARNG will work with NHESP to reduce impacts from grading and access roads to the SOS as the .50 caliber lanes would extend into this habitat near to a large frost bottom. Due to the presence of the Impact Area which is not accessible for habitat management and fire management, the SOS have become overgrown. The primary driver behind declines in some of the State-listed moths at Camp Edwards is a lack of fire in SOS and the dramatic incursion of pitch pines into shrublands and frost bottoms after the secession of artillery fires in the Impact Area. The extension of the two 1,500 meter lanes and adjacent firebreaks into this habitat (as shown in **Figure 3-2**) will allow for management and enhancement of the SOS which is a globally rare habitat.

Prescribed burns will be planned and implemented to improve open pine barrens conditions for dependent species, including improvement of frost bottom functioning where relevant. This will occur only after the

UXO have been removed. Fire and frost effects typically suppress the growth of pitch pine and other tree species while promoting the growth of scrub oak creating frost bottoms.

The two proposed extended 1,500 meter lanes have already been shifted to the east to avoid most of the frost bottom as part of the avoidance and minimization mitigation efforts. The placement of the targets and the access roads within these extended lanes may be shifted more to the east to reduce the amount of grading that would be needed. As the area by the frost bottom has moderate to steep slopes, targets would not be able to be placed low on the horizon as they would be out of view from the firing line. Therefore, shifting targets to the east would be more beneficial to the design and would reduce grading near to the frost bottom and would minimize (and possibly avoid) impacts to the frost bottom.

Methods for reducing impacts will be developed through the actual design of Phase 2 and setting protection and improvement of the frost bottom as a fundamental design criteria. The primary concern is erosion into the frost bottom from the range boundary road, but working with topography and road design can avoid this impact. Overall the reduction of tree canopy will be beneficial as will allow for the reintroduction of fire.

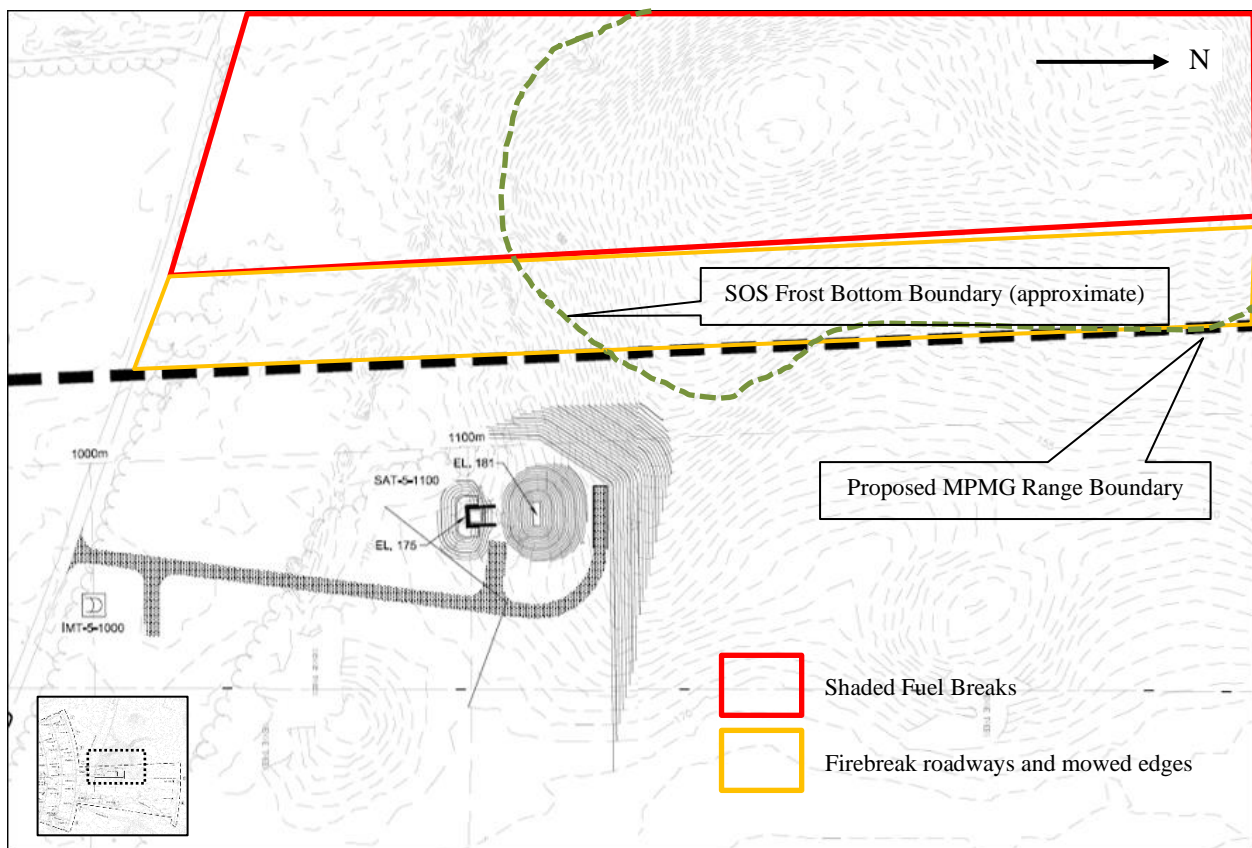


Figure 3-2: Proposed Grading for 1,500 meter lanes by Frost Bottom

3.8 Mitigation Funding

MAARNG has developed a budget for the rare species mitigation of MPMG Range. This budget has been proposed to include all management costs, including mechanical, fire, monitoring and research. Financial resources are budgeted through Federal (Army, NGB) funding. The Project has been designed to meet the long-term net benefit performance standard for rare species by providing for financial or in-kind contributions toward the development. Monitoring and research funding will be provided over a period of years as described in **Table 3-4**.

Table 3-4: Actions Proposed by Year

Year		Action	Acres	Cost	Year total
1	2019	Land transfer	132		\$181,700
		Mechanical harvest (Wheelock)	52	\$114,000	
		Prescribed burn	406	\$42,500	
		Mechanical prep for burns	18	\$11,200	
		Admin (plans, permits)		\$14,000	
2	2020	Prescribed burn	160	\$51,000	\$458,600
		Mechanical harvest (RAW3)	40	\$88,000	
		Mechanical prep for burns	42	\$54,000	
		Admin (plans, permits)		\$22,500	
		Moth survey plan		\$26,500	
		Eastern Box Turtle support		\$216,600	
3	2021	Prescribed burn	160	\$51,000	\$334,500
		Mechanical harvest (BA-7/BA-1)	50	\$110,000	
		Mechanical prep for burns	30	\$36,000	
		Admin (plans, permits)		\$22,500	
		Moth survey year 1		\$55,000	
		Eastern Box Turtle support		\$60,000	
4	2022	Prescribed burn	160	\$51,000	\$162,000
		Mechanical prep for burns	30	\$36,000	
		Admin (plans, permits)		\$15,000	
		Eastern Box Turtle support		\$60,000	
5	2023	Prescribed burn	160	\$51,000	\$205,000
		Mechanical prep for burns	20	\$24,000	
		Admin (plans, permits)		\$22,500	
		Moth survey year 2		\$55,000	
		Eastern Box Turtle support		\$60,000	
6	2024	Prescribed burn	160	\$51,000	\$162,000
		Mechanical prep for burns	30	\$36,000	
		Admin (plans, permits)		\$15,000	
		Eastern Box Turtle support		\$60,000	
7	2025	Prescribed burn	160	\$51,000	\$205,000
		Mechanical prep for burns	20	\$24,000	
		Admin (plans, permits)		\$22,500	
		Moth survey year 3		\$55,000	
		Eastern Box Turtle support		\$60,000	

Mitigation funding for range MILCON (Military Construction) projects is through the environmental budget of ARNG while facilities projects are through a combination of environmental (e.g., staff) and installation funding. Environmental funding is entered through the Status Tool for Environmental Programs (STEP). MAARNG maintains a seven-year budget including these plans and projects which will be included in the INRMP project tables. In addition to the monitoring and research funding, the MAARNG will be funding the various habitat management actions proposed as described in the CMP Application.

Due to early planning for mitigation needs, MAARNG accessed \$76,600 funds dedicated to MPMG Range mitigation and leveraged this for an additional \$158,791 of funded mitigation projects. Since the submittal of the NPC, Fiscal Year (FY) 2020 MPMG specific mitigation funding (\$458,600) has been provided by NGB to the MAARNG. Funding is also approved for the coming seven years in the Federal budget, but will benefit from the funding assurance provided by a formal CMP. The direct FY 2019 funds and associated acres were obligated for mitigation implantation to the amount of \$235,391, details of which are provided in the CMP Application.

3.9 Compliance with MESA

Pursuant to MESA (321 CMR 10.23(2)), a CMP may be issued by NHESP for a project provided that an applicant has provided the following three items. The MAARNG has developed a mitigation plan that will meet the requirements of these three MESA performance standards:

1. Adequately assesses alternatives to both temporary and permanent impacts to State-listed species.

The entire MPMG Range Project represents approximately one percent of the land area within Camp Edwards. Impacts to rare species for this Project alone would be insignificant relative to the entire installation as the impacted habitat and species occurrence are not disproportionate at the Project site. Nonetheless, as there are direct impacts to rare species and indirect effects as a result of the operation of the MPMG Range, there is the possibility for greater impacts (i.e., wildland fire). Mitigation will allow MAARNG to manage the resources and operation of the MPMG Range in a way that would result in an insignificant impact to the location populations of the State-listed species. Implementation of the CMP Plan will provide net benefit across much more area of Camp Edwards and will combine with ongoing site-wide management through the INRMP and additional habitat improvement beyond mitigation to support the MPMG Range use.

2. Demonstrates that the activities will result in an insignificant impact to the local populations of the affected species.

Temporary impacts may occur during the construction phase and the times when the MPMG Range will be active. Construction impacts will be mitigated as described above. The majority of wildlife on Department of Defense installations has been found to readily acclimate to military activities and noise, including birds and bats. Long-term use of the range is unlikely to negatively impact or exclude rare species from surrounding habitat as has been seen at active ranges at Camp Edwards (e.g., I Range, S Range). The most likely negative impact is wildlife, which should have reduced likelihood and severity under proposed management.

To minimize potential impacts associated with vegetation removal, land clearing activities would be scheduled to occur, to the extent feasible, outside the breeding season or late in the breeding season,

under guidance from the Environmental & Readiness Center (E&RC). Potential long-term, less-than-significant adverse effects to migratory birds could occur during land management operations (e.g., periodic mowing) and training activities. Proposed training activities at the range could have the potential to injure or kill birds or other species, but the likelihood of this occurring during operational activities is considered highly unlikely. Research shows wildlife desensitizes to range use. Eastern Whip-poor-wills on Camp Edwards have been found consistently surrounding I Range and S Range, both of which get much use and traffic. Other temporary potential stressors, may be the use of heavy machinery, vegetation removal, and increased noise. In the event that proposed training activities start a fire on the range with every effort and range design/management to facilitate suppression, the fire would be extinguished in accordance with existing range management rules before it reaches adjacent natural areas.

This range would be available for limited night fire operations in accordance with existing Camp Edwards Range Regulations and permanent light proposed for the Project would be designed and installed so as not to interfere with State-listed species, specifically moths. Lighting would be designed to minimize the potential for lighting adjacent off-range areas and contained within the confines of the MPMG Range as described above.

3. Carries out a Conservation and Management Plan that provides a long-term net benefit to the conservation of the State-listed species affected by the proposed Project which on or off-site permanent habitat protection, management or restoration of State-listed species habitat, and/or conservation research designed to benefit the species affected by a given project.

The CMP Application provides the CMP Plan that outlines all of the efforts the MAARNG will be doing to reduce impacts to rare species. The CMP Plan includes specific discussions regarding land transfers, mitigation focal areas, monitoring and research, avoidance and minimization, management efforts, management methods, and associated costs and funding. Additionally, these efforts are just a focused component of Site-wide conservation management focused on net benefit and long-term sustainability of rare species and the overall ecosystem. The INRMP and site-wide conservation are closely coordinated with partners and informed by monitoring, and both planned and implemented for long-term sustainability, ecosystem health and net benefit of rare and common flora and fauna.

3.10 Compliance with EPS

Additional performance standards are included in the EPS for Habitat Management, Wildlife Management, Fire Management, and Range Performance Standards. The EMC, who are responsible for implementing the EPS, has participated in meetings with the MAARNG and MassWildlife to establish a mitigation bank and overall strategy to facilitate implementation of long-term planning efforts including modernization of the Camp Edwards range complex and infrastructure such as the construction of the MPMG Range. All the standards and guidance provided in the EPS are incorporated into the CMP Application and this Single EIR.

3.11 Management of Mitigation Focal Areas in Perpetuity

MAARNG has an established and effective conservation and land management program with demonstrable success in managing sandplain grasslands and pine barrens habitat with commitments and planning documented through the INRMP process. After completion of the initial mitigation requirements detailed

in the CMP Application (i.e., conversion of habitat in Parcel H - Unit K, habitat management in Pine Barrens Mitigation Focal Areas), maintenance and management targets for the mitigation areas in perpetuity will be transitioned to and incorporated into the INRMP and INRMP process to ensure the long-term compliance with the CMP.

This will include commitments to continue management and stewardship of Parcel H - Unit K and the Pine Barrens Mitigation Focal Areas. CMP compliance will be reviewed during annual meetings, established here as a requirement for both MAARNG and MADFW. The annual meetings may be coincident with the INRMP annual meetings or separate, with either party able to request separate meetings if desired. Annual meetings will review the implementation of development projects and mitigation actions and serve as an audit of overall CMP compliance. Specific targets and objectives for long-term habitat maintenance and management will be addressed through future coordination between MAARNG and MADFW, and incorporated into the INRMP. Adaptive management principles will be the foundation for long-term implementation of habitat management for the net benefit of impacted species, to be informed by monitoring efforts, the outcomes of previously implemented mitigation projects, and discussions during the annual meetings integrating this information.

The existing INRMP process requires annual, in-person, meetings between the Sikes Act signatory partners including MADFW, MAARNG, and US Fish and Wildlife Service. The INRMP, Sikes Act, AR 200-1, and the EPS, all consider and incorporate management activities for the net benefit and sustainability of state-listed species at Camp Edwards.

Long-term habitat management and monitoring is a condition of the CMP and is required in perpetuity. These actions will be incorporated into the INRMP as objectives and management projects, to be funded and implemented at a management return interval and scope deemed sufficient by MADFW and Camp Edwards to ensure compliance with the CMP and the required long-term net benefit for state-listed species.

3.12 Summary of Rare Species Mitigation Proposed

The robust mitigation components committed to by the MAARNG in the CMP Application specific to the MPMG Range include:

- Approximately 133 acres within Camp Edwards will be preserved in perpetuity as open space through the transfer of land to MassWildlife. The land is identified as the 133-acre Tract 5 located within the towns of Falmouth, Bourne, and Sandwich along the JBCC southern boundary and abuts the Crane Wildlife Management Area.
- Approximately 177 acres of land has been identified by MAARNG to be set aside for land preservation with management of vegetation for rare species. This land is identified as a Forest Canopy Reserve Area within Camp Edwards.
- Approximately 36 acres of has been identified for grassland management for rare species. This land is identified as a Grassland Mitigation Focal Area located in the Cantonment Area to optimize conditions for grassland species.
- The MAARNG will monitor the MPMG Range construction area prior to, and during construction, to remove Eastern Box Turtles from the construction areas if found.
- The MAARNG will provide construction staff with information and materials about the likely presence of State-listed species and appropriate responses to any sightings

- The MAARNG will implement the NHESP-approved Turtle Protection Plan specific to the MPMG Range during the construction phase of the Project Eastern Box Turtles (included in CMP Application in **Appendix B**).
- The MAARNG will monitor Eastern Box Turtles and other species for a period to be determined after the construction of the Project to assess the effectiveness of mitigation measures.
- The MAARNG will implement a long term monitoring and management plan to maintain habitat quality within the pine barrens using the INRMP for guidance.
- The cost of the mitigation is more fully detailed in the CMP Application. Financial resources are budgeted for the proposed actions through Federal (Army, NGB) funding.
- Mitigation funding for range MILCON projects is through the environmental budget of ARNG while facilities projects are through a combination of environmental (e.g., staff) and installation funding. Environmental funding is entered through the STEP and is maintained with a seven-year budget.
- The MAARNG will be funding mitigation habitat management actions proposed as described in the CMP Application.
- The MAARNG will provide monitoring and research funding detailed more fully in the CMP Application which identifies actions and associated costs through to 2025.

4.0 Environmental Impacts and Mitigation

Section 4.0 of the NPC provided a description and analysis of the physical, biological, chemical, economic, and social conditions of the Project site, its immediate surroundings, and the region in sufficient detail to provide a baseline in relation to which the Project and its alternatives can be described and analyzed and its potential environmental impacts and mitigation measures can be assessed. This section follows 301 CMR 11.07 of the MEPA regulations for outline and content as modified by the Scope included in the NPC Certificate. Specifically, this section includes land alteration, water resources (groundwater), air quality, greenhouse gas, noise, biological resources, oil and hazardous materials, solid waste, and construction period impacts. Existing conditions, proposed impacts, and proposed mitigations for these subject areas are consolidated in the sections below.

4.1 Land Alteration

This section includes discussion of existing conditions and proposed land alteration which will result from the clearing of trees and grading associated with the construction of the range. As the site is relatively flat (with the exception of the frost bottom located to the north and west of the proposed .50 caliber lanes) and comprised of sandy soils, there is minimal likelihood of soil erosion. In addition there are no waterways or waterbodies within the vicinity of the MPMG Range, therefore, there are no discharges to waters of the U.S. and the Project will not require a NPDES Permit (and associated Storm Water Pollution Prevention Plan (SWPPP) for construction activities. Nonetheless, to reduce construction impacts to adjacent roadways, the contractor will implement methods to prevent soil from leaving the Project site either by wind, rainfall, or vehicles and equipment.

The MAARNG contractor will prepare a detailed, site-specific Erosion and Sedimentation Control Plan to address all earth-disturbance aspects of the Project. The Erosion and Sedimentation Control Plan will include standard BMPs, such as specific guidelines and engineering controls to address anticipated erosion and resultant sedimentation impacts from establishing and operating the proposed MPMG Range. The MAARNG will implement the following measures:

- Install and monitor erosion-prevention measures such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading of stockpiled topsoil; and seeding/revegetation of areas temporarily cleared of vegetation.
- Plant and maintain native soil-stabilizing vegetation on the range where soils have been disturbed.
- Conduct periodic visual inspections to verify that the Erosion and Sedimentation Control Plan is being followed and is working.

Stormwater management areas are proposed at the southern end of the ROCA to accept runoff from paved areas during the operations phase of this Project. Soil contamination, if encountered, will follow procedures described in **Section 4.7**. An emergency response plan will be prepared in the case the UXO are encountered as described in **Section 4.7**.

4.2 Water Resources (Groundwater)

The predominant source of groundwater in the Camp Edwards area is the Sagamore lens of the Cape Cod aquifer, designated as a SSA under the SDWA. The groundwater beneath Camp Edwards is also known as the Upper Cape Water Supply Reserve and provides up to three million gallons of clean drinking water daily to Camp Edwards and the towns of Sandwich, Bourne, Falmouth, and Mashpee. The entirety of Cape Cod has been designated as a SSA. Based on conversations with the USEPA, it is our understanding that this Project is excluded from review under the SSA program as it is located on a military base.

The water table is encountered at an elevation of approximately 65 to 67 feet above sea level (NGVD29 datum³) which equates to an average depth of 100 feet below ground surface in and around the proposed MPMG Range. Due to the depth of groundwater beneath the Site, no impacts to groundwater are anticipated during the construction and operation phases of this Project. Nonetheless, long-term groundwater protection during training operations would be accomplished by implementing stormwater BMPs, maintaining vegetative cover, and implementing the applicable EPS. No dewatering is anticipated during construction due to the depth of groundwater beneath the Site and the relatively shallow construction of the MPMG Range and associated buildings.

The proposed MPMG Range is adjacent to lands under active remediation managed by the Impact Area Groundwater Study (IAGWSP). The IAGWSP is responsible for remediation and mitigation of groundwater impacts from past training practices at the JBCC through a series of regulatory requirements. Groundwater plumes are being addressed through treatment and/or monitored natural attenuation, which uses the natural process of dilution, dispersion and degradation. MassDEP recommends that the proposed Project be designed and constructed to not impede any ongoing or future environmental site investigation, remediation, system performance and/or monitoring activities at JBCC. Construction and operation of the MPMG Range will be coordinated with the IAGWSP regarding their monitoring and treatment programs to ensure its remediation programs will continue without interruption during construction.

The EPSs requires that all active Small Arms Ranges on Camp Edwards have an OMMP. A required aspect of this plan calls for baseline and regular sampling to monitor soil and groundwater. These plans are updated as better training practices and range management processes are identified that will further protect the environment.

The MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify if existing monitoring wells are located in and around the MPMG Range that can be used to determine baseline and future groundwater conditions. The MAARNG will coordinate with the IAGWSP to protect and or relocate any existing groundwater quality monitoring wells currently located within the Project site.

If no existing wells meet this need, the MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify locations and depths for the needed monitoring wells, including down gradient wells. The MAARNG will complete baseline sampling once the range is complete and before rounds go down range. Sampling will include soil and groundwater. Once in operation if the monitoring results in changes to groundwater quality beneath the MPMG Range, the MAARNG will work with the EMC to review the results and to determine what is impacting the groundwater and determine what mitigation and changes in

³ National Geodetic Vertical Datum of 1929

practices would be required to address the findings. The MAARNG MPMG Range Project Manager will coordinate consultation as required with the IAGWSP in order to not interfere with ongoing site investigations, restorations and monitoring activities. The MAARNG will also work closely with the Air Force Civil Engineer Center (AFCEC), IAGWSP, USEPA and MassDEP to coordinate activities during the design and construction of the proposed MPMG Range to avoid or mitigate impacts. Soil contamination, if encountered, is described in **Section 4.7** below.

4.3 Air Quality

Sensitive receptors for air quality assessments include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers. The MPMG Range is proposed approximately 300 meters (0.2 miles) from the eastern JBCC boundary and the nearest offsite receptor (residential neighborhood), making the potential air pathway to offsite residents highly unlikely. The nearest receptor on Camp Edwards is located over two miles to the southwest in the Cantonment area where residential areas are available for military personnel.

The Project would have non-significant, temporary effects on air quality. Construction of the MPMG Range may generate dust resulting from earth-moving operations during construction. This effect would be localized to the construction site and immediate surroundings and last for the duration of construction. This effect would be non-significant, localized to the construction area and would occur during daylight hours on weekdays during the construction period which is anticipated to be eight months. Effects on air quality from operating the MPMG Range would largely result from vehicles travelling to and from the range. The Project would result in a *de minimus* localized, short-term increase in air emissions during construction and operation phases. This would not result in a significant or long-term adverse increase of criteria pollutants at the JBCC or the surrounding area, therefore, no adverse environmental impacts on air quality are anticipated.

The MAARNG would ensure dust control associated with land clearing activities and proposed training activities are conducted in accordance with MassDEP – Air and Climate Division guidelines and EPS Air Quality Performance Standard 8 which requires compliance with the State Implementation Plan (SIP) and the Clean Air Act (CAA). To minimize the potential for adverse air quality impacts, the MAARNG would implement the following typical dust control BMPs, as applicable.

The contractor will prepare and submit a dust mitigation plan to the MAARNG and enforce strict discipline over all personnel to minimize dust generated on Site including but not limited to the following:

- Use appropriate dust suppression methods during on-site construction activities, and if necessary, during dry weather training activities (i.e., available methods include application of water [fresh water only], soil stabilizers, or vegetation; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-movement or disturbance activities during high wind conditions);
- Require a speed of less than 15 miles per hour for land clearing equipment on unpaved surfaces;
- Use low volatile organic compounds supplies and equipment;
- Repair and service vehicular and construction equipment to prevent excess emissions;
- Shut down heavy equipment when not needed;
- Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport;

- Brief the contractor or Soldiers responsible for implementing Site activities on dust-reducing measures;
- The MAARNG's on-site manager would be responsible for bringing air quality issues, if they arise, to the Range Control and the MAARNG Environmental Office; and
- Air quality BMPs will be incorporated into construction documents.

The contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work being performed. MAARNG will ensure that the contractor complies with all laws required to perform the work. The contractor shall maintain the Site, stockpiles, access, detour, and haul roads, staging and parking areas free of dust that may cause a hazard or a nuisance to those at the Site or adjacent to the Site.

The MAARNG will look into participating in MassDEP's Clean Air Construction Initiative (CACI) and the MassDEP Diesel Retrofit Program to mitigate the construction-period impacts of diesel emissions to the maximum extent feasible. The CACI program helps proponents identify appropriate mitigation for minimizing air pollution from construction vehicles such as retrofit of construction equipment with particulate filters and oxidation catalysts and/or use of on-road low sulfur diesel (LSD) fuel. The MAARNG may consult with MassDEP to develop appropriate construction period diesel emission mitigation, which could include the installation of after-engine emission controls such as diesel oxidation catalysts or diesel particulate filters (DPFs). The MAARNG will require selected construction contractors to use ULSD fuel in diesel-fired engines and to the extent practical, require Tier 4 emission compliant engines to be used on job sites and provide a list of equipment and its compliance status.

Unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the Project in accordance with 310 CMR 7.11 of the Air Pollution Control regulations. During the construction period, MAARNG will require the contractor to provide driver training, periodic inspections by Site supervisors, and posting signage as methods of reducing idling. Per request of MassDEP, the MAARNG will install permanent signs limiting idling to five minutes.

Any construction or demolition of a building requires notification to the MassDEP before start of work in accordance with 310 CMR 7.09 designed to protect public health and the environment by ensuring that the release of dust or other potentially hazardous air pollutants to the ambient air will be prevented. In addition, the demolition of existing structures may contain asbestos and, as such, the demolition activity must comply with the Air Quality Control (310 CMR 7.00) regulations (see **Section 4.8** for construction period impacts).

4.4 Greenhouse Gas

EOEEA issued the MEPA GHG Policy and Protocol in 2007. Projects under the review of MEPA are required to quantify GHG impacts as a result of the proposed Project and identify measures to avoid, minimize, or mitigate any such emissions. As MEPA has full scope jurisdiction over the MPMG Range Project, a GHG analyses was required and provided in the NPC. A GHG analysis was provided in Appendix H of the NPC.

The majority of CO₂ emitted from the Project is generated from the land clearing and the biomass removal. For each alternative, the biomass removal accounts for anywhere between 97.4% and 98.1% of the total CO₂ generated. If you eliminate the land clearing (biomass removal) from the calculated totals provided in **Table 4-1** and compare the emissions to the 726 US Tons under the baseline conditions, the Project results in an increase of emissions of 32% over baseline emissions.

One change relative to the construction phase is the reduction of the amount of emissions generated from construction dump trucks and subsequent reduction of GHG. The MAARNG will be reusing spent soil from a local Eversource project. Eversource is building a new transfer station on their easement on Camp Edwards which calls for the leveling of a parcel of land. The leveling will result 24,000 CY of soil that needs to be disposed of. The soil has been tested for contamination (clean) and is structurally sound and the MAARNG will use it for the construction of the MPMG Range. This will result in a reduction of hours of construction needed by 2.4% for the Project which results in less than one-half of 1% of the total emissions including tree removal. The updated GHG calculations reflecting this reduction of truck traffic is provided in **Table 4-1** highlighted with underlined text.

The contractor will be required to maintain a list of equipment with engines being used for the construction of the MPMG Range including USEPA tier emission limits. It is standard for contracts with MAARNG to include provisions for reducing air emissions and maintaining these lists. In addition, this information will be required for the GHG self-certification process required by the NPC Certificate.

Table 4-1: CO₂ Emissions Summary by Alternative (US Tons)

Activity	Baseline	Preferred Alternative	Reduced Build	Full Build
Transportation	724	60	60	60
Out-of-State Training	724	0	0	0
Travel of Work Crews	0	1	1	1
Within Camp Edwards after Range Construction	0	59	59	59
Construction	0	<u>894</u>	<u>546</u>	<u>1,155</u>
Land Clearing	0	734	430	935
Range Construction	0	<u>126</u>	<u>82</u>	<u>186</u>
ROCA Demolition and Construction	0	34	34	34
Land Clearing (Biomass Removal)	0	39,649	23,295	61,992
Range Operations	0.3	1.3	1.3	1.3
Firing of Weapons	0.3	0.3	0.3	0.3
ROCA Structures	0	1	1	1
CO₂ Emission Totals	724.3	<u>40,603.9</u>	<u>23,901.1</u>	<u>63,2107.9</u>
CO₂ Emissions without Land Clearing	724.3	<u>955.1</u>	<u>606.6</u>	<u>1,216.1</u>

The MAARNG will provide self-certification at the completion of construction signed by an appropriate professional indicating all the GHG mitigation measures proposed in the NPC and included in this Single EIR were incorporated. The certification will be supported by documents that clearly illustrate where GHG mitigation measures have been incorporated. Examples of these documents include a spreadsheet for the contractor to keep track of the various vehicles and equipment being used during construction, a list of vehicles and date relative to what EPA tier, and a blank certification to be used by the contractor following completion of construction, examples of which are included in **Appendix D**.

As noted by MEPA in the NPC Certificate, an alternative to the self-certification is that the MAARNG may certify that equivalent emissions reduction measures that have been adopted and that collectively are

designed to reduce GHG emissions by the same percentage as the measures outlined in the Single EIR, based on the same modeling assumptions. MAARNG will take this alternative into consideration.

Mitigation for the Proposed Project includes phasing of the construction and preservation of forested acreage within Camp Edwards as the Project will be constructed in two phases with the two extended lanes being constructed as Phase 2. That is, as there will be two construction phases, impacts resulting in GHG will not occur all at once, resulting in a phased-in approach to GHG impacts.

Substantial mitigation efforts are being proposed relative to impacts to rare species in consultation with the NHESP which includes the preservation of approximately 310 acres of land within Camp Edwards that is presently forested. Other management strategies includes the management of approximately 551 acres of forests through mechanical forestry. The land preservation acreage alone provides mitigation for the impacts from the Proposed Project. Mitigation will continue each year with the annual sequestration occurring in the preserved forests. Grassland alteration during land clearing will also result in the release of CO₂ but will be mitigated by the replanting and restoration of the range floor with native grasses.

In addition to the annual sequestration, mature forests sequester carbon throughout its life. One acre of forest provides 230 US Tons of sequestration. The estimated amount of sequestered carbon in the 13,500 acres of forest at Camp Edwards is estimated to be approximately 3,105,000 US Tons. One acre of grassland provides 10 US Tons of sequestration. The estimated amount of sequestered carbon in the 175 acres of grassland at Camp Edwards is estimated to be approximately 1,750 US Tons of sequestration. The annual GHG sequestration and lifetime sequestration from the mitigation acreage is summarized in **Table 4-2**.

Camp Edwards continues to provide carbon sequestration on an annual basis through maintenance of forested land. Construction of the Proposed Project would only represent 1.3% of the carbon sequestered in the forests at Camp Edwards. The release of CO₂ from the Proposed Project will be mitigated in 3.5 years based on just the annual sequestration of GHG provided by the forested land at Camp Edwards. According to the latest GHG emissions inventory by Massachusetts, in CY 2016, the state sources emitted 74,200,000 million metric tons of CO₂e emissions. This is equivalent of 81,620,000 US tons of CO₂e emissions in CY 2016 where complete dataset was available. The estimated CO₂e emissions for the Preferred Alternative (immediately after project completion) represents an insignificant amount (less than one hundredth fraction of 1%). Regardless, after the completion of Project, the continued annual sequestration by forested land at Camp Edwards will make up for the release during Project construction.

Table 4-2: Sequestration and Mitigation

Management Action	Acreage	Annual Sequestration		Lifetime Sequestration	
		Rate	US Tons	Rate	US Tons
Land Preservation	310	0.85 US Tons/acre/year	263.5	230 US Tons/acre	71,300
Forestry Management	832	0.85 US Tons/acre/year	707.2	230 US Tons/acre	162,012
Total Mitigation	1,142	0.85 US Tons/acre/year	967.3	230 US Tons/acre	233,312
Forests at Camp Edwards	13,500	0.85 US Tons/acre/year	11,475	230 US Tons/acre	3,105,000

4.5 Noise

The MAARNG manages noise in accordance with State and Federal regulations including Federal guidelines specific for military training areas. The Army and MAARNG use a system that partitions noise into three zones (I, II, and III), each representing an area of increasing noise as described in the NPC. The United States Army Public Health Center (USAPHC) performed a Noise Assessment for the proposed MPMG Range in 2015 and again in May of 2019 in accordance with EPS 9.1 which states that noise management activities shall conform to the Army's Environmental Noise Management Program policies for evaluation, assessment, monitoring, and response procedures.

Based on previous studies, the Zone II noise may extend into residential areas to the east of Camp Edwards. The MAARNG published a Statewide Operational Noise Management Plan (SONMP) in December 2007 that provides a strategy for noise management at MAARNG facilities, including Camp Edwards. The plan includes a description of noise environments, including levels from small arms and aircraft training activities. Elements of the plan include education, complaint management, possible noise and vibration mitigation, noise abatement procedures, and land use management. Specific procedures and protocols are provided for noise complaints and for providing public notification including posting noise advisories and articles in local papers. The MAARNG will update the SONMP to include updated Camp Edwards specific Noise Complaint Protocols.

Following the construction of the MPMG Range, the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions. The MAARNG will consider recommendations made by USAPHC at the end of the study. The MAARNG will continue to coordinate with the EMC on a regular basis regarding noise at the range. The construction of a wall or a berm will be considered as a mitigation strategy as necessary following the results of the new noise study once the MPMG Range is constructed and operational. Nonetheless, it is not anticipated that there will be need for noise mitigation due to large area of undisturbed forested land between the MPMG Range and residential areas to the east.

The MAARNG concurs that construction activities are not exempt from 310 CMR 7.10 and work associated with the construction of the MPMG Range will comply with Massachusetts Noise Regulations. The MAARNG will implement the noise mitigation measures identified for construction. Noise generating sources during land conversion activities would be associated primarily with standard construction and maintenance equipment. These increased noise levels could directly affect the areas adjacent to the proposed range. Given the distance between the MPMG Range footprint and sensitive receptors (i.e., residential areas), coupled with the short duration of these activities, no effect to the off-base noise environment is anticipated to occur as a result of land clearing activities.

Indirect impacts include noise from workers commuting and material transport. Area traffic volumes and noise levels would increase slightly from travel to and from the site within Camp Edwards. The area near the proposed range activities would experience temporary increases in traffic noise during daytime hours and some night time hours during operations. These effects would be anticipated to be negligible because they are temporary and the location of the proposed MPMG Range is relatively remote and heavily wooded.

The contractor will prepare and submit a noise abatement plan to the MAARNG and enforce strict discipline over all personnel to minimize noise generated on Site. The contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on

performance of the work being performed. MAARNG will ensure that the contractor complies with all laws required to perform the work. The construction will be performed by methods and use of equipment that minimize noise. The contractor shall not permit the use of radios or electronic entertainment equipment to be operated at volume that makes ordinary conversation difficult at ten feet from such equipment. MAARNG will ensure that the contractor complies with all laws required to perform the work.

To minimize adverse noise impacts resulting from proposed small arms firing operations on the MPMG Range and during the construction phase, the MAARNG will continue to implement the noise notification protocol and noise complaint protocol including the following:

- Provide public notification of upcoming training events, particularly the caliber activity. A Noise Notification Protocol has been established in the SONMP and utilizes, among other communication methods, postings on social media such as Facebook.
- Stationary equipment and material transportation routes will be located as far away from sensitive receivers as possible.
- Equipment will be operated per manufacturer's recommendations, and noise-generating heavy equipment will be shut down when not needed.
- Construction personnel will be directed to operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.)
- Brief the contractor or Soldiers responsible for implementing Site activities on noise-reducing measures.
- The MAARNG's on-site construction manager would be responsible to bring noise issues, if they arise, to the Range Control or the MAARNG Environmental Office.
- Noise BMPs will be incorporated into construction contracts.

4.6 Biological Resources

While it is anticipated that short-term and long-term impacts may occur as a result of the Project on biological resources, mitigation measures, including the preservation and management of large tracts of land are being developed in order to offset any impacts. These mitigation measures are outlined for rare species but will benefit all biological resources in the CMP Application. These measures would reduce any adverse environmental impacts to below significant levels. Mitigation measures relative to rare species and rare species habitat are provided in **Section 3.0**.

Extensive surveys have been conducted to inventory the fauna of Camp Edwards. The MAARNG Range and Training Land Assessment (RTLTA) program inventories and monitors natural resource conditions and manages and analyzes natural resource information. Results are pertinent to management of training and testing lands from training area to installation scales and provides input to decisions that promote sustained and multiple uses on military lands. Annual RTLTA surveys have monitored the long-term trends in bird and small mammal populations since 1993 while other projects have surveyed faunal populations for one to eight years. According to the 2009 INRMP, in total, 28 species of mammals, 105 species of birds, 11 species of amphibians, 12 species of reptiles, 528 species of macrolepidoptera (butterflies, insects), and 46 species of odonates (dragonflies) have been documented at Camp Edwards. These lists are constantly being updated based on recent surveys. The Camp Edwards INRMP is currently being updated through a contract with EA Engineering, Science, and Technology, Inc. Formal stakeholder meetings and comment periods have

been completed and the draft final is nearing completion for review by Sikes Act partners. Agency reviews should be completed over the summer of 2020 and INRMP finalization by the end of the fiscal year.

The MAARNG will limit ground disturbing activities during the establishment of the proposed MPMG Range to the extent feasible. Native plant species will be used to the maximum extent practicable when revegetating the firing points. Long-term land management and training operations will be conducted in accordance with the CMP, the INRMP, and other applicable management plans for Camp Edwards. Large-scale habitat restorations are underway at Camp Edwards and established procedures are in place to avoid and minimize impacts to wildlife species from routine military activities. The Project would be anticipated to affect these species, but would be unlikely to adversely affect them if the following procedures and management measures are followed.

- Carry out the vegetation and wildland fire management recommendations outlined in the INRMP and IWFMP as applicable.
- Implement the NHESP approved Turtle Protection Plan relative to the Eastern Box Turtle to prevent any takes during the construction of the MPMG Range (including tree removal).
- Implement conditions of the CMP to be issued by NHESP.

4.7 Oil and Hazardous Materials

All Oil and Hazardous Materials (OHM) that would be used or generated would be handled and disposed of in compliance with Federal and State requirements, as well as EPS 15 to minimize potential impacts to the extent feasible. No stationary sources of hazardous or toxic materials/wastes occur within the proposed MPMG Range and the Project area is accessed occasionally by military and civilian vehicles.

The anticipated increases would include additional vehicle and equipment use associated with vegetation removal activities, site grading, site maintenance, and training operations. These proposed activities would have potential contamination sources, including such products as diesel fuel, oil, antifreeze, brake fluid, hydraulic oil, grease, battery acid, and other fuels for vehicle maintenance. Even without major release events, multiple minor releases could have potential effects to the environment. Releases over a long period of time could potentially lead to soil contamination, and thus could require some form of remediation.

The MAARNG maintains a Hazardous Waste Management Plan, as well as an installation-specific SPCC. This plan identifies potential sources of pollution, BMPs to limit this potential, procedures to respond to pollution events, and procedures to handle hazardous materials.

Refueling and maintenance of construction vehicles will be conducted in accordance with a Project-specific refueling plan. EPS 15.3.3 states that no storage or movement of fuels supporting field activities, other than in vehicle fuel tanks is permitted except in approved containers no greater than five gallons in capacity. Prior to the start of construction the MAARNG will request a waiver from EPS 15.3.3 through the EMC for the duration of the construction period. The recommendations set forth in the EMC approved waiver will be incorporated into the Project plans and specifications. In addition, MAARNG will obtain prior written approval by the EMC of a site specific SPCC.

The contractor and any subcontractor will comply with MGL c. 21C, MGL c. 21E, and any other laws affecting toxic or hazardous materials, solid, special or hazardous waste (collectively Hazardous Materials Laws). Should the contractor discover unforeseen materials subject to Hazardous Materials Laws at the

Site, the contractor shall immediately comply with any and all requirements for dealing with such materials and notify all required governmental authorities and the MAARNG of such discovery. The contractor will designate by notice to the MAARNG a responsible member of its organization at the Site whose duties shall include ensuring safety, implementation of contractor's Safety Plan and preventing accidents. The contractor shall maintain an accurate record of exposure data on all accidents incident to the work. In addition, the contractor shall submit to the MAARNG without delay verbal and written reports of all accidents involving bodily injury or property damage arising in connection with the work. Chemical waste shall be stored in corrosion resistant containers, removed from the Project site, and disposed of not less frequently than monthly unless directed otherwise. Disposal of chemical waste shall be in accordance with requirements of the USEPA and the MassDEP. Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants to be discarded or burned shall be disposed of in accordance with approved procedures meeting all applicable Federal, State and local regulations. In the event of an oil or hazardous materials spill large enough to violate Federal, State, or applicable local regulations, the contractor shall immediately notify the MAARNG. The contractor shall be responsible for immediately cleaning up any oil or hazardous waste spills resulting from its operations.

Pursuant to the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, MGL c. 21E, the MAARNG must notify MassDEP if oil, hazardous material and/or UXO and Munitions and Explosives of Concern (MEC) are identified or released during Project construction. The MAARNG will commit to ensuring that the Project contractors and sub-contractors maintain an emergency response plan for performing appropriate response actions in the event contamination is encountered during Project construction. In addition, the MAARNG will ensure that UXO safety and awareness training is provided for all utility and construction personnel working at the Site.

The MAARNG concurs that there may be soils contaminated with OHM and munitions. A plan will be developed and incorporated into the Project plans and specifications that identifies the emergency response procedures if OHM and UXO if encountered during the life of the Project. Impact to the environment from OHW is expected to be minimal and mostly associated with the construction phase. To mitigate and prevent any releases of OHW, the following will be implemented:

- Comply with the EPS's regarding oil, hazardous materials and pollution prevention.
- Ensure all MAARNG field staff members and contractors are trained in spill response.
- During construction and operation of the proposed MPMG Range, all OHW generated will be handled and disposed of in compliance with the performance standards and Massachusetts Hazardous Waste Regulation (310 CMR 30.00).

4.8 Solid Waste

The proposed Project includes the demolition of buildings, concrete walls, and/or other structures at the exiting KD Range. Removal of construction and demolition debris from the tear down of the existing buildings will be transported to the Integrated Solid Waste Management landfill located adjacent to Camp Edwards and will be handled in accordance with the Massachusetts Solid Waste Regulations (310 CMR 16.00 and 310 CMR 19.000). Asphalt, brick and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings or other structures, will be handled in accordance with the Solid Waste Regulations, the Resource Conservation and Recovery Act (RCRA), and more specifically, construction and demolition (C&D) guidance provided by MassDEP.

The demolition materials may contain asbestos. As such, the demolition activity must comply with both Solid Waste (310 CMR 10.000), Air Quality Control (310 CMR 7.00) regulations, and EPS 14 and 15. A pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos project monitor will occur at the buildings to be demolished at the KD Range prior to construction of the MPMG Range. In accordance with the revised Asbestos Regulations at 310 CMR 7.15(4), any owner or operator of a facility or facility component that contains suspect asbestos containing material (ACM) shall, prior to conducting any demolition or renovation, employ a DLS licensed asbestos inspector to thoroughly inspect the facility or facility component, to identify the presence, location and quantity of any ACM or suspect ACM and to prepare a written asbestos survey report. As part of the asbestos survey, samples must be taken of all suspect asbestos containing building materials and sent to a DLS certified laboratory for analysis, using USEPA approved analytical methods.

If ACM is identified in the asbestos survey at the KD Range, the MAARNG will hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from the facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at 310 CMR 7.15(7). The MAARNG and asbestos contractor will submit an *Asbestos Notification Form (ANF-001)* to MassDEP at least ten working days prior to beginning any removal of the asbestos containing materials as specified at 310 CMR 7.15(6). The MAARNG shall ensure that all asbestos containing waste material from any asbestos abatement activity is properly stored and disposed of at a landfill approved to accept such material in accordance with 310 CMR 7.15(17). MAARNG is subject to all provisions of 310 CMR 7.00 and will comply.

The MAARNG at Camp Edwards has moved to copper munitions and through an OMMP has BMPs (e.g. auxiliary berms for projectile capture) in place for monitoring soil and groundwater. Ammunition projectiles (copper) will be recycled when they are harvested from the range during maintenance of the target and auxiliary berms.

4.9 Construction Period Impacts

Construction period impacts due to noise, dust and traffic will include heavy construction vehicles (i.e., loaders, graders, vibratory rollers, dump trucks, excavators, etc.) that will operate within the construction site. Once on site, the equipment will remain until the Project is complete or until the equipment is no longer needed. Truck traffic will include material delivered from off the installation and consist mainly of dump trucks carrying soils for the Project. Mitigation measures will be controlled by working during normal business hours, 0700-1700, Monday through Friday. In addition, per the construction documents, the contractor shall take special measures to protect the workers, neighbors and the general public from dust and noise.

Construction period impacts may include erosion and sedimentation, air quality, and solid waste disposal. The MAARNG commits to measures to minimize construction impacts and ensure the Project is consistent with the applicable regulations such as the Solid Waste and Air Quality control regulations and applicable EPSs. A construction management plan will be prepared by MAARNG with more details on these impacts and associated mitigation. The Project would be constructed in two phases as previously described in **Section 1.7** which will eliminate impacts that would occur during the full build scenario. Constructing the Project in phases will reduce impacts on vegetation and GHG emissions.

The construction of the MPMG Range will be in compliance with State permits (i.e., CMP) and local permits (there are none). The contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work. MAARNG will ensure that the contractor obtains all required permits to perform the work and follows all applicable local, state and federal laws and regulations.

The following are items anticipated to be included in the construction management plan to reduce or eliminate impacts to the environment during the construction phase.

- MAARNG will coordinate with the IAGWSP to protect and or relocate any existing groundwater quality monitoring wells currently located within the Project site.
- Construction and demolition material will be disposed of off-Site in compliance with State regulations. The proposed demolition of existing buildings, roadways or parking areas must be handled in accordance with the Massachusetts Solid Waste Regulations.
- MAARNG will look into participating in MassDEP's Clean Air Construction Initiative (CACI) and the MassDEP Diesel Retrofit Program to mitigate the construction-period impacts of diesel emissions to the maximum extent feasible.
- Porto-potties will be used throughout the construction phase as no latrines are allowed in this area.
- All construction-related refueling must be conducted in accordance with an EMC-approved refueling plan.
- Construction traffic will result in the temporary increase from construction equipment being brought to and from the site. Construction traffic during the construction phase will be limited as machinery will be stored at the site or within Camp Edwards and all soils will be reused on site to the extent possible. This will almost eliminate traffic on local roads outside of the base.
- In the event that UXO/MEC are encountered during construction, an "on-call" UXO/MEC expert will be contacted immediately. This expert will handle all aspects of the removal process to include regulator notification, implementation of safety measures and removal of such items. This expert will be contracted from the start through the finish of the Project.
- MAARNG must notify MassDEP if OHM are identified and/or released above reportable quantities during Project construction.

5.0 Mitigation Measures

Mitigation measures proposed for the MPMG Range Project are provided in **Table 5-1**. Each mitigation measure is provided under the applicable subject headings and includes if the proposed measure would be scheduled during the construction phase, the operations phase, or both. The responsible parties are identified and costs are provided, if applicable.

Mitigation funding for range MILCON projects is through the environmental budget of ARNG while facilities projects are through a combination of environmental (e.g., staff) and installation funding. Financial resources are budgeted through Federal (Army, NGB) funding. The Project has been designed to meet the long-term net benefit performance standard for rare species by providing for financial or in-kind contributions toward the development. MAARNG has developed a budget for the rare species mitigation of MPMG Range as described in **Section 3.8**. This budget has been proposed to include all management costs, including mechanical, fire, monitoring and research.

The estimated cost of construction of the MPMG Range is approximately \$7 Million. Many of the mitigation measures are proposed during the construction phase, the cost of which is included in this estimated cost of construction. Nonetheless, we have estimated a cost associated with each mitigation measure in **Table 5-1**. Each cost is a one-time expense unless otherwise identified.

The MAARNG will provide self-certification at the completion of the Project signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR (and summarized in **Table 5-1**) were incorporated. This table can be used as a tracking mechanism for certifying that these mitigation measures were performed.

Table 5-1: Summary of Mitigation Measures

Mitigation Measure	Schedule/Phase	Responsible Party	Estimated Cost of Mitigation
Rare Species (see Section 3.0)			
Management of existing habitat within Pine Barrens Mitigation Focal Areas in accordance with the CMP Application and the five management standards developed by MAARNG.	Operations	MAARNG	\$1,708,800 Table 3-4
Land transfer of 133 acres to be preserved in perpetuity as open space through the transfer to MassWildlife (Tract 5).	Operations	MAARNG	Administrative
Land transfer of 177 acres to be preserved with management of vegetation for rare species (FCRA).	Operations	MAARNG	Administrative
Management of Forest Canopy Reserve Area.	Operations	MAARNG	Administrative (See CMP Application)
Land transfer of 150 acres to be preserved and managed for grassland habitat (Grassland Mitigation Focal Area, Parcel H – Unit K).	Operations	MAARNG	Administrative
Management of the Grassland Mitigation Focal Area to optimize conditions for grassland species.	Operations	MAARNG	\$16,000 per acre per year
Implement NHESP-approved Turtle Protection Plan during the construction phase of the Project.	Construction	MAARNG	\$216,000
Provide construction staff with information and materials about presence of State-listed species and appropriate responses to any sightings.	Construction	MAARNG	\$5,000

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Monitor Eastern Box Turtles and other species for a period (to be determined) after Project construction to assess effectiveness of mitigation measures.	Operations	MAARNG	\$100,000
Implement long term monitoring and management plan to maintain habitat quality within the pine barrens using the INRMP for guidance.	Operations	MAARNG	\$100,000
Development and implementation of Range Complex Master Plan	Operations	MAARNG	\$75,000
Development and implementation of site-wide INRMP	Operations	MAARNG	\$60,000
Implement conditions of the CMP to be issued by NHESP.	Construction Operations	MAARNG	TBD (See CMP Application)
Land Alteration (see Section 4.1)			
Implement methods to prevent soil from leaving the Project site either by wind, rainfall, or vehicles and equipment (e.g., construction entrance controls).	Construction	Contractor	\$15,000
Prepare detailed, site-specific Erosion and Sedimentation Control Plan to address all earth-disturbance aspects of the Project	Construction	Contractor	\$8,000
Install and monitor erosion-prevention measures such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading of stockpiled topsoil.	Construction	Contractor	\$30,000
Conduct periodic visual inspections to verify that the Erosion and Sedimentation Control Plan is being followed and is working.	Construction	MAARNG	\$20,000
Plant and maintain native soil-stabilizing vegetation on the range where soils have been disturbed.	Construction	Contractor	\$500,000
Maintain native soil-stabilizing vegetation on the range.	Operations	MAARNG	\$10,000 annually
Water Resources (Groundwater) (see Section 4.2)			
Implement stormwater BMPs per design plans.	Operations	MAARNG	\$150,000
Maintain stormwater BMPs and vegetative cover.	Operations	MAARNG	\$5,000 annually
Coordinate with IAGWSP to ensure remediation programs will continue without interruption during construction.	Construction	MAARNG	\$1,000
Finalize MPMG Range OMMP and obtain approval from EMC.	Operations	MAARNG	\$10,000
Sample for baseline and regular soil and water sampling pursuant to the OMMP.	Operations	MAARNG	\$10,000 annually
Coordinate with IAGWSP, the EMC, and the MassDEP to identify locations and depths for monitoring wells. Cost assumes installation of three wells.	Construction	MAARNG	\$30,000
Perform annual review groundwater monitoring results. Work with EMC to review results and determine mitigation and changes in practices if needed.	Operations	MAARNG	\$3,000
Notify MassDEP if oil, hazardous material and/or UXO and MEC are identified or released during Project construction.	Construction	MAARNG	No cost
Maintain emergency response plan in the event contamination is encountered during Project construction.	Construction	Contractor	\$20,000
Utilize porto-potties throughout the construction phase as no latrines are allowed in this area.	Construction	Contractor	\$5,000
Utilize porto-potties throughout the operation phase as no latrines are allowed in this area. Purchase price not included.	Operations	MAARNG	\$1,000 annually
Prepare construction-related refueling plan and obtain approval from EMC.	Construction	MAARNG Contractor	\$5,000
Air Quality (see Section 4.3)			
Implement dust control plan.	Construction	Contractor	\$5,000

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Use appropriate dust suppression methods during construction activities.	Construction	Contractor	\$100,000
Use appropriate dust suppression methods during dry weather training activities.	Construction	MAARNG	\$10,000 annually
Provide education and monitoring of the contractor by MAARNG requiring a speed of less than 15 miles per hour for land clearing equipment on unpaved surfaces.	Construction	MAARNG	\$1,000
Post 15 mile per hour signs relative to the MPMG Range construction.	Construction	MAARNG	\$10,000
Use low volatile organic compounds supplies and equipment.	Construction	Contractor	\$1,000
Repair and service vehicular and construction equipment to prevent excess emissions.	Construction	Contractor	\$30,000
Shut down heavy equipment when not needed.	Construction	Contractor	\$1,000
Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.	Construction	Contractor	\$40,000
Notify Range Control and the MAARNG Environmental Office of air quality issues, if they arise.	Construction	MAARNG	\$1,000
Review participation in MassDEP's CACI and the MassDEP Diesel Retrofit Program.	Construction	MAARNG	\$3,000
Provide education and monitoring of the contractor by MAARNG regarding idling requirements.	Construction	MAARNG	\$1,000
Provide driver training, periodic inspections by site supervisors, and posting signage as methods of reducing idling.	Construction	Contractor	\$20,000
Post idling signs relative to 310 CMR 7.11 of the Air Pollution Control regulations.	Construction Operations	MAARNG	\$10,000
Review possible consultation with MassDEP to develop appropriate construction period diesel emission mitigation.	Construction	MAARNG	\$5,000
Brief contractor or Soldiers responsible for implementing Site activities on dust-reducing measures	Construction	MAARNG	\$5,000
Incorporate air-quality BMPs into construction contracts.	Construction	MAARNG	\$2,000
Greenhouse Gas (see Section 4.4)			
Phase construction to reduce the impact of tree removal and GHG emissions.	Construction	MAARNG	No Cost
Maintain a list of equipment with engines including USEPA tier emission limits.	Construction	Contractor	\$10,000
Incorporate conditions into construction contracts to include provisions for reducing air emissions and maintaining equipment lists.	Construction	MAARNG	\$3,000
Provide self-certification at the completion of construction signed by an appropriate professional indicating GHG mitigation measures utilized.	Construction	MAARNG	\$5,000
Preserve land within Camp Edwards that is presently forested to provide annual sequestration.	Operations	MAARNG	See Rare Species
Replanting and restore MPMG Range floor with native grasses.	Construction	MAARNG	See Land Alteration
Noise (see Section 4.5)			
Update the SONMP to include updated Camp Edwards specific Noise Complaint Protocols.	Operations	MAARNG	\$10,000
Contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions.	Operations	MAARNG	\$15,000
Consider recommendations made by USAPHC at the end of the study.	Operations	MAARNG	TBD
Prepare and submit a noise abatement plan.	Construction	Contractor	\$5,000
Implement noise notification protocol and noise complaint protocol to minimize adverse noise impacts.	Operations	MAARNG	\$2,000 annually
Provide public notification of upcoming training events, particularly the caliber activity.	Operations	MAARNG	\$2,000 annually

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Locate stationary equipment and material transportation routes as far away from sensitive receivers as possible.	Construction	Contractor	\$1,000
Operate equipment per manufacturer's recommendations	Construction	Contractor	\$1,000
Shut down noise-generating heavy equipment when not needed.	Construction	Contractor	\$5,000
Operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.)	Construction	Contractor	\$2,000
Notify Range Control and the MAARNG Environmental Office of noise issues, if they arise.	Construction	MAARNG	\$1,000
Brief contractor or Soldiers responsible for implementing Site activities on noise-reducing measures	Construction	MAARNG	\$5,000
Incorporate noise BMPs into construction contracts.	Construction	MAARNG	\$2,000
Biological Resources (see Section 4.6)			
Implement wildland fire management recommendations outlined in the INRMP and IWFMP as applicable.	Operations	MAARNG	\$400,000
Control fires that may result from the range during training.	Operations	MAARNG	\$250,000
Oil and Hazardous Material (see Section 4.7)			
Maintain Hazardous Waste Management Plan	Construction Operations	MAARNG	\$3,000 annually
Maintain an EMC-approved SPCC	Construction Operations	MAARNG	\$3,000 annually
Comply with EPS's regarding oil, hazardous materials and pollution prevention and continue to work with EMC.	Construction Operations	MAARNG	Included in above costs.
Ensure all MAARNG field staff members are trained in spill response.	Construction Operations	MAARNG	\$8,000 annually
Provide UXO safety and awareness training for all utility and construction personnel.	Construction	MAARNG	\$5,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Construction	Contractor	\$20,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Operations	MAARNG	\$20,000 annually
Solid Waste (see Section 4.8)			
Dispose of construction and demolition material off-Site in compliance with State regulations.	Construction	Contractor MAARNG	\$100,000
Perform a pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos project monitor of buildings and structures to be demolished at the KD Range.	Construction	Contractor	\$6,000
If ACM is identified in the asbestos survey at the KD Range, hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities.	Construction	MAARNG	TBD
Develop specific recovery plans for the removal and proper disposition of spent projectiles, residues and solid waste associated with the weapons, ammunition, target systems, and/or their operation and maintenance. Recycle ammunition projectiles (copper) when harvested from the range during maintenance of the target and auxiliary berms.	Operations	MAARNG	\$15,000 annually
Environmental Performance Standards			
Implement BMPs to satisfy applicable regulatory requirements in association with the Project.	Construction Operations	MAARNG	Ongoing

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Consult with applicable agencies with oversight of the training area before undertaking any actions that are subject to State and/or Federal regulatory requirements.	Construction Operations	MAARNG	Ongoing
Reduction of adverse impacts to the maximum extent feasible, including consideration for the design/redesign and/or relocation of the activity or encouraging only those activities that result in meeting the goal of overall projectile and/or projectile constituent containment.	Operations	MAARNG	Ongoing
Internal and external coordination of documentation for the Camp Edwards range management programs and other related Camp Edwards management programs Including: the Integrated Training Area Management Program (ITAM), Range Regulations, Camp Edwards Environmental Management System, Civilian Use Manual, and SOPs.	Operations	MAARNG	Ongoing
Prepare annual State of the Reservation Report including long-term range maintenance, monitoring and reporting of applicable parameters and analysis.	Operations	MAARNG	Already occurring

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6.0 Response to MEPA Certificate and Comment Letters

The Certificate of the Secretary of EOEEA on the NPC for the MPMG Range was issued on 19 March 2020. In addition to the NPC Certificate, five comment letters were received in response to the NPC. The NPC Certificate issued on 19 March 2020 is provided in the front of this document and comment letters annotated with comment numbers corresponding with the numbering provided below are provided in **Appendix A**.

- Environmental Management Commission dated 12 March 2020
- Cape Cod Commission dated 12 March 2020
- Massachusetts Department of Environmental Protection dated 12 March 2020
- Massachusetts Natural Heritage and Endangered Species Program dated 12 March 2020
- Massachusetts Division of Marine Fisheries dated 10 March 2020

6.1 MEPA Comments

The Certificate of the Secretary of EOEEA on the NPC for the MPMG Range was issued on 19 March 2020 with the following comments:

MEPA1: MassDEP ... request[s] the installation of down gradient groundwater monitoring wells to determine baseline groundwater conditions.

Response: The MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify if existing monitoring wells will meet this need. If no existing wells meet this need, the MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify locations and depths for the needed monitoring wells including down gradient wells. The MAARNG will complete baseline sampling once the range is complete and before rounds go down range. Sampling will include soil and groundwater. See **Section 4.2**.

MEPA2: ... clarify that noise resulting from construction of the MPMG Range is not exempt and should comply with the noise regulations.

Response: The MAARNG concurs that noise resulting from construction of the MPMG Range is not exempt from 310 CMR 17.10 and work associated with the construction of the MPMG Range will comply with Massachusetts Noise Regulations. See **Section 4.5**.

MEPA3: A new noise study will be performed once the MPMG Range becomes operational to determine if additional mitigation measures are necessary.

Response: Following the construction of the MPMG Range, the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions. The MAARNG will consider recommendations made by USAPHC at the end of the study. See **Section 4.5**.

MEPA4: A noise complaint management program will also be implemented.

Response: The MAARNG will update the SONMP to include updated Camp Edwards specific Noise Complaint Protocols. See **Section 4.5**.

MEPA5: The Proponent, in consultation with MassDEP and the IAGWSP, should develop and implement a plan for the management of OHM, including contaminated soil and munitions items that may be found during construction.

Response: The MAARNG maintains a Hazardous Waste Management Plan, as well as an installation-specific SPCC. This plan identifies potential sources of pollution, BMPs to limit this potential, procedures to respond to pollution events, and procedures to handle hazardous materials. A plan will be developed and incorporated into the project plans and specifications that identifies the emergency response procedures if OHM and UXO is encountered during the life of the Project. Within this plan it will identify that all OHM encountered will follow the requirements of the MCP (310 CMR 40.00). This plan will also identify a procedure if UXO is encountered. This procedure includes an on-call UXO response team that has been contracted throughout the duration of the project to respond at a moment's notice if munitions are encountered. See **Section 4.7**.

MEPA6: The Proponent should coordinate with MassDEP and the EMC to protect or relocate any existing groundwater quality monitoring wells currently located within the project site.

Response: The MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify if existing monitoring wells are located in and around the MPMG Range that can be used to determine baseline and future groundwater conditions. The MAARNG will coordinate with the IAGWSP to protect and or relocate any existing groundwater quality monitoring wells currently located within the Project Site. See **Section 4.2**.

MEPA7: The Single EIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope.

Response: This Single EIR follows Section 11.07 of the MEPA regulations for outline and content as modified by the Scope included in the NPC Certificate. See **Section 1.2**.

MEPA8: The Single EIR should discuss the steps the Proponent has taken to further reduce the impacts since the filing of the Expanded NPC, or, if certain measures are infeasible, the Single EIR should discuss why these measures will not be adopted.

Response: The MAARNG has taken further steps to reduce impacts since the filing of the NPC. These efforts include continued discussions with EMC over range design. The EMC was afforded the opportunity to comment on the 95% design. Impacts to construction-related impacts have been reduced as described in **Section 4.4**. Consultation with NHESP also continued in finalizing the CMP application which is included as **Appendix B**. Methods for reducing impacts to the SOS frost bottom will be developed through the actual design of Phase 2 and setting protection and improvement of the frost bottom as a fundamental design criteria as described in **Section 3.7**.

MEPA9: The Single EIR should include an updated description of the proposed project and describe any changes to the project since the filing of the Expanded NPC.

Response: The scope of the proposed MPMG Range project has not changed since the initial filing of the NPC as described in **Section 1.3**. The proposed MPMG Range scope as it stands at 100% design is the same as now as in the NPC filing which consists of the construction of an eight 800 meters lane under Phase 1. At a later date the two middle lanes are proposed to be extended to 1,500 meters under Phase 2. There have been minor changes to the design plans mostly with the layout of the targets, although there have been no changes which would affect the Project impacts and associated mitigation. Plans are included as **Appendix C**. The most significant change is the filing of the CMP Application with NHESP including new language describing a significant commitment by MAARNG for management of the mitigation areas in perpetuity as described in **Section 3.11**.

MEPA10: The Single EIR should identify, describe, and assess the environmental impacts of any changes in the project that have occurred between the preparation of the Expanded NPC and Single EIR.

Response: There will be a reduction of impacts to the GHG emissions during the construction phase of the MPMG Range as described in **Section 4.4**. See also response to MEPA9 above.

MEPA11: The Single EIR should include updated site plans for existing and post-development conditions at a legible scale.

Response: Updated site plans are provided in **Appendix C**.

MEPA12: The Single EIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements...

Response: A description and analysis of applicable statutory and regulatory standards and requirements is provided in **Section 2.0**.

MEPA13/14: It should include a list of required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions.

Response: A list of required permits, approvals, and financial assistance is provided in **Section 2.0, Table 2-1**.

MEPA15: The Single EIR should elaborate on how the project (specifically the extension of the two 1,500-m lanes) will facilitate management of the scrub oak shrublands located north of the KD Range. It should also describe how construction of the 1,500-m lanes and associated grading and access roads will occur to minimize and/or reduce impacts to scrub oak shrubland.

Response: When Phase 2 is constructed, the MAARNG will work with NHESP to reduce impacts from grading and access roads to the scrub oak shrubland as the 0.50 caliber lanes would extend into this habitat near to a large frost bottom. Prescribed burns will be planned and implemented to improve open pine barrens conditions for dependent species, including improvement of frost bottom functioning where relevant. This will occur only after the UXO have been removed. Fire and frost effects typically suppress the growth of pitch pine and other tree species while promoting the growth of scrub oak creating frost bottoms. See **Section 3.7** and **Figure 3-2**.

MEPA16: The Single EIR should report on the timeframe for updating the INRMP....

Response: The Camp Edwards INRMP is currently being updated through a contract with EA Engineering, Science, and Technology, Inc. Formal stakeholder meetings and comment periods have been completed and the draft final is nearing completion for review by Sikes Act partners. Agency reviews should be completed over the summer of 2020 and INRMP finalization by the end of the fiscal year. See **Section 2.3**.

MEPA17: ... describe the specific mechanisms by which the commitments to preserve and manage forest and grasslands, which are separate from outright land transfers to DFW, will be enforced over time and ensured in perpetuity.

Response: The mechanism to enforce the commitments to preserve and maintain in perpetuity will be a combination of compliance with the CMP and the INRMP process. The INRMP is a requirement established by the Sikes Act which the MAARNG must comply with. The existing INRMP process requires annual in person meetings between all Sikes Act partners including MADFW, MAARNG and the USFWS. The INRMP, Sikes Act, AR 200-1 and the EPS all require management for the net benefit and sustainability of State-listed species at Camp Edwards. This annual meeting amongst other things will review the compliance and progress of the objectives established in the CMP. See **Section 2.3**.

MEPA18: It should provide an update to the GHG analysis showing any additional mitigation measures that will be implemented to reduce construction-period GHG emissions.

Response: One change relative to the construction phase is the reduction of the amount of emissions generated from trucks and subsequent reduction of GHG. The MAARNG will be reusing spent soil from a local Eversource project. Eversource is building a new transfer station on their easement on Camp Edwards which calls for the leveling of a parcel of land. The leveling will result 24,000 CY of soil that needs to be disposed of. The soil has been tested for contamination (clean) and is structurally sound and the MAARNG will use it for the MPMG Range. The updated GHG information is provided in **Section 4.4**.

MEPA19: The MA ARNG should continue to consult with MassDEP and the EMC to develop a plan for measuring and mitigating (if necessary) noise produced by construction and operation of the MPMG Range.

Response: The MAARNG will comply with current noise regulations as it pertains to noise generated by construction. The MAARNG will implement the noise mitigation measures identified for construction. Following construction the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG under full training (firing) conditions. The MAARNG will consider all recommendations made by USAPHC at the end of the study. See **Section 4.5**.

MEPA20: The Single EIR should include an update on this consultation and should identify mitigation measures that could be implemented if warranted by monitoring results.

Response: The MAARNG continues to coordinate with the EMC (which includes a representative from MassDEP) on a regular basis. Following construction the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG under full training (firing)

conditions. The MAARNG will consider recommendations made by USAPHC at the end of the study and implement measure to the extent practical. See **Section 4.5**.

MEPA21: The Single EIR should identify any existing groundwater quality monitoring wells within the project site that may need to be relocated. It should address how groundwater will be monitored to determine whether operation of the MPMG Range will adversely impact the aquifer, and what remediation measures will be taken if warranted by monitoring results

Response: The MAARNG will coordinate with the IAGWSP to protect and or relocate any existing groundwater quality monitoring wells currently located within the Project Site. Once in operation if the monitoring results in changes to groundwater quality beneath the MPMG Range, the MAARNG will work with the EMC to review the results and to determine what is impacting the groundwater and determine what mitigation and changes in practices would be required to address the findings. See **Section 4.2**.

MEPA22: address whether the project requires review by the EPA pursuant to the Sole Source Aquifer program

Response: The entirety of Cape Cod has been designated as a SSA. Based on conversations with the USEPA, it is our understanding that this Project is excluded from review under the SSA program as it is located on a military base. We have requested clarification in writing from the USEPA and will submit to EOEEA when it is received. See **Section 2.7**.

MEPA23: Construction period impacts and mitigation measures should be described in the Single EIR, including impacts associated with noise, dust and traffic. Measures that will be taken to minimize and mitigate construction period impacts should be detailed.

Response: Construction period impacts and mitigation measures are summarized in **Section 4.9**. Construction of the MPMG Range may generate dust resulting from earth-moving operations during construction. The MAARNG would ensure dust control associated with land clearing activities and proposed training activities are conducted in accordance with MassDEP – Air and Climate Division guidelines and EPS Air Quality Performance Standard 8 which requires compliance with the SIP and the CAA. See **Section 4.3**. Construction of the MPMG Range may result on temporary noise impacts. The contractor will prepare and submit a noise abatement plan to the MAARNG and enforce strict discipline over all personnel to minimize noise generated on Site. See **Section 4.5**.

MEPA24: ... include specific mitigation measures that will be implemented to ensure compliance with MassDEP’s Noise Regulations at 310 CMR 7.10.

Response: The MAARNG published a SONMP in December 2007 that provides a strategy for noise management at MAARNG facilities, including Camp Edwards. The plan includes a description of noise environments, including levels from small arms and aircraft training activities. Elements of the plan include education, complaint management, possible noise and vibration mitigation, noise abatement procedures, and land use management. Specific procedures are provided for noise complaints and protocols are provided for providing public notification including posting noise advisories and articles in the Cape Cod Times.

The MAARNG will ensure the contractor take special measures to protect the site workers, neighbors and the general public from noise and other disturbances. The contractor shall prepare and submit to the MAARNG a noise-abatement plan and enforce strict discipline over all personnel to keep noise to a minimum. The construction will be performed by methods and use of equipment that minimize noise. The contractor shall not permit the use of radios or electronic entertainment equipment to be operated at volume that makes ordinary conversation difficult at ten feet from such equipment. The MAARNG will ensure that the contractor complies with all laws required to perform the work. See **Section 4.5**.

MEPA25: The Single EIR should describe how construction activities will comply with MGL c. 21E, including any applicable land use controls.

Response: The contractor and any subcontractor will comply with MGL c. 21C, MGL c. 21E, and any other laws affecting toxic or hazardous materials, solid, special or hazardous waste (collectively Hazardous Materials Laws). Should the contractor discover unforeseen materials subject to Hazardous Materials Laws at the Site, the contractor shall immediately comply with any and all requirements for dealing with such materials and notify all required governmental authorities and the MAARNG of such discovery. The contractor will designate by notice to the MAARNG a responsible member of its organization at the Site whose duties shall include ensuring safety, implementation of contractor's Safety Plan and preventing accidents. The contractor shall maintain an accurate record of exposure data on all accidents incident to the work. In addition, the contractor shall submit to the MAARNG without delay verbal and written reports of all accidents involving bodily injury or property damage arising in connection with the work. Chemical waste shall be stored in corrosion resistant containers, removed from the Project site, and disposed of not less frequently than monthly unless directed otherwise. Disposal of chemical waste shall be in accordance with requirements of the USEPA and the MassDEP. Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants to be discarded or burned shall be disposed of in accordance with approved procedures meeting all applicable Federal, State and local regulations. In the event of an oil or hazardous materials spill large enough to violate Federal, State, or applicable local regulations, the contractor shall immediately notify the MAARNG. The contractor shall be responsible for immediately cleaning up any oil or hazardous waste spills resulting from its operations. See **Section 4.7**.

MEPA26: The Single EIR should confirm that the Proponent will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD).

Response: The contractor will be required to maintain a list of equipment with engines being used for the construction of the MPMG Range including USEPA tier emission limits as described in **Section 4.4**. It is standard for contracts with MAARNG to include provision for reducing air emissions. In addition, this information will be required for the GHG self-certification process required by the MEPA Certificate. The MAARNG will look into participating in MassDEP's Clean Air Construction Initiative (CACI) and the MassDEP Diesel Retrofit Program to mitigate the construction-period impacts of diesel emissions to the maximum extent feasible. The MAARNG will require selected construction contractors to use ULSD fuel in diesel-fired engines and to the

extent practical, require Tier 4 emission compliant engines to be used on job sites and provide a list of equipment and its compliance status. See **Section 4.3**.

MEPA27: All construction should be undertaken in compliance with the conditions of all applicable State and local permits.

Response: The construction of the MPMG Range will be in compliance with State permits (i.e., CMP) and local permits (there are none). The contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work. MAARNG will ensure that the contractor obtains all required permits to perform the work and follows all applicable local, state and federal laws and regulations. See **Section 2.0**.

MEPA28: The Single EIR should contain a copy of this Certificate and a copy of each comment letter received. The Single EIR should include direct responses to comments to the extent that they are within MEPA jurisdiction.

Response: A copy of the NPC Certificate is provided at the front of this document and comment letters are included in **Appendix A**. Responses to these are provided in **Section 6.0**.

MEPA29: The Single EIR should include a separate chapter summarizing proposed mitigation measures. This should incorporate any additional measures that have been adopted since the expanded NPC was filed.

Response: Mitigation measures are summarized in **Section 5.0** and found in greater details in subject matter sections within **Section 4.0**. **Section 5.0** and **Table 5-1** provide construction and operational mitigation measures that have been added to this Single EIR.

MEPA30: The Single EIR should include revised draft Section 61 Findings for each anticipated Agency Action by NHESP, EMC, and MA ARNG.

Response: The draft Section 61 Findings have been updated and findings for NHESP, EMC and MAARNG are provided in **Section 7.0** of this Single EIR. These Section 61 Findings build upon the original MEPA #5834 Section 61 Findings.

MEPA31: The Single EIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and schedule for implementation.

Response: The Single EIR has been updated to include a commitment to each of these mitigation measures as summarized in **Section 5.0** including a table of costs, responsible parties, and phase of scheduling (i.e., construction or operational phase).

MEPA32: ... require proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed.

Response: The MAARNG will provide self-certification at the completion of construction signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR were incorporated. See **Section 5.0**.

MEPA33: I will require, as a condition of my Certificate on the Single EIR, that following completion of construction the Proponent provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the Single EIR have been incorporated into the project.

Response: The MAARNG will provide self-certification at the completion of construction signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR were incorporated. Construction phase mitigation measures are summarized in **Table 5-1**) and this table can be used as a tracking mechanism for certifying these mitigation measures were performed. See **Section 5.0**.

MEPA34: Alternatively, the Proponent may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the Single EIR, based on the same modeling assumptions, have been adopted.

Response: The MAARNG will take this alternative into consideration.

MEPA35: Proponent is required, as a condition of this Certificate on the Single EIR, that following completion of construction the Proponent provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the Single EIR have been incorporated into the project.

Response: Please see response to MEPA33 above.

MEPA36: Alternatively, the Proponent may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the Single EIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated.

Response: Please see response to MEPA34 comments.

MEPA37: The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings

Response: The commitments identified in **Section 5.0 (Table 5-1)** have been incorporated into the draft Section 61 Findings in **Section 7.0**.

MEPA38: The Proponent should circulate the Single Supplemental EIR to those parties who commented on the Expanded NPC, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations.

Response: The Single EIR will be circulated to all parties who commented on the NPC, to all State Agencies from which a permit is required or approval, and to any party specified in Section 11.16 of the MEPA regulations. The circulation list is provided in **Section 8.0**. Due to COVID restrictions, the Single EIR will be sent electronically when possible.

MEPA39: copy of the Single EIR should be made available for public review at Bourne, Falmouth, Mashpee, and Sandwich public libraries.

Response: The Single EIR will be made available for public review at Bourne, Falmouth, Mashpee, and Sandwich public libraries (if re-opened from the temporary COVID-19 shutdown). The Single EIR will also be posted on the MAARNG Environmental and Readiness Center Website <https://www.massnationalguard.org/ERC/publications.htm>.

6.2 Environmental Management Commission

EMC1: The final MPMG Range design and the Operation, Maintenance and Monitoring Plan (OMMP) for the MPMG requires approval by the EMC in accordance with Chapter 47 of the Acts of 2002 and the Environmental Performance Standards (EPS) prior to construction and operation of the MPMG Range.

Response: The MAARNG has been working with the EMC Environmental Officer to finalize an OMMP for the MPMG Range. See **Sections 4.2** and **4.8**.

EMC2: The MPMG Range is designed and has been designated by the MAARNG as a copper ammunition-only range.

Response: The MAARNG has worked with the EMC, its Environmental Officer, and supporting councils (SAC, CAC) for design and operational (OMMP) review and approval. A request will be made to the EMC for design and operational approval in 2020 as a copper only range. See **Section 4.8**.

EMC3: The OMMP will address requirements for periodic soil and groundwater sampling and analysis, maintenance of soil berms and other engineered designs for projectile capture, recycling of harvested projectiles from the range and other maintenance and operational issues required under the EPSs. Sampling results and information from management and mitigation actions, training utilization, coordination with other projects and environmental programs within the Reserve are reported and compared against the EPSs in the annual "State of the Reservation" reports required by MEPA and by Chapter 47 of the Acts of 2002.

Response: As required by the EPS and Chapter 47, the data and information regarding the use and monitoring of the MPMG Range is reported in the annual State of the Reservation Report. See **Section 2.2**.

EMC4: The MAARNG is advised that there may be soils contaminated with OHM and munitions items located at the proposed project location.

Response: The MAARNG concurs that there may be soils contaminated with OHM and munitions. The MAARNG will commit to ensuring that the Project contractors and sub-contractors maintain an emergency response plan for performing appropriate response actions in the event contamination is encountered during Project construction. See **Section 4.7**.

EMC5: Therefore, a plan for the management of OHM, including contaminated soil and munitions items, which may be found during construction, should be developed by the MAARNG working in communication with the IAGWSP and MassDEP.

Response: A plan will be developed and incorporated into the project plans and specifications that identifies the emergency response procedures if OHM and UXO is encountered during the life of

the project. Within this plan it will identify that all OHM encountered will follow the requirements of the MCP (310 CMR 40.00). This plan will also identify a procedure if UXO is encountered. This procedure includes an on-call UXO response team that has been contracted throughout the duration of the project to respond at a moment's notice if munitions are encountered. See **Section 4.7**.

EMC6: Additionally, the EMC recommends that the MAARNG ensure that UXO safety and awareness training is provided for all utility and construction personnel working at the location of the proposed Project.

Response: MAARNG will provide UXO safety and awareness training to all personnel entering the training area to include all the utility and construction personnel working at the MPMG Range Site. The contractor will designate by notice to the MAARNG a responsible member of its organization at the Site whose duties shall include ensuring safety, implementation of contractor's Safety Plan and preventing accidents. The contractor shall maintain an accurate record of exposure data on all accidents incident to the work. See **Section 4.7**.

EMC7: EPS 15.3.3 states that no storage or movement of fuels supporting field activities, other than in vehicle fuel tanks is permitted except in approved containers no greater than five gallons in capacity. The MAARNG is advised that a waiver of EPS 15.3.3 may be granted by the EMC for the duration of the construction period subject to EMC review and prior written approval by the EMC of a site specific Spill Prevention, Control and Countermeasure Plan.

Response: Prior to the start of construction the MAARNG will formally request a waiver from EPS 15.3.3 through the EMC. The recommendations set forth in the EMC approved waiver will be incorporated into the Project plans and specifications. See **Section 4.7**.

EMC8: All construction-related refueling and equipment maintenance activities must be conducted in accordance with an EMC-approved refueling plan .

Response: MAARNG concurs that refueling and maintenance will be conducted in accordance with a refueling plan. See **Section 4.7**.

EMC9: Although there is an exemption in the regulation for "police, fire, and civil and national defense activities", the EMC recommends the MAARNG work with MassDEP to develop a plan for measuring and mitigating, if necessary, noise produced both by construction and operation of the MPMG Range.

Response: The MAARNG concurs that noise resulting from construction of the MPMG Range is not exempt from 310 CMR 17.10 and work associated with the construction of the MPMG Range will comply with Massachusetts Noise Regulations. Following the construction of the MPMG Range, the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions. The MAARNG will consider recommendations made by USAPHC at the end of the study. See **Section 4.5**.

EMC10: The MAARNG should continue to work closely during the permitting and the execution of the Project with MassDEP, the EMC, and MassWildlife, which maintains custody, care and control of the Upper Cape Water Supply Reserve. Early coordination with Commonwealth and municipal resource agencies is recommended with regard to rare species, noise and other operational impacts from the proposed project.

Response: The MAARNG will continue to work closely with MassDEP, the EMC and NHESP regarding rare species, noise, and other potential operational impacts.

6.3 Cape Cod Commission

CCC2: Ultimately, such mitigation actions should be incorporated into the Camp Edwards Integrated Natural Resources Management Plan and Integrated Fire Management Plan (it appears that the most recent 2009 INRMP is currently being updated).

Response: All mitigation actions will be identified in the INRMP update and is currently identified in the CMP application that has been developed between the MAARNG and the MA DFW. See **Section 2.3**.

CCC3: MAARNG will also coordinate with the Impact Area Groundwater Study Program to ensure the proposed MPMG range construction and activities do not interfere with ongoing site investigations, restorations, and monitoring activities.

Response: The MAARNG MPMG Range Project Manager will coordinate consultation as required with the IAGWSP in order to not interfere with ongoing site investigations, restorations and monitoring activities. See **Section 4.2**.

CCC4: JBCC Environmental Management Commission (EMC) approval of the Project will also be required.

Response: The MAARNG has worked with the EMC, its Environmental Officer, and supporting councils for design and operational OMMP review and approval. A request will be made to EMC for design and operational approval in 2020. See **Section 2.2**.

CCC5: MAARNG should continue to work with NHESP, EMC, MassDEP, and USEPA through Project review, permitting and implementation to ensure that environmental performance standards and protections are in place during all phases of development (i.e. Construction Management Plan, Range Management Plan, Operation, Maintenance and Monitoring Plan, and Standard Operating Procedure).

Response: The MAARNG will continue to consult with NHESP, MassDEP and USEPA throughout the construction and operation phases of the MPMG Range. The MAARNG will also continue to work with EMC to ensure the proposed MPMG Range design and construction will comply with all EPSs under the statutory requirement Chapter 47 the Acts of 2002. See **Section 2.2**.

6.4 Massachusetts Department of Environmental Protection

DEP1: MassDEP recommends that at least three monitoring wells be installed downgradient of the proposed range to determine baseline groundwater conditions.

Response: The MAARNG will work with the IAGWSP, the EMC, and the MassDEP to identify if existing monitoring wells will meet this need. If no existing wells meet this need, the MAARNG will work with the EMC and MassDEP to identify locations and depths for the needed monitoring

wells. The MAARNG will complete baseline sampling once the range is complete and before rounds go down range. Sampling will include soil and groundwater. See **Section 4.2**.

DEP2: If, in the future, the MPMG is suspected of causing or contributing to contamination of the aquifer, the sampling of these wells and comparison to the baseline conditions will provide valuable information as to the MPMG being or not being a source of contamination

Response: The EPSs require all active Small Arms Ranges on Camp Edwards to develop and maintain an OMMP. A required aspect of this plan calls for baseline and regular sampling to monitor soil and groundwater. See **Section 4.2**.

DEP3: The proponent should determine and obtain concurrence from the EPA if the Project requires SSA review or not.

Response: Based on conversations with the USEPA, it is our understanding that this Project is excluded from review under the SSA program as it is located on a military base. We have requested clarification in writing from the USEPA and will submit to EOEEA when it is received. See **Section 2.7**.

DEP4: The Project construction activities are scheduled to disturb 209 acres of land and therefore, may require a NPDES Stormwater Permit for Construction Activities.

Response: There are no waterways or waterbodies within the vicinity of the MPMG Range, therefore, there are no discharges to waters of the U.S. and no NPDES permitting is required. See **Section 2.5**.

DEP5: The Massachusetts National Guard is advised to communicate with Camp Edwards Range Control regarding UXO safety training for all utility and construction personnel working at the location of the proposed Project.

Response: MAARNG will provide UXO safety training to all personnel entering the training area to include the MPMG Range site. See **Section 4.7**.

DEP6: Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to: 310 CMR 7.09 Dust, Odor, Construction, and Demolition 310 CMR 7.10 Noise

Response: The MAARNG would ensure dust control associated with land clearing activities and proposed training activities are conducted in accordance with MassDEP – Air and Climate Division guidelines and EPS Air Quality Performance Standard 8 which requires compliance with the SIP and the CAA. See **Section 4.3** and **4.5**.

DEP7: Dust generated from earthwork and other construction activities must be controlled to ensure minimization of the off-site transport of dust. MassDEP Air Pollution Control regulations at 310 CMR 6.00-7.00 specify standards and limits for fugitive emissions, dusts and particulates.

Response: See response to DEP6.

DEP8: A new noise study will be performed once the range becomes operational. MassDEP is available for consultation for the design of this study. Also, after the range becomes operational, a noise complaint management program will be initiated.

Response: The MAARNG continues to coordinate with the EMC (which includes a representative from MassDEP) on a regular basis. Following construction the MAARNG will contract with the USAPHC to complete a follow up Noise Study for the MPMG under full training (firing) conditions. The MAARNG will consider recommendations made by USAPHC at the end of the study and implement measure to the extent practical. See **Section 4.5**.

DEP9: Mitigation in the form of a relatively small-wall or berm barrier close to the source(s) of the noise would create an acoustic shadow that would significantly reduce noise at and near ground level.

Response: The construction of a wall or a berm will be considered as a mitigation strategy following the results of the new noise study once the MPMG Range is constructed and it operational, although it is not anticipated due to large area of undisturbed forested between the MPMG Range and residential areas. See **Section 4.5**.

DEP10: The Proponent is reminded that although the training activities are exempt from 310 CMR 7.10, the construction activities are not exempt.

Response: The MAARNG concurs that construction activities are not exempt from 310 CMR 7.10 and will comply with the MassDEP noise regulations. See **Section 4.5**.

DEP11: MassDEP requests that all non-road diesel equipment rated 50 horsepower or greater meet EPA's Tier 4 emission limits, which are the most stringent emission standards currently available for off- road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified, or MassDEP- approved diesel oxidation catalysts (DOCs) or Diesel Particulate Filters (DPFs). The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece of equipment on file for Departmental review.

Response: The contractor will be required to maintain a list of equipment with engines being used for the construction of the MPMG Range including USEPA tier emission limits. It is standard for contracts with MAARNG to include provision for reducing air emissions. In addition, this information will be required for the GHG self-certification process required by the MEPA Certificate. See **Section 4.3** and **4.4**.

DEP12: The ENF reports that the Project Proponent proposes simply to "minimize idling." MassDEP reminds the Proponent that unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the Project (Section 7.11 of 310 CMR 7.00). With regard to construction period activity, typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage. In addition, to ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent install permanent signs limiting idling to five minutes or less on-site.

Response: Unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the Project in accordance with 310 CMR 7.11 of the Air Pollution Control regulations. During the construction period, MAARNG will require the contractor to provide driver training, periodic inspections by Site supervisors, and posting signage as methods of reducing idling. Per request of MassDEP, the MAARNG will install permanent signs limiting idling to five minutes. See **Section 4.3**.

DEP13: Asphalt, brick and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings or other structures must be handled in accordance with the Solid Waste regulations.

Response: All construction and demolition waste to include asphalt, brick and concrete will be handled in accordance with Massachusetts Solid Waste Regulations (RCRA), more specifically C&D guidance provided by MassDEP. See **Section 4.8**.

DEP14: The proposed Project includes the demolition of buildings, concrete walls, and/or other structures which may contain asbestos. The project proponent is advised that demolition activity must comply with both Solid Waste and Air Quality Control regulations. Please note that MassDEP promulgated revised Asbestos Regulations (310 CMR 7.15) that became effective on June 20, 2014. The new regulations contain requirements to conduct a pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos project monitor.

Response: If ACM is identified in the asbestos survey at the KD Range, the MAARNG will hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from the facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at 310 CMR 7.15(7). See **Section 4.8**.

DEP15: In accordance with the revised Asbestos Regulations at 310 CMR 7.15(4), any owner or operator of a facility or facility component that contains suspect asbestos containing material (ACM) shall, prior to conducting any demolition or renovation, employ a DLS licensed asbestos inspector to thoroughly inspect the facility or facility component, to identify the presence, location and quantity of any ACM or suspect ACM and to prepare a written asbestos survey report. As part of the asbestos survey, samples must be taken of all suspect asbestos containing building materials and sent to a DLS certified laboratory for analysis, using USEPA approved analytical methods.

Response: See response to DEP14 and **Section 4.8**.

DEP16: If ACM is identified in the asbestos survey, the proponent must hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from the facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at 310 CMR 7.15(7). The proponent and asbestos contractor will be responsible for submitting an *Asbestos Notification Form ANF-001* to MassDEP at least ten (10) working days prior to beginning any removal of the asbestos containing materials as specified at 310 CMR 7.15(6).

Response: See response to DEP14 and **Sections 4.8** and **4.9**.

DEP17: The proponent shall ensure that all asbestos containing waste material from any asbestos abatement activity is properly stored and disposed of at a landfill approved to accept such material in accordance with 310 CMR 7.15 (17).

Response: MAARNG is subject to all provisions of 310 CMR 7.00 and will comply. See **Section 4.8**.

DEP18: Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Response: The draft Section 61 Findings have been updated and findings for NHESP, EMC and MAARNG are provided in **Section 7.0** of this Single EIR.

6.5 Massachusetts Natural Heritage and Endangered Species Program

FWE1: Although the exact details of the long-term net benefit required under a CMP have not been finalized, based on a review of the draft materials submitted to date the Division anticipates that the proposed project should be able to meet the necessary performance standards of a CMP. In our view, the Applicant has and continues to work constructively with the Division to proactively address rare species issues and permitting requirements associated with this project.

Response: The CMP application has been submitted to NHESP for review and issuance of the CMP. See **Section 3.0** and **Appendix B**.

FWE2: Please note that the Division will not render a final decision until a final CMP Application has been submitted and the Massachusetts Environmental Policy Act (MEPA) review process has been completed.

Response: The MAARNG understands that the CMP cannot be issued until the MEPA process is completed.

6.6 Massachusetts Division of Marine Fisheries

DMF1: ... proposed to modify and Environmental Performance Standard regarding lead-bullet ammunition at selected small arms firing ranges at Camp Edwards.

Response: It appears that this comment is based on a previous MEPA submittal by MAARNG.

DMF2: Based on the scope of work as currently proposed, MA DMF has no recommendations for sequencing, timing or methods that would avoid or minimize impact at this time.

Response: No response needed.

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7.0 Revised Section 61 Findings

Pursuant to Section 61 of the MEPA MGL, Chapter 30 Sections 61- 62H, and Section 11.12(5) of the MEPA regulations (301 CMR 11.00), the MAARNG has designed the proposed MPMG Range Project so that all feasible measures have been taken to avoid damage to the environment or, to the extent this damage to the environment cannot be avoided, to minimize and mitigate that damage to the maximum extent practicable. The only State permit required for this project is the CMP to be issued by NHESP, in compliance with applicable performance standards of MESA and implementing regulations (321 CMR 10.00). Other State actions include approval by the EMC and internal approvals within MAARNG including the GHG self-certifications. Therefore, Section 61 Findings have been drafted for the MAARNG, the EMC, and the NHESP.

Documentation to support these findings include the 2020 NPC, past MEPA documents such as the Draft and Final Master Plan and Area-Wide Environmental Impact Reports, and Annual Reports prepared by MAARNG and noticed in the Environmental Monitor. The NPC and other MEPA documents have been widely distributed and reviewed by local, State, and Federal agencies and the general public. Public and other agency comments will be considered in making these findings.

For the EMC Section 61 Findings, we have reviewed the EMC Section 61 Findings issued on 11 October 2007 for the Final Area-Wide Environmental Impact Report for Massachusetts National Guard Properties at the MMR and updated the language as applicable following the submittal of the NPC for the MPMG Range. All mitigation measures proposed for this Project are included under the EMC Section 61 Findings as the EPS cover all environmental subject matters. EMC will provide oversight for many of these measures. Rare species mitigation is also included under the EMC although oversight will likely be by NHESP. Nonetheless, the EMC will be involved in rare species mitigation through the INRMP and IWFMP.

For the MAARNG Section 61 Findings, the MAARNG will provide self-certification at the completion of construction signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR were incorporated relative to GHG. The commitment to provide this self-certification in the manner outlined in the NPC Certificate has been incorporated into the draft Section 61 Findings. Approval by the NGB occurs through the approval of the (Federal) EA and is not included in these Section 61 Findings. The MAARNG will also provide self-certification annually to be included in the Annual Reports in order to update the agencies and public on the robust rare species mitigation program including mitigation banking and management of rare species habitat in perpetuity.

For the NHESP Section 61 Findings, the MAARNG has committed to the mitigation measures outlined. The CMP will provide net benefit across much more area of Camp Edwards and will combine with ongoing site-wide management through the INRMP and additional habitat improvement beyond mitigation to support the MPMG Range use. The INRMP provides effect mechanisms to ensure net benefit despite loss of habitat. In addition, the CMP will be memorialized, not only in the INRMP, but also in the required Annual Reports (State of the Reservation).

**MASSACHUSETTS ARMY NATIONAL GUARD
SECTION 61 FINDINGS
PURSUANT TO MGL CHAPTER 30, SECTION 61**

PROJECT NAME: Multi-Purpose Machine Gun (MPMG) Range - Final Area-Wide Environmental Impact Report for Massachusetts Army National Guard Properties at Camp Edwards

PROJECT PROPONENT: Massachusetts Army National Guard

PROJECT MUNICIPALITY: Bourne, Falmouth, Mashpee, Sandwich

PROJECT LOCATION: Camp Edwards, Massachusetts

PROJECT WATERSHED: Cape Cod

EOEEA NUMBER: 5834

MGL c. 30, s. 61 (Section 61) requires that “[a]ll ... authorities of the Commonwealth... review, evaluate, and determine the impact on the natural environment of all works, project or activities... conducted by them and ... use all practicable means and measures to minimize [their] damage to the environment. ... Any determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact.” MGL c. 30, s. 62A requires that the finding required by Section 61 “...shall be limited to those matters which are within the scope of the environmental impact report, if any, required [on a project].”

The potential environmental impacts of the Project have been characterized and quantified in the Notice of Project Change (NPC) dated 31 January 2020 and the Single Environmental Impact Report (Single EIR) dated 1 June 2020, both of which are incorporated by reference into the Section 61 Finding.

PROJECT DESCRIPTION

The Project involves the construction of an eight lane Multi-Purpose Machine Gun (MPMG) Range (Project) with eight lanes 800 meters long with a width of 25 meters at the firing line and a width of 100 meters at a distance of 800 meters. In the future, the MAARNG intends to extend the two middle lanes (Lanes 5 and 6) an additional 700 meters to a distance of 1,500 meters to accommodate .50 caliber rifles. The footprint of the Project is 199.0 acres which includes improving the existing 600-yard KD Range comprised of approximately 38.5 acres (36.0 acres managed grasslands, 2.5 acres existing range control area) and approximately 170.5 acres of vegetation clearing for range construction and firebreaks. The range consists of four primary components: (1) the physical range footprint, consisting of the firing positions, targetry, (2) Range Operations Control Area (ROCA) support structures (i.e., as specified in TC 25-8); which includes a Range Control Tower, Ammunition Storage Building, Covered Bleachers, and other support features, (3) the Surface Danger Zones (SDZs), and (4) firebreaks. These Project elements were described in detail in the NPC. Implementation of the Project would allow the MAARNG to fulfill their mission by meeting their weapons qualifications standards and training requirements using in-State

facilities, and to maintain their readiness posture. Specifically, it would train and test Soldiers on the skills necessary to zero, detect, identify, engage, and defeat targets.

In the northern portion of the Camp Edwards Training Area, 13,352 acres has been identified as the Upper Cape Water Supply Reserve (the Reserve) created by Chapter 47, Acts of 2002. Chapter 47 also transferred the care, custody, and control of the Reserve from the Special Military Reservation Commission (SMRC) to the Division of Fisheries and Wildlife.

PROJECT HISTORY

As a result of the significance of Camp Edwards and the Reserve relative to groundwater protection, land area, rare species, military use, and soil and groundwater contamination, there are multi-layers of regulations specific to Camp Edwards. In addition to State regulations, projects and activities at Camp Edwards are subject to orders, acts, agreements, and Federal regulations.

STATE PERMITS AND APPROVALS

The Project is regulated by State and Federal agencies including the following: the EMC, the Massachusetts Department of Environmental Protection (MassDEP) under the Massachusetts Contingency Plan (MCP), the US Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA), and by the NHESP under MESA. A summary of the required State permits and other State approvals is provided in **Table 1**. The construction of the MPMG Range will be in compliance with State permits (i.e., CMP) and local permits (there are none). The MAARNG will continue to work closely with MassDEP, the EMC, and NHESP regarding rare species, noise, and other potential operational impacts.

Table 1: Required State Permits and Approvals

Action or Permit Name	Issuing Agency	Submittal Schedule and Status
Conservation and Management Permit	NHESP	CMP Application submitted 29 April 2020. Review pending completion of MEPA process.
Design and Operational Approval	EMC	Approval process will occur once design and OMMP are finalized.
EPS ¹ 15.3.3 Waiver	EMC	Prior to start of construction, waiver is needed to approve fuel containers greater than five gallons in accordance with a refueling plan specific to the MPMG Range.
Approval	EMC	Spill Prevention, Control and Countermeasure Plan
Design and Operational Approval	MAARNG	NEPA approval by National Guard Bureau
Self-Certifications	MAARNG	GHG Self-Certification following construction. Rare species Self-Certification annually in Annual Reports.
Oversight through EMC	MassDEP	No permits or approvals required.

¹ Environmental Performance Standards

MITIGATION MEASURES, RESPONSIBLE PARTIES, AND COSTS

The MAARNG has developed a robust mitigation program including mitigation banking and management of rare species habitat in perpetuity. The MAARNG will provide self-certification at the completion of construction signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR were incorporated relative to GHG. The commitment to provide this self-certification in the manner outlined in the NPC Certificate has been incorporated into the draft Section 61 Findings. NEPA approval by the NGB occurs through the approval of the (Federal) EA and is not included in these Section 61 Findings.

The MAARNG will also provide self-certification annually to be included in the Annual Reports in order to update the agencies and public on the robust rare species mitigation program including mitigation banking and management of rare species habitat in perpetuity. The MAARNG will provide self-certification at the completion of the Project signed by an appropriate professional indicating all the mitigation measures proposed in the Single EIR (and summarized in **Table 2**) were incorporated. This table can be used as a tracking mechanism for certifying that these mitigation measures were performed.

Table 2: Mitigation Measures

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Rare Species (see Section 3.0)			
Management of existing habitat within Pine Barrens Mitigation Focal Areas in accordance with the CMP Application and the five management standards developed by MAARNG.	Operations	MAARNG	\$1,708,800 Table 3-4
Land transfer of 133 acres to be preserved in perpetuity as open space through the transfer to MassWildlife (Tract 5).	Operations	MAARNG	Administrative
Land transfer of 177 acres to be preserved with management of vegetation for rare species (FCRA).	Operations	MAARNG	Administrative
Management of Forest Canopy Reserve Area.	Operations	MAARNG	Administrative (See CMP Application)
Land transfer of 150 acres to be preserved and managed for grassland habitat (Grassland Mitigation Focal Area, Parcel H – Unit K).	Operations	MAARNG	Administrative
Management of the Grassland Mitigation Focal Area to optimize conditions for grassland species.	Operations	MAARNG	\$16,000 per acre per year
Implement NHESP-approved Turtle Protection Plan during the construction phase of the Project.	Construction	MAARNG	\$216,000
Provide construction staff with information and materials about presence of State-listed species and appropriate responses to any sightings.	Construction	MAARNG	\$5,000
Monitor Eastern Box Turtles and other species for a period (to be determined) after Project construction to assess effectiveness of mitigation measures.	Operations	MAARNG	\$100,000
Implement long term monitoring and management plan to maintain habitat quality within the pine barrens using the INRMP for guidance.	Operations	MAARNG	\$100,000
Development and implementation of Range Complex Master Plan	Operations	MAARNG	\$75,000
Development and implementation of site-wide INRMP	Operations	MAARNG	\$60,000
Implement conditions of the CMP to be issued by NHESP.	Construction Operations	MAARNG	TBD (See CMP Application)

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Land Alteration (see Section 4.1)			
Implement methods to prevent soil from leaving the Project site either by wind, rainfall, or vehicles and equipment (e.g., construction entrance controls).	Construction	Contractor	\$15,000
Prepare detailed, site-specific Erosion and Sedimentation Control Plan to address all earth-disturbance aspects of the Project	Construction	Contractor	\$8,000
Install and monitor erosion-prevention measures such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading of stockpiled topsoil.	Construction	Contractor	\$30,000
Conduct periodic visual inspections to verify that the Erosion and Sedimentation Control Plan is being followed and is working.	Construction	MAARNG	\$20,000
Plant and maintain native soil-stabilizing vegetation on the range where soils have been disturbed.	Construction	Contractor	\$500,000
Maintain native soil-stabilizing vegetation on the range.	Operations	MAARNG	\$10,000 annually
Water Resources (Groundwater) (see Section 4.2)			
Implement stormwater BMPs per design plans.	Operations	MAARNG	\$150,000
Maintain stormwater BMPs and vegetative cover.	Operations	MAARNG	\$5,000 annually
Coordinate with IAGWSP to ensure remediation programs will continue without interruption during construction.	Construction	MAARNG	\$1,000
Finalize MPMG Range OMMP and obtain approval from EMC.	Operations	MAARNG	\$10,000
Sample for baseline and regular soil and water sampling pursuant to the OMMP.	Operations	MAARNG	\$10,000 annually
Coordinate with IAGWSP, the EMC, and the MassDEP to identify locations and depths for monitoring wells. Cost assumes installation of three wells.	Construction	MAARNG	\$30,000
Perform annual review groundwater monitoring results. Work with EMC to review results and determine mitigation and changes in practices if needed.	Operations	MAARNG	\$3,000
Notify MassDEP if oil, hazardous material and/or UXO and MEC are identified or released during Project construction.	Construction	MAARNG	No cost
Maintain emergency response plan in the event contamination is encountered during Project construction.	Construction	Contractor	\$20,000
Utilize porto-potties throughout the construction phase as no latrines are allowed in this area.	Construction	Contractor	\$5,000
Utilize porto-potties throughout the operation phase as no latrines are allowed in this area. Purchase price not included.	Operations	MAARNG	\$1,000 annually
Prepare construction-related refueling plan and obtain approval from EMC.	Construction	MAARNG Contractor	\$5,000
Air Quality (see Section 4.3)			
Implement dust control plan.	Construction	Contractor	\$5,000
Use appropriate dust suppression methods during construction activities.	Construction	Contractor	\$100,000
Use appropriate dust suppression methods during dry weather training activities.	Construction	MAARNG	\$10,000 annually

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Provide education and monitoring of the contractor by MAARNG requiring a speed of less than 15 miles per hour for land clearing equipment on unpaved surfaces.	Construction	MAARNG	\$1,000
Post 15 mile per hour signs relative to the MPMG Range construction.	Construction	MAARNG	\$1,000
Use low volatile organic compounds supplies and equipment.	Construction	Contractor	\$1,000
Repair and service vehicular and construction equipment to prevent excess emissions.	Construction	Contractor	\$30,000
Shut down heavy equipment when not needed.	Construction	Contractor	\$1,000
Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.	Construction	Contractor	\$40,000
Notify Range Control and the MAARNG Environmental Office of air quality issues, if they arise.	Construction	MAARNG	\$1,000
Review participation in MassDEP's CACI and the MassDEP Diesel Retrofit Program.	Construction	MAARNG	\$3,000
Provide education and monitoring of the contractor by MAARNG regarding idling requirements.	Construction	MAARNG	\$1,000
Provide driver training, periodic inspections by site supervisors, and posting signage as methods of reducing idling.	Construction	Contractor	\$2,000
Post idling signs relative to 310 CMR 7.11 of the Air Pollution Control regulations.	Construction Operations	MAARNG	\$1,000
Review possible consultation with MassDEP to develop appropriate construction period diesel emission mitigation.	Construction	MAARNG	\$5,000
Brief contractor or Soldiers responsible for implementing Site activities on dust-reducing measures	Construction	MAARNG	\$5,000
Incorporate air-quality BMPs into construction contracts.	Construction	MAARNG	\$2,000
Greenhouse Gas (see Section 4.4)			
Phase construction to reduce the impact of tree removal and GHG emissions.	Construction	MAARNG	No Cost
Maintain a list of equipment with engines including USEPA tier emission limits.	Construction	Contractor	\$10,000
Incorporate conditions into construction contracts to include provisions for reducing air emissions and maintaining equipment lists.	Construction	MAARNG	\$3,000
Provide self-certification at the completion of construction signed by an appropriate professional indicating GHG mitigation measures utilized.	Construction	MAARNG	\$5,000
Preserve land within Camp Edwards that is presently forested to provide annual sequestration.	Operations	MAARNG	See Rare Species
Replanting and restore MPMG Range floor with native grasses.	Construction	MAARNG	See Land Alteration
Noise (see Section 4.5)			
Update the SONMP to include updated Camp Edwards specific Noise Complaint Protocols.	Operations	MAARNG	\$10,000
Contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions.	Operations	MAARNG	\$15,000
Consider recommendations made by USAPHC at the end of the study.	Operations	MAARNG	TBD
Prepare and submit a noise abatement plan.	Construction	Contractor	\$5,000

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Implement noise notification protocol and noise complaint protocol to minimize adverse noise impacts.	Operations	MAARNG	\$2,000 annually
Provide public notification of upcoming training events, particularly the caliber activity.	Operations	MAARNG	\$2,000 annually
Locate stationary equipment and material transportation routes as far away from sensitive receivers as possible.	Construction	Contractor	\$1,000
Operate equipment per manufacturer's recommendations	Construction	Contractor	\$1,000
Shut down noise-generating heavy equipment when not needed.	Construction	Contractor	\$1,000
Operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.)	Construction	Contractor	\$2,000
Notify Range Control and the MAARNG Environmental Office of noise issues, if they arise.	Construction	MAARNG	\$1,000
Brief contractor or Soldiers responsible for implementing Site activities on noise-reducing measures	Construction	MAARNG	\$5,000
Incorporate noise BMPs into construction contracts.	Construction	MAARNG	\$2,000
Biological Resources (see Section 4.6)			
Implement wildland fire management recommendations outlined in the INRMP and IWFMP as applicable.	Operations	MAARNG	\$400,000
Control fires that may result from the range during training.	Operations	MAARNG	\$250,000
Oil and Hazardous Material (see Section 4.7)			
Maintain Hazardous Waste Management Plan	Construction Operations	MAARNG	\$3,000 Life of project
Update SPCC	Construction Operations	MAARNG	\$3,000
Comply with EPS's regarding oil, hazardous materials and pollution prevention and continue to work with EMC.	Construction Operations	MAARNG	Included in SPCC costs
Ensure all MAARNG field staff members are trained in spill response.	Construction Operations	MAARNG	included in SPCC costs
Provide UXO safety and awareness training for all utility and construction personnel.	Construction	MAARNG	\$5,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Construction	Contractor	\$20,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Operations	MAARNG	\$20,000 annually
Solid Waste (see Section 4.8)			
Dispose of construction and demolition material off-Site in compliance with State regulations.	Construction	Contractor MAARNG	\$100,000
Perform a pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos project monitor of buildings and structures to be demolished at the KD Range.	Construction	Contractor	\$6,000
If ACM is identified in the asbestos survey at the KD Range, hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities.	Construction	MAARNG	TBD

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Develop specific recovery plans for the removal and proper disposition of spent projectiles, residues and solid waste associated with the weapons, ammunition, target systems, and/or their operation and maintenance. Recycle ammunition projectiles (copper) when harvested from the range during maintenance of the target and auxiliary berms.	Operations	MAARNG	\$15,000 annually
Environmental Performance Standards			
Implement BMPs to satisfy applicable regulatory requirements in association with the Project.	Construction Operations	MAARNG	Ongoing
Consult with applicable agencies with oversight of the training area before undertaking any actions that are subject to State and/or Federal regulatory requirements.	Construction Operations	MAARNG	Ongoing
Reduction of adverse impacts to the maximum extent feasible, including consideration for the design/redesign and/or relocation of the activity or encouraging only those activities that result in meeting the goal of overall projectile and/or projectile constituent containment.	Operations	MAARNG	Ongoing
Internal and external coordination of documentation for the Camp Edwards range management programs and other related Camp Edwards management programs including: the Integrated Training Area Management Program (ITAM), Range Regulations, Camp Edwards Environmental Management System, Civilian Use Manual, and SOPs.	Operations	MAARNG	Ongoing
Prepare annual State of the Reservation Report including long-term range maintenance, monitoring and reporting of applicable parameters and analysis.	Operations	MAARNG	Already occurring

FINDINGS

The Massachusetts Army National Guard finds that pursuant to MGL c. 30, s. 61, that with the implementation of the mitigation measures identified above, all practicable and feasible means and measures will have been taken to avoid or minimize potential damage to the environment from the Project.

Name/Title
For the Massachusetts Army National Guard

Date

Name/Title
For the Massachusetts Army National Guard

Date

**ENVIRONMENTAL MANAGEMENT COMMISSION
SECTION 61 FINDING
PURSUANT TO MGL CHAPTER 30, SECTION 61**

PROJECT NAME: Multi-Purpose Machine Gun (MPMG) Range - Final Area-Wide Environmental Impact Report for Massachusetts Army National Guard Properties at Camp Edwards

PROJECT PROPONENT: The Massachusetts Army National Guard

PROJECT MUNICIPALITY: Bourne, Falmouth, Mashpee, Sandwich

PROJECT LOCATION: Camp Edwards, Massachusetts

PROJECT WATERSHED: Cape Cod

EOEEA NUMBER: 5834

MGL c. 30, s. 61 (Section 61) requires that “[a]ll ... authorities of the Commonwealth... review, evaluate, and determine the impact on the natural environment of all works, project or activities conducted by them and ... use all practicable means and measures to minimize [their] damage to the environment. ... Any determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact.” MGL c. 30, s. 62A requires that the finding required by Section 61 “...shall be limited to those matters which are within the scope of the environmental impact report, if any, required [on a project].”

The potential environmental impacts of the Project have been characterized and quantified in the Notice of Project Change (NPC) dated 31 January 2020 and the Single Environmental Impact Report (Single EIR) dated 1 June 2020, both of which are incorporated by reference into the Section 61 Finding.

The EMC Section 61 Findings issued on 11 October 2007 for the Final Area-Wide Environmental Impact Report for Massachusetts National Guard Properties at the Massachusetts Military Reservation (MMR) and updated the language as applicable following the submittal of the NPC for the MPMG Range. All mitigation measures proposed for this Project are included under the EMC Section 61 Findings as the EPS cover all environmental subject matters. EMC will provide oversight for many of these measures. Rare species mitigation is also included under the EMC although oversight will likely be by NHESP. Nonetheless, the EMC will be involved in rare species mitigation through the INRMP and IWFMP.

PROJECT DESCRIPTION

The Project involves the construction of an eight lane Multi-Purpose Machine Gun (MPMG) Range (Project) with eight lanes 800 meters long with a width of 25 meters at the firing line and a width of 100 meters at a distance of 800 meters. In the future, the MAARNG intends to extend the two middle lanes (Lanes 5 and 6) an additional 700 meters to a distance of 1,500 meters to accommodate .50 caliber rifles. The footprint of the Project is 199.0 acres which includes improving the existing 600-yard KD Range comprised of approximately 38.5 acres (36.0 acres managed grasslands, 2.5 acres existing range control

area) and approximately 170.5 acres of vegetation clearing for range construction and firebreaks. The range consists of four primary components: (1) the physical range footprint, consisting of the firing positions, targetry, (2) Range Operations Control Area (ROCA) support structures (i.e., as specified in TC 25-8); which includes a Range Control Tower, Ammunition Storage Building, Covered Bleachers, and other support features, (3) the Surface Danger Zones (SDZs), and (4) firebreaks. These Project elements were described in detail in the NPC. Implementation of the Project would allow the MAARNG to fulfill their mission by meeting their weapons qualifications standards and training requirements using in-State facilities, and to maintain their readiness posture. Specifically, it would train and test Soldiers on the skills necessary to zero, detect, identify, engage, and defeat targets.

In the northern portion of the Camp Edwards Training Area, 13,352 acres has been identified as the Upper Cape Water Supply Reserve (the Reserve) created by Chapter 47, Acts of 2002. Chapter 47 also transferred the care, custody, and control of the Reserve from the Special Military Reservation Commission (SMRC) to the Division of Fisheries and Wildlife.

PROJECT HISTORY

As a result of the significance of Camp Edwards and the Reserve relative to groundwater protection, land area, rare species, military use, and soil and groundwater contamination, there are multi-layers of regulations specific to Camp Edwards. In addition to State regulations, projects and activities at Camp Edwards are subject to orders, acts, agreements, and Federal regulations including, but not limited to, the following described in greater detail in the sections below:

- Massachusetts Environmental Policy Act Submittals
- Executive Orders (EO), Acts, Memorandums of Agreement (MOA)
- Camp Edwards Range Regulations and Standard Operating Procedures (SOPs)
- Oversight by EMC
- Camp Edwards Environmental Performance Standards (EPS)
- JBCC Groundwater Protection Policy
- National Environmental Policy Act (NEPA)
- Other Federal guidelines

Initial planning for improvements to the KD Range and the construction of the proposed MPMG Range can be traced back to the 1990s as it was included in the November 1996 Draft Environmental Impact Statement (EIS) and EIR for the MMR Facilities Upgrade. Master Planning submitted through MEPA extends as far back as 1986. The Project was included in the MMR Master Plan Final Report dated 8 September 1998 and has been mentioned in subsequent MEPA filings; most recently in the Supplemental EIR for the SAR-IP in 2012.

Through the SRP, EOEEA required the creation of the Community Working Group (CWG) with members to include representatives from each town where JBCC resides (Falmouth, Mashpee, Sandwich, and Bourne), the Cape Cod Commission, various branches of the military stationed at the then MMR, and at-large members representing the Cape Cod public, who were tasked with developing a land use plan for the then MMR. After a lengthy, comprehensive, and open public process, in September 1998, the CWG issued and adopted its MMR Master Plan Final Report which divided the MMR into two primary land use zones: the Upper Cape Water Supply Reserve and the Cantonment Area. The Upper Cape Water Supply Reserve

(or Reserve) composes the northern portion of the JBCC with a land area of 13,352 acres. The Cantonment Area composes the southern 5,000 acres of the JBCC.

The Final Area-Wide EIR for the MMR Master Plan Final Report proposed a set of Environmental Performance Standards (EPS) that included a prohibition on the use of lead-bullet ammunition at all Camp Edwards training areas. The Certificate on this Final EIR (issued on 16 July 2001) required MEPA review for future projects within the Camp Edwards Training Area that exceeded the stand-alone MEPA thresholds and the “lowered thresholds” specific for Camp Edwards for activities involving any new impervious area, vegetative clearing or other land alteration as detailed in the Informational Supplement to the Final EIR, submitted to MEPA on 15 August 2001. A copy of the 16 July 2001 MEPA Certificate (see **Attachment A**) outlines the SRP. The following is a description of the various NPCs submitted under this Certificate to date:

- On 15 February 2006, the MAARNG submitted a NPC to MEPA proposing upgrades at Bravo, Echo and Sierra Ranges (B, E, and S Ranges). On 24 March 2006, MEPA issued a Certificate indicating that the NPC would not require an EIR.
- On 15 September 2006, the MAARNG submitted a NPC to MEPA that described the SAR-IP designed to resume small arms weapons training at Camp Edwards using lead-bullet ammunition (which required the modification of one of the EPS), proposed bullet capture and containment systems, and proposed BMPs in a three-phased approach by range: I) Tango and Echo Ranges; II) SE/SW Range and A, J, and K Ranges; and III) KD Range and ISBC Range. On 9 November 2006, MEPA issued a Certificate allowing State permitting to proceed for the Tango and Echo Ranges and required the MAARNG prepare a Supplemental EIR to provide additional information on baseline conditions, pollution prevention plans, on-site remedial investigations of specific small arm ranges and an analysis of ammunition alternatives. The Supplemental EIR was filed on 15 August 2012 (as described below).
- On 9 July 2007, the MAARNG submitted a NPC to MEPA proposing a change of sequencing for range upgrades including upgrades to J and K Ranges under the SAP-IP. This work included installing bullet containment systems along with the resumption of firing lead-bullet ammunition. On 10 August 2007, MEPA issued a Certificate allowing State permitting to proceed for the J and K Range upgrades prior to the completion of the Supplemental EIR. The Supplemental EIR was filed on 15 August 2012 (as described below).
- On 23 December 2009, the MAARNG submitted a NPC to MEPA proposing a temporary installation of an eXportable Combat Training Capability (XCTC) System which consisted of installation of ten areas to simulate realistic conditions with 10,400 s.f. of structures. On 22 January 2010, MEPA issued a Certificate indicating that the NPC would not require the preparation of a Supplemental EIR.
- On 6 April 2011, the MAARNG submitted a NPC to MEPA proposing Solider Validation Lane (SVL) training activities which included the placement of portable containers totaling 60,000 s.f. which would be modified to set up mock villages for realistic training. On 6 May 2011, MEPA issued a Certificate indicating that the NPC would not require preparation of a Supplemental EIR.
- On 15 August 2012, the MAARNG submitted the Supplemental EIR to MEPA that provided a detailed description of the MAARNG's proposed three-phase small arms range development program, and included a Pollution Prevention Plan (P2 Plan), range design plans, range rehabilitation/reuse plans, range management plans, and an overall environmental management strategy for the use of small arms ranges at Camp Edwards including the MPMG Range. The P2 Plan also included a selection of the

most appropriate BMPs and an Operations, Maintenance and Monitoring (OMMP) Plan for individual small arms ranges for firing lead core ammunition. The Supplemental EIR provided the results of the MAARNG's lead fate and transport study, remedial investigations of SAR ranges, and an analysis of ammunition alternatives. On 29 September 2012, MEPA issued a Certificate which determined the Supplemental EIR to be adequate.

- On 15 January 2013, a NPC was filed by MAARNG for a change of site for the construction of a Unit Training Equipment Site (UTES) from the 3600 Area to the western portion of the BOMARC (Boeing and Michigan Aeronautical Research Center) site. On 22 February 2013, MEPA issued a Certificate indicating the NPC would not require the preparation of an EIR.

The following EO, Acts, and MOAs have been promulgated relative to the JBCC:

- EO 414 was approved by the Governor of Massachusetts in October 1999 which established the Upper Cape Water Supply Reserve within the northern 15,000 acres of the then MMR.
- Chapter 352 of the Acts of 2000 approved by the Commonwealth of Massachusetts created the Upper Cape Regional Water Supply Cooperative for the four towns to establish a supplementary supply of water from sources within the then MMR.
- Memorandum of Agreement (MOA) was signed on 4 October 2001 between the Commonwealth of Massachusetts and the U.S. Army and National Guard Bureau and established a long-term management structure for the northern 15,000 acres in order to ensure the “permanent protection of the drinking water supply and the wildlife habitat, and to ensure that military and other activities are compatible with protection of the drinking water supply and the wildlife habitat.” This MOA also established the EMC.
- EO 433 was approved by the Governor of Massachusetts in 5 October 2001 and further established the EMC.
- Chapter 47 of the Acts of 2002 created the Upper Cape Water Supply Reserve area as a public conservation land dedicated to the natural resource purposes of water supply and wildlife habitat protection and the development and construction of public water supply systems, and the use and training of the military forces of the Commonwealth; provided that, such military use and training is compatible with the natural resource purposes of water supply and wildlife habitat protection. This Act formally approved the EPS provided in the 2001 Final Area-Wide EIR.

Range regulations provide guidance for the MAARNG for combat readiness training and establish uniform policies and procedures for facilities and training areas including, but not limited to, the following:

- Range Regulation 350-1 (Training and Training Support)
- Range Regulation 385-1 (Range Safety)
- Camp Edwards Training Site 210-5 Range Control SOP (range operations and training activities)
- Camp Edwards Range Regulation 350-2 (Camp Edwards Operations and Training Requirements)

The EPS are standards for performance, that guide both military and civilian users (all users) in the protection of Camp Edwards' natural and cultural resources and the groundwater beneath the Reserve during compatible military training and civilian use activities, such as hunting. These standards apply to MAARNG properties at JBCC. The EPS were established in 2001 under EO 443 and Chapter 47, Acts of 2002. The 19 EPSs, under the oversight of the EMC, regulate and guide training in the Reserve,

The JBCC Groundwater Protection Policy was approved in January 2015 through a MOA between the MAARNG, MA ANG, USAF, and USCG to protect future and existing water supplies, control land use within Groundwater Protection Areas (i.e., Zone IIs and Interim Wellhead Protection Areas), to preserve the ecological integrity of water resources interconnected with groundwater beneath the JBCC, and to prevent temporary and permanent contamination of the subsurface environment. All users of the Camp Edwards Training Area must comply with the provisions of the Groundwater Protection Policy and any future amendments or revisions to the restrictions and requirements. These will apply to all uses and activities within the overlays relative to Wellhead Protection, Zone II's within the Cantonment Area, and the Camp Edwards Training Areas.

EMC APPROVALS

A summary of the required State permits and other State approvals is provided in **Table 1** including the various approvals that the EMC will be required to issue for the MPMG Range Project.

Table 1: Required State Permits and Approvals

Action or Permit Name	Issuing Agency	Submittal Schedule and Status
Conservation and Management Permit	NHESP	CMP Application submitted 29 April 2020. Review pending completion of MEPA process.
Design and Operational Approval	EMC	Approval process will occur once design and OMMP are finalized.
EPS ¹ 15.3.3 Waiver	EMC	Prior to start of construction, waiver is needed to approve fuel containers greater than five gallons in accordance with a refueling plan specific to the MPMG Range.
Approval	EMC	Spill Prevention, Control and Countermeasure Plan
Design and Operational Approval	MAARNG	NEPA approval by National Guard Bureau
Self-Certifications	MAARNG	GHG Self-Certification following construction. Rare species Self-Certification annually in Annual Reports.
Oversight through EMC	MassDEP	No permits or approvals required.

¹ Environmental Performance Standards

Throughout the environmental review process, the proponent, the MAARNG, has been working, and continues to work, with the EMC and the Small Arms Working Group which includes MassDEP and the EPA to assess impacts and develop measures to mitigate potential impacts from the small arms ranges.

The potential environmental impacts of training on the small arms ranges at Camp Edwards with lead ammunition have been characterized and reviewed in the soil and groundwater site investigations, the Environmental Assessment of Lead at Camp Edwards, Massachusetts Small Arms Ranges Report, the Pollution Prevention Overview (Small Arms Supplement) plan, a Tango range design, operation, maintenance, and monitoring plan, the NEPA Environmental Assessment, and other documents. These

documents can be found on the MAARNG web site (www.eandrc.org). No significant impacts to environmental resources from firing lead ammunition into the bullet trap were identified.

The MAARNG has recognized that the identification of effective monitoring and mitigation of potential and/or unforeseen impacts is central to its responsibilities. Monitoring and mitigation measures are included in the above noted pollution prevention plans, monitoring plans, and through the use of a bullet containment system to limit lead exposure.

There have been extensive opportunities for public involvement through the review periods, public meetings, and site visits. Comments received were incorporated, as appropriate, into the review and applicable documents. The potential environmental impacts were also considered and mitigation incorporated into the revisions to the EPS following public review. Potential environmental impacts were also considered and mitigation incorporated into the approval of the Tango range plan.

MITIGATION MEASURES, RESPONSIBLE PARTIES, AND COSTS

The MAARNG has developed a robust mitigation program including mitigation banking and management of rare species habitat in perpetuity.

Table 2: Mitigation Measures

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Rare Species (see Section 3.0)			
Management of existing habitat within Pine Barrens Mitigation Focal Areas in accordance with the CMP Application and the five management standards developed by MAARNG.	Operations	MAARNG	\$1,708,800 Table 3-4
Land transfer of 133 acres to be preserved in perpetuity as open space through the transfer to MassWildlife (Tract 5).	Operations	MAARNG	Administrative
Land transfer of 177 acres to be preserved with management of vegetation for rare species (FCRA).	Operations	MAARNG	Administrative
Management of Forest Canopy Reserve Area.	Operations	MAARNG	Administrative (See CMP Application)
Land transfer of 150 acres to be preserved and managed for grassland habitat (Grassland Mitigation Focal Area, Parcel H – Unit K).	Operations	MAARNG	Administrative
Management of the Grassland Mitigation Focal Area to optimize conditions for grassland species.	Operations	MAARNG	\$16,000 per acre per year
Implement NHESP-approved Turtle Protection Plan during the construction phase of the Project.	Construction	MAARNG	\$216,000
Provide construction staff with information and materials about presence of State-listed species and appropriate responses to any sightings.	Construction	MAARNG	\$5,000
Monitor Eastern Box Turtles and other species for a period (to be determined) after Project construction to assess effectiveness of mitigation measures.	Operations	MAARNG	\$100,000
Implement long term monitoring and management plan to maintain habitat quality within the pine barrens using the INRMP for guidance.	Operations	MAARNG	\$100,000
Development and implementation of Range Complex Master Plan	Operations	MAARNG	\$75,000
Development and implementation of site-wide INRMP	Operations	MAARNG	\$60,000
Implement conditions of the CMP to be issued by NHESP.	Construction Operations	MAARNG	TBD (See CMP Application)

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Land Alteration (see Section 4.1)			
Implement methods to prevent soil from leaving the Project site either by wind, rainfall, or vehicles and equipment (e.g., construction entrance controls).	Construction	Contractor	\$15,000
Prepare detailed, site-specific Erosion and Sedimentation Control Plan to address all earth-disturbance aspects of the Project	Construction	Contractor	\$8,000
Install and monitor erosion-prevention measures such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading of stockpiled topsoil.	Construction	Contractor	\$30,000
Conduct periodic visual inspections to verify that the Erosion and Sedimentation Control Plan is being followed and is working.	Construction	MAARNG	\$20,000
Plant and maintain native soil-stabilizing vegetation on the range where soils have been disturbed.	Construction	Contractor	\$500,000
Maintain native soil-stabilizing vegetation on the range.	Operations	MAARNG	\$10,000 annually
Water Resources (Groundwater) (see Section 4.2)			
Implement stormwater BMPs per design plans.	Operations	MAARNG	\$150,000
Maintain stormwater BMPs and vegetative cover.	Operations	MAARNG	\$5,000 annually
Coordinate with IAGWSP to ensure remediation programs will continue without interruption during construction.	Construction	MAARNG	\$1,000
Finalize MPMG Range OMMP and obtain approval from EMC.	Operations	MAARNG	\$10,000
Sample for baseline and regular soil and water sampling pursuant to the OMMP.	Operations	MAARNG	\$10,000 annually
Coordinate with IAGWSP, the EMC, and the MassDEP to identify locations and depths for monitoring wells. Cost assumes installation of three wells.	Construction	MAARNG	\$30,000
Perform annual review groundwater monitoring results. Work with EMC to review results and determine mitigation and changes in practices if needed.	Operations	MAARNG	\$3,000
Notify MassDEP if oil, hazardous material and/or UXO and MEC are identified or released during Project construction.	Construction	MAARNG	No cost
Maintain emergency response plan in the event contamination is encountered during Project construction.	Construction	Contractor	\$20,000
Utilize porto-potties throughout the construction phase as no latrines are allowed in this area.	Construction	Contractor	\$5,000
Utilize porto-potties throughout the operation phase as no latrines are allowed in this area. Purchase price not included.	Operations	MAARNG	\$1,000 annually
Prepare construction-related refueling plan and obtain approval from EMC.	Construction	MAARNG Contractor	\$5,000
Air Quality (see Section 4.3)			
Implement dust control plan.	Construction	Contractor	\$5,000
Use appropriate dust suppression methods during construction activities.	Construction	Contractor	\$100,000
Use appropriate dust suppression methods during dry weather training activities.	Construction	MAARNG	\$10,000 annually
Provide education and monitoring of the contractor by MAARNG requiring a speed of less than 15 miles per hour for land clearing equipment on unpaved surfaces.	Construction	MAARNG	\$1,000
Post 15 mile per hour signs relative to the MPMG Range construction.	Construction	MAARNG	\$10,000
Use low volatile organic compounds supplies and equipment.	Construction	Contractor	\$1,000

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Repair and service vehicular and construction equipment to prevent excess emissions.	Construction	Contractor	\$30,000
Shut down heavy equipment when not needed.	Construction	Contractor	\$1,000
Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.	Construction	Contractor	\$40,000
Notify Range Control and the MAARNG Environmental Office of air quality issues, if they arise.	Construction	MAARNG	\$1,000
Review participation in MassDEP's CACI and the MassDEP Diesel Retrofit Program.	Construction	MAARNG	\$3,000
Provide education and monitoring of the contractor by MAARNG regarding idling requirements.	Construction	MAARNG	\$1,000
Provide driver training, periodic inspections by site supervisors, and posting signage as methods of reducing idling.	Construction	Contractor	\$20,000
Post idling signs relative to 310 CMR 7.11 of the Air Pollution Control regulations.	Construction Operations	MAARNG	\$10,000
Review possible consultation with MassDEP to develop appropriate construction period diesel emission mitigation.	Construction	MAARNG	\$5,000
Brief contractor or Soldiers responsible for implementing Site activities on dust-reducing measures	Construction	MAARNG	\$5,000
Incorporate air-quality BMPs into construction contracts.	Construction	MAARNG	\$2,000
Greenhouse Gas (see Section 4.4)			
Phase construction to reduce the impact of tree removal and GHG emissions.	Construction	MAARNG	No Cost
Maintain a list of equipment with engines including USEPA tier emission limits.	Construction	Contractor	\$10,000
Incorporate conditions into construction contracts to include provisions for reducing air emissions and maintaining equipment lists.	Construction	MAARNG	\$3,000
Provide self-certification at the completion of construction signed by an appropriate professional indicating GHG mitigation measures utilized.	Construction	MAARNG	\$5,000
Preserve land within Camp Edwards that is presently forested to provide annual sequestration.	Operations	MAARNG	See Rare Species
Replanting and restore MPMG Range floor with native grasses.	Construction	MAARNG	See Land Alteration
Noise (see Section 4.5)			
Update the SONMP to include updated Camp Edwards specific Noise Complaint Protocols.	Operations	MAARNG	\$10,000
Contract with the USAPHC to complete a follow up Noise Study for the MPMG Range under full training (firing) conditions.	Operations	MAARNG	\$15,000
Consider recommendations made by USAPHC at the end of the study.	Operations	MAARNG	TBD
Prepare and submit a noise abatement plan.	Construction	Contractor	\$5,000
Implement noise notification protocol and noise complaint protocol to minimize adverse noise impacts.	Operations	MAARNG	\$2,000 annually
Provide public notification of upcoming training events, particularly the caliber activity.	Operations	MAARNG	\$2,000 annually
Locate stationary equipment and material transportation routes as far away from sensitive receivers as possible.	Construction	Contractor	\$1,000
Operate equipment per manufacturer's recommendations	Construction	Contractor	\$1,000
Shut down noise-generating heavy equipment when not needed.	Construction	Contractor	\$5,000
Operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.)	Construction	Contractor	\$2,000
Notify Range Control and the MAARNG Environmental Office of noise issues, if they arise.	Construction	MAARNG	\$1,000

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Brief contractor or Soldiers responsible for implementing Site activities on noise-reducing measures	Construction	MAARNG	\$5,000
Incorporate noise BMPs into construction contracts.	Construction	MAARNG	\$2,000
Biological Resources (see Section 4.6)			
Implement wildland fire management recommendations outlined in the INRMP and IWFMP as applicable.	Operations	MAARNG	\$400,000
Control fires that may result from the range during training.	Operations	MAARNG	\$250,000
Oil and Hazardous Material (see Section 4.7)			
Maintain Hazardous Waste Management Plan	Construction Operations	MAARNG	\$3,000 annually
Maintain an EMC-approved SPCC	Construction Operations	MAARNG	\$3,000 annually
Comply with EPS's regarding oil, hazardous materials and pollution prevention and continue to work with EMC.	Construction Operations	MAARNG	Included in above costs.
Ensure all MAARNG field staff members are trained in spill response.	Construction Operations	MAARNG	\$8,000 annually
Provide UXO safety and awareness training for all utility and construction personnel.	Construction	MAARNG	\$5,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Construction	Contractor	\$20,000
Ensure all OHW used or generated is handled and disposed of in compliance with State regulations and EPS.	Operations	MAARNG	\$20,000 annually
Solid Waste (see Section 4.8)			
Dispose of construction and demolition material off-Site in compliance with State regulations.	Construction	Contractor MAARNG	\$100,000
Perform a pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos project monitor of buildings and structures to be demolished at the KD Range.	Construction	Contractor	\$6,000
If ACM is identified in the asbestos survey at the KD Range, hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities.	Construction	MAARNG	TBD
Develop specific recovery plans for the removal and proper disposition of spent projectiles, residues and solid waste associated with the weapons, ammunition, target systems, and/or their operation and maintenance. Recycle ammunition projectiles (copper) when harvested from the range during maintenance of the target and auxiliary berms.	Operations	MAARNG	\$15,000 annually
Environmental Performance Standards			
Implement BMPs to satisfy applicable regulatory requirements in association with the Project.	Construction Operations	MAARNG	Ongoing
Consult with applicable agencies with oversight of the training area before undertaking any actions that are subject to State and/or Federal regulatory requirements.	Construction Operations	MAARNG	Ongoing
Reduction of adverse impacts to the maximum extent feasible, including consideration for the design/redesign and/or relocation of the activity or encouraging only those activities that result in meeting the goal of overall projectile and/or projectile constituent containment.	Operations	MAARNG	Ongoing
Internal and external coordination of documentation for the Camp Edwards range management programs and other related Camp Edwards management programs Including: the Integrated Training Area	Operations	MAARNG	Ongoing

Mitigation Measure	Schedule/ Phase	Responsible Party	Estimated Cost of Mitigation
Management Program (ITAM), Range Regulations, Camp Edwards Environmental Management System, Civilian Use Manual, and SOPs.			
Prepare annual State of the Reservation Report including long-term range maintenance, monitoring and reporting of applicable parameters and analysis.	Operations	MAARNG	Already occurring

FINDINGS

The EMC has reviewed the mitigation conditions included in the MEPA Certificate dated ___ June 2020 for the Single EIR associated with the proposed MPMG Range. The use of the MPMG Range as proposed by the MAARNG is subject to the requirements of the EMC conditional approval dated __ June 2020 and the EPS, as amended on 6 April 2017. Accordingly, the EMC hereby finds pursuant to MGL C. 30, S. 61 that with the implementation of the conditions referenced above, all practicable and feasible measures will have been taken to avoid or minimize environmental damage from the Project.

Name/Title
For the Environmental Management Commission

Date

Name/Title
For the Environmental Management Commission

Date

**MASSACHUSETTS NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM
SECTION 61 FINDING
PURSUANT TO MGL CHAPTER 30, SECTION 61**

PROJECT NAME: Multi-Purpose Machine Gun (MPMG) Range - Final Area-Wide Environmental Impact Report for Massachusetts National Guard Properties at Camp Edwards

PROJECT PROPONENT: Massachusetts Army National Guard

PROJECT MUNICIPALITY: Bourne, Falmouth, Mashpee, Sandwich

PROJECT LOCATION: Camp Edwards, Massachusetts

PROJECT WATERSHED: Cape Cod

EOEEA NUMBER: 5834

MGL c. 30, s. 61 (Section 61) requires that “[a]ll ... authorities of the Commonwealth... review, evaluate, and determine the impact on the natural environment of all works, project or activities... conducted by them and ... use all practicable means and measures to minimize [their] damage to the environment. ... Any determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact.” MGL c. 30, s. 62A requires that the finding required by Section 61 “...shall be limited to those matters which are within the scope of the environmental impact report, if any, required [on a project].”

The potential environmental impacts of the Project have been characterized and quantified in the Notice of Project Change (NPC) dated 31 January 2020 and the Single Environmental Impact Report (Single EIR) dated 1 June 2020, both of which are incorporated by reference into the Section 61 Finding.

DESCRIPTION

The Project involves the construction of an eight lane Multi-Purpose Machine Gun (MPMG) Range (Project) with eight lanes 800 meters long with a width of 25 meters at the firing line and a width of 100 meters at a distance of 800 meters. In the future, the MAARNG intends to extend the two middle lanes (Lanes 5 and 6) an additional 700 meters to a distance of 1,500 meters to accommodate .50 caliber rifles. The footprint of the Project is 199.0 acres which includes improving the existing 600-yard KD Range comprised of approximately 38.5 acres (36.0 acres managed grasslands, 2.5 acres existing range control area) and approximately 170.5 acres of vegetation clearing for range construction and firebreaks. The range consists of four primary components: (1) the physical range footprint, consisting of the firing positions, targetry, (2) Range Operations Control Area (ROCA) support structures (i.e., as specified in TC 25-8); which includes a Range Control Tower, Ammunition Storage Building, Covered Bleachers, and other support features, (3) the Surface Danger Zones (SDZs), and (4) firebreaks. These Project elements were described in detail in the NPC. Implementation of the Project would allow the MAARNG to fulfill their mission by meeting their weapons qualifications standards and training requirements using in-State

facilities, and to maintain their readiness posture. Specifically, it would train and test Soldiers on the skills necessary to zero, detect, identify, engage, and defeat targets.

In the northern portion of the Camp Edwards Training Area, 13,352 acres has been identified as the Upper Cape Water Supply Reserve (the Reserve) created by Chapter 47, Acts of 2002. Chapter 47 also transferred the care, custody, and control of the Reserve from the Special Military Reservation Commission (SMRC) to the Division of Fisheries and Wildlife.

PROJECT HISTORY

As a result of the significance of Camp Edwards and the Reserve relative to groundwater protection, land area, rare species, military use, and soil and groundwater contamination, there are multi-layers of regulations specific to Camp Edwards. In addition to State regulations, projects and activities at Camp Edwards are subject to orders, acts, agreements, and Federal regulations.

STATE PERMITS AND APPROVALS

The Project is regulated by State and Federal agencies including the following: the EMC, the Massachusetts Department of Environmental Protection (MassDEP) under the Massachusetts Contingency Plan (MCP), the US Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA), and by the NHESP under MESA. A summary of the required State permits and other State approvals is provided in **Table 1**. The construction of the MPMG Range will be in compliance with State permits (i.e., CMP) and local permits (there are none). The MAARNG will continue to work closely with MassDEP, the EMC, and NHESP regarding rare species, noise, and other potential operational impacts.

Table 1: Required State Permits and Approvals

Action or Permit Name	Issuing Agency	Submittal Schedule and Status
Conservation and Management Permit	NHESP	CMP Application submitted 29 April 2020. Review pending completion of MEPA process.
Design and Operational Approval	EMC	Approval process will occur once design and OMMP are finalized.
EPS ¹ 15.3.3 Waiver	EMC	Prior to start of construction, waiver is needed to approve fuel containers greater than five gallons in accordance with a refueling plan specific to the MPMG Range.
Approval	EMC	Spill Prevention, Control and Countermeasure Plan
Design and Operational Approval	MAARNG	NEPA approval by National Guard Bureau
Self-Certifications	MAARNG	GHG Self-Certification following construction. Rare species Self-Certification annually in Annual Reports.
Oversight through EMC	MassDEP	No permits or approvals required.

¹ Environmental Performance Standards

A Conservation and Management Permit (CMP) Application has been submitted to NHESP for the MPMG Range project. The CMP Application has been prepared in consultation with the NHESP, in compliance with MESA and implementing regulations (321 CMR 10.00). Although the project will result in a "take" of several State-listed lepidopterans (moths and butterfly) species identified on the site, and that there could potentially be a "take" of Eastern Box Turtle (*Terrapene carolina*), Eastern Whip-poor-will (*Caprimulgus vociferus*), and sandplain grassland bird species, the project meets the standards for issuance of a CMP pursuant to MESA. Long-term habitat management and monitoring is a condition of the CMP Application and is required in perpetuity. These actions will be funded and implemented at a management return interval and scope deemed sufficient by NHESP and Camp Edwards to ensure compliance with the CMP and the required long-term net benefit for state-listed species. Implementation of the CMP will provide net benefit across much more area of Camp Edwards and will combine with ongoing site-wide management through the Integrated Natural Resources Management Plan (INRMP) and additional habitat improvement beyond mitigation to support the MPMG Range use. The INRMP provides effect mechanisms to ensure net benefit despite loss of habitat. The INRMP is presently being updated. In addition, the CMP will be memorialized, not only in the INRMP, but also in the required Annual Reports (State of the Reservation).

MITIGATION MEASURES, RESPONSIBLE PARTIES, AND COSTS

The MAARNG has developed a robust mitigation program including mitigation banking and management of rare species habitat in perpetuity.

Table 2: Mitigation Measures for Rare Species

Mitigation Measure	Schedule/Phase	Responsible Party	Estimated Cost of Mitigation
Management of existing habitat within Pine Barrens Mitigation Focal Areas in accordance with the CMP Application and the five management standards developed by MAARNG.	Operations	MAARNG	\$1,708,800 Table 3-4
Land transfer of 133 acres to be preserved in perpetuity as open space through the transfer to MassWildlife (Tract 5).	Operations	MAARNG	Administrative
Land transfer of 177 acres to be preserved with management of vegetation for rare species (FCRA).	Operations	MAARNG	Administrative
Management of Forest Canopy Reserve Area.	Operations	MAARNG	Administrative (See CMP Application)
Land transfer of 150 acres to be preserved and managed for grassland habitat (Grassland Mitigation Focal Area, Parcel H – Unit K).	Operations	MAARNG	Administrative
Management of the Grassland Mitigation Focal Area to optimize conditions for grassland species.	Operations	MAARNG	\$16,000 per acre per year
Implement NHESP-approved Turtle Protection Plan during the construction phase of the Project.	Construction	MAARNG	\$216,000
Provide construction staff with information and materials about presence of State-listed species and appropriate responses to any sightings.	Construction	MAARNG	\$5,000
Monitor Eastern Box Turtles and other species for a period (to be determined) after Project construction to assess effectiveness of mitigation measures.	Operations	MAARNG	\$100,000
Implement long term monitoring and management plan to maintain habitat quality within the pine barrens using the INRMP for guidance.	Operations	MAARNG	\$100,000
Development and implementation of Range Complex Master Plan	Operations	MAARNG	\$75,000
Development and implementation of site-wide INRMP	Operations	MAARNG	\$60,000
Implement conditions of the CMP to be issued by NHESP.	Construction Operations	MAARNG	TBD (See CMP Application)

FINDINGS

The NHESP has reviewed the mitigation conditions included in the MEPA Certificate for the Single EIR dated _____ 2020 associated with the MPMG Range. As discussed above, the use of the MPMG Range as proposed by the MAARNG is subject to the requirements of the CMP approved on _____ 2020. Accordingly, the NHESP hereby finds pursuant to MGL Chapter 30, Section 61, that with the implementation of the conditions referenced above, all practicable and feasible measures will have been taken to avoid or minimize environmental damage from the project.

Name/Title	Date
For the Massachusetts Natural Heritage and Endangered Species Program	

Name/Title	Date
For the Massachusetts Natural Heritage and Endangered Species Program	

8.0 Circulation of Notice of Project Change

This list has been developed from previous NPCs submitted to MEPA, notably the 2012 NPC and utilized for the 31 January 2020 NPC. In addition, other local, State, and Federal agencies, individuals, and non-profit organizations were updated as well as updates to the JBCC agencies.

Executive Office of Energy and Environmental Affairs 100 Cambridge Street, Suite 900 Boston, MA 02114-2524 Attn: Tori Kim, MEPA Director
Executive Office of Energy and Environmental Affairs 100 Cambridge Street, Suite 900 Boston, MA 02114-2524 Attn: Kathleen Theoharides, Executive Secretary
Executive Office of Energy and Environmental Affairs 100 Cambridge Street, Suite 900 Boston, MA 02114 Attn: Bob O'Connor, Land Policy Director
Massachusetts Department of Environmental Protection One Winter Street Boston, MA 02108 Attn: Martin Suuberg, Commissioner
Massachusetts Department of Environmental Protection Bureau of Water Resources One Winter Street Boston, MA 02108 Attn: Kathleen Baskin, Assistant Commissioner
Massachusetts Department of Environmental Protection Division of Waterways & Wetlands One Winter Street Boston, MA 02108 Attn: Stephanie Moura, Division Director
Massachusetts Department of Environmental Protection One Winter Street Boston, MA 02108 Attn: MEPA Coordinator
Massachusetts Department of Environmental Protection 20 Riverside Drive Lakeville, MA 02347 Attn: MEPA Coordinator
Massachusetts Department of Environmental Protection Southeast Regional Office Attn: Millie Garcia-Serrano, Regional Director 20 Riverside Drive Lakeville, MA 02347
Massachusetts Department of Environmental Protection 20 Riverside Drive Lakeville, MA 02347 Attn: Len Pinaud, Federal Facilities

<p>Massachusetts Department of Environmental Protection 20 Riverside Drive Lakeville, MA 02347 Attn: Ellie Donovan, Federal Facilities and Solid Waste</p>
<p>Massachusetts Department of Transportation Public/Private Development Unit 10 Park Plaza, Suite 4150 Boston, MA 02116</p>
<p>Massachusetts Department of Transportation District #5 1000 County Street Taunton, MA 02780 Attn: Mary-Joe Perry, District Highway Director</p>
<p>Massachusetts Historical Commission State Historic Preservation Officer 220 Morrissey Boulevard Boston, MA 02125 Attn: Brona Simon, Executive Director</p>
<p>Massachusetts Division of Marine Fisheries 251 Causeway Street, Suite 400 Boston, MA 02114 Attn: Project Review Coordinator</p>
<p>Massachusetts Division of Marine Fisheries (South Shore) 836 Rodney French Boulevard New Bedford, MA 02744 Attn: Environmental Reviewer</p>
<p>Massachusetts Office of Coastal Zone Management 251 Causeway Street, Suite 800 Boston, MA 02114 Attn: Project Review Coordinator</p>
<p>Massachusetts Department of Fish and Game 251 Causeway Street, Suite 400 Boston, MA 02114 Attn: Ronald S. Amidon, Commissioner</p>
<p>Massachusetts Natural Heritage and Endangered Species Program MassWildlife 1 Rabbit Hill Road Westborough, MA 01581 Attn: Eve Schluter, NHESP Assistant Director</p>
<p>Massachusetts Natural Heritage and Endangered Species Program MassWildlife 1 Rabbit Hill Road Westborough, MA 01581 Attn: David Paulson</p>
<p>Massachusetts Department of Conservation and Recreation Planning and Engineering 251 Causeway Street, 9th Floor Boston, MA 02114-2104 Attn: Jim Montgomery, Interim Commissioner</p>

<p>Massachusetts Department of Conservation and Recreation Division of Water Supply Protection 251 Causeway Street Boston, MA 02114-2104 Attn: John Scannell, Director</p>
<p>Massachusetts Department of Agricultural Resources 251 Causeway Street, Suite 500 Boston, MA 02114</p>
<p>Massachusetts Executive Office of Health and Human Services One Ashburton Place, 11th Floor Boston, MA 02108</p>
<p>Massachusetts Department of Public Health 250 Washington Street Boston, MA 02108</p>
<p>Massachusetts Department of Energy Resources 100 Cambridge Street, Suite 1020 Boston, MA 02114</p>
<p>US Environmental Protection Agency Superfund and Emergency Management Division 5 Post Office Square, Mail Code 07-5 Boston, MA 02109-3912 Attn: Bryan Olson, Director</p>
<p>US Environmental Protection Agency Massachusetts Superfund Program 5 Post Office Square, Mail Code 07-1 Boston, MA 02109-3912 Attn: Lynne Jennings, Section Chief</p>
<p>US Environmental Protection Agency 5 Post Office Square, Suite 100 Boston, MA 02109-3912 Attn: Environmental Reviewer</p>
<p>US Environmental Protection Agency - Region 1 5 Post Office Square, Suite 100 Boston, MA 02109-3912 Attn: Dennis Deziel, Regional Administrator</p>
<p>US Environmental Protection Agency 5 Post Office Square – Mail Code 07-03 Boston, MA 02109-3912 Attn: Jane Dolan, JBCC (MMR) Team Member</p>
<p>US Fish and Wildlife Service New England Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5087 Attn: Tom Chapman Attn: Susi von Oettingen</p>
<p>US Fish and Wildlife Service Northeast Region 300 Westgate Center Drive Hadley, MA 01035-9589 Attn: Wendi Weber, Regional Director</p>

<p>US Army Corps of Engineers New England District 696 Virginia Road Concord, MA 01742-2751 Attn: Col. William M. Conde, District Engineer, Commander</p>
<p>US Department of Agriculture Natural Resources Conservation Service 451 West Street Amherst, MA 01002-2953 Attn: Daniel Wright, State Conservationist</p>
<p>Senator Julian Cyr (Cape and Islands) State House, Room 218 24 Beacon Street Boston, MA 02133-1053</p>
<p>Barnstable Town Hall, Room 2L 367 Main Street Hyannis, MA 02601</p>
<p>Cape Cod Chamber of Commerce 5 Patti Page Way Centerville, MA 02632</p>
<p>Cape Cod Conservation District 303 Main Street W. Yarmouth, MA 02673</p>
<p>Cape Cod Commission 3225 Main Street, P.O. Box 226 Barnstable, MA 02630 Attn: Kristy Senatori, Executive Director Attn: Jonathan Idman, Chief Regulatory Officer</p>
<p>Association to Preserve Cape Cod 482 Main Street Dennis, MA 02638</p>
<p>Environmental Management Commission Building 3468, Beaman Street Camp Edwards, MA 02542-500 Attn: Len Pinaud, EMC Environmental Officer</p>
<p>Wampanoag Tribe of Gay Head (Aquinnah) 20 Black Brook Road Aquinnah, MA 02535 Attn: Bettina Washington, Tribe Historic Preservation Officer</p>
<p>Mashpee Wampanoag Tribe P.O. Box 1048 483 Great Neck Road South Mashpee, MA 02649 Attn: David Weeden, Tribal Historic Preservation Officer</p>
<p>Stockbridge - Munsee Tribe of Mohican, Wisconsin W13447 Camp 14 Road Bowler, WI 54416 Attn: Bonney Hartley, Tribal Historic Preservation Manager/NAGPRA</p>

<p>Massachusetts National Guard JFHQ Hanscom AFB, MA 01731 Attn: Mr. Paulo Baganha</p>
<p>Headquarters, Camp Edwards JFHQ Hanscom AFB, MA 01731 Attn: Mr. Dave Shannon</p>
<p>Massachusetts National Guard Environmental & Readiness Center Building 3468, Beaman Street Camp Edwards, MA 02542 Attn: Mike Ciaranca, Ph.D., Deputy Director</p>
<p>Impact Area Groundwater Study Program PB 0515, West Outer Road Camp Edwards, MA 02542 Attn: Ben Gregson, Remediation Manager</p>
<p>Impact Area Groundwater Study Program PB 0515, West Outer Road Camp Edwards, MA 02542 Attn: Pam Richardson, Community Involvement Specialist</p>
<p>Impact Area Groundwater Study Program PB 0515 West Outer Road Camp Edwards, MA 02542 Attn: LTC Shawn Cody</p>
<p>Air Force Civil Engineering Center Installation Restoration Program 322 East Inner Road Otis ANG Base, MA 02542 Attn: Doug Karson, Community Involvement Lead, JBCC</p>
<p>Massachusetts Air National Guard 253rd Cyberspace Engineering Installation Group Otis ANG Base, MA 02542 Attn: COL James Hoyer</p>
<p>Massachusetts Air National Guard 102d Intelligence Wing 158 Reilly Street, Box 25 Otis ANG Base, MA 02542 Attn: COL McNulty</p>
<p>US Coast Guard Environmental Health and Safety 5215 E. Hospital Road, 2nd Floor Buzzards Bay, 02542 Attn: Elizabeth Kirkpatrick</p>

<p>6th Space Warning Squadron (PAVE PAWS) 1 Flatrock Road Sagamore, MA 02561-0428 Attn: LTC James E. Roberts</p>
<p>Upper Cape Regional Water Supply Cooperative P.O. Box 373 Mashpee, MA 02649-0373 Attn: Dan Mahoney, Chair</p>
<p>Sheriff James Cummings Barnstable County Sherriff's Office 6000 Sheriff's Place Bourne, MA 02532</p>
<p>Dr. Paul Cavanaugh 225 Thomas Landers Road East Falmouth, MA 02536</p>
<p>Mark Harding 25 Devon Street Mashpee, MA 02649</p>
<p>Mimi McConnell P.O. Box 832 Cotuit, MA 02635</p>
<p>Jimmy Dishner P.O. Box 955 South Orleans, MA 02653</p>
<p>The Nature Conservancy 99 Bedford Street, Suite 500 Boston, MA 02111</p>
<p>Department of Natural Resources Conservation University of Massachusetts, Amherst 205 Holdsworth Way Amherst, MA 01003-9285</p>
<p>Anthony Schiavi, Town Administrator Bourne Town Hall 24 Perry Avenue Buzzards Bay, MA 02532</p>
<p>Bourne Board of Selectmen Bourne Town Hall 24 Perry Avenue Buzzards Bay, MA 0253</p>
<p>Bourne Planning Board Bourne Town Hall 24 Perry Avenue Buzzards Bay, MA 02532</p>
<p>Bourne Conservation Commission Bourne Town Hall 24 Perry Avenue Buzzards Bay, MA 02532</p>
<p>Bourne Board of Health Bourne Town Hall 24 Perry Avenue Buzzards Bay, MA 02532</p>

Jonathan Bourne Public Library 19 Sandwich Road Bourne, MA 02532
Rodney C. Collins, Town Manager Mashpee Town Hall 16 Great Neck Road North Mashpee, MA 02649
Mashpee Board of Selectmen Mashpee Town Hall 16 Great Neck Road Mashpee, MA 02649
Mashpee Planning Board Mashpee Town Hall 16 Great Neck Road Mashpee, MA 02649
Mashpee Conservation Commission Mashpee Town Hall 16 Great Neck Road Mashpee, MA 02649
Mashpee Board of Health Mashpee Town Hall 16 Great Neck Road Mashpee, MA 02649
Mashpee Public Library 64 Steeple Street PO Box 657 Mashpee, MA 02649
George Dunham, Town Manager Sandwich Town Hall 130 Main Street Sandwich, MA 02563
Sandwich Board of Selectmen Sandwich Town Hall 130 Main Street Sandwich, MA 02563
Sandwich Planning Board 16 Jan Sebastian Drive Sandwich, MA 02563
Sandwich Conservation Commission 16 Jan Sebastian Drive Sandwich, MA 02563
Sandwich Board of Health 16 Jan Sebastian Drive Sandwich, MA 02563
Sandwich Public Library 142 Main Street Sandwich, MA 02563
Julian Suso, Town Manager Falmouth Town Hall 59 Town Hall Square Falmouth, MA 02540

Falmouth Board of Selectmen Falmouth Town Hall 59 Town Hall Square Falmouth, MA 02540
Falmouth Planning Board Falmouth Town Hall 59 Town Hall Square Falmouth, MA 02540
Falmouth Conservation Commission Falmouth Town Hall 59 Town Hall Square Falmouth, MA 02540
Falmouth Board of Health Falmouth Town Hall 59 Town Hall Square Falmouth, MA 0254
Falmouth Public Library 300 Main Street Falmouth, MA 02540