ENVIRONMENTAL ASSESSMENT

AND

FINDING OF NO SIGNIFICANT IMPACT

For

Master Plan
U.S. Army Soldier Systems Center
Natick, Massachusetts

December 2021

Prepared for

.
Natick Soldier Systems Center
15 General Greene Avenue
Natick, Massachusetts 01760-2642

Prepared by

New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Page intentionally left blank

FINDING OF NO SIGNIFICANT IMPACT

Master Plan
U.S. Army Soldier Systems Center
Natick, Massachusetts

The U.S. Army Natick Soldier Systems Center (NSSC) is located in Natick, Massachusetts, approximately 20 miles west of Boston and 30 miles east of Worcester. The installation is located on a peninsula on the eastern shore of the South Basin of Lake Cochituate. The Army built the Natick Laboratory in 1954 and has since used the area for industrial, laboratory, and storage activities for research and development in food science, aero-mechanical, clothing, material, and equipment engineering.

The Real Property Master Plan Environmental Assessment (EA) is a decision-support document and the recommended or proposed actions included in the master plan must be assessed for their environmental effects in accordance with Army Regulation (AR) 210-20, (Real Property Master Plan for Army Installations). An EA is completed to evaluate the potential impacts and cumulative effects of projects being proposed. The EA also provides responsible and timely protection, conservation, and enhancement of environmental and cultural resources and ensures environmental mandates and considerations are incorporated in the planning process.

The Preferred Alternative provides additional administrative, storage, and parking facilities and incorporates all of the known design requirements that were identified during the planning process. It also maintains the installation design vision of a walkable campus environment, provides a consolidated logistics area, structured parking, and recreation and green space areas. This plan is based upon a 20-year planning window but is flexible enough to incorporate the Army's needs to grow and change over time. The Master Plan will be reviewed on an as needed basis but at a minimum of every five years to address necessary design changes.

The Master Plan EA is prepared pursuant to the National Environmental Policy Act (NEPA), Council of Environmental Quality (CEQ) regulations 40 CFR, 1500–1517, and 32 Code of Federal Regulation (CFR) Part 651 (29 March 2002). I find that based on the evaluation of environmental effects discussed in this document, the proposed Master Plan is not a major federal action significantly affecting the quality of the human environment. Under the CEQ NEPA regulations, "NEPA significance" is a concept dependent upon context and intensity (40 C.F.R. § 1508.27). When considering a site-specific action like the Master Plan, significance is measured by the impacts felt at a local scale, as opposed to a regional or nationwide context. The CEQ regulations identify a number of factors to measure the intensity of impact. These factors are discussed below, and none are implicated here to warrant a finding of NEPA significance. A review of these NEPA "intensity" factors reveals that the proposed action will not result in a significant impact, neither beneficial nor detrimental, to the human environment.

Impacts on public health or safety: The implementation of the Master Plan will have no effect on public health and safety.

Unique characteristics: The implementation of the Master Plan will not impact wild and scenic rivers, prime farmlands, cultural and historic resources or waters of the United States.

Controversy: The Master Plan is not controversial.

Uncertain impacts: The impacts of the proposed project are not uncertain, they are readily understood based on past experiences the Army NSSC has had with similar projects.

Precedent for future actions: The Master Plan EA was prepared pursuant to requirements contained in Army Regulation (AR) 210-20 and will not establish a precedent for future actions.

Cumulative significance: As discussed in the EA, to the extent that other actions are expected to be related to the project as proposed, these actions will provide little measurable cumulative impact.

Historic resources: An evaluation of the potential effects of each undertaking on historic properties and their setting will be conducted as specified in a Programmatic Agreement (PA) (Appendix C). The PA provides guidance on how to evaluate and if necessary minimize or mitigate any effects on the Quartermaster Research and Development Center (QRDC Historic District), for each of the undertakings involving any alteration of historic buildings or structures, and any major changes to their site surroundings.

Endangered species: The project will have no known negative impacts on any federal or state threatened or endangered species. The northern long-eared bat (*Myotis septentrionalis*), a federally listed "Threatened" species, is found throughout Massachusetts. Due to the urban/suburban setting and the lack of sizable and suitable forest habitat in the project vicinity, it is unlikely that the northern long-eared bat is present in the project area. A bat survey completed in 2016 did not identify any *Myotis* species. As such, the Master Plan will have no effect on the northern long-eared bat. The U.S. Fish and Wildlife Service responded back to a coordination letter and through verbal communications, stating that a renewed bat survey was not required after 5-years, for projects being completed 2022 and thereafter, so long as the scope of the project did not change.

Potential violation of federal law: This action will not violate federal law.

Based on my review and evaluation of the environmental effects as presented in the Environmental Assessment, I have determined that the Army Natick Soldier Systems Center Master Plan is not a major federal action significantly affecting the quality of the human environment. Therefore, I have determined that this project is exempt from requirements to prepare an Environmental Impact Statement.

Date

ANDREW A. WHITE
LTC, IN
Commanding
Natick Soldier Systems Center

ENVIRONMENTAL ASSESSMENT

For

Master Plan
U.S. Army Soldier Systems Center
Natick, Massachusetts

January 2021

Prepared for.

U.S. Natick Soldier Systems Center
15 General Greene Avenue
Natick, Massachusetts 01760-2764

Prepared by

New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

TABLE OF CONTENT

1.0 INTRODUCTION 4
1.1 Purpose and Need 4
2.0 PROJECT DESCRIPTION 5
2.1 Location and Site History 5
2.2 Installation Mission and Description 6
2.3 Proposed Action (Illustrative Plan – Preferred Alternative) 8
2.4 Alternative Development 11
2.5 Alternatives 13
3.0 ENVIRONMENTAL SETTING 15
3.1 Physical Environment 15
3.2 Water Resources 17
3.3 Biological Resources 21
3.4 Endangered and Threatened Species 23
3.5 Socio-Economic Resources 24
3.6 Historic and Archaeological Resources 25
4.0 ENVIRONMENTAL CONSEQUENCES 28
4.1 Physical Environment 28
4.2 Water Resources 29
4.3 Biological Resources 29
4.4 Endangered and Threatened Species 30
4.5 Socio-Economic Resources 30
4.6 Historic and Archaeological Resources 31
4.7 Noise 31
4.8 Air Quality 31
5.0 MASTER PLAN PHASING PROJECTS 32
5.1 Short-Range Phasing Projects (0-5 Years) 32
5.2 Mid-Range Phasing Projects (6-15 Years) 32
5.3 Long-Range Phasing Projects (16-20 Years) 32
6.0 ENVIRONMENTAL COMPLIANCE OVERVIEW FOR PHASING PROJECTS 35
6.1 National Environmental Policy Act (NEPA) 35

6.2 Construction General Permit (CGP) 38
6.3 Section 404 of the Clean Water Act 38
6.4 Compliance with Remedial Action Land Use Controls 38
6.5 Compliance with State and Local Regulations 39
7.0 OTHER COMPLIANCE REQUIREMENTS 39
7.1 Environmental Justice 39
7.2 Protection of Children 40
7.3 Floodplain Management 40
7.4 Clean Air Act Conformity 40
7.5 Cumulative Impacts 41
8.0 PREPARER 41
9.0 COORDINATION 41
10.0.COMPLIANCE WITH ENVIRONMENTAL FEDERAL STATUTES AND EXECUTIVE ORDERS 43
11.0 REFERENCES CITED 47
12.0 LIST OF ACRONYMS 49

List of Figures

Figure 1: Natick Soldier Systems Center Location Map……5
Figure 2: Natick SSC Existing Conditions……..7
Figure 3: Short and Mid-Range Projects Included in the Preferred ……...9
Figure 4: Mid and Long Range Projects Included in the Preferred Alternative...…….10
Figure 5: Environment Constraints in the Project Area…….12
Figure 6: The Regulating Plan……14
Figure 7: .HTRW Response Action Overview……...18
Figure 8: Wetland Resources on the Natick Soldier Systems Center……21
Figure 9: Winter Hibernacula of the Northern Long-eared Bat Near the Natick Soldier Systems Center…….....23
Figure 10: Short Range Implementation Plan……32
Figure 11: Mid-Range Implementation Plan……..34
Figure 12: Long-Term Implementation Plan……..35

ENVIRONMENTAL ASSESSMENT
Master Plan

1.0 INTRODUCTION

1.1 Purpose and Need

The most recent U.S. Army Natick Soldier Systems Center (NSSC) Real Property Master Plan (Master Plan) was completed in 2018. The Master Plan document serves as a guide for coordination of project development and management of all land and water resources on the Army installation. Master Plan project development provides for adequate Anti-Terrorism-Force Protection (AT/FP) measures, provides modern and efficient facilities to accommodate multiple functions and users, considers functional relationships to adjacent facilities, and provides sustainable design, functional perimeter parking, as well as compatible architectural features. The Master Plan completion process ensures there is a coordinated and well thought out implementation plan to meet the installation functional mission goals and future operational requirements in conjunction with installation resource capabilities and sustainability. The evaluation period of the Master Plan is 20 years. The Master Plan must be reviewed or, at a minimum all components will be reviewed every 5 years [Army Regulation (AR) 210-20 Real Property Master planning of Army Installations, 16 May 2005].

Environmental Assessment (EA) is completed to evaluate the potential impacts and cumulative effects of projects being proposed in the Master Plan. The EA also provides responsible and timely protection, conservation, and enhancement of environmental and cultural resources and ensures environmental mandates and considerations are incorporated in the planning process. The Master Plan EA is prepared pursuant to the National Environmental Policy Act (NEPA), Council of Environmental Quality (CEQ) regulations 40 Code of Federal Regulations (CFR) 1500-1517 and Environmental Analysis of Army Actions (32 CFR 651, 29 March 2002).

The Master Plan is a decision-support document and the recommended actions proposed in the Master Plan must be assessed for their environmental effects in accordance with AR 210-20. This EA addresses the impacts of the Master Planning process. This document also including a discussion of the environmental impact for individual actions proposed in the Master Plan that are known at this time. However, this EA is not meant to be a comprehensive environmental analysis of each individual project. Separate NEPA documents have been completed for actions that have already been constructed or will be written for those projects that will be constructed in the future as needed.

2.0 PROJECT DESCRIPTION

2.1 Location and Site History

The U.S. Army Natick Soldier Systems Center (NSSC) is located in Natick, Middlesex County, Massachusetts, approximately 20 miles west of Boston and 30 miles east of Worcester. The NSSC Installation is located on a peninsula on the eastern shore of the South Basin of Lake Cochituate. The NSSC is bounded on the west, south, and east by Lake Cochituate and bounded on the north by General Greene Avenue (formerly Kansas Street) and residential housing (Figure 1). The NSSC campus is 78 acres in size. The land use in the vicinity of the NSSC installation includes residential, commercial/retail and light industrial facilities.

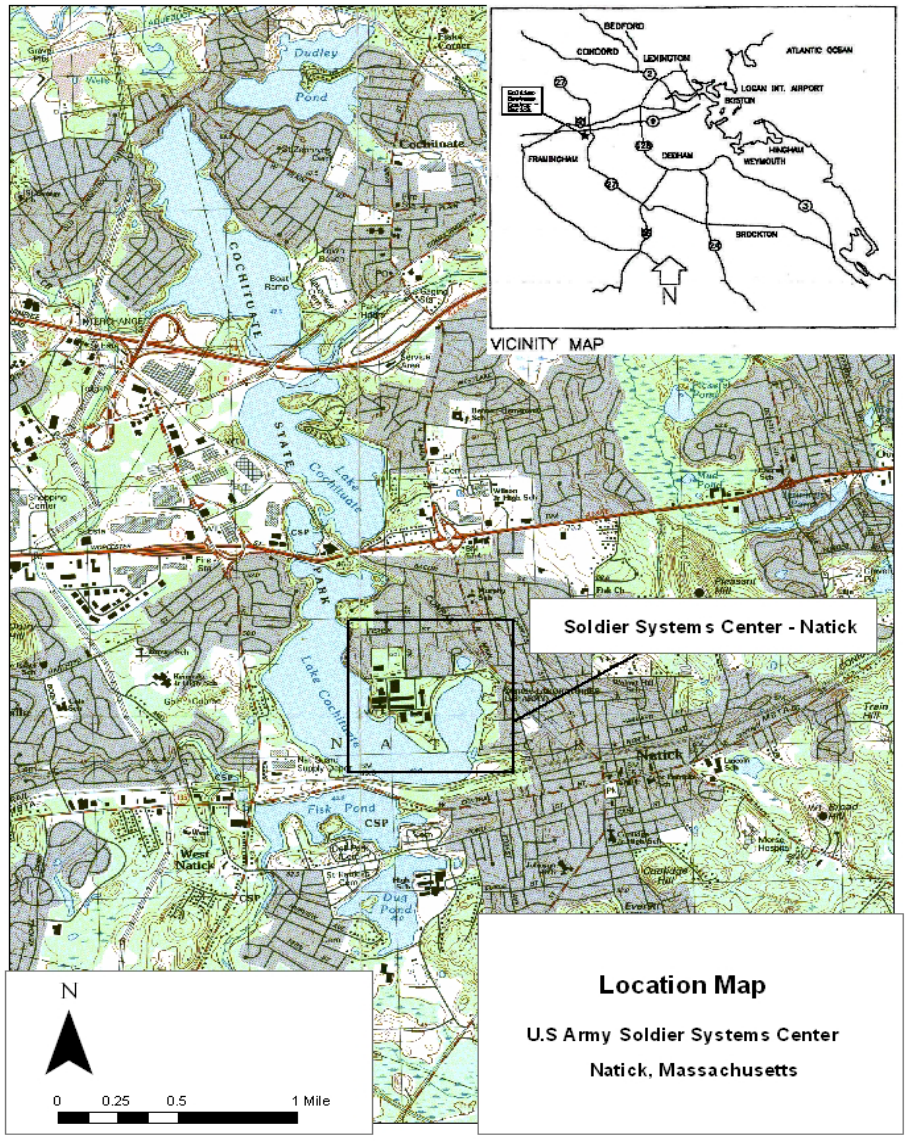


Figure 1: Natick Soldier Systems Center Location Map

The site was purchased by the Army in 1949 from the Metropolitan District Commission. At that time, it was used it primarily as a forested recreational area. The Army built the Natick Laboratory in 1954 and has since used the area for industrial, laboratory, and storage activities for research and development in food science, aero-mechanical, clothing, material, and equipment engineering. NSSC provides dedicated research, development, engineering and acquisition support for the soldier in any and all environments (U.S. Department of Defense 2015).

2.2 Installation Mission and Description

The mission of the NSSC is to conduct research, development, acquisition and sustainment to maximize combat effectiveness and survivability of soldiers. The NSSC accomplishes its mission by providing total life cycle management of soldier and related support systems through centralized development, procurement, integration, and management of equipment, clothing, food and protection for the individual soldier as well as shelters, airdrop, field service and organizational equipment. Natick, as all other Army installations, falls under the Installation Management Command (IMCOM), which provides equitable, effective and efficient management of the installation and serves as NSSC's parent organization.

Facilities at the NSSC include administration, laboratories, maintenance, storage, and housing areas. A self-contained city, NSSC also has a cafeteria, barbershop, credit union, recreation center, and a travel office and other unique facilities which allow the researchers an unparalleled capability to support America's troops. NSSC has the following unique/specialized facilities: Climatic Chamber, Altitude Chamber, Textile Facility, Combat Rations Production and Packaging Facility, Biomechanics Lab, 3-D Anthropometrics Lab, Camouflage Evaluation Facility, Raincourt, Hydro-Environmental Chamber, Shade Room, Fiber Plant, Thermal & Flame Lab, and a Military Operation in Urban Terrain (MOUT) Lab/Facility. The major partners at the Natick SSC include the Natick Soldier Center, United States Army Research Institute of Environmental Medicine (USARIEM), Program Executive Office (PEO)-Combat Service/Combat Service Support, PEO – Soldier, Navy Clothing and Textile Research Facility (NCTRF), Coast Guard Clothing Design and Technical Office and Integrated Logistics Support Center. Currently, the NSSC is divided into three general areas; the industrial area to the north, the housing area to the east and the main research campus to the south (Figure 2). The NSSC has a total workforce of approximately 120 Active Duty, 2,000 federal civilians, and 250 civilian contractors .

The NSSC has the following major partners:

Combat Capabilities Development Command - Soldier Center (DEVCOM SC)

The focus of the center is on research, development, testing and evaluation to maximize the warrior's survivability, sustainability, mobility, combat effectiveness and quality of life.

U.S, Army Research Institute of Environmental Medicine (USARIEM)

The USARIEM is a subordinate laboratory of the U.S. Army Medical Research and Materiel Command. The Institute's mission is to conduct basic and applied research to determine how exposure to extreme heat, severe cold, high terrestrial altitude, occupational tasks,

physical training, deployment operations and nutritional factors affect the health and performance of military personnel.

Figure 2: Natick SSC Existing Conditions

Program Manager Force Sustainment Systems (PM FSS) The mission of PM FSS is to enhance the combat effectiveness and quality of life for the soldier by providing equipment, systems, and technical support to sustain and improve the environments in which they live, train, and operate. Program areas include Field Feeding Equipment, Field Services Equipment, Shelter Systems, Aerial Delivery Systems, and Force Provider.

Program Manager Soldier Clothing and Individual Equipment (PM SCIE) The mission of PM SCIE is to support soldiers in multiple operational environments and improve their survivability, safety, mobility and sustainability by providing safe, durable, and operationally effective organizational clothing and individual equipment. PM SCIE provides technologically advanced tactical and environmental protective clothing, individual chemical protective, gear, load-carry systems, personnel parachutes, and other related air-drop equipment.

Navy Clothing and Textile Research Facility (NCTRF) NCTRF conducts research, development, test and evaluation of Navy uniforms and protective clothing and provides engineering support in clothing, textiles, and related fields associated with service clothing and environmental protective clothing.

Coast Guard Clothing Design and Technical Office This office designs and develops utility and organizational clothing items to better fit the needs of Coast Guard personnel today.

U.S. Army Installation Management Command (IMCOM) The IMCOM provides the facilities, programs, and services to support soldier and family readiness and well-being, lead and workforce development, installation readiness, safety, and security. It maintains the infrastructure and operational support for current and future mission requirements.

2.3 Proposed Action (Illustrative Plan – Preferred Alternative)

The Preferred Alternative, also known as the Illustrative Plan, was developed using a collaborative approach to identify and incorporate stakeholder preferences, identify and consider site limitations and benefits, and provide a community that maximizes mission readiness and environmental stewardship. The Preferred Alternative shown in Figures 3 and 4 incorporates all the known requirements at this time for future program requirements in phased plans. This Illustrative Plan represents only one construction variation, a snapshot in time that meets the planning vision.

The Preferred Alternative features a new parking garage near the main gate, road improvements throughout the installation to improve circulation and safety, a new Access Control Point (ACP) at the main gate, parking lot improvements, including landscaping and curbing, and new housing for active duty military personnel. Existing barracks, administrative, and laboratory buildings (Buildings 3, 4, 5, 30, and 45) will be improved through renovation and expansion, demolition and reconstruction projects, and several buildings have been demolished and replaced (Warehouse Area). A new exercise field will be built at the southern end of the peninsula. New storage buildings and laydown area will be constructed on the current baseball field site. This action is necessary to address storage space deficiencies throughout NSSC.

Preferred Alternative – Illustrative Plan

The Illustrative Plan above demonstrates one possible alternative that incorporates the common themes, planning goals, and objectives that were derived from the workshop.

Figure 3: Short and Mid-Range Projects Included in the Preferred Alternative

Preferred Alternative – Illustrative Plan

The Illustrative Plan above demonstrates one possible alternative that incorporates the common themes, planning goals, and objectives that were derived from the workshop.

Figure 4: Mid and Long Range Projects Included in the Preferred Alternative

The projects in the Preferred Alternative contribute to achieving the goals and objectives developed for NSSC. Relocating the field to the south end of the installation and replacing it with storage laydown addresses deficiencies and ensures adjacencies of similar land uses, which makes NSSC more efficient for the users. By constructing the parking garage near the main gate and relocating a majority of the parking from the center of the installation, NSSC will be more pedestrian-friendly and contribute to creating a walkable campus.

2.4 Alternative Development

2.4.1 Master Plan Alternative Analysis Overview The Master Plan planning process was a collaborative effort between installation personnel and the AECOM Joint Venture (the design team). A workshop was held July 13-17, 2017 with the purpose of crafting a Real Property Planning Vision and a supporting long-range development plan for NSSC. NSSC's Real Property Planning Vision is:

> "NSSC is a safe, secure, and sustainable DOD installation with adaptable infrastructure to attract and retain the best workforce and partnerships to maximize readiness and Warfighter success."

From the planning vision, four real property planning goals were created for NSSC.

Goal 1 Promote a Safe and Secure Installation: Improve physical and technological security and infrastructure to maximize safety and security on post.

Goal 2 Maintain a Sustainable Installation: Provide modern, multi-purpose real property to promote an efficient, user-friendly, and enduring environment.

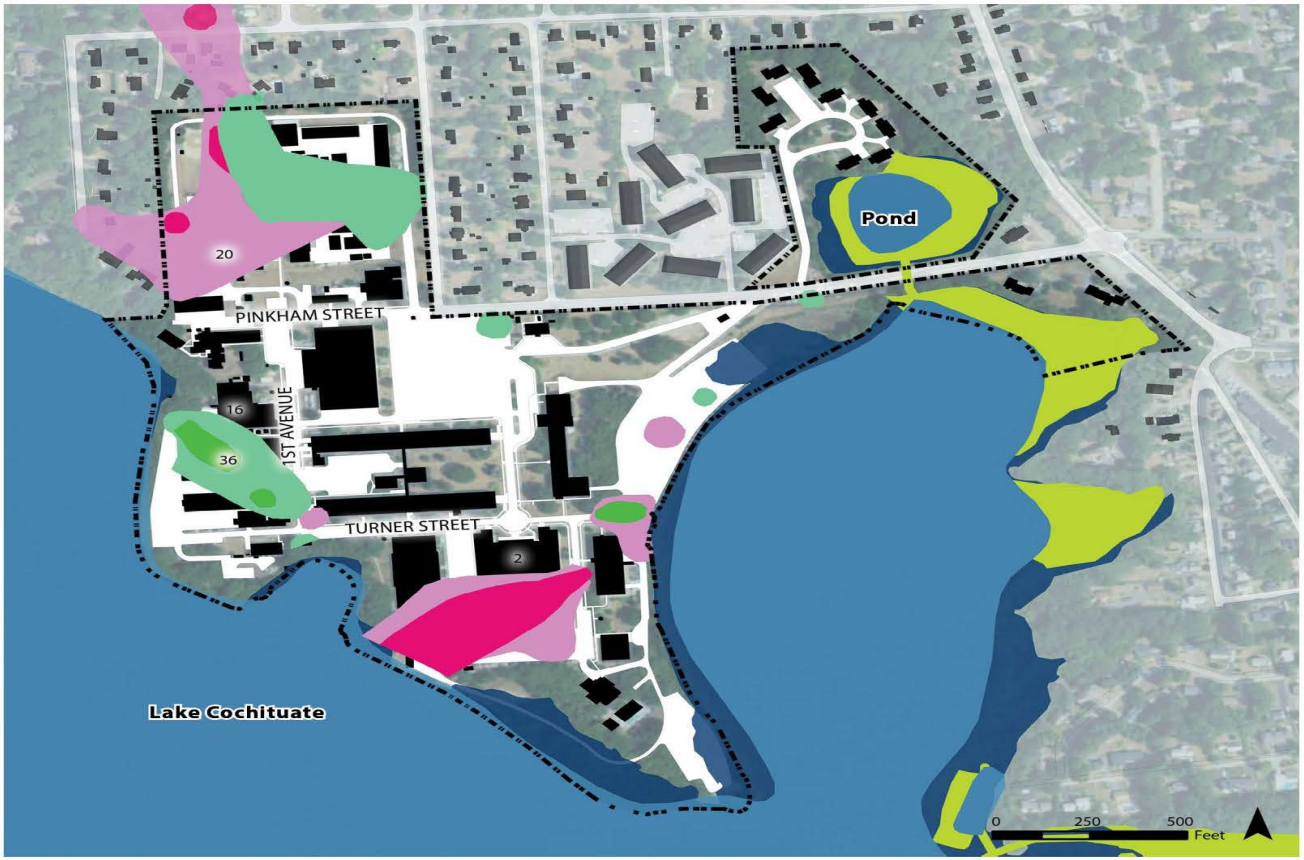
Goal 3 Create Adaptable Infrastructure: Provide flexible, efficient, and scalable infrastructure that responds to ever-changing requirements.

Goal 4 Attract and Retain the Best Workforce and Partnerships: Maximize the appeal of NSSC to attract and retain a high quality workforce and mission partners.

The stakeholders took part in an analysis of the installation's strengths, weaknesses, opportunities, and threats (SWOT). Army planning practices that outlined how to synchronize the planning vision within the Garrison's existing mission and vision were discussed. A field survey was completed to assess the condition of all buildings, streets and parking lots. Teams also noted attractive and unattractive elements (rights and blights) throughout NSSC. These observations provided a basis for planning decisions made later in the workshop. On day two the stakeholders were divided into two teams; each was given a different scenario, representing a range of development intensity. Working within the parameters of their respective scenario, each team developed a separate alternative. Once complete, each team out-briefed their alternative to the group, followed by a brief discussion of the pros and cons of each alternative respective to vision goals.

An analysis of the environmental constrains was also completed. Environmental

Environmental Constraints



Natick Soldier Systems Center
Environmental Constraints

- Installation Boundary
- Existing Buildings
- Pavement
- Floodplain
- Surface Water
- Wetland

PCE Concentration Contour
- 0.3-5 Mg/L
- 25 Mg/L

TCE Concentration Contour
- 0.3-5 Mg/L
- 5-25 Mg/L

Environmental constraints, such as surface water and floodplains, can influence development on an installation. The identification of these sites ensures protection of public health and safety and protects environmental resources from the impacts of development, while still allowing the military to carry out missions important to national defense.

PCE and TCE concentration contours represent current known extents of groundwater contamination. Note that the 2001 Record of Decision between Army and USEPA requires that this master plan "...will restrict the on-facility use of groundwater. If the SSC property is transferred out of federal ownership, the United States will impose appropriate enforceable land-use restrictions through the inclusion of appropriate restrictions (e.g., restrictive covenants and/or easements) in all deeds or other transfer documents relating to that property."

Source: NSSC DPW GIS
The constraint plans are reproductions of the installation's data.

Figure 5: Environment Constraints in the Project Area

constraint (Figure 5), including surface water, flood plains and wetlands, influence the development on the installation. The identification of these sites ensured the protection of public health and safety and protects environmental resources from the impacts of development, while still allowing the military to carry out missions important to national defense.

A Preferred Alternative was then developed based on the analysis. Once the preferred alternative illustrative map was complete, the stakeholders began to divide projects into three categories that identified three phases of development over time, including short, mid, and long-range projects.

A Regulating Plan for the installation was also created to break out the different areas for the garrison. The Regulating Plan is the controlling document and principal tool for implementing the form-based code for NSSC. It provides clear parameters for allowable uses, heights, massing, sitting, and basic building elements. This included the logistics area, south mission area, and the eastern housing area (Figure 6).

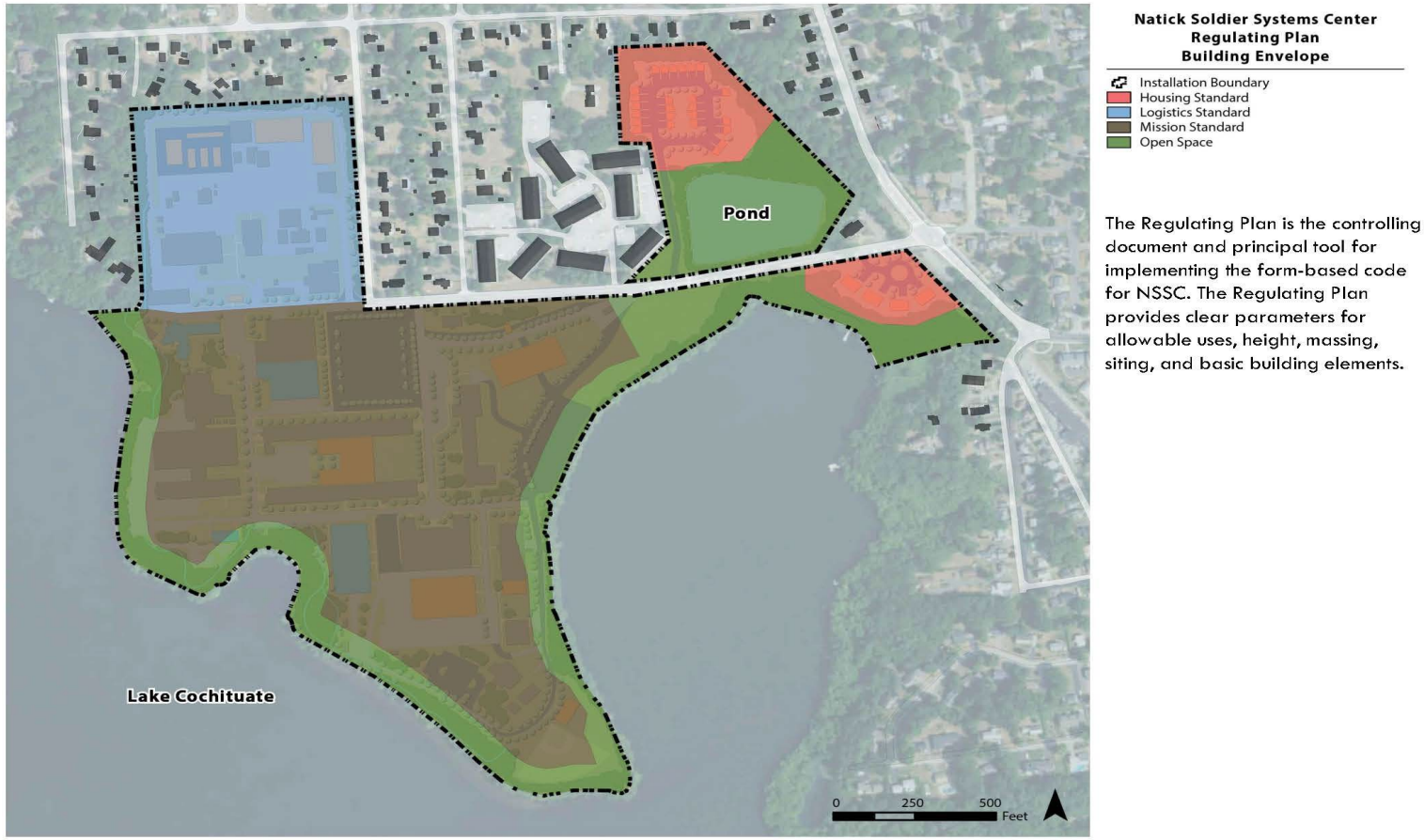
2.4.2 Comparison of Alternatives Workshop stakeholders worked in groups to develop alternatives for future development of NSSC using guidance provided by planning team members, informed by the Garrison vision, goals and objectives. Two groups of stakeholders in teams came up with two alternatives that included very similar themes. These alternatives had many common ideas such as consolidating the industrial area, constructing additional parking, restriping existing parking lots improving access to the facility to meet AT/FP standards, some new construction and demolition. These two alternatives were incorporated into the preferred alternative.

2.5 Alternatives

2.5.1 No Action Alternative The No-Action Alternative serves as a baseline against which the Proposed Action can be evaluated. Evaluation of the No-Action Alternative involves assessing the environmental effects that would result if the proposed action did not take place. In the No Action Alternative, the NSSC will not undertake the Master Planning process and evaluate future installation needs, the functional mission and future operations of the installation would be compromised over time. Although the No Action plan would not affect existing environmental resources, the No Action Alternative would not comply with Army regulations for installation Master Planning and maintaining compliance with new mandates for homeland security.

2.5.2 Preferred Alternative – Illustrative Plan The Preferred Alternative consists of a Master Plan that reflects the most optimal plan for meeting future installation needs in consideration of project resources (such as natural, cultural, and man-made features), while meeting public, social, and economic demands. The projects included in the master plan are divided into three categories, short, mid and long range actions. There are 17 projects that fall into the short-range category. These projects would be implemented within 0 to 5 years (Figure 3). The seven projects that fall into the mid-range would be constructed in 6 to15 year (Figures 3 & 4). While, three projects are included in the 16-20 year long-range implementation plan (Figure 4). The actions featured in the preferred alternative include a new

Regulating Plan



The Regulating Plan is the controlling document and principal tool for implementing the form-based code for NSSC. The Regulating Plan provides clear parameters for allowable uses, height, massing, siting, and basic building elements.

Figure 6: The Regulating Plan

parking garage near the main gate, road improvements throughout the installation to improve circulation and safety, a new ACP at the main gate, parking lot improvements, including landscaping and curbing, and new housing for active duty military personnel. Existing barracks, administrative, and laboratory buildings (Buildings 3, 4, 5, 30, and 45) will be improved through renovation and expansion projects, and several small buildings will be demolished and replaced. A new exercise field will be built at the southern end of the peninsula. New warehosue buildings have been constructed and laydown area being proposed where the current baseball field site is located. This action is necessary to address storage space deficiencies throughout NSSC.

The projects in the Preferred Alternative contribute to achieving the goals and objectives developed for NSSC. Relocating the field to the south end of the installation and replacing it with storage laydown addresses deficiencies and ensures adjacencies of similar land uses, which makes NSSC more efficient for the users. By constructing the parking garage near the main gate and relocating a majority of the parking from the center of the installation, NSSC will be more pedestrian-friendly and contribute to creating a walkable campus.

3.0 ENVIRONMENTAL SETTING

This section describes the environmental conditions at the project site. The environment described in this chapter is the baseline for the consequences that are presented for each resource and each alternative.

3.1 Physical Environment

3.1.1 Geology The NSSC is located within the Appalachian Highlands Geologic Province along the boundary with the Atlantic Plain Geologic Province (USGS 2015a). Bedrock geology consists of Igneous and Metasedimentary rocks from the Paleozoican and Precambrian periods (USGS 2015b). Bedrock outcrops are common in the hilly areas of southern Natick although superficial deposits cover most of Natick's underlying bedrock. The dominant geologic feature of the area is stratified deposits of well compacted glacial till that occurs in the Sudbury River Watershed. These till deposits are the result of glaciers receding from the region.

The Natick area is characterized by low-elevation terrain that is generally less than 200 feet above mean sea level. Elevations in Natick range from 410 feet at Pegan Hill, located in South Natick, to approximately 135 feet in wetland areas along the Charles River and at Lake Cochituate. Noteworthy topographic features of the town, starting from Pegan Hill in South Natick and moving north towards Route 9 include; Carver Hill (300 feet), Broad Hill (312 feet), Train Hill (300 feet), and Pleasant Hill (313 feet). In western Natick, Drury Hill (300 feet) is the dominant slope (Natick Soldier Systems Center 2013).

3.1.2 Soils The Natural Resources Conservation Service Web Soil Survey for Middlesex County, Massachusetts indicates that the NSSC installation is located primarily on urban land. Urban land consists of areas where the soil has been altered or obscured by buildings, industrial areas, paved parking lots, sidewalks, roads and railroad yards (structures cover 75% or more of

the surface area). Urban land areas in Middlesex County have slopes ranging from level to steep (USDA 2015).

A narrow area of Hinckley soil is also located on the NSSC installation along Lake Cochituate to the west. Hinckley soils are deep, excessively drained soils found on glacial outwash plains, kames, eskers, and terraces. The Hinckley soil found on-site is classified as having slopes of 15% to 25%. Typically, these soils are brittle or loose, gravelly and very gravelly sandy loam to loamy coarse sand surface soil and subsoil. In general, Hinckley soils have rapid permeability. The substratum consists of loose stratified sands and gravel at 12 to 30 inches, which have very rapid permeability. This soil type is classified as having severe limitations due to the slope (15% to 25%) and dryness of the soil that makes it generally unsuitable for cultivation (USDA 2015).

There is a narrow area of Deerfield soil located along Lake Cochituate to the south and southeast of the installation. The Deerfield series consists of deep, moderately well drained soils, which are found on glacial outwash plains, terraces, and deltas. The Deerfield soil series at the NSSC has a loamy fine sand-to-sand surface layer with 0 to 3% slopes. The permeability of the soil is rapid to very rapid. The seasonally high water table ranges from 18 to 36 inches.

The Federal Farmland Protection Policy Act (FPPA) of 1981 was enacted to minimize the extent to which federal programs contribute to the irreversible conversion of farmland to nonagricultural uses. The Act applies to farmland with soil types classified as prime, unique, or of statewide or local importance. The Deerfield series is recognized as a "Farmland of State or Local Importance" soil for agricultural purposes (NEsoil.com 2009). These soils do not meet the definition of "Prime Farmland" soils but still may be important for the productions of high yield crops and other agricultural purposes. Irrigation is needed for optimal yield and the seasonal high water table may delay some practices during the spring and limit root growth. It is well suited for woodland productivity.

Soil contamination has been documented with various constituents of concern in site investigations at the NSSC installation over the last few decades. Contaminated soils were excavated and removed at the Building T-25 site in 1997, the former Gym site in the spring/summer of 2002, the Building 62 and 68 site during the fall of 2005, the Boiler Plant (Building 19) site in 1990, 1995, and 2000 and the Building 14 and former Building 13 site in 2007 (U.S. Environmental Protection Agency 2011a). More detailed information about site contamination can be found in Section **3.1.4 Hazardous Materials**.

3.1.3. Climate In general, winters in Middlesex County are cold, and summers are warm. In winter, the average temperature is 28.0 degrees Fahrenheit (F) and the average daily minimum temperature is 18.5 degrees. In summer, the average temperature is 69.1 degrees and the average daily maximum temperature is 80.3 degrees. The winters are moderately cold and wet. The last killing frost generally occurs in early May, and the earliest fall frost usually comes in late September or early October. The summers are typically warm and moist with some periods of high humidity. The total annual precipitation is about 46.9 inches. Of this, about 22.6 inches, or 48 percent, usually falls in April through September. The average seasonal snowfall is about

53.2 inches. The prevailing wind is from the west-northwest with highest average wind speed of 13.9 miles per hour occurring in March. Winter storms moving northeastward along the coast frequently bring rain and thawing and then more snow and cold weather. In summer, sea breezes frequently moderate the temperature, particularly near the coast (USDA 2009).

3.1.4 Hazardous Materials The Final Site Assessment Decision for the NSSC was completed on May 10, 1993. The NSSC was identified as a Federal Superfund Site and placed on the U.S. Environmental Protection Agency's (USEPA) National Priority List for cleanup in 1994. At the present time, the USEPA has determined that potential or actual human exposures are under control at this site under current conditions. The USEPA is still working in cooperation with the NSSC to determine whether contaminated groundwater migration is under control (USEPA 2015a). There are no Land Use Controls specified by the USEPA for activities above contaminated groundwater plumes however, there is a directive that requires that exposure to contaminated groundwater be prevented. A Restoration Advisory Board was established in 1995 to review documents and provide citizen input to the restoration process (Natick Soldier Systems Center 2009).

Soil, groundwater, and surface water are contaminated with various Volatile Organic Compounds (VOCs), naphthalene, Freon 113, and a variety of heavy metals such as barium, mercury, arsenic, copper, chromium, lead, and zinc, which have been found in various investigations (Figure 7). This site is being addressed through several long-term remedial action phases focusing on the cleanup of the T-25 site, Supply Wells (Buildings 63, 2 and 45), the Boiler Plant (Building 19), Buildings 22 and 36, Building 14 and the former Building 13, Buildings 62 and 68 and remaining investigational areas of the site. Elevated levels of polychlorinated biphenyls (PCBs) had also been detected in sediments in Pegan Cove in Lake Cochituate and were likely related to a release from an electrical transformer on the installation in the mid-1980s. Sediments in Pegan Cove were removed in 2010 as required by the Record of Decision (ROD) signed in September 2009. The ROD documents the final decision regarding the cleanup of the site pursuant to the Superfund cleanup process (Figure 7).

3.1.5 Cross Boundary Issues The environmental effect of encroachments on installation boundaries (that may impact the future viability of the installation to perform assigned mission) plus annoyances such as noise and dust need to be considered in the Master Planning process pursuant to AR 200-20 Real Property Master Planning for Army Installations Section 3-2 b (Figure 2). The NSSC is bounded on the east, south, and west by Lake Cochituate, which prevents property encroachment in those areas. Although the northern portion of the NSSC facility is bounded by residential development, a security fence (and earthen berm in some locations) has prevented problems with encroachment in the northern portion of the facility. Cross boundary noise issues have not been problematic at the NSSC installation.

3.2 Water Resources

3.2.1 Surface Water The NSSC Installation is located adjacent to Lake Cochituate, which has a surface area of 625 acres and a depth of 65.6 feet at its deepest point. Cochituate Brook, the outlet for Lake Cochituate, located in Framingham, flows approximately 0.6 miles into the

Figure 7: HTRW Response Action Overview

Sudbury River, which merges with the Assabet River approximately 16 miles downstream to form the Concord River. The Concord River flows into the Merrimack River, which discharges into the Atlantic Ocean approximately 37 miles downstream.

Natick is located in two watersheds, the south being the Charles Watershed (HUC 01090001), which is divided into the Charles River Watershed in the eastern and southern

portions of town, and the SuAsCo River Watershed in the west and north. Natick SSC and the northern part of the town is in the Lake Cochituate Watershed, which is part of the Sudbury Watershed, covers approximately 17 square miles in the towns of Ashland, Framingham, Natick, Sherborn, and Wayland in Middlesex County. Water bodies and associated wetlands cover about 13.5% of the total area of the Town of Natick. Land use within the watershed consists of residential, industrial and urban. Lake Cochituate State Park owns a small margin of land surrounding the majority of the lake.

As stated previously, the NSSC was identified as a Federal Superfund Site and placed on the USEPA National Priority List for cleanup in 1994. As part of the Superfund process, the Army has conducted Tier I, II, and III Ecological Risk Assessments for sediments and surface waters in the Main Outfall area and in Lake Cochituate with oversight from the USEPA, the Massachusetts Department of Environmental Protection (MA DEP), the Massachusetts Department of Conservation and Recreation (MA DCR), and U.S. Fish and Wildlife Service (USFWS). Elevated levels of polychlorinated biphenyls (PCBs) were detected in sediments in Pegan Cove and were likely related to a release from an electrical transformer on the installation in the mid-1980s.

The Army removed contaminated sediments in Pegan Cove during 2010 pursuant to the remedial action plan documented in the ROD signed in September 2009. In addition to actions included in the remedial plan, all active stormwater outfalls were fitted with oil-water separators in the 1990s in order to improve stormwater quality and to minimize future impacts to Lake Cochituate,Atthe present time, there are no known current sources of PCBs in Lake Cochituatefromthe installation (Natick Soldier Systems Center 2009). The Tier I, II and III Ecological Risk Assessments, completed in 2009, indicate that it is safe for adults and children to swim, wade, and boat along the NSSC shoreline; the risks of eating fish caught near the NSSC shoreline are slightly higher than the USEPA acceptable range; and the ecological risks due to contamination from the NSSC-associated sediment are negligible for bird and mammal species (Natick Soldier Systems Center 2010). The Massachusetts Department of Public Health (DPH) instituted a fish consumption restriction for sensitive populations in May of 1996 for Lake Cochituate (MA DPH 2015), which is still in effect.

USEPA Region 1 issued the General Permit for stormwater discharges from Small Municipal Separate Storm Sewer Systems (MS4s) on May 1, 2003. The EPA issued a new MS4 permit in 2016 and February 2019 EPA approved a new SSC NOI.. The permit requires Small MS4s Operators to continue to implement the Stormwater Management Programs required by the previous permit and to incorporate additional applicable requirements.

An USEPA National Pollution Discharge Elimination System (NPDES) permit provides authorization for a municipality or public entity to discharge surface waters through a MS4. Each regulated MS4 entity is required to develop and implement a stormwater management program (SWMP) to reduce the contamination of stormwater runoff and prohibit illicit discharges. The NSSC provides annual reports to the USEPA with regard to its Phase II Small

MS4 General Permit, (Permit Number MAR042008). The current Phase II Small MS4 General Permit expires in 2022.

3.2.2 <u>Groundwater</u> The Town of Natick drinking water supply is derived from aquifers and reservoirs in the surrounding region. The public water supply system consists of two reservoirs, 10 wells, and a distribution of water mains located throughout Natick. The unconsolidated aquifer in Natick is composed of moderately well sorted silty sands, sandy silts, and silty clays that lie beneath poorly, sorted, coarse to fine-grained sands (Natick Soldier Systems Center 2004). The NSSC facility is located approximately 2,500 feet southeast of the town of Natick's Springvale Municipal Water Supply Well Field (Springvale Well Field). The ground water beneath the entire NSSC facility has been designated as a Zone II, or not suitable for human consumption, for the Town of Natick Springvale Municipal Well System (Natick Soldier Systems Center 2007).

As stated previously, the NSSC was added to the USEPA National Priority List in 1994. The Army began in-depth studies of soil and groundwater contamination, which have supported the formulation of clean up strategies for containing contaminant migration. An investigation of the T-25 former bulk hazardous materials storage site began in 1993, which resulted in development of the pump and treat system that is still operational. The Army discontinued the use of on-post water and contracted with the Town of Natick for a source of potable water for the NSSC facility after groundwater investigation, which began in 1997 in the Supply Well Area (Buildings 63, 2 and 45), showed well-water contamination. A ROD was signed in 2001, which included a cooperative agreement between the Army and the Town of Natick for a one-time grant of $3.1 million to the town to construct and operate the municipal Springvale Water Treatment Plant. The 2001 ROD prohibited all on-post use of groundwater that would cause ingestion and/or dermal exposure to contaminated groundwater. This was implemented in part by contracting for potable water from the Town of Natick and also by prohibiting any new projects on post that involve the use of groundwater at the NSSC.

Ground water use restrictions are affected through a municipal ordinance that covers the area where contaminated ground water has been found in areas beyond the NSSC facility boundary. More specifically, a town of Natick Board of Health regulation prohibits both the installation of new private drinking water wells and the use of existing private drinking water wells in certain areas to prevent any access or exposure to contaminated ground water. On February 24, 1999, the town of Natick Board of Health published an amendment to its regulations that state:

Private wells for drinking water shall not be allowed where a public water supply is available in sufficient quantity and pressure so as to meet U.S. and Massachusetts safe drinking water standards.

This restriction was imposed within the area bounded by North Main Street (Route 27), Lake Cochituate, West Central Street (Route 135), and the Massachusetts Turnpike (Route 90). An annual certification is required both by the town and by the installation environmental office

that these restrictions are in place and are being enforced.

During 2007, upgrades were made to the T-25 Area Treatment Plant in Building 94 to accommodate additional contributions from new groundwater extraction wells, which were constructed and tested during 2006/2007 to provide containment of groundwater plumes with tetrachloroethene (PCE) and trichloroethene (TCE) contamination in the Buildings 22 and 36 Area and the Buildings 63, 2 and 45 Area. There is also a small area of TCE groundwater contamination in the Main Outfall area which is also being monitored (Figure 5).

The progress of groundwater cleanup at NSSC is measured through evaluation of the capture zone produced by the extraction wells, and by assessing the results of long term monitoring. Continued monitoring has demonstrated that the groundwater extraction system is working at capturing contaminated groundwater within the T-25 area, Buildings 22 and 36 and Buildings 63, 2 and 45 Areas so groundwater is not being released with contaminants (Natick Soldier Systems Center 2011).

3.2.3. Wetlands Wetlands have many beneficial functions including the protection of public and private water supply, protection of surface and ground waters, nutrient retention, shoreline anchoring and dissipation of erosive forces, pollution prevention, fisheries and wildlife habitat, and aquifer recharge. In addition, wetlands have become increasingly important to those species that are generally considered upland species, such as white-tailed deer, as upland habitat becomes developed in urban/suburban areas.

Wetlands in the vicinity of the NSSC installation are generally associated with surface water bodies (streams, lakes, and ponds) due to urban/suburban development in the Natick area (Figure 8). According to a wetland delineation conducted by the NSSC in 2012, wetlands within installation boundaries include a narrow area along the periphery of Lake Cochituate, and at the housing area in an area surrounding Little Roundy Pond and along the stream that flows into Little Roundy Pond. There are no vernal pools, which are depressions or low areas that contain water for only part of the year that serve as breeding habitat for amphibian species.

3.3 Biological Resources

3.3.1 Vegetation Currently, the broad area that encompasses the NSSC features a combination of northeastern hardwood deciduous and coniferous forest, wooded swamps, and wetland, developed urban land and open fields. Wooded areas are comprised primarily of red oak (*Quercus rubra*), black oak (*Q. velutina*), black cherry (*Prunus serotina*), white pine (*Pinus strobus*), mulberry (*Morus* sp.), black locust (*Robinia pseudoacacia*), red maple (*Acer rubrum*) and silver maple (*Acer saccarinum*), dogwood (*Cornus sp*.), ash (*Fraximus* sp.), gray birch (*Betula populifolia*) and yew (*Taxus* sp.). Herbaceous plants in the area include club moss (*Lycopodium* sp.), common dewberry (*Rubus* sp.), and goldenrod (*Solidago* sp.)

Non-native invasive plants include trees, shrubs, herbs, vines, and aquatic vegetation that have been introduced into a new location by human activity that have the capability to flourish in the non-native environment through the lack of natural controls, the ability for prolific growth or

rapid reproductive capabilities. Some species found on the NSSC installation, such as honeysuckle, have been introduced through a variety of means (e.g. landscaping, land disturbance or erosion control). Invasive plants are among the greatest threats to the integrity of natural areas. They disrupt the natural ecosystem by displacing more diverse and valuable plant communities. In keeping with the NSSC stewardship responsibilities, the landscaping plan for

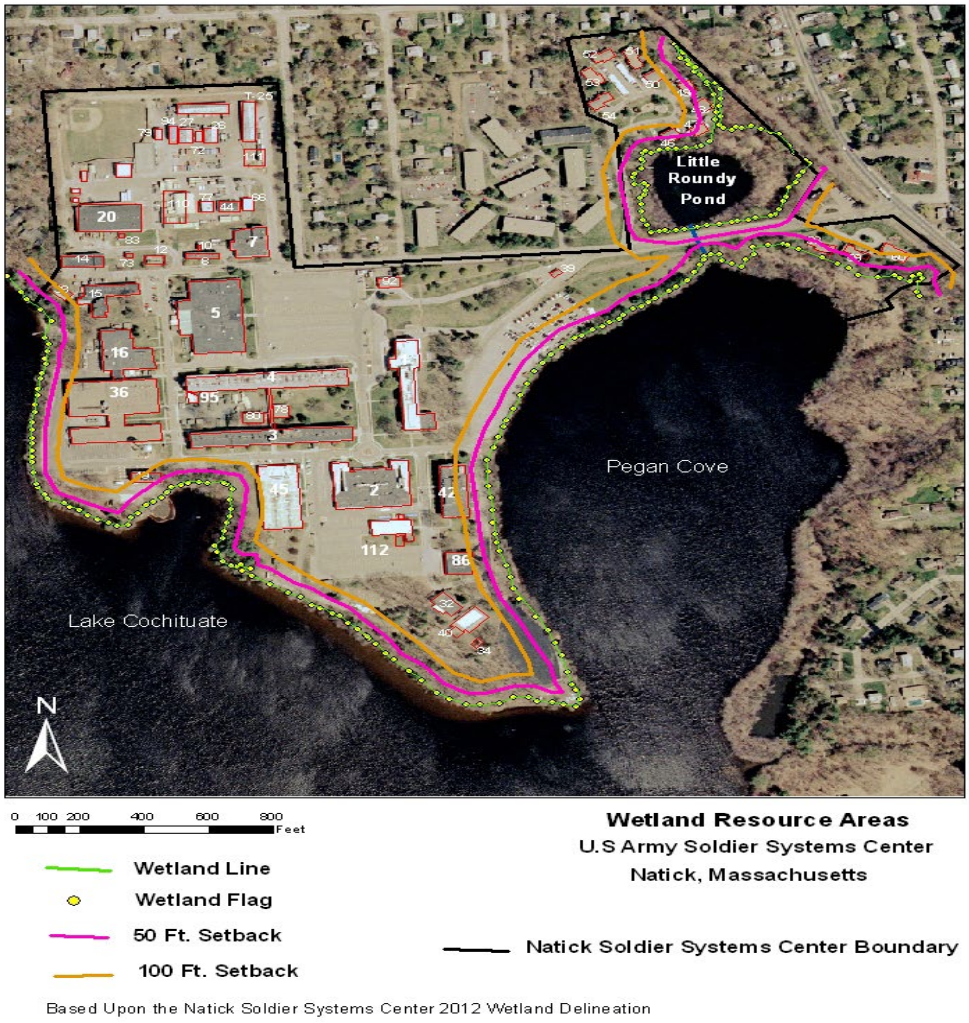


Figure 7 Wetland Resources on the Natick Soldier Systems Center

the NSSC Master Plan will avoid the use of plants that are considered invasive in Massachusetts (Massachusetts Invasive Plant Advisory Group 2005).

The project area has been highly modified by anthropomorphic development, which has allowed a preponderance of non-native invasive species to flourish in the plant community. Non-native invasive species are opportunistic invaders in disturbed habitats, have prolific reproductive capabilities and the ability to out-compete native vegetation and degrade habitat for

wildlife. Invasive plants are among the greatest threats to the integrity of natural areas. They disrupt the natural ecosystem by displacing more diverse and valuable plant communities. Invasive species noted in wetland areas include purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites autralis*) and a large colony of Japanese knotweed (*Fallopia japonica* synonym *Polygonum cuspidatum*), which became established on the exposed sediments associated with the unnamed intermittent stream on the east side of the area around Little Roundy Pond.

3.3.2. Wildlife Mammalian species found in the project area are those tolerant of human disturbance such as white-tailed deer (*Odocoileus virginiana*) raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), gray squirrel (*Sciurus carolinensis*), red fox (*Vulpes vulpes*), opossum (*Didelphis marsupialis*), and moles. Birds such as sparrows, northern cardinal (*Cardinalis cardinalis*), hawks, ducks and geese, herons, and ring-necked pheasant (*Phasianus colchicus*) have been known to inhabit the area. In addition, reptiles and amphibians present include frogs, salamanders, and snakes.

3.3.3. Fisheries Lake Cochituate supports a variety of fresh water species, including carp, bass, perch, bluegill and pickerel. Periodically, the Massachusetts Division of Fisheries and Wildlife stock the lake with trout (MA Department of Fish and Wildlife 2011). The Massachusetts Department of Public Health (DPH) instituted a fish consumption restriction for sensitive populations in May of 1996 for Lake Cochituate (MA DPH 2011), which is still in effect.

3.4 Endangered and Threatened Species

The only threatened and endangered species found at NSSC is the northern long-eared bat (*Myotis septentrionalis*). The NLEB was listed as a federally threatened species by the U.S. Fish and Wildlife Service (April 2, 2015). The bat species is present throughout the state of Massachusetts and impacts to this species must be considered for all projects that take place on the NSSC. This listing took effect on May 4, 2015. Increased mortality of the bat caused by white-nose syndrome, an infectious wildlife disease that poses considerable threats to hibernating bat species, has been the primary contributor to a significant decline in the population of the NLEB since 2007 (USFWS 2015a). The NLEB was once widespread throughout New England, but due to white-nose syndrome, the population in New England has declined by at least 90 percent (USFWS 2015b.)

In addition to listing the northern long-eared bat as a threatened species, the USFWS issued an interim 4(d) rule, which prohibits an incidental take (an action that is not intended to take a species but may still result in incidental harmful effects on the species) with some limited exceptions provided the activities protect known maternity roosts and hibernacula.

Suitable summer habitat for the NLEB consists of a wide variety of forested/wooded habitats where the bats roost, forage, and travel and have also been observed roosting in human-made structures, such as buildings, barns and sheds. Bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located

within 1,000 feet of other forested/wooded habitat. Females give birth between late May to late July and roost in maternity colonies composed of approximately 30 to 60 bats. In winter, the NLEB hibernates in caves and mines, called a hibernacula.

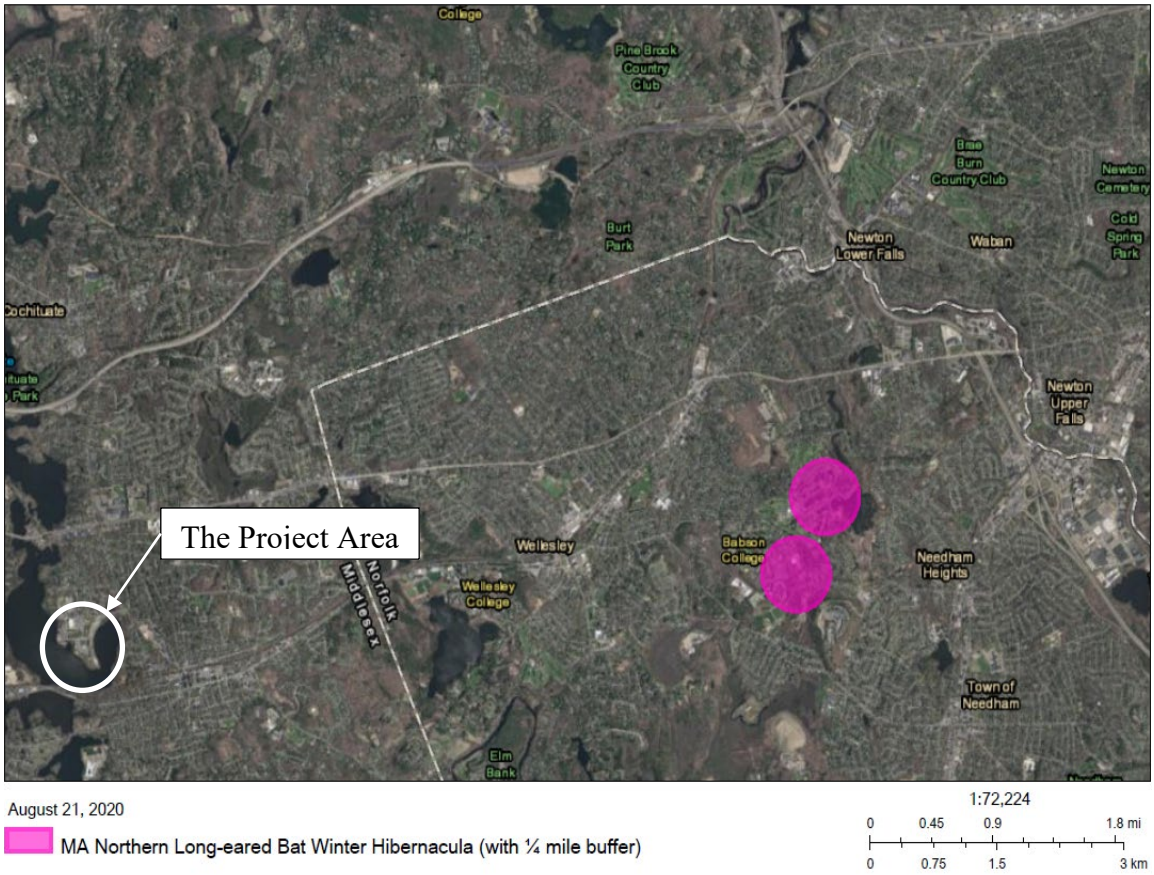


Figure 9: Winter Hibernacula of the Northern Long-eared Bat Near the Natick Soldier Systems Center

A survey for the presence of NLEB was completed during the summer of 2016 at the NSSC facility. No NLEB were identified and no Priority Habitat was identified (Figure 9). No additional NLEB survey requirements.

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) has no listed Priority Habitat or Estimated Habitat within the NSSC facility.

3.5 Socio-Economic Resources

As of 2019, there were 36,050 people and 14,040 households residing in the town of Natick. Of the 14,040 households in Natick, 64.9% were family households (with children) and 35.1 were non-family households. The average household size was 2.48 and the average family size was 3.1. The estimated racial makeup of Natick was 81.8% White, 1.7% African American, 0.1% Native American, 13.2% Asian, 0.0% Pacific Islander, 4.1 % Hispanic or Latino, and 1.8%

from two or more races. Of the town population, 48.8% were male and 51.2% were female; 7.1% were under 5 years, 24.1% were under 19 years, 15.4% were over 65 years (U.S. Census Bureau 2019).

In 2015 inflation-adjusted dollars, the median household income for the town of Natick was $95,328, the median family was $121,712 and the per capita income was $50,239. Approximately 2.1% of families and 4.3% of the population were below the poverty level (U.S. Census Bureau 2015). Natick is largely a middle class suburban town with some areas of semi-rural affluence.

3.6 Historic and Archaeological Resources

Archaeological investigations were completed at the NSSC in 2009 and 2010 (PAL Inc. 2009 and 2010). Three pre-contact sites were identified, but because of their limited information content, none of the sites were determined to be eligible for the National Register of Historic Places, and no further archaeological investigations for the NSSC were recommended

The Quartermaster Research and Development Center (QRDC) Historic District encompasses approximately 30 of the facility's 78 acres. The QRDC has unique historical significance because of its historical associations with the Cold War (1946 – 1989) and as a preserved example of a Cold War military research complex and is eligible for the National Register under Criteria A and C at the national level. Under Criterion A, the QRDC Historic District illustrates the Army's historic and current response to the need to develop measured scientific responses in the form of clothing, food, and equipment for use in fighting global wars. Under Criterion C, the historic district represents a state-of-the-art architectural response to a host of exotic needs such as the testing and disposal of toxic chemicals and the ability to grow fungi, molds, and food bacteria. The Ballinger Company's design for the original buildings within the complex provides especially strong support systems to hold a changing variety of test equipment housed within a community of functional, sleek, and modern buildings of the International Style. The facility retains a high degree of integrity in location, design, setting, materials, feeling, workmanship, and association (Griffin, Nolte and Steinback 2001).

The contributing resources are as follows:

Building 1, the Administration Building (now known as Carney Hall)
Building 2, the Doriot Climatic Chambers
Building 3, the Research Building (now referred to as MacGillivary Hall)
Building 4, the Development Building (now MacArthur Hall)
Building 5, the Technology Engineering Building (now referred to as the Whittlesey Building)
Building 7, the Special Test Building (now referred to as the Prendergast Building or the U.S. Navy Clothing and Textile Research Facility)
Building 8, the Hazardous Research Building (now referred to as the Nee Building)

Building 15, the Enlisted Men's Barracks (now known as the Johnson Barracks and Dining Facility)
Building 16, the Radiation Laboratory (now the Beaudoin Building)
Building 19, the Boiler Pump House
Building 36, the Engineering Laboratory (now called the Department of Defense Combat Feeding Program Building or Bainbridge Building)
Building 42, the U.S. Army Research Institute of Environmental Medicine Laboratory (USARIEM, also known as the Wood Building)
.

Building 6 - the Guard House, has been demolished. The Guard House was a contributing resource within the QRDC Historic District. This property was demolished in 2008, and replaced with a new pre-fabricated structure that met Force Protection/Anti-terrorism requirements. Photographic documentation of the original guard house was completed and accepted by the MA SHPO prior to demolition.
Structure 71, Central Flag Pole was replaced in 2011 with SHPO notification concurrence.

An Integrated Cultural Resource Management Plan (ICRMP) was completed in 2011 (PAL Inc. and USACE). The ICRMP details the coordination and consultation needed to preserve the historic integrity when working in the QRDC Historic District. Photographic documentation was also completed in 2012. This ensures that the existing condition of the QRDC Historic District structures are documented prior to any actions or construction being proposed in the Master Plan.
cooe

As part of the ICRMP and prior Master Plan effort, a Programmatic Agreement was executed between the Natick SSC facility and the MA SHPO in 2013 with a sunset clause of 10 years from execution (Appendix D). Certain activities at the facility are exempt from further MA SHPO review. Other, more substantial activities being considered in the Master Plan will still require review, and perhaps, mitigation as detailed in the Programmatic Agreement. An updated Programmatic Agreement is planned.

3.7 Noise

Noise is defined as unwanted or disturbing sound. Sound becomes unwanted when it either interferes with normal activities such as sleeping, conversation, or disrupts or diminishes one's quality of life. The effects of noise are determined mainly by the duration and level of the noise, but they are also influenced by the frequency. Long-lasting, high-level sounds are the most damaging to hearing and generally the most annoying. High-frequency sounds tend to be more hazardous to hearing and more annoying than low-frequency sounds. The way sounds are distributed in time is also important, in that intermittent sounds are typically less damaging to hearing than continuous sounds, because of the ear's ability to regenerate during the intervening quiet periods.

The decibel (dB) is the unit used to measure the intensity of the sound. The decibels are measured on a logarithmic scale and they correspond to how a human's ear interprets sound

pressure. A "weighted" scale (dBA) is used to account for the frequency range with respect to how people respond to sound. 1The threshold for audible sound is usually within a range of 10-25 dBA with a threshold of pain at the upper scale of audibility at approximately 135 dBA (US EPA, 1981). A small increase in decibels corresponds to a great increase in intensity; therefore, each increase in 10 dBA is perceived as twice loud to the human's ear.

The project site is predominantly suburban, including numerous buildings, and is surrounded by a large lake. The primary sources of noise would include traffic noise and the use of small combustion engines. Noise levels at the project area vary significantly. During the night in a rural area, average ambient noise levels would be approximately 40 dBA, while the noise level resulting from the use of a gas powered lawn mower would be 70 dBA at 100ft. Traffic noise depends on a number of elements, including vehicle speed, vehicle characteristics (engine type, transmission type, tire type), road characteristics (e.g. surface type, grade), traffic volume, wind and the surrounding terrain. Diesel trucks can produce 85 dBA at 50 mph (at 50 ft). However, noise produced by light automobile traffic is approximately 50 dBA (100 ft).

3.8 Air Quality

Air quality is defined by ambient air concentrations of specific pollutants determined by the U.S. Environmental Protection Agency (USEPA) to be of concern related to the health and welfare of the general public and the environment The Clean Air Act (CAA) of 1970, as amended, is the primary federal statute governing air quality. Under authority of the CAA, the USEPA sets the maximum acceptable concentration levels (NAAQS) for specific pollutants that may impact the health and welfare of the public. NAAQS have been established for six principal pollutants: Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone, Particle Pollution including particular matter equal to or less than 2.5 microns in diameter, and particulate matter equal or less than 10 microns in diameter, and Sulfur Dioxide.

The USEPA classifies the air quality in an air quality control region (ACQR) or its subareas. The areas designated for each of the six pollutants under ACQR are as either "attainment," "nonattainment," or "unclassified." Attainment means that the air quality within an area is better than NAAQS; nonattainment indicates that one or more of the six principal pollutants exceed NAAQS; and unclassified means that there is not enough information for the area to be classified. If an area is designated as being in attainment status of all criteria pollutants, a conformity determination is not required.

Per 40 CFR 81.322, Middlesex County, Massachusetts has met the NAAQS air quality standards and is in attainment.

The primary mobile sources of emissions in the vicinity of the project include private, commercial and government vehicles being operated the roadways in and around the project area and small combustion engines (e.g. lawn mowers, leaf blowers) used to maintain the facility.

Natick SSC removed six number six (#6) oil tanks from the building #19 area (boiler plant), and since about 2008 amount of #6 oil consumed much less each year and since 2014 none. Efficient natural gas boilers and furances have been installed throughout the installation,

emissions have reduced substantially.

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter describes the potential environmental consequences that are likely to occur as a result of implementation of the Preferred Alternative, which is the acceptance of the Master Plan. If environmental impacts resulting from the construction of individual projects that are described in the Master Plan are currently know, they are included in this section. However, this assessment is not meant to be a complete analysis of the individual actions and individual environmental assessment will be completed for each project.

4.1 Physical Environment

Deerfield Loamy Sand, 0-3% is present on NSSC property, which is listed a "Farmland of State or Local Importance", soil for agricultural purposes (NEsoil.com 2009). The Farmland Protection Policy Act (FPPA) applies to farmland with soil types listed as prime, unique, or of statewide or local importance, but pursuant to 7 CFR Ch. VI (1-01-03 Editions) Section 658.2 Definitions, (a) "Farmland" does not include land already in or committed to urban development or water storage which is the area covered at NSSC (NRCS 2011). The master plan would not impact prime farm land within the project area.

The NSSC was identified as a Federal Superfund Site and placed on the USEPAs National Priority List for cleanup in 1994. Contaminated soils were excavated and removed at the Building T-25 site in 1997, the former Gym site in the spring/summer of 2002, the Building 62 and 68 site during the fall of 2005, the Boiler Plant (Building 19) site in 1990, 1995, and 2000, and the Building 14 and the former Building 13 site in 2007 (USEPA 2011a). A ROD for No Further Action for the soil at the T-25 area, Building, and at Buildings 13 and 14 was signed in the fall of 2008. Soils excavated at the Buildings 62 and 68 site during the fall of 2005 were included in the former Gym ROD for no further action, which was signed in the fall of 2007. Although there has been closure for many soil contaminated sites at the NSSC, there remains the possibility that new sites could be identified within the 20-year Master Plan planning window. However, the Master Plan is reviewed on an as-needed basis but a minimum of every five years to address necessary design changes, which would include provision to address construction activities that may be located within or adjacent to newly discovered areas of soil contamination.

The No Action Alternative would have no long- or short-term impacts on the physical environment.

The Master Planning process and acceptance of the MP is not expected to have any long or short term adverse impacts on the physical environment. The construction of individual projects included in the MP are also not expected to have any negative impacts on the climate. Individual projects may result in short time impacts to soils, including erosion, disturbance and excavations of soils on the facility. The projects could also result in fugitive dust concerns and increase to impervious surfaces. Construction of proposed projects in the MP could have cross

boundary impacts, such as temporary increase in construction related noise and a reduction in local ambient air quality because of fugitive dust and emissions generated by construction equipment. The extent of dust generated would depend on the level of construction activity and dryness.

As required by law, individual NEPA analyses will be completed prior to the construction of each MP project. Methods and designs to reduce and eliminate adverse impacts will be investigated and implemented when possible. In addition, Best Management Practices (BMPs), such as erosion control, will be used during the construction phase to protect adjacent sensitive habitats and to reduce the impacts on neighborhoods that border the facility. Proper dust suppression techniques would be employed to avoid creating a nuisance for nearby residents during dry and windy weather. Other potential environmental compliance requirements for Master Plan phasing projects are listed in Section **5.0 Master Plan Phasing Projects**.

4.2 Water Resources

The NSSC was added to the USEPA National Priority List in 1994. Groundwater contamination from the T-25 area, the Buildings 63, 2, and 45 area, and the Building 22 site is currently being treated at the T-25 treatment area. Groundwater cleanup action at the NSSC installation is estimated to continue into the 2030s.

The NSSC was required by the 2001 ROD to prohibit all on-post use of groundwater that would cause ingestion and/or dermal exposure to contaminate groundwater. This was implemented in part by contracting for potable water from the town of Natick and also by prohibiting any new projects on post that involves the use of groundwater at the NSSC. However, Master Plan construction activities should be reviewed prior to implementation to avoid impacting wells or appurtenant structures related to groundwater remediation and other environmental compliance requirements as listed in section

The No Action Alternative would have no long- or short-term impacts on the water resources on and surrounding the NSSC.

The Master Planning process and acceptance of the MP is not expected to have any long or short term adverse impacts on the water resources of the NSSC. Additionally, the construction of individual projects included in the MP are not expected to have any negative impacts on the water resources. In addition, BMPs, such as sediment erosion control techniques, should be implemented to prevent runoff into neighboring wetlands and water bodies during construction activities.

4.3 Biological Resources

No negative long-term impacts to biological resources are anticipated as a result of the master planning process or construction of the MP projects. The majority of the NSSC installation has been developed and, Master Plan design plan projects will be built within the existing footprint of developed areas. Habitat resources within the installation, such as the

forested area along Lake Cochituate, are within close proximity to the research that results in a high level of human disturbance. This limits the suitability of that forested area at the NSSC to those common species tolerant to human interaction. During construction activities, birds and small mammals may be temporarily displaced. The use of sediment erosion control techniques, the quick restoration of disturbed areas and the use of non-invasive plants in landscape design will minimize these temporary impacts to biological resources. Once construction activities are completed, wildlife common to the area will reutilize suitable habitat on the NSSC campus. Many of the construction projects are almost completed,for example housing reconstruction and the new S2PRINT,

The No Action Alternative would have no long- or short-term impacts on the biological resources on and surrounding the NSSC.

4.4 Endangered and Threatened Species

No long- or short-term impacts are anticipated due to the master planning process or construction the individual project. A bat survey was performed at the NSSC in the summer of 2016. No *myotis* species were identified as being present in the area. A review of the U.S. Fish and Wildlife IPaC website on August 12, 2020 determined that the development of the MP EA will have no effect to the NLEB. Future actions described in this EA will be assessed.

The No Action Alternative would have no long- or short-term impacts on threatened and endangered species resources on and surrounding the NSSC.

4.5 Socio-Economic Resources

Positive short-term employment benefits would accrue to the construction industry during project execution as a result of the implementing the Preferred Alternative. Although not quantified, a short-term increase in the revenue generated in the surrounding area may result due to contractor employees utilizing local businesses for supplies and personal use. This increase in business is anticipated to last for the duration of construction.

The implementation of the Master Plan is expected to have positive long-term socio-economic benefits for the NSSC workforce. The Master Plan incorporates the desires of the existing workforce for flexible workspace, state-of-the-art technology and equipment, adequate storage space, updated infrastructure, a campus-like setting and community feel. These desires are reflected in the overall Master Plan vision for the NSSC to be a safe, secure, and sustainable DOD installation with adaptable infrastructure to attract and retain the best workforce and partnerships to maximize readiness and Warfighter success.

With regard to regional scale socio-economic effects of the Master Plan; on-going collaboration between the NSSC and regional businesses and organizations should provide positive effects. The U.S. Army Natick Soldier Systems Center Science and Technology Board strives to preserve, promote and enhance the NSSC as one of the country's preeminent military, academic and industrial technology complexes. Some examples of the on-going productive

relationships with the Board member organizations include Natick Soldier Research, Development, and Engineering Center (NSRDEC) association with UMass Lowell where Natick scientists serve as adjunct faculty/visiting scientists, and collaboration, contracts and agreements with the UMass System and Draper Laboratory. Enhanced mission capabilities derived through the Master Plan process would be expected to provide positive socio-economic benefits to the region through employment opportunities and the continued collaboration of the NSSC with regional businesses and organizations.

Not implementing the preferred alternative, or No Action Alternative, would have negative impacts on the NSSC workforce. Without the master planning effort, a comprehensive vision would not be incorporated in the future development of the NSSC.

4.6 Historic and Archaeological Resources

The NSSC Master Plan Preferred Alternative-Illustrative Plan envisions specific activities and undertaking that will be implemented. Some of these projects have the potential to have an effect on historic architectural properties. An evaluation of the effects of each undertaking on historic properties and their setting should be conducted as specified in the existing Programmatic Agreement (Appendix D) between the NSSC and the Massachusetts State Historic Preservation Officer. The Programmatic Agreement provides guidance on how to evaluate and if necessary, avoid, minimize, or mitigate any effects on the QRDC Historic District, for each of the undertakings involving demolition or alteration of historic buildings or structures, and any major changes to their site surroundings.

4.7 Noise

The master planning process and acceptance of the MP would not have any long- or short- term impacts on air quality. The short-term increases in noise would occur during construction activities. MP projects may require demolition and construction that would utilize specific equipment, such as construction, earth moving, or impact equipment. This equipment would be expected to temporarily increase noise levels on the facility. Noise from these activities vary based on the type of equipment used, the area where the action would occur, and the distance from the noise source. Construction noise is expected to be limited to regular working hours (between 7:00 AM and 5:00 PM) on regular workdays (Monday through Friday, excluding federal holidays). There are no anticipated changes in noise levels experienced at the project area as a result of the No-Action Alternative. 4.8 Air Quality

Middlesex County is in attainment for all six criteria air pollutants. The project area is located in an attainment area, therefore a General Conformity determination is not required.

The master planning process would not have any long- or short- term impacts on air quality. The construction of the individual projects may result in short-term localized air quality impacts. All construction vehicles and some equipment would produce emissions that could temporarily affect air quality. Emissions are, however, not anticipated to cause an adverse impact to regional air quality. All equipment and vehicles used during construction would be

maintained in good operating condition so that exhaust emissions are minimized. Dust would be controlled on-site using appropriate dust abatement techniques. Any impact due to construction would end once the road has been completed. As a result, no significant short or long-term impacts to air quality are anticipated.

No anticipated changes to air quality due to the implementation of the No-Action Alternative.

5.0 MASTER PLAN PHASING PROJECTS

The different phases of the Master Plan are addressed on a macro level considering that over time, projects may need to be modified to adjust to changing needs and requirements. Space planning and allocation will be addressed by the NSSC Department of Public Works and the Garrison closer to the construction process.

5.1 Short-Range Phasing Projects (0-5 Years)

There are 17 projects planned during the 0-5 year short-range implementation plan (Figure 10). These include demolishing the ball field, constructing a laydown and storage area, replace buildings T-24 and T-25 (already completed) with new facilities and demolish T-26, T-27 and 76, and construction of a Post Office (already completed), all within the Logistics Area. Old buildings will be demolished and new housing has already been constructed in the designated Housing Area. The old housing has already .been demolished. Improve Service Gate ACP with new barriers and turning radius, renovate the barracks, construct the S2PRINT building (nearly completed, Summer 2022) and relocate the clinic to expansion at Building 42 (already completed) in the Mission Area. Throughout the Mission and Logistics Areas, parking will be reconfigured, roadways will be defined, and vehicular and pedestrian circulation will be improved, as well as improvement to the fitness trail and outdoor lighting. The promotion of the tree succession plan (replace sick/dying trees), and planting of new street trees as well as designating key garden areas will be implemented throughout the facility (USACE 2017). South wing of the Barracks building 15 is scheduled to be reconstructed 2023. An exercise field is schedule to be constructed along south side of facility in 2024, A separate EA will address the proposed ballfield project.

5.2 Mid-Range Phasing Projects (6-15 Years)

There are seven projects planned during the 6-15 year mid-range implementation plan (Figure 11). These are all located in the Mission Area. Mid-range projects include the construction of a lane and shelter for large delivery truck inspection and improving the parking lot to update the entrance to the NSSC. Construction of a mezzanine in a portion of Building 5 and constructing a parking garage for up to 360 spaces. The last major project would involve consolidating recreational uses (baseball field, community center and food/beverage opportunities) at the southern tip of the peninsula.

5.3 Long-Range Phasing Projects (16-20 Years)

There are three projects planned during the 16-20 year long-range implementation plan

Implementation Plan – Short Range

The Illustrative Plan above demonstrates one possible alternative that incorporates the common themes, planning goals, and objectives that were derived from the workshop.

Figure 10: Short Range Implementation Plan

(Figure 12). The proposals are to demolish Buildings 78 and 80 and construct a facility to connect Buildings 3 and 4, demolish N-11 and N-12, and construct a mezzanine floor in Building 45.

6.0 ENVIRONMENTAL COMPLIANCE OVERVIEW FOR PHASING PROJECTS

The following sections provide an overview of potential environmental compliance requirements for individual projects within the three phases of demolition, construction, and improvements utilizing existing information. There is not enough specific project information to determine the compliance requirements of each individual Master Plan project at this time. Individual projects will need to be reviewed and environmental compliance requirements completed prior to implementation. This is a general overview of the current potential environmental compliance requirements. However, this overview should not be considered inclusive of all potential environmental compliance requirements necessary for all Master Plan projects over the current 20 year evaluation period.

6.1 National Environmental Policy Act (NEPA)

NEPA assessments will be or has been completed for the individual projects that are include in the MP. Projects that meet the definition of a Categorical Exclusion (CX) pursuant to 32 CFR 651 Environmental Analysis of Army Actions, Appendix B, Section II, do not require the preparation of a NEPA document. It should be noted however, that projects meeting CX definitions or thresholds must still comply with other applicable laws and regulations, such as the National Historic Preservation Act, Endangered Species Act, etc. A Record of Environmental Consideration (REC) will be completed for CX projects prior to project implementation, if applicable. A REC is a signed statement that briefly documents that an Army action has received environmental review. RECs are prepared for CXs that require them or for projects covered under existing or previous NEPA documentation.

For projects that do not qualify for a CX, the preparation of an Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required. These documents are intended to facilitate agency planning and informed decision-making. An EA helps project proponents and other decision makers understand the potential extent of environmental impact of a proposed action and its alternatives and whether those impacts (or cumulative effects) are significant (32 CFR 651.32). If the EA process results in a Finding of No Significant Impact (FONSI), a FONSI is signed and the project may proceed. If the project evaluation results in a determination of significant impacts, then an EIS must be prepared. It is highly unlikely that an EIS will be required for Master Plan Projects, RECs and/or an EA should suffice. Some projects with known significant environmental impacts or projects of substantial scope may prepare an EIS (and forego the preparation of an EA). It should also be noted that compliance with the regulations for the Department of Army Information Security Program (AR 380-5) and a NEPA analysis will be necessary for proposed actions involving classified information. Although classification does not relieve a proponent of the requirement to assess and document the environmental effects of a proposed action, classified portions will be kept separate and provided to reviewers in accordance with Army Information Security Program regulations.

Figure 11: Mid-Range Implementation Plan

Figure 12: Long-Term Implementation Plan

To date, NEPA analyses have been completed for three short-term projects (Figure 10). An EA was completed for the Army Family Housing in 2018, and for the S2PRINT building also in 2018. A REC was completed for the Post Office also in 2018. For Mid-Range projects (Figure 11), the baseball/athletic field will require an EA, due to the removal of a large number of trees and its location close to the buffer area and floodplain. Construction of the parking garage may also require an EA depending on its size and scope.

6.2 Construction General Permit (CGP)

Some Master Plan projects may require an USEPA Construction General Permit (CGP) prior to commencement of project activities. The USEPA CGP regulates the discharge of stormwater from construction sites (which include soil disturbing activities such as clearing, grading, excavating, stockpiling, etc.) that disturb one or more acres of land, and from smaller sites that are part of a larger, common plan of development. In Massachusetts, in addition t p obtaining a CGP from the USAPE, operators of regulated construction sites are required to develop a stormwater pollution prevention plan; to implement sediment, erosion, and pollution prevention control measures. The USEPA is the responsible authority in the Commonwealth of Massachusetts for issuing the CGP. Some projects may require the operator to comply with the State Water Quality Statutes, Regulations and Policies, State Stormwater Management regulations and other State Environmental Laws, Regulations and Policies (e.g., Massachusetts Wetland Protection Act, the Massachusetts Clean Water Act, the Massachusetts Endangered Species Act, etc.). CGP coverage was obtained for the housing reconstruction project, S2PRINT Project and Oil Water Separator Pavement repair project.

6.3 Section 404 of the Clean Water Act

Section 404 of the Clean Water Act program regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USEPA and the USACE have promulgated a number of regulations to implement the permitting program, which required that wetland impacts be avoided to the maximum extent practicable. Permitting requirements are established in the Massachusetts Programmatic General Permit (MA PGP) issued by USACE New England District Regulatory Division. The effective date of the MA PGP is April 16, 2018 to April 5, 2023. If the USACE prepares the Regulatory compliance documents, Regulatory requirements will be completed without applying for a MA PGP.

6.4 Compliance with Remedial Action Land Use Controls

Land Use Controls (LUCs) are established during the Superfund remedial action design and agreement process to protect the integrity and effectiveness of a selected remedial action remedy. LUCs are remedy-specific and site-specific but generally limit activities in specified areas that would interfere with the operation of the remedy. There are no LUCs in the 2001 ROD for construction activities conducted over groundwater contamination plumes at the NSSC. However, draft guidance was developed in 2002 by the USEPA for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soil. Should a risk assessment indicate that subsurface vapor intrusion might pose an unacceptable risk to future inhabitants of a

proposed residential structure or to workers in a proposed industrial structure planned for immediately above or within 100 feet down gradient of a plume of contaminated groundwater, the Army will evaluate and will discuss with the USEPA the design of the structure to incorporate vapor barriers, in order to eliminate the potential risk. Other considerations during construction activities would be to maintain the integrity of the monitoring wells and appurtenant structures associated with groundwater remediation activities. LUCs may also be required for future activities not anticipated at the current time.

6.5 Compliance with State and Local Regulations

There are no Priority Habitats or Estimated Habitat as designated by the Natural Heritage and Endangered Species Program (NHESP) on the NSSC. The Massachusetts Endangered Species Act (MESA) establishes a comprehensive approach to the protection of Endangered, Threatened and Special Concern species and their habitats in Massachusetts. MESA regulations (321) CMR 10.00) include environmental review provisions for projects located within designated habitat areas in order to avoid a "take" of a State-listed species. For projects of smaller scope, such as work within existing footprints, 321 CMR 10.00 provides exemptions from the established review procedures as specified in Section 10.14. Work outside of the scope of an established exemption will involve project review by the NHESP. The protection of state listed species is recognized as an important component of the implementation of the NSSC Master Plan and as such, as a matter of comity, for any projects located within Priority and Estimated Habitat, the NSSC would coordinate with the NHESP to confirm an exemption or determine best management practices.

The Massachusetts Wetland Protection Act gives town Conservation Commissions the discretionary authority to determine if resource area within its jurisdiction (100 foot wetland buffer zone) are being protected, to regulate work in these areas, and enforce wetlands regulations. The protection of wetland resources is an important component of the NSSC Master Plan and as such, as a matter of comity, the NSSC coordinates with the local Conservation Commission for construction activities within 100 feet of a vegetated wetland. In addition, the Town of Natick has local bylaw regulations, which includes a No Disturbance Zone; which are lands within 25 feet of wetlands, and an additional No Build Zone, which are lands within 15 feet of any No Disturbance Zone. Prior to initiating Phasing, projects are located within the 100 foot jurisdictional boundary should be assessed to determine coordination requirements.

7.0 OTHER COMPLIANCE REQUIREMENTS

7.1 Environmental Justice

Executive Order 12898 directs Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of an agency's programs, policies, and activities on minority populations and low-income populations. The proposed project is not expected to pose impacts upon any minority or low-income neighborhoods adjacent to or in the vicinity of the project pursuant to Executive Order No. 12898. The proposed Master Plan projects will be located on the existing U.S. Army property in

Natick, Massachusetts. Therefore, no disproportionately high and adverse impacts specific to any minority or low-income neighborhood would occur as a result of the proposed project.

7.2 Protection of Children

Executive Order 13045 requires Federal agencies to examine proposed actions to determine whether they will have disproportionately high human health or safety risks on children. During proposed construction, heavy construction equipment and vehicles will be transported to the site. However, the construction area is located on U.S. Army property. Access for the general public will be prohibited during construction to prevent unauthorized personnel from entering the work area (including children). In addition, there will be a temporary increase in truck traffic transporting materials to and from the site. These trucks will be limited to public roadways and the existing project access roads. Increased traffic will be of short duration and temporary. Therefore, the proposed projects in the Master Plan are not expected to cause any disproportionate direct, or indirect or cumulative environmental health or safety risks to children.

7.3 Floodplain Management

Executive Order No. 11988 Floodplain Management requires Federal agencies to evaluate the potential effects of any actions, which may take place within floodplains. The existing Federal Emergency Management Agency (FEMA) Flood Map Service Center (dated 7 July 2014) identifies portions of the southern peninsula as a Special Flood Hazard area (without Base Flood Elevation, Zone A, V 499) (FEMA 2014). A map from the NSSC DPW does show floodplains on the southern portion of the peninsula (Figure 5). The rest of the facility is Zone X, “area of minimal flood hazard”, and Lake Cochituate is categorized as a Zone A, which is defined as “No Flood Base Elevation Determined. In the absence of definitive maps, the best available information may be used to determine the location of the floodplain according to Executive Order No. 11988.

N

Floodplain maps were prepared for the Town of Natick as part of a drainage study in 1979 (Coffin & Richardson 1979, Appendix C). The ponded storage calculations for this study used a water surface elevation of Lake Cochituate of 137.5 feet National Geodetic Vertical Datum of 1929 (NGVD29) which resulted in the calculation of the 100-year floodplain elevation to be 140.0 feet NGVD29. Due to the steep shoreline topography of the NSSC property, the 100-year floodplain is identified as a narrow area along the periphery of the NSSC main campus.Contours for the area on the sourthern portion of the facility appears to indicate project will be at or above the140.00 feet NGVD29. Proposed project is currently scheduled for 2024, during design, survey data will be collected to verify proposed field being 140.00 nGVD29 will be above. elevation 140 NGVD29.

7.4 Clean Air Act Conformity

The Clean Air Act (CAA) requires that a conformity determination is required for all Federal actions in nonattainment and maintenance areas. Middlesex County is in attainment for

all six criteria air pollutants. The project area is located in an attainment area, therefore a General Conformity determination is currently not required. The attainment classification took place 2015.

7.5 Cumulative Impacts

The Council on Environmental Quality (CEQ) definition of cumulative impacts as found in 40 Code of Federal Regulation (CFR) section 1508.7 is as follows: "Cumulative Impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or nonfederal) or persons undertakes such other acts." This Master Plan EA is being completed pursuant to AR 210-20 Real Property Master Planning of Army Installations (16 May 2005). The Master Plan Preferred Alternative-Illustrative Plan provides areas to accommodate new mission growth, provides additional administrative, storage, and parking facilities and incorporates all the known design requirements that were identified at the current time. It also maintains the installation design vision of a walkable campus environment, allows for the consolidation of a logistic area, mission area, and housing area, with perimeter and structured parking, and recreation and green space areas. The demolition and construction necessary to accomplish this goal will be conducted within the same footprints of previous NSSC construction. There will be no increase in personnel as a result of the construction. Construction of the family housing and S2PRINT Building construction began in 2020. The S2PRINT construction has eliminated some parking spaces in the construction zone area just east of building 45.

8.0 PREPARER

U.S. Army Corps of Engineers, New England District

Kathleen A. Atwood	Archaeologist	M.A. Responsible for preparation of NEPA document	33 years

9.0 COORDINATION

Federal

U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency

State

Massachusetts Department of Environmental Protection
Massachusetts Department of Conservation and Recreation
Division of Resource Conservation
Massachusetts Department of Fisheries, Wildlife and Law Enforcement
Division of Fish and Wildlife

Natural Heritage and Endangered Species Program
Massachusetts Historic Preservation Office

Local

Town of Natick – Town Administrator and Selectmen Office
Natick Soldier Systems Center Restoration Advisory Board (RAB)
Cochituate State Park Advisory Committee
Natick Conservation Commission

Tribes

Wampanoag Tribe of Gay Head (Aquinnah)
Mashpee Wampanoag Tribe

A Notice of Availability of the Draft EA will be published in local newspaper (see Appendix B) requesting comments during a 30-day period. Copies of the Draft EA, FONSI a will be available on the U.S. Army Soldier Systems Center webpage, and at the local library. The Notice of Availability of the Draft EA and FONSI and will also be sent to Federal, state and local agencies with interest or jurisdiction with the project.

10.0 COMPLIANCE WITH ENVIRONMENTAL FEDERAL STATUTES AND EXECUTIVE ORDERS

Compliance included in this list refer to the Master Plan and not to the construction of the individual projects included in the Master Plan. Separate environmental analyses will be completed for each project individually.

Federal Statutes

1. Preservation of Historic and Archeological Data Act of 1974, as amended, 16 U.S.C. 469 et seq.

Compliance: The Master Plan project has been coordinated with the State Historic Preservation officer. The Master Plan will have no effect on historic properties.

2. American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Compliance: Must ensure access by Native Americans to sacred sites, possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

3. Clean Air Act (CAA), as amended, 42 U.S.C. 7401 et seq.

Compliance: In accordance with 40 CFR 93.153(b), Middlesex County is in attainment and a General Conformity review of the U.S. Army Natick Soldier Systems Center Master Plan is not required.

4. Clean Water Act of 1977 (Federal Water Pollution Control Act Amendments of 1972) 33 U.S.C. 1251 et seq.

Compliance: Section 404 -Not Applicable; project does not involve the discharge of dredged or fill material into a water of the U.S.

Compliance: The Preferred Alternative will not require a Construction General Permit, because Section 402 of the Clean Water Act is only needed for construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater orstrom water directly from a point source (a pipe, ditch or channel) into a surface water of the United States (a lake, river, and/or ocean).

5. Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 et seq.

Compliance: Not Applicable; project is not located within the State designated coastal zone.

6. Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.

Compliance: Coordination with the U.S. Fish and Wildlife Service (FWS) signifies compliance with this Act. Review of the IPaC website was completed on 12 August 2020. Awaiting any

comments from FWS. The MP EA will have no effect on the NLEB or other threatened and endangered species.

7. Estuarine Areas Act, 16 U.S.C. 1221 et seq.

Compliance: Not applicable; report is not being submitted to Congress.

8. Federal Water Project Recreation Act, as amended, 16 U.S.C. 4601-12 et seq.

Compliance: Public notice of availability to the project report to the National Park Service (NPS) and Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

9. Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 et seq.

Compliance: The Master Plan is exempt because the act exempts projects that are "activities for or in connection with programs primarily for land management and use carried out by Federal agencies with respect to Federal land under their jurisdiction" pursuant to 16 U.S.C. § 662 (h).

10. Land and Water Conservation Fund Act of 1965, as amended, 16 U.S.C. 4601-4 et seq.

Compliance: Public notice of the availability of this report to the National Park Service (NPS) and the Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

11. Marine Protection, Research, and Sanctuaries Act of 1971, as amended, 33 U.S.C. 1401 et seq.

Compliance: Not applicable; the project does not involve the transportation or disposal of dredged material in ocean waters pursuant to Sections 102 and 103 of the Act, respectively.

12. National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq.

Compliance: Coordination with the State Historic Preservation Office signifies compliance.

13. Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3000-3013, 18 U.S.C. 1170

Compliance: Regulations implementing NAGPRA will be followed if discovery of human remains and/or funerary items occur during implementation of this project.

14. National Environmental Policy Act of 1969, as amended, 42 U.S.C 4321 et seq.

Compliance: Preparation of an Environmental Assessment signifies partial compliance with NEPA. Full compliance shall be noted at the time the Finding of No Significant Impact is issued.

15. Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.

Compliance: No requirements for projects or programs authorized by Congress.

16. Watershed Protection and Flood Prevention Act as amended, 16 U.S.C 1001 et seq.

Compliance: The floodplain is limited to a narrow area along the periphery of Little Roundy Pond. The Master Plan will not impact the 100 year floodplain.

17. Wild and Scenic Rivers Act, as amended, 16 U.S.C 1271 et seq.

Compliance: Not applicable.

18. Magnuson-Stevens Act, as amended, 16 U.S.C. 1801 et seq.

Compliance: Not applicable.

Executive Orders

1. Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971

Compliance: Coordination with the State Historic Preservation Officer signifies compliance.

2. Executive Order 11988, Floodplain Management, 24 May 1977 amended by Executive Order 12148, 20 July 1979.

Compliance: Public notice of the availability of this report or public review fulfills the requirements of Executive Order 11988, Section 2(a) (2).

3. Executive Order 11990, Protection of Wetlands, 24 May 1977.

Compliance: Public notice of the availability if this report for public review fulfills the requirements of Executive Order 11990, Section 2 (b).

4. Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 4 January 1979.

Compliance: Not applicable to projects located within the United States.

5. Executive Order 12898, Environmental Justice, 11 February 1994.

Compliance: Not applicable; the project is not expected to have a significant impact on minority or low-income population, or any other population in the United States.

6. Executive 13007, Accommodation of Sacred Sites, 24 May 1996

Compliance: Not applicable unless on Federal lands, then agencies must accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites.

7. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. 21 April, 1997.

Compliance: Not applicable if the Master Plan would not create a disproportionate environmental health or safety risk for children.

8. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000.

Compliance: Consultation with Indian Tribal Governments, where applicable, and consistent with executive memoranda, DoD Indian policy, and USACE Tribal Policy Principles signifies compliance.

Executive Memorandum

Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing NEPA, 11 August 1980.

Compliance: The project area is located within primarily urban complex. No prime farmland soils are impacted and as such, the Master Plan projects are exempt from the Farmland Protection Policy Act.

White House Memorandum, Government-to-Government Relations with Indian Tribes, 29 April 1994.

Compliance: Consultation with Federally Recognized Indian Tribes, where appropriate, signifies compliance.

11.0 REFERENCES CITED

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). 2011. ANSI/ASHRAE/USGBC/IES Standard 189.1-2011. *Standard for the Design of High-Performance Green Buildings*. Atlanta, GA: ASHRAE.

Banister et al., 2011 Archaeological Intensive Survey and Site Examination Investigations, Natick Soldier Systems Center, Five Acres, Natick SSC Site Locus 1 and Locus 3, Natick, Massachusetts.

Coffin & Richardson, Inc. 1979. Town of Natick Floodplain Map. September 1979.

Griffin, Nolte and Steinback. 2001 Architectural Inventory of the Natick Soldier Systems Center, for the U.S. Army Research Institute for Environmental Medicine. Prepared for USARIEM under contract with Panamerican Consultants, Inc., Buffalo, NY.

Massachusetts Department of Conservation and Recreation (MA DCR). 2004. Lake Cochituate Dam Emergency Action Plan, Framingham, Massachusetts. Prepared by Pare Engineering Corporation, Norwood, MA. October 2004.

Massachusetts Department of Public Health (MA DPH). 2015. Public Health Fish Consumption Advisory website. http://db.state.ma.us/dph/fishadvisory/

Massachusetts Department of Fish and Wildlife (MA DFW). 2011. Website for Trout Stocked Waters in 2011. http://www.mass.gov/dfwele/dfw/recreation/fishing/trout/trout_waters_nd.htm

Massachusetts Natural Heritage and Endangered Species Program (NHESP). 2008. Massachusetts Natural Heritage Atlas - 13th Addition. Website accessed 7 November 2019. http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/regulatory-maps-priority-and-estimated-habitats/

Massachusetts Invasive Plant Advisory Group. 2005. The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts. April 1, 2005. http://www.newfs.org/docs/docs/MIPAG040105.pdf

Natick Soldier Systems Center (NSSC). 2004. Real Property Master Plan Long Range Component prepared for SSC, Natick, Massachusetts by R&K Engineering, Inc.

Natick Soldier Systems Center (NSSC). 2009. FY2009 Soldier Systems Center Army Defense Environmental Restoration Program Installation Action Plan. Print 8 October 2009.

Natick Soldier Systems Center (NSSC). 2010a. U.S. Army Natick Soldier Systems Center Newsletter. Sediment Cleanup on Lake Cochituate. June 2010.

Natick Soldier Systems Center (NSSC). 2011. The 2010 Annual Report for the T- 25

Groundwater Treatment System dated May 2011. Prepared by ECC, 33 Boston Post Road West, Marlborough, MA on behalf of the NSSC (unpublished).

Natick Soldier Systems Center (NSSC). 2013. Natick Soldier Systems Master Plan prepared by the US Army Corps of Engineers on behalf of the Soldier Systems Center. A Finding of No Significant Impact was signed by NSSC on January 28, 2014.

Natick Soldier Systems Center (NSSC). 2015. Asbestos Containing Materials (ACM) Building Survey Report was prepared by Mabbett & Associates, Inc. for the Department of the Army New England District Corps of Engineers and the U.S. Army Soldier Systems Center in Natick, Massachusetts.

PAL, Inc. and U.S. Army Corps of Engineers, New England District, 2011. Natick Soldiers Systems Center, Integrated Cultural Resources Management Plan, Natick, Massachusetts, Contract No. W912WJ—09-D-0001-036, with Woods Hole Group, Inc. East Falmouth, MA.

Polyak, K and Webber, L. 2002. Technical Guide for Compliance with the General Conformity Rule. U.S. Army Center for Health Promotion and Preventative Medicine, Directorate of Environmental Health Engineering, Air Quality Surveillance Program.

U.S. Army Corps of Engineers, New England District, 1997, Cultural Resource Management Plan, Natick Soldier Systems Command, Natick, Massachusetts.

U.S. Army Corps of Engineers, New England District, Urban Tree Inventory and Management Plan, U.S. Army Natick Soldier Systems Center Natick, Massachusetts, Draft Final.

U.S. Department of Agriculture (USDA). 2009. Soil Survey of Middlesex County Massachusetts.

U.S. Department of Agriculture (USDA). 2015. Middlesex County Massachusetts Web Soil survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

U.S. Census Bureau. 2015. Fact Sheet for the town of Natick, Middlesex County, Massachusetts. General Population and Housing Characteristics - 2010 Demographic Profile Data http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

U.S. Census Bureau. 2019. Fact Sheet for the town of Natick, Middlesex County, Massachusetts. Selected Economic Characteristics 2009-2015 American Community Survey 5-Year Estimates. http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

U.S. Environmental Protection Agency (USEPA). 2015a. Waste Site Cleanup & Reuse in New England, Natick Laboratory Army Research, Development and Engineering Center. Website accessed.

U.S. Environmental Protection Agency (USEPA) 2015b. Environmental Protection Agency Draft Massachusetts Interstate, Northern Coastal/Merrimack and South Coastal Small MS4 General Permit Website accessed on 2 December 2019. http://www.epa.gov/region1/npdes/stormwater/MS4_MA.html

U.S. Environmental Protection Agency (USEPA) 2015c. Environmental Protection Agency NPDES Permits in New England. 2003 Permit Archives. Website accessed 2 December 2019. http://epa.gov/ne/npdes/stormwater/2003-permit-archives.html

U.S. Fish and Wildlife Service (USFWS). 2015a. Species Profile for Northern long-eared bat (*Myotis septentrionalis*). Environmental Conservation Online System (ECOS). Website accessed November 7, 2019. http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE

U.S. Fish and Wildlife Service (USFWS). 2015b. Letter dated July 7, 2015 providing regional guidance to federal agencies on Endangered Species Act compliance for the northern long-eared bat. U.S. Fish and Wildlife Service, New England Field Office.

U.S. Fish and Wildlife Service (USFWS). 2015c. Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat With 4(d) Rule; Final Rule and Interim Rule. Federal Register 50 CFR Part 17/Vol. 80, No. 63 /Thursday, April 2, 2015 /Rules and Regulations.

U.S. Geological Survey (USGS). 2015a.Geologic Provinces of the United States. Website accessed 2 December 20190. http://geomaps.wr.usgs.gov/parks/province/appalach.html

U.S. Geological Survey (USGS). 2015b. Concord River Drainage Basin. Website accessed 2 December 2019 http://ma.water.usgs.gov/basins/concordgw.htm

12.0 LIST OF ACRONYMS

ACP – Access Control Point
AR – Army Regulation
AT/FP – Antiterrorism Force Protection
CAA – Clean Air Act
CEQ - Council of Environmental Quality
CFR – Code of Federal Regulation
CX – Categorical Exclusion
DPW – Department of Public Works
EA – Environmental Assessment
EIS – Environmental Impact Statement
FEMA – Federal Emergency Management Agency
FONSI – Finding of No Significant Impact
FPPA - Farmland Protection Policy Act
GIS – Geographic Information System

IMA - Installation Management Agency
IMCOM – Installation Management Command
LUC – Limited Use Controls
MA DCR – Massachusetts Department of Conservation and Recreation
MA DEP – Massachusetts Department of Environmental Protection
MA PGP – Massachusetts Programmatic General Permit
MA DPH – Massachusetts Department of Public Health
MESA - Massachusetts Endangered Species Act
MS4 – Municipal Separate Storm Sewer System
NAAQS – National Ambient Air Quality Standards
NEPA - National Environmental Policy Act
NCTRF – Navy clothing and Textile Research Facility
NPDES – National Pollution Discharge Elimination System
NRCS – Natural Resources Conservation Service
NSSC - Natick Soldiers Systems Center
PCBs – Polychlorinated Biphenyls
PEO – Program Executive Office
PM FSS - Program Manager Force Sustainment Systems
PM SCIE - Program Manager Soldier Clothing and Individual Equipment
REC – Record of Consideration
ROD – Record of Decision
RONA – Record of Non-Applicability
RPMP – Real Property Master Plan
SIP – State Implementation Plan
SHPO – State Historic Preservation Officer
SSCOM - U.S. Army Soldier Systems Command
SWOT – Strengths, Weaknesses, Opportunities, Threats
SWMP – Stormwater Management Program
USARIEM - U.S. Army Research Institute of Environmental Medicine
USEPA – U.S. Environmental Protection Agency
USFWS - U.S. Fish and Wildlife Service
VOC – Volatile Organic Compound
WPA – Massachusetts Wetland Protection Act

Appendix A – Coordination

Appendix B - Notice of Availability of the Draft Environmental Assessment

PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT FOR THE U.S. ARMY NATICK SOLDIER SYSTEMS CENTER
REAL PROPERTY MASTER PLAN, NATICK, MASSACHUSETTS

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR 1500), and 32 CFR 651 Environmental Analysis of Army Actions, the U.S. Army conducted an Environmental Assessment (EA) of the potential environmental and socioeconomic effects associated with the Real Property Master Plan located in Natick, Massachusetts.

The Draft EA and Finding of No Significant Impact (FONSI) will undergo a 30-day public comment period, from –?? March 2022 ?? Through ?? April 2022 This is in accordance with requirements specified in 32 CFR Part 651.14 Environmental Analysis of Army Actions. During this period, the public may submit comments on the proposed action and the EA.

The Draft EA and FONSI can be accessed on the U.S. Army Corps of Engineers, New England District website at: BLANK The Draft EA and FONSI are also available on the U.S. Army Natick Soldier Systems Center website at: http://www.natick.army.mil/garrison (note PAO to provide)??/; click on "BLANK".

Printed copies of the Draft EA and FONSI can also be viewed at the following local library:

Morse Institute
14 East Central Street
Natick, MA 01760

Comments on the Draft EA and FONSI should be submitted during the 30-day public comment period via mail, fax, or electronic mail to:

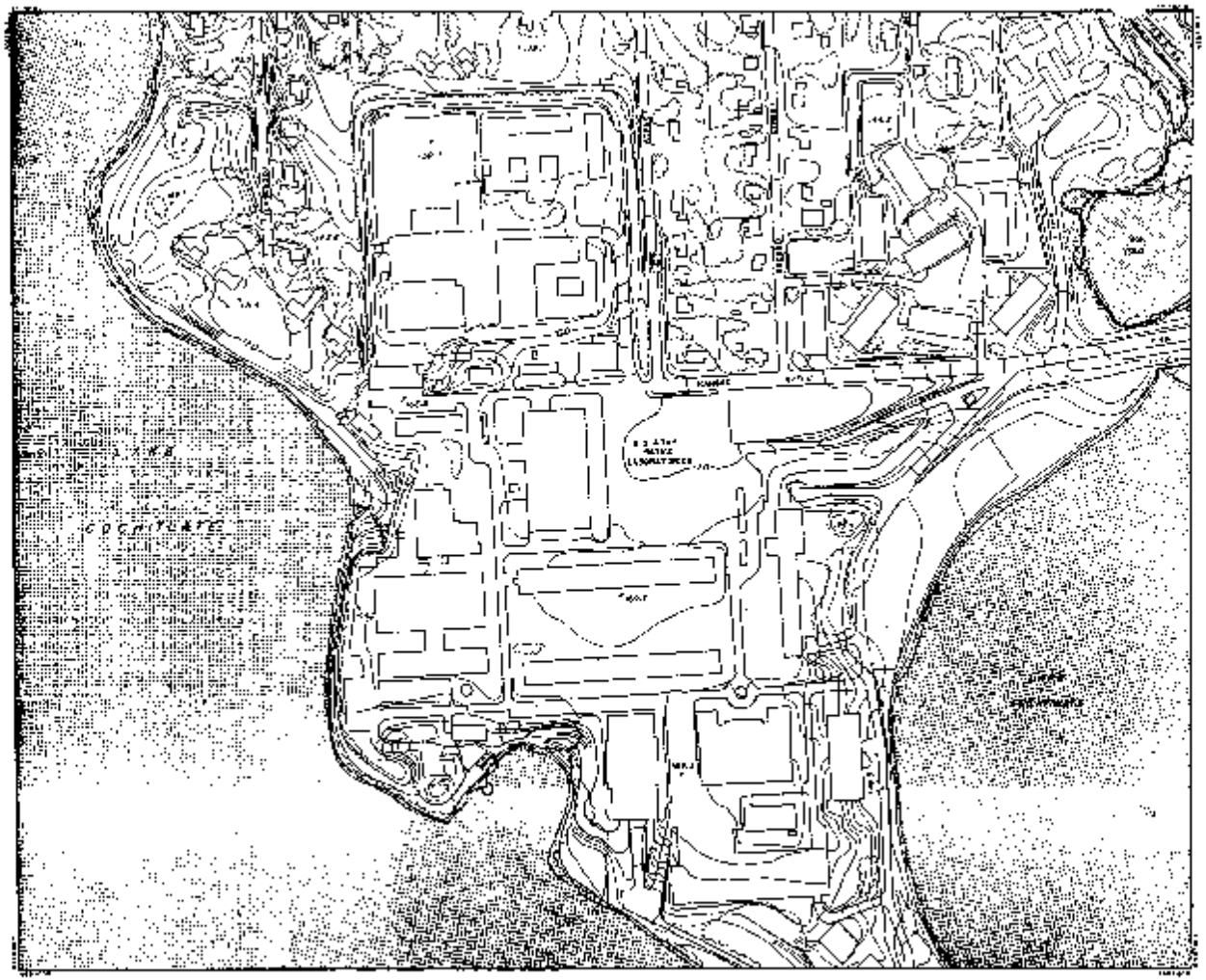
Ms. Hannah Doherty
U.S. Army Corps of Engineers
Evaluation Branch
696 Virginia Road
Concord, Massachusetts 01742-2751
fax: (978) 318-8685
e-mail: Hannah.L.Doherty@usace.army.mil

Legal Notices were placed in the Metrowest Daily News and the Natick Bulletin & Tab on Friday, ?? March 2022

Appendix C – Floodplain Maps

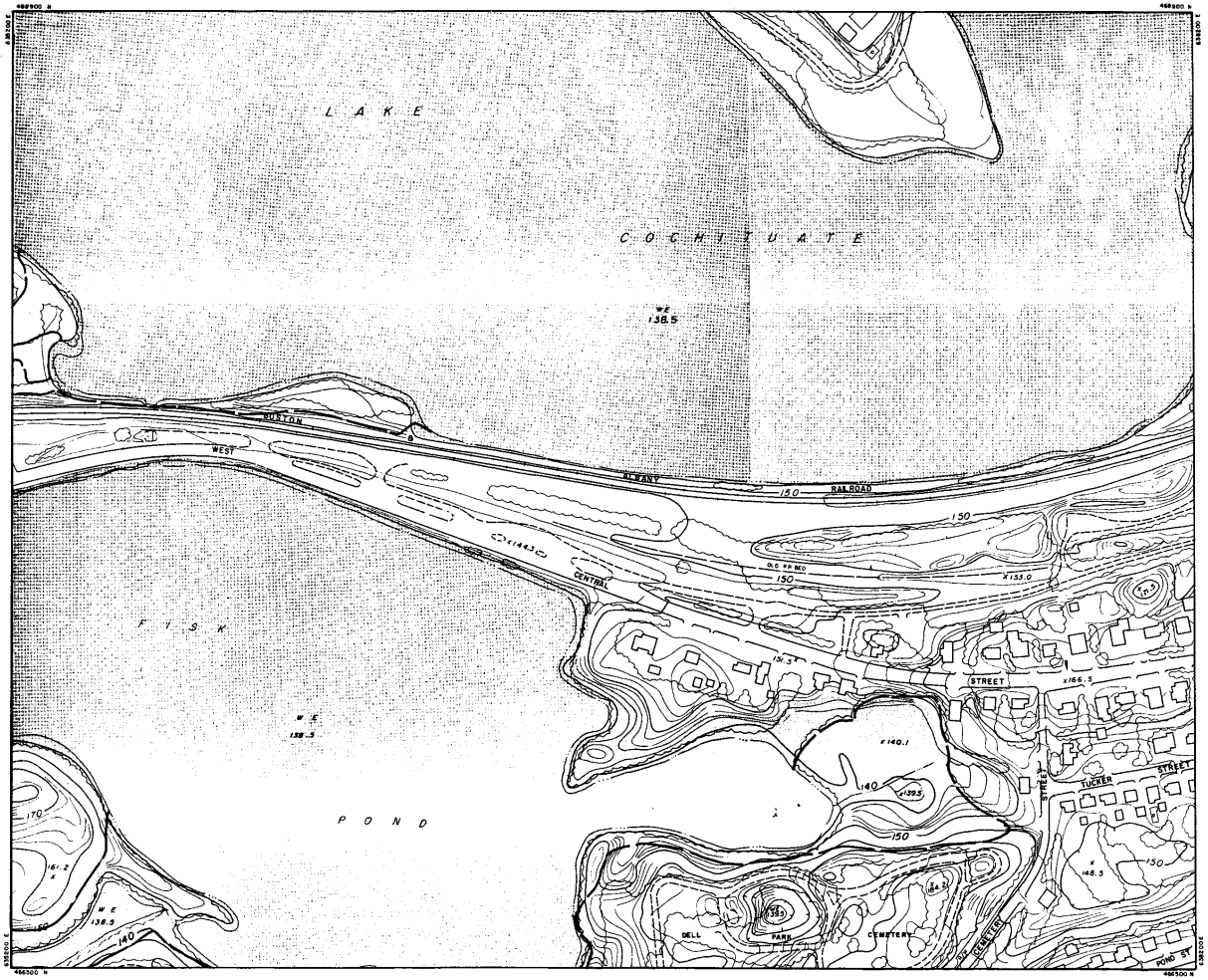
Source: Coffin & Richardson, Inc. Town of Natick Floodplain Map. September 1979.

TOWN OF NATICK, MASSACHUSETTS
TOPOGRAPHIC SURVEY



25	26	27
33	34	35
41	42	43

TOWN OF NATICK, MASSACHUSETTS
TOPOGRAPHIC SURVEY



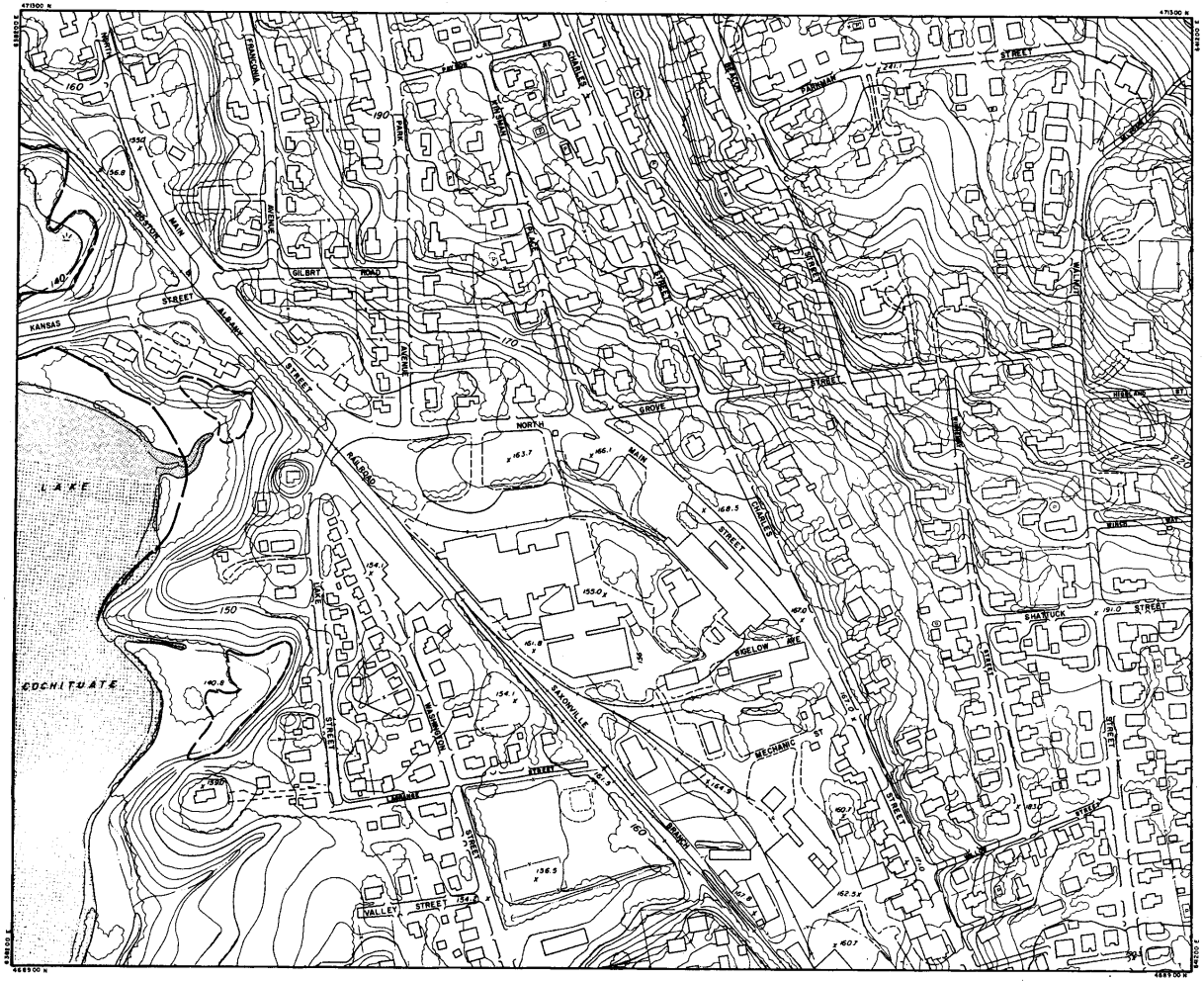
PREPARED UNDER THE DIRECTION OF
THE NATICK DEPT OF PUBLIC WORKS
BY
AVIS AIRMAP, INC

WETLAND DELINEATION
PRIMARY ZONE
TRANSITION ZONE
FLOOD PLAIN

100 0 100 200 300 FEET
2 FOOT CONTOUR INTERVAL

33	34	35
41	42	43
49	50	51

TOWN OF NATICK, MASSACHUSETTS
TOPOGRAPHIC SURVEY



PREPARED UNDER THE DIRECTION OF
THE NATICK DEPT OF PUBLIC WORKS
BY
AVIS AIRMAP, INC.

WETLAND DELINEATION
PRIMARY ZONE
TRANSITION ZONE
FLOOD PLAIN

100 0 100 200 300 FEET
2 FOOT CONTOUR INTERVAL

26	27	28
34	35	36
42	43	45

Appendix D
Programmatic Agreement

MEMORANDUM OF AGREEMENT
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
FOR THE PROTECTION OF HISTORIC PROPERTIES
DURING NORMAL OPERATION AND MAINTENANCE
AT THE U.S. ARMY SOLDIERS SYSTEM CENTER
NATICK, MASSACHUSETTS

WHEREAS, the U.S. Army Soldiers System Center (NSSC) operates and manages its facility in Natick, Massachusetts; and,

WHEREAS, 13 of the original buildings, structures, and objects, at the SSC, are contributing elements of the Natick Research and Development Laboratories, a district that has been determined eligible to the National Register of Historic Places (NR); and,

WHEREAS, the NSSC has determined that proposed and future improvements at the facility meet the definition of undertakings for the purposes of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (P.L. 89-665, 16 U.S.C. 470f), and, therefore the NSSC is responsible for complying with Section 106 for these actions; and,

WHEREAS, the NSSC is responsible for complying with the NHPA including Section 110 that requires federal agencies 1) to establish a program to preserve, protect, identify, evaluate, and nominate historic properties under their jurisdiction or control in consultation with others, and 2) to give full consideration to the preservation of historic properties not under their jurisdiction or control but affected by federal agency undertakings; and,

WHEREAS, the NSSC has determined that operation and maintenance at their facility may have an effect on properties listed on or eligible for listing on the NR, and;

WHEREAS, in compliance with Section 106, the NSSC and Massachusetts State Historic Preservation Officer (MA SHPO), and the NSSC will implement this Memorandum of Agreement (MOA) for certain NSSC operation and management actions as outlined in this MOA, in accordance with 36 CFR Part 800, regulations for implementing Section 106 of the NHPA [16 U.S.C. Part 470(f)]; and,

WHEREAS, archaeological investigations were completed by the NSSC, including an intensive archaeological survey and a site examination at two loci of pre-contact material; and,

WHEREAS, out of four sites, no archaeological sites were determined eligible for the NR. The NSSC consulted with the appropriate Tribal Historic Preservation Officer, and received no response to the NSSC request for comment. The MA SHPO concurred in the results of the archaeological investigations and agreed no further studies needed to be completed at the Natick SSC; and,

WHEREAS, the NSSC completed photographic and written recordation of the Natick Research and Development Laboratories Historic District in accordance with the standards and regulations outlined in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation [48 FR 190 (1983)], and 950 CMR 70, prior to new construction being proposed by the installation's new Master Plan. The MA SHPO accepted the archival set of photographs as part of this documentation; with the final paper documentation sent on July 18, 2012; and,

WHEREAS, the NSSC completed an Integrated Cultural Resource Management Plan (ICRMP), in conjunction with the Master Plan, that will ensure that Section 106 and Section 110 compliance is completed at the facility. No response was received from the THPO. The MA SHPO concurred in the recommendations in the ICRMP. The final ICRMP was sent on July 18, 2012

NOW, THEREFORE, the NSSC, the MA SHPO, and Council agree that the operation and maintenance of the NSSC facility shall be administered in accordance with the following stipulations to avoid, minimize, or mitigate adverse effects and satisfy NSSC responsibilities under Section 106 for those actions outlined within this MOA.

STIPULATIONS

The NSSC shall ensure that the following measures are carried out in consultation with the MA SHPO.

A. EXEMPT AND NON-REPORTING UNDERTAKINGS

1. The NSSC, in consultation with the MA SHPO agree that the following types of undertakings and actions will be exempted from review and consultation under this MOA because they have little or no potential to affect historic properties. These undertakings must also involve minor, repetitive maintenance that will not alter the exterior appearance or setting of contributing, NR eligible structures.

a. Staining/painting/repair of existing concrete buildings

1. Removal of all existing paint or stain coatings from masonry surfaces and masonry joints, the repair and/or replacement of damaged masonry units and masonry surfaces, removal of old joint sealant, caulking, and backer rod at building expansion joints, around all window and door openings, and at all other building façades.
2. Application of clear primer and pigmented topcoat sealers to masonry façade, including joints. Primers and sealers will be in colors used in the past for maintenance of concrete. Paint on other than masonry, such as window or door frames will utilize colors similar to those used in the past at the NSSC.

WHEREAS, the NSSC completed photographic and written recordation of the Natick Research and Development Laboratories Historic District in accordance with the standards and regulations outlined in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation [48 FR 190 (1983)], and 950 CMR 70, prior to new construction being proposed by the installation's new Master Plan. The MA SHPO accepted the archival set of photographs as part of this documentation; with the final paper documentation sent on July 18, 2012; and,

WHEREAS, the NSSC completed an Integrated Cultural Resource Management Plan (ICRMP), in conjunction with the Master Plan, that will ensure that Section 106 and Section 110 compliance is completed at the facility. No response was received from the THPO. The MA SHPO concurred in the recommendations in the ICRMP. The final ICRMP was sent on July 18, 2012

NOW, THEREFORE, the NSSC, the MA SHPO, and Council agree that the operation and maintenance of the NSSC facility shall be administered in accordance with the following stipulations to avoid, minimize, or mitigate adverse effects and satisfy NSSC responsibilities under Section 106 for those actions outlined within this MOA.

STIPULATIONS

The NSSC shall ensure that the following measures are carried out in consultation with the MA SHPO.

A. EXEMPT AND NON-REPORTING UNDERTAKINGS

1. The NSSC, in consultation with the MA SHPO agree that the following types of undertakings and actions will be exempted from review and consultation under this MOA because they have little or no potential to affect historic properties. These undertakings must also involve minor, repetitive maintenance that will not alter the exterior appearance or setting of contributing, NR eligible structures.

a. Staining/painting/repair of existing concrete buildings

1. Removal of all existing paint or stain coatings from masonry surfaces and masonry joints, the repair and/or replacement of damaged masonry units and masonry surfaces, removal of old joint sealant, caulking, and backer rod at building expansion joints, around all window and door openings, and at all other building façades.
2. Application of clear primer and pigmented topcoat sealers to masonry façade, including joints. Primers and sealers will be in colors used in the past for maintenance of concrete. Paint on other than masonry, such as window or door frames will utilize colors similar to those used in the past at the NSSC.

3. Repair of existing masonry surfaces will include crack repair, general surface repair, and removal and replacement of individual concrete masonry units.
4. These activities will follow plans and specifications which were previously reviewed and approved by the MA SHPO.

b. Window and door replacement within NR eligible historic district

1. Window replacement would only be exempt if the replacement involves glazing similar to the original windows and takes place within existing fenestration. The original windows at the NSSC consisted of steel frames, with multiple projected sashes within each frame. Many of these windows were replaced in the 1970s, and involved removing the original steel frames, and replacing them with aluminum frames, many of which were not fit to the original fenestration.
2. Window replacement must comply with the minimum window requirements in the Unified Facilities Criteria (UFC) 4-010-01, *DOD Minimum Antiterrorism Standards for Buildings,* dated October 8, 2003, and updated January 2007. The UFC 4-010-1 institutes the Antiterrorism/Force Protection (AT/FP) requirements that DOD is committed to effectively minimize loss of life from a terrorist attack. The glazing will mask construction elements needed for AT/FP, and will evoke the original 1954-55 design.
3. Window openings with aluminum louvers, will be replaced to louvers similar in appear but that will meet blast requirements.
4. Curtain walls will be replaced within current fenestration limits but will use a combination of spandrel glass and tinted, glazed, double-pane windows. Fenestration will not change, but windows will be more energy efficient and will meet AT/FP requirements.
5. Current main entry doors are aluminum framed with glass panels. Service doors are generally hollow core steel in steel frames. Door replacement will only be exempt if the doors are similar in size and appearance to the original doors on the structure.
6. If a design change in the doors is anticipated, the NSSC will consult with the MA SHPO, to determine the effects to historic properties.
7. These activities will follow plans and specifications which were previously reviewed and approved by the MA SHPO.

c. Exterior stair replacement

1. All concrete stairs and landings that are original to the facility will be replaced as needed due to safety and maintenance issues. The stairs will be replaced in-kind using granite rather than concrete for durability. The granite will be similar in appearance to the existing concrete but will last longer for safety reasons.

2. These activities will follow plans and specifications which were previously reviewed and approved by the MA SHPO.

d. Exterior canopy replacement

1. Most buildings that are contributing structures to the NR eligible historic district have a canopy overhang at building entrances. Replacement of overhang canopies must not affect the setting and appearance of the original structure in order to be considered an exempt undertaking.
2. Canopies are constructed of concrete with concrete ribbing covered with concrete panels. If concrete paneling cracks and becomes a safety hazard, the panels will be replaced with aluminum skin "Granite Stone" insulated panels. Any panels replaced over curtain walls will match the existing mullion layout of the glass curtain.
3. The "Granite Stone" panels must closely resemble the original concrete.
4. These activities will follow plans and specifications which were previously reviewed and approved by the MA SHPO.

B. FUTURE PROJECTS PLANNED THAT WILL TRIGGER A REVIEW WITH MA SHPO

1. The NSSC has several known future projects that are anticipated to require extensive consultation with the MA SHPO. The timeline for these projects are not yet known. These include: 1) connecting wings between Building 3 and Building 4; 2) exterior façade upgrades (excluding exempt undertakings such as staining, and window and door replacements); 3) Building 32 (Recreation Center) façade upgrade;) Building 1 Elevator.

2. The NSSC shall ensure that the project designs for new construction are compatible with the historic and architectural qualities of the Natick Research and Development Laboratories Historic District in terms of scale, massing, color, and materials, and is responsive to the recommended approaches to new construction set forth in the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (U.S. Department of the Interior, National Park Service, 1983), and that the design and specifications for the projects are developed in consultation with the MA SHPO and submitted to the MA SHPO for approval.

3. These projects will be coordinated following the steps laid out in the final ICRMP to avoid, minimize, or mitigate adverse effects to the Natick Research and Development Laboratories Historic District.

C. REPORTING

1. The NSSC shall ensure that reports on all activities carried out pursuant to this MOA are provided to the MA SHPO, and upon request, to other interested parties.

D. UNIDENTIFIED HISTORIC PROPERTIES

1. The NSSC will ensure that if additional previously unidentified historic properties are discovered which may be affected by any undertaking, they will notify the MA SHPO. The NSSC and the MA SHPO will apply the National Register criteria of eligibility and consult pursuant to 36 CFR 800.4.

E. ANNUAL REVIEW

1. The parties to this MOA shall consult annually to review implementation of the terms of this Agreement and determine whether revisions are needed. If revisions are needed, the NSSC and MA SHPO will consult in accordance with 36 CFR Part 800 to make such revisions.

F. DISPUTE RESOLUTION

1. Should the MA SHPO object within thirty (30) days to any actions proposed or carried out pursuant to this agreement, the NSSC shall consult with the MA SHPO to resolve the objection. If the NSSC determines that the objection cannot be resolved, the NSSC shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

a. provide the NSSC with recommendations which the they will take into account in reaching a final decision regarding the dispute; or

b. notify the NSSC that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any recommendations or comment provided by the Council will be understood to pertain only to the subject of the dispute; the SSCs responsibility to carry out all actions under the Memorandum of Agreement that are not subjects of the dispute will remain unchanged.

2. At any time during the implementation of the measures stipulated in this agreement, should any objection regarding the subject matter of this agreement be raised by a member of the public, the NSSC shall take the objection into account and consult as needed with the objecting party, the MA SHPO, or the Council to resolve the objection.

G. SUNSET CLAUSE

1. This MOA will be in effect for ten (10) years after signing, unless the SSC and the MA SHPO agree to terminate or extend the Agreement beyond that date.

Execution of this Memorandum of Agreement by the NSSC and the MA SHPO, its subsequent filing with the Council, and the implementation of its terms, shall establish that the NSSC has taken into account the effects of their undertakings on historic properties.

DEPARTMENT OF THE ARMY, SOLDIERS SYSTEM CENTER

By: _____ Date: 1/11/13

FRANK K. SOBCHAK
Lieutenant Colonel
Garrison Commander

MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER

By: Brona Simon Date: December 13, 2012

BRONA SIMON
Executive Director
State Historic Preservation Officer