

**DRAFT**  
**ENVIRONMENTAL ASSESSMENT**  
**AND**  
**FINDING OF NO SIGNIFICANT IMPACT**

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

**March 2012**

*Prepared for*  
**U. S. Army Soldier Systems Center, Natick, Massachusetts**

*Prepared by*  
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**DRAFT**  
**FINDING OF NO SIGNIFICANT IMPACT**

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

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

The Preferred Alternative provides areas to accommodate new mission growth, provides additional administrative, storage, and parking facilities and incorporates all the known design requirements that were identified during the planning process. It also maintains the installation design vision of a walkable campus environment, allows for the consolidation of housing onto the installation, provides a consolidated industrial area, perimeter and 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 plan will be reviewed on an as-needed basis but at a minimum of every 5 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 Policy and Procedures for Implementing NEPA Army Regulation (AR) 200-2 (23 December 1988) 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 is not a major federal action significantly affecting the quality of the human environment. Under the Council on Environmental Quality (“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 would not result in a significant impact- neither beneficial nor detrimental--to the human environment.

Impacts on public health or safety: The project is expected to have no effect on public health and safety. During the construction phase of the proposed project, heavy construction equipment and vehicles will be transported to the site. However, the construction area is located on U.S. Army property which limits access for the general public.

Unique characteristics: The NSSC Master does not impact wild and scenic rivers, prime farmlands or waters of the United States. Impacts to cultural and historic resources have been considered in the Master Plan EA (see Historic Resources section below).

Controversy: The proposed project 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 the requirements contained in Army Regulations 210-20 (Real Property Master Planning for Army Installations) 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 project as proposed, these actions will provide little measurable cumulative impact.

Historic resources: The NSSC Master Plan Consolidated Area Development Plan (Master Plan ADP), Alternative Six, envisions specific activities and undertaking that will be implemented in five phases, including demolition, new construction, and infrastructure and site/landscape modifications. Several of the proposed individual undertakings that the NSSC facility has programmed under the Master Plan ADP during the five year planning period of the Integrated Cultural Resource Management Plan (PAL, Inc. and U.S. Army Corps of Engineers, New England District 2011) 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 a Programmatic Agreement that will be executed at a minimum between the Natick Soldier Systems Center facility, the MA SHPO, and, possibly the Advisory Council on Historic Preservation. The Programmatic Agreement will provide guidance on how to evaluate and if necessary 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.

Endangered species: The project will have no known positive or negative impacts on any Federal threatened or endangered species. The Eastern Pondmussle (*Ligumia nasuta*), a species of “Special Concern” in Massachusetts has been found in the vicinity of the NSSC. No impacts, such as changes to flow, habitat encroachment and habitat degradation through the removal of lakeside vegetation are proposed. The use of proper sediment erosion control will be used during construction to prevent changes in water quality.

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.

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Date

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BG John J. McGuiness  
Senior Commander,  
US Army Natick Soldier Systems Center

# **DRAFT ENVIRONMENTAL ASSESSMENT**

**For**

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

**March 2012**

*Prepared by*  
**New England District  
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696 Virginia Road  
Concord, Massachusetts 01742-2751**

*Prepared for*  
**BG John J. McGuiness  
Senior Commander,  
US Army Natick Soldier Systems Center**

## TABLE OF CONTENTS

	Page
<b>ENVIRONMENTAL ASSESSMENT</b>	
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Purpose and Need.....	1
<b>2.0 PROJECT DESCRIPTION.....</b>	<b>1</b>
2.1 Location and Site History.....	1
2.2 Installation Mission and Description.....	3
2.3 Proposed Action (Illustrative Plan – Preferred Alternative).....	5
2.4 Alternative Analysis.....	6
<b>3.0 ENVIRONMENTAL SETTING.....</b>	<b>13</b>
3.1 Physical Environment.....	13
3.2 Water Resources.....	16
3.3 Biological Resources.....	22
3.4 Endangered and Threatened Species.....	23
3.5 Socio-Economic Resources.....	26
3.6 Historic and Archaeological Resources.....	27
<b>4.0 ENVIRONMENTAL IMPACTS.....</b>	<b>30</b>
4.1 Physical Environment.....	30
4.2 Water Quality.....	32
4.3 Biological Resources.....	32
4.4 Endangered and Threatened Species.....	32
4.5 Socio-Economic Resources.....	33
4.6 Historic and Archaeological Resources.....	34
<b>5.0 LONG RANGE COMPONENT (MASTER PLAN PHASING PROJECTS) .....</b>	<b>34</b>
5.1 Phase One Through Six-Demolition and Construction .....	34
5.2 Environmental Compliance Overview for Phasing Projects .....	44
5.3 Environmental Impacts of the Long Rang Component.....	46
<b>6.0 OTHER COMPLIANCE REQUIREMENTS.....</b>	<b>49</b>
6.1 Environmental Justice.....	49
6.2 Protection of Children.....	49
6.3 Floodplain Management.....	50
6.4 Clean Air Act Conformity.....	51
6.5 Cumulative Impacts.....	52
<b>7.0 LIST OF PREPARERS.....</b>	<b>52</b>

<b>8.0</b>	<b>COORDINATION.....</b>	<b>53</b>
<b>9.0</b>	<b>COMPLIANCE WITH ENVIRONMENTAL FEDERAL STATUTES AND EXECUTIVE ORDERS.....</b>	<b>54</b>
<b>10.0</b>	<b>REFERENCES.....</b>	<b>58</b>
<b>11.0</b>	<b>LIST OF ACRONYMS.....</b>	<b>61</b>
	<b>RECORD OF NON-APPLICABILITY (RONA).....</b>	<b>63</b>

**LIST OF FIGURES**

Figure 1 – Location Map.....	2
Figure 2 – Existing Conditions – Natick Soldiers Systems Center.....	4
Figure 3 – Alternative Six (Illustrative Plan – Preferred Alternative).....	6
Figure 4 – Framework Plan.....	8
Figure 5 – Alternative One.....	11
Figure 6 – Alternative Two.....	11
Figure 7 – Alternative Three.....	12
Figure 8 – Alternative Four.....	12
Figure 9 – Alternative Five.....	13
Figure 10 – Response Action Locations.....	17
Figure 11 – Groundwater Contamination.....	24
Figure 12 - Wetland Delineation and Setbacks.....	25
Figure 13 - Natural Heritage and Endangered Species Program Priority Habitats	28
Figure 14 - Quartermaster Research and Development Center Historic District ...	31
Figure 15 – Master Plan Demolition and Construction – Phase One.....	35
Figure 16 – Master Plan Demolition and Construction – Phase Two.....	36
Figure 17 – Master Plan Demolition and Construction – Phase Three.....	38
Figure 18 – Master Plan Demolition and Construction – Phase Four.....	40
Figure 19 – Master Plan Demolition and Construction – Phase Five.....	42
Figure 20 – Master Plan Demolition and Construction – Phase Six.....	43

**LIST OF TABLES**

Table 1 – Comparison of Master Plan Design Alternatives One through Six for Historic Resources.....	9
Table 2 – Response Action Overview.....	18

## LIST OF APPENDICES

Appendix A	Building Inventory.....	A
Appendix B	Correspondence Received.....	B
Appendix C	Notice of Availability .....	C
Appendix D	Construction General Permit (CGP) Part 10: Permit Conditions Applicable to Specific States.....	D
Appendix E	Floodplain Maps.....	E



# **DRAFT ENVIRONMENTAL ASSESSMENT**

## **Natick Soldier Systems Center Master Plan**

### **1.0 INTRODUCTION**

#### **1.1 Purpose and Need**

The most recent Army Natick Soldier Systems Center (NSSC) Real Property Master Plan, Long Range Component (LRC), is dated February 2004 and is currently being updated. The Master Plan document serves as a guide for coordination of project development and management of all land and water resources on an Army installation. Master Plan project development provides for adequate Force Protection/Anti-Terrorism 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 and 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 Plans is 20 years with periodic updates and revisions as installation change dictates 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).

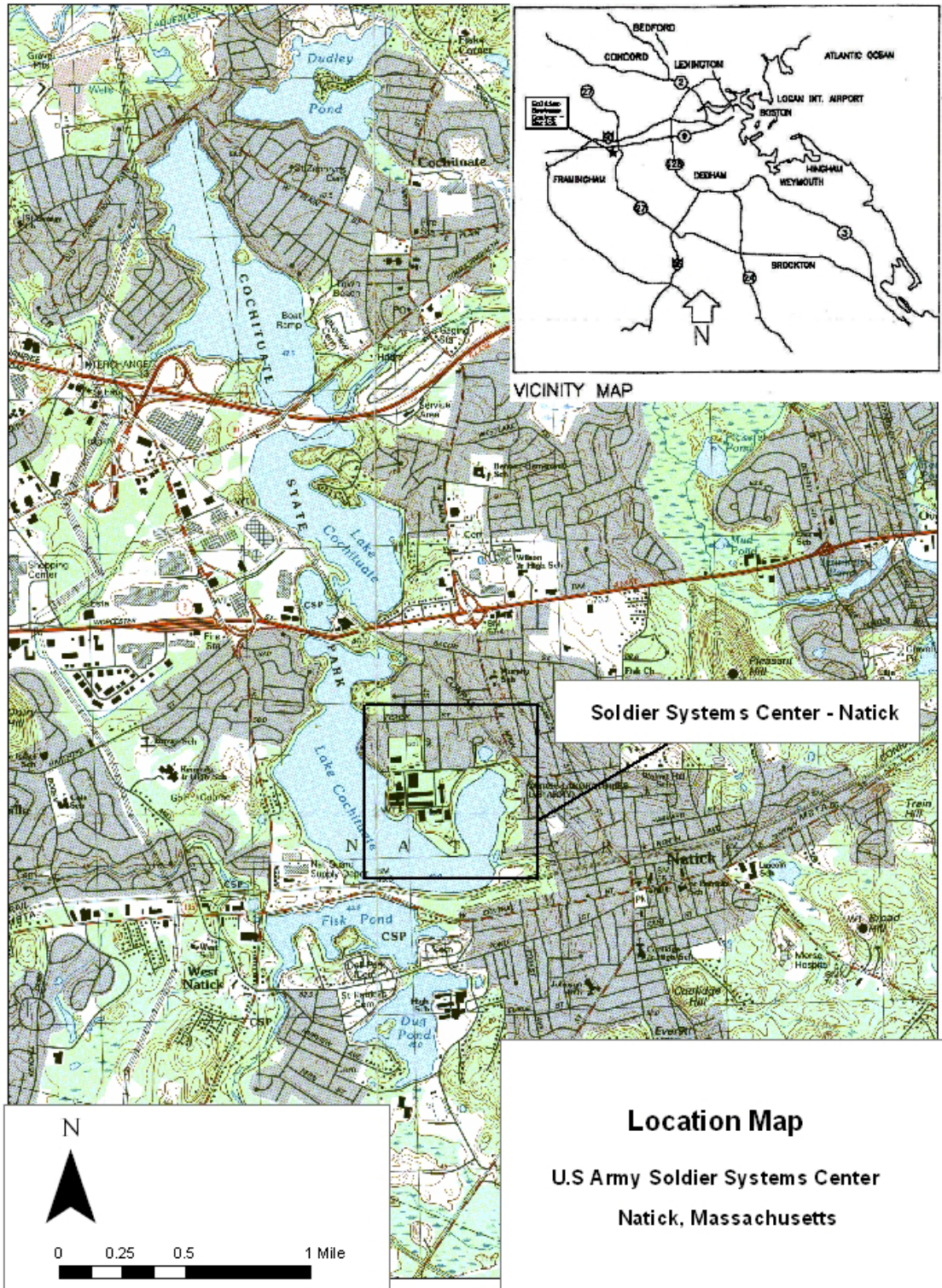
The Real Property Master Plan (RPMP) is a decision-support document and the recommended or proposed actions must be assessed for their environmental effects in accordance with AR 210-20. An Environmental Assessment (EA) is completed to evaluate the potential impacts and cumulative effects of projects being proposed in the RPMP. The EA also provides responsible and timely protection, conservation, and enhancement of project 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 CFR, 1500–1517, and Policy and Procedures for Implementing NEPA Army Regulation (AR) 200-2 (23 December 1988) and 32 Code of Federal Regulation (CFR) Part 651 (29 March 2002).

### **2.0 PROJECT DESCRIPTION**

#### **2.1 Location and Site History**

The U.S. Army Soldiers Systems Center is located in Natick, Middlesex Count, 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 Natick Soldier Systems Center (NSSC) is bounded on the west, south, and east by Lake Cochituate and bounded on the north by Kansas Street and residential housing. The land use in the vicinity of the NSSC installation includes residential, commercial/retail and light industrial facilities (see Figure 1 - Location Map).

Figure 1 – Location Map



The site was purchased by the Army in 1949 from the Metropolitan District Commission. At that time, it was used 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. U.S. Army Soldier Systems Command (SSCOM), activated in November 1994, provides dedicated research, development, engineering and acquisition support for the soldier in any and all environments (Natick Soldier Systems Center 2008b).

## **2.2 Installation Mission and Description**

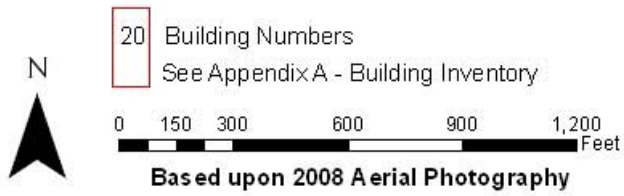
The mission of the Natick Soldier Systems Center (NSSC) is to conduct research, development, acquisition and sustainment to maximize combat effectiveness and survivability of soldiers. The NSSC accomplishes its mission by providing total life cycle management of soldier and related support systems through 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 Agency (IMA), which provides equitable, effective and efficient management of the installation and serves as NSSC's parent organization.

The NSSC has over 120 buildings located on 174 acres in the Town of Natick and neighboring communities. The main campus is 78 acres. Facilities include administration, laboratories, maintenance, storage, and housing areas. A self-contained city, NSSC also has a shopette, 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. One of these facilities is a Climatic Chamber that allows researchers to generate worldwide extreme climatic conditions to test equipment, or to test human performance in extreme conditions, in a controlled environment. In addition, NSSC has the following unique/specialized facilities: 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. 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 (see Figure 2 – Existing Conditions- Natick Soldier Systems Center and Appendix A – Building Inventory for the description of individual buildings by location and number).

The NSSC has the following major partners:

**Natick Soldier Center** - 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.

**Figure 2 – Existing Conditions - Natick Soldier Systems Center**



**Existing Conditions**  
**U.S Army Soldier Systems Center**  
**Natick, Massachusetts**

**Integrated Logistics Support Center** - The mission of this center is to provide logistical support for the Command's programs and product managers.

**United States Army Research Institute of Environmental Medicine** - The U.S. Army Research Institute of Environmental Medicine (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.

**Program Executive Office (PEO)-Combat Service/Combat Service Support** - PEO Combat Service/Combat Service Support is responsible for management and oversight for the development, production and deployment of Army field feeding systems, aerial delivery systems, unit/organizational equipment, field service equipment and shelters.

**PEO – Soldier** - PEO Soldier is responsible for the development, systems integration, testing, acquisition, and fielding (total life cycle management) of all soldier clothing and individual equipment items comprised of the Product Manager Soldier Sensors and Equipment, Product Manager-Soldier Weapons, and Project Manager-Warrior that combined, manages more than 250 individual programs encompassing all combat, life support, ballistics and environmental protective items worn or carried by the individual soldier in a tactical environment, as well as non-tactical clothing and dress clothing.

**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.

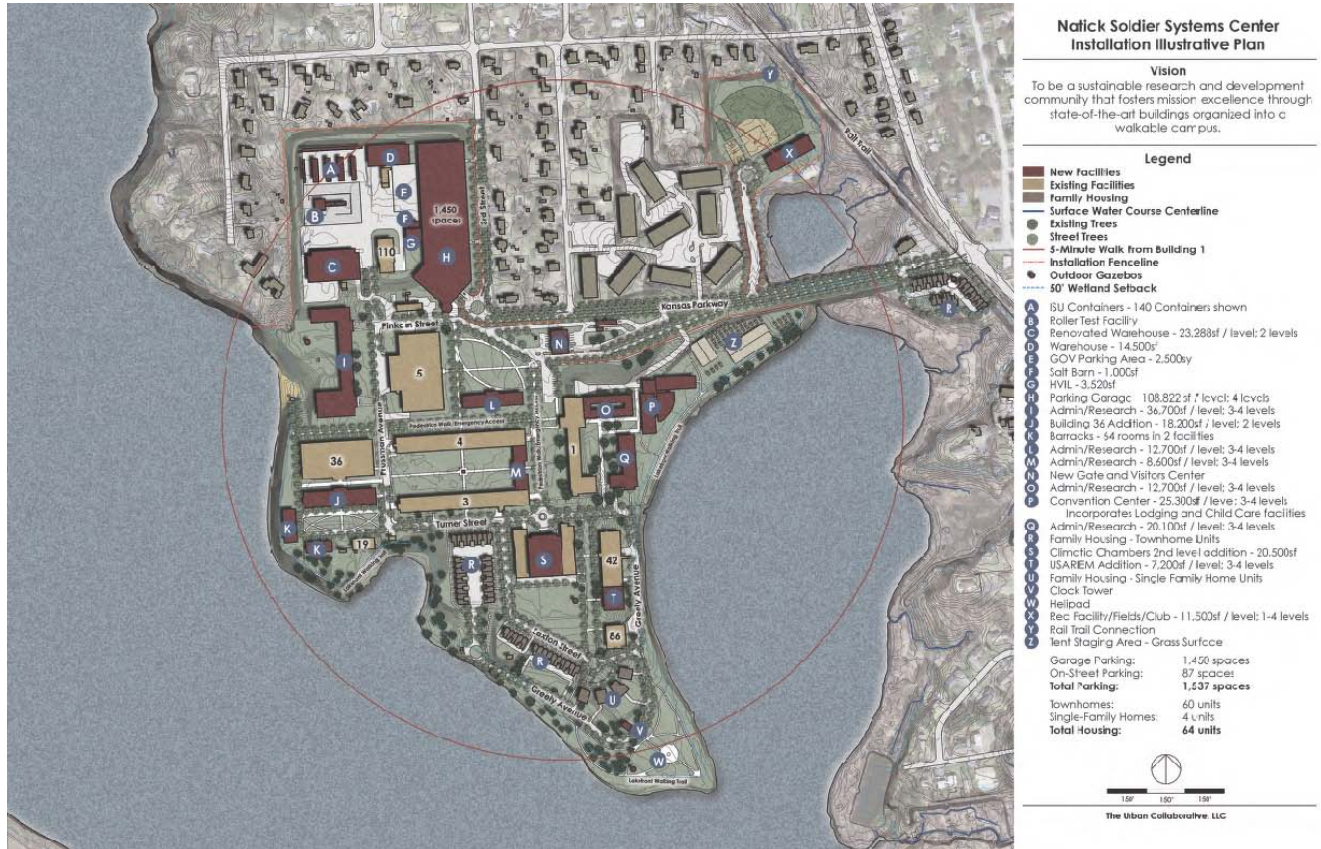
**Coast Guard Clothing Design and Technical Office** - This office designs and develops utility and organizational clothing items to better fit the needs of Coast Guard personnel today.

### **2.3 Proposed Action (Illustrative Plan – Preferred Alternative)**

Alternative Six (Illustrative Plan – Preferred Alternative) 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 (see Figure 3 – Alternative Six (Illustrative Plan - Preferred Alternative)). The Preferred Alternative provides areas to accommodate new mission growth, provides additional administrative, storage, and parking facilities and incorporates all the known design requirements that were identified during the planning process. It also maintains the installation design vision of a walkable campus environment, allows for the consolidation of housing onto the installation, provides a consolidated industrial area, perimeter and 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 plan will be reviewed on an as-needed basis but at a minimum of every 5 years to address necessary design changes.

**Figure 3 – Alternative Six (Illustrative Plan – Preferred Alternative)**



Source: 29 August 2011 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

## 2.4 Alternative Analysis

**Overview of the Master Plan Alternative Analysis** - The Master Plan planning process was a collaborative effort between The Urban Collaborative, LCC (the design team), NSSC installation leaders and personnel, and local stakeholders (e.g., Town of Natick Selectman, Department of Public Works, etc.). Installation personnel and leaders initially met with the design team in April 2009 to develop a planning vision to guide the Master Plan process. The NSSC planning vision, as defined in the 17 December 2010 Natick Soldier Systems Center Area Development Plans Report Final (Natick Soldier Systems Center 2010a) was defined as “a **Sustainable Research and Development Community** that fosters mission excellence through **State-of-the-Art Buildings** organized into a **Walkable Campus.**” The three design goals, incorporated in the vision statement, were further refined through the development of planning objectives. The goals and objectives used in the alternative analysis, as outlined in the Area Development Plans report (Natick Soldier Systems Center 2010a) are described in the following

section:

**Goal 1 - Sustainable Research and Development Community** - Provide a community that maximizes mission readiness and environmental stewardship. The design objectives of this goal are to provide room for growth, common access areas, safe access, shaded parking, street trees and respectful development.

**Goal 2 - State-of-the-Art Buildings** - Prepare a plan that fosters mission excellence through attractive, excellently-equipped research and development facilities. The design objectives of this goal are to have windows that open wide, narrow wings, adaptable building, multi-use spaces, multi-story buildings, space for collaboration, open floor plans, adequate storage, and “main street” hallways.

**Goal 3 - Walkable Campus** - Provide a walkable community that is safe, convenient, and comfortable. The design objectives to achieve this goal are to have campus quads, comfortable courtyards, connected sidewalks, perimeter parking, views to nature, lakeside access, nearby recreation, variable entries and arcades.

An initial Framework Plan was developed to guide the alternative analysis process and identify critical environmental resources that needed to be considered (constraints and opportunities) in the planning process. The Framework Plan established three separate areas within the NSSC installation to accommodate the design of individual Area Development Plans (ADPs); the North Campus Industrial Area, the South Campus Research Area and the Housing Area (also called the Eastside Housing and Recreation Area) (see Figure 4 – Framework Plan). The Framework Plan also required Antiterrorism Force Protection (AT/FP) setbacks in the North Campus Industrial Area to comply with NSSC established security programs and defensive measures to protect personnel, information, and critical resources from local threats and vulnerabilities. Other initial environmental considerations included a no-build setback of 50 feet from open water resource areas, the avoidance of archaeologically sensitive resource areas, aesthetics considerations (viewshed), and environmental stewardship initiatives such as the maintenance of existing forested areas.

The resulting planning vision, goals, objectives and Framework Plan constraints and opportunities served as a guide to the NSSC Master Plan design effort and development of alternatives. The alternative analysis development process began at a design workshop held on 9-10 November 2009 with NSSC stakeholders. The workshop attendees worked in four separate groups and each developed an alternative (Alternatives One, Two Three and Four). In a hierarchal approach to refine the alternatives, Alternative Five was developed by incorporating the commonalities identified in Alternatives One through Four; the need for recreation areas, on-base housing, perimeter paths, structured parking, a consolidated industrial area, and green spaces at the NSSC facility. An additional design workshop was held on 16-17 November with NSSC and local community stakeholders. Alternative Six (Illustrative Plan – Preferred Alternative) was developed by applying all the information gathered in the stakeholder meetings

**Figure 4 – Framework Plan**



Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

in addition to other pertinent force protection and code rules. The Illustrative Plan – Preferred Alternative was revised during the preparation of the Environmental Assessment (EA) to also include a setback from vegetated wetland resources (additional information provided in the Comparison of Alternatives in the next section).



**Comparison of Alternatives** - Alternatives for the proposed action include the No Action plan and six installation design Alternatives (including the Illustrative Plan - Preferred Alternative). Since the initial Framework Plan identified key environmental constraints; a 50 foot setback from open water, maintenance of existing forested areas and the avoidance of sensitive archaeological resources, the environmental effects were avoided for all Alternatives. Further revisions to include a 50’ setback from vegetated wetlands avoided impacts to shallow marsh and forested wetlands for the planned in Eastside Housing and Recreations Area (see Environmental Setting Section 3.2.3 Wetlands for further details). Please note that there are areas within the 50’ wetland setback buffer that are in development that will be redeveloped. However, Master Plan projects will not develop undisturbed areas within this 50’ wetland setback buffer and there may be opportunities, as the redevelopment process continues, to restore some areas within the buffer. As such, the only variable in the alternative analysis was the number of historic buildings that would be demolished with each Alternative (with a range of 1 to 4 buildings with each Alternative) (see Table 1 - Comparison of Master Plan Design Alternatives One to Six for Historic Resources).

**Table 1 – Comparison of Master Plan Design Alternatives One to Six for Historic Resources**

	Alternative One	Alternative Two	Alternative Three	Alternative Four	Alternative Five	Alternative Six
Historic Resources	3 Historic buildings removed	4 Historic buildings removed	1 Historic buildings removed	2 Historic buildings removed	2 Historic buildings removed	3 Historic buildings removed

**2.4.1 No Action** - Should the NSSC 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 plan would not comply with Army regulations for installation Master Planning and maintaining compliance with new mandates for Homeland security. The No Action Plan is not a viable alternative.

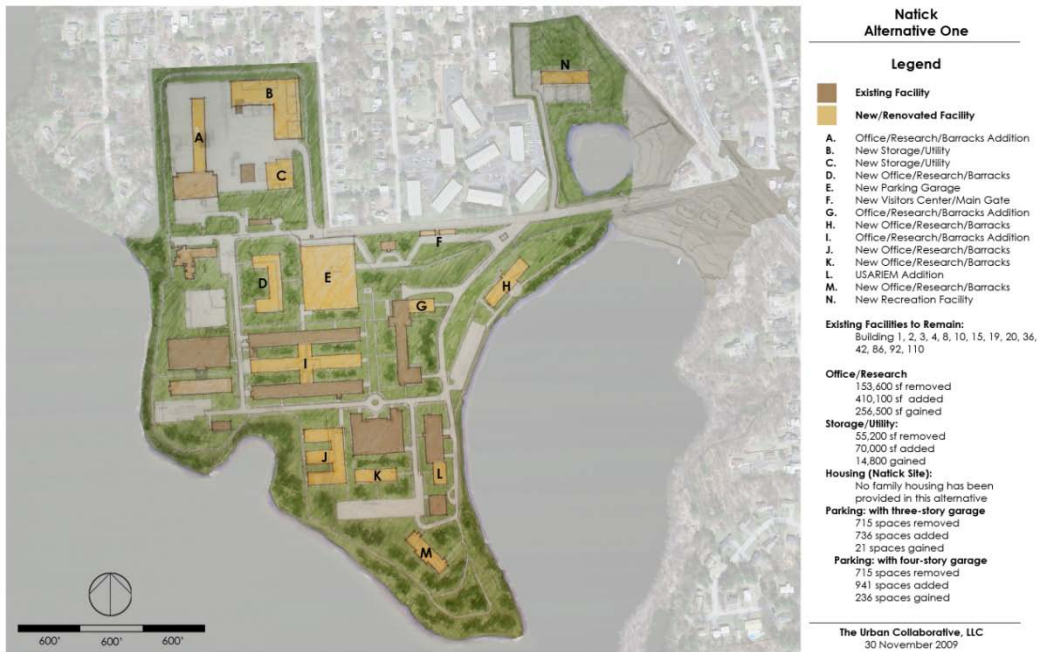
**2.4.2 Alternatives One, Two Three and Four** – Alternatives One through Four were developed by installation stakeholders at a design workshop conducted on 9-10 November 2009. During the workshop, participants divided into four groups and developed four separate alternatives for the long-term development of the NSSC installation (Alternative One through Four). As part of the workshop, participants scored each alternative using a set of design principles for a sustainable research and development campus, walkable campus, state-of-the-art buildings and other attributes (e.g., phaseability, constructability, cost, etc.) to determine how well each alternative met the design principles. The percentage of the total possible score for Alternatives One, Two, Three and Four, was calculated to be 64.9%, 73.6%, 69.5% and 77.0%, respectively, which showed Alternative Four was slightly more favorable in meeting the design

criteria. In general, Alternative One gains office space and storage space, provides no on-post housing, and increases parking capacity; Alternative Two loses office space, gains storage space, provides housing, and increases parking capacity; Alternative Three gains both office and storage space, provides housing, but loses parking capacity; and Alternative Four gains office and storage space, provides housing, but loses a significant number of parking spaces. Commonalities found between the four alternatives included the recreation areas, on-base housing, perimeter paths, structured parking, a consolidated industrial area, and green spaces at the NSSC facility. All four alternatives had no impacts to terrestrial resources/land use, Federally protected Species, archaeological resources or wetland resources. In Alternative One, three historic buildings, Nos., 5, 7, and 16 would be demolished within the Quartermaster Research and Development Laboratory Historic District (QRDC). These are the Whittlesey Building (5), Prendergast Building (U.S. Navy Clothing and Textile Research Facility) (7), and the Beaudoin Building (16). Alternative Two has four historic buildings being demolished; the Whittlesey Building (5), Prendergast Building (7), the Johnson Barracks and Dining Facility (15), and the Beaudoin Building (16). In Alternative Three, only one building that is within the QRDC Historic District would be demolished, Building 16, the Beaudoin Building. Alternative Four proposes to demolish two historic buildings: the Johnson Barracks and Dining Facility (15) and the Beaudoin Building (16). See Figure 5 – Alternative One, Figure 6 – Alternative Two, Figure 7 – Alternative Three, and Figure 8 – Alternative Four for the alternative design configurations.

**2.4.3 Alternative Five** – The analysis of Alternatives One through Four determined many common themes; recreation areas, on-base housing, perimeter paths, structured parking, a consolidated industrial area, and green spaces at the NSSC installation. The desirable components of the previous alternatives were combined with the common themes found in the qualitative analysis of Alternative One through Four to develop Alternative Five. This hierarchal approach provided an improved alternative which included increased office space, gains storage space, provides housing, and increases parking capacity (see Figure 9 – Alternative Five). Alternative Five has no impacts to terrestrial resources/land use, Federally protected Species, archaeological resources or wetland resources (after the inclusion of the setback from vegetated wetlands). Alternative Five would require the demolition of buildings 15 and 16, the Johnson Barracks and Dining Facility, and the Beaudoin Building, respectively.

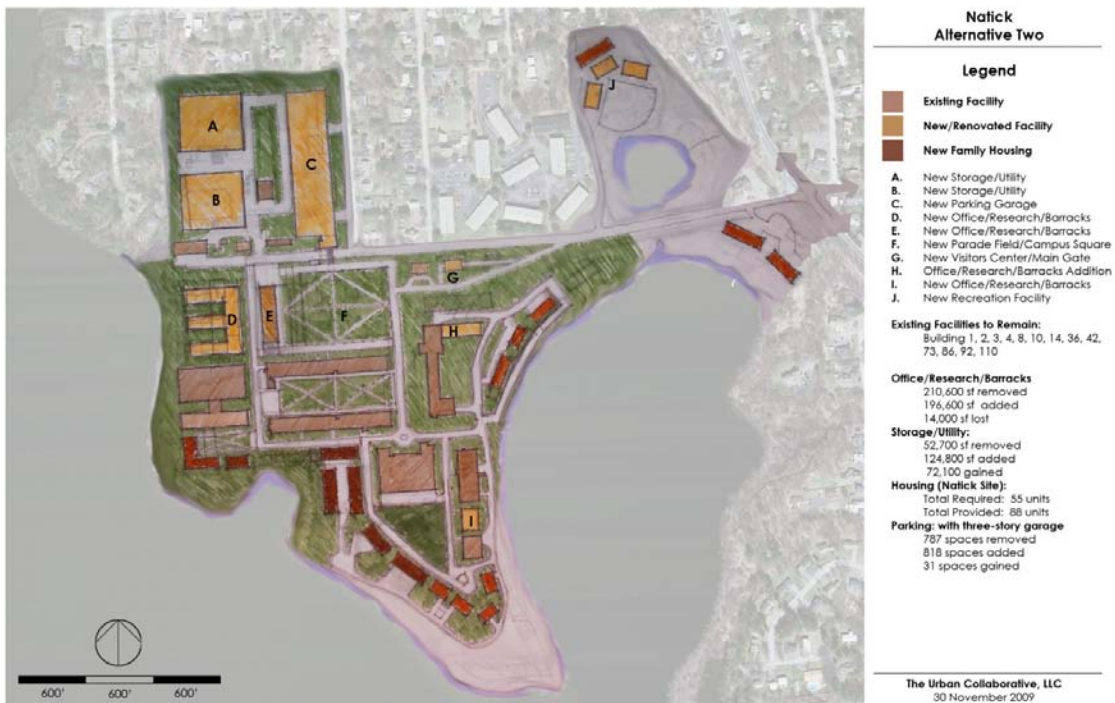
**2.4.4 Alternative Six (Illustrative Plan – Preferred Alternative)** - Alternative Five was further refined using additional information provided by the installation stakeholders. Alternative Six (Illustrative Plan - Preferred Alternative) reflects the most optimal plan for meeting future installation needs in consideration of project resources (such as natural, cultural, and man-made features) while meeting public, social, and economic demands (see Figure 3 - Alternative Six (Illustrative Plan – Preferred Alternative)). Alternative Six has no impacts to terrestrial resources/land use, Federally protected Species, archaeological resources or wetland resources. Alternative Six would impact three buildings which are contributing elements to the QRDC Historic District: the Special Test Building (7), the Enlisted Men’s Barracks (15), and the Food Service Equipment Laboratory (16).

**Figure 5 – Alternative One**



Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

**Figure 6 – Alternative Two**



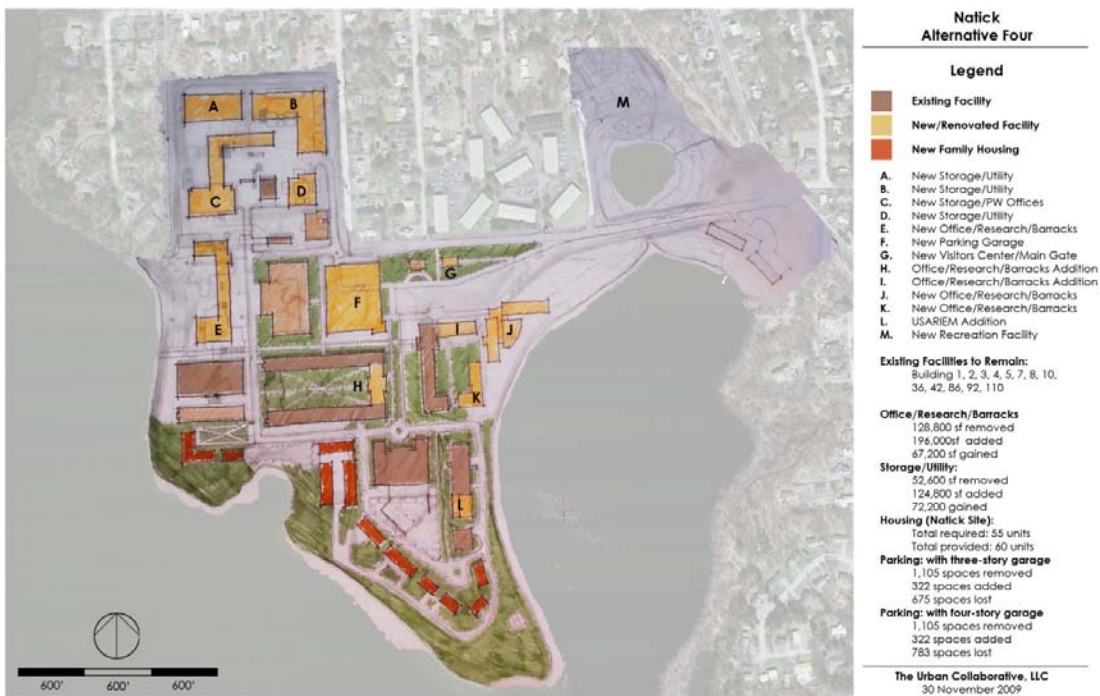
Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

**Figure 7 – Alternative Three**



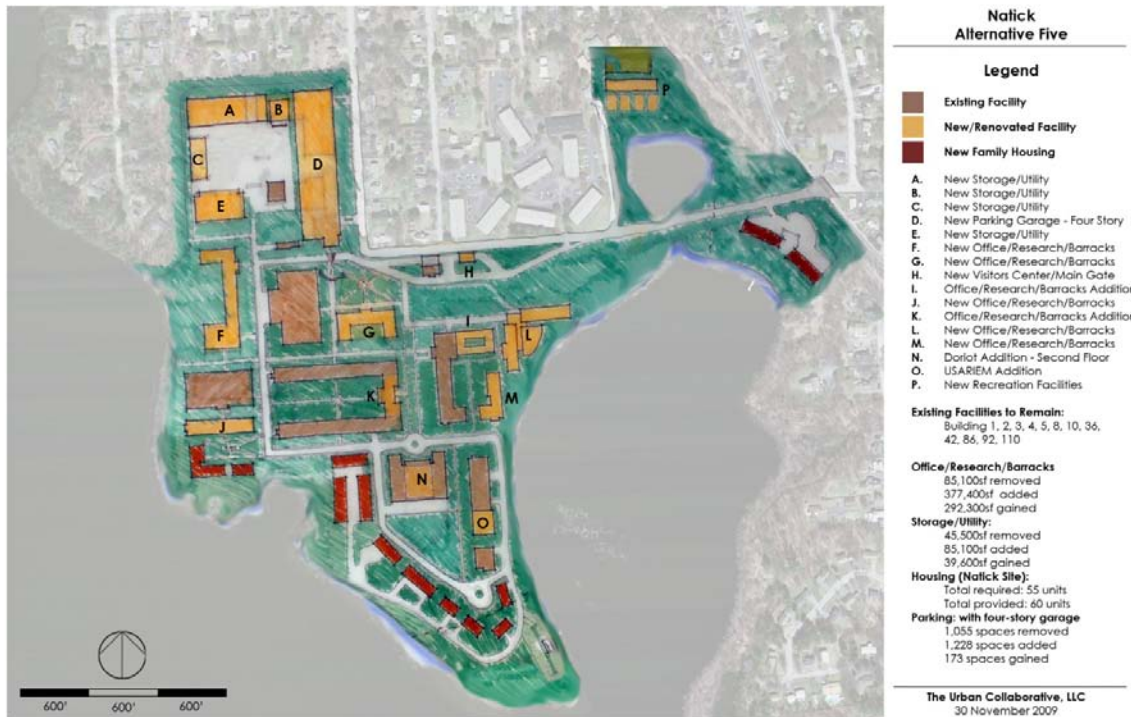
Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

**Figure 8 – Alternative Four**



Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

**Figure 9 – Alternative Five**



Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

### 3.0 ENVIRONMENTAL SETTING

#### 3.1 Physical Environment

**3.1.1 Geology** - The Natick Soldier Systems Center (NSSC) is located within the Appalachian Highlands Geologic Province along the boundary with the Atlantic Plain Geologic Province (US Geological Survey 2008a). Bedrock geology consists of Igneous and Metasedimentary rocks from the Paleozoic and Precambrian periods (US Geological Survey 2008b). 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 (msl). Elevations in Natick range from 410 feet at Pegan Hill, located in South Natick, to approximately 135 feet 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 2004).

**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. These structures cover 75% or more of the surface area. Urban land areas in the county have slopes ranging from level to steep (US Department of Agriculture 2011).

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 (US Department of Agriculture 2011).

There is a narrow area of the 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 production 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 (see Figure 10 – Response Action Locations) (US Environmental Protection Agency 2011a). More detailed information about site contamination can be found in Section **3.1.4 Hazardous Materials**.

**3.1.3 Climate** - There has been a large temperature range and an equal

distribution of precipitation in Natick over the years. The prevailing wind is from the west, with an average velocity of 10 to 13 miles per hour (HydroGeoLogic 2002 in NSSC 2004). Average monthly temperatures in Natick range from 28.2 degrees in January to 72.0 degrees in July (National Climatic Data Center 1990 in Natick Soldier Systems Center 2004). The winters are moderately cold and wet. The last killing frost generally occurs before May 10, 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 normal annual precipitation is 44.23 inches (Citizen Information Service Website 2002 in Natick Soldier Systems Center 2004). The climate is subject to fluctuating influences of polar, tropical, marine, and continental air masses. The frequent passage of storm fronts through the region creates storms and extended periods of cloudiness, drizzle, and low visibility (HydroGeoLogic 2002 in Natick Soldier Systems Center 2004).

**3.1.4 Hazardous Materials** - The Final Site Assessment Decision for the NSSC was completed on May 10, 1993 and 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 (US Environmental Protection Agency 2011a). There are no Land Use Controls (LUCs) 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 (RAB) was established in 1995 and to review documents and provide citizen input to the restoration process (Natick Soldier Systems Center 2009b). In recent years, the RAB has met two to five times annually.

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. 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 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 (see Figure 10 – Response Action Locations). 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.) Table 2 outlines installation contamination at the Natick Soldier Systems Center (NSSC) and vicinity as described by the USEPA Waste Site Cleanup & Reuse in New England, Natick Laboratory Army Research, Development and Engineering Center website (US Environmental Protection Agency 2011a).

**3.1.5 Cross Boundary Issues** – Pursuant to AR 200-20 Real Property Master Planning for Army Installations Section 3-2 b. (6), the environmental effect of encroachments on installations' 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 planning process. 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) bound the perimeter of the NSSC facility. This observable demarcation of the property boundary has prevented problems with encroachment in the northern portion of the facility.

Although some testing facilities involve noise, such as Building 77 – the Combustion Test Facility in the North Campus Industrial Area, few noise complaints have been generated. Testing facilities that create noise are insulated to be noise proof and therefore, cross boundary noise issues have not been problematic at the NSSC installation. Construction of the proposed project could cause a 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. Proper dust suppression techniques would be employed to avoid creating a nuisance for nearby residents during dry and windy weather.

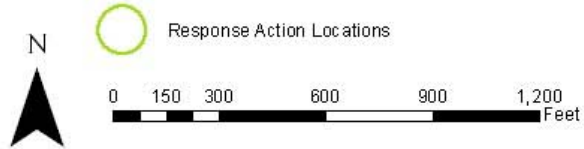
## **3.2 Water Resources**

**3.2.1 Surface Water** - The NSSC 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. The lake is divided into three main ponds with two other connected ponds. Dudley pond is located immediately north of Lake Cochituate and Fisk Pond lies immediately south of the lake (see Figure 1 – Location Map). Cochituate Brook, the outlet for Lake Cochituate, located in Framingham, flows approximately 0.6 miles into the 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 divided between the Charles River Watershed in the eastern and southern portions of town, and the Concord River Watershed in the west and north. The Lake Cochituate 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.



**Figure 10 – Response Action Locations**



**Response Action Locations**  
**U.S. Army Soldier Systems Center**  
**Natick, Massachusetts**

**Table 2 – Response Action Overview**

<p>T-25 Area</p>	<p>The Army began an in-depth study of soil and groundwater contamination at the T-25 Area in 1993. Studies completed in 1993 thru 1996 have help determine cleanup strategies for containing contaminant migration via an onsite pump and treat system. The Army is currently operating the pump and treat system and monitoring the groundwater in the T- Area. A Record of Decision (ROD) for groundwater was signed in September 2001. The ROD calls for the continued operation of the existing treatment system. The Army is updating plans for operations and maintenance and long term monitoring of the system and surrounding groundwater. Additional extraction well installation took place in fall 2002 to more fully contain the contaminated water on post. Additional monitoring wells were installed in 2003 to monitor the contamination north of the site. The treatment system was upgraded to treat the additional water. A pilot study is being implemented during 2006-2010 to determine if augmented bioremediation will be effective. Soil at the T-25 Area was determined to not require action. A No Further Action ROD was signed in September 2008.</p>
<p>Former Gym Site</p>	<p>The Army began an extensive investigation of groundwater and soil contamination at the Former Gym Site in the fall of 1997. This investigation will lead to the selection of cleanup remedies for the area. An excavation of contaminated soils at the former gym site was completed in spring 2002. A report on the confirmation sampling was submitted in October 2002. An additional monitoring well was installed in 2003. The Army monitored the groundwater contamination for several additional rounds and determined the removal action was successful. Soils were also excavated at the Buildings 62 &amp; 68 site during the fall of 2005 and included in the Former Proposed Gymnasium ROD for no further action which was signed in the fall of 2007.</p>
<p>Supply Well (Buildings 63, 2 and 45)</p>	<p>The Army began an investigation of groundwater contamination at the Army Supply Well (Building 63) in the fall of 1997. The Army discontinued using the on-post water supply well and now contracts with the town of Natick for potable water. The Army has found additional groundwater contamination near the wells and Buildings 45 and 2. The Army is currently implementing a pilot study to determine groundwater capture effectiveness with an extraction system. Contaminated water is being treated at the T-25 area treatment plant. Additional well head treatment was implemented in August 2008 to treat a contaminant that is not treated by the treatment plant.</p>

Building 22 and 36	This area is currently being investigated. Soil, Sediment and groundwater samples have been taken. The Army submitted a Remedial Investigation Report for the investigations at Building 22 in 2003. The Army is currently implementing an optimization study to determine groundwater capture effectiveness with an extraction system. Contaminated water is being treated at the T-25 area treatment plant.
Boiler Plant (Building 19)	This area is currently being investigated. Soil, Sediment and groundwater samples have been taken. The Army performed a soil removal action at the Boiler Plant, with a closeout report provided in the fall of 2001. Soil at the Boiler Plant has been determined to not require action. A No Further Action ROD was signed in September 2008.
Pegan Cove/Main Outfall	Tier I, II, & III Ecological Risk Assessments was performed for the sediments and surface water at these areas. The Army submitted the Tier III report in 2003. The Tier I & II indicated a probability of risk to the benthic community and a potential for aquatic food chain exposures to occur in the sediments, but no unacceptable risk for exposures to the surface water. The Tier III concluded that concentrations of chemicals of ecological concern in fish and in the sediment-based aquatic food chain do not pose unacceptable risk to wildlife. A human health fish consumption pathway evaluation completed in 2005 verified the Massachusetts Department of Public Health (DPH) fish consumption restriction for sensitive populations. Additional fish tissue studies were conducted in fall 2007. A ROD was signed in September 2009 for the Sediment Area. The Army has removed contaminated sediment in Pegan Cove during 2010.
Soil Areas	The Army has identified several other areas of possible contamination at the site as part of their Master Environmental Plan and Installation Action Plan. A ROD for No Further Action for the soil at the T-25 area, the Boiler Plant (Building 19) and at Buildings 13 and 14 was signed in Fall of 2008.

Source: U.S. Environmental Protection Agency (USEPA). 2011a. Website entitled Waste Site Cleanup & Reuse in New England, Natick Laboratory Army Research, Development and Engineering Center.

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 the U.S. Fish and Wildlife Service (USFWS). Elevated levels of polychlorinated biphenyls (PCBs) were detected in sediments in

Pagan 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 Pagan Cove during 2010 pursuant to the remedial action plan documented in the Record of Decision (ROD) signed in September 2009. In addition, to improve stormwater quality and to minimize future impacts to Lake Cochituate, all active stormwater outfalls were fitted with oil-water separators in the 1990's. At the present time, there are no known current sources of PCBs to Lake Cochituate from the installation (Natick Soldier Systems Center 2009a).

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 2010b). The Massachusetts Department of Public Health (DPH) instituted a fish consumption restriction for sensitive populations in May of 1996 for Lake Cochituate (MA Department of Public Health 2011) which is still in effect.

An USEPA National Pollution Discharge Elimination System (NPDES) permit provides authorization for a municipality or public entity to discharge surface waters through a Municipal Separate Storm Sewer System (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 which was issued on 2003 and is now in its eighth year (Permit Number MAR042008) (USEPA 2011c). The April 2010 annual report for Permit Year 7 (Reporting Period April 1, 2009 to March 31, 2010) demonstrated a number of initiatives for stormwater improvements and outlined progress and activities planned for the future (Natick Soldier Systems Center 2010c).

USEPA Region 1 issued the General Permit for stormwater discharges from Small MS4s on May 1, 2003. The EPA is currently in the process of replacing the Small MS4s General Permit with three separate Small MS4 General Permits: one for Operators located in the State of New Hampshire, a second for Operators located in the North Coastal watersheds of Massachusetts, and a third for Operators located in the Interstate, Merrimack and South Coastal watersheds of Massachusetts (the Natick facility is located within the Merrimack watershed). This draft permit requires Small MS4s Operators to continue to implement the Stormwater Management Programs required by the previous permit and to incorporate additional applicable requirements as will be outlined in the final permit (US Environmental Protection Agency 2011d). Once the USEPA concludes the process of updating the General Permit for the Merrimack and South Coastal Small MS4 General Permit (the Public Comment period ended on May 11, 2011), the Regional Administrator will issue a final permit decision. The Notice of Availability of the final permit will be published in the Federal Register. To obtain coverage, the NSSC will be required to submit a new Notice of Intent (NOI) to the USEPA for the permit for which they are eligible (US Environmental Protection Agency 2011d).

**3.2.2 Groundwater** - 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 designate as a Zone II 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. This prohibition was incorporated into the Master Plan.

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 (see Figure 11 – Groundwater Contamination).

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 in October 2010 demonstrated that the groundwater extraction system is capturing groundwater within the T-25 area, Buildings 22 and 36 and Buildings 63, 2 and 45 Areas (Natick Soldier Systems Center 2011a).

**3.2.3 Wetlands** - The development of wetlands is dependent on many physical and chemical parameters with the dominant successional force being soil moisture. Wetland 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 increasing 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. According to a wetland delineation conducted by the NSSC in 1998, wetlands within installation boundaries include a narrow area along the periphery of Lake Cochituate, an area surrounding Little Roundy Pond and along the stream that flows into Little Roundy Pond (see Figure 12 – Wetland Resource Areas). Within this wetland boundary are several different types of wetlands including the Open Water of Lake Cochituate, which surrounds the NSSC South Campus Research Area to the east, south and west; the Open Water of Little Roundy Pond; and shallow marsh and deciduous forested wetland areas in the Eastside Housing and Recreation Area). There is a culvert under Kansas Street that allows drainage from Little Roundy Pond into Lake Cochituate and a small stream located along the eastern border of the Eastside Recreation and Housing Area. There are no vernal pools found on the installation. Vernal pools 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**

Currently, the broad area that encompasses the NSSC features a combination of northeastern hardwood deciduous and coniferous forest, wooded swamps and wetlands, developed urban land and open fields. Wooded areas are comprised primarily of red oak (*Quercus rubra*), white pine (*Pinus strobus*), maple (*Acer* spp.), ash (*Fraxinus* sp.), and gray birch (*Betula populifolia*). Grass fields have a combination of goldenrods (*Solidago* spp.), asters

(*Aster* spp.), and upland grasses (Poaceae) and shrubs such as roses (*Rosa* sp.), brambles (*Rubus* spp.), honeysuckle (*Lonicera* spp.), and witch hazel (*Hamamelis virginiana*). Herbaceous plants in the area include club moss (*Lycopodium* sp.), common dewberry (*Rubus* sp.), and goldenrod. Mammalian species include 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.

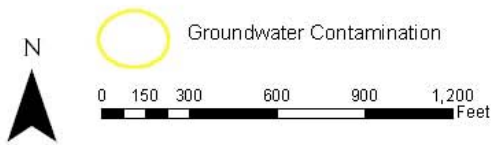
Lake Cochituate supports a variety of fresh water species, including carp, bass, perch, bluegill and pickerel. Periodically, the Massachusetts Division of Fisheries and Wildlife stock the lake with trout (MA Department of Fish and Wildlife 2011). Waterfowl of many types use the lake for resting, feeding, or breeding, with the largest transient population being found during spring and fall migration periods. As stated previously, the Massachusetts Department of Public Health (DPH) instituted a fish consumption restriction for sensitive populations in May of 1996 for Lake Cochituate (MA Department of Public Health 2011) which is still in effect.


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, 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 the NSSC Master Plan should avoid the use of plants that are considered invasive in Massachusetts as listed in the document entitled The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts (Massachusetts Invasive Plant Advisory Group 2005).

### **3.4 Endangered and Threatened Species**

This project was reviewed for the presence of Federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website: <http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>. Based on the information currently available, no Federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area. Preparation of a Biological Assessment or further consultation under section 7 of the Endangered Species Act is not required pursuant to a letter dated 3 January 2011. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

**Figure 11 – Groundwater Contamination**

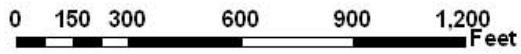


 Groundwater Contamination

**Groundwater Contamination  
U.S Army Soldier Systems Center  
Natick, Massachusetts**



**Figure 12 – Wetland Delineation and Setbacks**



**Wetland Delineation and Setbacks  
U.S Army Soldier Systems Center  
Natick, Massachusetts**

- 50 Ft. Setback
- ◆ Wetland Flags
- Wetland Line
- - - 100 Ft. Setback

Natick Soldier Systems Center Boundary

Based Upon the Natick Soldier Systems Center 1998 Wetland Delineation

The Massachusetts Natural Heritage and Endangered Species Program (NHESP), in a letter dated 6 July 2011, indicated that Priority Habitat 200 (PH200) and Estimated Habitat 95 (EH 95) are located within the project area vicinity (NHESP 2011). Priority Habitat is based on the known geographical extent of habitat for all state-listed rare species, both plants and animals, and is regulated under the Massachusetts Endangered Species Act (MESA). Estimated Habitats are a sub-set of the Priority Habitats, and are based on the geographical extent of habitat of state-listed rare wetlands wildlife and is codified under the Wetlands Protection Act. It should be noted that these habitat designations are reviewed and updated approximately every four years.

The NHESP database indicates that Eastern Pondmussle (*Ligumia nasuta*) have been found in the vicinity of the NSSC as based upon habitat maps dated September 24, 2008 (see Figure 13 – Natural Heritage and Endangered Species Program Habitats). Based upon a telecom with Kristin Black of the NHESP and Judith Johnson of the Army Corps of Engineers on 19 July 2011, an updated edition of the NHESP rare species habitat maps is due to be published around January of 2012. However, Ms. Black noted that the Priority Habitat and Estimated Habitat designations in the NSSC area will not change. Therefore, this information on state rare species habitats in the NSSC area is viable until approximately January of 2016.

The Eastern Pondmussel is listed as a species of “Special Concern” which is defined as “native species which have been documented by biological research or inventory to have suffered a decline that could threaten the species if allowed to continue unchecked, or which occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become threatened within Massachusetts.” The Eastern Pondmussel is a medium sized freshwater mussel that may exceed six inches. It is distributed throughout Atlantic coastal drainages from Virginia to New Hampshire and in the eastern Great Lakes region. It inhabits streams, rivers lakes and ponds but exhibits no distinct preference for substrate, depth and flow of water. Eastern Pondmussels are sedentary filter feeders and as such, the species is vulnerable to degraded water quality such as sedimentation, nutrient enrichment and alteration of habitat (encroachment, invasive species, etc.) or alteration of flow regimes (Natural Heritage and Endangered Species Program 2011a).

### **3.5 Socio-Economic Resources**

As of the 2000 census, there were 32,170 people, 13,080 households, and 8,528 families residing in the town of Natick. The racial makeup of the town was 90.02% White, 1.6% African American, 0.1% Native American, 3.9% Asian, 0.1% Pacific Islander, 3.9% Hispanic or Latino, 0.8% from other races, and 1.6% from two or more races. There were 13,080 households out of which 65.2 were family households (with children) and 34.8 were non-family households. The average household size was 2.4 and the average family size was 3.0. Of the town population, 47.3% were male and 52.7% were female; 7.4% were under 5 years, 16.9 were 5 years to 19 years, 61.3% were 20 to 64 years and 14.3% were over 65 years (Mass.Gov 2011).

In 2009 inflation-adjusted dollars, the median household income for the town of Natick was \$86,583, the median family was \$111,189 and the per capita income was \$44,221. About 2.1% of families and 3.4% of the population were below the poverty level (U.S. Census Bureau 2011). Natick is largely a middle class town suburban town with some areas of semi-rural affluence.

The NSSC has 124 buildings located on 174 acres in the Town of Natick and neighboring communities. The main campus is 78 acres. Based upon January 2012 population information, the NSSC has a total workforce of 1,698. The NSSC public relations office reported that the NSSC facility infuses more than \$135 million annually into the local economy through installation salaries, utilities and local contracts (Wikipedia.org 2011).

### **3.6 Historic and Archaeological Resources**

The 1997 Cultural Resource Management Plan (CRMP) identified five archaeologically sensitive acres within the NSSC facility (U.S. Army Corps of Engineers, New England District, 1997). These sensitive areas consisted of undeveloped land bordering Lake Cochituate in the southeastern tip and southwestern edge of the facility. The 1997 CRMP recommended that an intensive archaeological survey be conducted in these sensitive areas to locate, identify, and assess the presence of any undocumented sites.

The 2009 intensive archaeological survey (Banister et al. 2009) identified three previously undocumented pre-contact Native American archaeological sites designated NSSC Site Locus 1, Locus 2, and Locus 3. Locus 1 was identified in the southwest part of the facility, and Locus 2 and Locus 3 were identified to the southeast in undeveloped wooded areas adjacent to existing parking lots, drives, and buildings. All three site areas yielded chipping debris, the byproducts of Native American stone tool-making, and Locus 1 and Locus 3 also contained chipped stone tool artifacts. Of the three, Locus 1 and Locus 3 were considered potentially significant archaeological resources, under Criterion D of the National Register of Historic Places (National Register). Locus 2 was not considered a significant archaeological site and no further work was recommended.

The 2010 site examination investigations were conducted for the NSSC Site Locus 1 and Site Locus 3 to determine their significance and National Register eligibility. Based on the recovered cultural material assemblages, Locus 1 and Locus 3 were interpreted as areas where chipped stone tool manufacture and maintenance were the primary on-site activities. Because of their limited information content, neither site was determined to be eligible for the National Register and no further archaeological investigations for the NSSC facility were recommended.

**Figure 13 – Natural Heritage and Endangered Species Program Priority Habitats**



The NSSC facility contains one historic district with thirteen individual contributing resources and 25 non-contributing individual resources (Figure 14 - Quartermaster Research and Development Center). The facility was determined eligible for the National Register in 2007 in consultation with the Massachusetts State Historic Preservation Officer (MA SHPO).

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 MacGillivray 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 71, the Central Flag Pole

One historic building has been demolished, Building 6, the Guard House. 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.

## **4.0 ENVIRONMENTAL IMPACTS**

### **4.1 Physical Environment**

Deerfield Loamy Sand, 0-3% soil exist is present on NSSC property which is listed as 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 Code of Federal Regulations (CFR) Ch. VI (1-1-03 Editions) Section 658.2 Definitions. (a) ‘‘Farmland’’ does not include land already in or committed to urban development or water storage. Correspondence with Al Averill, Assistant State Soil Scientist at the Natural Resources Conservation Service confirmed NSSC property is considered “urban development” based upon the density of structures on the site and as such, the FPPA is not applicable (Natural Resources Conservation Service 2011).

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. 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 (US Environmental Protection Agency 2011a). A ROD for No Further Action for the soil at the T-25 area, the Boiler Plant (Building 19) and at Buildings 13 and 14 was signed in fall of 2008. Soils excavated at the Buildings 62 & 68 site during the fall of 2005 were included in the Former Proposed Gymnasium 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 at a minimum of every 5 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.

Other potential environmental compliance requirements for Master Plan phasing projects are listed in Section **5.0 Long Range Component (Master Plan Phasing Projects)**. At a minimum, sediment erosion control techniques should be implemented to prevent runoff into adjacent wetlands and water bodies during construction activities. In addition, to minimize the potential for cross boundary annoyances, proper dust suppression techniques and applicable provisions to minimize noise should be employed during construction activities. Construction activities will be temporary and intermittent and with the use of proper provision to minimize runoff, dust and noise, Master Plan projects will have no long-term impacts to the physical environment.

Figure 14 – Quartermaster Research and Development Center Historic District



## **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 plume is currently being treated at the T-25 Treatment Area. Groundwater cleanup action at the NRRC installation is estimated to continue into the 2030's.

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 project 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 monitoring wells or appurtenant structures related to groundwater remediation and other environmental compliance requirements as listed in Section **5.2 Environmental Compliance Overview for Phasing Projects**. In addition, at a minimum, sediment erosion control techniques should be implemented to prevent runoff into neighboring wetlands and water bodies during construction activities. No impacts to water resources are anticipated as a result of Master Plan projects.

## **4.3 Biological Resources**

No negative long-term impacts to biological resources will occur as a result of Master Plan 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 campus 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; however, 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.

## **4.4 Endangered and Threatened Species**

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website: <http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>. Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area.

The Massachusetts Natural Heritage and Endangered Species Program (NHESP), in a letter dated 6 July 2011, indicated the Eastern Pondmussle (*Ligumia nasuta*), a species of



“Special Concern” in Massachusetts has been found in the vicinity of the NSSC. This designation of habitat is viable until approximately January 2016. This species is vulnerable to changes in water quality, alterations in flow, habitat encroachment and habitat degradation through the removal of lakeside vegetation and the establishment of invasive species.

The protection of state listed species is recognized as an important component of the implementation of the NSSC Master Plan process. Maintaining lakeside vegetation was recognized in the Master Plan process through the inclusion of a wetland/open water 50’ setback for construction activities and use of native species in the landscaping plan. Some areas at the NSSC already have development within this setback area. In that case, redevelopment will occur within the existing footprint and there may be opportunities for restoration in these areas as more detailed information about Master Plan projects becomes available. In addition, proper sediment erosion control techniques will be implemented during construction activities to avoid runoff into adjacent wetland and waterbodies.

It is anticipated that Master Plan projects will not impact the Eastern Pondmussel due to these environmental protection measures. Coordination shall be undertaken, on the basis of comity, with the Natural Heritage and Endangered Species Program for Master Plan projects that are located with Priority Habitats (see Figure 13 – Natural Heritage and Endangered Species Program Priority Habitats) to assure that adequate protection measures are being implemented for state protected species prior to construction.

#### **4.5 Socio-Economic Resources**

The implementation of the Master Plan is expected to have positive socio-economic benefits for the NSSC workforce. The Master Plan incorporates the desires of the existing workforce for flexible work space, 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 **sustainable research and development community** that fosters mission excellence through **state-of-the-art buildings** organized into a **walkable campus**.

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 (<http://stb.natick.army.mil/>) 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 (21 February 2008 Meeting Minutes of the Science and Technology Board). 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.

#### **4.6 Historic and Archaeological Resources**

The NSSC Master Plan Consolidated Area Development Plan (Master Plan ADP), Alternative Six, envisions specific activities and undertaking that will be implemented in five phases, including demolition, new construction, and infrastructure and site/landscape modifications. Several of the proposed individual undertakings that the NSSC facility has programmed under the Master Plan ADP during the five year planning period of the Integrated Cultural Resource Management Plan (PAL, Inc. and U.S. Army Corps of Engineers, New England District 2011) 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 a Programmatic Agreement that will be executed at a minimum between the Natick Soldier Systems Center facility, the MA SHPO, and, possibly the Advisory Council on Historic Preservation. The Programmatic Agreement will provide guidance on how to evaluate and if necessary 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.

### **5.0 LONG RANGE COMPONENT (MASTER PLAN PHASING PROJECTS)**

#### **5.1 Phasing One Through Six - Demolition and Construction**

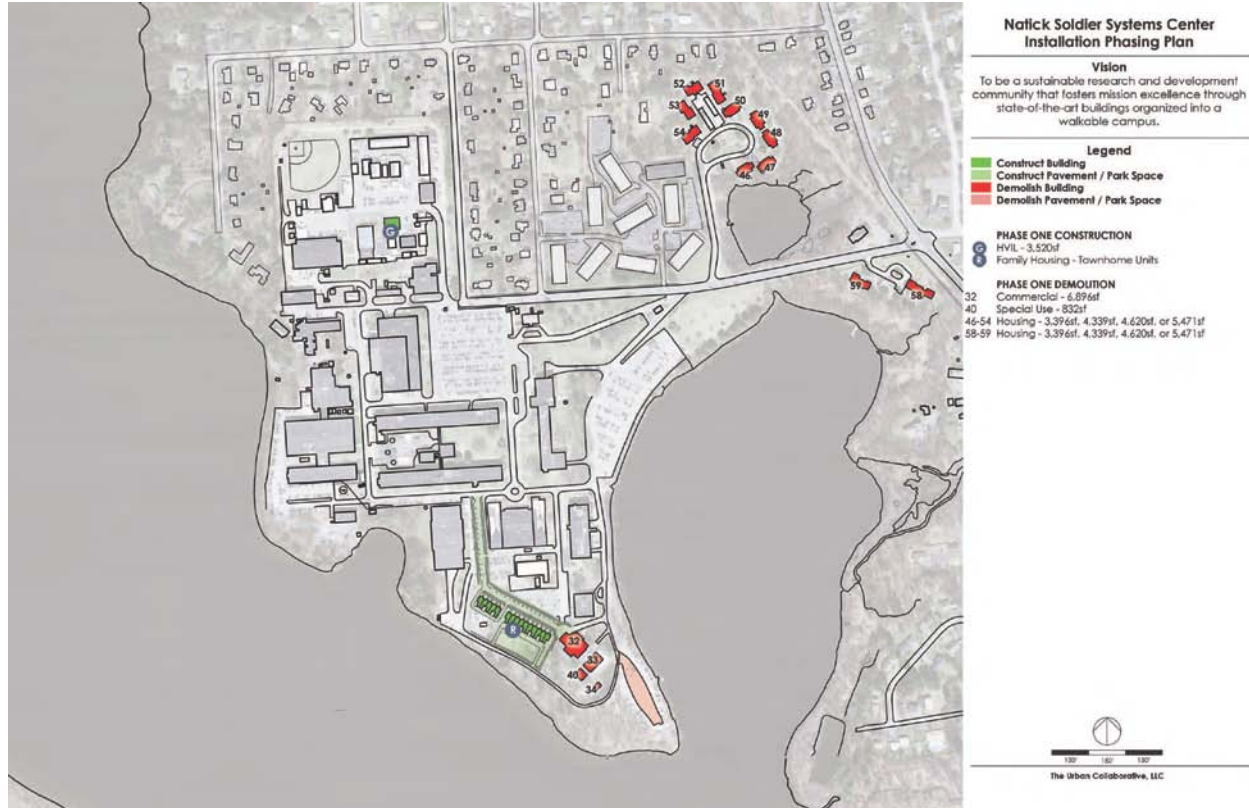
The Long Range Component of the Master Plan includes a Phasing Plan for demolition and construction over the 20 year planning time span of the Master Plan. The Phasing Plan is addressed on a macro level considering that over time, projects may need to be modified to adjust to changing needs and requirements. Space planning and allocation for individual users will be addressed by Department of Public Works (DPW) and the Garrison closer to the construction process.

There are six phases of demolition and construction anticipated. The descriptive information that is available for each project is variable based upon the priority level, the current level of planning and security classification of the project. This section provides a general description of each project. An overview of the environmental compliance requirements for the Long Range Component is provided in Section **5.2 Environmental Compliance Overview for Phasing Projects** and the environmental impacts of the phasing plan is provided in Section **5.3 Environmental Impacts of the Long Rang Component**

##### **5.1.1 Phase One Demolition and Construction Activities**

See Figure 15 to view Phase One Master Plan Demolition and Construction.

**Figure 15 – Master Plan Demolition and Construction – Phase One**



Source: 31 August 2011 Natick Soldier Systems Center, Long Range Component prepared by The Urban Collaborative, LLC

**5.1.1.1 Demolition** – There are plans to demolish 15 structures and one area of pavement in the Master Plan Demolition and Construction during Phase One as follows; Housing Buildings 46 through 54, 58 and 59, Building 32 – Community Center, Building 40 – Bath House, Building 33 – Pool and Building 34 – former wading pool. A parking (and storage area) will also be demolished in the southeast end of the peninsula.

**5.1.1.2 Construction** – A lab (Building G), housing complex (Building R) and park space in the vicinity of the housing area are proposed for construction in Phase 1 as follows:

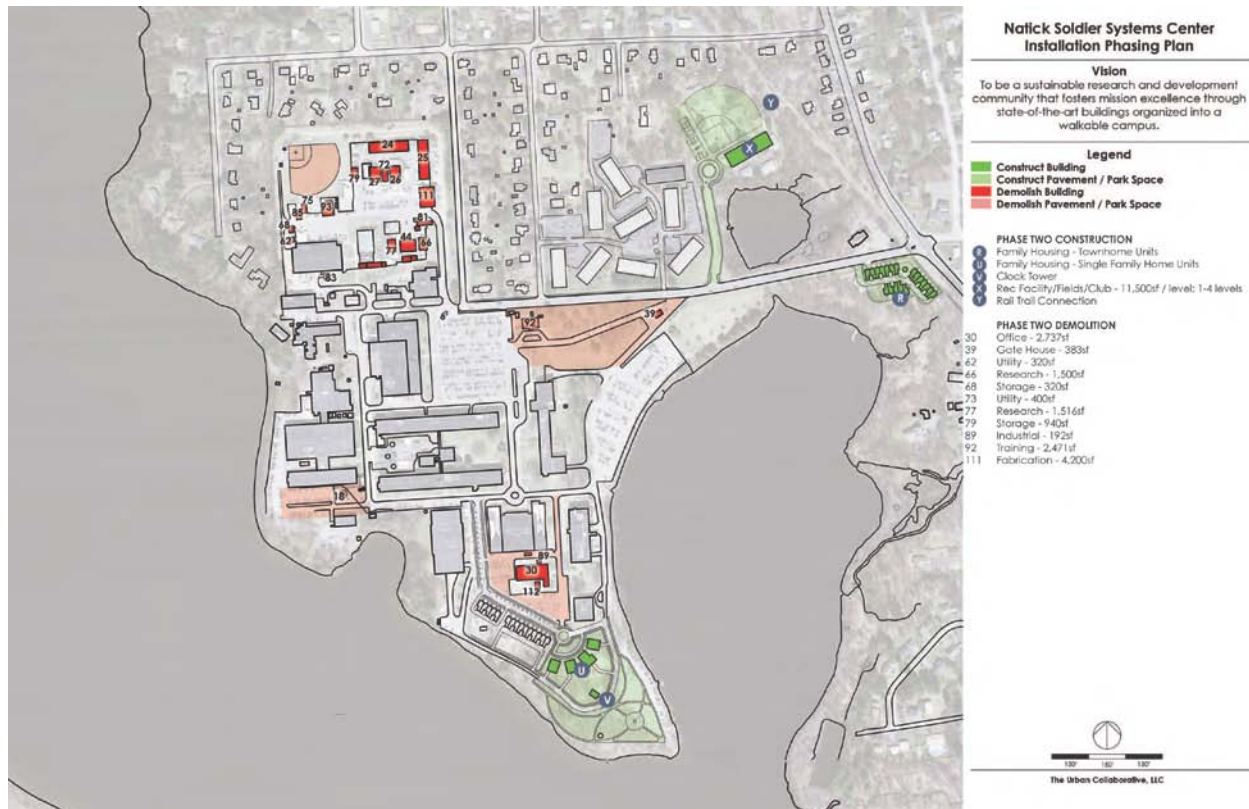
**High Velocity Impact Lab (HVIL)(Building G)** – This project involves the construction of a new High Velocity Impact Laboratory (HVIL) to perform on-site ballistics tests on military defense materials rather than conducting tests at other Army facilities. On-site testing will provide more efficient time-frames for obtaining test results and the development of better protective equipment for soldiers that wear and depend on products developed at the NSSC. The site for the proposed HVIL is in the installation’s North Campus, formerly a borrow area (referred to as “The Pit”) which has been gradually developed with various buildings and a recreation area.

**Family Housing – Townhouse Units (Building R)** – This is the Phase 1 portion of the family housing which will provide 60 townhouse units on NSSC. The barracks will be a maximum of 20’ wide with natural light entering through the front and back elevations. Sharing walls will increase energy efficiency and thermal comfort for the residents. However, to comply with anti-terrorism force protection regulations, there will be no more that 12 units with uninterrupted shared walls. They will be a minimum of 2-stories and a maximum of 4-stories. The primary entries to the units will be positioned along primary streets or facing neighborhood parks with sidewalks to encourage a walkable environment.

**5.1.2 Phase Two Demolition and Construction Activities**

See Figure 16 for the location of Phase Two Demolition and Construction Activities.

**Figure 16 – Master Plan Demolition and Construction – Phase Two**



Source: 31 August 2011 Natick Soldier Systems Center, Long Range Component prepared by The Urban Collaborative, LLC

**5.1.2.1 Demolition** – There are plans to demolish 22 structures in Phase Two as follows; Buildings 24, 27, 26, 68, 72 - storage, 75- Connex storage on gravel bed (no structure), Building 25 - storage (hazardous water storage), Building 79 - storage (salt shed), Building 111 - Fabrication, Building 81 – Research (Drop Test Tower and two small associated buildings), Building 44 - Administrative, Building 77 - Research (Combustion Test Facility), Building 66 - Research (Roller Test Facility), Building 62 - Utility, Building 93 - Storage (Hazardous Waste

Acclimation), Building 85- Shed, Building 92 – Training, 89 – Industrial (Low Radiation Storage), Building 112 - Lab, Building 39 – Gate House, two small parking areas in the North Campus Industrial Area, three parking areas and the ball park in the South Campus Research Area.

**5.1.2.2 Construction** – Phase 2 involves five construction projects as follows: Family Housing (Buildings R and U), Clock Tower (Building V), Recreation Facility/Club (Complex X) and the Rail Trail Connection and the construction of parkland in the vicinity of Family Housing U.

**Family Housing (Building R)** – This is the Phase 2 portion of the family housing construction as described in Section 5.1.1.2.

**Family Housing (Building U)** – This building is a notional administration or research facility that will accommodate future missions. It will be a maximum of 50’ wide to provide natural ventilation and day lighting to building occupants. The building will have a minimum of 3-stories and a maximum of 4-stories. The primary entries to the facilities will be positions along primary streets with sidewalks or pedestrian quads to encourage a walkable environment

**Clock Tower (Building V)** – The Clock Tower will become a focal point on the installation. It will also serve as a security overlook for the NSSC.

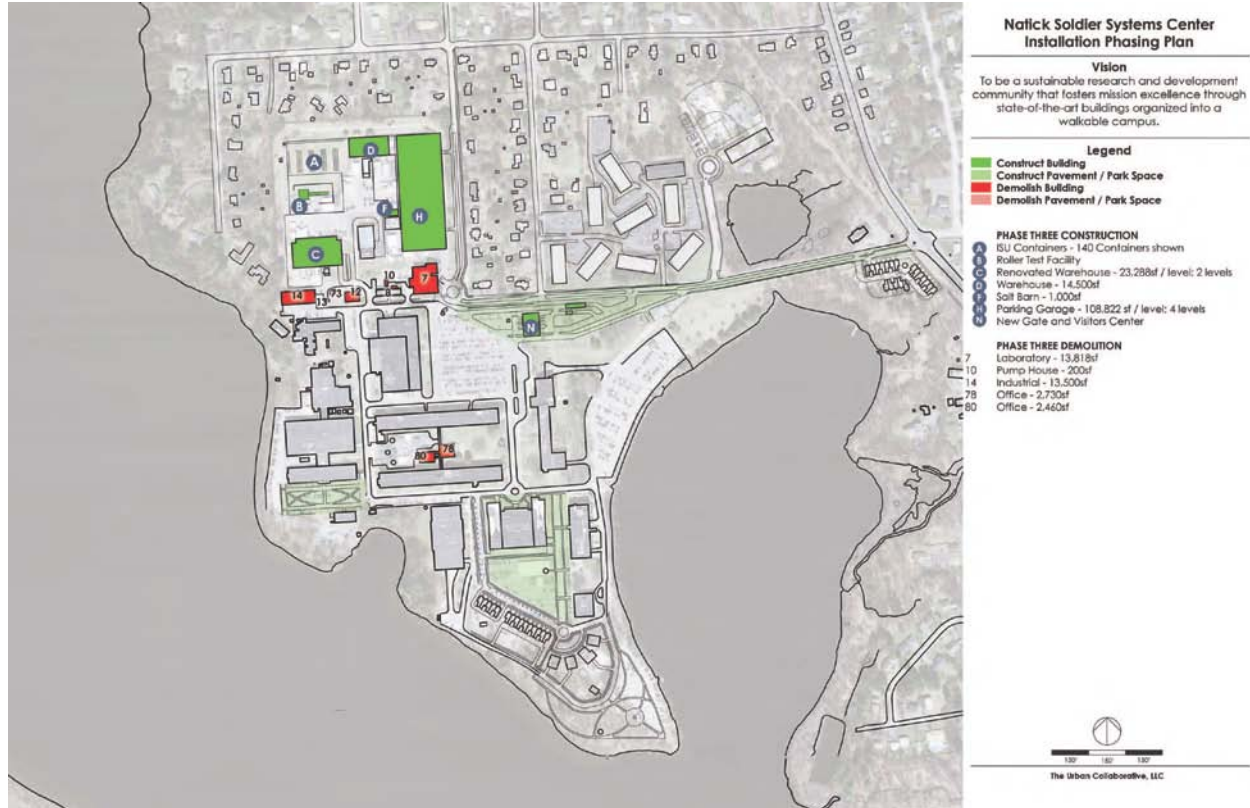
**Recreation Facility/Field/Club (Complex X)** - This project is be located in a previously disturbed area (former housing). It will provide a facility for recreation, a club for installation community activities, as well as a baseball field, basketball court and tennis court. The recreation area will be jointing used by installation personnel and by local community members.

**Rail Trail Connection (Y)** – This is a local effort to develop a bike and pedestrian trail along the abandoned rail line. It is an opportunity for the NSSC to contribute to the greater community of the city of Natick.

### **5.1.3 Phase Three Demolition and Construction Activities**

See Figure 17 for the location of Phase Three Demolition and Construction Activities.

**Figure 17 – Master Plan Demolition and Construction – Phase Three**



Source: 31 August 2011 Natick Soldier Systems Center, Long Range Component prepared by The Urban Collaborative, LLC

**5.1.3.1 Demolition** – Phase Three involves the demolition of seven buildings; Building 7 – Laboratory, Building 10 – Pump House, Building 14 – Industrial, Building 73 – Utility (Flammable Material Storage) and two Offices Buildings (Buildings 78 and 80).

**5.1.3.2 Construction** – Phase Three construction involves the construction of six buildings, an ISU container area and three areas of parklands as described in the following section.

**International Salvage Union (ISU) Containers (Building A)** – There are currently many ISU container in the North Industrial Campus ADP. The space will be used to consolidate the current contain storage needs in an organized and easily accessible layout.

**Roller Test Facility (Building B)** - The roller test facility is an operation requirement of the NSSC consisting of both built space and hardstand requirements.

**Renovated Warehouse (Building C)** - This project involves the construction of a central facility, combining all the storage requirements of each organization, along with general

installation storage. The project should replace several buildings in the North Industrial Campus Area that are in disrepair.

**Warehouse (Building D)** – This warehouse space will serve the purpose of consolidating numerous smaller storage sheds currently scattered in the industrial are of the NSSC.

**Salt Barn (Building F)** – The salt barn will serve as storage and will be located in the North Industrial Campus with easy access within and outside of the installation.

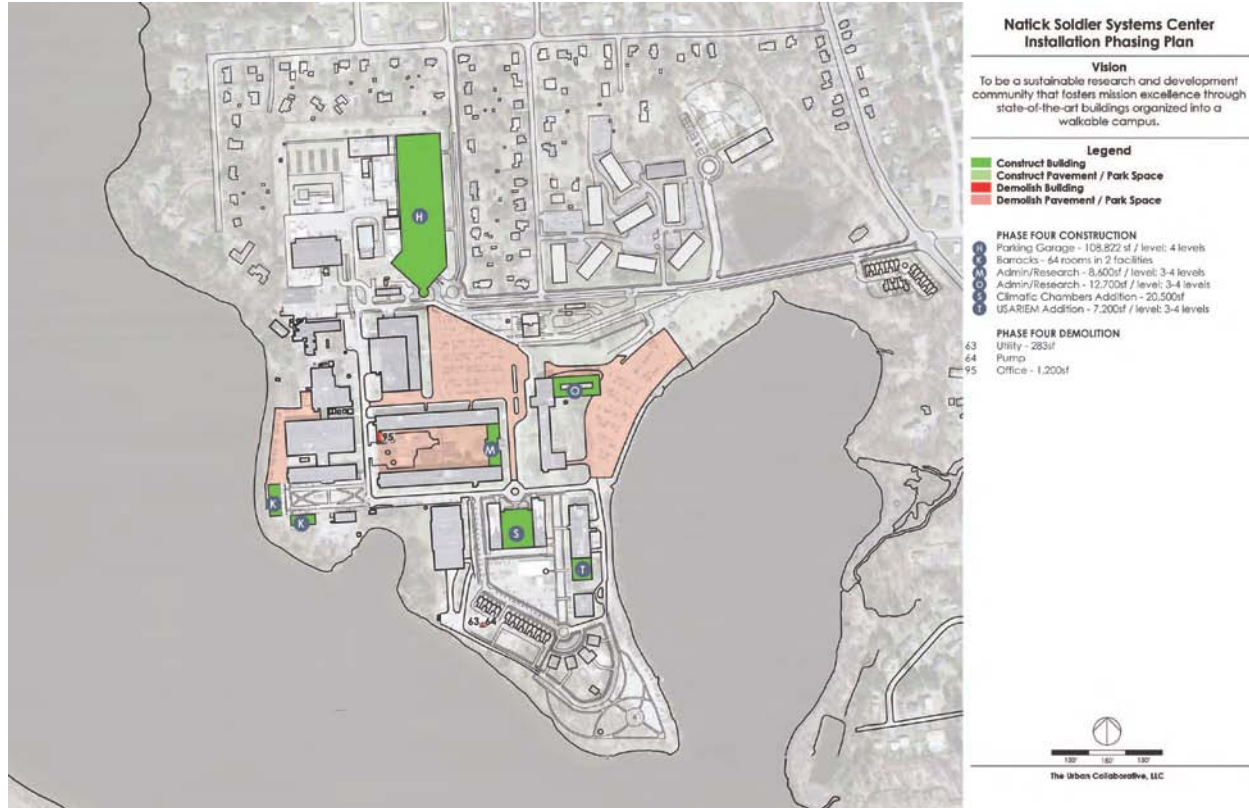
**New Gate Visitor Center Building N)** - This project relocates the installation’s main security gate further west to provide a more secure access to the installation. This project would include dedicated permanent facilities for vehicular inspection and associated pass/id issuance. The main roadway would extend Forth Avenue between the exiting parking lot east of Building 5 and Building 92.

**Parking Garage (Building H)** – This is phase one of the parking garage construction. The parking garage will consolidate the many surface parking lots currently meeting the NSSC’s parking requirements. The parking garage will provide 1,450 spaces.

#### **5.1.4 Phase Four Demolition and Construction Activities**

See Figure 18 for the location of Phase Four Demolition and Construction Activities.

**Figure 18 – Master Plan Demolition and Construction – Phase Four**



Source: 31 August 2011 Natick Soldier Systems Center, Long Range Component prepared by The Urban Collaborative, LLC

**5.1.4.1 Demolition** – Phase Four involves the demolition of one office building (Building 95) and the demolition of three large parking lots (the large area to the east is a grassy area). The area located adjacent to Pegan Cove is an existing open grassy area which will remain to be utilized in the future as a training area.

**5.1.4.2 Construction** - Phase Four construction involves the construction of seven buildings. Four of the construction projects, Building O, T, S and M, involve buildings listed as part of the Quartermaster Research and Development Historic District.

**Parking Garage (Building H)** – This is phase two of the parking garage construction as described in Section 5.1.3.2.

**Barracks (Building K)** – The barracks housing will provide 64 rooms in two separate facilities on the NSSC. The building will be a maximum of 50’ wide to facilitate opportunities for natural ventilation and day lighting. The will be a minimum of 3-stories and maximum of 4-stories. The primary entries to the barracks will be positioned along pedestrian quads to encourage a walkable environment of the Soldiers occupying them.



**Administration/Research (Building M)** - The Administrative/Research Building will provide physical connections to other, adjacent facilities (Building 3 and 4) to facilitate movements between laboratories and offices.

**Administration/Research (Building O)** - The Administrative/Research Facility is an addition to Building 1 which is designated as part of the Quartermaster Research and Development Center Historic District.

**Climatic Chambers (Building S)** - The Doriot Climatic Chamber is a state-of-the-art research facility located in Building 2. It has approximately 38,000 square feet which contains a unique group of climatic chambers used to test equipment, uniforms and personnel in a variety of extreme controlled climatic conditions. The complex consists of two wind tunnels which can generate winds of up to 40 miles per hour (mph), the Tropical Chamber and the Arctic Chamber with temperature ranges of 0°Fahrenheit (F) to 165°F and -70° to 120°F, respectively. Other climatic variable in the chambers include rainfall up to 4 inches per hour and relative humidity for 10% to 90%. The chambers are large enough to accommodate testing of 25 human volunteers, parachutes, test shelters, or other Army equipment.

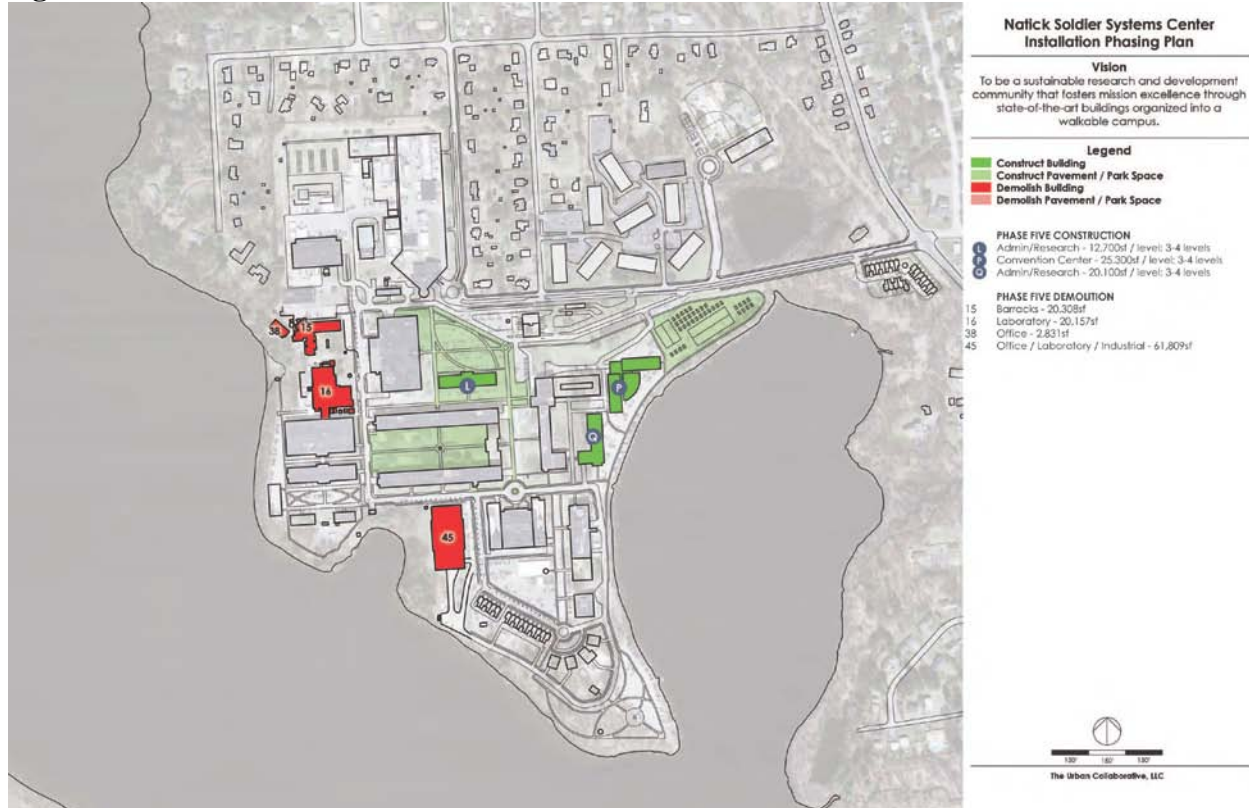
The Doriot Climatic Chambers were constructed in 1954 with upgrades to the facility occurring in 1993 and more recently in 2000. At the present time, some operating systems can no longer be modified or supported due to outdated technologies and must be replaced. Continued maintenance of these facilities is required to ensure their continued viability. This project will expand research and development capabilities and upgrade the facility technologically to meet the current mission needs of the installation.

**USARIEM Addition (Building T)** - The U.S. Army Research Institute of Environmental Medicine (USARIEM) is a subordinate laboratory of the U.S. Army Medical Research and Materiel Command.

### **5.1.5 Phase Five Demolition and Construction Activities**

See Figure 19 for the location of Phase Five Demolition and Construction Activities.

**Figure 19 – Master Plan Demolition and Construction – Phase Five**



Source: 31 August 2011 Natick Soldier Systems Center, Long Range Component prepared by The Urban Collaborative, LLC

**5.1.5.1 Demolition** – Four building will be demolished in Phase 5; Building 15 – Barracks, Building 16 – Laboratory, Building 38 – Office and Building 45 - Office.

**5.1.5.2 Construction** –Phase Five construction involves the construction of two Administrative/Research buildings (Building L and Q) and a Convention Center (Building P). Tents are depicted in the grassy area along the northern end of Pegan Cove; there are no permanent facilities proposed but this area could be used for training purposes. Two open space area will also be constructed in the South Campus Research Area.

**Administration/Research (Building L)** – This building is a notional administration or research facility that will accommodate future missions. It will be a maximum of 50’ wide to provide natural ventilation and day lighting to building occupants. The building will have a minimum of 3-stories and a maximum of 4-stories. The primary entries to the facilities will be positions along primary streets with sidewalks or pedestrian quads to encourage a walkable environment.

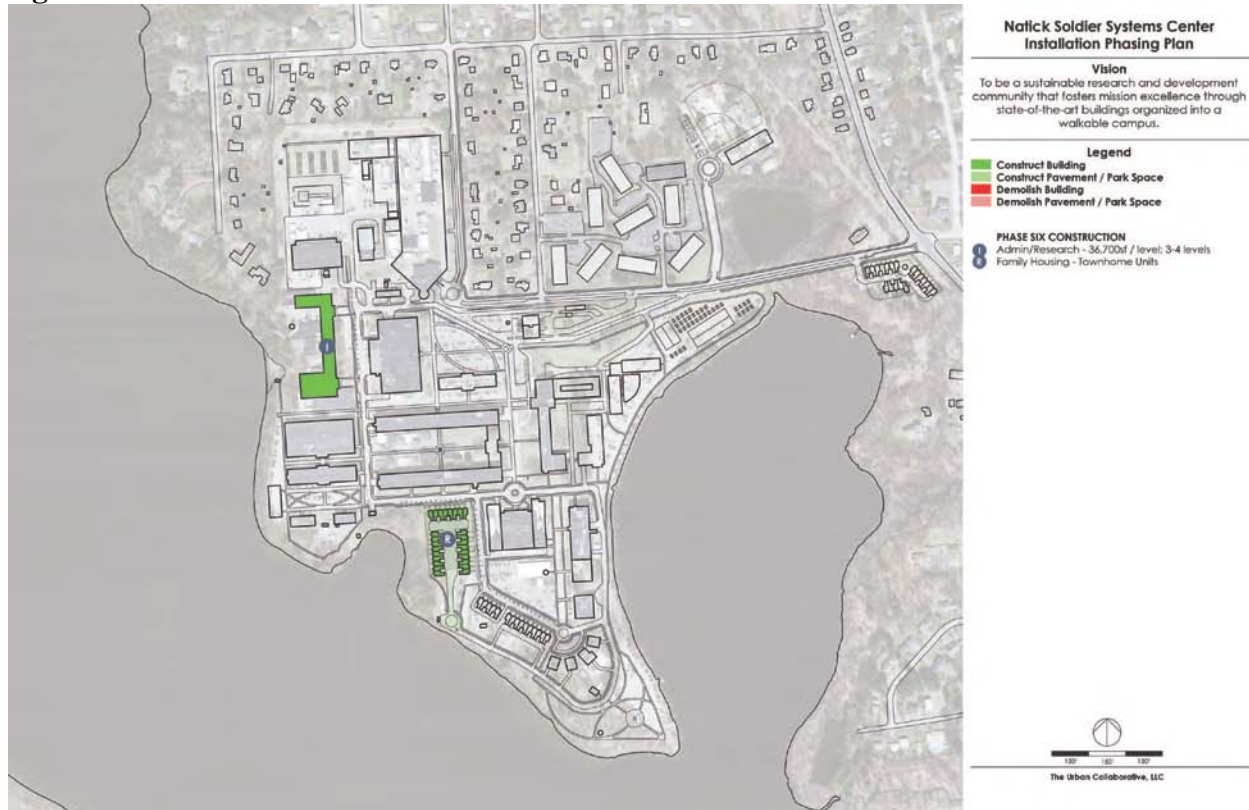
**Convention Center (Building P)** – Similar to Building L

**Administration/Research (Building Q)** Similar to Building L

**5.1.6 Phase Six Demolition and Construction Activities**

See Figure 20 for the location of Phase Six Demolition and Construction Activities.

**Figure 20 – Master Plan Demolition and Construction – Phase Six**



**5.1.6.1 Demolition** – No buildings or parking areas are demolished during Phase 6.

**5.1.6.2 Construction** –Phase Six construction involves the construction of one Administrative/Research buildings (Building I) and a Family Housing Area (Building R).

**Administration/Research (Building I)** – Similar to Building L

**Family Housing - Townhouses (Building R)** – This is Phase 6 of the family housing construction which will provide 60 townhouse units on NSSC. The barracks will be a maximum of 20’ wide with natural light entering through the front and back elevations. Sharing walls will increase energy efficiency and thermal comfort for the residents. However, to comply with anti-terrorism force protection regulations, there will be no more that 12 units with uninterrupted shared walls. They will be a minimum of 2-stories and a maximum of 4-stories. The primary

entries to the units will be positioned along primary streets or facing neighborhood parks with sidewalks to encourage a walkable environment.

## **5.2 Environmental Compliance Overview for Phasing Projects**

The following sections provide an overview of potential environmental compliance requirements for individual projects within the six phases of demolition and construction 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 requirement 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.

**5.2.1 National Environmental Policy Act (NEPA)** – Projects that meet the definition of a Categorical Exclusion (CX), pursuant to 32 CFR 651 Environmental Analysis of Army Actions, 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. In addition, a Record of Environmental Consideration (REC) needs to 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. REC's are prepared for CX's 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. Some projects with known significant environmental impacts or projects of substantial scope may prepare an EIS from the start (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 analyses 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.

**5.2.2 Construction General Permit (CGP)** - Some Master Plan projects may require an US Environmental Protection Agency (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, Operators of regulated construction sites are required to develop a stormwater pollution prevention plan; to implement sediment, erosion, and pollution prevention control measures; and to obtain a GCP from the USEPA (USEPA is the responsible authority in the State of Massachusetts for issuing the CGP (Permit Number MAR120000) (US Environmental Protection Agency 2012). Aside from the GCP permit conditions, the permit for the State of Massachusetts has additional permit conditions as outlined in Appendix D - Part 10: Permit Conditions Applicable to Specific States, Indian Country, or Territories. To comply with these additional permit conditions, 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.). On February 16, 2012, EPA issued the final 2012 CGP. The 2012 CGP replaces the 2008 CGP (which expired on February 15, 2012), and will provide coverage for eligible new and existing construction projects for a period of five years.

**5.2.3 Section 404 of the Clean Water Act** - Section 404 of the Clean Water Act program establishes regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USEPA and the U.S. Army Corps of Engineers 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 the Army Corps of Engineers, New England District Regulatory Division. The effective date of the MA PGP is January 21, 2010 to January 21, 2015.

**5.2.4 Compliance with Remedial Action Land Use Controls (LUCs)** – 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 current LUCs for construction activities conducted over groundwater contamination plumes at the NSSC which would affect Master Plan projects. However, 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.

**5.2.5 Compliance with State and Local Regulations** - Portions of the NSSC are designated as Natural Heritage and Endangered Species Program (NHESP) Priority Habitat 200 (PH200) and Estimated Habitat 95 (EH 95) for Eastern Pondmussle (*Ligumia nasuta*). 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 the existing footprints, 321 CMR 10.00 provides exemptions from the established review procedures as specified in Section 10.14: Exemptions from Review for Projects or Activities in Priority Habitat. Work outside of the scope of an established exemption will involve project review by the Natural Heritage and Endangered Species Program (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 projects located with Priority and Estimated Habitat, the NSSC coordinates with the NHESP to confirm exemptions or determine best management practices for the protection of the Eastern Pondmussle. Prior to initiating Phasing, project located within Priority Habitats should be located (see Figure 13 – Natural Heritage and Endangered Species Program Priority Habitats) to determine coordination requirements.

The Massachusetts Wetland Protection Act (WPA) gives town Conservation Commissions the discretionary authority to determine if resource areas within its jurisdiction (100 foot wetland buffer zone) are being protected, to regulate work in these areas, and to enforce the 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 located within the 100 foot jurisdictional boundary (see Figure 12 – Wetland Delineation and Setbacks) to determine coordination requirements.

### **5.3 Environmental Impacts of the Long Range Component**

This section provides a general review of the Long Range Component projects conducted in Phase One through Five. These projects should be reviewed for environmental compliance once more specific and timely information is available for individual projects. Environmental compliance may be able to be conducted by Phase is enough information is available for each project within a Phase.

#### **5.3.1 Phase One Demolition and Construction Activities**

**5.3.2.1 Demolition** - Projects that do not involve impacts to sensitive resource areas may be covered by a CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC required). Buildings 33, 34, 40 and the parking (storage lot) demolition are located within NHESP Priority Habitat and as such, the NSSC shall coordinate with the NHESP, as a matter of comity, to determine protection measures. None of these demolition projects are identified as historic buildings.

**5.3.2.2 Construction** - Construction projects that do not involve impacts to sensitive resource areas may be covered by a CX in 32 CFR 651 Appendix B - Section II (c) (1) (REC required).

An Environmental Assessment (EA) will need to be prepared for the High Velocity Impact Lab (HVIL) (Building G) project due to its substantial size and scope. The EA will need to incorporate the recent expansion of the project to include a second firing range, incorporate the results of a noise study to determine ambient conditions and noise impacts to an adjacent residential neighborhood (the building is designed to contain the noise generated from a 50 caliber firing test.) There was also an Industrial hygienist study to determine amount of air flow to remove gun powder from the building interior to meet appropriate standards. The design should also include explosive material storage (up to 3 pounds) in compliance with Army Regulations within the building interior.

### **5.3.2 Phase Two Demolition and Construction Activities**

**5.3.2.1 Demolition** - An environmental evaluation should be conducted prior to the demolition of Building 25, 89, and 93 which are used for Low Radiation or Hazardous Waste Storage. Many of these demolition projects may be covered by a CX in 32 CFR 651 Appendix B - Section II (c) (2) however, due to the variability of the buildings in the Phase 2, these projects should be evaluated to determine the environmental compliance requirements. The demolition of three parking areas and the ball field in Phase Two will probably require a GCP from the USEPA as this work will impact an acre or more of area. None of these demolition projects are identified as historic buildings.

**5.3.2.2 Construction** – Construction projects that do not involve impacts to sensitive resource areas may be covered by a CX in 32 CFR 651 Appendix B - Section II (c) (1). The Phase 2 construction of the Family Housing (Building R), the Recreation Facility/Field/Club (Complex X) and the Rail Trail Connection (Y), located in the Eastside Recreation and Housing area, are located in a previously disturbed area (former housing area and railroad bed). However, prior to project construction, compliance with Section 404 of the Clean Water Act should be evaluated due to its adjacency to wetland areas. Projects in this area are also within the jurisdiction of the Ma Wetland Protection Act (within 100 feet of a wetland) and local Conservation Commission.

The Family Housing (Building U) and Clock Tower (Building V) are located in a previously disturbed area (community center, bath house and pool area). However, this area is located with a Natural Heritage and Endangered Species Program (NHESP) Priority Habitat. Some of the work within the parklands within 100 feet of Lake Cochituate is within the jurisdiction of the Ma Wetland Protection Act local Conservation Commission. The need for a General Construction Permit (CGP) should also be determined because the cumulative impacts from the construction of two family housing areas and parklands will be an acre or more of disturbance.

### **5.3.3 Phase Three Demolition and Construction Activities**

**5.3.3.1 Demolition** - Building 7 is listed as a historic building within the Quartermaster Research and Development Historic District. If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC required).

**5.3.3.2 Construction** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (1) (REC required). The construction projects in Phase 3 are not located within close proximity to wetland resources with the exception of the main access road (Kansas Street) located between Lake Cochituate and Little Roundy Pond which is within the jurisdiction of the NHESP and the local Conservation Commission. The need for a CGP from the USEPA will need to be evaluated when construction details are available for parkland construction.

### **5.3.4 Phase Four Demolition and Construction Activities**

**5.3.4.1 Demolition** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC required). No historic building will be impacted by No Phase 4 demolition projects. A portion of the parking lot along the west side of the NSSC is located within Priority Habitats which will involve coordination with the NHESP. As well, the open land adjacent to Pegan Cove is located within 100 feet of a wetland which will involve coordination with the local Conservation Commission. In addition, the demolition of parking areas will result in a disturbance to more than an acre and as such, will require a CGP from the USEPA prior to demolition activities.

**5.3.4.2 Construction** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC Required). One of the barracks (Building K) is located within Priority Habitat and as such, coordination with the NHESP should be undertaken prior to construction.

The Doriot Climatic Chambers (Building S) upgrade project was reviewed in accordance with 32 CFR 651.29 screening criteria and was determined to qualify for Categorical Exclusion (c) (2) 32 CFR 651: construction and demolition and a Record of Environmental Consideration (REC) was signed by installation personnel on **BLANK DATE**. This building is also designated as part of the Quartermaster Research and Development Center Historic District. In addition, the U.S. Army Research Institute of Environmental Medicine (USARIEM) (Building T) involves the construction activities that may impact Building 42, the Administration/Research (Building M) project which will provide physical connections to other, adjacent facilities (Buildings 3 and 4), and Administration/Research (Building O) will attach to Building 1. Buildings 1, 3, 4, and 42 are part of the Quartermaster Research and Development Historic District and will be affected by Phase 4 construction projects. It is anticipated that this activity will be covered by the upcoming Programmatic Agreement.



### **5.3.5 Phase Five Demolition and Construction Activities**

**5.3.5.1 Demolition** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC required). Building 38 is located within the jurisdiction of the local Conservation Commission. In addition, Buildings 15 and 16 are listed as part of the Quarter Master Research and Development Historic District. It is anticipated that this activity will be covered by the upcoming Programmatic Agreement.

**5.3.5.2 Construction** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC Required). Administrative/Research buildings (Building Q), the Convention Center (Building P) and open space training area (located adjacent to Pegan Cove) are located within the jurisdiction of the local Conservation Commission. The open space training area is also located within Priority Habitats.

### **5.3.6 Phase Six Demolition and Construction Activities**

**5.3.6.1 Demolition** – No buildings or parking areas are demolished during Phase 6.

**5.3.6.2 Construction** - If no extraordinary circumstances are identified, these projects may be covered by CX in 32 CFR 651 Appendix B - Section II (c) (2) (REC Required). Phase 6 construction projects are located in previously disturbed areas and therefore, no impact to sensitive resources is anticipated.

## **6.0 OTHER COMPLIANCE REQUIREMENTS**

### **6.1 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.

### **6.2 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 the construction phase of the proposed project, heavy construction equipment and vehicles will be transported to the site. However, the construction area is located on U.S. Army property which limits access for the general public and would therefore 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 road and increased traffic will be of short duration and temporary. Therefore, the proposed project is not expected to cause any disproportionate direct, or indirect or cumulative environmental health or safety risks to children.

### **6.3 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 Insurance Rate Map (FIRM) Panel (dated 4 June 2010) does not include a determination of the floodplain for the NSSC area. The FIRM Panel (Number 536 of 656) categorizes the NSSC property as Zone D which is defined as “Areas in which flood hazards are undetermined, but possible” and Lake Cochituate is categorized as a Zone A which is defined as “No Base Flood Elevation determined”. In the absence of such maps, the best available information may be used to determine the location of the floodplain according to Executive Order No. 11988.

Floodplain maps were prepared for the Town of Natick as part of a drainage study in 1979 (Coffin & Richardson 1979). 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 and narrow area around Little Roundy Pond (see Floodplain Maps – Appendix E).

The surface water elevation of Lake Cochituate is controlled by the Lake Cochituate Dam which is located at the northern end of the lake in Framingham. The dam was built in 1920 and is controlled by the Massachusetts Department of Conservation and Recreation (MA DCR) for recreation purposes. Based upon a personnel communication with the dam operator (conversation with Tim Murphy, Cochituate State Park on May 4, 2011), the management of the dam has remained consistent over the last few decades. For comparison purposes, the MA DCR 2004 Lake Cochituate Dam Emergency Action Plan cites the surface elevation of Lake Cochituate to be 137.9 feet NGVD29 and the United State Geological Survey (USGS) Framingham Quadrangle dated 1987 (topographic map) cites an elevation for Lake Cochituate of 42.0 NGVD88 (which is equivalent to 137.8 NGVD29).

Although these elevations are slightly higher (a range of 2.5 to 3.3 inches) than the 1979 Coffin and Richardson study, this difference is not expected to alter the 100-floodplain to a large degree due to the steep topography of the NSSC area. Although the capacity of Lake Cochituate

to absorb runoff cannot be assumed, the large size of Lake Cochituate (625 acres in size) would be likely attenuate increased runoff due to urbanization in the watershed to some degree. As such, the floodplain boundaries identified in the 1979 Coffin & Richardson study were adequate for use in defining floodplain impacts for the proposed Master Plan. There are no projects proposed in the Master Plan that will impact the floodplain. However, modifications to current plans which result in changes to the topography of the NSSC at or below elevation 140.0 NGVD29 will need to be reevaluated in accordance with Executive Order No. 11988 Floodplain Management.

#### **6.4 Clean Air Act Conformity**

Section 176 (c) of the Clean Air Act (CAA) requires that Federal agencies assure that their activities are in conformance with Federally-approved CAA state implementation plans for geographic areas designated as non-attainment and maintenance areas under the CAA. The U. S. Environmental Protection Agency (USEPA) General Conformity Rule to implement Section 176 (c) is found at 40 CFR Part 93. Clean Air Act compliance, specifically with the USEPA's General Conformity Rule, requires that all Federal agencies, review new actions and decide whether the actions would worsen an existing National Ambient Air Quality Standards (NAAQS) violation, cause a new NAAQS violation, delay the State Implementation Plan (SIP) attainment schedule of the NAAQS, or otherwise contradict the State's SIP. However, in accordance with 40 CFR § 93.153(c) 2 (xii), Federal actions involving planning, studies and provision of technical assistance are considered actions that "would result in no emissions increase or an increase in emission that is clearly de minimis" and as such, a review under the General Conformity Rule of the Master Plan is not required. A Record of Non-Applicability (RONA), signed by the facility environmental coordinator, is attached to document this exemption.

With regard to individual construction and operation projects as discussed in the NSSC Master Plan, some projects may be exempt from the preparation of a conformity review pursuant to CRF § 93.153 (c) and (d) (e.g., CRF § 93.153 (c) (iv) Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails and facilities). If the Federal action is not eligible for an exemption, a general conformity review should be conducted. Calculations of the worst-case project specific emissions of VOCs and NO<sub>x</sub> would need to be prepared to determine whether project emissions exceed the General Conformity Trigger Levels and if the project is regionally significant. A project would be considered regionally significant if its emissions exceed 10% of the state's total emissions budget for the criteria pollutants (40 CFR 93.153 (i)). If a project is under the General Conformity Trigger Levels and is not regionally significant, a RONA would be prepared and signed by the facility environmental compliance coordinator. If individual Master Plan projects exceed these thresholds, then a full general conformity determination would need to be prepared.

In addition, the NSSC is currently subject to permitting for the operation of the boiler plant. Pursuant to 310 CMR 7.00 , the NSSC is regulated under a 50% rule cap for NO<sub>x</sub> and SO<sub>x</sub> pollutants facility wide and must maintain past 5-year fuel usage records, emission records

for past 24 months emission to demonstrate compliance. When new equipment is installed, the NSSC needs to track whether 50% cap for NOX and SOx is exceeded. In addition, the NSSC facility is currently operating close to the Massachusetts annual threshold from CO2 emissions (i.e. 5,000 tons versus the federal limit of 25,000 tons). Prior to the implementation of Master Plan project construction, the NSSC will need to determine is new projects could trigger addition reporting or other state related global warming requirements.

### 6.5 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 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 housing onto the installation, provides a consolidated industrial area, 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 footprint of previous NSSC installation. Therefore, no negative cumulative impacts are anticipated as a result of the proposed project.

### 7.0 LIST OF PREPARERS

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

Name	Title	Education/Responsibility	Experience
Judith L. Johnson	Biologist	B.S. Wildlife Biology. Responsible for the NEPA document preparation	31 years
Kathleen A. Atwood	Archaeologist	M.A. Responsible for compliance with National Historic Preservation Act	24 years

### 8.0 COORDINATION

The focus of the Master Plan process was to garner as much collaboration and information from stakeholders while developing design requirement and solutions. The Urban Collaborative, Inc design team held design programming workshops on 9-10 November 2009 and 16-17 November 2009 with stakeholders from the NSSC and Town of Natick.

A Notice of Availability of the Draft Environmental Assessment (EA) was published in local newspapers (see Appendix B). Copies of the Draft EA, Finding of No Significant Impact (FONSI) and Record of Non-Applicability (RONA) will be available on the U.S. Army Soldier Systems Center webpage, and at the local libraries. The Notice of Availability of the Draft EA, FONSI and RONA will also be sent to Federal, state and local agencies with interest or jurisdiction with the project. Coordination was undertaken with the agencies listed below during the planning process or through the Public Notice process (see Appendix A for letters of response). Comments received during the 30-day public comment period will be reviewed and incorporated into the final EA as necessary.

**Federal**

U.S. Fish and Wildlife Service  
U.S. Environmental Protection Agency  
U.S. Natural Resources Conservation Service

**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  
    Massachusetts Natural Heritage and Endangered Species Program  
Massachusetts Executive Office of Energy and Environmental Affairs  
    Massachusetts Environmental Policy Act (MEPA) Office  
Massachusetts Historic Preservation Office

**Local**

Town of Natick – Town Administrator and Selectmen Office  
Restoration Advisory Board (RAB)

**Tribes**

Wampanoag Tribe of Gay Head (Aquinnah)

**9.0 COMPLIANCE WITH ENVIRONMENTAL FEDERAL STATUTES AND EXECUTIVE ORDERS**

Federal Statutes

1. Archaeological Resources Protection Act of 1979, as amended, 16 USC 470 et seq.

Compliance: Issuance of a permit from the Federal land manager to excavate or remove archaeological resources located on public or Indian lands signifies compliance.

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

Compliance: Project has been coordinated with the State Historic Preservation officer. Impacts to archaeological resources will be mitigated.

3. 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 ceremonies and traditional rites.

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

Compliance: In accordance with 40 CFR 93.153(c) 2 (xii), Federal actions involving planning, studies and provision of technical assistance are considered actions that “would result in no emissions increase or an increase in emission that is clearly de minimis” and as such, a General Conformity review of Master Plan Environmental Assessment is not required. However, future construction and operation projects (as discussed in the Master Plan) will need to be assessed under the General Conformity Rule prior to project implementation.

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

Compliance: Not Applicable; project does not involve the discharge of dredged or fill material into a water of the U.S. However, individual projects located within the Eastside Housing and Recreation Area will need further assessment to determine compliance with the Clean Water Act prior to construction.

6. 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.

7. 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) consultation website determined no formal consultation requirements pursuant to Section 7 of the Endangered Species Act were required.

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

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

9. 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.

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

Compliance: Projects are exempt include “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).

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

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

Compliance: Due to the topography of the Natick Soldier Systems Center property, the floodplain is limited to a narrow area along the property periphery. The projects proposed in the Master Plan are not located within the 100 year floodplain.

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

Compliance: Not applicable.

19. 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 project 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: Coordination with the Natural Resources Conservation Service has yielded a determination that the NSSC is urban land and as such is 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.

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## **11.0 LIST OF ACRONYMS**

AR – Army Regulation  
AT/FP – Antiterrorism Force Protection  
EA - Environmental Assessment  
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  
FIRM – Federal Insurance Rate Map  
FONSI – Finding of No Significant Impact  
FPPA - Farmland Protection Policy Act  
GIS – Geographic Information System  
IMA - Installation Management Agency  
ISU – International Salvage Union  
LRC - Long Range Component  
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  
MOUT - Military Operation in Urban Terrain  
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 Byphenyls  
PEO – Program Executive Office  
REC – Record of Consideration  
ROD – Record of Decision  
RONA – Record of Non-Applicability  
RPMP – Real Property Master Plan  
SIP – State Implementation Plan  
SSCOM - U.S. Army Soldier Systems Command  
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

**RECORD OF NON-APPLICABILITY (RONA)**

**GENERAL CONFORMITY - RECORD OF NON-APPLICABILITY**

Project/Action Name: Natick Soldier Systems Center Master Plan

Project/Action Point of Contact: *Judith Johnson, USACE Biologist*  
*Phone: 978-318-8138*

Begin Date: *blank*

End Date: *blank*

In accordance with 40 CFR § 93.153(c) 2 (xii), Federal actions involving planning, studies and provision of technical assistance are considered actions that “would result in no emissions increase or an increase in emission that is clearly de minimis” and as such, a General Conformity review of the Master Plan Environmental Assessment is not required.

Date: \_\_\_\_\_

Signed: \_\_\_\_\_

John McHugh  
Natick Labs CIV USA IMCOM  
Director, Environmental & Safety

## Appendix A – Building Inventory



Source: 17 December 2010 Natick Soldiers Systems Center, Area Development Plans prepared by The Urban Collaborative, LLC

### North Campus Industrial Building Inventory

Building Number	Building Name	Type
7	Prendergast Building	Laboratory
8	Nee Building	Industrial
10	Pump House	Utility
12	Former Electrical Substation (concrete pad and fence remain)	Utility
14	Burt Building	Industrial
13		
20	Warehouse	Office/Industrial
24	Small Building (temporary)	Storage
26	Small Building (temporary)	Storage
27	Small Building (temporary)	Storage
T-25	Hazardous Waste Storage Area	Storage
44	Administrative	Administrative
62	Environmental Store House	Utility
66	Roller Test	Research
68	Environmental Store House	Storage
72	Small Building	Storage
73	Flammable Material Storage	Utility
75	Connex Storage (No Structure)	Storage
77	Combustion Test Facility	Research
79	Salt Shed	Storage
81	Drop Test Tower	Research
85	Shed	Storage
93	Hazardous Waste Acclimation	Storage
94	Pumping Facility	Groundwater Remediation
110	Uoellette Thermal Test	Research
111	PM-FSS Building	Fabrication

## Housing Building Inventory

Building Number	Building Name	Type
46 to 60 (Note: Building 60 was removed in 2010)	Housing	Family Housing

## South Campus Research Building Inventory

Building Number	Building Name	Type
1	Carney Hall	Office/Commercial
2	Doriot Climate Chambers	Laboratory
3	MacGillivray Hall	Office
4	MacArthur Hall	Office
5	Whittlesey Building	Laboratory
15	Johnson Barracks and DFAC	Barracks
16	Beaudoin Building	Laboratory
18		
19	Boiler House	Industrial
22	Concrete Block Building	Former Hazardous Material Storage
30	Murphy Clinic	Office
32	Lord Community Center	Commercial
33	Pool	Recreation
34	Former Wading Pool (filled with concrete)	Recreation
36	Bainbridge Building	Office/Laboratory
38	Hall Building	Office
39	Main Gate	Gate House
40	Bath House	Special Use
42	Wood Building	Office/Laboratory
45	Barnes Building (PWB)	Office/Laboratory/ Industrial
63	Shed	Utility
64	Electrical Transformer	Utility
71	Flagpole	Flagpole

78	Tobin Building	Office
80	Vittori Building	Office
86	Search Building	Office/Laboratory
89	Low Level Radiation Storage	Industrial
92	Gifford Building	Training (future)
95	Central Chemical Issue	Office
112	Trailer	Lab

Appendix B – Correspondence Received



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

New England Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5087  
<http://www.fws.gov/newengland>

January 3, 2011

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>)

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman  
Supervisor  
New England Field Office



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne E. MacCallum, Director

July 06, 2011

Judith Johnson  
US Army Corps of Engineers  
696 Virginia Road  
Concord MA 01742-2731

RE: Project Location: 15 Kansas Street Natick Soldier Systems Center  
Town: NATICK  
NHESP Tracking Num: 11-29634

To Whom It May Concern,

Thank you for contacting the Natural Heritage and Endangered Species Program ("NHESP") of the MA Division of Fisheries & Wildlife for information regarding state listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located within *Priority Habitat 200* (PH 200) and *Estimated Habitat 95* (EH 95) as indicated in the *Massachusetts Natural Heritage Atlas (13th Edition)*. Our database indicates that the following state listed rare species have been found in the vicinity of the site:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Ligumia nasuta</i>	Eastern Pondmussel	Mussel	Special Concern

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website ([www.nhesp.org](http://www.nhesp.org)).

Please note that projects and activities located within *Priority and/or Estimated Habitat*, must be reviewed by the NHESP for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

#### **Wetlands Protection Act (WPA)**

If the project site is within *Estimated Habitat* and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the NHESP so that it is received at the same time as the local conservation commission. If the NHESP determines that the proposed project will adversely affect the actual *Resource Area* habitat of state-protected wildlife, then the proposed project may not be permitted (10 CMR 10.27, 10.38(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the NHESP to discuss potential project design modifications that would avoid adverse effects to rare wildlife habitat.

A streamlined joint MESA/WPA review process is available. When filing a Notice of Intent (NOI), the applicant may file concurrently under the MESA on the same NOI form and qualify for a 30-day streamlined joint review. For a copy of the NOI form, please visit the MA Department of Environmental Protection's website: <http://www.mass.gov/dep/water/approvals/wpaform3.doc>.

[www.masswildlife.org](http://www.masswildlife.org)

#### **Division of Fisheries and Wildlife**

Field Headquarters, North Drive, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7889  
An Agency of the Department of Fish and Game

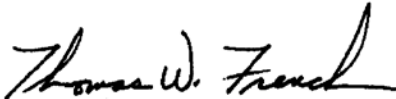
**MA Endangered Species Act (MESA)**

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be sent to NHESP Regulatory Review to determine whether a probable "take" under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). For a MESA filing checklist and additional information please see our website: [www.nhesp.org](http://www.nhesp.org) ("Regulatory Review" tab).

We recommend that rare species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to rare species and their habitats is likely to expedite endangered species regulatory review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If you have any questions regarding this letter please contact Amy Coman-Hoenig, Endangered Species Review Assistant, at (508) 389-6364.

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is written in a cursive, flowing style.

Thomas W. French, Ph.D.  
Assistant Director



**The Commonwealth of Massachusetts**

William Francis Galvin, Secretary of the Commonwealth  
Massachusetts Historical Commission

October 4, 2011

H. Farrell McMillan  
Chief  
Engineering/Planning Division  
U.S. Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742-2751

Attn: Kate Atwood

RE: Natick Soldier Systems Center (SSC) Draft Integrated Cultural Resources Management Plan,  
Natick, MA. MHC # RC.42510. PAL# 2413. CNAE Contract #W912WJ-09-D-0001-36.

Dear Mr. McMillan:

Thank you for the opportunity to review the report, *Natick Soldier Systems Center Integrated Cultural Resource Management Plan, Natick, Massachusetts, Contract No. W912WJ-09-D-0001-36*, submitted to the Massachusetts Historical Commission, received September 19, 2011, for the project referenced above.

MHC has no substantive comments on the report. The report is well written and may assist the Corps in the refinement of the cultural resource management portion of the facilities master plan update. The results of the archival documentation and archaeological survey provide important information on the ancient and modern uses of the property. If the draft is revised, please send a copy of the final version.

MHC looks forward to continued consultation, and to reviewing the additional information referenced in your cover letter, including the draft Programmatic Agreement, for future developments at the facility.

These comments are provided to assist in compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Fed. Reg. 190(1983)). If you have any immediate questions please contact Jonathan K. Patton at this office.

Sincerely,

Brona Simon  
State Historic Preservation Officer  
Executive Director  
State Archaeologist  
Massachusetts Historical Commission

cc: Deborah C. Cox, PAL, Attn: Jennifer Banister

220 Morrissey Boulevard, Boston, Massachusetts 02125  
(617) 727-8470 • Fax: (617) 727-5128  
[www.sec.state.ma.us/mhc](http://www.sec.state.ma.us/mhc)



**Appendix C - 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 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 U.S. Army Natick Soldier Systems Center Master Plan located in Natick, Massachusetts.

The most recent Army Natick Soldier Systems Center (NSSC) Real Property Master Plan, Long Range Component (LRC), is dated February 2004 and is currently being updated. The Master Plan document serves as a guide for coordination of project development and management of all land and water resources on an Army installation. Master Plan project development provides for adequate Force Protection/Anti-Terrorism 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 and 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 Plans is 20 years with periodic updates and revisions as installation change dictates 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).

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

The Draft EA and Finding of No Significant Impact (FONSI) will undergo a 30-day public comment period, from **BLANK** through **BLANK**. 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, FONSI and RONA can be accessed on the U.S. Army Corps of Engineers, New England District website at: **BLANK** and the U.S. Army Natick Soldier Systems Center website at: **BLANK WITH INSTRUCTIONS**

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

Bacon Free Library  
58 Elliot 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. Judith Johnson  
U.S. Army Corps of Engineers  
Evaluation Branch  
696 Virginia Road  
Concord, Massachusetts 01742-2751  
fax: (978) 318-8560  
e-mail: judith.l.johnson@usace.army.mil

**Appendix D - Construction General Permit (CGP) Part 10: Permit  
Conditions Applicable to Specific States**

**D**

**8.2 Water Quality Protection**

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 2.6 of this permit, or the permit may be modified to include different limitations and/or requirements.

**8.3 Timing of Permit Modification**

EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

**PART 9: STANDARD PERMIT CONDITIONS**

The federal regulations require that the Standard Conditions provisioned at 40 CFR §122.41 be applied to all NPDES permits. You are required to comply with those Standard Conditions, details of which are provided in Appendix G.

**PART 10: PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY, OR TERRITORIES**

The provisions of this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and federal facilities. States, Indian country, and federal facilities not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

**A. Region 1**

1. MAR100000: Commonwealth of Massachusetts, except Indian country
  - a. State Water Quality Statutes, Regulations, and Policies:
    - i. You must comply with the Massachusetts Clean Waters Act (Ch. 21, ss. 26-53).
    - ii. You must comply with the conditions in 314 CMR 4.00 - Surface Water Quality Standards.
    - iii. You must comply with the conditions in 314 CMR 3.00 - Surface Water Discharge Permit Program.
    - iv. You must comply with the Wetlands Protection Act, Ch. 131, s. 40 and its regulations, 310 CMR 10.00 and any order of Conditions issued by a Conservation Commission or a Superseding Order of Conditions issued by the Massachusetts Department of Environmental Protection.

- b. Department of Environmental Protection Storm Water Management Policy:
  - i. You must comply with the Massachusetts Storm Water Management Policy, and applicable Storm Water Performance Standards, as prescribed by state regulations promulgated under the authority of the Massachusetts Clean Waters Act, MGL Ch. 21, ss. 26-53 and the Wetlands Protection Act Ch. 131, s. 40.
- c. Other State Environmental Laws, Regulations, Policies:
  - i. You must comply with the Massachusetts Endangered Species Act [MESA] (MGL Ch. 313A and regulations at 321 CMR 10.00) and any actions undertaken to comply with this storm water permit, shall not result in non-compliance with the MESA.
  - ii. You must not conduct activities under this permit that will interfere with implementation of mosquito control work conducted in accordance with Chapter 252 including, s. 5A thereunder and MassDEP Guideline Number BRP G01-02, West Nile Virus Application of Pesticides to Wetland Resource Areas and Buffer Zones, and Public Water Systems.
- d. Other Department Directives:
  - i. The Department may require you to perform water quality monitoring during the permit term if monitoring is necessary for the protection of public health or the environment as designated under the authority at 314 CMR 3.00.
  - ii. The Department may require you to provide measurable verification of the effectiveness of BMPs and other control measures in your management program, including water quality monitoring.
  - iii. The Department has determined that compliance with this permit does not protect you from enforcement actions deemed necessary by the Department under its associated regulations to address an imminent threat to the public health or a significant adverse environmental impact which results in a violation of the Massachusetts Clean Waters Act, Ch. 21, ss. 26-53.
  - iv. The Department reserves the right to modify the 401 Water Quality Certification if any changes, modifications or deletions are made to the general permit. In addition, the Department reserves the right to add and/or alter the terms and conditions of its 401 Water Quality Certification to carry out its responsibilities during the term of this permit with respect to water quality, including any revisions to 314 CMR 4.00, Surface Water Quality Standards.
- e. Permit Compliance
  - i. Should any violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or the conditions of this certification occur, the Department will direct you to correct the violations(s). The Department has the right to take any action as authorized by the General Laws of the Commonwealth to address the violation of this permit or the MA Clean Waters Act and the regulations promulgated thereunder. Substantial civil and criminal penalties are authorized under MGL Ch. 21, s. 42 for discharging into Massachusetts' waters in violation of an order or permit issued by this Department. This

certification does not relieve you of the duty to comply with other applicable Massachusetts statutes and regulations.

2. NHR100000: State of New Hampshire
  - a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for a "Significant Alteration of the Terrain Permit from DES pursuant to RSA 485-A:17 and Env-Ws 415. This requirement applies to the disturbances of only 50,000 square feet when construction occurs within the protected shoreline (see RSA 483-B and Env-Ws 1400).
  - b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-storm water discharge under this permit (see Subpart 1.3.B). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the discharge. Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://www.des.state.nh.us> (One Stop Data Retrieval, Onestop Master Site Table). The web site also provides E-mail access to an NHDES Site Remediation Contact to answer questions about using the Web site.
  - c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at a location prior to mixing with storm water at least once per week during weeks when discharges occur. The samples must be analyzed for total suspended solids (TSS) and must meet monthly average and maximum daily TSS limitations of 50 milligrams per liter (mg/L) and 100 mg/L, respectively. TSS (a.k.a. Residue, Nonfilterable) analysis and sampling must be performed in accordance with Tables IB (parameter, units and method) and II (required containers, preservation techniques and holding times) in 40 CFR 136.3 (see: [http://www.access.gpo.gov/nara/cfr/waisidx\\_02/40cfr136\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr136_02.html)). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
  - d. During site design and preparation of the storm water pollution prevention plan (SWPPP), you must consider opportunities for groundwater recharge using on-site infiltration. The SWPPP must include a description of any on-site infiltration that will be installed as a post construction storm water management measure (see Subpart 3.4.E) or reasons for not employing such measures. For design considerations for infiltration measures see the September 2001 DES publication titled "Managing Storm Water as a Valuable Resource" which is available online at: <http://www.des.state.nh.us/StormWater/construction.htm>. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures wherever feasible.

B. Region 2 – No additional requirements.

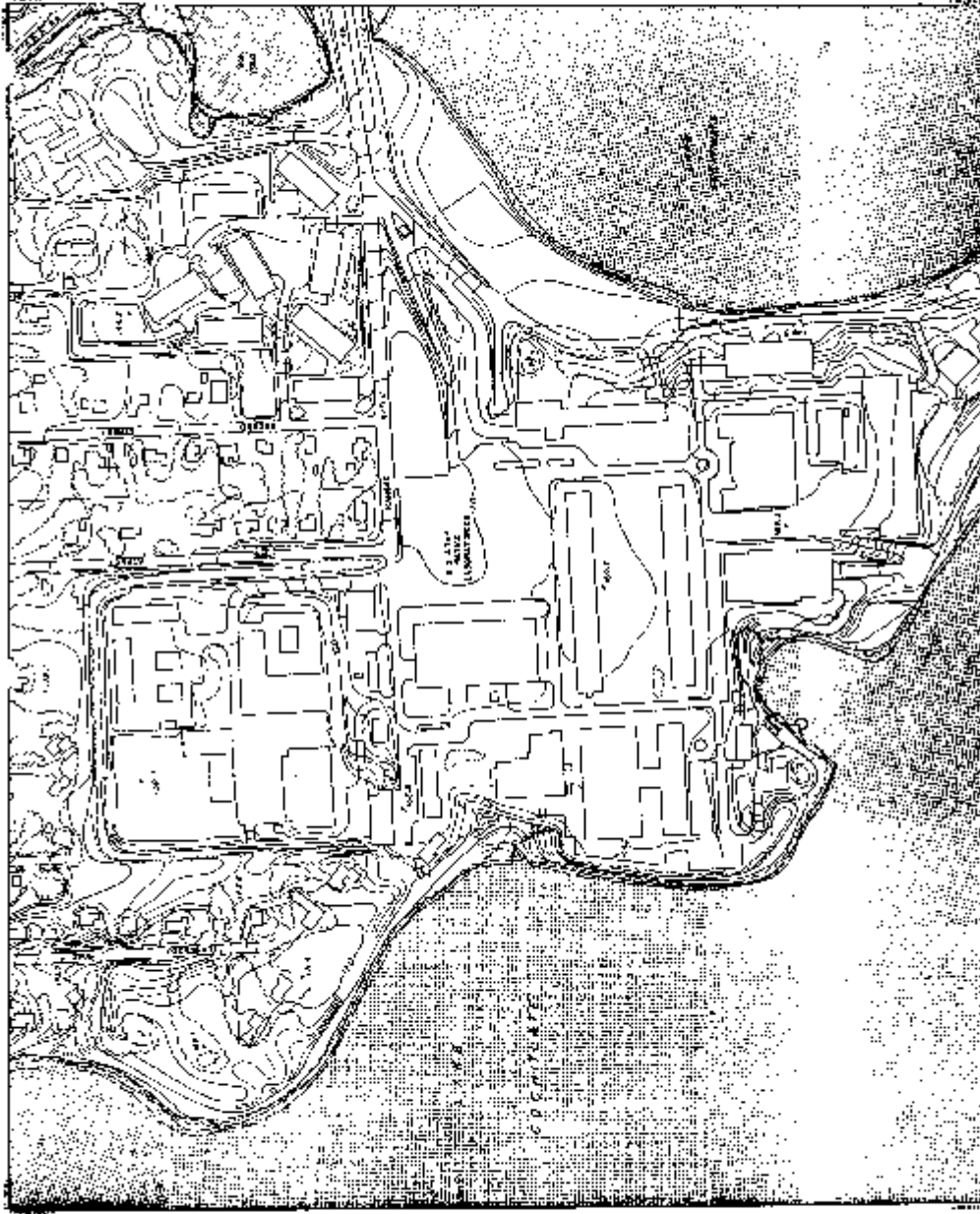
C. Region 5

1. MNR100000: Indian Country within the State of Minnesota

## **Appendix E – Floodplain Maps**

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

TOWN OF NATICK, MASSACHUSETTS  
 REFINED SURVEY



1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

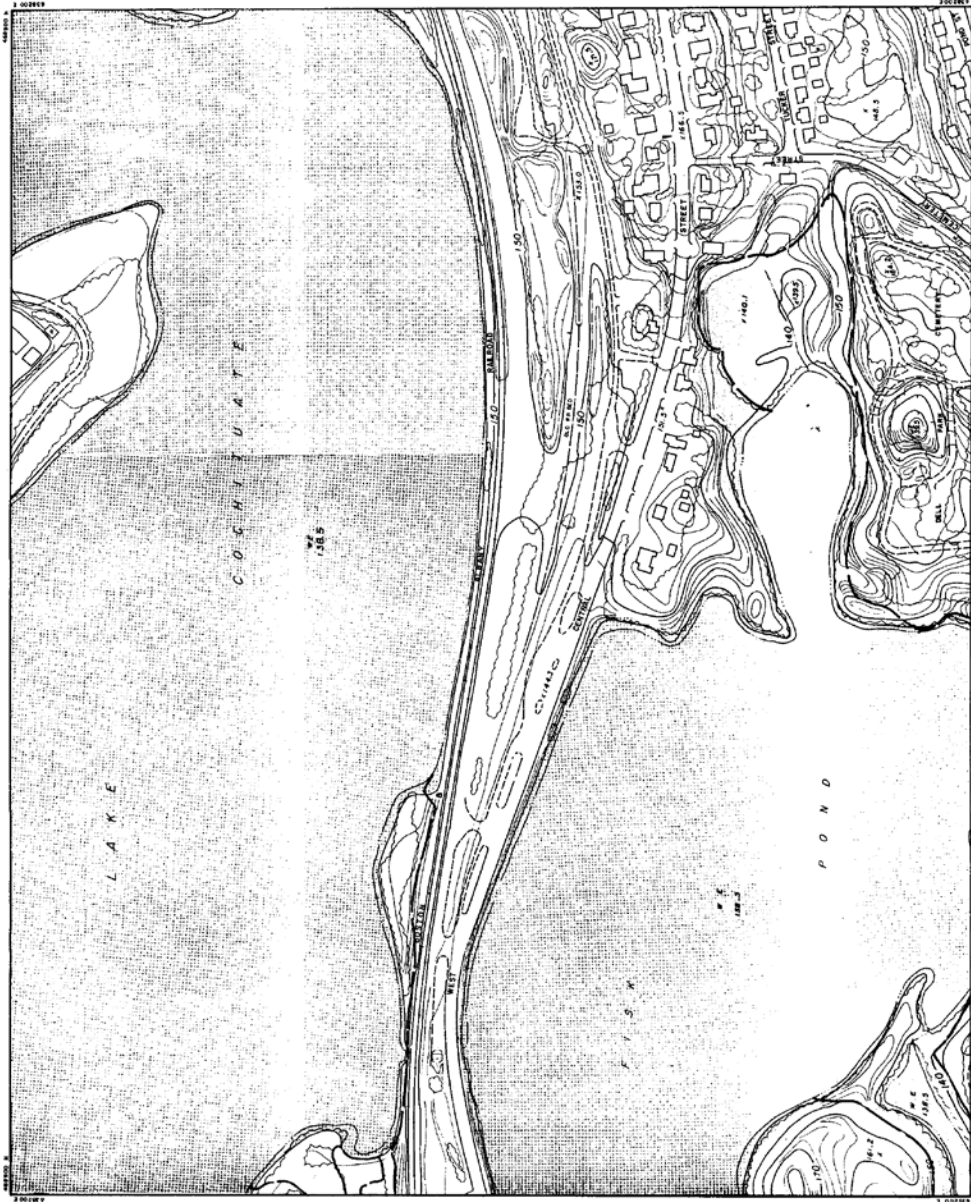


WILLIAMS & WATSON  
 ENGINEERS  
 100 STATE STREET  
 BOSTON, MASS.

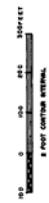
PLANNED BY THE TOWN OF NATICK  
 AND AREA INC.




TOWN OF NATICK, MASSACHUSETTS  
TOPOGRAPHIC SURVEY



33	34	35
41	42	43
49	50	51



WETLAND DELINEATION  
  
 PRIMARY ZONE  
 TRANSITION ZONE  
 FLOOD PLAIN

PREPARED UNDER THE AUTHORITY OF  
 THE NATICK OFFICE OF PUBLIC WORKS  
 AND ADMINISTRATION, INC.

