



**PUBLIC
INVOLVEMENT PLAN**

**Impact Area
Groundwater Study Program**

CAMP EDWARDS
Massachusetts Military Reservation

NATIONAL GUARD BUREAU
October 2001



Printed on Recycled Paper

PUBLIC INVOLVEMENT PLAN

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OVERVIEW

This Public Involvement Plan (PIP) will present public involvement activities designed to inform and involve the public regarding issues pertaining to the Impact Area Groundwater Study Program (**IAGWSP**) being conducted on Camp Edwards at the Massachusetts Military Reservation (MMR) by the National Guard Bureau (**NGB**). It also is designed to meet requirements for Community Involvement at a Public Involvement Plan Site under the Massachusetts Contingency Plan (**MCP**). This plan was developed through a collaborative effort of the IAGWSP, U.S. Environmental Protection Agency (**EPA**), and Massachusetts Department of Environmental Protection (**MADEP**).

This plan includes:

- Goal of the Impact Area Groundwater Study Program
- Goal of the Public Involvement Plan
- Key Parties Involved in the IAGWSP
- Site History & Description
- What is the Safe Drinking Water Act?
- Administrative Orders Concerning Camp Edwards
- Key Community Concerns
- Investigation and Cleanup Process
- Community Involvement Activities During the Cleanup Process

Additional information is included in the Appendices, which are listed in the Table of Contents. The list of acronyms and a glossary of terms is presented on each page to assist the reader.

GLOSSARY/ACRONYM

IAGWSP - Impact Area Groundwater Study Program

NGB – National Guard Bureau – the Federal organization responsible for the Army and Air Force Reserves Program.

MCP - Massachusetts Contingency Plan - a set of State regulations that govern the cleanup of oil and hazardous materials for the protection of public health, safety, welfare and the environment.

EPA - U.S. Environmental Protection Agency, New England Region

MADEP - Massachusetts Department of Environmental Protection

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GOAL OF THE IMPACT AREA GROUNDWATER STUDY PROGRAM (IAGWSP)

The goal of the IAGWSP is to assess and clean up the impacts of activities conducted at Camp Edwards on the **groundwater** beneath the **Impact Area** and training ranges of the Massachusetts Military Reservation (MMR). The study involves soil, surface water, sediment and groundwater investigations and focuses on areas considered to have the highest potential of being affected by historic military training activities. Once the type and location of any contamination is determined, measures will be conducted to abate any threat to public health, safety and the environment.

GOAL OF THE PUBLIC INVOLVEMENT PLAN

The goal of this plan is to provide a framework to engage all **stakeholders** in shaping decisions at the beginning of and throughout the study and cleanup process. As the issues at MMR are various and complex, this plan has been developed on the premise of flexibility in order to respond to the ever-changing nature of the environmental issues at MMR.

In addition, modifications to the plan should occur whenever inadequacies are noted or a change in the communication structure or environmental issues warrant additional changes.

KEY PARTIES INVOLVED IN THE IMPACT AREA GROUNDWATER STUDY PROGRAM

The EPA has issued four **Administrative Orders** to the National Guard Bureau and the Massachusetts Army National Guard. Under these Administrative Orders, the role of the EPA is one of oversight and final decision-making regarding the technical approach to the study and subsequent cleanup actions. The National Guard Bureau is the main agency responsible for carrying out the Orders, as the NGB provides funding and sets requirements for activities conducted by the Massachusetts National Guard at MMR, and is thus responsible for the clean up of its training site. The Massachusetts National Guard is an agency of the Commonwealth of Massachusetts and

GLOSSARY/ACRONYM

Groundwater - A supply of fresh water found beneath the earth's surface, which supplies wells and springs.

Impact Area - An area designated as a target to be fired into by artillery and mortar during training exercises.

Stakeholder - Any person who has a "stake" or interest in the outcome of a decision.

Administrative Order - A legally binding document issued by the EPA if they believe a drinking water source is threatened. It requires action to protect that source.

GLOSSARY/ACRONYM

HE - High Explosives -

A chemical composition which, when initiated, can undergo a rapid chemical reaction, with the production of noise, heat, and a violent expansion of gases.

Lens – Groundwater zone.

Aquifer – An underground geological formation containing useable amounts of groundwater that can supply wells and springs.

reports directly to the Governor, unless units of the Guard are federalized for wartime or other federal duties.

The Massachusetts Department of Environmental Protection will work with the EPA and the NGB to coordinate activities and to ensure that all response actions shall meet or exceed the substantive cleanup standards of the Massachusetts Contingency Plan. NGB, EPA and MADEP have agreed to work together to ensure that all requirements and timelines are coordinated.

As of January 1, 2001, the United States Army Corps of Engineers (USACE) began acting as the supervising contractor to the IAGWSP. The New England District of the Corps will support the National Guard Bureau and Massachusetts National Guard in their roles as respondents to the EPA Administrative Orders.

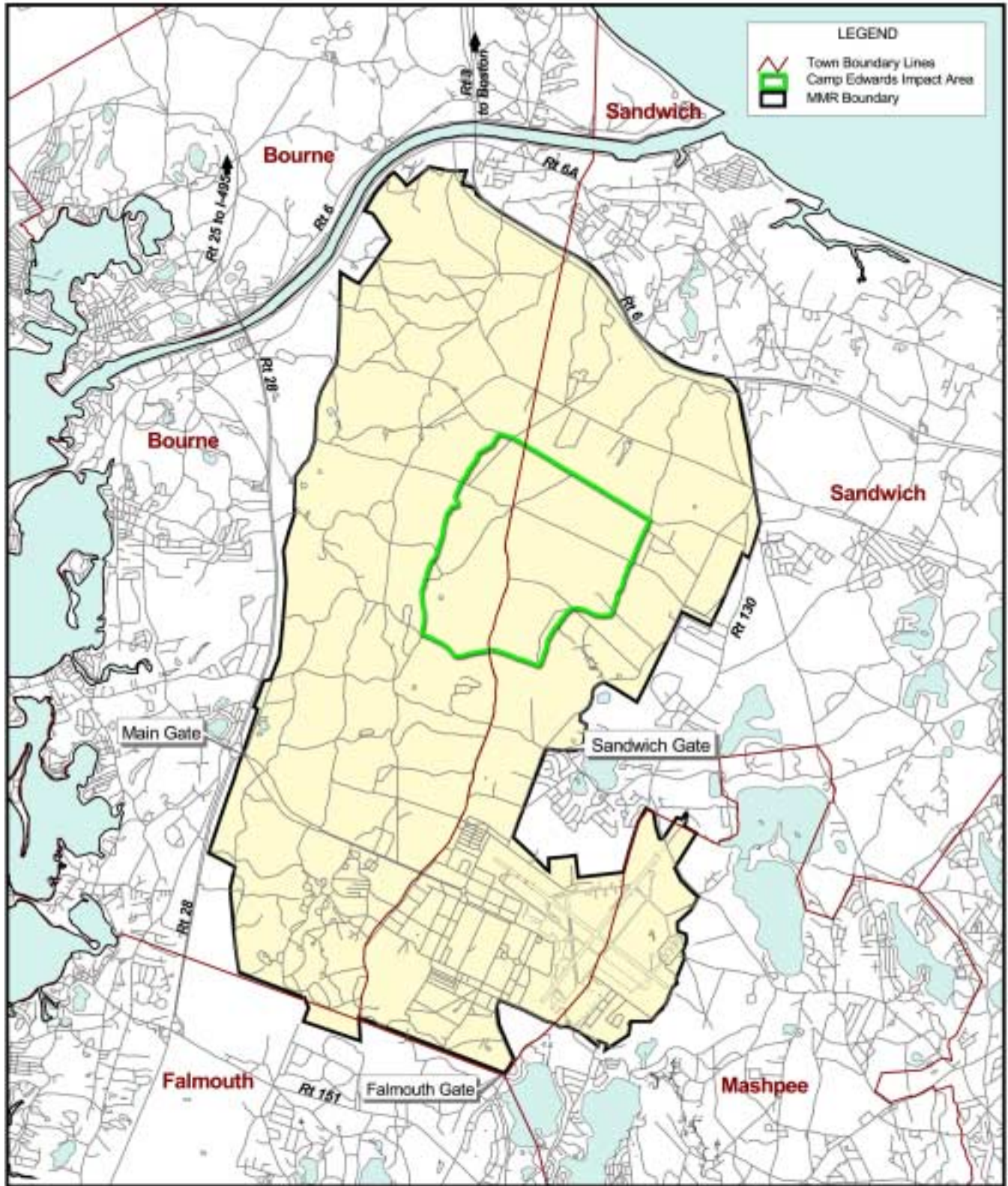
SITE HISTORY AND DESCRIPTION

The Massachusetts Military Reservation is located on the upper western portion of Cape Cod, immediately south of the Cape Cod Canal. It includes parts of the towns of Bourne, Mashpee and Sandwich and a small portion of the town of Falmouth. The entire reservation covers nearly 22,000 acres.




The northern portion of the Massachusetts Military Reservation, known as Camp Edwards, is used for the training of National Guard and law enforcement personnel from the New England area. The approximately 15,000 acres has at its center an Impact Area of 2,200 acres. (Figure 1) The Impact Area was used as a target for artillery and mortar firing. No firing of **high explosive** (HE) artillery has taken place since 1988 and no firing of HE mortar rounds since 1997. There are also 20 small arms ranges and twelve artillery firing points.

Some portions of the MMR have been used for military training purposes since 1911. Since 1935, the area has been used for Army training and maneuvers, military operations, maintenance and support.

The Impact Area is located over the recharge area of the Sagamore **Lens**, the sole-source **aquifer** supplying drinking water for the western part of Cape Cod, known as the Upper Cape. The Sagamore Lens is a large 300-foot thick layer of groundwater. In general, soils on Camp Edwards are sandy and permeable and permit rapid groundwater movement (1-3 feet per day). The



LEGEND


-  Town Boundary Lines
-  Camp Edwards Impact Area
-  MMR Boundary

0.5 0 0.5 1 Miles

Source of Base Map:
Massachusetts GIS

AMEC Earth and Environmental
220 Linton Road, Suite 1B
Westford, MA 01586
(978) 662-0090

**Massachusetts Military Reservation (MMR)
Cape Cod, Massachusetts**

 N

**Figure
1**

Grant1 new/loc. map.apr
2/25/2001 February 2001 PEP_1.pdf

GLOSSARY/ACRONYM

Plumes – A volume of contaminated water that extends downstream from the contamination source to its leading edge (similar to smoke from a smokestack as it drifts downwind in the atmosphere).

AFCEE – Air Force Center for Environmental Excellence – An Air Force organization, headquartered in San Antonio, TX that directs environmental work at military installations throughout the country.

Consent Decree – A judicial decree expressing a voluntary agreement between parties to a suit. Both parties agree to the decree in lieu of going to trial.

Environmental Impact Statement (EIS) - A comprehensive environmental analysis of a proposed project and alternatives as described in the National Environmental Policy Act (NEPA).

Notice of Responsibility (NOR) – A notice from the MADEP informing an individual or company of his or her potential liability pursuant to MGL C 21E, which is the state Superfund law.

Sagamore Lens is recharged, or replenished, by rainwater that seeps through the sandy soil into the aquifer.

During the 1980's, much attention was given to environmental issues both nationwide and on Cape Cod. Groundwater contamination was discovered flowing off of the southern portion of MMR. These **plumes** emanate from areas of previous military activity, mainly associated with those conducted at the former Otis Air Force Base (now Otis Air National Guard Base). The discovery of significant off-base contamination led to increased community interest in the environmental cleanup program at MMR and resulted in an extensive Community Involvement Program that is being implemented by the Air Force Center for Environmental Excellence's (**AFCEE**) Installation Restoration Program (IRP).

As interest and activity grew in the IRP program, citizens and local community organizations were persistent in raising concerns about activities taking place on MMR and voiced concern about the effect of historic and current training in the northern 15,000 acres of the MMR. Also, in the mid 1980's the Massachusetts National Guard proposed a number of upgrades to training facilities on Camp Edwards and at the Otis Air National Guard Base. The Conservation Law Foundation of New England filed a petition with the U.S. District Court to stop these projects. A **Consent Decree** was issued in 1984 that required the Massachusetts National Guard to prepare an **Environmental Impact Statement (EIS)** before proceeding with most of the planned upgrades. The Decree also stipulated several environmental projects to be completed.

Interest in the Consent Decree and proposed projects, as well as a growing awareness of the possibilities of groundwater contamination, led the U.S. EPA to issue an Administrative Order to the National Guard in 1997. This order was issued under the Safe Drinking Water Act and formed the basis for the Impact Area Groundwater Study Program now underway on Camp Edwards.

As a result of these investigations being conducted under the Safe Drinking Water Act Administrative Order, the Massachusetts Department of Environmental Protection issued a **Notice of Responsibility (NOR)** under the Massachusetts Contingency Plan in September 1999. Responsible parties are obligated to assess and remediate if necessary soil or groundwater contamina-

tion. The Massachusetts Contingency Plan also establishes enforceable milestones for assessment and remediation.

WHAT IS THE SAFE DRINKING WATER ACT?

Congress enacted the Safe Drinking Water Act (SDWA) (Public Law 93-523, as amended) in 1974 to ensure that public water supply systems in the United States meet national minimum standards for the protection of public health. Congress gave the EPA primary responsibility for ensuring that the requirements of the Act are met. Unlike the Clean Water Act, which governs only surface waters of the United States, the SDWA applies to all potential sources of drinking water, surface water or groundwater. The Act also was specifically designed to protect underground sources of drinking water, known as aquifers, from toxic contaminants.

The SDWA was designed to regulate the quality of water as it flows to the tap. The SDWA has two main goals: to protect and to regulate the quality of drinking water.

These goals are achieved in a number of ways:

- *By establishment of National Drinking Water Regulations.*
These are health-based, enforceable standards that regulate the **maximum contaminant level (MCL)** of certain chemicals in drinking water that are considered safe. MCLs apply to drinking water sources that are delivered through a public water supply system.
- *By establishment of National Secondary Drinking Water Standards.*
These are non-enforceable, aesthetic standards designed by EPA to address odor, appearance, etc. of drinking water.
- *By establishment of Groundwater Protection Programs designed to minimize groundwater contamination.*

Three protection methods are used:

1. Protection from injection of pollutants underground
2. Designation and protection of sole source aquifers
3. Establishment of wellhead protection areas

The 1986 SDWA amendments grant the EPA authority to issue Administrative Orders where it appears that pollutants may present a threat to drinking water supplies including underground aquifers. If the EPA believes a drinking water source is threatened, an Administrative Order requiring action

GLOSSARY/ACRONYM

Maximum Contaminant Level (MCL) – The maximum concentration of a given contaminant allowed in drinking water under the federal Safe Drinking Water Act (SDWA). When the state drinking water standards are more stringent than the federal MCL, the state standard is used.

GLOSSARY/ACRONYM

High Explosives (HE) - A chemical composition which, when initiated, can undergo a rapid chemical reaction, with the production of noise, heat, and a violent expansion of gases.

to protect that source may be issued. Penalties may also be assessed for violations of an AO. An AO is a legally binding document based on authority granted to the Administrator of the U.S. EPA by the SDWA.

ADMINISTRATIVE ORDERS CONCERNING CAMP EDWARDS

Administrative Order Number 1 (AO No. 1)

The EPA issued Administrative Order Number 1 to the National Guard Bureau on February 27, 1997. This order was in response to concerns about the impacts of range training operations on the groundwater under, near, and emanating from the MMR Camp Edwards Impact Area and Training Ranges. This Order was issued under the authority of the Safe Drinking Water Act, Section 1431 and requires the NGB to conduct a comprehensive study of the effects of military activities on the aquifer underlying the MMR. The Order provides for complete EPA oversight of this work and establishes a citizens' advisory committee to monitor the work. This advisory committee was formed and is known as the Impact Area Review Team (IART). (See Appendix A, Impact Area Review Team).

More specifically the Order requires the NGB to:

- Provide to the EPA and the public all known information on potential contaminants in soil and groundwater (see Addendum 1 - Contaminants of Concern).
- Complete a study on the effects on public health and the environment of past, present, and future activities on or near the training ranges and Impact Area
- Ensure adequate public involvement and coordinate work with the Impact Area Review Team, a citizens' advisory team established by the EPA

Administrative Order Number 2 (AO No. 2)

On April 10, 1997, based on environmental data collected under AO No. 1, a second AO was issued under the SDWA to NGB and the Massachusetts Army National Guard (MAARNG). This required that the following activities be halted to protect the aquifer:

- All firing of lead ammunition
- All usage of **high explosive** artillery and mortar

- All demolition of **ordnance** or explosives, except for unexploded ordnance clearance
- All use of artillery and mortar **propellants**
- All use of **pyrotechnics** and burning of **propellant bags**
- All use of lead bullets

AO No. 2 also required remediation of lead contamination at small arms firing ranges.

Administrative Order Number 3 (AO No. 3)

On January 6, 2000, the EPA issued Administrative Order Number 3, which required both short and long-term clean up activities to remove identified areas of soil contamination. More specifically, AO No. 3 required the NGB to:

- Conduct **Rapid Response Actions** to remove identified areas of soil contamination (see Figure 2):
 - Steel Lined Pit
 - Study Area 2 of the Impact Area
 - KD Range firing and target areas
 - J-3 Wetland
 - Gun position 7
 - Gun position 16
 - Gun position 9
 - Armored Personnel Carrier
 - H Range
- Prepare **Feasibility Studies** to evaluate potential alternatives for conducting environmental cleanup at five sites: (see Figure 3)
 - Demolition Area 1
 - Southeast corner of the J Ranges
 - Contaminated groundwater in and from the Central Impact Area
 - Areas in the training ranges and Impact Area that contain surface and sub-surface **UXO**
 - **Chemical Spill-19 (CS-19)**, if necessary
- Design and construct cleanup systems after Feasibility Studies are complete
- Prepare a Public Involvement Plan

Administrative Order Number 4 (AO No. 4)

GLOSSARY/ACRONYM

Ordnance - Military materiel, such as weapons, ammunition, combat vehicles and equipment.

Propellants - An explosive charge that propels or provides thrust.

Pyrotechnics - Items of ammunition which produce, through chemical reaction, light, heat, noise.

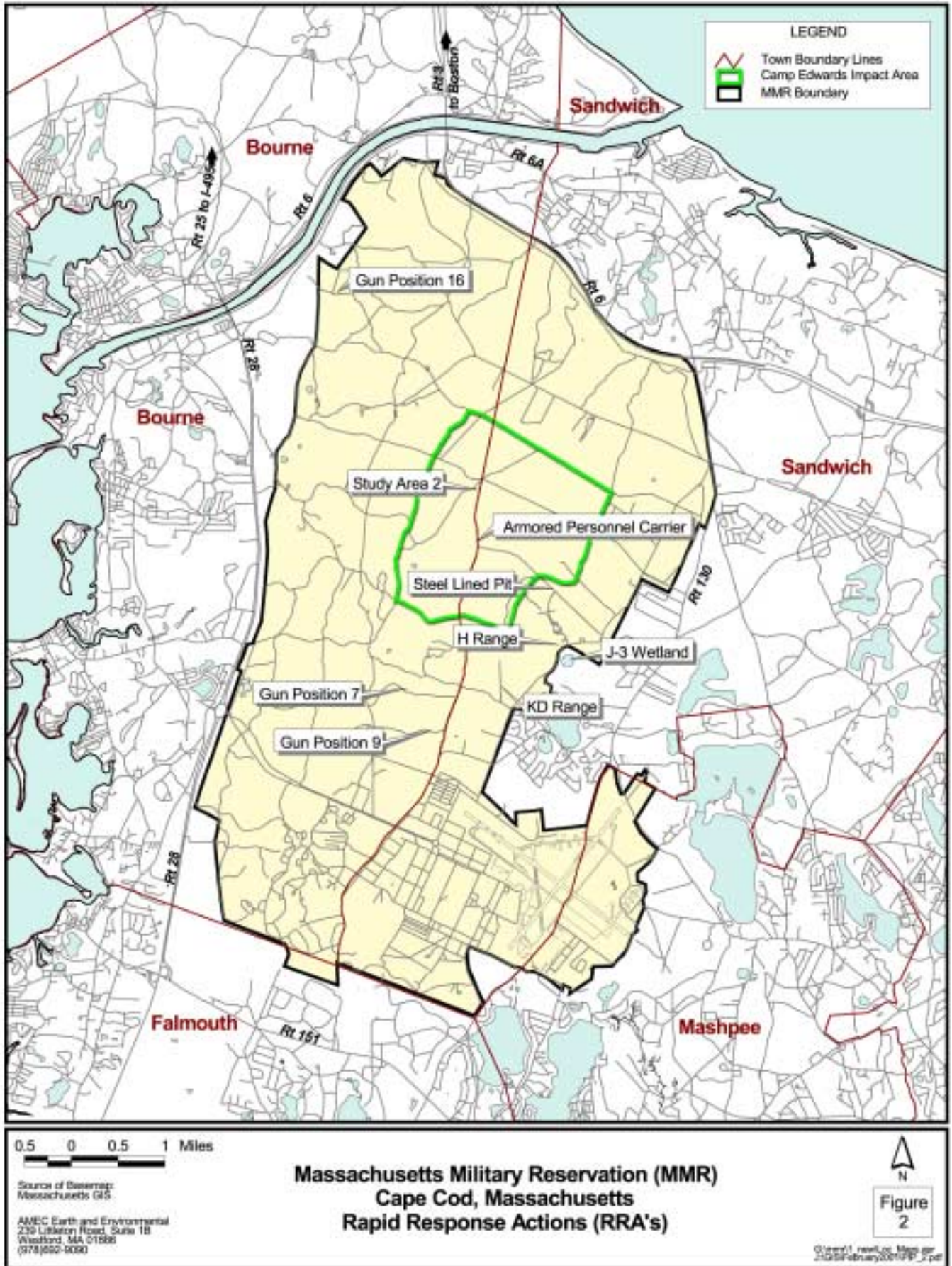
Propellant Bags - Canvas bags that contain a measured volume of propellant.

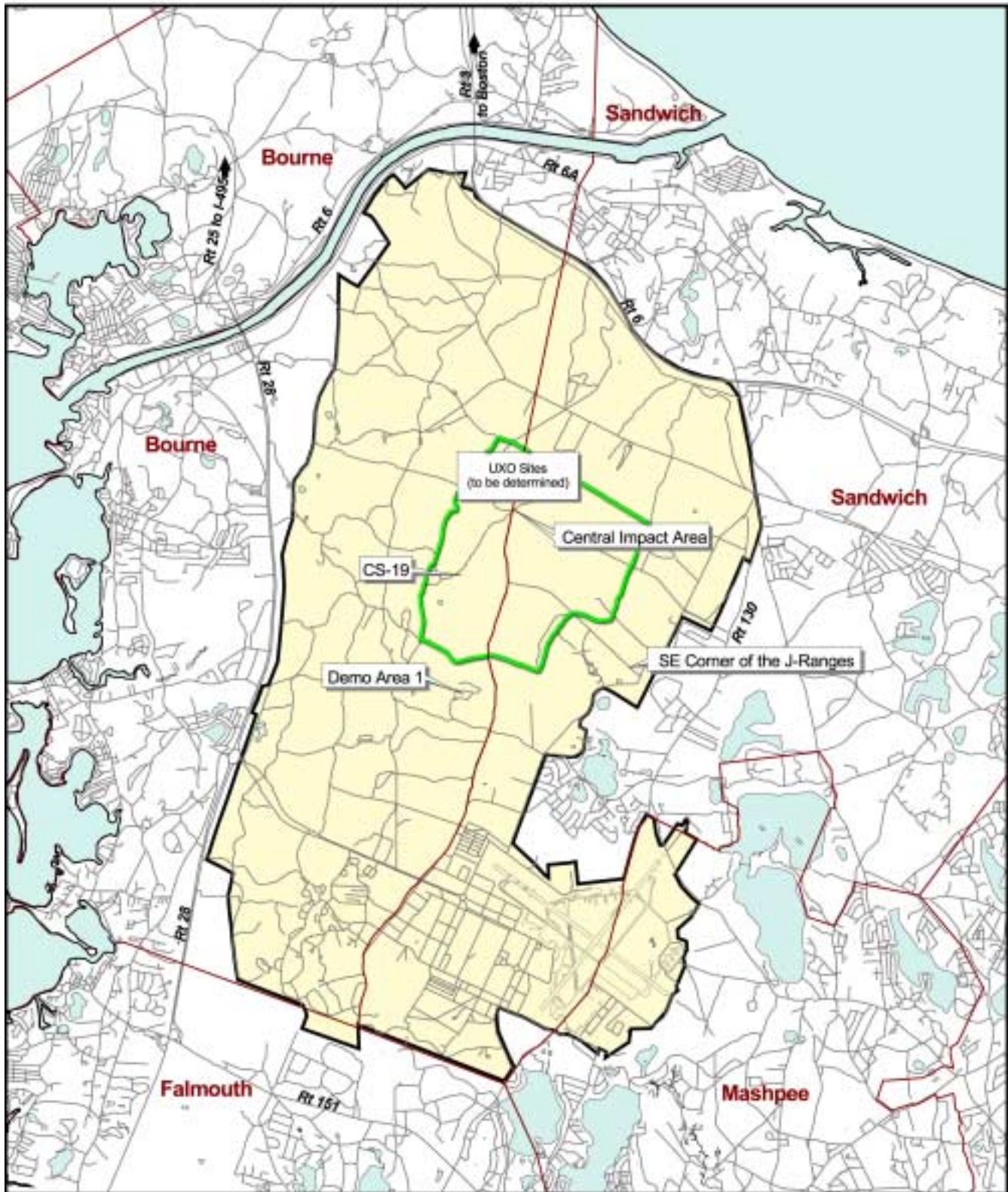
Rapid Response Actions – an expedited regulatory approach used when quick actions are needed to clean up a hazardous material release.

Feasibility Study - A study to evaluate cleanup technologies and alternatives to be used for the containment, treatment, or removal of contamination from a site.

UXO - Unexploded ordnance – ammunition fired that did not detonate on impact.

Chemical Spill-19 (CS-19) – A chemical spill, which is under the jurisdiction of AFCEE's Air Force cleanup program





0.5 0 0.5 1 Miles

Source of Basemap:
 Massachusetts GIS
 AMEC Earth and Environmental
 239 Littleton Road, Suite 1B
 Westford, MA 01886
 (978) 992-9000

**Massachusetts Military Reservation
 Cape Cod, Massachusetts
 Sites for Feasibility Studies**

Figure
 3

0:\proj1\new\loc_bldgs.apr
 2/25/2015 February 2015\FP_3.pdf

GLOSSARY/ACRONYM

Contained Detonation Chamber – A contained “chamber” for blowing up unexploded ordnance.

Resource Conservation and Recovery Act (RCRA) – Federal law enacted in 1976 to address the issue of how to safely manage and dispose of huge volumes of municipal and industrial waste generated nationwide.

On January 4, 2001, the EPA issued a fourth AO under the Resource Conservation and Recovery Act (RCRA) to NGB. This order required munitions found in burial pits to be properly stored and disposed of in the **Contained Detonation Chamber**. It also allows the EPA to require the NGB to bring in a larger detonation chamber in the future if necessary.

INVESTIGATION AND CLEANUP PROJECTS

Under the four EPA Administrative Orders and MADEP’s Chapter 21E of the Massachusetts Contingency Plan, an extensive investigation of contamination is being conducted in the northern 15,000 acres of MMR. In some instances, as contamination is identified, clean up is taking place. Several projects are completed or already underway. For details on these or other issues, documents are available at the Information Repositories in the local libraries. The July, 1997, “Action Plan for the Camp Edwards Impact Area Groundwater Quality Study, Volume 1” is a good overall reference for those who wish to have a broader understanding of the background of this project. What follows is a brief update on major projects conducted or currently underway.

Firing Range Berms Soil Cleanup Action

A Completion Report for the Firing Range Berms Soil Cleanup Report was finalized in May 2000. The objective of this soil maintenance action was to remove the particulate lead and other metallic fragments from the contaminated soil in the firing range berms. This activity consisted of a soil washing process that was designed to separate and wash large boulders, cobbles, and gravel into separate streams, and remove lead by gravity separation. The finer material soil was also separated, washed, and recovered. Airborne lead was of particular concern for this project. A water truck to wet traffic areas was mobilized to the site to help control dust.

Archive Search

An extensive search of national, regional, local, and military archived records that may contain information on potential areas of contamination is

currently underway. Information is being compiled on identification and verification of the types and quantities of munitions used at MMR training ranges, as well as historic disposal methods. The archive search includes interviewing former and current employees, as well as those who trained at MMR. Old aerial photographs, other photos and unit records are among the items considered. The Archive Search information will be available in 2001 through a computer GIS system.

Rapid Response Actions (RRA)

Areas of soil contamination are being cleaned up under actions called Rapid Response Actions. “Rapid” Response has been ordered in areas where high levels of contamination have already been identified under AOI activities. The RRA is the actual excavation, treatment, disposal and restoration along with the ongoing evaluation of effectiveness. These RRA’s are also being conducted in compliance with the substantive cleanup standards of the Massachusetts Contingency Plan, as a Release Abatement Measure (RAM). More of these Actions may be required as the investigation continues.

Identification and Removal of Unexploded Ordnance (UXO)

An important part of the cleanup is the identification and safe disposal of **UXO** found during the study and cleanup. When **UXO** are discovered and are determined unsafe to move, Explosive Ordnance Disposal (EOD) experts or **UXO** contract personnel destroy the **UXO** in place. This procedure is commonly referred to as a “Blow in Place” or **BIP**. If the **UXO** can be safely moved and is of the appropriate size, it is taken to the **Contained Detonation Chamber (CDC)** located in the Impact Area. This chamber is a state-of-the-art method for destruction of **UXO**. **UXO** deemed safe to move, but too large to be safely disposed of in the chamber, are moved to a safe storage area to await further action. After each **BIP**, the surrounding soil is sampled for residual explosive compounds. If any contamination is found, the soil is removed and disposed of in accordance with applicable regulations.

The Feasibility Study Process

GLOSSARY/ACRONYM

UXO – Unexploded Ordnance

BIP – Blow in Place

Contained Detonation Chamber – A contained “chamber” for blowing up unexploded ordnance.

GLOSSARY/ACRONYM

Feasibility Study (FS) – A study to evaluate clean-up technologies and alternatives to be used for the containment, treatment, or removal of contamination from a site.

Remedial Design (RD) – The design for construction necessary to complete the remediation or cleanup of contamination.

Remedial Action (RA) – The actual cleanup process.

AO No. 3 requires the preparation of separate **Feasibility Study/Remedial Design / Remedial Action (FS/RD/RA)** Reports to evaluate potential remediation alternatives for four to five areas of concern on Camp Edwards. Additional studies may be required as the IAGWSP progresses.

During the Feasibility Study process for each site, the project managers will meet with the IART and the Senior Management Board (SMB), as well as with other stakeholders at an open workshop to evaluate all proposed alternatives, using the Decision Criteria Matrix (DCM) (see page 27 for more details on the Decision Criteria Matrix).

Once the draft Feasibility Study Process is complete, a Remedy Selection Plan will be developed based on alternatives carried through in the Feasibility Study. This Remedy Selection Plan will be available for a 30-day public comment period. After the comment period, a decision document will be published, along with a Responsiveness Summary. The Responsiveness Summary will be prepared by the NGB, with input from the EPA and MADEP, and will respond to comments made on the Remedy Selection Plan. If consensus cannot be reached between parties to the order during the remedy selection process, the parties can use the dispute resolution process outlined in the Administrative Order to resolve differences.

The Remedy selection process for each area of concern outlined in the Administrative Order is as follows:

- A Remedial Action Work Plan, which details the field investigations and reports, will be developed by the NGB and then reviewed by the EPA and MADEP. A draft Feasibility Study will be developed by the NGB and then reviewed by the EPA, MADEP and public. During this process the DCM will be used to allow a thorough comparison of the alternatives and/or various technologies being considered for the cleanup process.
- After all input is received, a Remedy Selection Plan will be developed which lays out a proposal for the cleanup. This Plan will be reviewed by the EPA and MADEP and then released to the public for a thirty-day public comment period.

- Upon receipt and evaluation of the comments received on the Remedy Selection Plan, a Draft Decision Document and Responsiveness Summary will be submitted by NGB to the EPA and MADEP for comment and approval, revised based on comments, and a final Decision Document submitted to the EPA Regional Administrator for signature.

Upon selection of the remedy, the cleanup phase of the process will begin: A **Remedial Design** document will be prepared by the NGB, which describes the design of the system to be used for the cleanup. This document will go to the EPA, MADEP and the public for comment. The design will be looked at by all parties when 60% designed and again at 100% design. This plan details the actual construction phase of the project. The public will be kept informed of all aspects of the actual construction by press releases, fact sheets, meetings, etc.

Incorporated throughout the cleanup process is the management of existing habitat as well as restoration of any destroyed habitat.

COMMUNITY INVOLVEMENT ACTIVITIES DURING THE INVESTIGATION AND CLEANUP PROCESS

The activities discussed in this PIP will be ongoing as the project progresses. There will be a continuous flow of press releases, fact sheets, briefings to advisory and other stakeholder groups, etc. A Community Involvement schedule will be prepared for each of the Feasibility Studies.

KEY COMMUNITY CONCERNS

Stakeholder involvement is key to the successful completion of the **IAGWSP**. Citizens need to be informed and involved at all stages with regards to any environmental actions. Any reference made to stakeholders in this document refers to any individuals having a “stake” in the environmental operations at MMR, including but not limited to the following:

- Members of the communities surrounding MMR
- Individuals living and working on MMR
- Elected officials and their representatives
- Community leaders

GLOSSARY/ACRONYM

Remedial Design (RD) –

The design for construction necessary to complete the remediation or clean up of contamination.

IAGWSP – Impact Area Groundwater Study Program

GLOSSARY/ACRONYM

Open Detonation – to blow up a piece of unexploded ordnance where it is found, or after moving to a safe location outdoors.

Contained Detonation Chamber – A contained “chamber” for blowing up unexploded ordnance.

- Members of the various community advisory groups involved at MMR, e.g. Impact Area Review Team (IART), Senior Management Board (SMB)
- The Department of Defense
- Massachusetts National Guard
- The Environmental Protection Agency
- Massachusetts Department of Environmental Protection
- Other regulatory agencies

Community involvement issues associated with the Impact Area Groundwater Study Program fall into several key areas. The following represent those concerns and requests identified through past and present activities and records:

Public Information and Public Involvement

- Public health concerns related to impact from past activities at Camp Edwards
- Proximity of some residences to the Impact Area and training ranges
- Access to information in a timely manner
- Release of new information frequently
- Presentation of information in a concise, understandable and user-friendly fashion
- Production of easily understood maps and other visual information
- Concern with preferential treatment of community advocates
- Holding more informational neighborhood meetings with less structure
- Request for opportunities for site visits and tours
- Provision of neutral facilitation of citizen advisory groups
- Lack of openness with the public by Army National Guard officials
- Examine historic contractor use of land

Environmental and Safety Issues

- Disposal options (**Open Detonation**/Blow in Place, **Contained Detonation Chamber**, offsite disposal [transportation])

- Threat of groundwater and soil contamination
- Threat to wildlife and habitat
- The synergistic effect of multiple compounds not studied
- Threat to base personnel and the public regarding the handling and disposal of UXO (risk to the community from restoration efforts)

Military Training and Socioeconomic Issues

- Viability of continued training on ranges and impact areas for military readiness
- Economic impact on local community if training is reduced
- Military training co-existing with environmental protection

COMMUNITY ACTIVITIES WITH STAKEHOLDERS

The remainder of this plan will address the specifics of the Public Involvement process proposed by NGB under AO No. 3 to respond to the above requests and concerns. All activities will be conducted by NGB in coordination with EPA, MADEP, and the public. All actions in this proposal are designed to enhance coordination and information exchange between the community, NGB, EPA and MADEP. In addition, modifications to the plan should occur whenever inadequacies are noted or a change in the communication structure or environmental issues warrant additional changes.

EPA, MADEP, MASSACHUSETTS DEPARTMENT OF HEALTH (MDPH)

NGB will provide information to these agencies through a combination of mail, e-mail, fax or telephone, depending on preference. Community involvement publications and activities will be coordinated with EPA and MADEP. If appropriate, MDPH will also be asked for input and/or comment on these items. NGB will host regularly scheduled meetings with these agencies and additional meetings or correspondence will occur as required or when requested.

NOTIFICATION PROTOCOLS

Residents of the towns of Bourne, Falmouth, Mashpee, and Sandwich, along with the residents and workers on the Massachusetts Military Reservation are the primary communities of stakeholders. All appropriate town organizations

GLOSSARY/ACRONYM

Joint Program Office

(JPO) – An office on MMR that represents the Under Secretary of Defense for Environmental Security and is responsible for coordinating all environmental programs on MMR.

and stakeholder groups will be notified in case of any situation that arises during the study that poses an immediate threat to human health, safety or the environment, such as contamination in a drinking water supply system or UXO in a potentially dangerous location. EPA, MADEP and the Massachusetts Department of Public Health (MDPH) will also be notified whenever an emergency or potentially dangerous situation occurs. In addition, a Notification Protocol has been established with the Town of Sandwich to address the recovery and disposal of UXO found in areas on MMR that are adjacent to the Town of Sandwich. (See Appendix B, *Notification Protocols*).

IMPACT AREA REVIEW TEAM

The IART (See Appendix A, *Impact Area Review Team*) will continue to function as an advisory group to the NGB and EPA on the Impact Area Groundwater Study Program and subsequent cleanup activities. The NGB will continue to provide administrative support to the IART. All documents pertaining to the Impact Area Groundwater Study Program will be shared with the IART as soon as available by mail or e-mail. Efforts to increase community membership will continue to be made.

Advertisements for IART meetings are placed in the *Cape Cod Times*, *Enterprise* and *Upper Cape Codder* newspapers prior to IART meetings. Whenever possible, meetings will be held in the surrounding towns and a concerted effort will be made to encourage attendance and membership of any who express an interest in this activity.

SENIOR MANAGEMENT BOARD

The Senior Management Board (SMB) is comprised of an elected representative from each of the four surrounding towns, EPA, MADEP, MDPH, the Coast Guard, the MAARNG and the **Joint Program Office (JPO)**. The function of the SMB is to review, discuss and advise MMR organizations on all environmental programs on MMR and to interact with the decision-makers involved in those programs. The SMB is not related to the IART, but has the role of integrating issues that cross over several programs. Regular updates will be provided to the SMB. The members of the SMB will be kept informed of the progress and issues of the IAGWSP through the use of poster sessions, presentations, fact sheets and any other requested materials. Third party consultation is provided to the SMB through a contract with Foothill Engineering. The NGB will continue to support this effort.

ELECTED OFFICIALS

NGB will provide information regarding the IAGWSP to elected officials through mail, e-mail, fax, or telephone, depending on preference. NGB will arrange for periodic, timely meetings with elected officials (Appendix E, *Elected Officials*) and their staffers in order to provide updates or clarify information.

OTHER MMR ORGANIZATIONS

NGB and the Impact Area Groundwater Study Program office will continue to work through the Joint Program Office (JPO) to coordinate technical and community involvement activities with the other organizations on MMR, particularly the AFCEE Installation Restoration Program.

MMR RESIDENTS AND SCHOOLS

The Impact Area Groundwater Study Program office participates in the MMR-wide Public Involvement Group and the Risk Communication Group. These groups, coordinated by the Joint Program Office, are made up of community involvement personnel on MMR. The Risk Communication Group also includes Federal and State environmental agencies. Both groups work to develop public information materials and activities to inform base residents and local schools about environmental issues at MMR.

Base residents are further kept informed of activities through the Coast Guard Commander, who is a member of the **SMB**. NGB will recommend to the IART that a special effort be made to recruit a base resident for team membership.

PUBLIC EDUCATION AND INFORMATION

In order for stakeholders to make informed recommendations to decision-makers, timely and accurate information must be available to the public. The following methods will be used to make information available to all stakeholders.

MEDIA

The media play an integral part in the flow of information regarding MMR activities. Therefore, NGB will ensure media access to IAGWSP personnel.

GLOSSARY/ACRONYM

AFCEE – Air Force Center for Environmental Excellence – An Air Force organization, headquartered in San Antonio, TX, that directs environmental work at military installations throughout the country.

SMB – Senior Management Board

GLOSSARY/ACRONYM

Administrative Record – A collection of documents generated during the investigation of a site that form the basis for selection of a remedial action and are placed in a central location for public review.

Information Repository – A set of documents that contain important facts relating to the clean up of a site.

Specified IAGWSP personnel will grant media interviews upon request and will provide follow-up data whenever possible. This effort will ensure media representatives have a clear understanding of NGB issues and the IAGWSP process. NGB will also provide the media with a 24-hour contact list and media will be notified immediately, in accordance with the emergency notification protocol, whenever an emergency or potentially dangerous situation occurs. Special consideration will be given to publication deadlines and to respond to media queries in a timely manner. (See Appendix F, *Media Contacts*)

PUBLICATIONS

Fact sheets, newsletters, neighborhood notices and other education or informational materials will be produced and distributed on a regular basis. Every effort will be made to respond to the community request for concise, non-technical material presented in an easy-to-read format. These publications will be developed in cooperation with the environmental agencies and community advisory groups. This material will be mailed to the site mailing list, placed in the local Information Repositories and distributed at community meetings. When investigation or cleanup activities will take place off-site or near neighborhoods abutting the MMR, neighborhood notices will be published and distributed.

ADMINISTRATIVE RECORD/ INFORMATION REPOSITORIES

The **Administrative Record** is the legal record that contains a complete compilation of all official correspondence and documentation from the Impact Area Groundwater Study Program that are used for decision-making. Copies of this complete record are kept at the IAGWSP office on MMR. Information from the Administrative Record will be accessible by computer from any one of the five libraries that contain MMR Information Repositories. The decision on what documents will comprise the final Administrative Record will be made by the EPA at the conclusion of the decision process for the cleanup actions under the Administrative Order.

An **Information Repository** is a collection of pertinent documents of interest to the public. There are five specified Information Repositories for MMR and the locations are listed in Appendix G, *Administrative Record and Information Repositories*. These Repositories are updated and maintained by the MMR Public Involvement Group. Current documents that are in use or out for public comment, or those determined to be of particular interest

will be in both hard copy and digital format. Other documents will be available on the web.

MAILING LIST

NGB will create and update a site mailing list to facilitate information flow. The mailing list will include individual residents, citizen team members and agency names and addresses. It will be used to circulate various kinds of information including notices, fact sheets, updates, meeting notices and other documents.

WEB SITE

NGB will use, maintain and regularly update the existing IAGWSP web site to provide information regarding the IAGWSP. The site will include contact information, weekly activity reports, meeting minutes, and other pertinent documents. The web site address is www.grndwater.org. Other web site resources are listed in Appendix H.

PUBLIC EDUCATION ACTIVITIES

The IAGWSP will work with the Joint Program Office and local community educators to develop a public education program designed to educate members of the communities surrounding MMR on UXO issues.

GLOSSARY/ACRONYM



GLOSSARY/ACRONYM

Public Comment Period –

A specific period of time when stakeholders may give comments on a document.

OPPORTUNITIES FOR DIALOGUE

PUBLIC COMMENT PROCESS

NGB recognizes that IAGWSP actions will be driven by the needs, wants, and concerns of the citizens of Cape Cod. In order to ensure that individual and community positions are accurately captured, NGB will sponsor **public comment periods** to allow the public input into actions regarding the IAGWSP. The public will receive a minimum of two weeks notice prior to public comment opportunities. Public comment time may be extended, at any time during the comment period, by a written request to EPA or NGB. Notification of public comment periods will be made through news releases and paid advertisements in the Cape Cod area newspapers, a mailed notice to elected officials, regulatory agencies, advisory group members and other specified individuals. The notices will contain a brief description of the topic requiring comment, documents up for comment, where they can be reviewed, and the date/time/location of the related public meetings. In addition, an EPA, MADEP and NGB contact person will be listed along with methods for commenting.

NGB will make every effort to ease and expand the methods for commenting to include verbal, mail, e-mail and fax. Once the comments are received, NGB will develop a Responsiveness Summary that describes the comments received as well as NGB's responses to those comments and will incorporate EPA and MADEP comments before release to the public. An official transcript will be published and placed in the Administrative Record and the Information Repositories.

PUBLIC MEETINGS/PUBLIC HEARINGS

The NGB will conduct public hearings and/or public meetings at appropriate times. The meetings will be used to disseminate information concerning the Impact Area Groundwater Study Program and planned activities as well as to receive input from stakeholders. These meetings will be held in the community when possible.

Formal public hearings will be held as necessary during public comment periods to receive comments on specific documents.

NEIGHBORHOOD MEETINGS

The NGB will continue to take part in neighborhood meetings sponsored by the Joint Program Office and will hold IAGWSP neighborhood meetings when project activity impacts a specific area or when interest is heard from a particular group.

COMMUNITY WORKSHOPS

Because informed decisions require a knowledge base for those involved in the process, the NGB will offer workshops and training classes to stakeholders on technical topics. These will be scheduled during evening or weekend hours and advertised through paid media and mailing to the site mailing list. Workshop subjects will depend on technologies being evaluated for remediation and results of various studies.

NGB plans to sponsor a community workshop on munitions and UXO in general, early in the Feasibility Study process. NGB will continue to work through the Joint Program Office to do environmental fairs, workshops, etc. in the local schools.

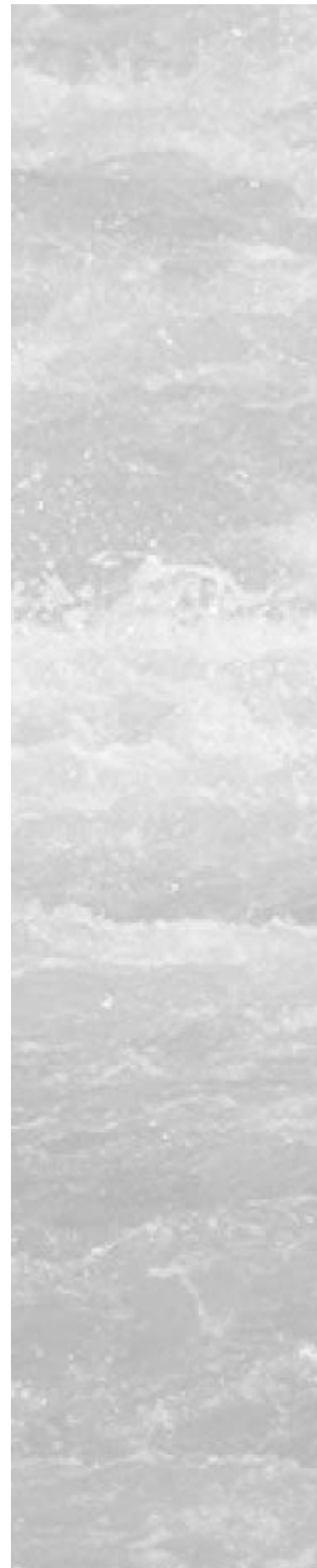
POSTERBOARD SESSIONS

When appropriate, posterboard sessions will be held prior to IART, SMB and other public meetings. These sessions provide stakeholders an opportunity to have two-way dialogue with technical project managers, one on one.

SITE TOURS

The NGB, in cooperation with the Camp Edwards Training Site, will continue to offer site tours when requested. Tours may be scheduled prior to IART or SMB meetings, or other times convenient to the public. The Impact Area Groundwater Study Program office will also continue to take part in tours arranged by the Joint Program Office for various community and educational groups.

Tours will be offered to the public through paid advertisement, and/or invitation when special technical events are taking place, such as delivery of the Contained Detonation Chamber.



GLOSSARY/ACRONYM

Remedial alternative –

An action or technology to be used to clean-up contamination.

Project Management

Group (PMG) - The technical Project Managers for the Impact Area Groundwater Study Program from NGB, EPA and MADEP.

COMMUNITY BASED DECISION MAKING

DECISION CRITERIA MATRIX (DCM)

In order to facilitate community-based decision making it is necessary to involve all stakeholders early and often in the cleanup process. This is successful only with appropriate two-way dialogue on all factors affecting a decision. NGB will use a Decision Criteria Matrix (DCM) similar to the one used by AFCEE in making decisions on the cleanup systems to be used for the plumes emanating from the southern portion of MMR. This matrix is a “consumer report” type of document that will allow stakeholders to assess individual **remedial alternatives** against each of nine evaluation criteria to determine the best approach to clean up contamination found in training ranges and the Impact Area. These nine criteria are listed in Appendix B of Administrative Order No. 3.

1. Overall protection of human health and the environment; this shall include prevention of the movement of contaminants into the aquifer and its preservation as a public drinking water supply
2. Compliance with regulations
3. Long term effectiveness and permanence
4. Reduction of toxicity mobility, or volume through treatment
5. Short term effectiveness
6. Implementability
7. Cost
8. State acceptance
9. Community acceptance

The **Project Management Group** and the community involvement staff of NGB, EPA and MADEP will develop this matrix based on the requirements of AO No. 3. It will then be presented to the public and community advisory teams for use during the development of the Feasibility Study.

NGB, EPA and MADEP have all agreed that maximum public participation is necessary as the Impact Area Groundwater Study Program moves toward cleanup solutions. Use of the DCM during the Feasibility Study process will help bring information to all stakeholders and provide a basis for discussion of each proposed alternative. The goal of the DCM is to help all stakeholders evaluate the various alternatives. In the DCM, each of the nine evaluation criteria is broken down into elements to be evaluated for acceptance.



FIGURE 4 - COMMUNITY INVOLVEMENT ACTIVITIES

Activity	Press Release	News Advertisement	Town/Neighborhood Meeting	Fact Sheet	IART Briefing	SMB Briefing	Public Comment Period	Responsiveness Summary
FS Scoping					X	X		
FS Workplan					X	X		
Screen of Alternatives			If Appropriate		X	X		
Field Invest Workplan			If Appropriate		X	X		
Draft FS			DCM Workshop If Appropriate		DCM Workshop	DCM Workshop		
Remedy Selection Plan	X	X	If Appropriate	X	X	X	30 Day	X
Decision Document	X	X	If Appropriate		X	X		X
Remedial Design Workplan								
60% RD					X	X		
100% RD				X	X	X		
Remedial Action Workplan								
Prior to Construction	X	X	If Appropriate	X	X	X		
Construction Updates	If Appropriate	If Appropriate	If Appropriate		If Appropriate	If Appropriate		
Rapid Response Actions	X	X	If Appropriate	X	X	X	15 Day Informal	X